9 IMPACT ASSESSMENT

9.1 Introduction

The significant environmental impacts identified in the Scoping Phase as well as any newly identified impacts have been assessed during the EIA phase.

The objective of the assessment of impacts is to identify and assess all the significant impacts that may arise as a result of the proposed project. The process of assessing the impacts of the project encompasses the following four activities:

- Identification and assessment of potential impacts;
- Prediction of the nature, extent, duration, magnitude and probability of potentially significant impacts;
- Identification of mitigation measures that could be implemented to reduce the severity or significance of the impacts of the activity; and
- Evaluation of the significance of the impact after the mitigation measures have been implemented i.e. the significance of the residual impact.

The possible impacts associated with the proposed new 400 kV powerline between the Tabor and Nzhelele substations were primarily identified in the Scoping Phase through desktop study and public consultation. Additional impacts have further been identified and assessed during the Impact Assessment Phase by means of more in-depth investigations along with consultation with interested and affected parties.

9.2 EIA process and methodology

In accordance with Government Notice R. 543, promulgated in terms of section 24 of the National Environmental Management Act, 1998 (Act 107 of 1998), specialists were required to assess the significance of potential impacts in terms of the following criteria:

- Nature of the impact;
- Extent of the impact;
- Intensity of the impact;
- Duration of the impact;
- Probability of the impact occurring;
- Impact non-reversibility;
- Cumulative impacts;
- Impact on irreplaceable resources; and
- · Confidence level.

Issues were assessed in terms of the following criteria:

- The **nature**, a description of what causes the effect, what will be affected and how it will be affected;
- The physical **extent**, wherein it is indicated whether:
 - 1 the impact will be limited to the site;
 - 2 the impact will be limited to the local area;
 - 3 the impact will be limited to the region;
 - 4 the impact will be national; or
 - 5 the impact will be international;
- The **duration**, wherein it is indicated whether the lifetime of the impact will be:
 - 1 of a very short duration (0-1 years);
 - 2 of a short duration (2-5 years);
 - 3 medium-term (5-15 years);
 - 4 long term (> 15 years); or
 - 5 permanent;
- The magnitude of impact on ecological processes, quantified on a scale from 0-10, where a score is assigned:
 - 0 small and will have no effect on the environment;
 - 2 minor and will not result in an impact on processes;
 - 4 low and will cause a slight impact on processes;
 - 6 moderate and will result in processes continuing but in a modified way;
 - 8 high (processes are altered to the extent that they temporarily cease); or
 - 10 very high and results in complete destruction of patterns and permanent cessation of processes;
- The probability of occurrence, which describes the likelihood of the impact actually occurring. Probability is estimated on a scale where:
 - 1 very improbable (probably will not happen;
 - 2 improbable (some possibility, but low likelihood);
 - 3 probable (distinct possibility);
 - 4 highly probable (most likely); or
 - 5 definite (impact will occur regardless of any prevention measures);
- the **significance**, which is determined through a synthesis of the characteristics described above (refer formula below) and can be assessed as low, medium or high;
- the **status**, which is described as either positive, negative or neutral;
- the degree to which the impact can be reversed;
- the degree to which the impact may cause irreplaceable loss of resources; and
- the degree to which the impact can be mitigated.

The **significance** is determined by combining the criteria in the following formula:

S = (E+D+M)*P; where

S = Significance weighting

E = Extent

D = Duration

M = Magnitude

P = Probability

The **significance weightings** for each potential impact are as follows:

Points	Significant Weighting	Discussion					
< 30 points	Low	where this impact would not have a direct influence on					
< 30 points	LOW	the decision to develop in the area					
31 60 noints	Medium	where the impact could influence the decision to					
31-60 points	Medium	develop in the area unless it is effectively mitigated					
> 60 noints	High	where the impact must have an influence on the					
> 60 points	High	decision process to develop in the area					

The findings of the impact assessment have been consolidated into **Table 9.1** to **Table 9.7** below.

Table 9.1: Detailed assessment of identified impacts for Alternative 1

Potential		Extent	Duration	Magnitude	Probability	Sigi	nificance	Status			
impact	Mitigation	(E)	(E) (D) (M) (P) (S=(E+D+M)*P)		+D+M)*P)	(+ve or - ve)	Confidence				
CONSTRUCTION	I PHASE										
AGRICULTURAL	POTENTIAL										
	Nature of impact:	Loss of agricult	ıral land due to	construction of	infrastructure	_					
	With	1	4	2	2	14	Low	-	High		
	Without	1	4	4	3	27	Low	-	High		
Deterioration of Soil Resource	Degree to which impact can be reversed:	Reversal should	eversal should be straightforward after removal of infrastructure								
	Degree of impact on irreplaceable resources:	Low to none	Low to none								
	Nature of impact:	Soil erosion hazard due to construction activities									
	With	1	1	2	2	8	Low	-	High		
	Without	2	3	6	4	44	Medium	-	High		
Deterioration of Soil Resource	Degree to which impact can be reversed:	If erosion is cau	areas								
	Degree of impact on irreplaceable resources:	Moderate									
FLORA											
	Nature of impact:	Removal of prot	ected plant spe	cies due to the	new servitude w	vithin the c	orridor				
Destruction of	With	1	5	2	5	40	Medium	-	Medium		
protected flora	Without	1	5	2	5	40	Medium	-	High		
	Degree to which impact can be reversed:	Existing/permit	ed access roads	s must be used	and the all othe	er measures	must be follow	ed			

Potential		Extent	Duration	Magnitude	Probability	Sigr	nificance	Status				
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	+D+M)*P)	(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	Area already di	sturbed and rou	te follows existi	ng power line							
	Nature of impact:	Destruction and	disturbance of	a previously un	disturbed veget	ation. envir	onments are in	npacted				
	With	1	5	2	2	16	Low	-	Medium			
Destruction of	Without	1										
pristine habitat	Degree to which impact can be reversed:		existing/permitted access roads must be used and the all other measures must be followed. Due to the fact that an existing servitude exists for the whole route, very limited additional pristine habitature impacted.									
	Degree of impact on irreplaceable resources:	Area already di	Area already disturbed and route follows existing power line									
	Nature of impact:	Removal of veg										
	With	1	5	2	3	24	Low	-	Medium			
.,	Without	1	5	2	3	24	Low	-	Medium			
Vegetation clearance	Degree to which impact can be reversed:	Existing/permit the fact that an are impacted. I start on comple										
	Degree of impact on irreplaceable resources:	Area already di	sturbed and rou	te follows existi	ng power line							
	Nature of impact:	Vegetation clea	ring or disturbaı	nce may and ha	ve been fond to	increase e	ncroachment/ c	umulative im	pact			
	With	1	2	4	3	21	Low	-	High			
Plant	Without	1	4	4	3	27	Low	-	Medium			
encroachment	Degree to which impact can be reversed:	Existing/permit construction it i		s must be used	and the all othe	r measures	must be follow	ed. During				
	Degree of impact on irreplaceable resources:	Area already di										
Threat to	Nature of	Disturbance of an area with high biodiversity will increase the probability of encroachment and biodiversity will be lost.										

Potential		Extent	Duration	Magnitude	Probability	Sigi	nificance	Status				
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	+D+M)*P)	(+ve or - ve)	Confidence			
biodiversity	impact:											
	With	1	3	2	3	18	Low	-	Medium			
	Without	1	4	4	3	27	Low	-	Medium			
	Degree to which impact can be reversed:	Existing/permit	ed									
	Degree of impact on irreplaceable resources:	Area already dis										
	Nature of impact:		emoval of vegetation due to the servitudes and access roads will increase the soil erosion as vegetation plays a major role in eventing/minimising soil erosion (cumulative impact)									
	With	1	1	2	3	12	Low	-	Medium			
Cail amarian	Without	1	3	4	5	40	Medium	-	High			
Soil erosion	Degree to which impact can be reversed:	Existing/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:	Area already dis soil erosion fron	ace for the									
FAUNA												
	Nature of impact:	Adverse Impact										
	With	2	4	6	5	60	Medium	-	High			
	Without	2	4	6	5	60	Medium	-	High			
Loss of faunal habitat	Degree to which impact can be reversed:	Low- Realign pr activities to the	55m servitude.									
	Degree of impact on irreplaceable resources:	The proposed alignment bisects the Soutpansberg, rivers (non-perennial drainage lines), seasonally inundated pans, rupicolous outcrops, Northern Mistbelt Forest as well as suitable habitat for several red listed faunal species including Giant Bullfrog, Northern Forest Rain Frog, Soutpansberg Flat Lizard, Muller's Velvet Gecko, Ground Pangolin, Brown Hyaena, Lion, Wild Dog, Cheetah and White Rhinoceros										
Direct Impact on associated	Nature of impact:	Adverse Impact										

Potential		Extent	Duration	Magnitude	Probability	Sig	gnificance	Status			
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E+D+M)*P)	(+ve or - ve)	Confidence		
fauna and	With	2	4	4	4	40	Medium		High		
interactions with structures and	Without	2	4	6	5	60	Medium		High		
personnel	Degree to which impact can be reversed:		Restrict construction activities to the 55m servitude. No intentional killing of any faunal species.								
	Degree of impact on irreplaceable resources:	The proposed alternative alignment 1 bisects the western boundary of the Manavhela Ben Lavin Provincial Nature Reserve, the Soutpansberg Conservation area, rivers (non-perennial drainage lines), seasonally inundated pans, rupicolous outcrops, Northern Mistbelt Forest as well as suitable habitat for several red listed faunal species.									
AVIFAUNA											
	Nature of impact:	Permanent rem	oval of habitat t	hat is used, or i	may be used, by	avifauna	ı .				
	With	1	2	4	3	21	Low		Medium		
Habitat	Without	1	2	4	5	35	Medium		Medium		
destruction	Degree to which impact can be reversed:	Partially reversi									
	Degree of impact on irreplaceable resources:	Low									
	Nature of impact:	Noise and move	ement, from staf	ff and machiner	y, may disturb a	avifauna,	and nests my be	disturbed.			
	With	1	1	4	3	18	Low		Medium		
	Without	2	1	4	4	28	Low		Medium		
Disturbance	Degree to which impact can be reversed:	Irreversible									
	Degree of impact on irreplaceable resources: Medium										
HERITAGE											
Destruction of heritage sites	Nature of impact:	Adverse impact	on a identified	heritage sites al	ong alternative						
and features	With mitigation	3	5	2	5	50	Medium	-	High		

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Potential		Extent	Duration	Magnitude	Probability	Sig	nificance	Status				
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	+D+M)*P)	(+ve or - ve)	Confidence			
	Without mitigation	3	5	10	5	90	High	-	High			
	Degree to which impact can be reversed:	Medium	edium									
	Degree of impact on irreplaceable resources:	Not Applicable							High			
VISUAL												
Transformation	Nature of impact:	Soutpansberg a as a "scar" in th	nd private nature e landscape will entractors and c	re reserves. Th I create adverse onstruction veh	e same account e visual impacts. icles in the area	s for the So Construct , which wil	ubstation area. ion activity will	Visibilty of the increase the	naracter, especially in the he power line servitude presence and the sense of place,			
of the visual	With	3	2	6	5	55	Medium	-	High			
quality of the	Without	3	2	6	5	55	Medium	-	High			
landscape	Degree to which impact can be reversed:	The impact can movement of co										
	Degree of impact on irreplaceable resources:	In areas of high private nature r					ch as the Soupa	insberg and				
SOCIAL												
Influx of job	Nature of impact:	The powerline c Welteverede. Hi seekers							may be from possible influx of job			
seekers, mainly unskilled labour,	With mitigation	3	1	0	2	8	Low	-	Medium to high			
from the communities	Without mitigation	3	2	4	4	36	Medium	-	Medium to high			
around the power line route having job	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures						
expectations	Degree of impact on irreplaceable resources:	Not Applicable							-			

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Potential		Extent	Duration	Magnitude	Probability	Sig	gnificance	Status				
impact	Mitigation	(E)	(D)	(M)	(P)	(S=((S=(E+D+M)*P)		Confidence			
Health Impacts	Nature of impact:	If toilet facilities	s on site are not	well managed,	these can lead	to advers	e health impacts	to the surrou	unding communities			
as a result of	With mitigation	1	1	0	1	2	Low	-	Medium to high			
exposure to sewage from	Without mitigation	1	1	6	3	24	Low	-	Medium to high			
construction camps and on construction	Degree to which impact can be reversed:	High – with the	High – with the implementation of the relevant mitigation measures									
camps	Degree of impact on irreplaceable resources:	Not Applicable		-								
	Nature of impact:	Waste on site cand animals	aste on site can become a nuisance for community members and on farms and also pose a danger to the health of p nd animals									
Health Impacts	With mitigation	1	1	2	3	18	Low	-	Medium			
as a result of exposure to	Without mitigation	1	2	2	3	18	Low	-	Medium			
waste (domestic and industrial)	Degree to which impact can be reversed:	High – with the		Medium								
	Degree of impact on irreplaceable resources:	Not Applicable	-									
	Nature of impact:	Where construct workers in the a				es, these	can be passed o	n to the com	munity members or farm			
Health impacts from	With mitigation	1	1	2	2	8	Low	-	Low			
construction sites and camps	Without mitigation	2	1	6	3	27	Low	-	Low			
as a result of infectious diseases	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	t mitigation mea	isures			Medium			
	Degree of impact on irreplaceable resources:	Not Applicable							-			
Conduct of	Nature of impact:	It is possible th actions can aris		ood relationship	s between conta	actors and	community mer	mbers, negati	ve as well as positive			
construction workforce; Good	With mitigation	2	1	2	2	10	Low	-	Medium to high			

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Potential		Extent	Duration	Magnitude	Probability	Sig	nificance	Status			
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	E+D+M)*P)	(+ve or - ve)	Confidence		
relationships between	Without mitigation	2	1	6	4	36	Medium	-	Medium to high		
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:	High – with the	High – with the implementation of the relevant mitigation measures								
	Degree of impact on irreplaceable resources:	Not Applicable	ot Applicable								
Conduct of construction	Nature of impact:	These can resul									
workforce; Bad	With mitigation	2	1	2	2	10	Low	-	Medium		
relationships between	Without mitigation	2	1	6	4	36	Medium	-	Medium		
community members/ farm workers and Eskom	Degree to which impact can be reversed:	High – with the		Medium							
Construction workers leading to violence	Degree of impact on irreplaceable resources:	Not Applicable							-		
	Nature of impact:	Material can be stolen even alor				ng the rou	te especially as	material used	in powerlines is often		
Theft of material from camps and	With mitigation	1	1	0	1	2	Low	-	Medium		
along construction	Without mitigation	2	1	8	4	44	Medium	-	Medium		
sites	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures			Medium		

Potential		Extent	Duration	Magnitude	Probability	Sig	nificance	Status			
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	(S=(E+D+M)*P)		Confidence		
	Degree of impact on irreplaceable resources:	Not Applicable	Not Applicable								
Negative	Nature of impact:	It is possible the livelihoods will of			, game farmers	owners fo	r whom visual in	npacts are in	nportant to their		
attitudes	With mitigation	2	1	2	2	10	Low	-	Medium		
towards the project and the	Without mitigation	2	1	6	3	27	Low	-	Medium		
formation of community groups, NGO's,	Degree to which impact can be reversed:	High – with the	ligh – with the implementation of the relevant mitigation measures								
in response to the project	Degree of impact on irreplaceable resources:	Not Applicable	-								
	Nature of impact:	This would be e									
	With mitigation	1	1	2	2	8	Low	-	Medium		
Land owners denying	Without mitigation	1	2	6	4	36	Medium	-	Medium		
contractors access to their properties	Degree to which impact can be reversed:	High – with the	Medium								
	Degree of impact on irreplaceable resources:	Not Applicable	-								
	Nature of impact:	Land and crops	can be lost duri	ng the clearing	of the powerline	e corridor a	nd during the co	onstruction o	f the powerline		
	With mitigation	1	1	2	2	8	Low	-	Medium to high		
Loss of crops	Without mitigation	1	3	6	4	40	Medium	-	Medium to high		
leading to economic losses	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures			Medium		
	Degree of impact on irreplaceable resources:	Not Applicable							-		

Potential		Extent	Duration	Magnitude	Probability	Sig	nificance	Status				
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(I	(S=(E+D+M)*P)		Confidence			
	Nature of impact:	Grazing land are	ea can be lost d	ue to clearing o	f land for the co	rridor as v	vell as during the	e constructio	n of access roads			
	With mitigation	1	1	2	2	8	Low	-	Medium to high			
Loss of land	Without mitigation	1	3	6	4	40	Medium	-	Medium to high			
leading to economic losses	Degree to which impact can be reversed:	High – with the	High – with the implementation of the relevant mitigation measures									
	Degree of impact on irreplaceable resources:	Not Applicable	Not Applicable									
Impacts on	Nature of impact:	Construction ca	n disturb activit	ies on farms								
farming activities such	With mitigation	1	1	2	2	8	Low	-	Medium to high			
as sowing, harvesting, and	Without mitigation	1	1	8	3	30	Low	-	Medium to high			
fire management programmes	Degree to which impact can be reversed:	High – with the		Medium								
leading to economic losses	Degree of impact on irreplaceable resources:	Not Applicable		-								
	Nature of impact:	This can lead to conflicts with community members and farmers										
	With mitigation	1	1	2	1	4	Low	-	Medium to high			
Damage to farm infrastructure	Without mitigation	1	1	6	3	24	Low	-	Medium to high			
e.g. Irrigation equipment, gates, fences	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures			Medium			
	Degree of impact on irreplaceable resources:	Not Applicable							-			
Security concerns as a	Nature of impact:	It is highly likely	y that theft of g	ame and stock	can occur. Theft	of game o	can be higher on	farms where	Rhino is present			
result of	With mitigation	1	1	2	4	16	Low	-	Medium to high			

Potential		Extent	Duration	Magnitude	Probability	Sig	nificance	Status			
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	E+D+M)*P)	(+ve or - ve)	Confidence		
poaching of game, stock	Without mitigation	1	1	10	4	48	Medium	-	Medium to high		
theft and crop theft	Degree to which impact can be reversed:	High – with the	High – with the implementation of the relevant mitigation measures								
	Degree of impact on irreplaceable resources:	Not Applicable	Not Applicable								
	Nature of impact:	The mere prese threatened	nce of construct	tion workers in (communities an	d especiall	y on farms can	lead to unea	se and people may feel		
Security as a	With mitigation	1	1	2	2	8	Low	-	Medium to high		
result of the presence of	Without mitigation	2	1	8	3	33	Medium	-	Medium to high		
workers on farms and communities	Degree to which impact can be reversed:	High – with the		Medium							
communices	Degree of impact on irreplaceable resources:	Not Applicable		-							
	Nature of impact:	Construction sites are highly hazardous environments and the safety of people and animals can be compromised									
	With mitigation	1	1	2	1	4	Low	-	Medium		
Safety of community	Without mitigation	1	1	6	2	16	Low	-	Medium		
members/farm workers/animals	Degree to which impact can be reversed:	High – with the	High – with the implementation of the relevant mitigation measures								
	Degree of impact on irreplaceable resources:	Not Applicable							-		
Poor maintenance of	Nature of impact:	It is possible that	at access routes	can be of such	poor state that	maintenar	nce of the power	line is not po	essible		
the power line	With mitigation	1	1	2	2	8	Low	-	Medium to high		
access roads: conflict between	Without mitigation	1	4	8	4	52	Medium	-	Medium to high		

Potential		Extent	Duration	Magnitude	Probability	Significance	Status					
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E+D+M)*P)	(+ve or - ve)	Confidence				
Eskom and the landowners on whose	Degree to which impact can be reversed:	High – with the	High – with the implementation of the relevant mitigation measures									
responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Degree of impact on irreplaceable resources:	Not Applicable	Not Applicable									
Loss of a sense	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their view be spoilt										
of place/income	With mitigation	1	1	2	2	8 Low	-	Medium to high				
on game farms - Tourists want	Without mitigation	1	1	8	4	40 Medium	-	Medium to high				
to see "Africa" and the power line can disturb	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures		Medium				
the rustic African setting;	Degree of impact on irreplaceable resources:	Not Applicable	Not Applicable									

OPERATION PHASE

AGRICULTURAL POTENTIAL

It is anticipated that the main impacts on agricultural potential will occur during the construction phase

FLORA

ILOKA	LONA												
Destruction of	Nature of impact:	Removal of prof	Removal of protected plant species due to the servitude										
	With	1	1	2	3	12	Low	-	High				
protected flora	Without	1	1 2 3 12 Low -										
	Degree to which impact can be	Existing/permit											

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Potential		Extent	Duration	Magnitude	Probability	Sign	nificance	Status						
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	+D+M)*P)	(+ve or - ve)	Confidence					
	reversed:													
	Degree of impact on irreplaceable resources:	Area already dis	ea already disturbed and route follows existing power line											
	Nature of impact:	Destruction and	disturbance of	a previously un	disturbed veget	ation								
	With	1	5	2	2	16	Low	-	High					
Destruction of	Without	1	5	2	2	16	Low	-	High					
pristine habitat	Degree to which impact can be reversed:	Existing/permit	ted access roads	s must be used	and the all othe	r measures	must be follow	ed						
	Degree of impact on irreplaceable resources:	Area already dis	sturbed and rou	te follows existi	ng power line/ v	rirtually no	pristine habitat							
	Nature of impact:	Removal of veg												
	With	1	4	2	3	21	Low	-	High					
Vegetation	Without	1	4	2	3	21	Low	-	High					
clearance	Degree to which impact can be reversed:	Existing/permit	ed											
	Degree of impact on irreplaceable resources:	The servitude h	as to be kept clo	ear at all times	(bush clearing)									
	Nature of impact:	Vegetation clea	ring or disturbar	nce may and ha	ve been fond to	increase e	ncroachment/ c	umulative im	pact					
	With	1	1	2	3	12	Low	-	High					
Plant	Without	1	1	2	3	12	Low	-	High					
encroachment	Degree to which impact can be reversed:	Existing/permit	ted access roads	s must be used	and the all othe	r measures	must be follow	ed						
	Degree of impact on irreplaceable	Most of the area area	a is already encr	roached by the	suikel bush/ the	destruction	n will be benefic	cial to the						

Potential		Extent	Duration	Magnitude	Probability	Sigi	nificance	Status					
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	+D+M)*P)	(+ve or - ve)	Confidence				
	resources:												
	Nature of impact:	Disturbance of a	Disturbance of an area with high biodiversity will increase the probability of encroachment and biodiversity will be lost.										
	With	1	2	2	3	15	Low	-	High				
Threat to	Without	1	2	4	3	21	Low	-	High				
biodiversity	Degree to which impact can be reversed:	Existing/permit	Existing/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:	Area already is	•	•	•								
	Nature of impact:	Removal of veg preventing/min	n plays a major role in										
	With	1	2	2	3	15	Low	-	High				
Soil erosion	Without	1	2	2	3	15	Low	-	High				
Son erosion	Degree to which impact can be reversed:	Existing/permit											
	Degree of impact on irreplaceable resources:	Area already dis soil erosion fror	sturbed and rout n the existing lir	te follows existi ne	ng power line/ a	already mea	asures put in pla	ace for the					
FAUNA													
	Nature of impact:	Adverse Impact											
Loss of faunal	With	1	4	4	5	45	Medium	-	High				
habitat with	Without	2	4	6	5	60	Medium	-	High				
clearance of vegetation within the 55m servitude	Degree to which impact can be reversed:	The clearance o species impaction the servitude shades (especially arbo	ng which could pould not be total	otential impact	on the lines she	ould be ren	noved. The vege	etation of					
	Degree of impact on irreplaceable resources:												

Potential		Extent	Duration	Magnitude	Probability	Sigi	nificance	Status				
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E+D+M)*P)		(+ve or - ve)	Confidence			
	Nature of impact:	Adverse Impact										
Direct Impact	With	1	4	4	4	36	Medium					
on associated	Without	2	4	6	5	60	Medium					
fauna and interactions with structures and	Degree to which impact can be reversed:	faunal species.	estrict construction activities to the 55m servitude. No intentional killing or disturbances of any aunal species. No illegal poaching or hunting activities.									
personnel	Degree of impact on irreplaceable resources:	The proposed all Soutpansberg C rupicolous outcr species.	Conservation are	a, rivers (non-p	erennial draina	ge lines), s	easonally inund	ated pans,				
AVIFAUNA												
	Nature of impact:	Collision or red	data species wit	th the overhead	line (usually the	e earth wir	e).					
	With	1	3	4	3	27	Low	-	Medium			
6 11: :	Without	1	3	6	4	44	Medium	-	Medium			
Collision	Degree to which impact can be reversed:	Low		Medium								
	Degree of impact on irreplaceable resources:	Medium										
	Nature of impact:	Bird perches on live and earthed					oridging the air	gap between	live components and/or			
	With	1	3	4	3	27	Low	-	Medium			
Electrocution	Without	1	3	6	4	44	Medium	-	Medium			
Electrocution	Degree to which impact can be reversed:	Low							Medium			
	Degree of impact on irreplaceable resources:	Medium	Medium									
Nesting of birds on Tower	Nature of impact:	Routine maintenance of pylons and power lines could result in disturbance of certain bird species										

Potential		Extent	Duration	Magnitude	ude Probability Significance		nificance	Status	
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	(S=(E+D+M)*P)		Confidence
structures and	With	1	3	4	3	27	Low	-	Medium
disturbance during routine	Without	2	3	6	4	44	Medium	-	Medium
maintenance	Degree to which impact can be reversed:	High	Medium						
	Degree of impact on irreplaceable resources:	Medium							-

HERITAGE

It is anticipated that the main impacts on heritage will occur during the construction phase

V	Ί	S	Ū	Α	L

Visual exposure to the Powerline Servitude,	Nature of impact:	will create adve locations in clos impact on the s	isual exposure to the power line servitude, conductor cables and towers, as well as infrastructure at the Nzhelele Substation, will create adverse visual impacts, especially in the Soutpansberg and in, or close to private nature reserves. Sensitive viewer ocations in close proximity (<500m) are highly vulnerable to exposure of the power line, where visibility result in a negative mpact on the sense of place. Night time lighting at the Nzhelele Substation will create light pollution with adverse visual ffects of glare and sky glow.										
Conductor	With	3	4	6	5	65	High	-	High				
Cables and	Without	3	5	6	5	70	High	-	High				
Towers, as well as the Nzhelele Substation.	Degree to which impact can be reversed:		e impact can be reversed by avoiding the unnecessary removal of vegetation and avoiding eximity to sensitive viewer locations through careful route planning, or by selecting the no-go ion.										
	Degree of impact on irreplaceable resources:		n areas of high visual quality and where there are no HV power lines, such as the Soupansberg and private nature reserves, the degree of impact will be very high.										
SOCIAL													
Perceived electromagnetic	Nature of impact:	The presence of on some proper		orkers can resu	It in the treat of	safety and	can possibly lea	ad to actual	crimes being committed				
fields impacts	With mitigation	1	3	2	1	6	Low	-	Medium				
on humans and animals during	Without mitigation	1	5	4	2	20	Low	1	Medium				
the operational phase	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures							

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Potential		Extent	Duration	Magnitude	Probability	Sig	nificance	Status				
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	E+D+M)*P)	(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	N/A										
Loss of a sense	Nature of		f powerlines par	ticularly in touri	ist attractions ca	an result in	tourists no long	ger visiting th	e area as their views will			
of place/income on game farms	impact: With mitigation	be spoilt	1	2	3	12	Low	-	Medium			
- Tourists want to see "Africa"	Without mitigation	3	4	8	4	60	Medium	-	High			
and the power line can disturb the rustic African setting;	Degree to which impact can be reversed:	High – with the	gh – with the implementation of the relevant mitigation measures									
Amcan setting,	Degree of impact on irreplaceable resources:	Not Applicable							-			
Poor maintenance of	Nature of impact:	It is possible th	ossible									
the power line access roads:	With mitigation	1	1	2	2	8	Low	-	Medium to high			
conflict between Eskom and the	Without mitigation	1	4	8	4	52	Medium	-	Medium to high			
landowners on whose responsibility it	Degree to which impact can be reversed:	High – with the										
is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Degree of impact on irreplaceable resources:	Not Applicable	ot Applicable									
Impact of the power lines on	Nature of impact:	Where powerlin	es are not visibl	le or known, pla	ne crashes can	result and	in turn electricit	y outages m	ay occur			
aircraft as there	With mitigation	1	2	2	2	10	Low	-	Medium to high			
are airports within the study	Without mitigation	4	5	6	4	60	Medium	-	Medium to high			

Potential		Extent	Duration	Magnitude	Probability	Sig	nificance	Status				
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(I	E+D+M)*P)	(+ve or - ve)	Confidence			
area; one is the Louis Trichardt airport and the	Degree to which impact can be reversed:	High – with the	High – with the implementation of the relevant mitigation measures									
other is for light aircraft on the road towards Waterpoort from Louis Trichardt	Degree of impact on irreplaceable resources:	Not Applicable										
Decrease in property values	Nature of impact:	These can lead	to economic los	ses								
and number of	With mitigation	1	3	4	1	8	Low	-	Medium to high			
visitors to lodges and	Without mitigation	2	5	6	3	39	Medium	-	Medium to high			
other areas that are popular with tourists due to the visual	Degree to which impact can be reversed:	High – with the										
impacts of powerlines	Degree of impact on irreplaceable resources:	Not Applicable										
Security issues as a result of	Nature of impact:	The presence of on some proper		orkers can resu	t in the treat of	safety and	d can possibly le	ad to actual	crimes being committed			
the presence of	With mitigation	1	1	2	2	8	Low	-	Medium to high			
maintenance workers on	Without mitigation	1	1	4	4	24	Low	-	High			
properties	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures						
	Degree of impact on irreplaceable resources:	Not Applicable	ot Applicable -									
Land owners	Nature of	This can result i	in maintenance	not occurring								
denying contractors	impact: With mitigation	1	1	2	2	8	Low	-	Medium			
access to their	Without	1	1	8	4	40	Medium	-	High			
properties	mitigation											

Potential		Extent	Duration	Magnitude	Probability	Sign	ificance	Status				
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E-	+D+M)*P)	(+ve or - ve)	Confidence			
	Degree to which impact can be reversed:	Eskom must liai farmers must ag to gates without access to their p when maintenar	gree on the prod t informing Esko properties during	cedures e.g. it com, and where it generally maintenance.	an be agreed th necessary, provi Despite this, th	nat, farmers iding them v e Landowne	must not to chwith spare keys	nange locks s for easy				
	Degree of impact on irreplaceable resources:	Not Applicable	·									
Poaching of game as well as	Nature of impact:	This is a high pr	robability									
stock theft and	With mitigation	1	1	0	1	2	Low	-	Medium to high			
theft of crops	Without mitigation	1	1	2	2	8	Low	-	Medium to high			
	Degree to which impact can be reversed:	activities such a	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:	Not Applicable	-									
Impact on farming	Nature of impact:	During the oper very minimal as	tions are likely to be									
activities such	With mitigation	1	1	0	1	2	Low	-	Medium to high			
as sowing, harvesting, and	Without mitigation	1	1	2	1	4	Low	-	Medium to high			
fire management programmes leading to economic losses	Degree to which impact can be reversed:	As maintenance on these activiti can be through be high activity	ies will be for a measures such	significantly sho	orter duration, b	ut must at	all costs be avo	ided. This				
	Degree of impact on irreplaceable resources:											
Impact on farming	Nature of impact:	During the oper very minimal as	ational phase, in they will only in	mpacts on active mainten	vities and on gu	ests to lodg	es and other to	ourist destina	tions are likely to be			
activities such	With mitigation	1	1	0	1	2	Low	-	Medium to high			
as hunting in	Without	1	1	2	1	4	Low	-	Medium to high			

Potential		Extent	Duration	Magnitude	Probability	Sigi	nificance	Status				
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	+D+M)*P)	(+ve or - ve)	Confidence			
game farms	mitigation											
leading to economic losses. Impacts can also be on	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	isures						
guests in lodges leading to economic losses	Degree of impact on irreplaceable resources:	Not Applicable	ot Applicable									
Increase in the voltage stability	Nature of impact:	An increased vo	ltage will ensur	e that activities	that were not a	ble to take	place will be po	ssible				
	With mitigation											
	Without mitigation	3	5	8	5	80	High	+	Medium			
	Degree to which impact can be reversed:	Not Applicable	Not Applicable									
	Degree of impact on irreplaceable resources:	Not Applicable	Not Applicable									
An assurance of a reliable	Nature of impact:	Reliable electric	ado Local Municipality									
electricity	With mitigation											
supply	Without mitigation	2	1	6	4	36	Medium	+	Medium			
	Degree to which impact can be reversed:	Not Applicable										
	Degree of impact on irreplaceable resources:	Not Applicable							-			
Increase of electricity	Nature of impact:	In order to grov	v the economy o	of the Makhado	Local Municipali	ty, electrici	ty is vital					
supply making it	With mitigation											
available for agriculture,	Without mitigation	3	5	8	5	80	High	+	Medium			

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E+D+I	M)*P)	(+ve or - ve)	Confidence				
tourism and other industries. The increase in	Degree to which impact can be reversed:	Not Applicable											
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:	Not Applicable	lot Applicable										
No more backlogs in	Nature of impact:	The absence of will be possible	nere electricity is present										
electricity	With mitigation												
Connections	Without mitigation	3	5	8	5	80 High	h	+	Medium				
	Degree to which impact can be reversed:	Not Applicable											
	Degree of impact on irreplaceable resources:	Not Applicable							-				
The inadequate provision of	Nature of impact:												
electricity to	With mitigation												
services such as health facilities	Without mitigation	3	5	8	5	80 High	h	+	Medium				
will cease	Degree to which impact can be reversed:	Not Applicable											

Potential		Extent	Duration	Magnitude	Probability	Signific	cance	Status			
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E+D	+M)*P)	(+ve or - ve)	Confidence		
	Degree of impact on irreplaceable resources:	Not Applicable									
Electricity will be available to	Nature of impact:	The presence of	electricity to ru								
numerous rural	With mitigation										
settlements that do not have this	Without mitigation	3	5	8	5	80 Hi	igh	+	Medium		
service	Degree to which impact can be reversed:	Not Applicable	: Applicable								
	Degree of impact on irreplaceable resources:	Not Applicable	ot Applicable								

DECOMMISSIONING PHASE

AGRICULTURAL POTENTIAL

No decommissioning impacts are anticipated

FLORA

1 _ 0 . 0 .	LONA												
	Nature of impact:	Removal of prot	emoval of protected plant species due to the servitude										
	With	1	1	4	3	18	Low	-	High				
Destruction of	Without	1	1 4 3 18 Low -										
protected flora	Degree to which impact can be reversed:	Existing/permitt	ed access roads	must be used	and the all othe	r measures	must be follow	ed					
	Degree of impact on irreplaceable resources:	Area already dis	turbed and rout	e follows existin	ng power line								
Destruction of	Nature of impact:	Removal of vege	etation due to se	ervitudes, acces	ss roads and ere	ecting of the	e pylons						
pristine habitat	With	1	1 4 3 18 Low - High										
	Without	1	1 4 3 18 Low - High										

Potential		Extent	Duration	Magnitude	Probability	Sig	nificance	Status				
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	E+D+M)*P)	(+ve or - ve)	Confidence			
	Degree to which impact can be reversed:	Existing/permit	ed access roads	s must be used	and the all othe	r measures	s must be follow	ved				
	Degree of impact on irreplaceable resources:	Area already dis	sturbed and rout	te follows existi	ng power line							
	Nature of impact:	Removal of veg	etation due to s	ervitudes, acces	ss roads and ere	cting of th	e pylons					
	With	1	1	4	3	18	Low	-	High			
Vegetation	Without	1	1	-	High							
clearance	Degree to which impact can be reversed:	Existing/permit	isting/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:	Area already dis	Area already disturbed and route follows existing power line									
	Nature of impact:	Vegetation clea	ring or disturbar	nce may and ha	ve been fond to	increase e	encroachment/ c	cumulative im	npact			
	With	2	2	4	5	40	Medium	-	High			
Plant	Without	2	2	4	5	40	Medium	-	High			
encroachment	Degree to which impact can be reversed:	Existing/permiti	ed access roads	s must be used	and the all othe	r measures	s must be follow	ved				
	Degree of impact on irreplaceable resources:	Area already dis	sturbed and rout	te follows existi	ng power line							
	Nature of impact:	Disturbance of an area with high biodiversity will increase the probability of encroachment and biodiversity will be lost.										
Threat to	With	1	3	2	3	18	Low	-	High			
biodiversity	Without	1	4	4	5	45	Medium	-	High			
	Degree to which impact can be reversed:	Existing/permitted access roads must be used and the all other measures must be followed										

Potential		Extent	Duration	Magnitude	Probability	Si	ignificance	Status					
impact	Mitigation	(E)	(D)	(M)	(P)	(S=	(E+D+M)*P)	(+ve or - ve)	Confidence				
	Degree of impact on irreplaceable resources:	Area already d	sturbed and rou	ite follows existi	ng power line								
	Nature of impact:			the servitudes a sion (cumulative		ill increas	se the soil erosior	n as vegetatio	n plays a major role				
	With	1	1	2	3	12	Low	-	High				
	Without	1	3	4	5	40	Medium	-	High				
Soil erosion	Degree to which impact can be reversed:	Existing/permi	ing/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:		ea already disturbed and route follows existing power line/ already measures put in place for the I erosion from the existing line										
FAUNA													
	Nature of impact:	Adverse Impac	t										
Direct Impact	With	1	1	2	5	20	Low		High				
on associated	Without	2	1	4	5	35	Medium		High				
fauna and interactions with structures and	Degree to which impact can be reversed:		the tower pylor on within the cle		st be restricted t	to the 55	m servitude. Ref	nabilitation					
personnel	Degree of impact on irreplaceable resources:	Soutpansberg	Conservation are	ea, rivers (non-p	perennial draina	ge lines),	Provincial Nature seasonally inunc for several red l	dated pans,					
AVIFAUNA													
No decommission	ing impacts are antici	pated											
HERITAGE													
No decommission	ing impacts are antici	pated											
VISUAL													
Visual exposure to operations to	Nature of								ot have significant vis				

to the existence of the power line will decrease due to decommissioning.

impacts. Perceptions relating to the removal of visualy intrusive objects might be positive in as far as visual impacts related

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impact:

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to operations to

dismantle and

Potential		Extent	Duration	Magnitude	Probability	Si	gnificance	Status					
impact	Mitigation	(E)	(D)	(M)	(P)	(S=((E+D+M)*P)	(+ve or - ve)	Confidence				
remove of	With	3	1	2	3	18	Low	+	High				
Power Line & Substation	Without	3	1	4	3	24	Low	+	High				
Infrastructure	Degree to which impact can be reversed:	Avoid unnecess	ary disturbance	e of the natural	environment du	ring deco	mmissioning ope	rations					
	Degree of impact on irreplaceable resources:	None	2										
SOCIAL													
	Nature of impact:	Creating employ	eating employment expectations for job seekers										
	With mitigation	1	1	0	1	2	Low	-	Medium to high				
Influx of job	Without mitigation	1	2	2	2	10	Low	-	Medium to high				
seekers	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	: mitigation mea	sures							
	Degree of impact on irreplaceable resources:	Not Applicable											
	Nature of impact:	If toilet facilities	on site are not	well managed,	these can lead	to advers	e health impacts	to the surrou	inding communities				
Health Impacts as a result of	With mitigation	1	1	0	1	2	Low	-	Medium to high				
exposure to sewage from	Without mitigation	1	1	6	3	24	Low	-	Medium to high				
construction camps and on construction	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures							
camps	Degree of impact on irreplaceable resources:	Not Applicable	Not Applicable Where construction workers are infected with infectious diseases, these can be passed on to the community members or farm										
Health impacts from	Nature of impact:	Where construct workers in the a		h work is being	undertaken		can be passed o	n to the com	munity members or farm				
construction	With mitigation	1	1	2	2	8	Low	-					
sites and camps	Without	2	1	6	3	27	Low	-					

Potential		Extent	Duration	Magnitude	Probability	Sig	nificance	Status					
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	+D+M)*P)	(+ve or - ve)	Confidence				
as a result of	mitigation												
infectious diseases	Degree to which impact can be reversed:	High – with the	gh – with the implementation of the relevant mitigation measures t Applicable s possible that because of good relationships between contactors and community members, nega										
	Degree of impact on irreplaceable resources:	Not Applicable											
Conduct of	Nature of			nbers, negati	ve as well as positive								
construction workforce; Good	impact: With mitigation	actions can aris 2	e 1	-	Medium to high								
relationships between	Without mitigation	2	1	6	4	36	Low Medium	-	Medium to high				
community members/ farm workers and Eskom	Degree to which impact can be reversed:	High – with the	gh – with the implementation of the relevant mitigation measures										
Construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Degree of impact on irreplaceable resources:	Not Applicable											
Conduct of construction	Nature of impact:	These can resul	t from factors s	uch as differenc	es in beliefs and	l cultural b	ackgrounds						
workforce; Bad	With mitigation	2	1	2	2	10	Low	-	Medium to high				
relationships between community	Without mitigation	2	1	6	4	36	Medium	-	Medium to high				
members/ farm workers and Eskom	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures							
Construction workers leading to violence	Degree of impact on irreplaceable resources:	Not Applicable											

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Potential		Extent	Duration	Magnitude	Probability	Si	ignificance	Status				
impact	Mitigation	(E)	(D)	(M)	(P)	(S=	(E+D+M)*P)	(+ve or - ve)	Confidence			
	Nature of impact:	Material can be targeted by crir		sites where de	commissioning i	s taking _l	place as material	used in elect	ricity is often the			
	With mitigation	1	1	0	1	2	Low	-	Medium			
Theft of material from camps and	Without mitigation	2	1	8	4	44	Medium	-	Medium			
along construction sites	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	t mitigation mea	isures						
	Degree of impact on irreplaceable resources:	Not Applicable										
Negative	Nature of impact:		is possible that land owners eg lodge owners, game farmers owners for whom visual impacts are velihoods will oppose the project									
attitudes	With mitigation	2	1	2	2	10	Low	-	Medium			
towards the project and the	Without mitigation	2	1	6	3	27	Low	-	Medium			
formation of community groups, NGO's,	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	t mitigation mea	sures						
in response to the project;	Degree of impact on irreplaceable resources:	Not Applicable										
	Nature of impact:	This would be e	expected from la	ndowners who	are opposed to	the proje	ct					
	With mitigation	1	1	2	2	8	Low	-	Medium			
Land owners denying	Without mitigation	1	2	6	4	36	Medium	-	Medium			
contractors access to their properties	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	isures						
	Degree of impact on irreplaceable resources:	Not Applicable										
Loss of crops leading to	Nature of impact:	Land and crops	can be lost duri	ng the clearing	of the powerlin	e corridor	and during the o	construction o	of the powerline			
economic losses	With mitigation	1	1	2	2	8	Low	-	Medium to high			

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Potential		Extent	Duration	Magnitude	Probability	Si	gnificance	Status					
impact	Mitigation	(E)	(D)	(M)	(P)	(S=((E+D+M)*P)	(+ve or - ve)	Confidence				
	Without mitigation	1	3	6	4	40	Medium	-	Medium to high				
	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	: mitigation mea	sures							
	Degree of impact on irreplaceable resources:	Not Applicable											
	Nature of impact:	Grazing land are	azing land area can be lost due to clearing of land for the corridor as well as during the constru										
	With mitigation	1	1 2 2 8 Low -										
Loss of land	Without mitigation	1	3	6	4	40	Medium	-	Medium to high				
leading to economic losses	Degree to which impact can be reversed:	High – with the	igh – with the implementation of the relevant mitigation measures										
	Degree of impact on irreplaceable resources:	Not Applicable											
Impacts on	Nature of impact:	Construction ca	n disturb activit	ies on farms									
farming activities such	With mitigation	1	1	2	2	8	Low	-	Medium to high				
as sowing, harvesting, and	Without mitigation	1	1	8	3	30	Low	-	Medium to high				
fire management programmes	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	: mitigation mea	sures							
leading to economic losses	Degree of impact on irreplaceable resources:	Not Applicable	Not Applicable										
Damage to farm infrastructure	Nature of impact:	This can lead to	conflicts with c	ommunity mem	bers and farme	rs							
e.g. irrigation	With mitigation	1	1	2	1	4	Low	-	Medium to high				
equipment, gates, fences	Without mitigation	1	1	6	3	24	Low	-	Medium to high				

Potential		Extent	Duration	Magnitude	Probability	Sig	nificance	Status					
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	E+D+M)*P)	(+ve or - ve)	Confidence				
	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	: mitigation mea	sures							
	Degree of impact on irreplaceable resources:	Not Applicable											
	Nature of impact:	It is highly likel	y that theft of g	ame and stock	can occur. Theft	of game o	an be higher on	farms where	Rhino is present				
Security	With mitigation	1	1	-	Medium to high								
concerns as a result of	Without mitigation	1	1	10	4	48	Medium	-	Medium to high				
poaching of game, stock theft and crop	Degree to which impact can be reversed:	High – with the	gh – with the implementation of the relevant mitigation measures										
theft	Degree of impact on irreplaceable resources:	Not Applicable	Not Applicable										
	Nature of impact:	The mere prese threatened	nce of construct	tion workers in		d especiall	y on farms can	lead to unea	se and people may feel				
Security as a	With mitigation	1	1	2	2	8	Low	-	Medium to high				
result of the presence of	Without mitigation	2	1	8	3	33	Medium	-	Medium to high				
workers on pfarms and communities	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	: mitigation mea	sures							
Communicies	Degree of impact on irreplaceable resources:	Not Applicable											
	Nature of impact:												
Safety of	With mitigation	1	1	2	1	4	Low	-	Medium				
community members/farm	Without mitigation	1	1	6	2	16	Low	-	Medium				
workers/animals	Degree to which impact can be reversed:	High – with the	ligh – with the implementation of the relevant mitigation measures										

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Potential		Extent	Duration	Magnitude	Probability	Sigr	nificance	Status	
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	+D+M)*P)	(+ve or - ve)	Confidence
	Degree of impact on irreplaceable resources:	Not Applicable							
Poor maintenance of	Nature of impact:	It is possible tha	at access routes	line is not po	essible				
the power line	With mitigation	1	1	-	Medium to high				
access roads: conflict between	Without mitigation	1	4	8	4	52	Medium	-	Medium to high
Eskom and the landowners on whose responsibility it	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures			
is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Degree of impact on irreplaceable resources:	Not Applicable							

FLORA

AGRICULTURAL POTENTIAL

No cumulative impacts are anticipated

	Nature of impact:	Vegetation clea	ring or disturba	nce may and h	ave been for	nd to increase	e encroachmen	t/ cumulativ	e impact					
	With	1	1	2	3	12	Low	-	High					
Plant	Without	1	1 2 3 12 Low - High											
encroachment	Degree to which impact can be reversed:	Existing/permit	Existing/permitted access roads must be used and the all other measures must be followed											
	Degree of impact on irreplaceable resources:	Area already di	area already disturbed and route follows existing power line											

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Potential		Extent	Duration	Magnitude	Probability	Sig	nificance	Status				
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(I	E+D+M)*P)	(+ve or - ve)	Confidence			
	Nature of impact:	Removal of veg				ill increase	the soil erosion	as vegetatio	n plays a major role in			
	With	1	1	2	2	8	Low	-	High			
	Without	1	1	2	2	8	Low	-	High			
Soil erosin	Degree to which impact can be reversed:	can be Existing/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:		a already disturbed and route follows existing power line/ already measures put in place for the erosiom from the existing line									
FAUNA												
	Nature of impact:	Adverse Impact	lverse Impact									
	With	2	4	6	5	60	Medium		High			
	Without	2	4	6	5	60	Medium		High			
Loss of faunal habitat	Degree to which impact can be reversed:	Realign preferre activities to the		avoid sensitive	habitats and res	strict vegel	tation clearance	and				
	Degree of impact on irreplaceable resources:	The proposed al inundated pans, red listed fauna Python, Soutpan Wild Dog, Cheel	, rupicolous outo I species includi nsberg Flat Liza	crops, Northern ng Giant Bullfro rd, Muller's Velv	Mistbelt Forest g, Northern For	as well as est Rain Fr	suitable habitat og, Southern Af	for several rican				
	Nature of impact:	Adverse Impact										
Direct Impact	With	2	4	4	4	40	Medium		High			
on associated	Without	2	4	6	5	60	Medium		High			
fauna and interactions with structures and	Degree to which impact can be reversed:	Restrict construction activities to the 55m servitude. No intentional killing of any faunal species.										
personnel	Degree of impact on irreplaceable resources:	The proposed all Soutpansberg C rupicolous outcr species.										

Potential impact	Mitigation	Extent	Duration (D)	Magnitude (M)	Probability (P)	Significance (S=(E+D+M)*P)		Status (+ve or - ve)	Confidence		
		(E)									
AVIFAUNA											
No cumulative im	pacts are anticipated										
HERITAGE											
No cumulative im	pacts are anticipated										
VISUAL											
Impact 1:	Nature of impact:	Cumulative impacts result from the positioning of the new development such that it would give rise to an extended and/or intensified impression of a pre-existing power line in the landscape. It will also occur as an increased perception where power lines are observed from locations from which more than one power line would now be seen in different parts of the landscape. Lastly cumulative impacts arise through an increase in the incidence of sequential perceptions of different power lines through the recurrence of images and impressions of power lines at various points in the landscape and which are continuously encountered when moving through it.									
Increased visual	With	3	5	0	3	24	Low	-	Low		
exposure to Power Line	Without	3	5	6	5	70	High	-	High		
Infrastructure.	Degree to which impact can be reversed:	The impact can material. Active									
	Degree of impact on irreplaceable resources:	In areas of high and private nat									
SOCIAL											
Poaching of	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									
game impacting on the loss of	With mitigation	2	3	4	3	27	Low	-	Medium to high		
game and in turn affecting the tourism industry of the Municipality and that of the country at large	Without mitigation	5	5	8	4	72	High	-	High		
	Degree to which impact can be reversed:	Where possible, the construction operational pha									
	Degree of impact on irreplaceable resources:	The impact will									
Loss of a sense of place	Nature of impact:	Tourists visit plate them			in nature and th	ne presence	of powerlines of	can therefore	spoil this experience for		
resulting in	With mitigation	1	2	2	2	10	Low	-	Medium to high		

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Potential impact	Mitigation	Extent	Duration	Magnitude	Probability	Sigr	nificance	Status		
		(E)	(D)	(M)	(P)	(S=(E+D+M)*P)		(+ve or - ve)	Confidence	
economic losses especially for	Without mitigation	3	4	6	3	39	Medium	-	Medium to high	
tourism sector in turn impact on the economic	Degree to which impact can be reversed:	Liaise with Visus would be to use								
growth of the Makhado Municipality	Degree of impact on irreplaceable resources:	N/A	N/A							
Increase in power supply and in the stability of the network. In turn numerous existing developments	Nature of impact:	An increase in t electricity is on	cal Municipality as							
	With mitigation Without	3	4	6	4	52 52	Medium Medium	+	Medium to high Medium to high	
	mitigation Degree to which impact can be reversed:	N/A							Treatum to mgn	
such as lodges and other tourist attractions can be improved.	Degree of impact on irreplaceable resources:	N/A								

NO-GO ALTERNATIVE

AGRICULTURAL POTENTIAL

In the event that the transmission lines are not constructed, there will be no impact on the agricultural potential, therefore the status quo will remain.

FLORA

In the event that the transmission lines are not constructed, there will be no impact on the flora, therefore the status quo will remain.

FAUNA

In the event that the transmission lines are not constructed, there will be no impact on the fauna, therefore the status quo will remain.

AVIFAUNA

In the event that the transmission lines are not constructed, there will be no impact on the avifauna, therefore the status quo will remain.

HERITAGE

In the event that the transmission lines are not constructed, there will be no impact on heritage sites, therefore the status quo will remain.

VISUAL

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Potential impact	Mitigation	Extent	Extent Duration		Probability	Significance		Status			
		(E)	(D)	(M)	(P)	(S=(E	S = (E + D + M) * P)		Confidence		
In the event that	the transmission lines	are not construc	ted, there will b	e no visual imp	act, therefore th	ne status q	uo will remain.				
SOCIAL											
Not constructing the Powerlines linking the Tabor	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									
substation to	with	2	1	2	1	5	Low	-	Medium to high		
the new Bokmakirie	without	4	5	8	3	51	Medium	-	Medium to high		
(Nzhelele) Substation	degree to which impact can be reversed:	Construct the po									
	degree of impact on irreplaceable resources:	N/A									
No increase in the voltage	Nature of impact:	The voltage is currently unstable. This can result in impacts such as electrical equipment being shut down leading to effect such as loss of data and the inability to undertake certain activities on farms etc.									
stability	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									
	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	Nature of impact:	An unreliable elemanufacturing, Municipality ma	e agricultural, tourism, the Makhado								
	with	1	1	2	1	4	Low	-	Medium		
	without	3	5	8	4	64	High	-	Medium		
	degree to which impact can be reversed:	Increase electric and ensure that	ower line								
allowing for the undertaking of	degree of impact on irreplaceable	N/A									
				0.26							

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Potential		Extent	Duration	Magnitude	Probability	Signif	icance	Status	
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E+D)+M)*P)	(+ve or - ve)	Confidence
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	resources:								
Continuation of	Nature of						es. The rend	ering of serv	ices that require the use
backlogs in electricity	impact: with	of electricity is i	mpossible when	there is no elec	2	14	Low	-	
connections	without	3	4	8	4	60	Medium	-	
	degree to which impact can be reversed:	The Makhado Lo increased budge adequate mater	ets to allow for a						
	degree of impact on irreplaceable resources:	N/A							
Continuation of the inadequate	Nature of impact:	In services such	as health facil	ities, lack of ele	ctricity can resu	It in losses of	lives		
provision of	with	1	1	0	2	4 L	ow	-	Medium to high
electricity to critical services	without	3	5	10	4	72 H	ligh	-	Medium to high
such as health facilities	degree to which impact can be reversed:	The necessity of that adverse im			imperative and	the proposed	d powerline c	an ensure	
	degree of impact on irreplaceable resources:	N/A							
Continuation of	Nature of	A lack of electric	city means that	the lifestyles wi	thin this rural a	rea will contir	ue. These in	clude the cut	ting of trees to use the

Potential		Extent	Duration	Magnitude	Probability	Sign	nificance	Status	
impact	Mitigation	(E)	(D)	(M)	(P)	(S=(E	(S=(E+D+M)*P)		Confidence
the unavailability of	impact:	wood for heating of protected spe	-	The cutting of tr	ees has numero	ous adverse	impacts such a	s deforestat	ion and the possible loss
electricity in	with	1	1	2	2	8	Low	-	Medium
numerous rural settlements	without	3	5	8	4	64	High	-	Medium
Sectionicity	degree to which impact can be reversed:	Provide electrici	ty to rural areas	5					
	degree of impact on irreplaceable resources:	N/A							

Table 9.2: Detailed assessment of identified impacts for alternative 1a

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
Construction ph	ase								
Agricultural pot	ential								
Deterioration of soil resource	Nature of impact:	Loss of agricultu	ıral land due to	construction of	infrastructure				
	With	1	4	0	2	10	Low	-	
	Without	1	4	2	3	21	Low	-	
	Degree to which impact can be reversed:	Reversal should	be straightforw	vard after remov	val of infrastruct	ture			
	Degree of impact on irreplaceable resources:	Low to none							
Deterioration of soil resource	Nature of impact:	Soil erosion haz	ard due to cons			_			
	With	1	1	2	2	8	Low	-	
	Without	2	2	4	3	24	Low	-	
	Degree to which impact can be reversed:	If erosion is cau	sed, reversal is	often difficult a	ind time-consun	ning, especi	ally in steeper a	areas	
	Degree of impact on irreplaceable resources:	Moderate							
Flora									
Destruction of protected flora	Nature of impact:	Removal of prot	ected plant spe	cies due to the	servitude				
	With	1	5	2	5	40	Medium	-	High
	Without	1	5	2	5	40	Medium	-	High
	Degree to which impact can be reversed:	Existing/permitt	ed access roads	s must be used	and the all othe	er measures	must be follow	ed	

Potential		Extent	Duration	Magnitude	Probability	Signific	ance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	,	Area already disturbed and route follows existing power line Destruction and disturbance of a previously undisturbed vegetation									
Destruction of pristine habitat	Nature of impact:	Destruction and	d disturbance of	a previously ur	ndisturbed veget	ation						
	With	1	1	2	2	8	Low	-	High			
	Without	1	1	2	2	8	Low	-	High			
	Degree to which impact can be reversed:	2				er measure	es must be follov	ved				
	Degree of impact on irreplaceable resources:	,	Area already disturbed and route follows existing power line									
Vegetation clearance	Nature of impact:	Removal of veg	getation due to s	servitudes, acce	ss roads and er	ecting of th	ne pylons					
	With	1	1	2	5	20	Low	-	High			
	Without	1	1	2	5	20	Low	-	High			
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all othe	er measure	es must be follov	ved				
	Degree of impact on irreplaceable resources:	The servitude h	nas to be kept cl	lear at all times	(bush clearing)							
Plant encroachment	Nature of impact:	Vegetation clea	aring or disturba	nce may and ha	ave been fond to	increase	encroachment					
	With	1	1	2	2	8	Low	-	High			
	Without	1	1	2	2	8	Low	-	High			
	Degree to which impact can be reversed:	2				er measure	es must be follov	ved				
	Degree of impact on irreplaceable resources:		sting powerline									
Threat to biodiversity	Nature of impact:	Disturbance of	an area with hig	gh biodiversity v	will increase the	probability	of encroachme	nt and biodiv	ersity will be lost.			

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Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	i+m)*p)	(+ve or - ve)	Confidence		
	With	1	1	2	2	8	Low	-	High		
	Without	1	1	2	2	8	Low	-	High		
	Degree to which impact can be reversed:	Existing/permit	kisting/permitted access roads must be used and the all other measures must be followed								
	Degree of impact on irreplaceable resources:	,	rea already disturbed and route follows existing power line								
Soil erosion	Nature of impact:	Removal of veg preventing/min				will increase	e the soil erosio	n as vegetat	ion plays a major role in		
	With	1	1	2	2	8	Low	-	High		
	Without	1	1	2	3	12	Low	-	High		
	Degree to which impact can be reversed:	Existing/permit	ted access roads	s must be used	and the all othe	r measures	s must be follow	ed			
	Degree of impact on irreplaceable resources:	Area already di soil erosion fror			ing power line/	already me	easures put in p	lace for the			
Fauna											
Loss of faunal habitat	Nature of impact:	Adverse impact									
	With	2	4	6	5	60	Medium	- !	High		
	Without	2	4	6	5	60	Medium	-	High		
	Degree to which impact can be reversed:	the 55m servitu	ide.			_	n clearance and				
	Degree of impact on irreplaceable resources:	inundated pans species includir dog, cheetah ar	dedium-high the proposed alignment bisects rivers (non-perennial drainage lines), seasonally nundated pans, rupicolous/rocky outcrops as well as suitable habitat for several red listed faunal pecies including giant bullfrog, muller's velvet gecko, ground pangolin, brown hyaena, lion, wild og, cheetah and white rhinoceros								
Direct impact on associated	Nature of impact:	Adverse impact									
fauna and		2	4	4	4	40	Medium	-	High		
interactions with											

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	2	(+ve or - ve)	Confidence			
structures and personnel	Degree to which impact can be reversed:		Restrict construction activities to the 55m servitude. No intentional killing of any faunal species.									
	Degree of impact on irreplaceable resources:		e proposed alternative alignment 1a bisects rivers (non-perennial drainage lines), seasonall indated pans, rupicolous outcrops as well as suitable habitat for several red listed faunal species.									
Avifauna												
Habitat destruction	Nature of impact:	Permanent rem		hat is used, or		y avifauna.						
	With	1	2	4	3	21	Low	-	Medium			
	Without	1	2	4	5	35	Medium	-	Medium			
	Degree to which impact can be reversed:	Partially reversi	ble									
	Degree of impact on irreplaceable resources:	Low										
Disturbance	Nature of impact:	Noise and move	ement, from staf	ff and machiner		avifauna, ar	nd nests my be	disturbed.				
	With	1	1	4	3	18	Low	-	Medium			
	Without	2	1	4	4	28	Low	-	Medium			
	Degree to which impact can be reversed:	Irreversible										
	Degree of impact on irreplaceable resources:	Medium										
Heritage												
Destruction of	Nature of impact:	Adverse impact	on a identified	heritage sites a	long alternative							
heritage sites	With mitigation	3	5	2	5	50	Medium	-	High			
and features	Without mitigation	3	5	10	5	90	High	-	High			

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Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
	Degree to which impact can be reversed:	Medium							High
	Degree of impact on irreplaceable resources:	Not applicable							High
Visual									
Transformation of the visual quality of the	Nature of impact:								naracter, especially in the will create adverse visual
landscape	With	3	2	6	5	55	Medium	-	High
	Without	3	2	6	5	55	Medium	-	High
	Degree to which impact can be reversed:	The impact car material. Active						construction	
	Degree of impact on irreplaceable	In areas of high private nature r					ich as the soupa	nsberg and	
	resources:	private riatare r	escrives, the de	gree or impact	will be very high	۱.			
Social	-	private natare i	eserves, the de	gree or impact	will be very high	1.			
Social Theft of material from camps and	-		stolen from co	nstruction sites	and in areas al		ute especially as	s material us	sed in powerlines is often
Theft of material from camps and along	resources: Nature of	Material can be	stolen from co	nstruction sites	and in areas al		ute especially as	s material us	sed in powerlines is often Medium
Theft of material from camps and along construction	Nature of impact:	Material can be stolen even alor	stolen from co	nstruction sites	and in areas al	ong the ro			
Theft of material from camps and along	Nature of impact:	Material can be stolen even alor	stolen from cong powerlines the 1	nstruction sites nat are in opera 0 8	and in areas altion	ong the rou	Low		Medium
Theft of material from camps and along construction	Nature of impact: With Without Degree to which impact can be	Material can be stolen even alor 1 2 High – with imp	stolen from cong powerlines the state of the	nstruction sites nat are in opera 0 8 relevant mitigat	and in areas altion 1 4 cion measures	ong the rou	Low Medium	-	Medium Medium
Theft of material from camps and along construction	Nature of impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable	Material can be stolen even alor 1 2 High – with imp	stolen from cong powerlines the state of the	nstruction sites nat are in opera 0 8 relevant mitigat	and in areas altion 1 4 cion measures	ong the rou	Low Medium	-	Medium
Theft of material from camps and along construction sites	Nature of impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable resources: Nature of impact:	Material can be stolen even alor 1 2 High – with imp	stolen from cong powerlines the state of the	nstruction sites nat are in opera 0 8 relevant mitigat	and in areas altion 1 4 cion measures	ong the rou	Low Medium	-	Medium Medium

Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
formation of community groups, NGO's,	Degree to which impact can be reversed:	High – with imp	lementation of r	relevant mitigat	ion measures						
in response to the project;	Degree of impact on irreplaceable resources:	N/A									
Land owners denying	Nature of impact:	This would be e	is would be expected from landowners who are opposed to the project								
contractors	With	1	1	2	2	8	Low	-	Medium		
access to their properties	Without	1	2	6	4	36	Medium	-	Medium		
properties	Degree to which impact can be reversed:	High – with imp	lementation of r	relevant mitigat	ion measures						
	Degree of impact on irreplaceable resources:	N/A									
Loss of crops leading to	Nature of impact:	Land and crops	can be lost duri	ng the clearing	of the powerline	e corridor a	nd during the co	onstruction o	f the powerline		
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:	High – with imp	lementation of r	relevant mitigat	ion measures						
	Degree of impact on irreplaceable resources:	N/A									
Loss of land leading to	Nature of impact:	Grazing land are	Grazing land area can be lost due to clearing of land for the corridor as well as during the constructi								
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:	High – with imp	lementation of r	relevant mitigat	ion measures						

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Potential		Extent	Duration	Magnitude	Probability	Significa	ınce	Status		
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	l+m)*p)	(+ve or - ve)	Confidence	
	Degree of impact on irreplaceable resources:	N/A								
Impacts on farming	Nature of impact:	Construction ca	n disturb activit	ies on farms						
activities such	With	1	1	2	2	8	Low	-	Medium to high	
as sowing, harvesting, and	Without	1	1	8	3	30	Low	-	Medium to high	
fire management programmes	Degree to which impact can be reversed:	High – with imp	lementation of I	relevant mitiga	cion measures					
leading to economic losses	Degree of impact on irreplaceable resources:	N/A								
Damage to farm infrastructure	Nature of impact:	This can lead to	conflicts with c	ommunity men	nbers and farme	rs				
e.g. irrigation	With	1	1	2	1	4	Low	-	Medium to high	
equipment, gates, fences	Without	1	1	6	3	24	Low	-	Medium to high	
J ,	Degree to which impact can be reversed:	High – with imp	lementation of I	relevant mitiga	tion measures					
	Degree of impact on irreplaceable resources:	N/A								
Security concerns as a	Nature of impact:	It is highly likel	y that theft of g	ame and stock	can occur. Theft	of game c	an be higher on	farms where	rhino is present	
result of	With	1	1	2	4	16	Low	-	Medium to high	
poaching of game, stock	Without	1	1	10	4	48	Medium	-	Medium to high	
theft and crop theft	Degree to which impact can be reversed:	High – with imp								
	Degree of impact on irreplaceable resources:	The impact can								
Security as a result of the	Nature of impact:	The mere prese threatened	The mere presence of construction workers in communities and especially on farms can lead to unease and people may hreatened							

Potential		Extent	Duration	Magnitude	Probability	Signifi	cance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	+d+m)*p)	(+ve or - ve)	Confidence			
presence of	With	1	1	2	2	8	Low	-	Medium to high			
workers on farms and	Without	2	1	8	3	33	Medium	-	Medium to high			
communities	Degree to which impact can be reversed:	High – with imp	gh – with implementation of relevant mitigation measures									
	Degree of impact on irreplaceable resources:	N/a										
Safety of community	Nature of impact:	Construction sit	es are highly ha	zardous enviro	nments and the	safety of	people and anir	nals can be co	mpromised			
members/farm	With	1	1	2	1	4	Low	-	Medium			
workers/animals	Without	1	1	6	2	16	Low	-	Medium			
	Degree to which impact can be reversed:	High – with imp	lementation of I	relevant mitiga	tion measures							
	Degree of impact on irreplaceable resources:	N/a	a									
Poor maintenance of	Nature of impact:	It is possible the	It is possible that access routes can be of such poor state that maintenance of the powerline is not p									
the power line	With	1	1	2	2	8	Low	-	Medium to high			
access roads: conflict between	Without	1	4	8	4	52	Medium	-	Medium to high			
eskom and the landowners on whose	Degree to which impact can be reversed:	High – with imp	lementation of I	relevant mitiga	tion measures		·					
responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect eskom to pay for all maintenance	Degree of impact on irreplaceable resources:	N/a										

Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	i+m)*p)	(+ve or - ve)	Confidence
Loss of a sense of place/income	Nature of impact:	The presence of be spoilt	powerlines par	ticularly in touri	ist attractions ca	an result in	tourists no long	jer visiting th	e area as their views will
on game farms	With	1	1	2	2	8	Low	-	Medium to high
- tourists want to see	Without	1	1	8	4	40	Medium	-	Medium to high
"africa"and the power line can disturb the	Degree to which impact can be reversed:	High – with imp	lementation of r	elevant mitigat	ion measures				
rustic african setting;	Degree of impact on irreplaceable resources:	N/A							

Operation phase

Agricultural potential

It is anticipated that the main impacts on agricultural potential will occur during the construction phase

Flora Destruction of of Removal of protected plant species due to the servitude **Nature** protected flora impact: With 2 2 1 1 8 High Low Without High Low Existing/permitted access roads must be used and the all other measures must be followed Degree to which impact can be reversed: Degree of impact Area already disturbed and route follows existing power line on irreplaceable resources: Removal of vegetation due to servitudes, access roads and erecting of the pylons Destruction of Nature impact: pristine habitat High 1 1 2 2 With 8 Low 8 Without Low High Existing/permitted access roads must be used and the all other measures must be followed Degree to which impact can be

		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
Potential impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
	reversed:								
	Degree of impact on irreplaceable resources:	Area already dis	sturbed and rou	te follows existi	ing power line/ v	virtually no	pristine habitat		
Vegetation clearance	Nature of impact:					J	e pylons		
	With	1	4	2	2	14	Low	-	High
	Without	1	5	2	2	16	Low	-	High
	Degree to which impact can be reversed:	371			and the all othe		must be follow	ed	
	Degree of impact on irreplaceable resources:	The servitude h	•						
Plant encroachment	Nature of impact:	Vegetation clea	pact						
	With	1	1	2	2	8	Low	-	High
	Without	1	1	2	2	8	Low	-	High
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all othe	er measures	must be follow	ed	
	Degree of impact on irreplaceable resources:	There is an exis	ting powerline a	and encroachme	ent is likely				
Threat to biodiversity	Nature of impact:	Disturbance of	an area with hig	ıh biodiversity v	vill increase the	probability	of encroachmer	nt and biodive	ersity will be lost.
	With	1	1	2	2	8	Low	-	High
	Without	1	1	2	2	8	Low	-	High
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all othe	er measures	must be follow	ed	
	Degree of impact on irreplaceable	Area already di	sturbed and rou	te follows existi	ing power line				

Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
	resources:											
Soil erosion	Nature of impact:	Removal of veg preventing/mini				vill increase	the soil erosion	n as vegetat	ion plays a major role in			
	With	1	1	2	2	8	Low	-	High			
	Without	1	1	2	2	8	Low	-	High			
	Degree to which impact can be reversed:	Existing/permit	ting/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:		a already disturbed and route follows existing power line/ already measures put in place for the erosion from the existing line									
Fauna												
Loss of faunal habitat with		Adverse impact										
clearance of	With	1	4	4	5	45	Medium		High			
vegetation within the 55m	Without	2	4	6	5	60	Medium		High			
servitude	Degree to which impact can be reversed:	The clearance species impacti the servitude s (especially arbo	ng which could hould not be to real species)	potential impactally removed	ct on the lines s providing refuge	should be r e habitat fo	emoved. The ve or remaining fac	egetation of inal species				
	Degree of impact on irreplaceable resources:	The proposed a inundated pans species includin dog, cheetah ar	, rupicolous/roc g giant bullfrog nd white rhinoce	ky outcrops as , muller's velv	well as suitabl	e habitat fo	or several red l	isted faunal				
Direct impact on associated	impact:	Adverse impact										
fauna and	With	1	4	4	4	36	Medium					
interactions with structures and	Without	2	4	6	5	60	Medium					
personnel	Degree to which impact can be reversed:											

Potential		Extent	Duration	Magnitude	Probability	Signific	ance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence
	Degree of impact on irreplaceable resources:	inundated pans	, rupicolous/roc ig giant bullfrog	ky outcrops as g, muller's velv	well as suitable	e habitat i	drainage lines), for several red l n, brown hyaena	isted faunal	
Avifauna									
Collision	Nature of impact:	Collision or red	data species wit						
	With	1	4	2	3	21	Low		Medium
	Without	1	4	4	4	36	Medium		Medium
	Degree to which impact can be reversed:	Low							
	Degree of impact on irreplaceable resources:	Medium							
Electrocution	Nature of impact:	Bird perches on live and earthed					bridging the air	gap betweer	n live components and/or
	With	1	4	2	3	21	Low		Medium
	Without	1	4	4	4	36	Medium		Medium
	Degree to which impact can be reversed:	Low							
	Degree of impact on irreplaceable resources:	Medium							
Nesting of birds on tower	Nature of impact:	Routine mainter				disturband	ce of certain bird	species	
structures and	With	1	2	4	2	14	Low		Medium
disturbance during routine	Without	2	2	4	3	24	Low		Medium
maintenance	Degree to which impact can be reversed:	High							
	Degree of impact on irreplaceable resources:	Medium							
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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d		(+ve or - ve)	Confidence			
Heritage												
It is anticipated th	nat the main impacts of	on heritage will o	ccur during the	construction ph	ase							
Visual												
Visual exposure to the powerline servitude, conductor cables and	Nature of impact:	will create adve proximity (<50	erse visual imp Om) are highly	acts, especially vulnerable to	in and close to exposure of the	o private n e power line	ature reserves. e, where visibili	Sensitive y ty result in a	the nzhelele substation, viewer locations in close a negative impact on the visual effects of glare and			
towers, as well	With	3	5	6	5	70	High	-	High			
as the nzhelele substation.	Without	3	4	6	5	65	High	-	High			
Substation.	Degree to which impact can be reversed:	proximity to se option.	ne impact can be reversed by avoiding the unnecessary removal of vegetation and avoiding oximity to sensitive viewer locations through careful route planning, or by selecting the no-go obtion. areas of high visual quality and where there are no hy power lines, such as the soupansberg and									
	Degree of impact on irreplaceable resources:	In areas of high private nature r					ch as the soupa	insberg and				
Social	-	I —.										
Perceived electromagnetic	Nature of impact:	The presence of on some proper		orkers can resu	ılt in the treat o	of safety and	d can possibly le	ead to actual	crimes being committed			
fields impacts	With mitigation	1	3	2	1	6	Low	-	Medium			
on humans and animals during	Without mitigation	1	5	4	2	20	Low	-	Medium			
the operational phase	Degree to which impact can be reversed:	High – with the	implementation	n of the relevant	: mitigation mea	asures						
	Degree of impact on irreplaceable resources:	N/a										
Loss of a sense of place/income	Nature of impact:	The presence of be spoilt	f powerlines par	ticularly in tour	ist attractions ca	an result in	tourists no long	jer visiting th	e area as their views will			
on game farms	With mitigation	1	1	2	3	12	Low	-	Medium			
to urists wantsee "africa"	Without mitigation	3	4	8	4	60	Medium	-	High			

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
and the power line can disturb the rustic	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	t mitigation mea	asures						
african setting;	Degree of impact on irreplaceable resources:	N/a										
Poor maintenance of	Nature of impact:	It is possible tha	at access routes	line is not po	ssible							
the power line	With mitigation	1	1	-	Medium to high							
access roads: conflict between	Without mitigation	1	4	8	4	52	Medium	-	Medium to high			
eskom and the landowners on whose responsibility it	Degree to which impact can be reversed:	High – with the	h – with the implementation of the relevant mitigation measures									
is to do maintenance on these roads. Farmers use it more often but yet expect eskom to pay for all maintenance	Degree of impact on irreplaceable resources:	N/A										
Impact of the power lines on	Nature of impact:	Where powerling	es are not visibl	le or known, pla	ne crashes can	result and i	n turn electricit	y outages ma	ay occur			
aircraft as there	With mitigation	1	2	2	2	10	Low	-	Medium to high			
are airports within the study area; one is the	Without mitigation	4	5	6	4	60	Medium	-	Medium to high			
louis trichardt airport and the other is for light	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	t mitigation mea	asures						
aircraft on the road towards waterpoort from louis trichardt	Degree of impact on irreplaceable resources:	N/a		9-52								

Potential		Extent	Duration	Status							
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	i+m)*p)	(+ve or - ve)	Confidence		
Decrease in property values	Nature of impact:	These can lead	to economic los	ses							
and number of	With mitigation	1	3	4	1	8	Low	-	Medium to high		
visitors to lodges and other areas that	Without mitigation	2	5	6	3	39	Medium	-	Medium to high		
are popular with tourists due to the visual	Degree to which impact can be reversed:	Vegetation can impact specialis		with visual							
impacts of powerlines	Degree of impact on irreplaceable resources:	N/a									
Security issues as a result of	Nature of impact:										
the presence of maintenance	With mitigation	1	1	2	2	8	Low	-	Medium to high		
workers on properties	Without mitigation	1	1	4	4	24	Low	-	High		
properties	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	: mitigation mea	asures					
	Degree of impact on irreplaceable resources:	The impact can	be high where o	endangered spe	cies such as rhi	no occur					
Land owners denying	Nature of impact:	This can result i	n maintenance	not occurring			_				
contractors access to their	With mitigation	1	1	2	2	8	Low	-	Medium		
properties	Without mitigation	1	1	8	4	40	Medium	-	High		
	Degree to which impact can be reversed:	High – with the	High – with the implementation of the relevant mitigation measures								
	Degree of impact on irreplaceable resources:	N/a									

Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
Poaching of game as well as	Nature of impact:	This is a high pr	robability					-				
stock theft and	With mitigation	1	1	0	1	2	Low	-	Medium to high			
theft of crops	Without mitigation	1	1	2	2	8	Low	-	Medium to high			
	Degree to which impact can be reversed:	High – with the	h – with the implementation of the relevant mitigation measures									
	Degree of impact on irreplaceable resources:	N/a										
Impact on farming	Nature of impact:	During the oper	ing the operational phase, impacts on farm activities are likely to be very minimal									
activities such as sowing,	With mitigation	1	1	0	1	2	Low	-	Medium to high			
harvesting, and	Without mitigation	1	1	2	1	4	Low	-	Medium to high			
fire management programmes	Degree to which impact can be reversed:	High – with the	implementation	of the relevan	t mitigation mea	asures						
leading to economic losses	Degree of impact on irreplaceable resources:	N/a										
Impact on farming	Nature of impact:	During the oper very minimal	rational phase,	impacts on ac	tivities and on	guests to I	odges and othe	r tourist des	tinations are likely to be			
activities such as hunting in	With mitigation	1	1	0	1	2	Low	-	Medium to high			
game farms	Without mitigation	1	1	2	1	4	Low	-	Medium to high			
leading to economic losses. Impacts can also be on	Degree to which impact can be reversed:	High – with the	ligh – with the implementation of the relevant mitigation measures									
guests in lodges leading to economic losses	Degree of impact on irreplaceable resources:	N/a										
Increase in the voltage stability	Nature of impact:	An increased vo	n increased voltage will ensure that activities that were not able to take place will be possible									

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Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	d+m)*p)	(+ve or - ve)	Confidence				
	With mitigation												
	Without mitigation	3	5	8	5	80	High	+	Medium				
	Degree to which impact can be reversed:	N/a											
	Degree of impact on irreplaceable resources:	N/a	a										
An assurance of a reliable	Nature of impact:	Reliable electric	liable electricity supply is a positive impact that will improve activities such as tourism in the ma										
electricity	With mitigation	3	4	2	4	36	Medium	+	Medium				
supply	Without mitigation	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	Nature of impact:	In order to grow	w the economy	of the makhado	local municipal	ity, electric	ity is vital						
supply making it	With mitigation												
available for agriculture,	Without mitigation	3	5	8	5	80	High	+	Medium				
tourism and other industries. The increase in electricity can	Degree to which impact can be reversed:	N/a											
also allow for the undertaking of other activities that may have been that may not have been possible prior to	Degree of impact on irreplaceable resources:	N/a											

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
the improved electricity supply									
No more backlogs in	Nature of impact:	The absence of present will be		ectricity conne	ctions can mea	ns that act	ivities that can	only take p	place where electricity is
electricity	With mitigation								
connections	Without mitigation	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	Nature of impact:				_				
electricity to	With mitigation								
services such as health facilities will cease	Without mitigation	3	5	8	5	80	High	+	Medium
wiii cease	Degree to which impact can be reversed:	N/a							
	Degree of impact on irreplaceable resources:	N/a							
Electricity will be available to	Nature of impact:	The presence of	f electricity to ru	ıral areas will ir	nprove the lives	of many w	ho live in pover	ty	
numerous rural	With mitigation								
settlements that do not have this	Without mitigation	3	5	8	5	80	High	+	Medium
service	Degree to which impact can be reversed:	N/a							

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Potential		Extent	Duration	Magnitude	Probability	Significance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)	(+ve or - ve)	Confidence
	Degree of impact on irreplaceable resources:	N/a						
Decommission	ing phase							
Agricultural po	tential							

No decommissioning impacts are anticipated

Flora	ora												
Destruction of protected flora	Nature of impact:	Removal of prot	ected plant spe	cies due to the	servitude								
	With	1	1	2	3	12	Low	-	High				
	Without	1	1	2	3	12	Low	-	High				
	Degree to which impact can be reversed:	Existing/permitt	ed access roads	ed									
	Degree of impact on irreplaceable resources:	•	already disturbed and route follows existing power line										
Destruction of pristine habitat	Nature of impact:	Removal of veg	etation due to se	ervitudes, acces	ss roads and ere	cting of the	e pylons						
	With	1	1	2	2	8	Low	-	High				
	Without	1	1	2	2	8	Low	-	High				
	Degree to which impact can be reversed:	Existing/permitt	ed access roads	must be used	and the all othe	r measures	must be followed	ed					
	Degree of impact on irreplaceable resources:	Area already dis	rea already disturbed and route follows existing power line/ virtually no pristine habitat										
Vegetation clearance	Nature of impact:	Removal of veg	demoval of vegetation due to servitudes, access roads and erecting of the pylons										
	With	1	1	2	5	20	Low	-	High				
	Without	1	1 2 5 20 Low - High										

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d		(+ve or - ve)	Confidence			
	Degree to which impact can be reversed:	Existing/permit					must be follow	ed				
	Degree of impact on irreplaceable resources:	The servitude h	·		,							
Plant encroachment	Nature of impact:	Vegetation clea	ring or disturba	nce may and ha	ave been fond to	increase e	ncroachment/ c	umulative im	pact			
	With	1	1	-	High							
	Without	1	1	2	2	8	Low	-	High			
	Degree to which impact can be reversed:		isting/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:	There is an exis			•							
Threat to biodiversity	Nature of impact:	Disturbance of a	an area with hig	jh biodiversity v	vill increase the	probability	of encroachmer	nt and biodiv	ersity will be lost.			
	With	1	1	2	2	8	Low	-	High			
	Without	1	1	2	2	8	Low	-	High			
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all othe	er measures	must be follow	ed				
	Degree of impact on irreplaceable resources:	Area already dis			- '							
Soil erosion	Nature of impact:		emoval of vegetation due to the servitudes and servitudes will increase the soil erosion as vegetation reventing/minimising soil erosion (cumulative impact)									
	With	1	1	2	2	8	Low	-	High			
	Without	1	1	2	3	12	Low	-	High			
	Degree to which impact can be reversed:	Existing/permitted access roads must be used and the all other measures must be followed										

Potential		Extent	Duration	Magnitude	Probability	Signific	cance	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence				
	Degree of impact on irreplaceable resources:	Area already dis soil erosion fror			ng power line/	already m	eausures put in	place for the					
Fauna													
Direct impact on associated	Nature of impact:	Adverse impact											
fauna and	With	1	1	2	5	20	Low		High				
interactions with structures and	Without	2	1	4	5	35	Medium		High				
personnel	Degree to which impact can be reversed:		moval of the tower pylons and lines must be restricted to the 55m servitude. Rehabilitation vegetation within the cleared servitude.										
	Degree of impact on irreplaceable resources:	inundated pans species includir	proposed alternative alignment 1a bisects rivers (non-perennial drainage lines), seasonally ndated pans, rupicolous/rocky outcrops as well as suitable habitat for several red listed faunal cies including giant bullfrog, muller's velvet gecko, ground pangolin, brown hyaena, lion, wild , cheetah and white rhinoceros										
Avifauna													
No decommission	ing impacts are anticip	oated											
Heritage													
No decommission	ing impacts are anticip	pated											
Visual													
Visual exposure to operations to dismantle and	Nature of impact:		ptions relating	to the removal					ot have significant visual as visual impacts will be				
remove of	With	3	1	2	3	18	Low	+	High				
power line & substation	Without	3	1	2	3	18	Low	+	High				
infrastructure	Degree to which impact can be reversed:	Avoid unnecess	ary disturbance	of the natural	environment du	iring deco	mmissioning ope	erations					
	Degree of impact on irreplaceable resources:	None											
Social													
Theft of material	Nature of	Material can be	stolen from t	he sites where	decommissioni	na is tak	ing place as ma	atorial usod i	n electricity is often the				

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Potential		Extent	Duration	Magnitude	Probability	Signific	ance	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence		
from camps and	impact:	targeted by crir	ninals		•						
along construction	With mitigation	1	1	0	1	2	Low	-	Medium		
sites	Without mitigation	2	1	8	4	44	Medium	-	Medium		
	Degree to which impact can be reversed:	High – with the	gh – with the implementation of the relevant mitigation measures								
	Degree of impact on irreplaceable resources:	N/A	A								
Loss of crops leading to	Nature of impact:	Crops can be lo	ops can be lost during this phase as the activities are almost as intense as those during the constru								
economic losses	With mitigation	1	1	2	2	8	Low	-	Medium to high		
	Without mitigation	1	3	6	4	40	Medium	-	Medium to high		
	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	t mitigation mea	sures					
	Degree of impact on irreplaceable resources:	N/a									
Impacts on farming	Nature of impact:	Decommissionir	ng can disturb a	ctivities on farn	าร						
activities such	With mitigation	1	1	2	2	8	Low	-	Medium to high		
as sowing, harvesting, and fire	Without mitigation	1	1	8	3	30	Low	-	Medium to high		
management programmes leading to	Degree to which impact can be reversed:	High – with the	High – with the implementation of the relevant mitigation measures								
economic losses	Degree of impact on irreplaceable resources:	N/a									
Damage to farm infrastructure	Nature of impact:	This can lead to	conflicts with c	ommunity mem	nbers and farme	rs					
e.g. irrigation	With mitigation	1	1	2	1	4	Low	-	Medium to high		

Potential		Extent	Duration	Magnitude	Probability	Signific	ance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence			
equipment, gates, fences	Without mitigation	1	1	6	3	24	Low	-	Medium to high			
	Degree to which impact can be reversed:	High – with the	implementation	of the relevan	t mitigation mea	asures						
	Degree of impact on irreplaceable resources:	N/a										
Security concerns as a	Nature of impact:	It is highly likely	y that theft of g	rhino is present								
result of	With mitigation	1	1	2	4	16	Low	-	Medium to high			
poaching of game, stock	Without mitigation	1	1	10	4	48	Medium	-	Medium to high			
theft and crop theft	Degree to which impact can be reversed:	High – with the	igh – with the implementation of the relevant mitigation measures									
	Degree of impact on irreplaceable resources:	The impact can	The impact can be high where endangered species such as rhino occur									
Security as a result of the	Nature of impact:	The mere prese threatened	The mere presence of construction workers in communities and especially on farms can lead to unease and pec threatened									
presence of	With mitigation	1	1	2	2	8	Low	-	Medium to high			
workers on pfarms and	Without mitigation	2	1	8	3	33	Medium	-	Medium to high			
communities	Degree to which impact can be reversed:	High – with the	implementation	of the relevan	t mitigation mea	asures						
	Degree of impact on irreplaceable resources:	N/a										
Safety of community	Nature of impact:	As decommission	oning involves th	ne dismantling	of structures, th	e safety of	people and anir	mals can be c	ompromised			
members/farm	With mitigation	1	1	2	1	4	Low	-	Medium			
workers/animals	Without mitigation	1	1	6	2	16	Low	-	Medium			

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
	Degree to which impact can be reversed:	High – with the	implementation	n of the relevan	t mitigation mea	asures						
	Degree of impact on irreplaceable resources:	N/a										
Cumulative imp	acts											
Agricultural pot	ential ential											
No cumulative im	pacts are anticipated											
Flora												
Plant encroachment	Nature of impact:	Vegetation clear	ring or disturba			increase er	ncroachment/ c	umulative im	pact			
	With	1	1	2	3	12	Low	-	High			
	Without	1	1	2	2	8	Low	-	High			
	Degree to which impact can be reversed:	Existing/permitt	ted access road	s must be used	and the all othe	er measures	must be follow	ed				
	Degree of impact on irreplaceable resources:	Area already dis	sturbed and rou	te follows existi	ng power line							
Soil erosion	Nature of impact:	Removal of veg preventing/mini				will increase	the soil erosio	n as vegetat	ion plays a major role in			
	With	1	1	2	3	12	Low	-	High			
	Without	2	2	2	3	18	Low	-	High			
	Degree to which impact can be reversed:	Existing/permitt	ted access road	s must be used	and the all othe	er measures	must be follow	ed				
	Degree of impact on irreplaceable resources:	Area already dis soil erosion fron			ing power line/	already me	asures put in p	lace for the				
Fauna												
Loss of faunal habitat	Nature of impact:	Adverse impact										

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March 2013

Tabor – Nzhelele 400 kV Powerline EIA: Draft EIA Report

Chapter 9: Impact Assessment EIA Ref Number: 14/12/16/3/3/2/317

NEAS Ref Number: DEA/EIA/0001132/2012

Potential impact	Mitigation	Extent (e)	Duration (d)	Magnitude (m)	Probability (p)	Significance Statu (+ve			Confidence			
•	AAP't I.	(-)						ve)	10.4.			
	With	1	4	6	5	55	Medium	-	High			
	Without	2	4	6	5	60	Medium	-	High			
	Degree to which impact can be reversed:		realign preferred alignment to avoid sensitive habitats and restrict vegetation clearance and ies to the 55m servitude.									
	Degree of impact on irreplaceable resources:	The proposed a inundated pans species includin dog, cheetah ar	, rupicolous/roc ig giant bullfrog	ky outcropsas g, muller's velv	well as suitable	habitat fo	or several red l	isted faunal				
Direct impact on associated	Nature of impact:	Adverse impact										
fauna and	With	1	4	4	4	36	Medium	-	High			
interactions with structures and	Without	2	4	6	5	60	Medium	-	High			
personnel	Degree to which impact can be reversed:	Medium-restrict species.	construction a	ctivities to the	55m servitude	. No inten	tional killing of	any faunal				
	Degree of impact on irreplaceable resources:	inundated pans species including	ne proposed alternative alignment 1a bisects rivers (non-perennial drainage lines), seasonally undated pans, rupicolous/rocky outcropsas well as suitable habitat for several red listed faunal recies including giant bullfrog, muller's velvet gecko, ground pangolin, brown hyaena, lion, wild be recies including giant bullfrog, muller's velvet gecko, ground pangolin, brown hyaena, lion, wild be recies including giant bullfrog.									

No cumulative impacts are anticipated

Heritage

No cumulative impacts are anticipated

Visual

Increased visual	Nature of								e to an extended and/or		
exposure to	impact:								perception where power		
power line			s are observed from locations from which more than one power line would now be seen in different parts of the landscape.								
infrastructure.			tly cumulative impacts arise through an increase in the incidence of sequential perceptions of different power lines through								
			e recurrence of images and impressions of power lines at various points in the landscape and which are continuously								
		encountered wh	countered when moving through it.								
	With	3	5	0	3	24	Low	-	Low		
	Without	3	5	6	5	70	High	-	High		

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
	Degree to which impact can be reversed:	The impact car material. Active	e rehabilitation o	of vegetation w	here it has beer	n cleared, is	also required.					
	Degree of impact on irreplaceable resources:		n areas of high visual quality and where there are no hv power lines, such as the soupansberg and private nature reserves, the degree of impact will be very high.									
Social												
Poaching of game impacting	Nature of impact:	It is highly likely	is highly likely that theft of game and stock can occur. Theft of game can be higher on farms whe									
on the loss of	With	2	3	4	3	27	Low	-	Medium to high			
game and in turn affecting	Without	5	5	8	4	72	High	-	High			
the tourism industry of the municipality and	Degree to which impact can be reversed: Degree of impact	Where possible, the construction operational phase The impact will	n and decommis se	ssioning phases	s as well as dur	ring mainte						
that of the country at large Loss of a sense	on irreplaceable resources:	·					of nowerlines c	an therefore	spoil this experience for			
of place		them	aces to relax al	na be minerse	a in nature, the	c presence	or powernines e	an energione	spon this experience for			
resulting in	With	1	2	2	2	10	Low	-	Medium to high			
economic losses especially for	Without	3	4	6	3	39	Medium	-	Medium to high			
tourism sector in turn impact on the economic	Degree to which impact can be reversed:	Liaise with visus would be to use					other suggeste	d measures				
growth of the makhado local municipality	Degree of impact on irreplaceable resources:	N/a	/a									
Increase in power supply	Nature of impact:	An increase in electricity is on							ado local municipality as			
and in the	With	3	4	6	4	52	Medium	+	Medium			
stability of the network. In turn	Without	3	4	6	4	52	Medium	+	Medium			
numerous existing	Degree to which impact can be	N/a										
		·		0.04								

Potential		Extent	Duration	Magnitude	Probability	Significance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)	(+ve or - ve)	Confidence
developments such as lodges and other	reversed:							
tourist attractions can be improved.	Degree of impact on irreplaceable resources:	N/a						

No-go alternative

Agricultural potential

In the event that the transmission lines are not constructed, there will be no impact on the agricultural potential, therefore the status quo will remain.

Flora

In the event that the transmission lines are not constructed, there will be no impact on the flora, therefore the status quo will remain.

Fauna

In the event that the transmission lines are not constructed, there will be no impact on the fauna, therefore the status quo will remain.

Avifauna

In the event that the transmission lines are not constructed, there will be no impact on the avifauna, therefore the status quo will remain.

Heritage

In the event that the transmission lines are not constructed, there will be no impact on heritage sites, therefore the status quo will remain.

Visual

In the event that the transmission lines are not constructed, there will be no visual impact, therefore the status quo will remain.

Social

Powerlines	Nature of	There is voltage	e instability as t	he polokwane o	customer load r	network, ind	cluding the tabo	or and spend	er power is the weakest		
linking the tabor	impact:	part of the nort	hern grid netwo	ork due to being	operated beyo	nd its relia	bility. There is t	herefore a n	eed for a new powerline.		
substation to		Powerlines linkii	erlines linking the tabor substation to the new bokmakirie (nzhelele) substation in order to strengthen the northern grid or								
the new		that the expans	ion of the bokm	akirie substatio	n to accommod	ate the new	ı 400kv infrastrı	ucture			
bokmakirie	With	2	1	2	1	5	Low	-	Medium to high		
(nzhelele) substation will	Without	4	5	8	3	51	Medium	-	Medium to high		
not be	Degree to which	Construct the po	owerlines								
constructed.	impact can be										
	reversed:										

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Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
	Degree of impact on irreplaceable resources:	N/a							
No increase in the voltage	Nature of impact:	The voltage is of such as loss of						ent being shu	t down leading to effects
stability	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 stabi	lised				•	
	Degree of impact on irreplaceable resources:	N/a							
No increase and assurance of electricity	Nature of impact:		and mining s	ectors. A lack					the agricultural, tourism, growth of the makhado
supply making it unavailable for		1	1	2	1	4	Low	-	Medium
agriculture,	Without	3	5	8	4	64	High	-	Medium
tourism and other industries as well as	Degree to which impact can be reversed:	Increase electri and ensure that			such as the co	nstruction	of the proposed	d power line	
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	on irreplaceable	N/a							

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
supply											
Continuation of backlogs in	Nature of impact:	The backlogs a use of electricity		endering of s	services that require the						
electricity	With	2	1	4	2	14	Low	-	Medium to high		
connections	Without	3	4	8	4	60	Medium	-	Medium to high		
	Degree to which impact can be reversed:	The makhado l increased budg adequate mater	ets to allow for								
	Degree of impact on irreplaceable resources:	N/a	3 								
Continuation of the inadequate		In services such	n health as facili	ties, lack of ele		It in losses	of lives				
provision of	With	1	1	0	2	4	Low	-	Medium		
electricity to critical services	Without	3	5	10	4	72	High	-	Medium		
such as health facilities	Degree to which impact can be reversed:	The necessity of that adverse im			is imperative a	nd the prop	osed powerline	can ensure			
	Degree of impact on irreplaceable resources:	N/a									
Continuation of the unavailability of	Nature of impact:		g and cooking.						utting of trees to use the tion and the possible loss		
electricity in	With	1	1	2	2	8	Low	-	Medium		
numerous rural settlements	Without	3	5	8	4	64	High	-	Medium		
	Degree to which impact can be reversed:	Provide electric	ity to rural areas	S							
	Degree of impact on irreplaceable resources:	N/a									

Table 9.3: Detailed assessment of identified impacts for Alternative 1b

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
Construction ph	ase										
Agricultural pot	ential										
Deterioration of soil resource	Nature of impact:	Loss of agricultu	ıral land due to	construction of	infrastructure						
	With	1	4	2	2	14	Low	-			
	Without	1	4	4	3	27	Low	-			
	Degree to which impact can be reversed:	Reversal should	be straightforw	ard after remov	val of infrastruct	ture	•				
	Degree of impact on irreplaceable resources:	Low to none	ow to none								
Deterioration of soil resource	Nature of impact:	Soil erosion haz	ard due to cons	truction activition	es						
	With	1	1	2	2	8	Low	-			
	Without	2	3	6	4	44	Medium	-			
	Degree to which impact can be reversed:	If erosion is cau	sed, reversal is	often difficult a	nd time-consum	ning, especi	ally in steeper a	areas			
	Degree of impact on irreplaceable resources:	Moderate									
Flora											
Destruction of protected flora	Nature of impact:	Removal of prot	emoval of protected plant species due to the servitude								
	With	1	1	2	2	8	Low	-	High		
	Without	1	1	4	3	18	Low	-	High		
	Degree to which impact can be reversed:	Existing/permitted access roads must be used and the all other measures must be followed									

Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	,	sturbed and rou									
Destruction of pristine habitat	Nature of impact:	Destruction and	d disturbance of	a previously ur	ndisturbed veget	ation						
	With	1	1	2	2	8	Low	-	High			
	Without	1	1	2	2	8	Low	-	High			
	Degree to which impact can be reversed:	2	sting/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:	,	a already disturbed and route follows existing power line									
Vegetation clearance	Nature of impact:	Removal of veg	getation due to s	servitudes, acce	ss roads and ere	ecting of th	e pylons					
	With	1	1	2	2	8	Low	-	High			
	Without	1	1	2	2	8	Low	-	High			
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all othe	er measure	s must be follow	ved				
	Degree of impact on irreplaceable resources:	The servitude h	nas to be kept cl	lear at all times	(bush clearing)							
Plant encroachment	Nature of impact:	Vegetation clea	iring or disturba	nce may and ha	ave been fond to	increase e	encroachment					
	With	1	1	2	2	8	Low	-	High			
	Without	2	2	4	3	24	Low	-	High			
	Degree to which impact can be reversed:	2	Existing/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:		sting powerline		•							
Threat to biodiversity	Nature of impact:	Disturbance of	Disturbance of an area with high biodiversity will increase the probability of encroachment and biodiversity will be lost.									

Potential		Extent	Duration	Magnitude	Probability	Significa	Significance Status		Confidence
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	
	With	1	1	2	2	8	Low	-	High
	Without	1	1	2	2	8	Low	-	High
	Degree to which impact can be reversed:	Existing/permit							
	Degree of impact on irreplaceable resources:	Area already disturbed and route follows existing power line							
Soil erosion	Nature of	Removal of vegetation due to the servitudes and servitudes will increase the soil erosion as vegetation plays preventing/minimising soil erosion							
	impact: With	1	1	2	2	8	Low	-	High
	Without	1	1	2	2	8	Low	-	High
	Degree to which impact can be reversed:	Existing/permitted access roads must be used and the all other measures must be followed							
	Degree of impact on irreplaceable resources:	Area already dis soil erosiom fro							
Fauna									
Loss of faunal habitat	Nature of impact:	Adverse impact							
	With	1	4	4	3	27	Low	-	High
	Without	2	4	6	4	48	Medium	-	High
	Degree to which impact can be reversed:	Low- realign pr clearance and a							
	Degree of impact on irreplaceable resources:	The proposed a well as suitable african python							
Direct impact on associated	Nature of impact:	Adverse impact							
fauna and	With	1	4	4	3	27	Low	-	High
interactions with	Without	2	4	6	4	48	Medium	-	High

Potential impact	Mitigation	Extent	Duration	Magnitude	Probability	Significa	nce	Status		
		(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence	
structures and personnel	Degree to which impact can be reversed:	Restrict constru								
	Degree of impact on irreplaceable resources:	The proposed a well as suitable african python								
Avifauna										
Habitat destruction	Nature of impact:	Permanent rem								
	With	1	2	4	3	21	Low	-	Medium	
	Without	1	2	4	5	35	Medium	-	Medium	
	Degree to which impact can be reversed:	Partially reversible								
	Degree of impact on irreplaceable resources:	Low								
Disturbance	Nature of impact:	Noise and movement, from staff and machinery, may disturb avifauna, and nests my be disturbed.								
	With	1	1	4	3	18	Low	-	Medium	
	Without	2	1	4	4	28	Low	-	Medium	
	Degree to which impact can be reversed:	Irreversible								
	Degree of impact on irreplaceable resources:	Medium								
Heritage										
Destruction of	Nature of impact:	Adverse impact								
heritage sites	With mitigation	3	5	2	5	50	Medium	-	High	
and features	Without mitigation	3	5	10	5	90	High	-	High	

Potential impact	Mitigation	Extent	Duration	Magnitude	Probability	Significa	nce	Status		
		(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence	
	Degree to which impact can be reversed:	Medium	High							
	Degree of impact on irreplaceable resources:	Not applicable				High				
Visual										
Transformation of the visual quality of the landscape	Nature of impact:	Clearing of vegetation to establish a 55m corridor will result in the transformation of the landscape character, soutpansberg and private nature reserves. Visibility of the servitude as a "scar" in the landscape will crea impacts.								
	With	3	2	6	5	55	Medium	-	High	
	Without	3	2	6	5	55	Medium	-	High	
	Degree to which impact can be reversed:	The impact can be reversed by terminating construction activity and removing all construction material. Active rehabilitation of vegetation where it has been cleared, is also required.								
	Degree of impact	In areas of high								
	on irreplaceable resources:	private nature r	eserves, the de				ien as the soupe	moberg and		
Social	-	private nature r	eserves, the de				ich as the soupe	ansberg und		
Influx of job seekers, mainly	Nature of impact:		an create emplo	gree of impact	will be very high	n. eekers. Alor	ng this route, th	ne job seeke	rs may be from the louis ob seekers	
Influx of job seekers, mainly unskilled labour,	Nature of impact:	The powerine c	an create emplo	gree of impact	will be very high	n. eekers. Alor	ng this route, th	ne job seeke		
Influx of job seekers, mainly unskilled labour, from the	Nature of impact:	The powerine c	an create emplo	gree of impact byment expecta	will be very high ations for job se n the area could	n. eekers. Alor d be the driv	ng this route, th	ne job seeke	ob seekers	
Influx of job seekers, mainly unskilled labour, from the communities around the power line route	Nature of impact:	The powerine c trichart town ar	an create emploea. High unemp	byment expectations in the second sec	ations for job sen the area could	eekers. Alord be the driverse 16 52	ng this route, the ver of the possible Low	ne job seeke	ob seekers Medium to high	
Influx of job seekers, mainly unskilled labour, from the communities around the	Nature of impact: With Without Degree to which impact can be	The powerine c trichart town ar 3	an create emploea. High unemp	byment expectations in the second sec	ations for job sen the area could	eekers. Alord be the driverse 16 52	ng this route, the ver of the possible Low	ne job seeke	ob seekers Medium to high	
Influx of job seekers, mainly unskilled labour, from the communities around the power line route having job	Nature of impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable resources:	The powerine c trichart town ar 3 3 High – with the	an create emploea. High unemp 1 2 implementation	byment expectations in the second sec	ations for job sen the area could 2 4	eekers. Alord be the drive 16 52 asures	ng this route, the ver of the possible Low Medium	ne job seeke ole influx of j - -	ob seekers Medium to high	
Influx of job seekers, mainly unskilled labour, from the communities around the power line route having job expectations	Nature of impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable resources: Nature of	The powerine c trichart town ar 3 3 High – with the	an create emploea. High unemp 1 2 implementation	byment expectations in the second sec	ations for job sen the area could 2 4	eekers. Alord be the drive 16 52 asures	ng this route, the ver of the possible Low Medium	ne job seeke ole influx of j - -	ob seekers Medium to high Medium to high	

Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status			
impact	Mitigation	(e)	(d)	(m)	(p)		l+m)*p)	(+ve or - ve)	Confidence		
construction camps and on construction	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	t mitigation mea	asures					
camps	Degree of impact on irreplaceable resources:	N/a									
Health impacts as a result of	Nature of impact:	Waste on site c and animals	an become a nu	isance for com	munity member	rs and on f	arms and also p	ose a dangei	to the health of people		
exposure to	With	1	1	0	1	2	Low	-	Medium		
waste (domestic and industrial)	Without	1	2	2	3	15	Low	-	Medium		
and madstrary	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	t mitigation mea	asures					
	Degree of impact on irreplaceable resources:	N/a									
Health impacts from	Nature of impact:	Where construct workers in the a				ses, these	can be passed o	n to the com	munity members or farm		
construction	With	1	1	2	2	8	Low	-	Medium		
sites and camps as a result of	Without	2	1	6	3	27	Low	-	Medium		
infectious diseases	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	t mitigation mea	asures					
	Degree of impact on irreplaceable resources:	N/a									
Conduct of construction	Nature of impact:	•	it is possible that because of good relationships between contactors and community members, neg								
workforce; good	With	2	1	2	2	10	Low	-	Medium to high		
relationships between	Without	2	1	6	4	36	Medium	-	Medium to high		
community members/ farm	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	t mitigation mea	asures					

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
workers and eskom construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Degree of impact on irreplaceable resources:	N/a							
Conduct of construction	Nature of impact:	These can resul	t from factors s	uch as differenc	es in beliefs and	d cultural ba	ackgrounds		
workforce; bad	With	2	1	2	2	10	Low	-	Low
relationships between	Without	2	1	6	4	36	Medium	-	Low
community members/ farm workers and	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	: mitigation mea	sures			
eskom construction workers leading to violence	Degree of impact on irreplaceable resources:	N/a							
Theft of material from camps and	Nature of impact:	Material can be targeted by crin		he sites where	decommissioni	ng is takin	g place as mat	terial used i	n electricity is often the
along	With	1	1	0	1	2	Low	-	Medium
construction sites	Without	1	1	8	4	40	Medium	-	Medium
	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	: mitigation mea	sures			
	Degree of impact on irreplaceable resources:								
Negative attitudes	Nature of impact:	It is possible to livelihoods will of	hat land owner	s eg lodge ow	ners, game far	mers owne	rs for whom v	isual impact	s are important to their
towards the	With	2	1	2	2	10	Low	-	Medium

Potential		Extent	Duration	Magnitude	Probability	Signific	cance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	-d+m)*p)	(+ve or - ve)	Confidence
project and the	Without	3	1	6	3	30	Low	-	Medium
formation of community groups, NGO's,	Degree to which impact can be reversed:	High – with the	implementation	n of the relevan	t mitigation mea	asures			
n response to the project;	Degree of impact on irreplaceable resources:	N/a							
Land owners denying	Nature of impact:	This would be e	expected from la	indowners who	are opposed to	the projec	ct		
contractors	With	1	1	2	2	8	Low	-	Medium
access to their properties	Without	1	2	6	4	36	Medium	-	Medium
properties	Degree to which impact can be reversed:	High – with the	implementation	n of the relevan	t mitigation mea	asures			
	Degree of impact on irreplaceable resources:	N/a							
Loss of crops leading to	Nature of impact:	Land and crops	can be lost dur	ing the clearing	of the powerlin	e corridor	and during the	construction o	of the powerline
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:	High – with the	implementation	n of the relevan	t mitigation mea	asures			
	Degree of impact on irreplaceable resources:	N/a							
Loss of land leading to	Nature of impact:	Grazing land ar	ea can be lost d	lue to clearing o	of land for the co	orridor as	well as during tl	ne constructio	n of access roads
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:	High – with the	implementation	n of the relevan	t mitigation mea	asures			

Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	i+m)*p)	(+ve or - ve)	Confidence
	Degree of impact on irreplaceable resources:	• where the loss	s of land is pern	nanent, eskom	should discuss o	compensati	on with landow	ner	
Impacts on farming	Nature of impact:	Construction ca	n disturb activit	ies on farms					
activities such	With	1	1	2	2	8	Low	-	Medium to high
as sowing, harvesting, and	Without	1	1	8	3	30	Low	-	Medium to high
fire management programmes	Degree to which impact can be reversed:	High – with the	implementation	n of the relevan	t mitigation mea	asures			
leading to economic losses	Degree of impact on irreplaceable resources:	N/a							
Damage to farm infrastructure	Nature of impact:	This can lead to	conflicts with c	community men	nbers and farme	ers			
e.g. irrigation	With	1	1	2	1	4	Low	-	Medium to high
equipment, gates, fences	Without	1	1	6	3	24	Low	-	Medium to high
3,	Degree to which impact can be reversed:	High – with the	implementation	n of the relevan	t mitigation mea	asures			
	Degree of impact on irreplaceable resources:	N/a							
Security concerns as a	Nature of impact:	It is highly likely	y that theft of g	ame and stock	can occur. Thef	t of game o	an be higher or	n farms where	rhino is present
result of	With	1	1	2	4	16	Low	-	Medium to high
poaching of game, stock	Without	1	1	10	4	48	Medium	-	Medium to high
theft and crop theft	Degree to which impact can be reversed:	High – with the	implementation	n of the relevan	t mitigation mea	asures			
	Degree of impact on irreplaceable resources:	•			ecies such as rhi				
Security as a result of the	Nature of impact:	The mere prese threatened by t		ction workers in	communities a	nd especia	lly on farms ca	n lead to une	ease and people may feel

Potential		Extent	Duration	Magnitude	Probability	Signifi	cance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	+d+m)*p)	(+ve or - ve)	Confidence			
presence of	With	1	1	2	2	8	Low	-	Medium to high			
workers on farms and	Without	2	1	8	3	33	Medium	-	Medium to high			
communities	Degree to which impact can be reversed:	High – with the	implementation	n of the relevan	t mitigation mea	asures						
	Degree of impact on irreplaceable resources:	N/a										
Safety of community	Nature of impact:	Construction sit	es are highly h	azardous enviro	nments and the	safety of	people and ani	mals can be co	mpromised			
members/farm	With	1	1	2	1	4	Low	-	Medium			
workers/animals	Without	1	1	6	2	16	Low	-	Medium			
	Degree to which impact can be reversed:	High – with the	gh – with the implementation of the relevant mitigation measures									
	Degree of impact on irreplaceable resources:	N/a										
Poor maintenance of	Nature of impact:	It is possible that	at access route	s can be of such	n poor state that	t mainten	ance of the pow	erline is not po	ssible			
the power line	With	1	1	2	2	8	Low	-	Medium to high			
access roads: conflict between	Without	1	4	8	4	52	Medium	-	Medium to high			
eskom and the landowners on whose	Degree to which impact can be reversed:	High – with the	implementation	n of the relevan	t mitigation mea	asures						
responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect eskom to pay for all maintenance	Degree of impact on irreplaceable resources:	N/a										

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence
Loss of a sense of place/income	Nature of impact:	The presence of be spoilt	powerlines part	cicularly in touri	st attractions ca	n result in	tourists no long	er visiting th	e area as their views will
on game farms	With	1	1	2	2	8	Low	1	Medium to high
to urists wantto see "africa"	Without	1	1	8	4	40	Medium	ı	Medium to high
and the power line can disturb the rustic	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures			
african setting;	Degree of impact on irreplaceable resources:	N/A							

Operation phase

Agricultural potential

It is anticipated that the main impacts on agricultural potential will occur during the construction phase

Flora													
Destruction of	Nature of	Removal of prot	ected plant spe	cies due to the	servitude								
protected flora	impact:												
	With	1	3	4	3	24	Low	-	High				
	Without	1 3 4 3 24 Low - High Existing/permitted access roads must be used and the all other measures must be followed											
	Degree to which	Existing/permitt	ed access roads	must be used	and the all othe	r measures	must be follow	ed					
	impact can be												
	reversed:												
	Degree of impact	Area already dis	sturbed and rout	te follows existi	ng power line								
	on irreplaceable												
	resources:												
Destruction of	Nature of	Destruction and	disturbance of	a previously un	disturbed veget	ation							
pristine habitat	impact:												
	With	1	1	2	2	8	Low	-	High				
	Without	1	1 2 2 8 Low - High										
	Degree to which	Existing/permitt	xisting/permitted access roads must be used and the all other measures must be followed										
	impact can be reversed:												

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Potential		Extent	Duration	Magnitude	Probability	Signific	cance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	-d+m)*p)	(+ve or - ve)	Confidence
	Degree of impact on irreplaceable resources:	Area already d	sturbed and rou	te follows exist	ing power line				
Vegetation clearance	Nature of impact:	Removal of veg	getation due to s	servitudes, acce	ss roads and er	ecting of t	the pylons		
	With	1	5	4	5	50	Medium	-	High
	Without	1	5	4	5	50	Medium	-	High
	Degree to which impact can be reversed:	2					es must be follo	wed	
	Degree of impact on irreplaceable resources:		nas to be kept cl						
Plant encroachment	Nature of impact:		aring or disturba			increase	encroachment		
	With	1	2	4	3	21	Low	-	High
	Without	1	2	6	4	36	Medium	-	High
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all othe	er measur	es must be follo	wed	
	Degree of impact on irreplaceable resources:	There is an exi	sting powerline	and encroachme	ent is likely				
Threat to biodiversity	Nature of impact:	Disturbance of	an area with hig	gh biodiversity v	will increase the	probabilit	y of encroachme	ent and biodiv	ersity will be lost.
	With	1	1	4	3	18	Low	-	High
	Without	1	1	4	3	18	Low	-	High
	Degree to which impact can be reversed:	2				er measur	es must be follo	wed	
	Degree of impact on irreplaceable resources:		sturbed and rou						
Soil erosion	Nature of impact:		getation due to nimising soil eros		and servitudes	will increa	ise the soil eros	on as vegetat	ion plays a major role in

Iletential		Extent	Duration	Magnitude	Probability	Significa	ance	Status	
Potential impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	i+m)*p)	(+ve or - ve)	Confidence
	With	1	2	2	3	15	Low	-	High
	Without	2	3	4	3	27	Low	-	High
	Degree to which impact can be reversed: Existing/permitted access roads must be used and the all other measures must be followed and the all other measures must be followed as a second secon							ved	
	Degree of impact on irreplaceable resources:	Area already dis soil erosion fron	place for the						
Fauna									
Loss of faunal habitat with	impact:	Adverse impact							
clearance of	With	1	4	4	3	27	Low	-	High
vegetation within the 55m	Without	2	4	6	4	48	Medium	-	High
servitude	Degree to which	The clearance							
	impact can be reversed:	the servitude s (especially arbo	hould not be to				removed. The voor remaining fa		
	-	the servitude s	hould not be to						
Direct impact on associated	reversed: Degree of impact on irreplaceable	the servitude s	hould not be to real species)						
associated fauna and	reversed: Degree of impact on irreplaceable resources: Nature of impact:	the servitude s (especially arbo	hould not be to real species)						Medium-high
associated fauna and interactions with	Degree of impact on irreplaceable resources: Nature of impact:	the servitude s (especially arbo	hould not be to real species)	tally removed	providing refuge	e habitat fo	or remaining fa	unal species	Medium-high Medium-high
associated fauna and	Degree of impact on irreplaceable resources: Nature of impact: With	the servitude si (especially arbo	hould not be to ireal species) 4 4 action activities	4 6 to the 55m se	providing refuge 3 4 ervitude. No inte	27	Low Medium	unal species	
associated fauna and interactions with structures and	reversed: Degree of impact on irreplaceable resources: Nature of impact: With Without Degree to which impact can be	the servitude s (especially arbo Adverse impact 1 2 Restrict constru	hould not be to real species) 4 4 action activities No illegal poach	4 6 to the 55m seing or hunting ment 1b bisects	providing refuge 3 4 ervitude. No interactivities. s a seasonally in	27 48 entional kil	Low Medium ling or disturba	nces of any	
associated fauna and interactions with structures and	reversed: Degree of impact on irreplaceable resources: Nature of impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable	Adverse impact Restrict construtational species. The proposed a well as suitable african python	hould not be to real species) 4 4 viction activities No illegal poach lternative aligni	4 6 to the 55m seing or hunting ment 1b bisectiveral red listed	3 4 ervitude. No interactivities. s a seasonally ir faunal species	27 48 entional kil	Low Medium ling or disturba	nces of any	
associated fauna and interactions with structures and personnel	reversed: Degree of impact on irreplaceable resources: Nature of impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable	Adverse impact Restrict construtation of the proposed a well as suitable.	hould not be to real species) 4 4 viction activities No illegal poach lternative aligni	4 6 to the 55m seing or hunting ment 1b bisectiveral red listed	3 4 ervitude. No interactivities. s a seasonally ir faunal species	27 48 entional kil	Low Medium ling or disturba	nces of any	

Potential		Extent	Duration	Magnitude	Probability	Signific	ance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence
	Without	1	4	4	4	36	Medium	-	Medium
	Degree to which impact can be reversed:	Low							
	Degree of impact on irreplaceable resources:	Medium							
Electrocution	Nature of	Bird perches on	pylon and cau	ses an electrical	short circuit by	physically	/ bridging the a	ir gap betweer	n live components and/or
	impact: With	1	components, l	resulting in deat	th or severe inju	1ry.	Low	-	Medium
	Without	1	4	4	4	36	Medium	_	Medium
	Degree to which impact can be reversed:	_		·	1		Ticalam		ricalani
	Degree of impact on irreplaceable resources:								
Nesting of birds on tower	Nature of impact:	Routine mainte	nance of pylons	and power line	s could result in	disturban	ce of certain bi	rd species	
structures and	With	1	2	4	2	14	Low	-	Medium
disturbance during routine	Without	2	2	4	3	24	Low	-	Medium
maintenance	Degree to which impact can be reversed:	High					•		
	Degree of impact on irreplaceable resources:	Medium							
Heritage									
It is anticipated th	nat the main impacts o	on heritage will o	ccur during the	construction ph	ase				
Visual									
Visual exposure to the powerline servitude,	impact:	close to private	nature reserve		ewer locations in	n close pro	oximity (<500m		mpacts, especially in and rulnerable to exposure of
conductor	With	3	5	6	5	70	High	-	High

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
cables and	Without	3	4	6	5	65	High	-	High		
towers.	Degree to which impact can be reversed:	The impact car proximity to se option.	nsitive viewer l	ocations throug	gh careful route	e planning,	or by selecting	g the no-go			
	Degree of impact on irreplaceable resources:	In areas of high private nature r					ch as the soupa	ansberg and			
Social											
Perceived electromagnetic	Nature of impact:	The presence of on some proper		orkers can resu	ılt in the treat o	f safety and	d can possibly l	ead to actual	crimes being committed		
fields impacts	With mitigation	1	3	2	1	6	Low	-	Medium		
on humans and animals during	Without mitigation	1	5	4	2	20	Low	-	Medium		
the operational phase	Degree to which impact can be reversed:	High – with the	igh – with the implementation of the relevant mitigation measures								
	Degree of impact on irreplaceable resources:	N/a									
Loss of a sense of place/income	Nature of impact:	The presence of be spoilt	powerlines par	ticularly in tour	ist attractions c	an result in	tourists no long	ger visiting th	e area as their views will		
on game farms	With mitigation	1	1	2	3	12	Low	1	Medium		
tourists want to see "africa" and the power	Without mitigation	3	4	8	4	60	Medium	-	High		
line can disturb the rustic african setting;	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	t mitigation mea	asures					
arrican setting,	Degree of impact on irreplaceable resources:	N/a									
Poor maintenance of	Nature of impact:	It is possible that	at access routes	can be of such	poor state that	maintenan	ce of the power	line is not po	ssible		
the power line	With mitigation	1	1	2	2	8	Low	-	Medium to high		
access roads: conflict between	Without mitigation	1	4	8	4	52	Medium	-	Medium to high		

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
eskom and the landowners on whose	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures			
responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect eskom to pay for all maintenance	Degree of impact on irreplaceable resources:	Put a firm negol	ciated contract i	n place during t	he operational _l	phase			
Impact of the power lines on	Nature of impact:	Where powerling	es are not visibl	e or known, pla	ne crashes can	result and i	n turn electricty	outages ma	y occur
aircraft as there	With mitigation	1	2	2	2	10	Low	-	Medium to high
are airports within the study area; one is the	Without mitigation	4	5	6	4	60	Medium	-	Medium to high
louis trichardt airport and the other is for light	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures			
aircraft on the road towards waterpoort from louis trichardt	Degree of impact on irreplaceable resources:	N/a							
decrease in property values	Nature of impact:	These can lead							
and number of	With mitigation	1	3	4	1	8	Low	-	Medium to high
visitors to lodges and other areas that	Without mitigation	2	5	6	3	39	Medium	-	Medium to high
are popular with tourists due to	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	: mitigation mea	sures			

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence				
the visual impacts of powerlines	Degree of impact on irreplaceable resources:	N/a											
Security issues as a result of	Nature of impact:	The mere prese threatened	ie mere presence of construction workers in communities and especially on farms can lead to unease and people reatened										
the presence of maintenance	With mitigation	1	1	2	2	8	Low	-	Medium to high				
workers on	Without mitigation	1	1	4	4	24	Low	1	High				
properties	Degree to which impact can be reversed:	High – with the	gh – with the implementation of the relevant mitigation measures										
	Degree of impact on irreplaceable resources:	The impact can											
Land owners denying	Nature of impact:	This can result in maintenance not occurring											
contractors	With mitigation	1	1	2	2	8	Low	-	Medium				
access to their properties	Without mitigation	1	1	8	4	40	Medium	-	High				
	Degree to which impact can be reversed:	High – with the	High – with the implementation of the relevant mitigation measures										
	Degree of impact on irreplaceable resources:	N/a											
Poaching of game as well as	Nature of impact:	This is a high pr	obability			_							
stock theft and	With mitigation	1	1	0	1	2	Low	-	Medium to high				
theft of crops	Without mitigation	1	1	2	2	8	Low	-	Medium to high				
	Degree to which impact can be reversed:	as maintenanc activities such a may not have th											

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(S=(A+A+m)*n)		(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	N/a	I/a									
Impact on farming	Nature of impact:	During the oper	ational phase, ir	mpacts on farm	activities are li	kely to be v	ery minimal					
activities such	With mitigation	1	1	0	1	2	Low	-	Medium to high			
as sowing, harvesting, and fire management programmes leading to economic losses	Without mitigation	1	1	2	1	4	Low	-	Medium to high			
	Degree to which impact can be reversed:	on these activitican be through	naintenance during the operational phase is of a shorter duration than construction, the impacts hese activities will be for a significantly shorter duration, but must at all costs be avoided. This be through measures such as undertaking maintenance during seasons when there is likely to igh activity on farms.									
economic losses	Degree of impact on irreplaceable resources:	N/a	I/a									
Impact on farming	Nature of impact:	During the oper very minimal	During the operational phase, impacts on activities and on guests to lodges and other tourist destinations are likely to be very minimal									
activities such	With mitigation	1	1	0	1	2	Low	-	Medium to high			
as hunting in game farms leading to	Without mitigation	1	1	2	1	4	Low	-	Medium to high			
leading to economic losses. Impacts can also be on	Degree to which impact can be reversed:	N/A										
guests in lodges leading to economic losses	Degree of impact on irreplaceable resources:	N/a	l/a									
Increase in the voltage stability	Nature of impact:	An increased vo	ltage will ensure	e that activities	that were not a	ble to take	place will be po	ssible				
	With mitigation											
	Without mitigation	3	5	8	5	80	High	+	Medium			
	Degree to which impact can be reversed:	N/a										

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	N/a						•				
An assurance of a reliable	Nature of impact:	Reliable electric	ity supply is a p	ositive impact t	hat will improve	activities s	such as tourism	in the makh	ado local municipality			
electricity	With mitigation	3	4	2	4	36	Medium	+	Medium			
supply	Without mitigation	2	1	6	4	36	Medium	+	Medium			
	Degree to which impact can be reversed:	N/a	a									
	Degree of impact on irreplaceable resources:	N/a	N/a									
Increase of electricity	Nature of impact:	In order to grow the economy of the makhado local municipality, electricity is vital										
supply making it available for	With mitigation											
agriculture, tourism and	Without mitigation	3	5	8	5	80	High	+	Medium			
other industries. The increase in	Degree to which impact can be reversed:	N/a										
electricity can also allow for the undertaking of other activities that may have been that may not have been possible prior to the improved elect.ricity supply	Degree of impact on irreplaceable resources:	N/a										
No more	Nature of		backlogs in ele	ctricy connectio	ns can imply th	at activities	that can only	take place w	here electicity is present			
backlogs in	impact:	will be possible										

Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence			
electricity	With mitigation											
connections	Without mitigation	3	5	8	5	80	High	+	Medium			
	Degree to which impact can be reversed:	N/a	N/a									
The implement	Degree of impact on irreplaceable resources:	N/a	N/a									
The inadequate provision of	Nature of impact:				_							
electricity to	With mitigation											
services such as health facilities	Without mitigation	3	5	8	5	80	High	+	Medium			
will cease	Degree to which impact can be reversed:	N/a										
	Degree of impact on irreplaceable resources:	N/a										
Electricity will be available to	Nature of impact:	The presence of	electricity to ru	ıral areas will ir	nprove the lives	of many w	ho live in pover	ty				
numerous rural	With mitigation											
settlements that do not have this	Without mitigation	3	5	8	5	80	High	+	Medium			
service	Degree to which impact can be reversed:	N/a										
	Degree of impact on irreplaceable resources:											
Decommissionin	g phase											
Agricultural pote	ential											

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No decommissioning impacts are anticipated

Potential		Extent	Duration	Magnitude	Probability	Significa	ınce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence				
Flora													
Destruction of protected flora	Nature of impact:	Removal of pro	tected plant spe	ecies due to the	servitude								
	With	1	1	2	2	8	Low	-	High				
	Without	1	1	4	3	18	Low	-	High				
	Degree to which impact can be reversed:	Existing/permit	existing/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:	Area already di											
Destruction of pristine habitat	Nature of impact:	Destruction and	d disturbance of	a previously ur	ndisturbed veget	cation							
	With	1	1	2	2	8	Low	-	High				
	Without	1	1	2	2	8	Low	-	High				
	Degree to which impact can be reversed:	Existing/permitted access roads must be used and the all other measures must be followed											
	Degree of impact on irreplaceable resources:	Area already di											
Vegetation clearance	Nature of impact:	Removal of veg	jetation due to s	servitudes, acce	ss roads and er	ecting of th	e pylons						
	With	1	1	2	2	8	Low	-	High				
	Without	1	1	2	2	8	Low	-	High				
	Degree to which impact can be reversed:	Existing/permit	Existing/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:	The servitude has to be kept clear at all times (bush clearing)											
Plant encroachment	Nature of impact:	Vegetation clea	ring or disturba	nce may and ha	ave been fond to	increase e	ncroachment						
	With	1	1	2	2	8	Low	-	High				

Potential		Extent	Duration	Magnitude	Probability	Signific	ance	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence				
	Without	1	1	2	2	8	Low	-	High				
	Degree to which impact can be reversed:	Existing/permit	Existing/permitted access roads must be used and the all other measures must be followed There is an existing powerline and encroachment is likely										
	Degree of impact on irreplaceable resources:												
Threat to biodiversity	Nature of impact:	Disturbance of	an area with hig	gh biodiversity v	will increase the	probability	of encroachm	nent and biodive	ersity will be lost.				
	With	1	1	2	2	8	Low	-	High				
	Without	2	2	4	3	24	Low	-	High				
	Degree to which impact can be reversed:	Existing/permit	tted access road	s must be used	and the all othe	er measure	s must be follo	owed					
	Degree of impact on irreplaceable resources:	Area already d	isturbed and rou	ite follows exist	ing power line								
Soil erosion	Nature of impact:		getation due to nimising soil ero		and servitudes	will increas	e the soil eros	sion as vegetat	ion plays a major role in				
	With	1	1	2	2	8	Low	-	High				
	Without	1	1	2	2	8	Low	-	High				
	Degree to which impact can be reversed:	Existing/permit											
	Degree of impact on irreplaceable resources:		Area already disturbed and route follows existing power line/ already measures put in place for the soil erosion from the existing line										
Fauna													
Direct impact on associated	Nature of impact:	Adverse impac	t										
fauna and	With	1	1	2	5	20	Low		High				
interactions with structures and	Without	2	1	4	5	35	Medium		High				
personnel	Degree to which impact can be	The removal of the vegetation											

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Potential		Extent	Duration	Magnitude	Probability	Significance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)	(+ve or - ve)	Confidence			
	reversed:										
			e proposed alternative alignment 1b bisects a seasonally inundated pans, rupicolous outcrops as								
	on irreplaceable		ell as suitable habitat for several red listed faunal species including giant bullfrog and southern								
	resources:	african python									

Avifauna

No decommissioning impacts are anticipated

Heritage

No decommissioning impacts are anticipated

Visual exposure to operations to dismantle and	impact:	impacts. Perce	Activity within the servitude related to the dismantling and removal of power line infrastructure will not have significant visual impacts. Perceptions relating to the removal of visualy intrusive objects might be positive in as far as visual impacts will be decreased due to decommissioning.										
remove of	With	3	1	2	3	18	Low	+	High				
power line & substation	Without	3	1	2	3	18	Low	+	High				
infrastructure	Degree to which impact can be reversed:	Avoid unnecess	void unnecessary disturbance of the natural environment during decommissioning operations										
	Degree of impact on irreplaceable resources:	None											
Access roads	Nature of impact:	None											
	With	3	1	2	3	18	Low	+	High				
	Without	3	1	2	3	18	Low	+	High				
	Degree to which impact can be reversed:		Road reserves must be cleared of all construction material and actively rehabilitated by the introduction of suitable vegetation										
	Degree of impact on irreplaceable resources:	None											
Social													
Influx of job	Nature of	The decommision	The decommisioning of a powerline can creating employment expectations for job seekers against the background of low										

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence				
seekers	impact:	employment ra decommissioned construction ph	d, the size of	khado local m the town will	nunicipality and have grown an	because d the influ	it is possible in ix of job seeke	that by the ers may be	time this powerline is higher than during the				
	With mitigation	1	1	0	1	2	Low	-	Medium to high				
	Without mitigation	1	2	2	2	10	Low	-	Medium to high				
	Degree to which impact can be reversed:	High – with the	ligh – with the implementation of the relevant mitigation measures										
	Degree of impact on irreplaceable resources:	N/a	N/a										
health impacts as a result of	Nature of impact:	If toilet facilities	on site are not	well managed,	these can lead	to adverse	health impacts	to the surrou	nding communities				
exposure to sewage from	With mitigation	1	1	0	1	2	Low	-	Medium to high				
construction	Without mitigation	1	1	6	3	24	Low	-	Medium to high				
camps and on construction camps	Degree to which impact can be reversed:	High – with the											
	Degree of impact on irreplaceable resources:	N/a											
health impacts from	Nature of impact:	Where construct workers in the a				ses, these c	an be passed o	n to the com	munity members or farm				
construction	With mitigation	1	1	2	2	8	Low	-					
sites and camps as a result of infectious	Without mitigation	2	1	6	3	27	Low	-					
diseases	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	t mitigation mea	sures							
	Degree of impact on irreplaceable resources:	-											
Conduct of construction	Nature of impact:	It is possible that because of good relationships between contactors and community members, negative as well as positive actions can arise											

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
workforce; good	With mitigation	2	1	2	2	10	Low	-	Medium to high			
relationships between	Without mitigation	2	1	6	4	36	Medium	-	Medium to high			
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:	High – with the	High – with the implementation of the relevant mitigation measures									
	Degree of impact on irreplaceable resources:	N/a										
" conduct of	Nature of impact:	These can result from factors such as differences in beliefs and cultural backgrounds										
construction	With mitigation	2	1	2	2	10	Low	-				
workforce; bad relationships	Without mitigation	2	1	6	4	36	Medium	-				
between community members/ farm workers and	Degree to which impact can be reversed:	High – with the										
workers and eskom construction workers leading to violence	Degree of impact on irreplaceable resources:	N/a	N/a									
Theft of material	Nature of impact:	Material can be	stolen from con	struction sites	and in areas alo	ng the rout	e					
from camps and	With mitigation	1	1	0	1	2	Low	-	Medium			
along construction	Without mitigation	2	1	8	4	44	Medium	-	Medium			

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
sites	Degree to which impact can be reversed:	High – with the	High – with the implementation of the relevant mitigation measures									
	Degree of impact on irreplaceable resources:											
Negative	Nature of impact:	It is possible the livelihoods will of	nat land owner ppose the proje	s eg lodge ow ect	ners, game far	mers owne	rs for whom v	isual impact	s are important to their			
attitudes	With mitigation	2	1	2	2	10	Low	-	Medium			
cowards the project and the formation of	Without mitigation	2	1	6	3	27	Low	-	Medium			
community groups, ngo's,	Degree to which impact can be reversed:	High – with the	gh – with the implementation of the relevant mitigation measures									
in response to the project;	Degree of impact on irreplaceable resources:	N/a	N/a									
Land owners	Nature of impact:	This would be expected from landowners who are opposed to the project										
denying	With mitigation	1	1	2	2	8	Low	-	Medium			
contractors access to their	Without mitigation	1	2	6	4	36	Medium	-	Medium			
properties	Degree to which impact can be reversed:	High – with the	High – with the implementation of the relevant mitigation measures									
	Degree of impact on irreplaceable resources:	N/a										
Loss of crops	Nature of impact:	Land and crops	can be lost duri	ng the clearing	of the powerlin	e corridor a	nd during the co	onstruction o	f the powerline			
leading to	With mitigation	1	1	2	2	8	Low	-	Medium to high			
economic losses	Without mitigation	1	3	6	4	40	Medium	-	Medium to high			
	Degree to which impact can be reversed:	ensure thatwhere possibleloss										

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
		 where power l when the discuss with lanctivities such a 	e land and and and and owners that	is t the loss of lan	fallow ar Id will only be d	nd w luring the c	rith no onstruction pha	crops se as some				
	Degree of impact on irreplaceable resources:	N/a										
Loss of land	Nature of impact:	Grazing land are	ea can be lost d	construction	n of access roads							
leading to economic losses	With mitigation	1	1	2	2	8	Low	-	Medium to high			
economic losses	Without mitigation	1	3	6	4	40	Medium	-	Medium to high			
	Degree to which impact can be reversed:	High – with the	High – with the implementation of the relevant mitigation measures									
	Degree of impact on irreplaceable resources:	Where the loss	here the loss of land is permanent, eskom should discuss compensation with landowner									
Impacts on	Nature of impact:	Construction car										
farming	With mitigation	1	1	2	2	8	Low	1	Medium to high			
activities such as sowing,	Without mitigation	1	1	8	3	30	Low	-	Medium to high			
harvesting, and fire management programmes leading to	Degree to which impact can be reversed:	In the case of	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									
economic losses	Degree of impact on irreplaceable resources:	N/a										
Damage to farm	Nature of impact:	This can lead to	conflicts with c	ommunity mem	bers and farme	rs						
infrastructure	With mitigation	1	1	2	1	4	Low	-	Medium to high			
e.g. irrigation equipment,	Without mitigation	1	1	6	3	24	Low	-	Medium to high			

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
gates, fences	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures						
	Degree of impact on irreplaceable resources:	N/a										
Security	Nature of impact:	It is highly likely	is highly likely that theft of game and stock can occur. Theft of game can be higher on farms whe									
concerns as a	With mitigation	1	1	2	4	16	Low	-	Medium to high			
result of poaching of	Without mitigation	1	1	10	4	48	Medium	-	Medium to high			
game, stock theft and crop theft	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures						
	Degree of impact on irreplaceable resources:	The impact can	be high where e	endangered spe	cies such as rhii	no occur						
Security as a	Nature of impact:		The mere presence of construction workers in communities and especially on farms can lead to unear Threatened by their presence									
result of the	With mitigation	1	1	2	2	8	Low	-	Medium to high			
presence of workers on	Without mitigation	2	1	8	3	33	Medium	-	Medium to high			
farms and communities	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	: mitigation mea	isures						
	Degree of impact on irreplaceable resources:	N/a										
Safety of	Nature of impact:	Construction sit	Construction sites are highly hazardous environments and the safety of people and animals can be compromis									
community	With mitigation	1	1	2	1	4	Low	-	Medium			
members/farm workers/animals	Without mitigation	1	1	6	2	16	Low	-	Medium			
	Degree to which impact can be reversed:	High – with the										

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status		
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence	
	Degree of impact on irreplaceable resources:	N/a								
Poor maintenance of	Nature of impact:	It is possible that	at access routes	line is not po	ssible					
the power line	With mitigation	1	1 2 2 8 Low -							
access roads: conflict between	I millioallon	1	4	8	4	52	Medium	-	Medium to high	
Eskom and the landowners on whose	Degree to which impact can be reversed:	High – with the	implementation	of the relevant	mitigation mea	sures				
responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect Eskom to pay for all maintenance	Degree of impact on irreplaceable resources:	N/a								

Agricultural potential

No cumulative impacts are anticipated

Flora									
Plant	Nature of	Vegetation clea	ring or disturba	nce may and	d have been fo	ond to increase	encroachmer	nt	
encroachment	impact:								
	With	1	1	2	3	12	Low	-	High
	Without	1	1	2	3	12	Low	-	High
	Degree to which	Existing/permit	ted access road	ls must be us	sed and the al	l other measur	es must be fo	llowed	
	impact can be								
	reversed:								
	Degree of impact	There is an exis	sting powerline	and encroacl	hment is likely	′			
	on irreplaceable								
	resources:								

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Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	d+m)*p)	(+ve or - ve)	Confidence			
Soil erosion	Nature of impact:	Removal of veg preventing/min			and servitudes	will increas	e the soil erosion	on as vegetat	ion plays a major role in			
	With	1	1	2	3	12	Low	-	High			
	Without	1	1	2	3	12	Low	-	High			
	Degree to which impact can be reversed:	Existing/permit										
	Degree of impact on irreplaceable resources:		ea already disturbed and route follows existing power line/ already measures put in place for the I erosion from the existing line									
Fauna												
Loss of faunal habitat	Nature of impact:	Adverse impact										
	With	1	4	4	3	27	Low	-	High			
	Without	2	4	6	4	48	Medium	-	High			
	Degree to which impact can be reversed:	Low- realign pr activities to the		ent to avoid se	nsitive habitats	and restric	ct vegetation cl	earance and				
	Degree of impact on irreplaceable resources:	The proposed a well as suitable african python										
Direct impact on associated	Nature of impact:	Adverse impact										
fauna and	With	1	4	4	4	36	Medium	-	High			
interactions with structures and	Without	2	4	6	4	48	Medium	-	High			
personnel	Degree to which impact can be reversed:	Medium-restrict species.	construction a	ctivities to the	e 55m servitude	e. No inter	ntional killing of	any faunal				
	Degree of impact on irreplaceable resources:	The proposed a well as suitable african python										
Avifauna												
Nie same letine in	nacts are anticipated											

No cumulative impacts are anticipated

Heritage

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
No cumulative imp	pacts are anticipated											
Visual												
Increased visual exposure to power line infrastructure.	Nature of impact:	intensified imprilines are observed Lastly cumulative the recurrence encountered when	ulative impacts result from the positioning of the new development such that it would give rise sified impression of a pre-existing power line in the landscape. It will also occur as an increased are observed from locations from which more than one power line would now be seen in different y cumulative impacts arise through an increase in the incidence of sequential perceptions of differ recurrence of images and impressions of power lines at various points in the landscape and untered when moving through it.									
	With	3	5	0	3	24	Low	-	Low			
	Without	3	5	6	5	70	High	-	High			
	Degree to which impact can be reversed:	The impact car material. Active						construction				
	Degree of impact on irreplaceable resources:	In areas of high private nature r					ch as the soupa	ansberg and				
Social												
Poaching of game impacting	Nature of impact:	It is highly likely	y that theft of ga	ame and stock	can occur. Theft	t of game ca	an be higher on	farms where	rhino is present			
on the loss of	With	2	3	4	3	27	Low	-	Medium to high			
game and in turn affecting	Without	5	5	8	4	72	High	-	High			
the tourism industry of the municipality and that of the country at large	Degree to which impact can be reversed: Degree of impact on irreplaceable resources:	Where possible, the construction operational pha The impact will	n and decommis se	ssioning phases	as well as dur	ing mainter						
Loss of a sense of place	Nature of impact:	Tourists visit pl them	aces to relax ar	nd be immerse	d in nature, the	e presence	of powerlines ca	an therefore	spoil this experience for			
resulting in	With	1	2	2	2	10	Low	-	Medium to high			
economic losses especially for	Without	3	4	6	3	39	Medium	-	Medium to high			
tourism sector in turn impact	Degree to which impact can be reversed:	Liaise with visuo would be to use					other suggeste	d measures				

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
on the economic growth of the makado municipality	Degree of impact on irreplaceable resources:	N/a							
Increase in power supply	Nature of impact:	An increase in electricity is on							ado local municipality as
and in the	With	3	4	6	4	52	Medium	+	Medium
stability of the network. In turn	Without	3	4	6	4	52	Medium	+	Medium
numerous existing developments	Degree to which impact can be reversed:	N/a							
such as lodges and other tourist attractions can be improved.	Degree of impact on irreplaceable resources:	N/a							

No-go alternative

Agricultural potential

In the event that the transmission lines are not constructed, there will be no impact on the agricultural potential, therefore the status quo will remain.

Flora

In the event that the transmission lines are not constructed, there will be no impact on the flora, therefore the status quo will remain.

Fauna

In the event that the transmission lines are not constructed, there will be no impact on the fauna, therefore the status quo will remain.

Avifauna

In the event that the transmission lines are not constructed, there will be no impact on the avifauna, therefore the status quo will remain.

Heritage

In the event that the transmission lines are not constructed, there will be no impact on heritage sites, therefore the status quo will remain.

Visual

In the event that the transmission lines are not constructed, there will be no visual impact, therefore the status quo will remain.

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Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	d+m)*p)	(+ve or - ve)	Confidence
Social									
Powerlines linking the tabor substation to the new	Nature of impact:	weakest part of powerline. Pow	f the northern o erlines linking t	grid network du the tabor subst	e to being oper ation to the ne	rated beyo w bokmak	nd its reliability.	There is the ubstation in	nd spencer power is the erefore a need for a new order to strengthen the astructure
bokmakirie	With	2	1	2	1	5	Low	-	Medium to high
(nzhelele) substation will	Without	4	5	8	3	51	Medium	-	Medium to high
not be constructed.	Degree to which impact can be reversed:	Construct the p	owerlines						
	Degree of impact on irreplaceable resources:	N/a							
No increase in the voltage	Nature of impact:	The voltage is of such as loss of						nt being shu	t down leading to effects
stability	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 stabi	lised					
	Degree of impact on irreplaceable resources:	N/a							
No increase and assurance of electricity	Nature of impact:		and mining s	ectors. A lack					the agricultural, tourism, growth of the makhado
supply making it	With	1	1	2	1	4	Low	-	Medium
unavailable for agriculture,	Without	3	5	8	4	64	High	-	Medium
tourism and other industries as well as	Degree to which impact can be reversed:	and ensure that			such as the co	nstruction	of the proposed	power line	
allowing for the undertaking of other activities that may not	Degree of impact on irreplaceable resources:	N/a							

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Potential		Extent	Duration	Magnitude	Probability	Significan	ce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+	m)*p)	(+ve or - ve)	Confidence
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									
Continuation of backlogs in	Nature of impact:	The backlogs ar the use of elect					shortages. Tl	ne rendering	of services that require
electricity	With	2	1	4	2	14	Low	-	Medium to high
connections	Without	3	4	8	4	60	Medium	-	Medium to high
	Degree to which impact can be reversed:	The makhado lo increased budg adequate mater	ets to allow for						
	Degree of impact on irreplaceable resources:	N/a							
Continuation of the inadequate	Nature of impact:	In services such	as health facili	ties, lack of elec	tricity can resul	lt in losses of	lives		
provision of	With	1	1	0	2	4	Low	-	Medium
electricity to critical services	Without	3	5	10	4	72	High	-	Medium
such as health facilities	Degree to which impact can be reversed:	The necessity o that adverse im			is imperative ar	nd the propos	sed powerline	can ensure	
	Degree of impact on irreplaceable resources:	N/a							
Continuation of the unavailability of	Nature of impact:		ng and cooking.						utting of trees to use the estation and the possible

Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
electricity in	With	1	1	2	2	8	Low	-	Medium
numerous rural settlements	Without	3	5	8	4	64	High	-	Medium
Sectionicities	Degree to which impact can be reversed:	Provide electrici	ty to rural areas	5					
	Degree of impact on irreplaceable resources:	N/a							

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Table 9.4: Detailed assessment of identified impacts for Alternative 2

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
Construction ph	ase										
Agricultural pot											
Deterioration of soil resource	Nature of impact:	Loss of agricultu	ıral land due to	construction of	infrastructure						
	With	1	4	2	2	14	Low	-			
	Without	1	4	2	3	21	Low	-			
	Degree to which impact can be reversed:	Reversal should	Leversal should be straightforward after removal of infrastructure								
	Degree of impact on irreplaceable resources:	Low to none	ow to none								
Deterioration of soil resource	Nature of impact:	Soil erosion haz	ard due to cons	truction activitie	es						
	With	1	1	2	2	8	Low	-			
	Without	2	2	4	3	24	Low	-			
	Degree to which impact can be reversed:	If erosion is cau	sed, reversal is	often difficult a	nd time-consum	ning, especi	ally in steeper a	ireas			
	Degree of impact on irreplaceable resources:	Moderate									
Flora											
Destruction of protected flora	Nature of impact:	Removal of prot	emoval of protected plant species due to the servitude								
	With	1	1	2	3	12	Low	-	High		
	Without	1	1	2	3	12	Low	-	High		
	Degree to which impact can be reversed:	Existing/permitt	ed access roads	must be used	and the all othe	r measures	must be follow	ed			

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Potential		Extent	Duration	Magnitude	Probability	Signific	ance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	,	sturbed and rou									
Destruction of pristine habitat	Nature of impact:	Destruction and	d disturbance of	a previously ur	ndisturbed veget	ation						
	With	1	1	2	3	12	Low	-	High			
	Without	1	1	2	3	12	Low	-	High			
	Degree to which impact can be reversed:	2	xisting/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:	,	rea already disturbed and route follows existing power line									
Vegetation clearance	Nature of impact:	Removal of veg	getation due to s	servitudes, acce	ess roads and er	ecting of tl	ne pylons					
	With	1	1	2	3	12	Low	-	High			
	Without	1	1	2	3	12	Low	-	High			
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all othe	er measure	es must be follov	ved				
	Degree of impact on irreplaceable resources:		·		(bush clearing)							
Plant encroachment	Nature of impact:	Vegetation clea	aring or disturba	nce may and ha	ave been fond to	increase	encroachment					
	With	1	1	2	3	12	Low	-	High			
	Without	1	1	2	3	12	Low	-	High			
	Degree to which impact can be reversed:	2				er measure	es must be follov	ved				
	Degree of impact on irreplaceable resources:		sting powerline		,							
Threat to biodiversity	Nature of impact:	Disturbance of	an area with hig	gh biodiversity v	will increase the	probability	y of encroachme	nt and biodiv	ersity will be lost.			

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Potential	Mitigation	Extent	Duration	Magnitude	Probability	Significa	ance	Status			
impact		(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence		
	With	1	1	2	3	12	Low	-	High		
	Without	1	1	2	3	12	Low	-	High		
	Degree to which impact can be reversed:	Existing/permit									
	Degree of impact on irreplaceable resources:	Area already disturbed and route follows existing power line									
Soil erosion	Nature of impact:	Removal of vegetation due to the servitudes and servitudes will increase the soil erosion as vegetation plays a major role in preventing/minimising soil erosion									
	With	1		2	3	12	Low	-	High		
	Without	1	1	2	3	12	Low	-	High		
	Degree to which impact can be reversed:	Existing/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:	Area already dissoil erosion fron	place for the								
Fauna											
Loss of faunal habitat	Nature of impact:	Adverse impact									
	With	1	4	4	4	36	Medium	-	High		
	Without	2	4	6	5	60	Medium	-	High		
	Degree to which impact can be reversed:	Low- realign pr activities to the									
	Degree of impact on irreplaceable resources:										
Direct impact on associated	Nature of impact:	Adverse impact									
fauna and	With	1	4	4	4	36	Medium	-	High		
interactions with	Without	2	4	6	5	60	Medium	-	High		

Potential impact	Mitigation	Extent	Duration	Magnitude	Probability	Significa	nce	Status			
		(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
structures and personnel	Degree to which impact can be reversed:	Restrict constru									
	Degree of impact on irreplaceable resources:	The proposed inundated pans bullfrog and sou									
Avifauna											
Habitat destruction	Nature of impact:	Permanent removal of habitat that is used, or may be used, by avifauna.									
	With	1	2	4	3	21	Low	-	Medium		
	Without	1	2	4	5	35	Medium	-	Medium		
	Degree to which impact can be reversed:	Partially reversi									
	Degree of impact on irreplaceable resources:	Low									
Disturbance	Nature of impact:	Noise and movement, from staff and machinery, may disturb avifauna, and nests my be disturbed.									
	With	1	1	4	3	18	Low	-	Medium		
	Without	2	1	4	4	28	Low	-	Medium		
	Degree to which impact can be reversed:	Irreversible									
	Degree of impact on irreplaceable resources:	Medium									
Heritage											
Destruction of	Nature of impact:	Adverse impact									
heritage sites	With mitigation	3	5	2	5	50	Medium	-	High		
and features	Without mitigation	3	5	10	5	90	High	-	High		

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Potential	Mitigation	Extent	Duration	Magnitude	Probability	Significa	ince	Status			
impact		(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
	Degree to which impact can be reversed:	Medium	High								
	Degree of impact on irreplaceable resources:	Not applicable	High								
Visual											
Transformation of the visual quality of the	Nature of impact:	Clearing of vegetation to establish a 55m corridor will result in the transformation of the landscape character, especially in the soutpansberg and private nature reserves. Visibility of the servitude as a "scar" in the landscape will create adverse visual impacts									
landscape	With	3	2	6	5	55	Medium	-	High		
	Without	3	2	6	5	55	Medium	-	High		
	Degree to which impact can be reversed:	The impact can be reversed by terminating construction activity and removing all construction material. Active rehabilitation of vegetation where it has been cleared, is also required.									
	Degree of impact on irreplaceable resources:	In areas of high private nature r	ansberg and								
Social											
Influx of job seekers, mainly											
Influx of job seekers, mainly	Nature of impact:								kraal and harmony. Low ne influx of job seekers		
seekers, mainly unskilled labour,											
seekers, mainly unskilled labour, from the	impact:	employment rat		ado local munio	cipality (mlm) a	rea could b	e the driving fo		e influx of job seekers		
seekers, mainly unskilled labour, from the communities around the power line route	impact: With Without Degree to which impact can be reversed:	employment rat	es in the makh	ado local munio 0 4	cipality (mlm) a	8 36	the driving fo	rce behind th	ne influx of job seekers Medium to high		
seekers, mainly unskilled labour, from the communities around the power line route having job expectations	impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable resources:	employment rat 3 3	es in the makh	ado local munio 0 4	cipality (mlm) a	8 36	the driving fo	rce behind th	ne influx of job seekers Medium to high		
seekers, mainly unskilled labour, from the communities around the power line route having job	impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable resources:	employment rat 3 3 High – with the	in the makh	0 4 of relevant mit	cipality (mlm) a 2 4 tigation measure	8 36	Low Medium	rce behind th	ne influx of job seekers Medium to high		
seekers, mainly unskilled labour, from the communities around the power line route having job expectations	impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable resources: Nature of	employment rat 3 3 High – with the	in the makh	0 4 of relevant mit	cipality (mlm) a 2 4 tigation measure	8 36	Low Medium	rce behind th	Medium to high Medium to high		

Potential impact	Mitigation	Extent	Duration	Magnitude	Probability	Significa	nce	Status			
		(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
construction camps and on construction camps	Degree to which impact can be reversed:	High – with the									
	Degree of impact on irreplaceable resources:	N/a									
Health impacts as a result of	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									
exposure to	With	1	1	0	1	2	Low	-	High		
waste (domestic and industrial)	Without	1	2	2	3	15	Low	-	High		
and moustriar)	Degree to which impact can be reversed:	High – with the									
	Degree of impact on irreplaceable resources:	N/a									
health impacts from	Nature of impact:		Where construction workers are infected with infectious diseases, these can be passed on to the community members or farr workers in the area within which work is being undetaken								
construction	With	1	1	2	2	8	Low	-			
sites and camps as a result of	Without	2	1	6	3	27	Low	-			
infectious diseases	Degree to which impact can be reversed:	High – with the									
	Degree of impact on irreplaceable resources:	N/a									
Conduct of construction	Nature of impact:	It is possible that because of good relationships between contactors and community members, negative as well as positive actions can arise									
workforce; good	With	2	1	2	2	10	Low	-	Medium to high		
relationships between	Without	2	1	6	4	36	Medium	-	Medium to high		
community members/ farm	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	igation measure	es					

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
workers and eskom construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Degree of impact on irreplaceable resources:	N/a							
" conduct of	Nature of impact:	These can resul	t from factors s						
construction	With	2	1	2	2	10	Low	-	Low
workforce; bad relationships	Without	2	1	6	4	36	Medium	-	Low
between community members/ farm	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	igation measure	es			
workers and eskom construction workers leading to violence	Degree of impact on irreplaceable resources:	N/a							
Theft of material	Nature of impact:	Material can be stolen even alor				ong the rou	ite especially as	s material us	ed in powerlines is often
from camps and	With	1	1	0	1	2	Low	-	Medium
along construction	Without	2	1	8	4	44	Medium	-	Medium
sites	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	igation measure	es			
	Degree of impact on irreplaceable resources:								
		•		0.100					

Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
Negative	Nature of impact:	It is possible the livelihoods will determined to the livelihoods will determine the livelihoods.			ners, game far	mers owne	ers for whom v	isual impacts	s are important to their			
attitudes	With	2	1	2	2	10	Low	-	Medium			
towards the project and the	Without	2	1	6	3	27	Low	-	Medium			
formation of community groups, ngo's,	Degree to which impact can be reversed:	ct can be High – with the implementation of relevant mitigation measures										
in response to the project;	Degree of impact on irreplaceable resources:	N/a										
Land owners	Nature of impact:	This would be e	would be expected from landowners who are opposed to the project									
denying contractors	With	1	1	2	2	8	Low	-	Medium			
access to their	Without	1	2	6	4	36	Medium	-	Medium			
properties	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	igation measure	es						
	Degree of impact on irreplaceable resources:	N/a										
Loss of crops	Nature of impact:	Land and crops	can be lost duri	ng the clearing	of the powerline	e corridor a	nd during the co	onstruction o	f the powerline			
leading to	With	1	1	2	2	8	Low	1	Medium to high			
economic losses	Without	1	3	6	4	40	Medium	-	Medium to high			
	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	igation measure	es						
	Degree of impact on irreplaceable resources:	N/a										
Loss of land	Nature of impact:	Grazing land are	ea can be lost d	ue to clearing o	f land for the co	rridor as w	ell as during the	construction	n of access roads			
leading to	With	1	1	2	2	8	Low	-	Medium to high			
economic losses	Without	1	3	6	4	40	Medium	-	Medium to high			

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence				
	Degree to which impact can be reversed:	High – with the	implementation	n of relevant mi	tigation measur	es							
	Degree of impact on irreplaceable resources:	Where the loss	ere the loss of land is permanent, eskom should discuss compensation with landowner										
Impacts on	Nature of Construction can disturb activities on farms												
farming	With	1	1	2	2	8	Low	-	Medium to high				
activities such as sowing,	Without	1	1	8	3	30	Low	-	Medium to high				
harvesting, and fire management	Degree to which impact can be reversed:	High – with the	implementation	n of relevant mi	tigation measur	es							
programmes leading to economic losses	Degree of impact on irreplaceable resources:	N/a											
Damage to farm	Nature of impact:	This can lead to	This can lead to conflicts with community members and farmers										
infrastructure	With	1	1 2 1 4 Low -										
e.g. irrigation equipment,	Without	1	1	6	3	24	Low	-	Medium to high				
gates, fences	Degree to which impact can be reversed:	High – with the	implementation	n of relevant mi	tigation measur	es							
	Degree of impact on irreplaceable resources:	N/a											
Security	Nature of impact:	It is highly likely	y that theft of g	ame and stock	can occur. Thef	t of game ca	n be higher on	farms where	rhino is present				
concerns as a	With	1	1	2	4	16	Low	-	Medium to high				
result of poaching of	Without	1	1	10	4	48	Medium	-	Medium to high				
game, stock theft and crop reversed: Degree to which impact can be reversed: High – with the implementation of relevant mitigation measures													

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Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	l+m)*p)	(+ve or - ve)	Confidence		
theft	Degree of impact on irreplaceable resources:	The impact can	be high where	endangered spe	ecies such as rhi	ino occur					
Security as a	Nature of impact:		mere presence of construction workers in communities and especially on farms can lead to une eatened by their presence								
result of the	With	1	1 2 2 8 Low -								
presence of workers on	Without	2	1 8 3 3 Medium -								
farms and communities	Degree to which impact can be reversed:	High – with the	h – with the implementation of relevant mitigation measures								
	Degree of impact on irreplaceable resources:	N/a	3								
Cafatu. af	Nature of impact:	Construction sit	nstruction sites are highly hazardous environments and the safety of people and animals can be compro								
Safety of community	With	1	1	2	1	4	Low	-	Medium		
members/farm	Without	1	1	6	2	16	Low	-	Medium		
workers/animals	Degree to which impact can be reversed:	High – with the	implementation	of relevant mi	tigation measur	es					
	Degree of impact on irreplaceable resources:	N/a									
,	Nature of impact:	It is possible that	at access routes	can be of such	poor state that	t maintened	e of the powerli	ne is not pos	sible		
Poor maintenance of	With	1	1	2	2	8	Low	-	Medium to high		
the power line	Without	1	4	8	4	52	Medium	-	Medium to high		
access roads: conflict between eskom and the	Degree to which impact can be reversed:	High – with the	High – with the implementation of relevant mitigation measures								
landowners on whose responsibility it is to do maintenance on these roads.	Degree of impact on irreplaceable resources:	N/a									
Farmers use it				9-112							

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
more often but yet expect eskom to pay for all maintenance									
Loss of a sense of place/income	Nature of impact:	The presence of be spoilt	powerlines par	ticularly in touri	st attractions ca	an result in	tourists no long	er visiting th	e area as their views will
on game farms	With	1	1	2	2	8	Low	-	Medium to high
to urists want to see "africa"	Without	1	1	8	4	40	Medium	-	Medium to high
and the power line can disturb the rustic	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	igation measure	es			
african setting;	Degree of impact on irreplaceable resources:	N/A							
Operation phase									

Operation phase

Agricultural potential

It is anticipated that the main impacts on agricultural potential will occur during the construction phase

Flora													
Destruction of	Nature of	Removal of prot	Removal of protected plant species due to the servitude										
protected flora	impact:												
	With	1	1 2 3 12 Low - High										
	Without	1	1 2 3 12 Low - High										
	Degree to which	Existing/permitt	ed access roads	must be used	and the all other	er measure	es must be follow	ed					
	impact can be												
	reversed:												
	Degree of impact	Area already dis	sturbed and rou	te follows existi	ng power line								
	on irreplaceable		,										
	resources:												
Destruction of	Nature of	Destruction and	disturbance of	a previously un	disturbed veget	tation							
pristine habitat	impact:												

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Chapter 9: Impact Assessment

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Potential		Extent	Duration	Magnitude	Probability	Signifi	cance	Status						
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e-	+d+m)*p)	(+ve or - ve)	Confidence					
	With	1	1	2	3	12	Low	-	High					
	Without	1	1	2	3	12	Low	-	High					
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all othe	er measur	es must be follo	owed						
	Degree of impact on irreplaceable resources:		a already disturbed and route follows existing power line noval of vegetation due to servitudes, access roads and erecting of the pylons											
Vegetation clearance	Nature of impact:		1	servitudes, acce	ss roads and ero	ecting of	the pylons							
	With	1	1	-	High									
	Without	2	2	2	3	18	Low	-	High					
	Degree to which impact can be reversed:	Existing/permit	xisting/permitted access roads must be used and the all other measures must be followed											
	Degree of impact on irreplaceable resources:	The servitude h	•											
Plant encroachment	Nature of impact:	Vegetation clea												
	With	1	1	2	3	12	Low	-	High					
	Without	1	1	2	3	12	Low	-	High					
	Degree to which impact can be reversed:	Existing/permit				er measur	es must be follo	owed						
	Degree of impact on irreplaceable resources:													
Threat to biodiversity	Nature of impact:		_				ty of encroachm	ent and biodiv	ersity will be lost.					
	With	1	1	2	3	12	Low	-	High					
	Without	1	1	2	3	12	Low	-	High					
	Degree to which impact can be	5, 1												
			0.114											

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence				
	reversed:												
	Degree of impact on irreplaceable resources:	Area already dis	already disturbed and route follows existing power line										
Soil erosion	Nature of impact:	preventing/mini	noval of vegetation due to the servitudes and servitudes will increase the soil erosion as vegeta venting/minimising soil erosion										
	With	1	1 2 3 12 Low -										
	Without	1	1	2	3	12	Low	-	High				
	Degree to which impact can be reversed:	Existing/permitt	sting/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:	Area already dis soil erosion fron			ing power line/	already me	asures put in p	lace for the					
Fauna													
Loss of faunal habitat with	Nature of impact:	Adverse impact											
clearance of	With	1	4	4	5	45	Medium	-	High				
vegetation within the 55m	Without	2	4	6	5	60	Medium	-	High				
servitude	Degree to which impact can be reversed:	The clearance of species impacting the servitude slagger (especially arbo	ng which could nould not be to real species)	potential impac tally removed p	t on the lines s providing refuge	should be re e habitat fo	emoved. The ver	egetation of inal species					
Disast insucet on	Degree of impact on irreplaceable resources:	inundated pans bullfrog and sou	proposed alternative alignment 2 bisects rivers (non-perennial drainage lines), seasonally ndated pans as well as suitable habitat for several red listed faunal species including giant frog and southern african python										
Direct impact on associated	Nature of impact:	Adverse impact											
fauna and	With	1	4	4	4	36	Medium	-	High				
interactions with structures and	Without	2	4	6	5	60	Medium	-	High				
personnel	Degree to which impact can be reversed:		Restrict construction activities to the 55m servitude. No intentional killing or disturbances of any aunal species. No illegal poaching or hunting activities.										

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Potential		Extent	Duration	Magnitude	Probability	Signific	ance	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence				
	Degree of impact on irreplaceable resources:	inundated pans	proposed alternative alignment 2 bisects rivers (non-perennial drainage lines), seasonally ated pans as well as suitable habitat for several red listed faunal species including giant og and southern african python										
Avifauna													
Collision	Nature of impact:	Collision or red	on or red data species with the overhead line (usually the earth wire).										
	With	1	4	2	3	21	Low	-	Medium				
	Without	1	4	4	4	36	Medium	-	Medium				
	Degree to which impact can be reversed:	Low											
	Degree of impact on irreplaceable resources:	Medium	1edium										
Electrocution	Nature of impact:		Bird perches on pylon and causes an electrical short circuit by physically bridging the air gap between live components and/or ive and earthed components, resulting in death or severe injury.										
	With	1	4	2	3	21	Low	-	Medium				
	Without	1	4	4	4	36	Medium	-	Medium				
	Degree to which impact can be reversed:	Low											
	Degree of impact on irreplaceable resources:	Medium											
Nesting of birds on tower	Nature of impact:	Routine mainter	nance of pylons	and power line	s could result in	disturban	ce of certain bird	species					
structures and	With	1	2	4	2	14	Low	-	Medium				
disturbance during routine	Without	2	2	4	3	24	Low	-	Medium				
maintenance	Degree to which impact can be reversed:	High											
	Degree of impact on irreplaceable resources:	Medium											

Potential		Extent	Duration	Magnitude	Probability	Significa	ınce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	l+m)*p)	(+ve or - ve)	Confidence			
Heritage												
It is anticipated th	nat the main impacts o	on heritage will o	ccur during the	construction ph	ase							
Visual												
Visual exposure to the powerline servitude,	Nature of impact:	close to private the power line,	nature reserve	s. Sensitive vie	ewer locations in	n close prox	kimity (<500m)	verse visual i are highly v	mpacts, especially in and rulnerable to exposure of			
conductor	With	3	5	6	5	70	High	-	High			
cables and towers.	Without	3	4	6	5	65	High	-	High			
towers.	Degree to which impact can be reversed:	proximity to se option.	impact can be reversed by avoiding the unnecessary removal of vegetation and avoiding imity to sensitive viewer locations through careful route planning, or by selecting the no-go on.									
	Degree of impact on irreplaceable resources:	In areas of high private nature r					ich as the soupa	ansberg and				
Social												
Perceived electromagnetic	Nature of impact:	The presence of on some proper		orkers can resu	ult in the treat o	of safety an	d can possibly l	ead to actua	crimes being committed			
fields impacts	With mitigation	1	3	2	1	6	Low	-	Medium			
on humans and animals during	Without mitigation	1	5	4	2	20	Low	-	Medium			
the operational phase	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	tigation measur	es						
	Degree of impact on irreplaceable resources:	N/a										
Loss of a sense of place/income	Nature of impact:	The presence of be spoilt	powerlines par	ticularly in tour	ist attractions c	an result in	tourists no long	ger visiting th	ne area as their views will			
on game farms	With mitigation	1	1	2	3	12	Low	-	Medium			
- tourists want to see "africa"	Without mitigation	3	4	8	4	60	Medium	-	High			
and the power line can disturb the rustic	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	tigation measur	es						

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Potential		Extent	Duration	Magnitude	Probability	Signific	ance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence			
african setting;	Degree of impact on irreplaceable resources:	N/a										
Poor maintenance of	Nature of impact:	It is possible the	at access routes	s can be of such	poor state that	maintena	nce of the powe	erline is not po	ssible			
the power line	With mitigation	1	1	2	2	8	Low	-	Medium to high			
access roads: conflict between eskom and the	Without mitigation	1	4 8 4 52 Medium -									
landowners on whose responsibility it	Degree to which impact can be reversed:	N/a	ı									
is to do maintenance on these roads. Farmers use it more often but yet expect eskom to pay for all maintenance	Degree of impact on irreplaceable resources:	Put a firm nego	tiated contract i	n place during	the operational	phase						
Impact of the power lines on	Nature of impact:	Where powerlin	es are not visib	le or known, pla	ane crashes can	result and	l in turn electric	ty outages ma	y occur			
aircraft as there	With mitigation	1	2	2	2	10	Low	-	Medium to high			
are airports within the study area; one is the	Without mitigation	4	5	6	4	60	Medium	-	Medium to high			
louis trichardt airport and the other is for light	Degree to which impact can be reversed:	High – with the	High – with the implementation of relevant mitigation measures									
aircraft on the road towards waterpoort from louis trichardt	Degree of impact on irreplaceable resources:	N/a										
decrease in property values	Nature of impact:	These can lead	ese can lead to economic losses									

Potential		Extent	Duration	Magnitude	Probability	Signific	cance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence			
and number of	With mitigation	1	3	4	1	8	Low	-	Medium to high			
visitirs to lodges and other areas that are popular	Without mitigation	2	5	6	3	39	Medium	-	Medium to high			
with tourists due to the	Degree to which impact can be reversed:	High – with the	implementation	n of relevant mi	tigation measur	es						
visual impacts of powerlines	Degree of impact on irreplaceable resources:	N/a	/a									
Security issues as a result of	Nature of impact:											
the presence of	With mitigation	1	1	2	2	8	Low	-	Medium to high			
maintenance workers on	Without mitigation	1	1	4	4	24	Low	-	High			
properties	Degree to which impact can be reversed:	High – with the	implementation	n of relevant mi	tigation measur	es						
	Degree of impact on irreplaceable resources:	The impact can	be high where	endangered spe	ecies such as rhi	no occur						
Land owners denying	Nature of impact:	This can result	in maintenance	not occurring								
contractors	With mitigation	1	1	2	2	8	Low	-	Medium			
access to their properties	Without mitigation	1	1	8	4	40	Medium	-	High			
	Degree to which impact can be reversed:	High – with the	implementation	n of relevant mi	tigation measur	es						
	Degree of impact on irreplaceable resources:	N/a										
Poaching of game as well as	Nature of impact:	This is a high p	robability									
stock theft and	With mitigation	1	1	0	1	2	Low	-	Medium to high			
theft of crops	Without mitigation	1	1	2	2	8	Low	-	Medium to high			

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	igation measure	es			
	Degree of impact on irreplaceable resources:	N/a							
Impact on farming	Nature of impact:	During the oper							
activities such	With mitigation	1	1	0	1	2	Low	-	Medium to high
as sowing, harvesting, and fire	Without mitigation	1	1	2	1	4	Low	-	Medium to high
management programmes	Degree to which impact can be reversed:	High – with the	implementation						
leading to economic losses	Degree of impact on irreplaceable resources:	N/a							
Impact on farming	Nature of impact:	During the oper minimal	ational phase, i	mpacts on actv	rities and on gue	ests to lodg	es and other to	urist destniat	ions are likely to be very
activities such	With mitigation	1	1	0	1	2	Low	-	Medium to high
as hunting in game farms leading to	Without mitigation	1	1	2	1	4	Low	-	Medium to high
economic losses. Impacts can also be on	Degree to which impact can be reversed:								
guests in lodges leading to economic losses	ts in lodges of impact on irreplaceable 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 mitigation								
	Without mitigation	3	5	8	5	80	High	+	Medium

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
	Degree to which impact can be reversed:	N/a										
	Degree of impact on irreplaceable resources:	N/a										
An assurance of a reliable	Nature of impact:	Reliable electric	liable electricity supply is a positive impact that will improve activities such as tourism in the makh									
electricity	With mitigation	3	4	2	4	36	Medium	+	Medium			
supply	Without mitigation	2	1	6	4	36	Medium	+	Medium			
	Degree to which impact can be reversed:	N/a										
	Degree of impact on irreplaceable resources:	N/a	N/a									
Increase of electricity	Nature of impact:	In order to grov	n order to grow the economy of the makhado local municipality, electricity is vital									
supply making it	With mitigation											
available for agriculture,	Without mitigation	3	5	8	5	80	High	+	Medium			
tourism and other industries. The increase in electricity can	Degree to which impact can be reversed:	N/a	N/a									
also allow for the undertaking of other activities that may have been that may not have been possible prior to the improved elect.ricity supply	Degree of impact on irreplaceable resources:	N/a										

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
No more backlogs in	Nature of impact:	The absence of will be possible	backlogs in ele	ctricy connectio	ons can imply th	at activities	that can only	take place w	here electicity is present		
electricity	With mitigation										
connections	Without mitigation	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	Nature of impact:				,						
electricity to services such as	With mitigation										
health facilities will cease	Without mitigation	3	5	8	5	80	High	+	Medium		
wiii cease	Degree to which impact can be reversed:	N/a	N/a								
	Degree of impact on irreplaceable resources:	N/a									
Electricity will be available to	Nature of impact:	The presence of	f electricity to ru	ıral areas will ir	mprove the lives	of many w	ho live in pover	ty			
numerous rural settlements that	With mitigation										
do not have this service	Without mitigation	3	5	8	5	80	High	+	Medium		
Service	Degree to which impact can be reversed:	N/a									
	Degree of impact on irreplaceable resources:	N/a									

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
Decommissionin	ig phase								
Agricultural pote	ential								
No decommissioni	ing impacts are anticip	oated							
Flora									
Destruction of protected flora	Nature of impact:	Removal of prot	ected plant spe	cies due to the	servitude				
	With	1	1	2	3	12	Low	-	High
	Without	1	1	2	3	12	Low	-	High
	Degree to which impact can be reversed:	Existing/permitt	ed access roads	s must be used	and the all othe	r measures	must be follow	ed	
	Degree of impact on irreplaceable resources:	Area already dis	sturbed and rou	te follows existi	ng power line				
Destruction of pristine habitat	Nature of impact:	Destruction and	disturbance of	a previously un	disturbed veget	ation			
	With	1	1	2	3	12	Low	-	High
	Without	1	1	2	3	12	Low	-	High
	Degree to which impact can be reversed:	Existing/permitt	ed access roads	s must be used	and the all othe	r measures	must be follow	ed	
	Degree of impact on irreplaceable resources:	Area already dis	sturbed and rou	te follows existi	ng power line				
Vegetation clearance	Nature of impact:	Removal of vege	etation due to s	ervitudes, acces	ss roads and ere	ecting of the	pylons		
	With	1	1	2	3	12	Low	-	High
	Without	1	1	2	3	12	Low	-	High
	Degree to which impact can be reversed:	Existing/permitt	ed access roads	s must be used	and the all othe	r measures	must be follow	ed	

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Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	l+m)*p)	(+ve or - ve)	Confidence
	Degree of impact on irreplaceable resources:	The servitude h	as to be kept cl	ear at all times	(bush clearing)				
Plant encroachment	Nature of impact:	Vegetation clea	ring or disturba	nce may and ha	ave been fond to	increase e	encroachment		
	With	1	1	2	2	8	Low	-	High
	Without	1	1	2	3	12	Low	-	High
	Degree to which impact can be reversed:	- '			and the all othe	r measure	s must be follow	ed	
	Degree of impact on irreplaceable resources:	There is an exis			·				
Threat to biodiversity	Nature of impact:	Disturbance of	an area with hig	h biodiversity v	will increase the	probability	of encroachmer	nt and biodiv	ersity will be lost.
	With	1	1	2	3	12	Low	-	High
	Without	1	1	2	3	12	Low	-	High
	Degree to which impact can be reversed:	Existing/permit	ted access roads	s must be used	and the all othe	er measure:	s must be follow	ed	
	Degree of impact on irreplaceable resources:	Area already di			- '				
Soil erosion	Nature of impact:	Removal of veg preventing/min			and servitudes v	will increas	e the soil erosio	n as vegetat	ion plays a major role in
	With	1	1	2	2	8	Low	-	High
	Without	1	1	2	2	8	Low	-	High
	Degree to which impact can be reversed:	Existing/permit	ted access roads	s must be used	and the all othe	er measure:	s must be follow	ed	
	Degree of impact on irreplaceable resources:	Area already di soil erosion fror							
Fauna									

Potential		Extent	Duration	Magnitude	Probability	Signific	ance	Status		
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence	
Direct impact on associated	Nature of impact:	Adverse impact								
fauna and	With	1	1	2	5	20	Low	-	High	
interactions with structures and	Without	2	1	4	5	35	Medium	-	High	
personnel	Degree to which impact can be reversed:	The removal of of the vegetation			ust be restricted	to the 5	om servitude. I	Rehabilitation		
	Degree of impact on irreplaceable resources:	inundated pans	ne proposed alternative alignment 2 bisects rivers (non-perennial drainage lines), seasonally undated pans as well as suitable habitat for several red listed faunal species including giant ullfrog and southern african python							
Avifauna										
No decommission	ing impacts are anticip	oated								
Heritage										
No decommission	ing impacts are anticip	oated								
Visual										
Visual exposure to operations to dismantle and	Nature of impact:		ptions relating	to the removal					not have significant visu as visual impacts will	
remove of	With	3	1	2	3	18	Low	+	High	
power line & substation	Without	3	1	2	3	18	Low	+	High	
infrastructure	Degree to which impact can be reversed:	Avoid unnecess	ary disturbanc	e of the natural	environment du	iring deco	mmissioning op	erations		
	Degree of impact on irreplaceable	None								

2

0

2

10

Low

Low

Creating employment expectations for job seekers

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resources:

With mitigation

of

1

1

Nature

impact:

Without

mitigation

Chapter 9: Impact Assessment

Social

seekers

Influx of job

EIA Ref Number: 14/12/16/3/3/2/317 NEAS Ref Number: DEA/EIA/0001132/2012

Medium to high

Medium to high

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	igation measure	es						
	Degree of impact on irreplaceable resources:	N/a										
health impacts as a result of	Nature impact: of If toilet facilities on site are not well managed, these can lead to adverse health impacts to the surroun							nding communities				
exposure to	With mitigation	1	1	0	1	2	Low	-	Medium to high			
sewage from construction	Without mitigation	1	1	6	3	24	Low	-	Medium to high			
camps and on construction sites	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	igation measure	es						
	Degree of impact on irreplaceable resources:	N/a	I/a									
health impacts from	Nature of impact:		here construction workers are infected with infectious diseases, these can be passed on to the community members or far orkers in the area within which work is being undetaken									
construction	With mitigation	1	1	2	2	8	Low	•				
sites and camps as a result of infectious	Without mitigation	2	1	6	3	27	Low	-				
diseases	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	igation measure	es						
	Degree of impact on irreplaceable resources:	N/a										
Conduct of construction	Nature of impact:	It is possible th actions can arise	-	good relationshi	ps between cor	ntactors and	d community m	nembers, neg	ative as well as positive			
workforce; good	With mitigation	2	1	2	2	10	Low	-	Medium to high			
relationships between	Without mitigation	2	1	6	4	36	Medium	-	Medium to high			
community members/ farm workers and	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	igation measure	es						

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
eskom construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Degree of impact on irreplaceable resources:	N/a									
" conduct of	Nature of impact:	These can resul	t from factors su								
construction workforce; bad	With mitigation	2	1	2	2	10	Low	-	Low		
relationships between	Without mitigation	2	1	6	4	36	Medium	-	Low		
community members/ farm workers and	Degree to which impact can be reversed:	High – with the	High – with the implementation of relevant mitigation measures								
eskom construction workers leading to violence	Degree of impact on irreplaceable resources:	N/a	l/a								
Theft of material	Nature of impact:	Material can be targeted by crin		ne sites where	decommissioni	ng is takin	g place as mat	terial used i	n electricity is often the		
from camps and	With mitigation	1	1	0	1	2	Low	-	Medium		
along construction sites	Without mitigation	2	1	8	4	44	Medium	-	Medium		
SILES	Degree to which impact can be reversed:	High – with the	implementation	of relevant mit	igation measure	es					
	Degree of impact on irreplaceable resources:										

Potential		Extent	Duration	Magnitude	Probability	Signific	cance	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence		
Loss of crops	Nature of impact:	Crops can be lo	st during the cle	earing of the po	werline corridor	and durin	ng the construc	tion of the pow	erline		
leading to	With mitigation	1	1	2	2	8	Low	-	Medium to high		
economic losses	Without mitigation	1	3	6	4	40	Medium	-	Medium to high		
	Degree to which impact can be reversed:	High – with the	implementation	n of relevant mi	tigation measur	es					
	Degree of impact on irreplaceable resources:	N/a									
Impacts on	Nature of impact:	Construction ca	n disturb activit	ties on farms							
farming	With mitigation	1	1	2	2	8	Low	-	Medium to high		
activities such as sowing,	Without mitigation	1	1	8	3	30	Low	-	Medium to high		
harvesting, and fire management	Degree to which impact can be reversed:	High – with the									
programmes leading to economic losses	Degree of impact on irreplaceable resources:	N/a									
Damage to farm	Nature of impact:	This can lead to	conflicts with c	community men	nbers and farme	ers					
infrastructure	With mitigation	1	1	2	1	4	Low	-	Medium to high		
e.g. irrigation equipment,	Without mitigation	1	1	6	3	24	Low	-	Medium to high		
gates, fences	Degree to which impact can be reversed:	High – with the	implementation	n of relevant mi	tigation measur	es					
	Degree of impact on irreplaceable resources:	N/a									
Security	Nature of impact:	It is highly likel	y that theft of g	ame and stock	stock can occur. Theft of game can be higher on farms where rhino is						

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Potential		Extent	Duration	Magnitude	Probability	Signifi	icance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e-	+d+m)*p)	(+ve or - ve)	Confidence
concerns as a	With mitigation	1	1	2	4	16	Low	-	Medium to high
result of poaching of	Without mitigation	1	1	10	4	48	Medium	-	Medium to high
game, stock theft and crop theft	Degree to which impact can be reversed:	High – with th	ne implementatio	on of relevant mi	tigation measur	es			
	Degree of impact on irreplaceable resources:	The impact ca							
Security as a	Nature of impact:		esence of constru y their presence	an lead to une	ase and people may feel				
result of the presence of	With mitigation	1	1	2	2	8	Low	-	Medium to high
workers on	Without mitigation	2	1	8	3	33	Medium	-	Medium to high
farms and communities	Degree to which impact can be reversed:	High – with th							
	Degree of impact on irreplaceable resources:	N/a							
Safety of community	Nature of impact:	The mere pre threatened	esence of constru	uction workers ir	communities a	nd espec	ially on farms o	an lead to une	ase and people may feel
members/farm	With mitigation	1	1	2	1	4	Low	-	Medium
workers/animals	Without mitigation	1	1	6	2	16	Low	-	Medium
	Degree to which impact can be reversed: High – with the implementation of relevant mitigation measures								
	Degree of impact on irreplaceable resources:	N/a							

Agricultural potential

No cumulative impacts are anticipated

Potential		Extent	Duration	Magnitude	Probability	Significa	ınce	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	l+m)*p)	(+ve or - ve)	Confidence		
Flora											
Plant encroachment	Nature of impact:	Vegetation clea	ring or disturbar	nce may and ha	ve been fond to	increase e	ncroachment				
	With	1	2	2	3	15	Low	-	High		
	Without	2	3	4	5	45	Medium	-	High		
	Degree to which impact can be reversed:	Existing/permit	xisting/permitted access roads must be used and the all other measures must be followed								
	Degree of impact on irreplaceable resources:	There is an exis	here is an existing powerline and encroachment is likely								
Soil erosion	Nature of impact:	Removal of veg preventing/mini			and servitudes v	vill increase	e the soil erosio	n as vegetat	ion plays a major role in		
	With	1	1	2	2	8	Low	-	High		
	Without	2	2	4	3	24	Low	-	High		
	Degree to which impact can be reversed:	Existing/permit	ted access roads	must be used	and the all othe	r measures	must be follow	ed			
	Degree of impact on irreplaceable resources:	Area already dissoil erosion from			ing power line/	already me	easures put in p	lace for the			
Fauna											
Loss of faunal habitat	Nature of impact:	Adverse impact									
	With	1	4	4	5	45	Medium	-	High		
	Without	2	4	6	5	60	Medium	-	High		
	Degree to which impact can be reversed:	activities to the	Low- realign preferred alignment to avoid sensitive habitats and restrict vegetation clearance and activities to the 55m servitude.								
	Degree of impact on irreplaceable resources:	The proposed alternative alignment 2 bisects rivers (non-perennial drainage lines), seasonally inundated pans as well as suitable habitat for several red listed faunal species including giant bullfrog and southern african python									
Direct impact on associated	Nature of impact:	Adverse impact									

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status		
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence	
fauna and	With	1	4	4	4	36	Medium	-	High	
interactions with structures and	Without	2	4	6	5	60	Medium	-	High	
personnel	Degree to which impact can be reversed:	Medium-restrict species.	ledium-restrict construction activities to the 55m servitude. No intentional killing of any faunal pecies.							
	Degree of impact on irreplaceable resources:	inundated pans	The proposed alternative alignment 2 bisects rivers (non-perennial drainage lines), seasonally nundated pans as well as suitable habitat for several red listed faunal species including giant bullfrog and southern african python							
Avifauna										

No cumulative impacts are anticipated

Heritage

No cumulative impacts are anticipated

	· · · · · · · · · · · · · · · · · · ·											
Visual												
Increased visual exposure to power line infrastructure.	impact:	intensified impr lines are observ Lastly cumulativ	ession of a pre- red from location re impacts arise of images and	existing power l ns from which m through an inc impressions of	ine in the lands nore than one perease in the inci	cape. It wi ower line w dence of se	ill also occur as ould now be se equential percep	an increased en in differer otions of diffe	e to an extended and/or I perception where power it parts of the landscape. Erent power lines through I which are continuously			
	With	3	5	0	3	24	Low	-	High			
	Without	3	5	6	5	70	High	-	High			

Without	3	5	6	5	70	High	-
Degree to which	•		,		,	_	onstruction
•	material. Active	rehabilitation of	of vegetation wh	nere it has been	cleared, is	also required.	
reversed:							
Degree of impact						ch as the soupa	nsberg and
on irreplaceable	private nature r	eserves, the de	gree of impact w	viii be very nign			

Social of It is highly likely that theft of game and stock can occur. Theft of game can be higher on farms where rhino is present Poaching of Nature game impacting impact: on the loss of With Medium to high 2 3 3 27 Low game and in Without 5 5 8 4 72 High High

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
turn affecting the tourism industry of the	reversed:	Where possible the contaructio operational pha	nand decommis se	sioning phases	as well as duri	ing mainter						
municpality and that of the country at large	Degree of impact on irreplaceable resources:		he impact will high where endangered species such as rhino occur									
Loss of a sense of place		Tourists visit pl them										
resulting in	With	1	2	2	2	10	Low	-	Medium to high			
economic losses especially for	Without	3	4	6	3	39	Medium	-	Medium to high			
tourism sector in turn imact on the economic	Degree to which impact can be reversed:	Liase with visua would be to use					other suggeste	d measures				
growth of the makhado municipality	Degree of impact on irreplaceable resources:	N/a										
Increase in power supply	Nature of impact:	An increase in electricity is on							ado local municipality as			
and in the	With	3	4	6	4	52	Medium	+	Medium			
stability of the network. In turn	Without	3	4	6	4	52	Medium	+	Medium			
numerous existing developments	Degree to which impact can be reversed:											
such as lodges and other tourist attractions can be improved.	Degree of impact on irreplaceable resources:	N/a										

No-go alternative

Agricultural potential

In the event that the transmission lines are not constructed, there will be no impact on the agricultural potential, therefore the status quo will remain.

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Potential	A4'4'	Extent	Duration	Magnitude	Probability	Significance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)	(+ve or - ve)	Confidence

Flora

In the event that the transmission lines are not constructed, there will be no impact on the flora, therefore the status quo will remain.

Fauna

In the event that the transmission lines are not constructed, there will be no impact on the fauna, therefore the status quo will remain.

Avifauna

In the event that the transmission lines are not constructed, there will be no impact on the avifauna, therefore the status quo will remain.

Heritage

In the event that the transmission lines are not constructed, there will be no impact on heritage sites, therefore the status quo will remain.

Visua

In the event that the transmission lines are not constructed, there will be no visual impact, therefore the status quo will remain.

Social												
Powerlines linking the tabor substation to the new	Nature of impact:	weakest part of	the northern g erlines linking t	jrid network du he tabor subst	e to being oper ation to the ne	ated beyon w bokmaki	nd its reliability. rie (nzhelele) s	There is the ubstation in	nd spencer power is the erefore a need for a new order to strengthen the astructure			
bokmakirie	With	2	1	2	1	5	Low	-	Medium to high			
(nzhelele) substation will	Without	4	5	8	3	51	Medium	-	Medium to high			
not be constructed.	Degree to which impact can be reversed:	construct the	powerlines									
	Degree of impact on irreplaceable resources:	N/a	√a									
No increase in the voltage	Nature of impact:	The voltage is of such as loss of o						nt being shu	t down leading to effects			
stability	With	1	1	2	1	4	Low	-	Medium			
	Without	3	5 8 3 48 Medium -									

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d-	+m)*p)	(+ve or - ve)	Confidence
	Degree of impact on irreplaceable resources:	N/a							
No increase and assurance of electricity	Nature of impact:		and mining so	ectors. A lack					the agricultural, tourism, growth of the makhado
supply making it	With	1	1	2	1	4	Low	-	Medium
unavailable for agriculture,	Without	3	5	8	4	64	High	-	Medium
tourism and other industries as well as	Degree to which impact can be reversed:	Increase electri and ensure that			such as the co	nstruction o	f the proposed	power line	
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 of impact on irreplaceable resources:	N/a							
Continuation of backlogs in	Nature of impact:	The backlogs ar use of electricity					nortages. The r	endering of s	services that require the
electricity	With	2	1	4	2	14	Low	-	
connections	Without	3	4	8	4	60	Medium	-	
	Degree to which impact can be reversed:	The makhado lo increased budgadequate mater	ets to allow fo						

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence				
Degree of impact N/a on irreplaceable resources:													
Continuation of the inadequate	Nature of impact:	In services such	services such as health facilities, lack of electricity can result in losses of lives										
provision of	With	1	1	0	2	4	Low	-					
electricity to	Without	3	5	10	4	72	High	-					
such as health facilities	ritical services uch as health Degree to which The necessity of electricity to critical services is imperative and the proposed powerline can ensure												
	Degree of impact on irreplaceable resources:	N/a	l/a										
Continuation of the unavailability of	Nature of impact:	the wood for he	A lack of electricity means that the lifestyles within these 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.										
electricity in	With	1	1	2	2	8	Low	-	Medium				
numerous rural settlements	Without	3	5	8	4	64	High	-	Medium				
Sectionic	Degree to which impact can be reversed:	Provide electrici	rovide electricity to rural areas										
	Degree of impact N/a on irreplaceable resources:												

Table 9.5: Detailed assessment of identified impacts for Alternative 3

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
Construction ph	ase										
Agricultural pot											
Deterioration of soil resource	Nature of impact:	Loss of agricultu	ıral land due to	construction of	infrastructure						
	With	1	4	2	2	14	Low	-	High		
	Without	1	4	2	3	21	Low	-	High		
	Degree to which impact can be reversed:	Reversal should	versal should be straightforward after removal of infrastructure								
	Degree of impact on irreplaceable resources:	Low to none	v to none								
Deterioration of soil resource	Nature of impact:	Soil erosion haz	ard due to cons	truction activition	es						
	With	1	1	2	2	8	Low	-	High		
	Without	2	2	4	3	24	Low	-	High		
	Degree to which impact can be reversed:	If erosion is cau	sed, reversal is	often difficult a	nd time-consum	ning, especi	ally in steeper a	areas			
	Degree of impact on irreplaceable resources:	Moderate									
Flora											
Destruction of protected flora	Nature of impact:	Removal of prot	ected plant spe								
	With	1	5	6	5	60	Medium	-	High		
	Without	1	5	6	5	60	Medium	-	High		
	Degree to which impact can be reversed:	impact can be						ed			

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Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	The route is on access roads	a virtually und	isturbed area a	and passes thro	ugh a natui	re reserve ad th	nere are not				
Destruction of pristine habitat	Nature of impact:	Destruction and	estruction and disturbance of a previously undisturbed vegetation									
	With	2	5	6	5	65	High	-	High			
	Without	2	5	6	5	65	High	-	High			
	Degree to which impact can be reversed:	571	xisting/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:	access roads	ne route is on a virtually undisturbed area and passes through a nature reserve ad there are not coess roads									
Vegetation clearance	Nature of impact:	Removal of veg	etation due to s	ervitudes, acce	ss roads and ere	ecting of th						
	With	1	5	6	5	60	Medium	-	High			
	Without	1	5	6	5	60	Medium	-	High			
	Degree to which impact can be reversed:	Existing/permit				er measures	s must be follow	ed				
	Degree of impact on irreplaceable resources:	The servitude h	•		,							
Plant encroachment	Nature of impact:	Vegetation clea	ring or disturbai	nce may and ha	ave been fond to	increase e	ncroachment					
	With	1	5	4	3	30	Low	-	High			
	Without	1	5	6	5	60	Medium	-	High			
	Degree to which impact can be reversed:	Existing/permit										
	Degree of impact on irreplaceable resources:	The area is pris										
Threat to biodiversity	Nature of impact:	Disturbance of	an area with hig	h biodiversity v	vill increase the	probability	of encroachmer	nt and biodiv	ersity will be lost.			

Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	i+m)*p)	(+ve or - ve)	Confidence				
	With	1	3	6	5	50	Medium	-	High				
	Without	1	4	6	5	55	Medium	-	High				
	Degree to which impact can be reversed:	Existing/permit	isting/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:	Biodiversity is h	odiversity is high along this route and thus prone to invasion										
Soil erosion	Nature of impact:		emoval of vegetation due to the servitudes and servitudes will increase the soil erosion as vegeta reventing/minimising soil erosion										
	With	1	2	4	4	28	Low	-	High				
	Without	2	3	4	4	36	Medium	-	High				
	Degree to which impact can be reversed:	Existing/permit	ted access roads	s must be used	and the all othe	r measure	s must be follow	ved					
	Degree of impact on irreplaceable resources:	The area is vir erosion	tually undisturt	ped and there	no access road	s, to build	l roads would i	ncrease soil					
Fauna													
Loss of faunal habitat	Nature of		dverse impact										
Habitat	impact:												
Habitat		Adverse impact	4	6	5	60	Medium	-	High				
liabitat	impact:		1	6	5	60	Medium Medium	-	High High				
Habitat	impact: With	2	4 4 eferred alignme	6 ent to avoid ser	5	60	Medium	-					
nabitat	impact: With Without Degree to which impact can be	2 2 Low- realign pr	4 4 eferred alignme 55m servitude. he proposed al ern mistbelt for	ent to avoid ser ignment bisect rest as well as	5 nsitive habitats s rivers (non-suitable habitat	and restrice perennial t for sever	Medium ct vegetation cla drainage lines) ral red listed fai	- earance and , rupicolous					
Direct impact on associated	impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable resources:	2 Low- realign practivities to the Medium-high to	4 4 eferred alignme 55m servitude. he proposed al ern mistbelt for bullfrog, souther	ent to avoid ser ignment bisect rest as well as	5 nsitive habitats s rivers (non-suitable habitat	and restrice perennial t for sever	Medium ct vegetation cla drainage lines) ral red listed fai	- earance and , rupicolous					
Direct impact on	impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable resources: Nature of impact:	2 Low- realign practivities to the Medium-high to outcrops, north including giant	4 4 eferred alignme 55m servitude. he proposed al ern mistbelt for bullfrog, souther	ent to avoid ser ignment bisect rest as well as	5 nsitive habitats s rivers (non-suitable habitat	and restrice perennial t for sever	Medium ct vegetation cla drainage lines) ral red listed fai	- earance and , rupicolous					

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Potential		Extent	Duration	Magnitude	Probability	Significar	ісе	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+	⊦m)*p)	(+ve or - ve)	Confidence			
structures and personnel	Degree to which impact can be reversed:	Medium-restrict species.	Medium-restrict construction activities to the 55m servitude. No intentional killing of any faunal species. Medium-high the proposed alignment bisects rivers (non-perennial drainage lines), rupicolous									
Avifauna												
Habitat destruction	Nature of impact:	Permanent rem		hat is used, or i		y avifauna.						
	With	1	2	4	3	21	Low	-	Medium			
	Without	1	2	4	5	35	Medium	-	Medium			
	Degree to which impact can be reversed:	Partially reversi	ole									
	Degree of impact on irreplaceable resources:	Low										
Disturbance	Nature of impact:	Noise and move	ment, from staf	f and machiner	y, may disturb a	avifauna, an	d nests my be	disturbed.				
	With	1	1	4	3	18	Low	-	Medium			
	Without	2	1	4	4	28	Low	-	Medium			
	Degree to which impact can be reversed:	Irreversible										
	Degree of impact on irreplaceable resources:											
Heritage												
Destruction of	Nature of impact:	Adverse impact	on a identified l	heritage sites al	ong alternative							
heritage sites	With mitigation	3	5	2	5	50	Medium	-	High			
and features	Without mitigation	3	5	10	5	90	High	-	High			

Potential		Extent	Duration	Magnitude	Probability	Significa	ınce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	l+m)*p)	(+ve or - ve)	Confidence				
	Degree to which impact can be reversed:	Medium							High				
	Degree of impact on irreplaceable resources:	Not applicable	t applicable										
Visual													
Transformation of the visual quality of the	Nature of impact:	activity will inc	aring of vegetation to establish a 55m corridor will result in the transformation of the landscape wity will increase the presence and movement of contractors and construction vehicles, which acts and negatively affect the sense of place, especially in or close to private nature reserves.										
landscape	With	3	2	6	5	55	Medium	-	High				
	Without	3	2	6	5	55	Medium	-	High				
	Degree to which impact can be reversed:	material. Activ	e impact can be reversed by terminating construction activity and removing all construction aterial. Active rehabilitation of vegetation where it has been cleared, is also required.										
	Degree of impact on irreplaceable resources:	In areas of high private nature i					ich as the soup	ansberg and					
Social													
Conduct of construction	Nature of impact:	As this route ru	ns through farm	ns good relation	ships between o	contactors a	and farm worke	rs are possibl	е				
workforce; good	With mitigation	2	1	2	2	10	Low	-	Medium to high				
relationships between / farm	Without mitigation	2	1	6	4	36	Medium	-	Medium to high				
workers and eskom construction workers can	Degree to which impact can be reversed:	High – with imp	gh – with implementation of relevant mitigation measures										
result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Degree of impact on irreplaceable resources:	N/a											

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Potential		Extent	Duration	Magnitude	Probability	Significance		Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence		
Conduct of construction workforce; bad relationships between farm workers and eskom construction workers leading to violence	Nature of impact:	As this route ru factors such as	le. These can result from								
	With mitigation	2	1	2	2	10	Low	-	Medium to high		
	Without mitigation	2	1	6	4	36	Medium	-	Medium to high		
	Degree to which impact can be reversed:	High – with implementation of relevant mitigation measures									
	Degree of impact on irreplaceable resources:	N/a	V/a								
Theft of material from camps and	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									
along	With mitigation	1	1	0	1	2	Low	-	Medium		
construction sites	Without mitigation	2	1	8	4	44	Medium	-	Medium		
	Degree to which impact can be reversed:	High – with imp									
	Degree of impact on irreplaceable resources:										
Negative attitudes	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									
towards the	With mitigation	2	1	2	2	10	Low	-	Medium		
project and the formation of	Without mitigation	2	1	6	3	27	Low	-	Medium		
community groups, ngo's, in response to the project;	Degree to which impact can be reversed:	High – with implementation of relevant mitigation measures									
	Degree of impact on irreplaceable resources:	N/a									
Land owners denying	Nature of impact:	This would be expected from landowners who are opposed to the project									
contractors	With mitigation	1	1	2	2	8	Low	_	Medium		

Potential impact	Mitigation	Extent	Duration	Magnitude	Probability	Significance (s=(e+d+m)*p)		Status			
		(e)	(d)	(m)	(p)			(+ve or - ve)	Confidence		
access to their properties	Without mitigation	1	2	6	4	36	Medium	-	Medium		
	Degree to which impact can be reversed:	High – with imp									
	Degree of impact on irreplaceable resources:	N/a									
Loss of crops leading to	Nature of impact:	Land and crops can be lost during the clearing of the powerline corridor and during the construction of the powerline									
economic losses	With mitigation	1	1	2	2	8	Low	-	Medium to high		
	Without mitigation	1	3	6	4	40	Medium	-	Medium to high		
	Degree to which impact can be reversed:	High – with imp									
	Degree of impact on irreplaceable resources:	N/a									
Loss of land leading to	Nature of impact:	Grazing land are	n of access roads								
economic losses	With mitigation	1	1	2	2	8	Low	-	Medium to high		
	Without mitigation	1	3	6	4	40	Medium	-	Medium to high		
	Degree to which impact can be reversed:	High – with imp									
	Degree of impact on irreplaceable resources:	• where the loss									
Impacts on farming	Nature of impact:	Construction ca									
activities such	With mitigation	1	1	2	2	8	Low	-	Medium to high		
as sowing, harvesting, and	Without mitigation	1	1	8	3	30	Low	-	Medium to high		

Potential impact	Mitigation	Extent	Duration	Magnitude	Probability	Significa	nce	Status			
		(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
fire management programmes leading to economic losses	Degree to which impact can be reversed:	High – with imp									
	Degree of impact on irreplaceable resources:	N/a									
Damage to farm infrastructure	Nature of impact:	This can lead to conflicts with community members and farmers									
e.g. irrigation	With mitigation	1	1	2	1	4	Low	-	Medium to high		
equipment, gates, fences	Without mitigation	1	1	6	3	24	Low	-	Medium to high		
	Degree to which impact can be reversed:	High – with imp	High – with implementation of relevant mitigation measures								
	Degree of impact on irreplaceable resources:	N/a									
Security concerns as 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									
result of	With mitigation	1	1	2	4	16	Low	-	Medium to high		
poaching of game, stock	Without mitigation	1	1	10	4	48	Medium	-	Medium to high		
theft and crop theft	Degree to which impact can be reversed:	High – with imp									
	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	Nature of impact:	The mere presence of construction workers in communities and especially on farms can lead to unease and people may threatened									
	With mitigation	1	1	2	2	8	Low	-	Medium to high		
workers on farms and	Without mitigation	2	1	8	3	33	Medium	-	Medium to high		
communities	Degree to which impact can be reversed:	High – with implementation of relevant mitigation measures									

Potential impact	Mitigation	Extent	Duration	Magnitude	Probability	Significa	nce	Status			
		(e)	(d)	(m)	(p)	(S=(A+A+M)*N)		(+ve or - ve)	Confidence		
	Degree of impact on irreplaceable resources:	N/a									
Safety of community	Nature of impact:	Construction sit	Construction sites are highly hazardous environments and the safety of people and animals can be compromised								
members/farm	With mitigation	1	1	2	1	4	Low	-	Medium		
workers/animals	Without mitigation	1	1	6	2	16	Low	-	Medium		
	Degree to which impact can be reversed:	High – with imp									
	Degree of impact on irreplaceable resources:	N/a	N/a								
Poor maintenance of	Nature of impact:	It is possible that	It is possible that access routes can be of such poor state that maintenece of the powerline is not possible								
the power line	With mitigation	1	1	2	2	8	Low	-	Medium to high		
access roads: conflict between eskom and the	Without mitigation	1	4	8	4	52	Medium	-	Medium to high		
landowners on whose responsibility it	Degree to which impact can be reversed:	High – with imp									
responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect eskom to pay for all maintenance	Degree of impact on irreplaceable resources:	N/a	N/a								
Loss of a sense of place/income	Nature of impact:	The presence of powerlines particularly in tourist attractions can result in tourists no longer visiting the area as their views be spoilt									
on game farms	With mitigation	1	1	2	2	8	Low	-	Medium to high		

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
tourists wantsee	Without mitigation	1	1	8	4	40	Medium	-	Medium to high
"africa"and the power line can disturb the	Degree to which impact can be reversed:			those parts that will have t be placed in o	e the least	hunting impact or farm areas	5- 5	avoided; industry;	
rustic african setting;	Degree of impact on irreplaceable resources:								

Operation phase

Agricultural potential

It is anticipated that the main impacts on agricultural potential will occur during the construction phase

Flora													
Destruction of	Nature of	Removal of prot	ected plant spe	cies due to the	servitude								
protected flora	impact:												
	With	1	4 6 5 55 Medium - H										
	Without	2	5	High									
	Degree to which	Existing/permitt	ing/permitted access roads must be used and the all other measures must be followed										
	impact can be reversed:												
	Degree of impact	The route is on	a virtually undi	sturbed area a	nd passes throu	gh a natur	e reserve ad th	ere are not					
	on irreplaceable	access roads											
	resources:												
Destruction of	Nature of	Destruction and	disturbance of	a previously un	disturbed vegeta	ation							
pristine habitat	impact:												
	With	2	5	8	5	75	High	-	High				
	Without	2	5 8 5 75 High - High										
	Degree to which	Existing/permitt	xisting/permitted access roads must be used and the all other measures must be followed										
	impact can be												
	reversed:												

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence				
	Degree of impact on irreplaceable resources:	The route is on access roads	a virtually und	isturbed area a	nd passes throu	igh a natur	e reserve ad th	ere are not					
Vegetation clearance	Nature of impact:	Removal of veg	moval of vegetation due to servitudes, access roads and erecting of the pylons										
	With	2	5	8	5	75	High	-	High				
	Without	2	5	8	5	75	High	-	High				
	Degree to which impact can be reversed:		sting/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:		servitude has to be kept clear at all times (bush clearing)										
Plant encroachment	Nature of impact:	Vegetation clea				increase e	ncroachment						
	With	1	3	6	3	30	Low	-	High				
	Without	2	3	6	3	33	Medium	-	High				
	Degree to which impact can be reversed:	Existing/permit						ed					
	Degree of impact on irreplaceable resources:	The area is pris	tine and disturb	ance will increa	se the possibility	y of encroad	chment						
Threat to biodiversity	Nature of impact:	Disturbance of a	an area with hig	h biodiversity w	vill increase the	probability	of encroachmer	t and biodiv	ersity will be lost.				
	With	1	2	6	5	45	Medium	-	High				
	Without	2	3	6	5	55	Medium	-	High				
	Degree to which impact can be reversed:	Existing/permit	ted access roads	s must be used	and the all othe	r measures	must be follow	ed					
	Degree of impact on irreplaceable resources:												
Soil erosion	Nature of impact:	Removal of vegetation due to the servitudes and servitudes will increase the soil erosion as vegetation plays a major role in preventing/minimising soil erosion											

Potential		Extent	Duration	Magnitude	Probability	Signific	cance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	-d+m)*p)	(+ve or - ve)	Confidence			
	With	1	1	6	4	32	Medium	-	High			
	Without	1	2	6	4	36	Medium	-	High			
	Degree to which impact can be reversed:	Existing/permit	ixisting/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:	The area is vir erosion	e area is virtually undisturbed and there no access roads, to build roads would increase soil osion									
auna												
oss of faunal nabitat with	impact:	Adverse impact	verse impact									
clearance of	With	1	4	4	5	45	Medium	-	High			
egetation vithin the 55m	Without	2	4	6	5	60	Medium	-	High			
ervitude	Degree to which impact can be	The clearance species impacti										
	reversed:	(especially arbo		tally removed	providing refug	e habitat	for remaining fa	unal species				
	Degree of impact on irreplaceable resources:		real species) he proposed a ern mistbelt fo	ignment bisec rest as well as	ts rivers (non- suitable habita	perennial t for seve	drainage lines eral red listed fa), rupicolous				
•	Degree of impact on irreplaceable	(especially arbo Medium-high the outcrops, north	oreal species) he proposed a ern mistbelt fo bullfrog, southe	ignment bisec rest as well as	ts rivers (non- suitable habita	perennial t for seve	drainage lines eral red listed fa), rupicolous				
ssociated auna and	Degree of impact on irreplaceable resources: Nature of impact:	(especially arbo Medium-high the outcrops, northe including giant	oreal species) he proposed a ern mistbelt fo bullfrog, southe	ignment bisec rest as well as	ts rivers (non- suitable habita	perennial t for seve	drainage lines eral red listed fa), rupicolous	High			
associated auna and nteractions with	Degree of impact on irreplaceable resources: Nature of impact:	(especially arbo Medium-high the outcrops, northe including giant Adverse impact	real species) he proposed a ern mistbelt fo bullfrog, southe	lignment bisec rest as well as rn african pytho	ts rivers (non- suitable habita on, ground pang	perennial t for seve olin and b	drainage lines eral red listed fa prown hyaena.), rupicolous aunal species	High High			
Direct impact on associated fauna and interactions with structures and personnel	Degree of impact on irreplaceable resources: Nature of impact: With	(especially arbo Medium-high the outcrops, northe including giant of the description of t	he proposed a ern mistbelt fo bullfrog, southed 4 4 4 construction acies. No illegal p	lignment bised rest as well as rn african pytho	tts rivers (non-suitable habita on, ground panged) 4 5 5 5 5 5 5 6 6 6 6 6 6 6	perennial t for seve olin and b 36 60 No intention	drainage lines eral red listed fa prown hyaena. Medium Medium onal killing or dis	sturbances of				
associated auna and nteractions with structures and	Degree of impact on irreplaceable resources: Nature of impact: With Without Degree to which impact can be	(especially arbo Medium-high the outcrops, northe including giant adverse impact 1 2 Medium-restrict	he proposed a ern mistbelt fo bullfrog, southed 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	lignment bisectorest as well as rn african pythouse a final pythouse a fin	tts rivers (non-suitable habita on, ground panged) 4 5 5 5 5 5 5 6 6 7 7 8 7 8 7 8 8 8 8 8 8 8	perennial t for seve olin and b 36 60 No intention -perennial t for seve	drainage lines eral red listed fa prown hyaena. Medium Medium onal killing or dis drainage lines eral red listed fa	sturbances of				
associated auna and nteractions with structures and personnel	Degree of impact on irreplaceable resources: Nature of impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable	(especially arbo Medium-high the outcrops, northe including giant of the first section of the first section of the proposed outcrops, northe medium ou	he proposed a ern mistbelt fo bullfrog, southed 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	lignment bisectorest as well as rn african pythouse a final pythouse a fin	tts rivers (non-suitable habita on, ground panged) 4 5 5 5 5 5 5 6 6 7 7 8 7 8 7 8 8 8 8 8 8 8	perennial t for seve olin and b 36 60 No intention -perennial t for seve	drainage lines eral red listed fa prown hyaena. Medium Medium onal killing or dis drainage lines eral red listed fa	sturbances of				
associated auna and nteractions with structures and	Degree of impact on irreplaceable resources: Nature of impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable	(especially arbo Medium-high the outcrops, northe including giant of the first section of the first section of the proposed outcrops, northe medium ou	he proposed a lern mistbelt fo bullfrog, southed a construction acties. No illegal palternative alighter mistbelt fo bullfrog, southed a construction acties. So illegal palternative alighter mistbelt fo bullfrog, southed	lignment bised rest as well as rn african pythoda 4 6 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching to the soaching or hunderest as well as rn african pythoda 5 ctivities to the soaching to the soachin	ts rivers (non-suitable habita on, ground panged) 4 5 5 m servitude. It ing activities. ts rivers (non-suitable habita on, ground panged)	perennial t for seve olin and b 36 60 No intention t for seve olin and b	drainage lines eral red listed fa prown hyaena. Medium Medium onal killing or dis eral red listed fa prown hyaena.	sturbances of				

Potential		Extent	Duration	Magnitude	Probability	Signifi	cance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e-	+d+m)*p)	(+ve or - ve)	Confidence			
	Without	1	4	4	4	36	Medium	-	Medium			
	Degree to which impact can be reversed:				•							
	Degree of impact on irreplaceable resources:	Medium										
Electrocution	Nature of						ly bridging the a	air gap betwee	n live components and/or			
	impact: With	live and earti	hed components,	resulting in deal	th or severe inju	1ry.	Low	_	Medium			
	Without	1						_	Medium			
	Degree to which impact can be reversed:	Low	4 4 4 4 Medium -									
	Degree of impact on irreplaceable resources:											
Nesting of birds on tower	Nature of impact:	Routine mair	itenance of pylon	s and power line	s could result in	disturba	nce of certain bi	ird species				
structures and	With	1	2	4	2	14	Low	-	Medium			
disturbance during routine	Without	2	2	4	3	24	Low	-	Medium			
maintenance	Degree to which impact can be reversed:											
	Degree of impact on irreplaceable resources:	Medium										
Heritage												
It is anticipated th	nat the main impacts	on heritage wil	l occur during the	construction ph	ase							
Visual												
Visual exposure to the powerline servitude,	Nature of impact:	close to priva		es. Sensitive vie	ewer locations in	n close pr	roximity (<500n		mpacts, especially in and Julnerable to exposure o			
	With	3	5	6	5				High			

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
cables and	Without	3	4	6	5	65	High	-	High			
towers.	Degree to which impact can be reversed:	proximity to se option.										
	Degree of impact on irreplaceable resources:	In areas of high private nature r					ch as the soupa	ansberg and				
Social												
Perceived electromagnetic	Nature of impact:	The presence or on some proper		orkers can resu	ult in the treat o	of safety and	d can possibly l	ead to actual	crimes being committed			
fields impacts	With mitigation	1	3	2	1	6	Low	-	Medium			
on humans and animals during	Without mitigation	1	5	4	2	20	Low	-	Medium			
the operational phase	Degree to which impact can be reversed:	High – with imp	ligh – with implementation of relevant mitigation measures									
	Degree of impact on irreplaceable resources:	N/a										
Loss of a sense of place/income	Nature of impact:	The presence of be spoilt	f powerlines par	ticularly in tour	ist attractions c	an result in	tourists no long	ger visiting th	e area as their views will			
on game farms	With mitigation	1	1	2	3	12	Low	-	Medium			
- tourists want to see "africa"	Without mitigation	3	4	8	4	60	Medium	-	High			
and the power line can disturb the rustic african setting;	Degree to which impact can be reversed:	High – with imp	lementation of	relevant mitiga	tion measures							
anican setting,	Degree of impact on irreplaceable resources:	N/a										
Poor maintenance of	Nature of impact:	It is possible th	at access routes	can be of such	poor state that	maintenan	ce of the power	line is not po	ssible			
the power line	With mitigation	1	1	2	2	8	Low	-	Medium to high			
access roads: conflict between	Without mitigation	1	4	8	4	52	Medium	-	Medium to high			

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
eskom and the landowners on whose	Degree to which impact can be reversed:	N/a										
responsibility it is to do maintenance on these roads. Farmers use it more often but yet expect eskom to pay for all maintenance	Degree of impact on irreplaceable resources:	Put a firm nego	Put a firm negotiated contract in place during the operational phase									
Impact of the power lines on	Nature of impact:	Where powerlin	es are not visibl	e or known, pla	ne crashes can	result and i	n turn electricty	outages ma	y occur			
aircraft as there	With mitigation	1	2	2	2	10	Low	-	Medium to high			
are airports within the study area; one is the	Without mitigation	4	5	6	4	60	Medium	-	Medium to high			
louis trichardt airport and the other is for light	Degree to which impact can be reversed:	High – with imp	lementation of r	elevant mitigat	ion measures							
aircraft on the road towards waterpoort from louis trichardt	Degree of impact on irreplaceable resources:	N/a										
decrease in property values	Nature of impact:	These can lead	hese can lead to economic losses									
and number of	With mitigation	1	3	4	1	8	Low	-	Medium to high			
visitors to lodges and other areas that	Without mitigation	2	5	6	3	39	Medium	-	Medium to high			
are popular with tourists due to	Degree to which impact can be reversed:	High – with imp	lementation of r	elevant mitigat	ion measures							

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
the visual impacts of powerlines	Degree of impact on irreplaceable resources:	N/a										
Security issues as a result of	Nature of impact:											
the presence of	With mitigation	1	1	2	2	8	Low	-	Medium to high			
maintenance workers on properties	Without mitigation	1	1	4	4	24	Low	-	High			
properties	Degree to which impact can be reversed:	High – with imp	– with implementation of relevant mitigation measures									
	Degree of impact on irreplaceable resources:	The impact can	be high where e	endangered spe	cies such as rhi	no occur						
Land owners denying	Nature of impact:	This can result i	This can result in maintenance not occurring									
contractors access to their	With mitigation	1	1	2	2	8	Low	-	Medium			
properties	Without mitigation	1	1	8	4	40	Medium	-	High			
	Degree to which impact can be reversed:	High – with imp	lementation of r	elevant mitigat	ion measures							
	Degree of impact on irreplaceable resources:	N/a										
Poaching of game as well as	Nature of impact:	This is a high pr	his is a high probability									
stock theft and theft of crops	With mitigation	1	1	0	1	2	Low	-	Medium to high			
theit of crops	Without mitigation	1	1	2	2	8	Low	-	Medium to high			
	Degree to which impact can be reversed:	High – with imp	lementation of r	relevant mitigat	ion measures							

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status		
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence	
	Degree of impact on irreplaceable resources:	N/a								
Impact on farming	Nature of impact:	During the oper	ational phase, ir	mpacts on farm	activities are lil	kely to be v	ery minimal			
activities such	With mitigation	1	1	0	1	2	Low	-	Medium to high	
as sowing, harvesting, and fire	Without mitigation	1	1	2	1	4	Low	-	Medium to high	
management programmes leading to	Degree to which impact can be reversed:									
economic losses	Degree of impact on irreplaceable resources:	N/a								
Impact on farming	Nature of impact:	During the oper very minimal	rational phase,	impacts on ac	tivities and on	guests to l	odges and othe	r tourist des	tinations are likely to be	
activities such as hunting in	With mitigation	1	1	0	1	2	Low	-	Medium to high	
game farms leading to	Without mitigation	1	1	2	1	4	Low	-	Medium to high	
economic losses. Impacts can also be on	Degree to which impact can be reversed:	High – with imp	High – with implementation of relevant mitigation measures							
guests in lodges leading to economic losses	Degree of impact on irreplaceable resources:	N/a								
Increase in the voltage stability	Nature of impact:	An increased vo	n increased voltage will ensure that activities that were not able to take place will be possible							
	With mitigation									
	Without mitigation	3	5	8	5	80	High	+	Medium	
	Degree to which impact can be reversed:	N/a								

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
	Degree of impact on irreplaceable resources:	N/a						•			
An assurance of a reliable	Nature of impact:	Reliable electric	ity supply is a p	ositive impact t	hat will improve	e activities s	such as touriam	in the makh	ado local municipality		
electricity	With mitigation	3	4	2	4	36	Medium	+	Medium		
supply	Without mitigation	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	Nature of impact:	In order to grow	the economy o	of the makhado	local municipali	ity, electrici	ty is vital				
supply making it available for	With mitigation										
agriculture, tourism and	Without mitigation	3	5	8	5	80	High	+	Medium		
other industries. The increase in electricity can	Degree to which impact can be reversed:	N/a									
also allow for the undertaking of other activities that may have been that may not have been possible prior to the improved elect.ricity supply	Degree of impact on irreplaceable resources:	N/a									
No more	Nature of		backlogs in elec	ctricity connection	ons can imply th	nat activitie	s that can only	take place w	here electricity is present		
backlogs in	impact:	will be possible									

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
electricity	With mitigation										
connections	Without mitigation	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	Nature of impact:					_					
electricity to	With mitigation										
services such as health facilities	Without mitigation	3	5	8	5	80	High	+	Medium		
will cease	Degree to which impact can be reversed:	N/a	l/a								
	Degree of impact on irreplaceable resources:	N/a									
Electricity will be available to	Nature of impact:	The presence of	electricity to ru	ıral areas will in	nprove the lives	of many w	ho live in pover	ty			
numerous rural	With mitigation										
settlements that do not have this	Without mitigation	3	5	8	5	80	High	+	Medium		
service	Degree to which impact can be reversed:	N/a									
	Degree of impact on irreplaceable resources:	N/a									
Decommissionin	g phase										
Agricultural pot	ential										

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No decommissioning impacts are anticipated

Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
Flora											
Destruction of protected flora	Nature of impact:	Removal of prot	tected plant spe	cies due to the	servitude						
	With	1	5	6	5	60	Medium	-	High		
	Without	1	5	6	5	60	Medium	-	High		
	Degree to which impact can be reversed:	Existing/permit	sting/permitted access roads must be used and the all other measures must be followed								
	Degree of impact on irreplaceable resources:	The route is on access roads	a virtually und	isturbed area a	nd passes throu	ugh a natur	e reserve ad th	ere are not			
Destruction of pristine habitat	Nature of impact:	Destruction and	l disturbance of	a previously un	disturbed veget	ation					
	With	2	5	6	5	65	High	-	High		
	Without	2	5	6	5	65	High	-	High		
	Degree to which impact can be reversed:	Existing/permit	ted access roads	s must be used	and the all othe	r measures	must be follow	ed			
	Degree of impact on irreplaceable resources:	The route is on access roads	a virtually und	isturbed area a	nd passes throu	ugh a natur	re reserve ad th	ere are not			
Vegetation clearance	Nature of impact:	Removal of veg	etation due to s	ervitudes, acces	ss roads and ere	ecting of the	e pylons				
	With	1	5	6	5	60	Medium	-	High		
	Without	1	5	6	5	60	Medium	-	High		
	Degree to which impact can be reversed:		xisting/permitted access roads must be used and the all other measures must be followed								
	Degree of impact on irreplaceable resources:		The servitude has to be kept clear at all times (bush clearing)								
Plant encroachment	Nature of impact:	Vegetation clea	ring or disturbai	nce may and ha	ve been fond to	increase e	ncroachment				
	With	1	5	4	3	30	Low		High		

Potential		Extent	Duration	Magnitude	Probability	Signific	cance	Status						
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	+d+m)*p)	(+ve or - ve)	Confidence					
	Without	1	5	6	3	36	Medium	-	High					
	Degree to which impact can be reversed:	2	Existing/permitted access roads must be used and the all other measures must be followed											
	Degree of impact on irreplaceable resources:			bance will increa										
Threat to biodiversity	Nature of impact:					•	•	ent and biodiv	ersity will be lost.					
ŕ	With	1	3	6	5	50	Medium	-	High					
	Without	1	4	6	5	55	Medium	-	High					
	Degree to which impact can be reversed:	2	Existing/permitted access roads must be used and the all other measures must be followed											
	Degree of impact on irreplaceable resources:	Biodiversity is												
Soil erosion	Nature of impact:	Removal of vegetation due to the servitudes and servitudes will increase the soil erosion as vegetation pla preventing/minimising soil erosion												
	With	1	2	4	4	28	Low	-	High					
	Without	2	3	4	4	36	Medium	-	High					
	Degree to which impact can be reversed:	Existing/permit												
	Degree of impact on irreplaceable resources:	The area is vi erosion	The area is virtually undisturbed and there no access roads, to build roads would increase soil erosion											
Fauna														
Direct impact on associated														
fauna and	With	1	1	2	5	20	Low	-	High					
interactions with structures and	Without	2	1	4	5	35	Medium	-	High					
personnel	Degree to which impact can be			ons and lines me eared servitude.		to the 5	5m servitude.	Rehabilitation						
	•			0.156		_		•						

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Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status						
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	l+m)*p)	(+ve or - ve)	Confidence					
	reversed:													
	Degree of impact on irreplaceable resources:	outcrops, north	e proposed alternative alignment 3 bisects rivers (non-perennial drainage lines), rupicolous tcrops, northern mistbelt forest as well as suitable habitat for several red listed faunal species cluding giant bullfrog, southern african python, ground pangolin and brown hyaena.											
Avifauna														
No decommissioni	ing impacts are anticip	oated												
Heritage														
No decommissioni	ing impacts are anticip	oated												
Visual														
Visual exposure to operations to dismantle and	Nature of impact:	impacts. Perce	Activity within the servitude related to the dismantling and removal of power line infrastructure will not have significant vis mpacts. Perceptions relating to the removal of visualy intrusive objects might be positive in as far as visual impacts will decreased due to decommissioning.											
remove of	With	3	1	2	3	18	Low	+	High					
power line & substation	Without	3	1	2	3	18	Low	+	High					
infrastructure	Degree to which impact can be reversed:	Avoid unnecess	rations											
	Degree of impact on irreplaceable resources:	None												
Social														
Theft of material from camps and	Nature of impact:	Material can be targeted by crir		the sites where	decommission	ing is takir	ng place as ma	iterial used i	n electricity is often the					
along	With mitigation	1	1	0	1	2	Low	-	Medium					
construction sites	Without mitigation	2	1	8	4	44	Medium	-	Medium					
	Degree to which impact can be reversed:	,	olementation of	relevant mitiga	cion measures									
	Degree of impact on irreplaceable resources:	N/a	N/a											

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Detential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
Potential impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence				
Loss of crops leading to	Nature of impact:	Crops can be los	st during this ph	nase as the actv	ities are almost	as intense	as those durin	g the constru	ction phase				
economic losses	With mitigation	1	1	2	2	8	Low	-	Medium to high				
	Without mitigation	1	3	6	4	40	Medium	-	Medium to high				
	Degree to which impact can be reversed:	High – with imp	lementation of I	relevant mitigat	ion measures								
	Degree of impact on irreplaceable resources:	N/a											
farming	Nature of impact:	Decommissionir	ng can disturb a	ctivities on farm	ıs	_	_						
activities such as sowing,	With mitigation	1	1	2	2	8	Low	-	Medium to high				
harvesting, and	Without mitigation	1	1	8	3	30	Low	-	Medium to high				
fire management programmes leading to	Degree to which impact can be reversed:	High – with imp											
economic losses	Degree of impact on irreplaceable resources:	N/a											
Damage to farm infrastructure	Nature of impact:	This can lead to	conflicts with c	ommunity mem	bers and farme	rs							
e.g. irrigation	With mitigation	1	1	2	1	4	Low	-	Medium to high				
equipment, gates, fences	Without mitigation	1	1	6	3	24	Low	-	Medium to high				
	Degree to which impact can be reversed:	High – with imp	lementation of I	relevant mitigat	ion measures								
	Degree of impact on irreplaceable resources:	N/a											
Security concerns as a	Nature of impact:	It is highly likely	that theft of g	ame and stock	can occur. Theft	of game ca	an be higher or	farms where	rhino is present				
result of	With mitigation	1	1	2	4	16	Low	-	Medium to high				

Potential		Extent	Duration	Magnitude	Probability	Signific	cance	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	·d+m)*p)	(+ve or - ve)	Confidence				
poaching of game, stock	Without mitigation	1	1	10	4	48	Medium	-	Medium to high				
theft and crop theft	Degree to which impact can be reversed:	High – with imp	lementation of ı	relevant mitigat	ion measures								
	Degree of impact on irreplaceable resources:	The impact can	he impact can be high where endangered species such as rhino occur										
Security as a result of the	Nature of impact:	The mere prese threatened	e mere presence of contruction workers in communities and especially on farms can lead to unease and people eatened										
presence of workers on pfarms and	With mitigation	1	1	2	2	8	Low	-	Medium to high				
	Without mitigation	2	1	8	3	33	Medium	-	Medium to high				
communities	Degree to which impact can be reversed:	High – with imp											
	Degree of impact on irreplaceable resources:	N/a											
Safety of community	Nature of impact:	As decommission	ning involves th	ne dismantling o	of structures, the	e safety o	f people and anin	nals can be c	ompromised				
members/farm	With mitigation	1	1	2	1	4	Low	-	Medium				
workers/animals	Without mitigation	1	1	6	2	16	Low	-	Medium				
	Degree to which impact can be reversed:	High – with imp	lementation of I	relevant mitigat	ion measures								
	Degree of impact on irreplaceable resources:	N/a											
Cumulative imp							<u> </u>						

Cumulative impacts

Agricultural potential

No cumulative impacts are anticipated

Flora

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Potential		Extent	Duration	Magnitude	Probability	Signific	ance	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence				
Plant encroachment	Nature of impact:	Vegetation clea	aring or disturba	nce may and ha	ave been fond to	increase	encroachment						
	With	1	5	4	3	30	Low	-	High				
	Without	1	5	6	3	36	Medium	-	High				
	Degree to which impact can be reversed:	Existing/permi	Existing/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:												
Soil erosion	Nature of impact:		nimising soil eros		.			on as vegetat	ion plays a major role in				
	With	1	2	4	4	28	Low	-	High				
	Without	2	3	4	4	36	Medium	-	High				
	Degree to which impact can be reversed:	Existing/permitted access roads must be used and the all other measures must be followed											
	Degree of impact on irreplaceable resources:												
Fauna													
Loss of faunal habitat	Nature of impact:	Adverse impac	t										
	With	1	4	4	5	45	Medium	-	High				
	Without	2	4	6	5	60	Medium	-	High				
	Degree to which impact can be reversed:	activities to the	referred alignme e 55m servitude.	•			_						
	Degree of impact on irreplaceable resources:	outcrops, nort including giant	alternative alig hern mistbelt fo bullfrog, southe	rest as well as	suitable habita	it for seve	ral red listed fa						
Direct impact on associated	Nature of impact:	Adverse impact											
fauna and	With	1	4	4	4	36	Medium	-	High				

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	(s=(e+d+m)*p)		Confidence				
interactions with	Without	2	4	6	5	60	Medium	-	High				
structures and personnel	Degree to which impact can be reversed:	Medium-restrict species.	Medium-restrict construction activities to the 55m servitude. No intentional killing of any faunal species.										
	Degree of impact on irreplaceable resources:	outcrops, north	The proposed alternative alignment 3 bisects rivers (non-perennial drainage lines), rupicolous putcrops, northern mistbelt forest as well as suitable habitat for several red listed faunal species including giant bullfrog, southern african python, ground pangolin and brown hyaena.										
Avifauna													
No cumulative impacts are anticipated													

Heritage

No cumulative impacts are anticipated

Increased visual	Nature of	Cumulative imp	acts result from	the positionin	g of the new de	evelopment	such that it w	ould give ris	e to an extended and/or					
exposure to	impact:								perception where power					
power line									nt parts of the landscape.					
infrastructure.									erent power lines through					
			e recurrence of images and impressions of power lines at various points in the landscape and which are continuously											
		encountered wh	ncountered when moving through it.											
	With	3	5 0 3 24 Low - High											
	Without	3	5	6	5	70	High	-	High					
	Degree to which	The impact car	be reversed b	by terminating	construction ac	ctivity and	removing all o	construction						
	impact can be	material. Active	rehabilitation o	of vegetation wh	nere it has been	cleared, is	also required.							
	reversed:													
	Degree of impact	In areas of high	visual quality a	and where there	are no hv pow	er lines, su	ch as the soupa	insberg and						
	on irreplaceable	private nature re	eserves, the deg	gree of impact v	vill be very high									
	resources:													
Social														
Poaching of	Nature of	It is highly likely	that theft of ga	ame and stock of	an occur. Theft	of game ca	n be higher on	farms where	rhino is present					
game impacting	impact:								·					
on the loss of	With	2	3	4	3	27	Low	-	Medium to high					
game and in turn affecting	Without	but 5 5 8 4 72 High - High												
the tourism industry of the	Degree to which impact can be	Where possible, the construction												

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Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	i+m)*p)	(+ve or - ve)	Confidence				
municipality and that of the country at large	reversed:	operational pha	operational phase Is should be fitted with tracking device										
country at large	Degree of impact on irreplaceable resources:	The impact will	The impact will high where endangered species such as rhino occur										
Loss of a sense of place	Nature of impact:	Tourists visit pl them	urists visit places to relax and be immersed in nature the presence of powerlines can therefore spoil this experience fem										
resulting in	With	1	2	2	2	10	Low	-	Medium to high				
economic losses especially for	Without	3	4	6	3	39	Medium	-	Medium to high				
tourism sector in turn impact on the economic	Degree to which impact can be reversed:	would be to use	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										
growth of the makhado local municipality	Degree of impact on irreplaceable resources:	N/a											
Increase in power supply	Nature of impact:		An increase in the power supply and in the stability of the network would be vital to the makhado local municipali electricity is one of the hindrances to the development of the area and in turn an improved economy										
and in the	With	3	4	6	4	52	Medium	+	Medium				
stability of the network. In turn	Without	3	4	6	4	52	Medium	+	Medium				
numerous existing developments	Degree to which impact can be reversed:	N/a											
such as lodges and other tourist attractions can be improved.	Degree of impact on irreplaceable resources:	N/a											
No go alternativ													

No-go alternative

Agricultural potential

In the event that the transmission lines are not constructed, there will be no impact on the agricultural potential, therefore the status quo will remain.

Flora

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Potential		Extent	Duration	Magnitude	Probability	Significance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)	(+ve or - ve)	Confidence

In the event that the transmission lines are not constructed, there will be no impact on the flora, therefore the status quo will remain.

Fauna

In the event that the transmission lines are not constructed, there will be no impact on the fauna, therefore the status quo will remain.

Avifauna

In the event that the transmission lines are not constructed, there will be no impact on the avifauna, therefore the status quo will remain.

In the event that the transmission lines are not constructed, there will be no impact on heritage sites, therefore the status quo will remain.

Visual

In the event that the transmission lines are not constructed, there will be no visual impact, therefore the status quo will remain.

Social

Powerlines linking the tabor substation to the new	Nature of impact:	weakest part of powerline power	There is voltage instability as the polokwane customer load network (cln), including the tabor and spencer power is the veakest part of the northern grid network due to being operated beyond its reliability. There is therefore a need for a necowerline 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										
bokmakirie	With	2	1	2	1	5	Low	-	Medium to high				
(nzhelele) substation will	Without	4	5	8	3	51	Medium	-	Medium to high				
not be constructed.	Degree to which impact can be reversed:	Construct the po	onstruct the powerlines										
	Degree of impact on irreplaceable resources:	N/a											
No increase in the voltage	Nature of impact:	The voltage is of such as loss of o	•		•			nt being shu	t down leading to effects				
stability	With	1	1	2	1	4	Low	-	Medium				
	Without	3	5	8	3	48	Medium	-	Medium				
	Degree to which impact can be reversed:												
	Degree of impact on irreplaceable resources:	N/a											

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
No increase and assurance of electricity	Nature of impact:		and mining se	ectors. A lack					the agricultural, tourism, growth of the makhado			
supply making it	With	1	1	2	1	4	Low	-	Medium			
unavailable for agriculture,	Without	3	5	8	4	64	High	-	Medium			
tourism and other industries as well as	Degree to which impact can be reversed:	Increase electri and ensure that			such as the co	nstruction (of the proposed	power line				
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 of impact on irreplaceable resources:	N/a										
Continuation of backlogs in	Nature of impact:	The backlogs ar use of electricity					hortages. The re	endering of s	services that require the			
electricity	With	2	1	4	2	14	Low	-	Medium to high			
connections	Without	3	4	8	4	60	Medium	-	Medium to high			
	Degree to which impact can be reversed:	increased budg	The makhado local municipality must put measures in place to reduce backlogs. This can include ncreased 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										

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Potential		Extent	Status									
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
Continuation of the inadequate	Nature of impact:	In services such	as health facil	ities, lack of ele	ctricity can resu	It in losses	of lives					
provision of	With	1	1	0	2	4	Low	-	Medium			
electricity to critical services	Without	3	5	10	4	72	High	-	Medium			
such as health facilities	Degree to which impact can be reversed:	The necessity of that adverse im			is imperative ar	nd the prop	osed powerline	can ensure				
	Degree of impact on irreplaceable resources:	N/a										
Continuation of the unavailability of	impact:		g and cooking.						utting of trees to use the cion and the possible loss			
electricity in	With	1	1	2	2	8	Low	-	Medium			
numerous rural settlements	Without	3	5	8	4	64	High	-	Medium			
Sectionicités	Degree to which impact can be reversed:	Provide electrici	rovide electricity to rural areas									
	Degree of impact on irreplaceable resources:	N/a										

Table 9.6: Detailed assessment of identified impacts for Alternative 4

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
Construction ph	ase										
Agricultural pote	ential										
Deterioration of soil resource	Nature of impact:	Loss of agricultu	ıral land due to	construction of	infrastructure						
	With	1	4	2	3	21	Low	-			
	Without	1	4	4	2	18	Low	-			
	Degree to which impact can be reversed:	Reversal should	be straightforw	ard after remov	val of infrastruct	ure					
	Degree of impact on irreplaceable resources:	Low to none	v to none								
Deterioration of soil resource	Nature of impact:	Soil erosion haz	ard due to cons	truction activition	es						
	With	1	1	2	2	8	Low	-			
	Without	2	3	6	4	44	Medium	-			
	Degree to which impact can be reversed:	If erosion is cau	sed, reversal is	often difficult a	nd time-consum	ning, especi	ally in steeper a	areas			
	Degree of impact on irreplaceable resources:	Moderate									
Flora											
Destruction of protected flora	Nature of impact:	Removal of prot	emoval of protected plant species due to the servitude								
	With	2	5	8	5	75	High	-	High		
	Without	2	5	8	5	75	High	-	High		
	Degree to which impact can be reversed:	Existing/permitt	ed access roads	must be used	and the all othe	r measures	must be follow	ed			

Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	Along this route	there is a lot o	f protected plai	nt species							
Destruction of pristine habitat	Nature of impact:	Destruction and	d disturbance of	a previously ur	ndisturbed veget	ation						
•	With	1	5	8	5	70	High	-	High			
	Without	1	5	8	5	70	High	-	High			
	Degree to which impact can be reversed:		sting/permitted access roads must be used and the all other measures must be followed stine habitats are prone to invasion/encroachment once disturbed									
	Degree of impact on irreplaceable resources:											
Vegetation clearance	Nature of impact:	Removal of veg	etation due to s	ervitudes, acce	ss roads and ere	ecting of th	e pylons					
	With	1	5	6	5	60	Medium	-	High			
	Without	1	5	8	5	70	High	-	High			
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all othe	er measure	s must be follov	ved				
	Degree of impact on irreplaceable resources:	Along this route	e there is a lot o	f protected plai	nt species							
Plant encroachment	Nature of impact:	Vegetation clea	ring or disturba	nce may and ha	ave been fond to	increase e	encroachment (d	cumulative im	npact)			
	With	1	2	8	5	55	Medium	-	High			
	Without	1	3	8	5	60	Medium	-	High			
	Degree to which impact can be reversed:	Existing/permitted access roads must be used and the all other measures must be followed and vegetation clearing needs to be continuously to prevent the growth of foreign plants										
	Degree of impact on irreplaceable resources:	prone to invasion	on	•	ne condition and			·				
Threat to biodiversity	Nature of impact:	Disturbance of	an area with hig	h biodiversity v	will increase the	probability	of encroachme	nt and biodiv	ersity will be lost.			

IIOTOMEIOI		Extent	Duration	Magnitude	Probability	Significa	ance	Status					
Potential impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence				
	With	1	5	8	5	70	High	-	High				
	Without	1	5	8	5	70	High	-	High				
	Degree to which impact can be reversed:		isting/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:	·	liversity is high especially in the ridge along this route and thus prone to invasion										
Soil erosion	Nature of impact:	preventing/min	oval of vegetation due to the servitudes and servitudes will increase the soil erosion as vegetation plays a major role in enting/minimising soil erosion										
	With	1	2	2	5	25	Low	-	High				
	Without	1	3	4	5	40	Medium	-	High				
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all othe	er measure	s must be follow	ved					
	Degree of impact on irreplaceable	The area is vir	The area is virtually undisturbed and there no access roads, to build roads would increase soil erosion										
	resources:	C1031011											
Fauna		Crosion											
Fauna Loss of faunal habitat	resources:	Adverse impact											
Loss of faunal	resources: Nature of		4	6	5	60	Medium	-	High				
Loss of faunal	Nature of impact:	Adverse impact	1	6	5 5	60	Medium Medium	-	High High				
Loss of faunal	Nature of impact:	Adverse impact 2 2 Low- realign al and activities to	4 ternative alignr the 55m servit	6 ment 4 to avoid cude.	5 sensitive habi	60 tats and r	Medium restrict vegetation	- on clearance					
Loss of faunal	Nature of impact: With Without Degree to which impact can be	Adverse impact 2 2 Low- realign al and activities to The proposed perennial drain as well as suit forest rain frog	ternative alignment biseage lines), seasable habitat for soutpansberg	nent 4 to avoid aude. cts the soutpactonally inundated several red list flat lizard, mu	5 d sensitive habit nsberg through pans, rupicol sted faunal spe	tats and rule the sand ous outcrocies includ	Medium	rivers (non- stbelt forest					
Loss of faunal	Nature of impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable resources:	Adverse impact 2 Low- realign al and activities to The proposed perennial drain as well as suit	ternative alignment biseage lines), seasable habitat for soutpansberg theetah and whi	nent 4 to avoid aude. cts the soutpactonally inundated several red list flat lizard, mu	5 d sensitive habit nsberg through pans, rupicol sted faunal spe	tats and rule the sand ous outcrocies includ	Medium estrict vegetation d river gorge, pps, northern miling giant bullfro	rivers (non- stbelt forest					

Potential		Extent	Duration	Magnitude	Probability	Signific	cance	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	·d+m)*p)	(+ve or - ve)	Confidence				
interactions with	Without	2	4	6	5	60	Medium	-	High				
structures and personnel	Degree to which impact can be reversed:	Restrict constru	strict construction activities to the 55m servitude. No intentional killing of any faunal species.										
	Degree of impact on irreplaceable resources:	perennial draina as well as suita forest rain frog	e proposed alignment bisects the soutpansberg through the sand river gorge, rivers (non- ennial drainage lines), seasonally inundated pans, rupicolous outcrops, northern mistbelt forest well as suitable habitat for several red listed faunal species including giant bullfrog, northern est rain frog, soutpansberg flat lizard, muller's velvet gecko, ground pangolin, brown hyaena, wild dog, cheetah and white rhinoceros										
Avifauna													
Habitat destruction	Nature of impact:	Permanent rem		hat is used, or		y avifauna). 						
	With	1	2	4	3	21	Low	-	Medium				
	Without	1	2	4	5	35	Medium	-	Medium				
	Degree to which impact can be reversed:	Partially reversi	ble										
	Degree of impact on irreplaceable resources:	Low											
Disturbance	Nature of impact:	Noise and move	ement, from staf	ff and machiner	ry, may disturb	avifauna,	and nests may b	e disturbed.					
	With	1	1	4	3	18	Low	-	Medium				
	Without	2	1	6	5	45	Medium	-	Medium				
	Degree to which impact can be reversed:	Irreversible											
	Degree of impact on irreplaceable resources:	Medium	Medium										
Heritage													
Destruction of heritage sites	Nature of impact:	Adverse impact on a identified heritage sites along alternative											
and features	With mitigation	3	5	2	5	50	Medium	-	High				

		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
Potential impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d		(+ve or - ve)	Confidence			
	Without mitigation	3	5	10	5	90	High	-	High			
	Degree to which impact can be reversed:	Medium			High							
	Degree of impact on irreplaceable resources:	Not applicable			High							
Visual												
Transformation of the visual quality of the landscape	Nature of impact:	soutpansberg a	ng of vegetation to establish a 55m corridor will result in the transformation of the landscape character, especially in the insberg and private nature reserves. Construction activity will increase the presence and movement of contractors and uction vehicles, which will create adverse visual impacts and negatively affect the sense of place, specifically in the samorge.									
	With	3	2	6	5	55	Medium	-	High			
	Without	3	2	6	5	55	Medium	-	High			
	Degree to which impact can be reversed:	The impact car material. Active						construction				
	Degree of impact on irreplaceable resources:	In areas of high private nature r					ch as the soupa	ansberg and				
Social												
Influx of job seekers, mainly unskilled labour, from the	Nature of impact:	hamantsha and	madaheni. It is nd to these vil	s possible that h	nigh unemploym	ent rates w	hich are preval	ent in the ma	ments such as muraleni, akhado local municipality likely viewed as a high			
communities	With mitigation	3	1	4	2	16	Low	-	Medium to high			
around the power line route	Without mitigation	3 1 8 4 48 Medium -							Medium to high			
having job expectations	Degree to which impact can be reversed:	High – with implementation of relevant mitigation measures										
	Degree of impact on irreplaceable resources:	N/a										

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Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	l+m)*p)	(+ve or - ve)	Confidence				
Health impacts as a result of	Nature of impact:	If toilet facilities	on site are not	well managed,	these can lead	to adverse	health impacts	to the surrou	inding communities				
exposure to	With mitigation	1	1	0	1	2	Low	-	Medium to high				
sewage from construction camps and on	Without mitigation	1	1	6	4	32	Medium	-	Medium to high				
construction camps	Degree to which impact can be reversed:	High – with imp	lementation of I	relevant mitiga	tion measures								
	Degree of impact on irreplaceable resources:	N/a	e on site can become a nuisance for community members and on farms and also pose a danger to the health of										
Health impacts as a result of	Nature of impact:	Waste on site c and animals	an become a nu	isance for com	munity member	rs and on fa	arms and also p	ose a dange	r to the health of people				
exposure to waste (domestic	With mitigation	1	1	0	1	2	Low	-	High				
and industrial)	Without mitigation	1	2	2	3	15	Low	-	High				
	Degree to which impact can be reversed:	High – with imp	High – with implementation of relevant mitigation measures										
	Degree of impact on irreplaceable resources:	N/a											
health impacts from	Nature of impact:	Where construct workers in the a				ses, these o	can be passed o	n to the com	munity members or farm				
construction	With mitigation	1	1	2	2	8	Low	-					
sites and camps as a result of infectious	Without mitigation	2	1	6	4	36	Medium	-					
diseases	Degree to which impact can be reversed:	High – with imp	lementation of ı	relevant mitiga	cion measures								
	Degree of impact on irreplaceable resources:	N/a											
Conduct of construction	Nature of impact:	It is possible th actions can arise		good relationsh	ips between co	ntactors an	d community m	nembers, neg	gative as well as positive				
workforce; good	With mitigation	2	1	2	2	10	Low	-	Medium to high				

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Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	l+m)*p)	(+ve or - ve)	Confidence			
relationships between	Without mitigation	2	1	6	4	36	Medium	-	Medium to high			
community members/ farm workers and	Degree to which impact can be reversed:	High – with imp	lementation of	relevant mitigat	cion measures							
eskom construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Degree of impact on irreplaceable resources:	N/a										
" conduct of	Nature of impact:	of These can result from factors such as differences in beliefs and cultural backgrounds										
construction	With mitigation	2	1	2	2	10	Low	+				
workforce; bad relationships between	Without mitigation	2	1	6	4	36	Medium	-				
community members/ farm workers and	Degree to which impact can be reversed:	High – with imp	elementation of	relevant mitigat	tion measures							
eskom construction workers leading to violence	Degree of impact on irreplaceable resources:	N/a										
Theft of material	Nature of impact:	Material can be	stolen from cor	struction sites	and in areas alo	ng the rout	:e					
from camps and	With mitigation	1	1	0	1	2	Low	-	Medium			
along construction	Without mitigation	2	1	8	4	44	Medium	-	Medium			

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
sites	Degree to which impact can be reversed:	High – with imp	High – with implementation of relevant mitigation measures									
	Degree of impact on irreplaceable resources:											
Negative	Nature of impact:	It is possible t livelihoods will o			ners, game far	mers owne	rs for whom v	isual impact	s are important to their			
attitudes	With mitigation	2	1	2	2	10	Low	-	Medium			
towards the project and the	Without mitigation	2	1	6	3	27	Low	-	Medium			
formation of community groups, ngo's,	Degree to which impact can be reversed:	High – with imp	lementation of ı	relevant mitigat	ion measures							
in response to the project;	Degree of impact on irreplaceable resources:	N/a										
Land owners	Nature of impact:	This would be e	This would be expected from landowners who are opposed to the project									
denying	With mitigation	1	1	2	2	8	Low	-	Medium			
contractors access to their	Without mitigation	1	2	6	4	36	Medium	-	Medium			
properties	Degree to which impact can be reversed:	High – with imp	lementation of I	relevant mitigat	ion measures							
	Degree of impact on irreplaceable resources:	N/a										
Loss of crops	Nature of impact:	Crops can be lo	Crops can be lost during the clearing of the powerline corridor and during the construction of the powerline 1 1 2 2 8 Low - Medium to high									
leading to	With mitigation	1										
economic losses	Without mitigation	1	3	6	4	40	Medium	-	Medium to high			
	Degree to which impact can be reversed:	High – with imp	ligh – with implementation of relevant mitigation measures									
				0.470								

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Potential		Extent	Extent Duration Magnitude Probability Significance Status								
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	i+m)*p)	(+ve or - ve)	Confidence		
	Degree of impact on irreplaceable resources:	N/a									
Loss of land	Nature of impact:	Grazing land are	e construction	n of access roads							
leading to	With mitigation	1	1 2 2 8 Low -								
economic losses	Without mitigation	1	3	6	4	40	Medium	-	Medium to high		
	Degree to which impact can be reversed:	High – with imp	High – with implementation of relevant mitigation measures								
	Degree of impact on irreplaceable resources:	Where the loss	ere the loss of land is permanent, eskom should discuss compensation with landowner								
Impacts on	Nature of impact:	Construction ca	onstruction can disturb activities on farms								
farming activities such	With mitigation	1	1	2	2	8	Low	-	Medium to high		
as sowing, harvesting, and	Without mitigation	1	1	8	3	30	Low	-	Medium to high		
fire management programmes	Degree to which impact can be reversed:	High – with imp	High – with implementation of relevant mitigation measures								
leading to economic losses	Degree of impact on irreplaceable resources:	N/a	N/a								
Damage to farm	Nature of impact:	This can lead to	conflicts with c	ommunity mem	nbers and farme	rs					
infrastructure	With mitigation	1	1	2	1	4	Low	-	Medium to high		
e.g. irrigation equipment,	Without mitigation	1	1	6	3	24	Low	-	Medium to high		
gates, fences	Degree to which impact can be reversed:	High – with imp									
	Degree of impact on irreplaceable resources:	N/a	9-174								

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Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	i+m)*p)	(+ve or - ve)	Confidence		
Security	Nature of impact:	The location of game and stock	this route, parti can occur. The	cularly the nort ft of game can	hern portion rui be higher on far	ns along nu ms where	ımerous game fa rhino is present	arms. This is	highly likely that theft of		
concerns as a result of	With mitigation	1	1	2	4	16	Low	-	Medium to high		
poaching of	Without mitigation	1	1	10	4	48	Medium	-	Medium to high		
game, stock theft and crop theft	Degree to which impact can be reversed:	High – with imp	lementation of	relevant mitiga	tion measures						
	Degree of impact on irreplaceable resources:	The impact can									
Security as a	Nature of impact:	The mere prese threatened by t		lead to une	ase and people may feel						
result of the presence of	With mitigation	1	1	2	2	8	Low	-	Medium to high		
workers on	Without mitigation	2	1	8	3	33	Medium	-	Medium to high		
pfarms and communities	Degree to which impact can be reversed:	High – with imp									
	Degree of impact on irreplaceable resources:	N/a									
Safety of	Nature of impact:	Construction sit	es are highly ha	ırzadous enviro	nments and the	safety of p	people and anim	als can be co	mpromised		
community members/farm	With mitigation	1	1	2	1	4	Low	-	Medium		
workers/animals	Without mitigation	1	1	6	2	16	Low	-	Medium		
	Degree to which impact can be reversed:	High – with imp	ligh – with implementation of relevant mitigation measures								
	Degree of impact on irreplaceable resources:	N/a									
Loss of a sense	Nature of impact:	be spoilt									
of place/income	With mitigation	1	1	2	2	8	Low	-	Medium to high		

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence
on game farms	Without	1	1	8	4	40	Medium	_	Medium to high
tourists want		4	1	O	-1	40	ricalam		riculani to nign
to see "africa"	Degree to which								
and the power	impact can be	High – with imp	lementation of i	elevant mitigat	ion measures				
line can disturb	reversed:								
the rustic	Degree of impact								
african setting;	on irreplaceable	N/a							
	resources:								

Operation phase

Agricultural potential

It is anticipated that the main impacts on agricultural potential will occur during the construction phase

Flora												
Destruction of	Nature of	Removal of protected plant species due to the servitude										
protected flora	impact:											
	With	1	5	8	5	70	High	-	High			
	Without	2	5	8	5	75	High	-	High			
	Degree to which impact can be reversed:		Existing/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:	The area is virtu prone to invasio										
Destruction of pristine habitat	Nature of impact:	Destruction and disturbance of a previously undisturbed vegetation										
	With	1	5	8	5	70	High	-	High			
	Without	2	5	8	5	75	High	-	High			
	Degree to which impact can be reversed:	Existing/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:	Pristine habitat biodiversity										
Vegetation clearance	Nature of impact:	Removal of vegetation due to servitudes, access roads and erecting of the pylons										

Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status		
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	i+m)*p)	(+ve or - ve)	Confidence	
	With	2	5	8	5	75	High	-	High	
	Without	2	5	8	5	75	High	-	High	
	Degree to which impact can be reversed:	Existing/permit								
Degree of impact on irreplaceable resources: Along this route there is a lot of protected plant species										
Plant encroachment	Nature of impact:	Vegetation clea	ring or disturbar	•			`	cumulative im		
	With	1	1	8	5	50	Medium	-	High	
	Without	2	2	8	5	60	Medium	-	High	
	Degree to which impact can be reversed:	Existing/permitted access roads must be used and the all other measures must be followed								
	Degree of impact on irreplaceable resources:	The area is virtone to invasion								
Threat to biodiversity	Nature of impact:	Disturbance of an area with high biodiversity will increase the probability of encroachment and biodiversity will be lost.								
	With	1	4	6	5	55	Medium	-	High	
	Without	2	5	8	5	75	High	-	High	
	Degree to which impact can be reversed:	Existing/permitted access roads must be used and the all other measures must be followed and vegetation clearing needs to be continuosly to prevent the growth of foreign plants								
	Degree of impact on irreplaceable resources:	Biodiversity is high along this route and thus prone to invasion								
Soil erosion	Nature of impact:	Removal of vegetation due to the servituds and servitudes will increase the soil erosion as vegetation plays a new preventing/minimising soil erosion								
	With	1	3	6	5	50	Medium	-	High	
	Without	2	4	8	5	70	High	-	High	
	Degree to which impact can be	Existing/permit								
		-	-	9-177			-	-		

Potential impact	Mitigation	Extent	Duration	Magnitude	Probability	Significa	nce	Status				
		(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
	reversed:											
	Degree of impact on irreplaceable resources: The area is virtually undisturbed and there no access roads, to build roads would increase soil erosion											
Fauna												
Loss of faunal habitat with		Adverse impact	Iverse impact									
clearance of	With	1	4	4	5	45	Medium	-	High			
vegetation within the 55m	Without	2	4	6	5	60	Medium	-	High			
servitude	Degree to which impact can be reversed: Degree of impact	The clearance of the vegetation should be restricted to the 55m servitude and only larger tree species impacting which could potential impact on the lines should be removed. The vegetation of the servitude should not be totally removed providing refuge habitat for remaining faunal species (especially arboreal species) The proposed alignment bisects the soutpansberg through the sand river gorge, rivers (non-										
	on irreplaceable resources:	perennial drainage lines), seasonally inundated pans, rupicolous outcrops, northern mistbelt forest as well as suitable habitat for several red listed faunal species including giant bullfrog, northern forest rain frog, soutpansberg flat lizard, muller's velvet gecko, ground pangolin, brown hyaena, lion, wild dog, cheetah and white rhinoceros										
Direct impact on associated	Nature of impact:	Adverse impact										
fauna and	With	1	4	4	4	36	Medium	-	High			
interactions with structures and	Without	2	4	6	5	60	Medium	-	High			
personnel	Degree to which impact can be reversed:	Medium-restrict construction activities to the 55m servitude. No intentional killing or disturbances of any faunal species. No illegal poaching or hunting activities.										
	Degree of impact on irreplaceable resources:	The proposed alignment bisects the soutpansberg through the sand river gorge, rivers (non-perennial drainage lines), seasonally inundated pans, rupicolous outcrops, northern mistbelt forest as well as suitable habitat for several red listed faunal species including giant bullfrog, northern forest rain frog, soutpansberg flat lizard, muller's velvet gecko, ground pangolin, brown hyaena, lion, wild dog, cheetah and white rhinoceros										
Avifauna												
Collision	Nature of impact:	Collision or red	Collision or red data species with the overhead line (usually the earth wire).									

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Potential impact	Mitigation	Extent	Duration	Magnitude	Probability	Signif	icance	Status	Confidence		
		(e)	(d)	(m)	(p)	(s=(e	+d+m)*p)	(+ve or - ve)			
	With	1	4	4	4	36	Medium	-	Medium		
	Without	1	4	4	5	45	Medium	-	Medium		
	Degree to which impact can be reversed:	Low									
	Degree of impact on irreplaceable resources:	Medium									
Electrocution	Nature of impact:		sird perches on pylon and causes an electrical short circuit by physically bridging the air gap between live components and/o ve and earthed components, resulting in death or severe injury.								
	With	1	4	2	3	21	Low	-	Medium		
	Without	1	4	6	5	55	Medium	-	Medium		
	Degree to which impact can be reversed:	Low									
	Degree of impact on irreplaceable resources:	Medium									
Nesting of birds on tower	Nature of impact:	Routine maintenance of pylons and power lines could result in disturbance of certain bird species									
structures and	With	1	2	4	3	21	Low	-	Medium		
disturbance during routine	Without	2	2	4	4	32	Medium	-	Medium		
maintenance	Degree to which impact can be reversed:	High									
	Degree of impact on irreplaceable resources:	Medium									
Heritage											
It is anticipated th	nat the main impacts o	on heritage will	occur during the	e construction ph	nase						
Visual											
Visual exposure	Nature of								mpacts, especially in		
والمستنان والمستنان والمستنان	l :	1 Alaba Harakii - 1			:				والمستحم ممايلا منا		

close to private nature reserves. Sensitive viewer locations in close proximity (<500m), specifically in the sand river gorge,

are highly vulnerable to exposure of the power line, where visibility result in a negative impact on the sense of place.

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impact:

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to the powerline

servitude,

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Potential	Mitigation	Extent	Duration	Magnitude	Probability	Signific	ance	Status			
impact		(e)	(d)	(m)	(p)	(s=(e+	(s=(e+d+m)*p)		Confidence		
conductor cables and towers.	With	3	5	6	5	70	High	-	High		
	Without	3	4	6	5	65	High	-	High		
	Degree to which impact can be reversed: Degree of impact	The impact can proximity to se option. In areas of high									
	on irreplaceable resources:	private nature r									
Social											
Perceived electromagnetic	Nature of impact:		ne presence of construction workers can result in the treat of safety and can possibly lead to actual crime n some properties								
fields impacts	With mitigation	1	3	2	1	6	Low	-	Medium		
on humans and animals during	Without mitigation	1	5	4	2	20	Low	-	Medium		
the operational phase	Degree to which impact can be reversed:	High – with imp									
	Degree of impact on irreplaceable resources:	N/a									
Loss of a sense of place/income	Nature of impact:	The presence of be spoilt	ne area as their views will								
on game farms	With mitigation	1	1	2	3	12	Low	-	Medium		
- tourists want to see "africa"	Without mitigation	3	4	8	4	60	Medium	-	High		
and the power line can disturb the rustic african setting;	Degree to which impact can be reversed:	High – with imp									
	Degree of impact on irreplaceable resources:	N/a									
Poor maintenance of	Nature of impact:	It is possible the	at access routes	can be of such	poor state that	maintene	ce of the powerl	ine is not pos	sible		
the power line	With mitigation	1	1	2	2	8	Low	-	Medium to high		
access roads:	Without	1	4	8	4	52	Medium	-	Medium to high		

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence				
conflict between	mitigation												
eskom and the landowners on whose responsibility it	Degree to which impact can be reversed:	N/a											
is to do maintenance on these roads. Farmers use it more often but yet expect eskom to pay for all maintenance	Degree of impact on irreplaceable resources:	Put a firm negot	ciated contract i	n place during t	he operational p	ohase							
Impact of the power lines on	Nature of impact:	Where powerling	Where powerlines are not visible or known, plane crashes can result and in turn electricty outages may occur										
aircraft as there	With mitigation	1	2	2	2	10	Low	-	Medium to high				
are airports within the study	Without mitigation	4	5	6	4	60	Medium	-	Medium to high				
area; one is the louis trichardt airport and the other is for light	Degree to which impact can be reversed:	High – with imp											
aircraft on the road towards waterpoort from louis trichardt	Degree of impact on irreplaceable resources:	N/a	N/a										
decrease in property values	Nature of impact:	These can lead	to economic los	ses									
and number of	With mitigation	1	3	4	1	8	Low	-	Medium to high				
visitors to lodges and	Without mitigation	2	5	6	3	39	Medium	-	Medium to high				
other areas that are popular with tourists due to	Degree to which impact can be reversed:	High – with imp	High – with implementation of relevant mitigation measures										

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Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	l+m)*p)	(+ve or - ve)	Confidence			
the visual impacts of powerlines	Degree of impact on irreplaceable resources:	N/a						-				
Security issues as a result of	Nature of impact:											
the presence of	With mitigation	1	1	2	2	8	Low	-	Medium to high			
maintenance workers on	Without mitigation	1	1	4	4	24	Low	-	High			
properties	Degree to which impact can be reversed:	High – with imp	gh – with implementation of relevant mitigation measures									
	Degree of impact on irreplaceable resources:	The impact can										
Land owners denying	Nature of impact:	This can result in maintenance not occuring										
contractors	With mitigation	1	1	2	2	8	Low	-	Medium			
access to their properties	Without mitigation	1	1	8	4	40	Medium	-	High			
	Degree to which impact can be reversed:	High – with imp	High – with implementation of relevant mitigation measures									
	Degree of impact on irreplaceable resources:	N/a	N/a									
Poaching of game as well as	Nature of impact:	This is a high pr	obability									
stock theft and	With mitigation	1	1	0	1	2	Low	-	Medium to high			
theft of crops	Without mitigation	1	1	2	2	8	Low	-	Medium to high			
	Degree to which impact can be reversed:	High – with imp	lementation of r	elevant mitigat	ion measures							

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	N/a	N/a									
impact on farming	Nature of impact:	During the oper	ational phase, ir	mpacts on farm	actvities are lik	cely to be v	ery minimal					
activities such	With mitigation	1	1	0	1	2	Low	-	Medium to high			
as sowing, harvesting, and fire management programmes leading to	Without mitigation	1	1	2	1	4	Low	-	Medium to high			
	Degree to which impact can be reversed:	High – with imp	n – with implementation of relevant mitigation measures									
economic losses	Degree of impact on irreplaceable resources:	N/a	√a									
impact on farming	Nature of impact:	During the oper very minimal										
activities such as hunting in	With mitigation	1	1	0	1	2	Low	-	Medium to high			
as hunting in game farms leading to	Without mitigation	1	1	2	1	4	Low	-	Medium to high			
economic losses. Impacts can also be on	Degree to which impact can be reversed:											
guests in lodges leading to economic losses	Degree of impact on irreplaceable resources:	N/a	N/a									
Increase in the voltage stability	Nature of impact:	An increased vo	ltage will ensure	e that activities	that were not a	ble to take	place will be po	ssible				
	With mitigation											
	Without mitigation	3	5	8	5	80	High	+	Medium			
	Degree to which impact can be reversed:											

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	N/a	N/a									
An assurance of a reliable	Nature of impact:	Reliable electric	ity supply is a p	ositive impact t	hat will improve	e activities s	such as touriam	in the makh	ado local municipality			
electricity	With mitigation	3	4	2	4	36	Medium	+	Medium			
supply	Without mitigation	2	1	6	4	36	Medium	+	Medium			
	Degree to which impact can be reversed:	N/a	/a									
	Degree of impact on irreplaceable resources:	N/a	N/a									
Increase of electricity	Nature of impact:	In order to grov	n order to grow the economy of the makhado local municipality, electricity is vital									
supply making it available for	With mitigation											
agriculture, tourism and	Without mitigation	3	5	8	5	80	High	+	Medium			
other industries. The increase in	Degree to which impact can be reversed:	N/a										
electricity can also allow for the undertaking of other activities that may have been that may not have been possible prior to the improved elect.ricity supply	Degree of impact on irreplaceable resources:	N/a										
No more	Nature of	The absence of backlogs in electricity connections can imply that activities that can only take place where electricity is present										
backlogs in	impact:	will be possible										

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Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	l+m)*p)	(+ve or - ve)	Confidence				
electricity	With mitigation												
connections	Without mitigation	3	5	8	5	80	High	+	Medium				
	Degree to which impact can be reversed:	N/a											
	Degree of impact on irreplaceable resources:	N/a	V/a										
The inadequate provision of	Nature of impact:				_		_						
electricity to	With mitigation												
services such as health facilities will cease	Without mitigation	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	Nature of impact:	The presence of											
numerous rural	With mitigation												
settlements that do not have this	Without mitigation	3	5	8	5	80	High	+	Medium				
service	Degree to which impact can be reversed:	N/a											
	Degree of impact on irreplaceable resources:	N/a											
Decommissionin	g phase												
Agricultural pote	ential												

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No decommissioning impacts are anticipated

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence				
Flora													
Destruction of protected flora	Nature of impact:	Removal of pro	tected plant spe	cies due to the	servitude								
	With	2	5	8	5	75	High	-	High				
	Without	2	5 8 5 75 High - High										
	Degree to which impact can be reversed:	Existing/permit	xisting/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:	prone to invasion		·			f protected plan	ts and very					
Destruction of pristine habitat	Nature of impact:	Destruction and	struction and disturbance of a previously undisturbed vegetation										
	With	1	5	8	5	70	High	-	High				
	Without	1	5	8	5	70	High	-	High				
	Degree to which impact can be reversed:	Existing/permitted access roads must be used and the all other measures must be followed											
	Degree of impact on irreplaceable resources:	Pristine habitats are prone to invasion/encroachment once disturbed. The ridge is high in biodiversity											
Vegetation clearance	Nature of impact:	Removal of veg	etation due to s	ervitudes, acce	ss roads and ere	ecting of the	e pylons						
	With	1	5	6	5	60	Medium	-	High				
	Without	1	5	8	5	70	High	-	High				
	Degree to which impact can be reversed: Existing/permitted access roads must be used and the all other measures must be followed												
	Degree of impact on irreplaceable resources:												
Plant encroachment	Nature of impact:	of Vegetation clearing or disturbance may and have been fond to increase encroachment (cumulative impact)							pact)				
	With	1	2	8	5	55	Medium	-	High				

Potential		Extent	Duration	Magnitude	Probability	Signific	cance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	-d+m)*p)	(+ve or - ve)	Confidence			
	Without	1	3	8	5	60	Medium	-	High			
	Degree to which impact can be reversed:		Existing/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:	prone to invasi	he area is virtually undisturbed and in pristine condition and has a lot of procted plants and very rone to invasion isturbance of an area with high biodiversity will increase the probability of encroachment and biodive									
Threat to biodiversity	Nature of impact:			<u> </u>		probabilit	y of encroachm	ent and biodiv				
	With	1	5	8	5	70	High	-	High			
	Without	1	5	8	5	70	High	-	High			
	Degree to which impact can be reversed:	Existing/permit	xisting/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:	Biodiversity is I	high along this	route and thus p	prone to invasion	ı						
Soil erosion	Nature of impact:	Removal of vegetation due to the servituds and servitudes will increase the soil erosion as vegetation plays a major role in preventing/minimising soil erosion										
	With	1	2	2	5	25	Low	-	High			
	Without	1	3	4	5	40	Medium	-	High			
	Degree to which impact can be reversed:	Existing/permit										
	Degree of impact on irreplaceable resources:	Thre area is v erosion	Thre area is virtually undisturbed and there no access roads, to build roads would increase soil erosion									
Fauna												
Direct impact on associated	Nature of impact:	Adverse impact	Adverse impact									
fauna and	With	1	1	2	5	20	Low	-	High			
interactions with structures and	Without	2	1	4	5	35	Medium	-	High			
personnel	Degree to which impact can be	The removal of of the vegetation										
				0.107			<u> </u>					

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Potential		Extent	Duration	Magnitude	Probability	Significance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)	(+ve or - ve)	Confidence
	reversed:							
	Degree of impact on irreplaceable resources:	The proposed aperennial draina as well as suita forest rain frog lion, wild dog, c						
Avifauna								

No decommissioning impacts are anticipated

Heritage

No decommissioning impacts are anticipated

Visual exposure to operations to dismantle and	Nature of impact:	impacts. Perce	Activity within the servitude related to the dismantling and removal of power line infrastructure will not have significant visual mpacts. Perceptions relating to the removal of visually intrusive objects might be positive in as far as visual impacts will be decreased due to decommissioning.								
remove of	With	3	1	2	3	18	Low	+	High		
power line & substation	Without	3	1	2	3	18	Low	+	High		
infrastructure	Degree to which impact can be reversed:	Avoid unnecessa	ary disturbance	of the natural of	environment dui	ring decom	missioning oper	ations			
	Degree of impact on irreplaceable resources:	None									
Social											
Influx of job seekers	Nature of impact:	employment ra	ites in the ma . It is also possi	khado local m ble that by the	nunicipality which time this power	ch may co rline is deco	ontinue up to ommisioned, the	the period e size of the	st the background of low when the powerline is settlements close to this hase		
	With mitigation	1	1	0	1	2	Low	-	Medium to high		
	Without mitigation	1	2	2	2	10	Low	-	Medium to high		
	Degree to which impact can be	High – with imp	lementation of r	elevant mitigat	ion measures						

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence				
	reversed:												
	Degree of impact on irreplaceable resources:	N/a											
Health impacts as a result of	Nature of impact:	If toilet facilities	on site are not	well managed,	these can lead	to adverse	health impacts	to the surrou	inding communities				
exposure to	With mitigation	1	1	0	1	2	Low	-	Medium to high				
sewage from construction camps and on	Without mitigation	1	1	6	3	24	Low	-	Medium to high				
construction camps	Degree to which impact can be reversed:	High – with imp	igh – with implementation of relevant mitigation measures										
	Degree of impact on irreplaceable resources:	N/a											
Health impacts from	Nature of impact:	Where construction workers are infected with infectious diseases, these can be passed on to the community members workers in the area within which work is being undetaken											
construction	With mitigation	1	1	2	2	8	Low	-					
sites and camps as a result of infectious	Without mitigation	2	1	6	3	27	Low	-					
diseases	Degree to which impact can be reversed:	High – with imp	High – with implementation of relevant mitigation measures										
	Degree of impact on irreplaceable resources:	N/a											
Conduct of construction	Nature of impact:	It is possible th actions can aris		good relationsh	ips between cor	ntactors an	d community m	nembers, neg	gative as well as positive				
workforce; good	With mitigation	2	1	2	2	10	Low	-	Medium to high				
relationships between	Without mitigation	2	1	6	4	36	Medium	-	Medium to high				
community members/ farm workers and	Degree to which impact can be reversed:	High – with imp	lementation of I	relevant mitigat	ion measures								

Detential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
Potential impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence				
eskom construction workers can result in issues such as sexual misconduct and the spread of sexually transmitted diseases	Degree of impact on irreplaceable resources:	N/a											
Conduct of construction	Nature of impact:		ese can result from factors such as differences in beliefs and cultural backgrounds. These differences in the rural settlements in which the tab-nzh 4 is proposed										
workforce; bad	With mitigation	2	1	2	2	10	Low	-	Low				
relationships between community	Without mitigation	2	1	6	4	36	Medium	-	Low				
members/ farm workers and eskom	Degree to which impact can be reversed:	High – with imp											
construction workers leading to violence	Degree of impact on irreplaceable resources:	N/a											
Theft of material from camps and	Nature of impact:	Material can be targeted by crin		he sites where	decommissioni	ng is takin	g place as mat	erial used in	n electricity is often the				
along	With mitigation	1	1	0	1	2	Low	-	Medium				
construction sites	Without mitigation	2	1	8	4	44	Medium	-	Medium				
	Degree to which impact can be reversed:	High – with imp	lementation of ı	relevant mitigat	ion measures								
	Degree of impact on irreplaceable resources:												
Loss of crops leading to	Nature of impact:	Land and crops can be lost during the clearing of the powerline corridor and during the construction of the powerline											
economic losses	With mitigation	1	1	2	2	8	Low	-	Medium to high				

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence				
	Without mitigation	1	3	6	4	40	Medium	-	Medium to high				
	Degree to which impact can be reversed:	High – with imp	lementation of r	relevant mitigat	ion measures								
	Degree of impact on irreplaceable resources:	N/a											
Loss of land leading to	Nature of impact:	Grazing land are	azing land area can be lost due to clearing of land for the corridor as well as during the construction of access roads										
economic losses	With mitigation	1	1	2	2	8	Low	-	Medium to high				
	Without mitigation	1	3	6	4	40	Medium	-	Medium to high				
	Degree to which impact can be reversed:	High – with imp	lementation of r										
	Degree of impact on irreplaceable resources:	where the loss	where the loss of land is permanent, eskom should discuss compensation with landowner										
Impacts on farming	Nature of impact:	Construction ca											
activities such	With mitigation	1	1	2	2	8	Low	-	Medium to high				
as sowing, harvesting, and	Without mitigation	1	1	8	3	30	Low	-	Medium to high				
fire management programmes leading to	Degree to which impact can be reversed:	High – with imp	lementation of r	relevant mitigat	ion measures								
economic losses	Degree of impact on irreplaceable resources:	N/a											
Damage to farm infrastructure	Nature of impact:	This can lead to	conflicts with c	ommunity mem	bers and farme	rs							
e.g. irrigation	With mitigation	1	1	2	1	4	Low	-	Medium to high				
equipment, gates, fences	Without mitigation	1	1	6	3	24	Low	-	Medium to high				

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
	Degree to which impact can be reversed:	High – with imp	lementation of r	elevant mitigat	ion measures							
	Degree of impact on irreplaceable resources:	N/a										
Security concerns as a	Nature of impact:	It is highly likely	rhino is present									
result of	With mitigation	1	1	2	4	16	Low	-	Medium to high			
poaching of game, stock	Without mitigation	1	1	10	4	48	Medium	-	Medium to high			
theft and crop theft	Degree to which impact can be reversed:	High – with imp	h – with implementation of relevant mitigation measures									
	Degree of impact on irreplaceable resources:	The impact can	e impact can be high where endangered species such as rhino occur									
Security as a result of the	Nature of impact:		ne mere presence of contruction workers in communities and especially on farms can lead to unease and people ma reatened by their presence									
presence of	With mitigation	1	1	2	2	8	Low	-	Medium to high			
workers on pfarms and	Without mitigation	2	1	8	3	33	Medium	-	Medium to high			
communities	Degree to which impact can be reversed:	High – with imp	lementation of r	elevant mitigat	ion measures							
	Degree of impact on irreplaceable resources:	N/a										
Safety of community	Nature of impact:	During decomm	issioning the dis	smatling of stru	ctures can resul	lt in possibl	injury to huma	ns and anima	als			
members/farm	With mitigation	1	1	2	1	4	Low	-	Medium			
workers/animals	Without mitigation	1	1	6	2	16	Low	-	Medium			
	Degree to which impact can be reversed:	High – with implementation of relevant mitigation measures										
				0.400								

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable N/a resources:											
Poor maintenance of	Nature of impact:	It is possible tha	possible that access routes can be of such poor state that maintenece of the powerline is not p									
the power line	With mitigation	1	1	2	2	8	Low	-	Medium to high			
access roads: conflict between	Without mitigation	1	4	8	4	52	Medium	-	Medium to high			
eskom and the landowners on whose responsibility it	Degree to which impact can be reversed:	High – with imp										
is to do maintenance on these roads. Farmers use it more often but yet expect eskom to pay for all maintenance	Degree of impact on irreplaceable resources:	N/a										

Agricultural potential

No cumulative impacts are anticipated

Flora													
Plant	Nature of	Vegetation clea	getation clearing or disturbance may and have been fond to increase encroachment										
encroachment	impact:												
	With	1	3 6 5 50 Medium - Hi										
	Without	2	4 8 5 70 High - H										
	Degree to which	Existing/permit	ted access road:	s must be use	ed and the all	other measure	es must be follo	wed					
	impact can be												
	reversed:												
	Degree of impact	The area is virt	e area is virtually undisturbed and in pristine condition and has a lot of protected plants and very										
	on irreplaceable	prone to invasio	n				•						
	resources:												

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Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+c	d+m)*p)	(+ve or - ve)	Confidence			
Soil erosion	Nature of impact:	Removal of veg preventing/mini			and servitudes v	will increas	e the soil erosi	on as vegetat	ion plays a major role in			
	With	1	3	8	5	60	Medium	-	Hi			
	Without	2	4	8	5	70	High	-	Hi			
	Degree to which impact can be reversed:	3.1	risting/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:	The area is vir erosion	The area is virtually undisturbed and there no access roads, to build roads would increase soil prosion									
Fauna												
Loss of faunal habitat	impact:	Adverse impact	·									
	With	2	4	6	5	60	Medium		High			
	Without	2	4	8	5	70	High		High			
	Degree to which impact can be reversed:	Extremely limite sand river gorge		sensitivity of la	rge sections of	the alignn	nent especially	through the				
	Degree of impact on irreplaceable resources:	The proposed perennial drains as well as suits forest rain frog lion, wild dog, c	age lines), seas able habitat for , soutpansberg	onally inundate several red lis flat lizard, mu	ed pans, rupicol sted faunal spe	ous outcro cies includ	ps, northern m ing giant bullfr	istbelt forest og, northern				
Direct impact on associated	Nature of impact:	Adverse impact										
fauna and	With	1	4	4	4	36	Medium		High			
interactions with structures and	Without	2	4	6	5	60	Medium		High			
personnel	Degree to which impact can be reversed:	Restrict construction activities to the 55m servitude. No intentional killing of any faunal species.										
	Degree of impact on irreplaceable resources:											

		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
Potential impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d-		(+ve or -	Confidence
Avifauna									
No cumulative im	npacts are anticipated								
Heritage									
No cumulative im	npacts are anticipated								
Visual									
Increased visual exposure to power line infrastructure.	impact:	intensified impr lines are observ Lastly cumulativ	ession of a pre- red from locatio re impacts arise of images and	existing power ns from which r through an ind impressions o	line in the lands more than one p crease in the inc	scape. It will sower line will idence of se	ll also occur as ould now be se quential percep	an increased en in differer otions of diffe	e to an extended and/or perception where power nt parts of the landscape. Prent power lines through which are continuously
	With	3	5	0	3	24	Low	-	High
	Without	3	5	6	5	70	High	-	High
	Degree to which impact can be reversed:	The impact car material. Active						construction	
	Degree of impact on irreplaceable resources:	In areas of high private nature r					ch as the soupa	ansberg and	
Social									
Poaching of game impacting		It is highly likel	y that theft of g	ame and stock	can occur. Theft	of game ca	n be higher on	farms where	e rhino is present
on the loss of	_	2	3	4	3	27	Low	-	Medium to high
game and in turn affecting	WITHOUT	5	5	8	4	72	High	-	High
the tourism industry of the municipality and	Degree to which impact can be	Where possible, the construction operational pha	n and decommi						
that of the country at large		The impact will	high where end	angered specie	s such as rhino (occur			
Loss of a sense of place		Tourists visit pl	aces to relax a	nd be immerse	d in nature the	presence o	of powerlines ca	an therefore	spoil this experience for
resulting in	With	1	2	2	2	10	Low	-	Medium to high

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Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence				
economic losses	Without	3	4	6	3	39	Medium	-	Medium to high				
especially for tourism sector in turn impact	Degree to which impact can be reversed:	Liase with visua would be to use					other suggeste	d measures					
on the economic growth of the makhado local municipality	Degree of impact on irreplaceable resources:	N/a											
Increase in power supply	Nature of impact:		n increase in the power supply and in the stability of the network would be vital to the makhado local municipality as ectricity is one of the hindrances to the development of the area and in turn an improved economy										
and in the	With	3	4	6	4	52	Medium	+	Medium				
stability of the network. In turn	Without	3	4	6	4	52	Medium	+	Medium				
numerous existing developments	Degree to which impact can be reversed:	N/a											
such as lodges and other tourist attractions can be improved.	Degree of impact on irreplaceable resources:	N/a											

No-go alternative

Agricultural potential

In the event that the transmission lines are not constructed, there will be no impact on the agricultural potential, therefore the status quo will remain.

Flora

In the event that the transmission lines are not constructed, there will be no impact on the flora, therefore the status quo will remain.

Fauna

In the event that the transmission lines are not constructed, there will be no impact on the fauna, therefore the status quo will remain.

Avifauna

In the event that the transmission lines are not constructed, there will be no impact on the avifauna, therefore the status quo will remain.

Heritage

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Potential		Extent	Duration	Magnitude	Probability	Significance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)	(+ve or - ve)	Confidence

In the event that the transmission lines are not constructed, there will be no impact on heritage sites, therefore the status quo will remain.

Visual

In the event that the transmission lines are not constructed, there will be no visual impact, therefore the status quo will remain.

	the transmission intes	a. cc. ccc. ac		с по тоши пор	det, therefore th	ie statas q	ae wiii remaiiii						
Social													
Powerlines linking the tabor substation to the new	Nature of impact:	weakest part of powerline power	ere is voltage instability as the polokwane customer load network (cln), including the tabor and spencer power is th takest part of the northern grid network due to being operated beyond its reliability. There is therefore a need for a ne werline powerlines linking the tabor substation to the new bokmakirie (nzhelele) substation in order to strengthen th rthern grid or that the expansion of the bokmakirie substation to accommodate the new 400kv infrastructure										
bokmakirie	With	2	1	2	1	5	Low	-	Medium to high				
(nzhelele) substation will	Without	4	5	8	3	51	Medium	-	Medium to high				
not be constructed.	Degree to which impact can be reversed:		onstruct the powerlines										
	Degree of impact on irreplaceable resources:	N/a											
No increase in the voltage	Nature of impact:		ne voltage is currently unstable. This can result in impacts such as electrical equipment being shut down leading to effects uch as loss of data and the inability to undertake certain activities on farms etc.										
stability	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	Ensure that the voltage is stabilised										
	Degree of impact on irreplaceable resources:	N/a											
No increase and assurance of electricity	Nature of impact:		and mining se	ectors. A lack					the agricultural, tourism, growth of the makhado				
supply making it	With	1	1	2	1	4	Low	-	Medium				
unavailable for agriculture,	Without	3	5	8	4	64	High	-	Medium				
tourism and other industries	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 maitained										

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d-	+m)*p)	(+ve or - ve)	Confidence				
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 of impact on irreplaceable resources:	N/a											
Continuation of backlogs in	Nature of impact:		[The backlogs are caused by factors such as a lack of funds and staff shortages. The rendering of services that re use of electricity is impossible when there is no electricity available.										
electricity	With	2	1	4	2	14	Low	-	Medium to high				
connections	Without	3	4	8	4	60	Medium	-	Medium to high				
	Degree to which impact can be reversed: Degree of impact on irreplaceable resources:	The makhado kincreased budg adequate mater N/a	ets to allow for										
Continuation of the inadequate	Nature of	In services such	as health facil	ities, lack of ele	ctricity can resu	ılt in losses	of lives						
provision of	With	1	1	0	2	4	Low	-	Medium				
electricity to critical services	Without	3	5	10	4	72	High	-	Medium				
such as health facilities	Degree to which impact can be reversed:	The necessity o that adverse im			is imperative ar	nd the prop	osed powerline	can ensure					

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Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	N/a										
Continuation of the unavailability of	Nature of impact:		k of electricity means that the lifestyles within this rural areas will continue. These include the cutt for heating and cooking. The cutting of trees has numerous adverse impacts such as deforestation of tected species.									
electricity in	With	1	1	2	2	8	Low	-	Medium			
numerous rural settlements	Without	3	5	8	4	64	High	-	Medium			
Sectionicity	Degree to which impact can be reversed:	Provide electrici	vide electricity to rural areas									
	Degree of impact on irreplaceable resources:	N/a										

Table 9.7: Detailed assessment of identified impacts for Alternative 5

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
Construction ph	ase											
Agricultural pot	ential											
Deterioration of soil resource	Nature of impact:	Loss of agricultu	ıral land due to	construction of	infrastructure							
	With	1	4	2	2	14	Low	-				
	Without	1	4	4	3	27	Low	-				
	Degree to which impact can be reversed:	Reversal should	eversal should be straightforward after removal of infrastructure									
	Degree of impact on irreplaceable resources:	Low to none	w to none									
Deterioration of soil resource	Nature of impact:	Soil erosion haz	ard due to cons	truction activitie		_						
	With	1	1	2	2	8	Low	-				
	Without	2	2	4	3	24	Low	-				
	Degree to which impact can be reversed:	If erosion is cau	sed, reversal is	often difficult a	nd time-consum	ning, especi	ally in steeper a	ireas				
	Degree of impact on irreplaceable resources:	Moderate										
Flora												
Destruction of protected flora	Nature of impact:	High	ligh									
	With	1	5	8	5	70	High	-	High			
	Without	1	5	8	5	70	High	-	High			
	Degree to which impact can be reversed:	Existing/permitt	ed access roads	must be used	and the all othe	r measures	must be follow	ed				

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Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	Along this route	e there is a lot o	f protected pla	nt species							
Destruction of pristine habitat	Nature of impact:	Destruction and	d disturbance of	a previously ur	ndisturbed veget	ation						
•	With	1	5	8	5	70	High	-	High			
	Without	2	5	8	5	75	High	-	High			
	Degree to which impact can be reversed:	Existing/permit	sting/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:	Pristine habitat	stine habitats are prone to invasion/encroachment once disturbed									
Vegetation clearance	Nature of impact:	Removal of veg	jetation due to s	ervitudes, acce	ss roads and er	ecting of th	ne pylons					
	With	1	5	8	5	70	High	-	High			
	Without	1	5	8	5	70	High	-	High			
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all other	er measure	s must be follow	ved				
	Degree of impact on irreplaceable resources:	Along this route	e there is a lot o	f protected plai	nt species and th	ne servitud	es needs to alw	ays clear				
Plant encroachment	Nature of impact:	Vegetation clea	iring or disturba	nce may and ha	ave been fond to	increase (encroachment					
	With	1	2	4	3	21	Low	-	High			
	Without	1	3	6	4	40	Medium	-	High			
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all other	er measure	s must be follow	ved				
	Degree of impact on irreplaceable resources:	The area is virt prone to invasi		ed and in pristir	ne condition and	has a lot o	of protected pla	nts and very				
Threat to biodiversity	Nature of impact:	Disturbance of	an area with hig	Jh biodiversity v	will increase the	probability	of encroachme	nt and biodiv	ersity will be lost.			

Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
	With	1	4	8	5	65	High	-	High
	Without	1	4	8	5	65	High	-	High
	Degree to which impact can be reversed:	Existing/permit	ted access roads	s must be used	and the all othe	r measures	must be follow	ed	
	Degree of impact on irreplaceable resources:	Biodiversity is h							
Soil erosion	Nature of impact:	Removal of veg preventing/min		n as vegetat	ion plays a major role in				
	With	1	1	2	2	8	Low	-	High
	Without	2	1	2	3	15	Low	-	High
	Degree to which impact can be reversed:	Existing/permit	ted access roads	s must be used	and the all othe	r measures	must be follow	red	
	Degree of impact on irreplaceable resources:	The area is vir erosion/ the are		ped and there	no access road	s, to build	roads would ii	ncrease soil	
Fauna									
Loss of faunal habitat	Nature of impact:	Adverse impact							
	With	2	4	6	4	48	Medium		High
	Without	2	4	6	5	60	Medium		High
	Degree to which impact can be reversed:	Realign preferr activities to the	55m servitude.				_		
	Degree of impact on irreplaceable resources:	The proposed conservation and habitat for seving mullers' velvet	rea, rivers (non reral red listed gecko, ground p	- n-perennial drai faunal species	nage lines), ru _l s including giar	picolous ou nt bullfrog,	utcrops as well southern afric	as suitable	
Direct impact on associated	impact:	Adverse impact							
		2	4	4	4	40	Medium		High
fauna and interactions with	With	2	4	7	4	40	Medium		підії

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
structures and personnel	Degree to which impact can be reversed:	Restrict constru	ction activities t	o the 55m serv	itude. No intent	ional killing	of any faunal s	pecies.				
	Degree of impact on irreplaceable resources:	conservation ar habitat for sev	he proposed alternative alignment 5 bisects the northern boundary of the soutpansberg onservation area, rivers (non-perennial drainage lines), rupicolous outcrops as well as suitable abitat for several red listed faunal species including giant bullfrog, southern african python, nullers' velvet gecko, ground pangolin, brown hyaena, wild dog and cheetah.									
Avifauna												
Habitat destruction	Nature of impact:	Permanent rem	oval of habitat t									
	With	1	2 4 3 21 Low									
	Without	1	2 4 5 35 Medium									
	Degree to which impact can be reversed:	Partially reversi	ole				1					
	Degree of impact on irreplaceable resources:	Low										
Disturbance	Nature of impact:	Noise and move										
	With	1	1	4	3	18	Low		Medium			
	Without	2	1	6	5	45	Medium		Medium			
	Degree to which impact can be reversed:	Irreversible										
	Degree of impact on irreplaceable resources:	Medium	edium									
Heritage												
Destruction of	Nature of impact:	Adverse impact	on a identified l	neritage sites a	long alternative							
heritage sites	With mitigation	3	5	2	5	50	Medium	-	High			
and features	Without mitigation	3 5 10 5 90 High - H										

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
	Degree to which impact can be reversed:	Medium							High		
	Degree of impact on irreplaceable resources:	Not applicable							High		
Visual											
Transformation of the visual quality of the	Nature of impact:		ease the prese	cles, which v	character. Construction vill create adverse visual						
landscape	With	3	2	6	5	55	Medium	-	High		
	Without	3	2	6	5	55	Medium	-	High		
	Degree to which impact can be reversed:	The impact car material. Active	e rehabilitation (of vegetation wi	here it has been	cleared, is	also required.				
	Degree of impact on irreplaceable resources:	In areas of high private nature r					ch as the soupa	ansberg and			
Social											
Theft of material from camps and	Nature of impact:	Material can be stolen even alor				ong the rou	ite especially as	s material us	ed in powerlines is often		
along	With mitigation	1	1	0	1	2	Low	-	Medium		
construction sites	Without mitigation	2	1	8	4	44	Medium	-	Medium		
	Degree to which impact can be reversed:	High – with imp	lementation of ı	relevant mitigat	ion measures						
	Degree of impact on irreplaceable resources:										
Negative attitudes	Nature of impact:	It is possible t			ners, game far	mers owne	rs for whom v	isual impact	s are important to their		
towards the	With mitigation	2	1	2	2	10	Low	-	Medium		
project and the formation of	Without mitigation	2	1	6	3	27	Low	-	Medium		

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
community groups, ngo's, in response to	Degree to which impact can be reversed:	High – with imp	lementation of r	relevant mitigat	ion measures							
the project;	Degree of impact on irreplaceable resources:	N/a										
Land owners denying	Nature of impact:	This would be e	would be expected from landowners who are opposed to the project 1 2 2 8 Low -									
contractors	With mitigation	1	1	-	Medium							
access to their properties	Without mitigation	1	2 6 4 36 Medium -									
	Degree to which impact can be reversed:	High – with imp	gh – with implementation of relevant mitigation measures									
	Degree of impact on irreplaceable resources:	N/a										
Loss of crops leading to	Nature of impact:	Land and crops	and and crops can be lost during the clearing of the powerline corridor and during the construction of									
economic losses	With mitigation	1	1	2	2	8	Low	-	Medium to high			
	Without mitigation	1	3	6	4	40	Medium	-	Medium to high			
	Degree to which impact can be reversed:	High – with imp	lementation of r	elevant mitigat	ion measures							
	Degree of impact on irreplaceable resources:	N/a										
Loss of land leading to	Nature of impact:	Grazing land are	Grazing land area can be lost due to clearing of land for the corridor as well as during the construction of ac									
economic losses	With mitigation	1	1	2	2	8	Low	-	Medium to high			
	Without mitigation	1	3	6	4	40	Medium	-	Medium to high			
	Degree to which impact can be reversed:	High – with imp										

Potential		Extent	Duration	Magnitude	Probability	Significa	ance	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	• where the los	s of land is pern	nanent, eskom	should discuss o	compensati	ion with landowr	ner				
Impacts on farming	Nature of impact:	Construction ca	n disturb activit	ies on farms								
activities such	With mitigation	1	1	2	2	8	Low	-	Medium to high			
as sowing, harvesting, and fire	Without mitigation	1	1	8	3	30	Low	-	Medium to high			
management programmes leading to	Degree to which impact can be reversed:	High – with imp	elementation of									
economic losses	Degree of impact on irreplaceable resources:	N/a										
Damage to farm infrastructure	Nature of impact:	This can lead to	his can lead to conflicts with community members and farmers									
e.g. irrigation	With mitigation	1	1	2	1	4	Low	-	Medium to high			
equipment, gates, fences	Without mitigation	1	1	6	3	24	Low	-	Medium to high			
	Degree to which impact can be reversed:	High – with imp	High – with implementation of relevant mitigation measures									
	Degree of impact on irreplaceable resources:	N/a										
Security concerns as a	Nature of impact:	It is highly likel	y that theft of g	ame and stock	can occur. Thef	t of game o	can be higher on	farms where	e rhino is present			
result of	With mitigation	1	1	2	4	16	Low	-	Medium to high			
poaching of game, stock theft and crop	Without mitigation	1	1	10	4	48	Medium	-	Medium to high			
theft	Degree to which impact can be reversed:	High – with imp	elementation of	relevant mitiga	tion measures							
	Degree of impact on irreplaceable resources:	The impact can										
			0.000									

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
Security as a result of the	Nature of impact:	The mere prese threatened	nce of construc	tion workers in	communities a	nd especial	ly on farms car	lead to une	ase and people may feel			
presence of	With mitigation	1	1	2	2	8	Low	-	Medium to high			
workers on pfarms and	Without mitigation	2	1	8	3	33	Medium	-	Medium to high			
communities	Degree to which impact can be reversed:	High – with imp	lementation of ı	relevant mitigat	ion measures							
	Degree of impact on irreplaceable resources:	N/a										
Safety of community	Nature of impact:	Construction sit	estruction sites are highly hazardous environments and the safety of people and animals can be									
members/farm workers/animals	With mitigation	1	1	2	1	4	Low	-	Medium			
workers/ammais	Without mitigation	1	1	6	2	16	Low	-	Medium			
	Degree to which impact can be reversed:	High – with imp										
	Degree of impact on irreplaceable resources:	N/a	N/a									
Poor maintenance of	Nature of impact:	It is possible tha	at access routes	can be of such	poor state that	maintenan	ce of the power	line is not po	ssible			
the power line	With mitigation	1	1	2	2	8	Low	-	Medium to high			
access roads: conflict between	Without mitigation	1	4	8	4	52	Medium	-	Medium to high			
eskom and the landowners on whose responsibility it	Degree to which impact can be reversed:	High – with imp	gh – with implementation of relevant mitigation measures									
is to do maintenance on these roads. Farmers use it more often but yet expect	Degree of impact on irreplaceable resources:	N/a		9-207								

Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
eskom to pay for all maintenance									
Loss of a sense of place/income		The presence of be spoilt	f powerlines par	ticularly in tour	ist attractions c	an result in	tourists no long	jer visiting th	e area as their views will
on game farms	With mitigation	1	1	2	2	8	Low	-	Medium to high
- tourists want to see	Without mitigation	1	1	8	4	40	Medium	-	Medium to high
"africa"and the power line can disturb the rustic african	Degree to which impact can be reversed:	High – with imp	olementation of I	relevant mitigat	ion measures				
rustic african setting;	Degree of impact on irreplaceable resources:								
Operation phase									

Operation phase

Agricultural potential

It is anticipated that the main impacts on agricultural potential will occur during the construction phase

Flora of Removal of protected plant species due to the servitude Destruction of Nature protected flora impact: With 1 5 8 5 70 High High Without 8 **75** High High Degree to which Existing/permitted access roads must be used and the all other measures must be followed impact can be reversed: Degree of impact Along this route there is a lot of protected plant species on irreplaceable resources: Destruction of Destruction and disturbance of a previously undisturbed vegetation **Nature** of pristine habitat impact: With 1 1 8 5 50 Medium High 2 8 5 55 Medium High Without 1 _

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	2	(+ve or - ve)	Confidence			
	Degree to which impact can be reversed:	Existing/permit	ed access roads	s must be used	and the all othe	er measures	must be follow	ed				
	Degree of impact on irreplaceable resources:	Pristine habitats	s are prone to in	ivasion/encroac	hment once dist	turbed						
Vegetation clearance	Nature of impact:	Removal of veg	etation due to s	ervitudes, acce	ss roads and ere	ecting of the	e pylons					
	With	1	5 6 3 36 Medium -									
	Without	2	5	8	3	45	Medium	-	High			
	Degree to which impact can be reversed:	Existing/permit										
	Degree of impact on irreplaceable resources:	Along this route			•			ays clear				
Plant encroachment	Nature of impact:	Vegetation clea	ring or disturbar	nce may and ha	ve been fond to	increase e	ncroachment					
	With	1	3	8	5	60	Medium	-	High			
	Without	2	4	8	5	70	High	-	High			
	Degree to which impact can be reversed:	Existing/permit	ed access roads	s must be used	and the all othe	er measures	must be follow	ed				
	Degree of impact on irreplaceable resources:	The area is virt prone to invasion		ed and in pristi	ne condition and	d has a lot	of procted plan	ts and very				
Threat to biodiversity	Nature of impact:											
	With	1	2	8	5	55	Medium	-	High			
	Without	2	3	8	5	65	High	-	High			
	Degree to which impact can be reversed:	Existing/permit	ed access roads	s must be used	and the all othe	er measures	must be follow	ed				

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence				
	Degree of impact on irreplaceable resources:	Biodiversity is h	igh along this ro	oute and thus p	rone to invasion	1							
Soil erosion	Nature of impact:	Removal of veg preventing/mini				will increase	the soil erosio	n as vegetat	ion plays a major role in				
	With	1	1	2	2	8	Low	-	High				
	Without	1	1	2	2	8	Low	-	High				
	Degree to which impact can be reversed:	Existing/permitt	kisting/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:		ne area is virtually undisturbed and there no access roads, to build roads would increase soil osion. The area is flat										
Fauna													
Loss of faunal habitat with	Nature of impact:	Adverse impact	·										
clearance of	With	1	4	4	5	45	Medium	-	High				
vegetation within the 55m	Without	2	4	6	5	60	Medium	-	High				
servitude	Degree to which impact can be reversed:	The clearance of species impacting the servitude slagger (especially arborates)	ng which could nould not be to real species)	potential impac tally removed p	t on the lines s providing refuge	should be re habitat fo	emoved. The ver	egetation of unal species					
	Degree of impact on irreplaceable resources:	The proposed conservation ar habitat for sev mullers' velvet o	ea, rivers (non eral red listed gecko, ground p	-perennial drai faunal species	nage lines), ru _l s including giar	picolous ou nt bullfrog,	tcrops as well southern afric	as suitable					
Direct impact on associated	Nature of impact:	Adverse impact											
fauna and	With	1	4	4	4	36	Medium	-	High				
interactions with structures and	Without	2	4	6	5	60	Medium	-	High				
personnel	Degree to which impact can be reversed:												

Degree of impact on irreplaceable resources: Nature Degree of impact on irreplaceable resources: Degree of impac	Potential		Extent	Duration	Magnitude	Probability	Signific	ance	Status	
on irreplaceable resources: Nature (mpact: more) Degree to which impact: or irreplaceable resources: Electrocution of irreplaceable resources: Nature of impact: or irreplaceable resources: Electrocution of irreplaceable resources: Nature of impact: or irreplaceable resources: Electrocution of irreplaceable resources: Nature of impact: or irreplaceable resources: Electrocution of irreplaceable resources: Nature of impact: or irreplaceable resources: Electrocution of irreplaceable resources: Nature of impact: or irreplaceable resources: Nature of impact: or irreplaceable resources: Nature of impact: or irreplaceable resources: Nethods 1 4 4 8 2 3 4 1 Now Medium 1 4 2 2 3 21 Now Medium Medium Medium Degree to which impact can be resources: Nethods 1 4 8 6 5 5 5 Medium Medium Medium Medium Medium Medium Medium Medium Medium Medium Medium Medium Degree to which on irreplaceable resources: Nethods 1 2 4 8 3 21 Now Medium Med		Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	•	Confidence
Nature Mith 1 4 4 4 4 5 Medium		on irreplaceable	conservation ar habitat for sev	rea, rivers (non reral red listed	as suitable					
Impact: With	Avifauna									
Without 1 4 4 4 5 5 45 Medium Medium Degree to which impact can be reversed: Degree of impact on irreplaceable on tower structures and disturbance during routine maintenance of pulmer and internance of impact can be reversed: Nesting of birds on tower structures and disturbance during routine maintenance of impact can be reversed: Degree to which impact can be reversed: Degree of impact on irreplaceable on irreplaceabl	Collision		Collision or red	data species wit	h the overhead	line (usually th	e earth wi	re).		
Degree to which impact can be reversed: Degree of impact on irreplaceable resources: Electrocution Nesting of birds on irreplaceable resources: Nesting of birds on tower structures and disturbance during routine maintenance of pylons and power lines and disturbance during routine maintenance of impact can be reversed: Degree to which impact can be reversed: Degree of impact on irreplaceable resources: Nesting of birds on tower structures and disturbance during routine maintenance of pylons and power lines could result in disturbance of certain bird species Without 2 2 2 4 3 21 Low Medium Medium Medium		With	1	4	4	4	36	Medium		Medium
Impact can be reversed: Degree of impact on irreplaceable resources: Degree of impact on irreplaceable resources: Bird perches on plus and earthed components, resulting in death or severe injury.		Without	1	4		Medium				
Electrocution Nesting of birds on tower structures and disturbance structures and disturbance		impact can be reversed:								
Iive and earthed components, resulting in death or severe injury. With		on irreplaceable								
Without 1 4 6 5 5 55 Medium Medium Degree to which impact can be reversed: Degree of impact on irreplaceable resources: Nesting of birds on tower structures and disturbance during routine maintenance of impact can be reversed: Without 1 2 4 3 21 Low Medium Without 2 2 4 3 3 21 Low Medium Medium Degree to which impact can be reversed: Degree to which impact can be reversed: Degree to impact can be reversed: Degree to impact can be reversed: Degree of impact can be reversed:	Electrocution	impact:				h or severe inju		bridging the air	gap betweer	
Degree to which impact can be reversed: Degree of impact on irreplaceable resources: Nesting of birds on tower structures and disturbance during routine maintenance Mith 1 2 4 3 21 Low Medium Without 2 2 2 4 32 Medium		With	1	4	2	3	21	Low		Medium
impact can be reversed: Degree of impact on irreplaceable resources: Nesting of birds on tower structures and disturbance disturbance during routine maintenance of impact can be reversed: Degree to which impact can be reversed: Degree to which impact can be reversed: Degree of impact on irreplaceable resources: Medium		Without	1	4	6	5	55	Medium		Medium
Nesting of birds on tower structures and disturbance during routing maintenance Medium Degree to which impact can be reversed: Degree of impact on irreplaceable resources: Medium		impact can be	Low							
on tower structures and disturbance during routine maintenance Mithout 2 4 3 21 Low Medium		on irreplaceable	Medium							
disturbance during routine maintenance Mithout 2 2 4 4 4 32 Medium Medium Medium Degree to which impact can be reversed: Degree of impact on irreplaceable resources:	_		Routine mainter	nance of pylons	and power lines	s could result in	disturban	ce of certain bird	species	
during routine maintenance Degree to which impact can be reversed: Degree of impact on irreplaceable resources: Medium M		With	1	2	4	3	21	Low		Medium
maintenance Degree to which impact can be reversed: Degree of impact on irreplaceable resources: High High Medium		Without	2	2	4	4	32	Medium		Medium
on irreplaceable resources:		impact can be	High							
		on irreplaceable	Medium		_					

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence
Heritage									
It is anticipated th	nat the main impacts o	on heritage will o	ccur during the	construction ph	ase				
Visual									
Visual exposure to the powerline servitude,	impact:	close to private the power line,	nature reserve where visibility	s. Sensitive vie	ewer locations in	n close prox	kimity (<500m)		mpacts, especially in and rulnerable to exposure of
conductor	With	3	5	6	5	70	High	-	High
cables and towers.	Without	3	4	6	5	65	High	-	High
towers.	Degree to which impact can be reversed:	proximity to se option.	ensitive viewer	locations throu	gh careful route	e planning,	or by selectin	g the no-go	
	Degree of impact on irreplaceable resources:						ch as the soup	ansberg and	
Social									
Perceived electromagnetic	Nature of impact:	The presence o on some proper		orkers can resu	ılt in the treat o	of safety and	d can possibly	lead to actua	crimes being committed
fields impacts	With mitigation	1	3	2	1	6	Low	-	Medium
on humans and animals during	Without mitigation	1	5	4	2	20	Low	-	Medium
the operational phase	Degree to which impact can be reversed:	High – with imp	lementation of	relevant mitigat	ion measures				
	Degree of impact on irreplaceable resources:								
Loss of a sense of place/income	Nature of impact:	The presence of be spoilt	f powerlines par	ticularly in tour	ist attractions c	an result in	tourists no lon	ger visiting th	ne area as their views will
on game farms	With mitigation	1	1	2	3	12	Low	-	Medium
- tourists want to see "africa"	Without mitigation	3	4	8	4	60	Medium	-	High
and the power line can disturb the rustic	Degree to which impact can be reversed:	High – with imp	elementation of	relevant mitigat	ion measures				

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Potential	Mitigation	Extent	Duration	Magnitude	Probability	Signific	ance	Status	
impact		(e)	(d)	(m)	(p)	(S=(A+(1+m)*n)		(+ve or - ve)	Confidence
african setting;	Degree of impact on irreplaceable resources:	N/a							
Poor maintenance of	Nature of impact:	It is possible the	sible						
the power line	With mitigation	1	1	2	2	8	Low	-	Medium to high
access roads: conflict between eskom and the	Without mitigation	1	4	8	4	52	Medium	-	Medium to high
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	Degree to which impact can be reversed:	N/a							
	Degree of impact on irreplaceable resources:	Put a firm nego							
Impact of the power lines on	Nature of impact:	Where powerlin	ay occur						
aircraft as there	With mitigation	1	2	2	2	10	Low	-	Medium to high
are airports within the study area; one is the	Without mitigation	4	5	6	4	60	Medium	-	Medium to high
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:	High – with imp							
	Degree of impact on irreplaceable resources:	N/a							
decrease in property values	Nature of impact:	These can lead							

Potential impact	Mitigation	Extent	Duration	Magnitude	Probability	Significance (s=(e+d+m)*p)		Status	
		(e)	(d)	(m)	(p)			(+ve or - ve)	Confidence
and number of visitirs to lodges and other areas that are popular with tourists due to the visual impacts of powerlines	With mitigation	1	3	4	1	8	Low	-	Medium to high
	Without mitigation	2	5	6	3	39	Medium	-	Medium to high
	Degree to which impact can be reversed:	High – with imp							
	Degree of impact on irreplaceable resources:	N/a							
Security issues as a result of	Nature of impact:								
the presence of	With mitigation	1	1	2	2	8	Low	-	Medium to high
maintenance workers on properties	Without mitigation	1	1	4	4	24	Low	-	High
	Degree to which impact can be reversed:	High – with imp							
	Degree of impact on irreplaceable resources:	The impact can							
Land owners denying	Nature of impact:	This can result							
contractors	With mitigation	1	1	2	2	8	Low	-	Medium
access to their properties	Without mitigation	1	1	8	4	40	Medium	-	High
	Degree to which impact can be reversed:	High – with imp							
	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 p							
	With mitigation	1	1	0	1	2	Low	-	Medium to high
	Without mitigation	1	1	2	2	8	Low	-	Medium to high

Potential impact	Mitigation	Extent	Duration	Magnitude	Probability	Significa	nce	Status			
		(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence		
	Degree to which impact can be reversed:	High – with imp									
	Degree of impact on irreplaceable resources:	N/a									
Impact on farming	Nature of impact:	During the oper	During the operational phase, impacts on farm actvities are likely to be very minimal								
activities such	With mitigation	1	1	0	1	2	Low	-	Medium to high		
as sowing, harvesting, and fire	Without mitigation	1	1	2	1	4	Low	-	Medium to high		
management programmes	Degree to which impact can be reversed:	High – with imp									
leading to economic losses	Degree of impact on irreplaceable resources:	N/a									
Impact on farming	Nature of impact:	During the oper very minimal	tinations are likely to be								
activities such	With mitigation	1	1	0	1	2	Low	-	Medium to high		
as hunting in game farms leading to	Without mitigation	1	1	2	1	4	Low	-	Medium to high		
economic losses. Impacts can also be on	Degree to which impact can be reversed:	High – with imp									
guests in lodges leading to economic losses	Degree of impact on irreplaceable resources:	N/a									
Increase in the voltage stability	Nature of impact:	An increased vo									
	With mitigation										
	Without mitigation	3	5	8	5	80	High	+	Medium		

Potential	Mitigation	Extent	Duration	Magnitude	Probability	Significa	nce	Status		
impact		(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence	
	Degree to which impact can be reversed:	N/a								
	Degree of impact on irreplaceable resources:	N/a								
An assurance of a reliable	Nature of impact:	Reliable electricity supply is a positive impact that will improve activities such as touriam in the makhado local munic								
electricity	With mitigation	3	4	2	4	36	Medium	+	Medium	
supply	Without mitigation	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	Nature of impact:	In order to grow								
supply making it	With mitigation									
available for agriculture,	Without mitigation	3	5	8	5	80	High	+	Medium	
tourism and other industries. The increase in electricity can	Degree to which impact can be reversed:	N/a								
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								

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Potential		Extent	Duration	Magnitude	Probability	Significa	ince	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
No more backlogs in	Nature of impact:	The absence of will be possible	The absence of backlogs in electricity connections can imply that activities that can only take place whe will be possible									
electricity	With mitigation											
connections	Without mitigation	3	5	8	5	80	High	+	Medium			
	Degree to which impact can be reversed:	N/a	a									
	Degree of impact on irreplaceable resources:	N/a	/a									
The inadequate provision of	Nature of impact:											
electricity to services such as	With mitigation											
health facilities will cease	Without mitigation	3	5	8	5	80	High	+	Medium			
wiii cease	Degree to which impact can be reversed:	N/a										
	Degree of impact on irreplaceable resources:	N/a	N/a									
Electricity will be available to	Nature of impact:	The presence of	f electricity to ru	ıral areas will in	nprove the lives	of many w	ho live in pover	ty				
numerous rural	With mitigation											
settlements that do not have this service	Without mitigation	3	5	8	5	80	High	+	Medium			
Sel VICE	Degree to which impact can be reversed:	N/a										
	Degree of impact on irreplaceable resources:	N/a	N/a									

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status			
impact	Mitigation	(e)	(d)	(m)	(p) (s=(e+d+m)*		+m)*p)	(+ve or - ve)	Confidence		
Decommissionin	ng phase										
Agricultural pot	ential										
No decommission	ing impacts are antici	pated									
Flora											
Destruction of protected flora											
	With	1	5	8	5	70	High	-	High		
	Without	1	5	8	5	70	High	-	High		
	Degree to which impact can be reversed:	Existing/permit	Existing/permitted access roads must be used and the all other measures must be followed								
	Degree of impact on irreplaceable resources:										
Destruction of pristine habitat	Nature of impact:	Destruction and	l disturbance of	a previously un	disturbed veget	ation					
	With	1	5	8	5	70	High		High		
	Without	2	5	8	5	75	High	-	High		
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all othe	er measures	must be follow	red			
	Degree of impact on irreplaceable resources:	Pristine habitat	Pristine habitats are prone to invasion/encroachment once disturbed								
Vegetation clearance	Nature of impact:	Removal of vegetation due to servitudes, access roads and erecting of the pylons									
	With	1	5	8	5	70	High	-	High		
	Without	1	5	8	5	70	High	-	High		
	Degree to which impact can be reversed:	Existing/permit	ted access road	s must be used	and the all othe	er measures	must be follow	red			

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	l+m)*p)	(+ve or - ve)	Confidence			
	Degree of impact on irreplaceable resources:	Along this route	Along this route there is a lot of protected plant species and the servitudes needs to always clear									
Plant encroachment	Nature of impact:	Vegetation clea	Vegetation clearing or disturbance may and have been fond to increase encroachment									
	With	1	2	4	3	21	Low	-	High			
	Without	1	3	6	4	40	Medium	-	High			
	Degree to which impact can be reversed:		xisting/permitted access roads must be used and the all other measures must be followed									
	Degree of impact on irreplaceable resources:		he area is virtually undisturbed and in pristine condition and has a lot of procted plants and very rone to invasion									
Threat to biodiversity	Nature of impact:											
	With	1	4	8	5	65	High	-	High			
	Without	1	4	8	5	65	High	-	High			
	Degree to which impact can be reversed:	Existing/permit										
	Degree of impact on irreplaceable resources:	Biodiversity is h	nigh along this r	oute and thus p	orone to invasior	1						
Soil erosion	Nature of impact:	Removal of veg preventing/min				will increas	e the soil erosio	n as vegetat	ion plays a major role in			
	With	1	1	2	2	8	Low	-	High			
	Without	2	1	2	3	15	Low	-	High			
	Degree to which impact can be reversed:	Existing/permit	ted access roads	s must be used	and the all othe	er measures	s must be follow	ed				
	Degree of impact on irreplaceable resources:	Thre area is vi erosion										
Fauna												

	Extent	Duration	Magnitude	Probability	Signifi	cance	Status		
Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence	
Nature of impact:	Adverse impact								
With	1	1	2	5	20	Low		High	
Without	2	1	4	5	35	Medium		High	
Degree to which impact can be reversed:									
Degree of impact on irreplaceable resources:	conservation ar habitat for sev	as suitable							
	impact: With Without Degree to which impact can be reversed: Degree of impact on irreplaceable	Mitigation (e) Nature of impact: With 1 Without 2 Degree to which impact can be reversed: Degree of impact on irreplaceable resources: The proposed conservation an habitat for sevensed:	Mitigation (e) (d) Nature of impact: With 1 1 1 Without 2 1 Degree to which impact can be reversed: Degree of impact on irreplaceable resources: The proposed alternative alignment conservation area, rivers (non habitat for several red listed)	Mitigation (e) (d) (m) Nature of impact: With 1 1 2 Without 2 1 4 Degree to which impact can be reversed: Degree of impact on irreplaceable resources: The proposed alternative alignment 5 bise conservation area, rivers (non-perennial drain habitat for several red listed faunal species)	Mitigation (e) Adverse impact With 1 1 2 5 Without Degree to which impact can be reversed: Degree of impact on irreplaceable resources: The proposed alternative alignment 5 bisects the north conservation area, rivers (non-perennial drainage lines), rul habitat for several red listed faunal species including giar	Mitigation (e) (d) (m) (p) (s=(e-1) Adverse impact impact: With 1 1 2 5 20 Without 2 1 4 5 35 Degree to which impact can be reversed: Degree of impact on irreplaceable resources: The proposed alternative alignment 5 bisects the northern bout conservation area, rivers (non-perennial drainage lines), rupicolous habitat for several red listed faunal species including giant bullfrom the conservation giant giant bullfrom the conservation giant gian	Mitigation (e) (d) (m) (p) (s=(e+d+m)*p) Adverse impact impact: With 1 1 2 5 20 Low Without 2 1 4 5 35 Medium The removal of the tower pylons and lines must be restricted to the 55m servitude. Residence of the vegetation within the cleared servitude. Degree of impact on irreplaceable The proposed alternative alignment 5 bisects the northern boundary of the social conservation area, rivers (non-perennial drainage lines), rupicolous outcrops as well	Mitigation (e) (d) (m) (p) (s=(e+d+m)*p) (+ve or -ve) Nature of impact: With 1 1 2 5 20 Low Without Degree to which impact can be reversed: Degree of impact on irreplaceable resources: The proposed alternative alignment 5 bisects the northern boundary of the soutpansberg conservation area, rivers (non-perennial drainage lines), rupicolous outcrops as well as suitable habitat for several red listed faunal species including giant bullfrog, southern african python,	

Avifauna

No decommissioning impacts are anticipated

Heritage

Visual

No decommissioning impacts are anticipated

exposure
rations to
itle and
e o

of Activity within the servitude related to the dismantling and removal of power line infrastructure will not have significant visual **Nature** impacts. Perceptions relating to the removal of visualy intrusive objects might be positive in as far as visual impacts will be impact: decreased due to decommissioning. With 3 3 18 High 1 + Low 18 High Low

power line Without substation Degree to which infrastructure impact can be reversed:

Avoid unnecessary disturbance of the natural environment during decommissioning operations

Degree of impact on irreplaceable resources:

None

Social									
Theft of material	Nature of	Material can be	stolen from the	ne sites where	decommissionii	ng is takin	g place as mat	terial used i	n electricity is often the
from camps and	impact:	targeted by crin	ninals						
along	With mitigation	1	1	0	1	2	Low	-	Medium
construction sites	Without mitigation	2	1	8	4	44	Medium	-	Medium

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
	Degree to which impact can be reversed:	High – with imp	High – with implementation of relevant mitigation measures									
	Degree of impact on irreplaceable resources:											
Loss of crops leading to	Nature of impact:	Crops can be los	rops can be lost during this phase as the actvities are almost as intense as those during the construction phase									
economic losses	With mitigation	1	1	2	2	8	Low	-	Medium to high			
	Without mitigation	1	3	6	4	40	Medium	-	Medium to high			
	Degree to which impact can be reversed:	High – with imp	gh – with implementation of relevant mitigation measures									
	Degree of impact on irreplaceable resources:	N/a										
Impacts on farming	Nature of impact:	Decommissioning can disturb activities on farms										
activities such	With mitigation	1	1	2	2	8	Low	-	Medium to high			
as sowing, harvesting, and fire	Without mitigation	1	1	8	3	30	Low	-	Medium to high			
management programmes	Degree to which impact can be reversed:	High – with imp	High – with implementation of relevant mitigation measures									
leading to economic losses	Degree of impact on irreplaceable resources:	N/a										
Damage to farm infrastructure	Nature of impact:	This can lead to	conflicts with co	ommunity mem	bers and farme	rs						
e.g. irrigation	With mitigation	1	1	2	1	4	Low	-	Medium to high			
equipment, gates, fences	Without mitigation	1	1	6	3	24	Low	-	Medium to high			
	Degree to which impact can be reversed:	High – with imp	High – with implementation of relevant mitigation measures									

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Potential		Extent	Duration	Magnitude	Probability	Signific	ance	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+	d+m)*p)	(+ve or - ve)	Confidence				
	Degree of impact on irreplaceable resources:	N/a	N/a										
Security concerns as a	Nature of impact:	It is highly likely	y that theft of g	ame and stock	can occur. Thef	of game	can be higher or	n farms where	rhino is present				
result of	With mitigation	1	1	2	4	16	Low	-	Medium to high				
poaching of game, stock	Without mitigation	1	1	10	4	48	Medium	-	Medium to high				
theft and crop theft	Degree to which impact can be reversed:	High – with imp	gh – with implementation of relevant mitigation measures										
	Degree of impact on irreplaceable resources:	The impact can	he impact can be high where endangered species such as rhino occur										
Security as a result of the	Nature of impact:	The mere prese threatened											
presence of	With mitigation	1	1	2	2	8	Low	-	Medium to high				
workers on pfarms and communities	Without mitigation	2	1	8	3	33	Medium	-	Medium to high				
Communices	Degree to which impact can be reversed:	High – with imp											
	Degree of impact on irreplaceable resources:	N/a											
Safety of community	Nature of impact:	As decommission	oning involves th	ne dismantling	of structures, th	e safety of	people and anii	mals can be c	ompromised				
members/farm	With mitigation	1	1	2	1	4	Low	-	Medium				
workers/animals	Without mitigation	1	1	6	2	16	Low	-	Medium				
	Degree to which impact can be reversed:	High – with imp	lementation of	relevant mitiga	tion measures								
	Degree of impact on irreplaceable resources:	N/a											

		Extent	Duration	Magnitude	Probability	Significa	ance	Status					
Potential impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence				
Cumulative imp	acts												
Agricultural pot	ential												
No cumulative im	pacts are anticipated												
Flora													
Plant encroachment	Nature of impact:	Vegetation clea	ring or disturbaı	nce may and ha	ave been fond to	increase e	encroachment						
	With	1	5	6	5	60	Medium	-	Hi				
	Without	2	5	6	5	65	High	-	Hi				
	Degree to which impact can be reversed:	Existing/permit	xisting/permitted access roads must be used and the all other measures must be followed										
	Degree of impact on irreplaceable resources:	The area is virtour prone to invasion											
Soil erosion	Nature of impact:	Removal of vegetation due to the servitudes and servitudes will increase the soil erosion as vegetation plays a major role in preventing/minimising soil erosion											
	With	1	1	2	2	8	Low	-	Hi				
	Without	1	1	2	2	8	Low	-	Hi				
	Degree to which impact can be reversed:	Existing/permit											
	Degree of impact on irreplaceable resources:	The area is vir erosion. The are		ped and there	no access road	s, to build	l roads would i	ncrease soil					
Fauna													
Loss of faunal habitat	Nature of impact:	Adverse impact											
	With	1	4	6	5	55	Medium		High				
	Without	2	4	6	5	60	Medium		High				
	Degree to which impact can be reversed:	Low- realign pr activities to the	earance and										

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status			
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	(s=(e+d+m)*p) (+ve or - ve)		Confidence		
	Degree of impact on irreplaceable resources:	The proposed conservation ar habitat for sev mullers' velvet of	as suitable								
Direct impact on associated	Nature of impact:	Adverse impact									
fauna and	With	1	4	4	4	36	Medium		High		
interactions with structures and	Without	2	4	6	5	60	Medium		High		
personnel	Degree to which impact can be reversed:	Medium-restrict species.	Medium-restrict construction activities to the 55m servitude. No intentional killing of any faunal species.								
Degree of impact on irreplaceable resources: The proposed alternative alignment 5 bisects the northern boundary of the soutpansberg conservation area, rivers (non-perennial drainage lines), rupicolous outcrops as well as suitable habitat for several red listed faunal species including giant bullfrog, southern african python mullers' velvet gecko, ground pangolin, brown hyaena, wild dog and cheetah.								as suitable			
Avifauna											

No cumulative impacts are anticipated

HeritageNo cumulative impacts are anticipated

Visual

Visuai													
Increased visual exposure to power line infrastructure.	Nature of impact:	intensified impro lines are observ Lastly cumulativ the recurrence	umulative impacts result from the positioning of the new development such that it would give rise to an extended and/or stensified impression of a pre-existing power line in the landscape. It will also occur as an increased perception where power ness are observed from locations from which more than one power line would now be seen in different parts of the landscape. astly cumulative impacts arise through an increase in the incidence of sequential perceptions of different power lines through ne recurrence of images and impressions of power lines at various points in the landscape and which are continuously incountered when moving through it.										
	With	3	5	0	3	24	Low	-	High				
	Without	3	5	6	5	70	High	-	High				
	Degree to which impact can be reversed:		he impact can be reversed by terminating construction activity and removing all construction naterial. Active rehabilitation of vegetation where it has been cleared, is also required.										
	Degree of impact on irreplaceable resources:		areas of high visual quality and where there are no hv power lines, such as the soupansberg and rivate nature reserves, the degree of impact will be very high.										

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Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d	+m)*p)	(+ve or - ve)	Confidence			
Social												
Poaching of game impacting	Nature of impact:	It is highly likely	y that theft of g	ame and stock	can occur. Theft	of game ca	an be higher on	farms where	rhino is present			
on the loss of	With	2	3	4	3	27	Low	-	Medium to high			
game and in turn affecting	Without	5	5	8	4	72	High	-	High			
the tourism industry of the municipality and	Degree to which impact can be reversed:	the construction operational phase										
that of the country at large	t of the intry at large on irreplaceable resources: The impact will high where endangered species such as rhino occur											
Loss of a sense of place		Tourists visit plants for them		nd be immersed	in nature and		nce of powerline	es can theref	ore spoil this experience			
resulting in	With	1	2	2	2	10	Low	-	Medium to high			
economic losses especially for	Without	3	4	6	3	39	Medium	-	Medium to high			
tourism sector in turn impact on the economic	Degree to which impact can be reversed:	Liaise with visual would be to use										
growth of the makhado local municipality	Degree of impact on irreplaceable resources:	N/a										
Increase in power supply		electricity is on	e of the hindrar	ces to the deve	lopment of the	area and in	turn an improv	ed economy	ado local municipality as			
and in the stability of the	With	3	4	6	4	52	Medium	+	Medium			
network. In turn	Without	3	4	6	4	52	Medium	+	Medium			
numerous existing developments	Degree to which impact can be reversed:	N/a										
such as lodges and other tourist attractions can be improved.	Degree of impact on irreplaceable resources:	N/a										

Potential		Extent	Duration	Magnitude	Probability	Significance	Status	
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)	(+ve or - ve)	Confidence

No-go alternative

Agricultural potential

In the event that the transmission lines are not constructed, there will be no impact on the agricultural potential, therefore the status quo will remain.

Flora

In the event that the transmission lines are not constructed, there will be no impact on the flora, therefore the status quo will remain.

Fauna

In the event that the transmission lines are not constructed, there will be no impact on the fauna, therefore the status quo will remain.

Avifauna

In the event that the transmission lines are not constructed, there will be no impact on the avifauna, therefore the status quo will remain.

Heritage

In the event that the transmission lines are not constructed, there will be no impact on heritage sites, therefore the status quo will remain.

In the event that the transmission lines are not constructed, there will be no visual impact, therefore the status quo will remain.

Powerlines linking the tabor substation to the new	Nature of impact:	weakest part of powerline power	ere is voltage instability as the polokwane customer load network (cln), including the tabor and spencer power is the akest part of the northern grid network due to being operated beyond its reliability. There is therefore a need for a newerline powerlines linking the tabor substation to the new bokmakirie (nzhelele) substation in order to strengthen the thern grid or that the expansion of the bokmakirie substation to accommodate the new 400kv infrastructure								
bokmakirie	With	2	1	2	1	5	Low	-	Medium to high		
(nzhelele) substation will	Without	4	5	8	3	51	Medium	-	Medium to high		
not be constructed.	Degree to which impact can be reversed:	Construct the po	onstruct the powerlines								
	Degree of impact on irreplaceable resources:	N/a									
No increase in the voltage	Nature of impact:		The voltage is currently unstable. This can result in impacts such as electrical equipment being shut down leading to effective such as loss of data and the inability to undertake certain activities on farms etc.								
stability	With	1	1	2	1	4	Low	-	Medium		
	Without	3	5	8	3	48	Medium	-	Medium		

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Chapter 9: Impact Assessment

EIA Ref Number: 14/12/16/3/3/2/317 NEAS Ref Number: DEA/EIA/0001132/2012

Potential		Extent	Duration	Magnitude	Probability	Significa	nce	Status				
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)		(+ve or - ve)	Confidence			
	Degree to which impact can be reversed:	Ensure that the	voltage is stabi	llised								
	Degree of impact on irreplaceable resources:	N/a	a									
No increase and assurance of electricity	Nature of impact:		and mining s	ectors. A lack					the agricultural, tourism, growth of the makhado			
supply making it	With	1	1	2	1	4	Low	-	Medium			
unavailable for agriculture,	Without	3	5	8	4	64	High	-	Medium			
tourism and other industries	Degree to which impact can be reversed:		ncrease electricity supply through measures such as the construction of the proposed power line and ensure that these are well maintained									
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 of impact on irreplaceable resources:	N/a										
Continuation of backlogs in	Nature of impact:				lack of funds a		ortages. The re	endering of s	services that require the			
electricity	With	2		4	2	14	Low	-	Medium to high			
connections	Without	3	4	8	4	60	Medium	-	Medium to high			

Potential		Extent	Duration	Magnitude	Probability	Significance	Status					
impact	Mitigation	(e)	(d)	(m)	(p)	(s=(e+d+m)*p)	(+ve or - ve)	Confidence				
	Degree to which impact can be reversed:	increased budg	The makhado local municipality must put measures in place to reduce backlogs. This can include ncreased 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	√/a									
Continuation of the inadequate		In services such	as health facil	ities, lack of ele	ctricity can resu	Ilt in losses of lives						
provision of	With	1	1	0	2	4 Low	-	Medium				
electricity to critical services	Without	3	5	10	4	72 High	-	Medium				
such as health facilities	Degree to which impact can be reversed:	that adverse im	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	Nature of impact:	A lack of electricity means that the lifestyles within this rural areas will continue. These include the cutting of trees to us wood for heating and cooking. The cutting of trees has numerous adeverse impacts such as deforestation and the post loss of protected species.										
electricity in	With	1	1	2	2	8 Low	-	Medium				
numerous rural settlements	Without	3	5	8	4	64 High	-	Medium				
	Degree to which impact can be reversed:	Provide electrici	Provide electricity to rural areas									
	Degree of impact on irreplaceable resources:	N/a										

9.3 Impact Assessment Conclusions

9.3.1 Alternative 1

During the **construction phase**, the majority of impacts identified were considered to be of low to medium significance in the event that the appropriate mitigation measures are

implemented.

The following **negative** impacts were assessed to be of High significance in the event that

mitigation measures are not implemented as required:

Heritage

Destruction of Heritage sites and features

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The majority of the impacts identified, associated with the **operational phase** were considered to be of low to medium significance in the event that the appropriate mitigation measures are

implemented.

The following **negative** impacts were assessed to be of high significance in the event that

mitigation measures are not implemented as required:

Visual

o Visual exposure to the Powerline Servitude, Conductor Cables and Towers, as well

as the Nzhelele Substation

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The following **positive** impacts were assessed to be of high significance:

Social

Increase in the voltage stability

 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

No more backlogs in electricity Connections

The inadequate provision of electricity to services such as health facilities will

cease

Electricity will be available to numerous rural settlements that do not have this

service

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Chapter 9: Impact Assessment

EIA Ref Number: 14/12/16/3/3/2/317 NEAS Ref Number: DEA/EIA/0001132/2012 The majority of impacts identified associated with the **de-commissioning phase** were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. No impacts were assessed as having a high significance before the implementation of mitigation measures.

9.3.2 Alternative 1a

During the **construction phase**, the majority of impacts identified were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of High significance in the event that mitigation measures are not implemented as required:

Heritage

Destruction of Heritage sites and features

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The majority of the impacts identified, associated with the **operational phase** were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of high significance in the event that mitigation measures are not implemented as required:

Visual

 Visual exposure to the Powerline Servitude, Conductor Cables and Towers, as well as the Nzhelele Substation

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The following **positive** impacts were assessed to be of high significance:

Social

- Increase in the voltage stability
- 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
- No more backlogs in electricity Connections
- The inadequate provision of electricity to services such as health facilities will cease
- Electricity will be available to numerous rural settlements that do not have this service

The majority of impacts identified associated with the **de-commissioning phase** were considered to be of low to medium significance in the event that the appropriate mitigation

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measures are implemented. No impacts were assessed as having a high significance before the implementation of mitigation measures.

9.3.3 Alternative 1b

During the **construction phase**, the majority of impacts identified were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of High significance in the event that mitigation measures are not implemented as required:

Heritage

Destruction of Heritage sites and features

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The majority of the impacts identified, associated with the **operational phase** were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of high significance in the event that mitigation measures are not implemented as required:

Visual

 Visual exposure to the Powerline Servitude, Conductor Cables and Towers, as well as the Nzhelele Substation

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The following **positive** impacts were assessed to be of high significance:

Social

- Increase in the voltage stability
- 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
- No more backlogs in electricity Connections
- The inadequate provision of electricity to services such as health facilities will cease
- Electricity will be available to numerous rural settlements that do not have this service

The majority of impacts identified associated with the **de-commissioning phase** were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. No impacts were assessed as having a high significance before the implementation of mitigation measures.

9.3.4 Alternative 2

During the **construction phase**, the majority of impacts identified were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of High significance in the event that mitigation measures are not implemented as required:

Heritage

Destruction of Heritage sites and features

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The majority of the impacts identified, associated with the **operational phase** were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of high significance in the event that mitigation measures are not implemented as required:

Visual

 Visual exposure to the Powerline Servitude, Conductor Cables and Towers, as well as the Nzhelele Substation

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The following **positive** impacts were assessed to be of high significance:

Social

- Increase in the voltage stability
- 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
- No more backlogs in electricity Connections
- The inadequate provision of electricity to services such as health facilities will cease
- Electricity will be available to numerous rural settlements that do not have this service

The majority of impacts identified associated with the **de-commissioning phase** were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. No impacts were assessed as having a high significance before the implementation of mitigation measures.

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9.3.5 Alternative 3

During the **construction phase**, the majority of impacts identified were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of High significance in the event that mitigation measures are not implemented as required:

- Flora
 - Destruction of pristine habitat
- Heritage
 - Destruction of Heritage sites and features

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The majority of the impacts identified, associated with the **operational phase** were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of high significance in the event that mitigation measures are not implemented as required:

- Flora
 - Destruction of protected flora
 - Destruction of pristine habitat
 - Vegetation clearance
- Visual
 - Visual exposure to the Powerline Servitude, Conductor Cables and Towers, as well as the Nzhelele Substation

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The following **positive** impacts were assessed to be of high significance:

- Social
 - Increase in the voltage stability
 - 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
 - No more backlogs in electricity Connections
 - The inadequate provision of electricity to services such as health facilities will cease
 - Electricity will be available to numerous rural settlements that do not have this service

The majority of impacts identified associated with the **de-commissioning phase** were considered to be of low to medium significance in the event that the appropriate mitigation

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measures are implemented. The following **negative** impacts were assessed to be of high significance in the event that mitigation measures are not implemented as required:

- Flora
 - Destruction of pristine habitat

9.3.6 Alternative 4

During the **construction phase**, the majority of impacts identified were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of High significance in the event that mitigation measures are not implemented as required:

- Flora
 - Destruction of protected flora
 - Destruction of pristine habitat
 - Vegetation clearance
 - Treat to biodiversity
- Heritage
 - Destruction of Heritage sites and features

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The majority of the impacts identified, associated with the **operational phase** were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of high significance in the event that mitigation measures are not implemented as required:

- Flora
 - Destruction of protected flora
 - Destruction of pristine habitat
 - Vegetation clearance
 - Threat to biodiversity
 - Soil erosion
- Visual
 - Visual exposure to the Powerline Servitude, Conductor Cables and Towers, as well as the Nzhelele Substation

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The following **positive** impacts were assessed to be of high significance:

- Social
 - Increase in the voltage stability

- 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
- No more backlogs in electricity Connections
- The inadequate provision of electricity to services such as health facilities will cease
- Electricity will be available to numerous rural settlements that do not have this service

The majority of impacts identified associated with the **de-commissioning phase** were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of high significance in the event that mitigation measures are not implemented as required:

Flora

- Destruction of protected flora
- Destruction of pristine habitat
- Vegetation clearance
- Threat to biodiversity

9.3.7 Alternative 5

During the **construction phase**, the majority of impacts identified were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of High significance in the event that mitigation measures are not implemented as required:

Flora

- Destruction of protected flora
- Destruction of pristine habitat
- Vegetation clearance
- Treat to biodiversity

Heritage

Destruction of Heritage sites and features

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The majority of the impacts identified, associated with the **operational phase** were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of high significance in the event that mitigation measures are not implemented as required:

Flora

Destruction of protected flora

- o Plant encroachment
- Threat to biodiversity

Visual

 Visual exposure to the Powerline Servitude, Conductor Cables and Towers, as well as the Nzhelele Substation

After the implementation of mitigation measures the intensity levels of all impacts reduced.

The following **positive** impacts were assessed to be of high significance:

Social

- Increase in the voltage stability
- 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
- No more backlogs in electricity Connections
- The inadequate provision of electricity to services such as health facilities will cease
- Electricity will be available to numerous rural settlements that do not have this service

The majority of impacts identified associated with the **de-commissioning phase** were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented. The following **negative** impacts were assessed to be of high significance in the event that mitigation measures are not implemented as required:

Flora

- Destruction of protected flora
- Destruction of pristine habitat
- Vegetation clearance
- Threat to biodiversity

9.3.8 No-Go Alternative

In general, no impacts were identified to be associated with the No-Go Alternative, due to the fact that in the event that the transmission line is not constructed, no impacts will occur as the status quo will remain.

However, a number of **negative** impacts were identified to be of High significance from a social point of view in the event that the powerline is not constructed:

Social

 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

- Continuation of the inadequate provision of electricity to critical services such as health facilities
- Continuation of the unavailability of electricity in numerous rural settlements
- Continuation of backlogs in electricity connections
- No increase in the voltage stability

9.3.9 Cumulative Impacts

The majority of **cumulative impacts** identified and associated with the project were considered to be of low to medium significance in the event that the appropriate mitigation measures are implemented.

The following **negative** impacts were assessed to be of High significance in the event that mitigation measures are not implemented as required:

- Flora
 - Plant encroachment
 - Soil erosion
- Fauna
 - Loss of faunal habitat
- Visual
 - Increased visual exposure to Power Line Infrastructure
- Social
 - 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

With regards to the proposed new powerline a total of two (2) cumulative impacts were assessed as having a high significance before the implementation of mitigation measures. After the implementation of mitigation measures the intensity levels of all impacts were reduced.

9.4 Route Preference Rating

In order to identify which of the alternative routes is deemed preferred, the specialists were requested to rank the alternatives routes according to a route ranking methodology.

The evaluation and nomination of a preferred route involves a highly interdisciplinary approach. The approach undertaken has involved a number of specialist studies which examine a number of different issues. In order to evaluate routes and determine a preferred route, the studies need to be comparative and therefore a route rating matrix was developed. The site preference rating system is applied to each discipline, and the rating of each site was conducted according to the following system:

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- 1 = Not suitable for development / No-Go (impact of very high significance negative)
- 2 = not preferred (impact of high significance negative)
- 3 = acceptable (impact of moderate significance negative)
- 4 = Preferred (impact of low or negligible significance negative)

While each specialist study was required to have the Route Preference as an outcome, how they evaluated each route varied from discipline to discipline and the description of their specific approaches are outlined in each specialist report (refer **Appendix J to P**).

The route preference results for each route from each specialist study were entered into a matrix and added together. The route with the highest value is then considered the most preferable.

Table 9.8 outlines each specialist studies criteria for each of the route preference ratings.

Table 9.8: Specialist Criteria for Route Preference Ratings

Site preference Rating	Criteria				
Flora					
	A preferred route will be in an area where:				
	There is limited or no vegetation clearance required;				
Preferred (4)	There is limited or no pristine habitats and areas of high biodiversity;				
	No red data or protected species;				
	High encroachment of species				
	An acceptable route will an area where:				
	There is limited vegetation clearance required;				
Acceptable (3)	There is limited or less pristine habitat and areas of high biodiversity;				
	No red data or protected species;				
	High encroachment of species.				
	A route is not preferred if :				
	There will be high vegetation clearance required(no pre-existing				
Not Preferred (2)	servitudes and or access roads);				
Not Freierred (2)	There is pristine habitats and areas of high biodiversity;				
	There is red data or protected species;				
	There is less or no encroachment of species.				
	A no go route will be an area where:				
	Extensive vegetation clearance will be required				
No-Go (1)	There is a lot of pristine habitats and areas of high biodiversity,				
110-00 (1)	There is an occurrence of red data or protected species more than one				
	species				
	And there is no encroachment of species				
Fauna					
	A totally degraded and transformed area with a low habitat diversity and				
Preferred (4)	ecosystem functioning; no viable populations of natural plants and the				
rreleffed (4)	faunal composition has already been altered. Development could be				
	supported with low impact on the natural vegetation and associated fauna.				
	Areas with relatively natural vegetation, though a common vegetation				
Acceptable (3)	type. Could be developed with mitigation and expected medium impact on				
	ecosystem as well as associated fauna.				

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Not Preferred (2)	Areas with high species richness and habitat diversity comprising natural faunal species. These areas are ecologically valuable and important for ecosystem functioning. An area with a relatively natural faunal species composition; not a highly threatened or unique ecosystem; extremely high faunal species and habitat diversity. Development could be considered under exceptional conditions with medium-high impact on the fauna as well as vegetation / ecosystem.
No-Go (1)	Areas of atypical habitat, conservation areas, riparian and wetland habitats, rocky ridges and hills with the known presence of faunal species of conservation concern (Red Data Species), not regarded suitable for proposed development, expected impacts likely to be unacceptable on a local or regional scale, adverse impact on the fauna and not possible to mitigate
Avifauna	
Preferred (4)	Shortest Length, least sensitive habitats passed, follows existing infrastructure for the majority, highly unlikely to impact on red-listed species, high levels of anthropogenic disturbance.
Acceptable (3)	Short Length, few sensitive habitats passed, follows some infrastructure, unlikely to impact on red listed species, medium levels of anthropogenic disturbance.
Not Preferred (2)	Long Length, Some sensitive habitats, follows some infrastructure, Likely to impact on red-listed species, low levels of anthropogenic disturbance.
No-Go (1)	Longest Length, Extensive sensitive habitats, Follows little or no linear infrastructure, Highly Likely to impact on red-listed species, very low levels of anthropogenic disturbance.
Social	
Preferred (4)	 Route follows an existing line to a some degree Route follows existing linear structures e.g. roads, railway tracks Through areas far from existing settlements Through fewer settlements than other routes Through areas with low population density Through areas not currently occupied by infrastructure or settlements Through grazing lands
Acceptable (3)	 Through agricultural lands with low vegetation On the borders of sparsely populated areas Through stock farming areas
Not Preferred (2)	 Through orchards and plantations Through areas earmarked for future developments On the borders of game farms
	 On the borders of Nature Reserves and protected areas, lodges and other areas that attract tourists On the borders of densely populated areas
No-Go (1)	On the borders of Nature Reserves and protected areas, lodges and other areas that attract tourists
No-Go (1) Visual	 On the borders of Nature Reserves and protected areas, lodges and other areas that attract tourists On the borders of densely populated areas Dense populations where relocation may be necessary Through game farms Through Nature Reserves and protected areas, lodges and other areas

	specifically lodges, hunting camps and nature reserves.
	Any route that follows existing power line corridors, with minimum
	removal of vegetation to widen the servitude.
	Any route with a very high visual absorption capacity of the receiving
	environment, to the extent that very little of the power line, or the
	servitude can be seen.
	 Any route with a comparative exposure rating of >25% and <= 50 %
	(calculated from the viewshed analysis database).
	Any route that will be no closer than 1 km from sensitive receptors,
	specifically lodges, hunting camps and nature reserves.
Acceptable (3)	Any route that follows existing power line corridors, with minimum
	removal of vegetation to widen the servitude.
	Any route with a high visual absorption capacity of the receiving
	environment.
	Any route with a comparative exposure rating of > 50 % (calculated)
	from the viewshed analysis database).
	Any route that will closer than 1 km from sensitive receptors,
	specifically lodges, hunting camps and nature reserves, and closer than
Not Preferred (2)	500m from residential areas and farmsteads.
, ,	Any route that requires the establishment of a new servitude where all
	vegetation need to be removed for a 55m span along the route.
	Any route with a low visual absorption capacity of the receiving
	environment, where the power line and the servitude is highly visible.
No-Go (1)	Any route where an acceptable or preferred rating is not achieved.
Visual	
Acceptable (3)	Routes where numerous known sites exist and the area is well researched
(3)	Routes where known site exist but where the area is largely under
Not Preferred (2)	researched
	researched

Table 9.9: Final Route Ranking Matrix

Study	Alt 1	Alt 1a	Alt 1b	Alt 2	Alt3	Alt 4	Alt 5
Fauna	3	3	4	4	3	2	3
Avifauna	3	3	3	4	2	1	1
Flora	4	4	4	4	1	2	1
Soils and						2	3
Agricultural	4	3	4	3	3		
Potential							
Social	4	3	1	3	3	2	3
Visual	3	3	3	3	2	2	2
Heritage	3	3	3	3	3	2	2
Total	24	22	22	24	17	13	15

From the above route raking assessment, it is clear that the preferred route would involve a combination of Alternatives 1, 1a, 1b and 2. Alternative 3, 4 and 5 are not deemed to be acceptable. It can be noted that Alternative 1 and 2 have the same final value, however, Alternative 2 was identified as the more preferred route in the south due to the fact that the individual scores for biodiversity issues (i.e. flora, fauna and avifauna) were higher for Alternative 2 than for Alternative 1. Alternative 2 also does not cut through the Ben Lavin Nature Reserve. The final route is shown in **Figure 9.1** below.

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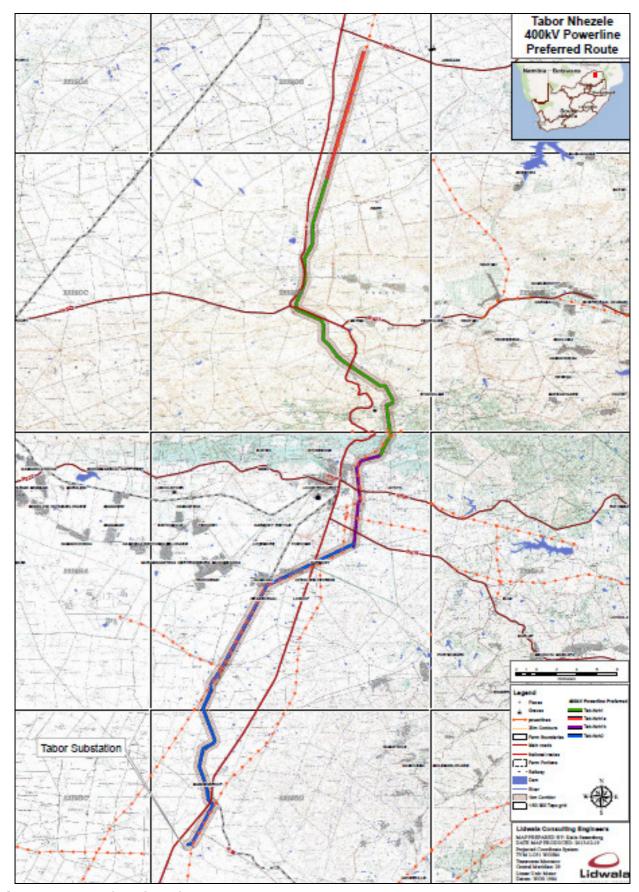


Figure 9.1: Final Preferred Route

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