Impacts Identified in the BAR

	Construction Phase										
	Alt	e <mark>rnative</mark> 1-	Substatio	n 1, Route	Option 1 (F	Preferred A	Alternative)				
Potential Impact		Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence		
	Nature of impact:		• • • •			Direct			•		
	Without Mitigation	1	1	0	1	2	Low	-			
Disturbance to underlying geology for the	degree to which impact can be reversed:				Low						
construction of the powerlines	degree of impact on irreplaceable resources:				Low						
	Mitigation Measures	Du	e to the low imp	act significance	, mitigation mea	asures are not co	onsidered to be necess	ary.			
	With Mitigation	1	1	0	1	2	Low	-			
	Nature of impact:		•	•	•	Direct					
	Without Mitigation	1	1	0	1	2	Low	-			
Disturbance to underlying geology for the construction of the	degree to which impact can be reversed:				Low						
Substation	degree of impact on				Low						
Substation	Mitigation Measures	Du	e to the low imp	act significance	, mitigation mea	asures are not co	onsidered to be necess	ary.			
	With Mitigation	1	1	0	1	2	Low	-			
	Nature of impact:					Dircet					
	Without Mitigation	2	2	4	5	40	Medium	-	Medium		
Reduction in land availaibility for grazing	degree to which impact can be reversed:				Low						

being occupied by the transmission and substation infrastructure	degree of impact on irreplaceable resources:				Low							
substation initiastructure	Mitigation Measures	Areas of co	nstruction shou		actical) limited to should be kept t		he project footprint, and	d activities				
	With Mitigation	1	2	2	4	20	Low	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	2	2	4	3	24	Low	-	Medium			
erosion due to vegetation	degree to which impact can be reversed:				High							
clearance, soil disturbance and a high traffic movement onsite.	degree of impact on irreplaceable resources:		Low									
	Mitigation Measures		of construction should be (where practical) limited to the extent of the project footprint, and activities le should be kept to a minimum. Traffic of construction vehicles should be kept to a minimum to reduce soil									
	With Mitigation	1	2	2	2	10	Low	-	Medium			
	Nature of impact:					Direct			•			
	Without Mitigation	2	2	2	2	12	Low	-	Medium			
Potential spillage of	degree to which impact can be reversed:				High							
as oils, fuel, grease from construction vehicles, and	degree of impact on irreplaceable resources:				Low							
sewage from on-site sanitation systems	Mitigation Measures			s are possible. T		ng around stora	nding in storage areas o ge of hazardous materia					
	With Mitigation	1	2	0	1	3	Low	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	2	2	4	4	32	Medium	-	Medium			
	degree to which impact can be reversed:				High							
Alterations of flow regimes of watercourses, in close proximity to the site, or	degree of impact on irreplaceable resources:	Low										

that is proposed to be traversed.	Mitigation Measures	events occur. F endeavour tha (which should I	Powerlines must t the span across	only cross perp s the watercour r as possible). T	endicular to a w se is minimalise	atercourse and d to restrict the	e rehabilitated before n the chosen alignment n number of pylons withi lons should be positione	nust n a system	
	With Mitigation	2	2	2	3	18	Low	-	Medium
	Nature of impact:					Direct			
	Without Mitigation	2	2	4	4	32	Medium	-	Medium
	degree to which impact can be reversed:		·		High			•	
romporary acgradation of	degree of impact on irreplaceable resources:				Low				
due to the proposedproposed positioning of the powerlines and pylons	Mitigation Measures	habitats poten freshwater spe functional asse freshwater hab habitats. A fres an in-depth site	tially affected by cialist to assess essment should b pitat assessment hwater habitat s	y the site and po specific areas w be conducted sh must provide re specialist be pre to any site wor	owerlines. At this within the site. The ould BioTherm I ecommendation esent onsite duri k to assess the a	s stage design d herefore, a more be recognised as is in terms of py ing the construc irea for any wet	S and EcoServices) of fre etails should be availabl e in-depth and thorough s a Preferred Bidder. The lon positions in relatior tion phase of the project lands and watercourses	e allowing the h freshwater e detailed h to freshwater at, and conduct	
	With Mitigation	1	2	4	3	21	Low	-	Medium
	Nature of impact:					Direct			
	Without Mitigation	2	1	6	3	27	Low	-	
	degree to which impact can be reversed:				High				
	degree of impact on irreplaceable resources:				Low				

Potential contamination of groundwater through	Mitigation Measures	 Cement must Any spilled or Adequate abl 	be mixed on an waste concrete ution facilities n	impermeable su onsite must be nust be placed o	urface and not o removed imme nsite.	on the bare grou ediately and disp	lerneath at all times. nd. osed of appropriately. on an impermeable su	rface.	
	With Mitigation	1	1	2	2	8	Low	-	
	Nature of impact:					Direct			
	Without Mitigation	2	2	4	3	24	Low	-	
	degree to which impact can be reversed: degree of impact on irreplaceable				Moderat				
	resources:				modorut	•			
Impacts on vegetation and protected plant species	Mitigation Measures	are be avoided • Ensure that la transformed ar • Minimise the by the operatic • All roads built steep areas. • Preconstructi principles are a spills, avoiding	where possible. y-down and oth eas if possible. development for nal phase of the for construction on environment dhered to. This fire hazards, min	her temporary in potprint as far as e development. In should have w tal induction for includes awarer nimizing wildlife	frastructure is v possible and re vater diversion a all construction ness as to no litt interactions, re	within low sensit ehabilitate distur and erosion cont n staff on site to tering, appropria emaining within o	ure that sensitive habit ivity areas, preferably bed areas that are no rol structures present, ensure that basic envir ate handling of pollutio demarcated constructi However caution shou Low	previously longer required especially in ronmental in and chemical on areas etc.	
		2	2	2	3		LOW	-	
	Nature of impact:					Direct			

	Without Mitigation	2	2	4	3	24	Low	-	[
	degree to which impact can be reversed:		1	1	Low				
	degree of impact on irreplaceable resources:				Low				
Impacts on Fauna due to constructtion activities	Mitigation Measures	 During constr location by the The illegal co Personnel shou No fires shou No fuelwood No dogs or ca If any parts o (such as most L All hazardous accidental cher 	Euction any faun ECO or other sullection, hunting Ild not be allowed Id be allowed w collection shou ats should be allo f site such as con EDs), which do materials shou	a directly threat uitably qualified or harvesting o ed to wander off ithin the site as Id be allowed or owed on site ap nstruction camp not attract insec Id be stored in the il spills that occord	person. f any plants or a f the constructio there is a risk of n-site. art from that of is must be lit at r its and which sho he appropriate n	struction activit nimals at the sit n site. runaway veld fi the landowners night, this should puld be directed nanner to preve	ties should be removed te should be strictly for res. d be done with low-UV	rbidden. Y type lights ne site. Any	
	With Mitigation	1	2	2	3	15	Low	-	
	Nature of impact:		T	1		Direct			
	Without Mitigation	2	2	8	4	48	Medium	-	
	degree to which impact can be reversed:				Moderate	9			
	degree of impact on irreplaceable resources:				Moderate	9			
Increased Soil Erosion risk during construction	Mitigation Measures	 Roads should vegetation. Disturbance ractivities shoul Regular moni Erosion probl Sediment trapresent during 	have runoff cor near to drainage d demarcated a toring for erosic ems should be r ps may be neces the wet season.	ntrol and water lines should be s no-go areas. on problems alou rectified on a reg ssary to prevent	avoided and ser ng the access roa gular basis. erosion and soil	rastructure pres nsitive drainage ads and other cl movement if th	sent to limit erosion ar areas near to the cons	er waste heaps	

	With Mitigation	2	2	2	3	18	Low	-				
	Nature of impact:		•			Direct						
	Without Mitigation	2	1	6	3	27	Low	-	Medium			
	degree to which											
	impact can be				High							
	reversed:											
	degree of impact on											
Displacement of Red Data	irreplaceable				Low							
avifauna due to habitat	resources:											
destruction and disturbance associated with the construction of the powerlines	Mitigation Measures	 Access to the species. Measures to Maximum us minimum as fa The recommendation 	struction activity should be restricted to the immediate footprint of the infrastructure. ess to the remainder of the site should be strictly controlled to prevent unnecessary disturbance of priority es. asures to control noise and dust should be applied according to current best practice in the industry. simum use should be made of existing access roads and the construction of new roads should be kept to a num as far as practical. recommendations of the ecological and botanical specialist studies must be strictly implemented, especially as limitation of the construction footprint and rehabilitation of disturbed areas is concerned.									
	With Mitigation	2	1	4	2	14	Low	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	1	1	4	3	18	Low	-	Medium			
Displacement of Red Data	degree to which impact can be reversed:				High							
avifauna due to habitat	degree or impact on irreplaceable	ee or impact on										
destruction and	rosourcos				Lon							
destruction and disturbance associated with the construction of the substation	resources Mitigation Measures	 Access to the species. Measures to Maximum us minimum as fa 	remainder of th control noise an e should be mad r as practical.	e site should be d dust should be e of existing acc	he immediate fo strictly controlle applied accordi ess roads and th	ed to prevent u ing to current k e construction	nfrastructure. nnecessary disturbance est practice in the indus of new roads should be t be strictly implemented	stry. kept to a				
destruction and disturbance associated with the construction of the substation		 Access to the species. Measures to Maximum us minimum as fa 	remainder of th control noise an e should be mad r as practical.	e site should be d dust should be e of existing acc	he immediate fo strictly controlle applied accordi ess roads and th	ed to prevent u ing to current k e construction	nnecessary disturbance est practice in the indus of new roads should be	stry. kept to a	Medium			

	Without Mitigation	2	5	4	2	22	Low	-	Medium			
	degree to which impact can be reversed:				Low							
Physical disturbance of	degree of impact on irreplaceable resources:				Low to Med	ium						
the construction of the powerlines	Mitigation Measures	houses or when or graves . Mic • If any high co notified;	re the powerline ro-setting mayb ncentrations of remains are un	e crosses stream e requirwed to e archaeological i	is) to verify when ensure that herit material, such as	re the pylons wi tage resources a s stone artefacts	eh most sensitive areas II not damage the archa are not damaged. s are recovered, SAHRA s must stop in that area	eological sites must be				
	With Mitigation	4										
	Nature of impact:		1	T	1	Direct						
	Without Mitigation	4	5	8	3	51	Medium	-	Medium			
	degree to which impact can be reversed:				Low							
Physical disturbance of	degree of impact on irreplaceable resources:				Moderate	е						
archaeological sites during the construction of Substation 1	Mitigation Measures	proposed locat • A 20m buffer • If any high co notified; • If any human	proposed location of substation 1 needs to be shifted to prevent any damage to the graves identified at the osed location SDubstation 1; Om buffer must be placed around the graves identified at Substation 1 and must be declared a "No-Go" area; ny high concentrations of archaeological material, such as stone artefacts are recovered, SAHRA must be ed; ny human remains are uncovered during the excavations for pylons, work must stop in that area and SAHRA be alerted immediately.									
	With Mitigation	4	4 5 6 2 30 Low - Medium									
	Nature of impact:					Direct						

	Without Mitigation	1	5	2	2	16	Low	-	Medium		
	degree to which impact can be reversed:				Low						
	degree of impact on irreplaceable resources:				Low						
Physical disturbance of palaeontological sites	Mitigation Measures	bones, teeth, fo • Safeguarding followed by rep • Recording an pertinent conte • Curation of fo • Pre-Construc	ossil wood) on a of chance fossil porting of finds t d judicious samp extual data. ossil material wi tion specialist pa	n on-going basis finds (preferabl to Heritage Wes pling of significa thin an approve alaeontologist s	during the cons y in situ) during tern Cape. nt chance fossil d repository by a urvey of the uns	struction phase the constructio finds by a quali a qualified palae studies powerlir	on phase by the responsil fied palaeontologist, tog	ble ECO, ether with the ucky 206 and			
	With Mitigation	1	5	2	2	16	Low	-	Medium		
	Nature of impact:		Direct								
	Without Mitigation	2	2	6	4	40	Medium	-	Medium- High		
	degree to which impact can be reversed:	High- The v	isual impact can		reversed if vehic are removed af		, rubble and any other co n.	onstruction			
Visual impact during construction due to dust,	degree of impact on irreplaceable resources:	l	Low- Dust and e	quipment are no	ot likely to impa	ct on any irrepla	aceable visual resources.				
vehicles and equipment											
	With Mitigation	2	2	4	4	32	Medium	-	Medium- High		
	Nature of impact:					Direct					
	Without Mitigation	2	2	4	4	32	Medium		Medium- High		

Visual impact during construction due to	degree to which impact can be reversed:		High- The visu	ual impact can b	ecompletely re	versed, if veget	ation is rehabilitated.						
vegetation clearing	degree of impact on irreplaceable resources:					e can be re-estat							
	Mitigation Measures	• The construct vegetation.	•	ust be kept as sr	nall as possibke		ccessary disruption to th	e existing					
	With Mitigation	2	2	4	3	24	Low	-	Medium- High				
	Nature of impact:			•		Direct							
	Without Mitigation	2	1	2	3	15	Low	-					
	degree to which impact can be reversed:		Low										
Increased traffic generation around the study area by	degree of impact on irreplaceable resources:		Low										
construction vehicles-	Mitigation Measures	suggested that limit of 40km/r • intersection v the South Afric	the speed limit must be adhere warning signs she an Road Traffic S vehicles should	should be reduc ed to on all grav ould be erected Signs Manual.	ed in advance o el access roads. either side of th	f the intersection	nent is currently 120km/ on with the access road. n accordance with the re o construction vehicles s	• A speed equirements of					
	With Mitigation	2	1	2	2	10	Low	-					
	Nature of impact:					Direct							
	Without Mitigation	2	2	4	4	32	Medium	-	High				
	degree to which impact can be reversed:	High											
Acoustic impact on residential recentors	degree of impact on irreplaceable resources:				None								

	Mitigation Measures	to generate no • When working minimum as fa	ing construction activities in consultation with local communities so that activities witj the greatest potential erate noise are planned during periods of the day that will result in the least disturbance. In working near (within 500 m) a potential sensitive receptor, limit the number of simultaneous activities to a s far as possible. Ing or minimizing project transportation through community areas.									
	With Mitigation	2	2	4	3	24	Low	-	High			
	Nature of impact:					Direct						
	Without Mitigation	3	2	4	3	27	Low	+	Medium			
Increase in employment	degree to which impact can be reversed:		None									
opportunities	degree of impact on irreplaceable resources:		None Appointment of local contractors; Employment of local labour as far as possible, particularly semi-skilled and unskilled opportunities;									
	Mitigation Measures	Appointme										
	With Mitigation	3	2	4	4	36	Medium	+	Medium			
	Nature of impact:					Indirect						
	Without Mitigation	2	2	6	3	30	Low	-	Medium			
	degree to which impact can be reversed:	٦	Aedium - difficul	t to manage or c	ontrol influx of j	job seekers and	associated local impacts	5				
job seeks	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures	re	spect of accomn		•		ent, engage with local m by contractors/develope					
	With Mitigation	2	2	6	2	20	Low	-	Medium			
	Nature of impact:					Indirect			1			
	Without Mitigation	2	2	6	3	30	Low	-	Medium			
Increase in communicable	degree to which impact can be reversed:	Medium - dif	ficult to manage	or control comn	nunicable diseas	e which could p	ermanently impact loca	l populations				
	degree of impact on irreplaceable resources:		High									

	Mitigation Measures	Developme	nt of a labour fo	rce Health and S	Safety Plan, HIV,	AIDS awarenes	s, prevention and testing	g campaign	
	With Mitigation	2	2	6	2	20	Low	-	Medium
	Nature of impact:			•		Direct			
	Without Mitigation	2	2	4	3	24	Low	-	Medium
	degree to which impact can be reversed:	Medium - i	mplementation	of EMPr measur	es to reduce no negate comp		ffic related impacts, but	unlikely to	
Nuisance from noise, dust and traffic disturbances	degree of impact on irreplaceable resources:				Low				
	Mitigation Measures	Air quality, no	bise and traffic re	elated mitigatio	n measures reco the EMP	•	ne relevant specialists an	d included in	
	With Mitigation	2	2	2	2	12	Low	-	Medium
	Nature of impact:					Indirect			_
	Without Mitigation	2	2	6	3	30	Low	-	Medium
	degree to which impact can be reversed:	Н	igh - provision o	fcompensation	to farmers for c	lamage to infras	structure, stock theft, etc		
Increased risk to neighbouring land users	degree of impact on irreplaceable resources:				Low				
	Mitigation Measures						he contractor; Contracto ed to construction work		
	With Mitigation	2	2	4	3	24	Low	-	Medium
	Nature of impact:			· · · · · · · · · · · · · · · · · · ·		Direct			•
	Without Mitigation	2	2	6	4	40	Medium	-	Medium
ncreased risk of veld fires	degree to which impact can be reversed:		High - provis	sion of compens	sation to farmer	s for losses resu	Iting from veld fires		
ncreaseu fisk út veid tifes	degree of impact on irreplaceable resources:	Low							

	Mitigation Measures	Implementation open fires allow	n of EMPr i.e. m /s on site for co	itigation in resp oking/heating; a	ect of construction activities that pos	on phase activi se a fire risk to l	ties that may pose a fire be property managed a	e risk (i.e. no nd confined to	
	With Mitigation	2	2	4	3	24	Low	-	Medium
				Powerline	- No-Go				
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence
	Nature of impact:					Direct			
	Without Mitigation	1	1	0	1	2	Low	+	Medium
mpacts on vegetation and	degree to which impact can be reversed:				N/A				
	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:			1		Direct			
	Without Mitigation	1	1	0	1	2	Low	+	Medium
Faunal impacts due to	degree to which impact can be reversed:				N/A				
	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:					Direct			
	Without Mitigation	1	1	0	1	2	Low	+	Medium
	degree to which impact can be reversed:				N/A				
	degree of impact on irreplaceable resources:				N/A				

	Mitigation Measures				NI/A	N/A							
			r		IV/A		Γ						
	With Mitigation												
	Nature of impact:		[1	1	Direct	[
	Without Mitigation												
	degree to which impact can be reversed:				N/A								
the current ecological integrity	degree of impact on irreplaceable resources:				N/A								
	Mitigation Measures				N/A								
	With Mitigation												
	Nature of impact:					Direct							
	Without Mitigation	2	5	2	5	45	Medium	-	Medium				
Loss of amployment and	degree to which				N/A								
Loss of employment and local economic development	degree of impact on irreplaceable resources:				N/A								
	Mitigation Measures				None								
	With Mitigation	3	5	2	5	50	Medium	-	Medium				
	Nature of impact:					Direct							
	Without Mitigation	2	5	2	5	45	Medium	+					
Maintenance of the existing	degree to which		•	•	Direct			•					
landscape and sense of place	se of degree of impact on irreplaceable N/A resources:												
	Mitigation Measures				None								
	With Mitigation	2	5	2	5	45	Medium	+	Medium				

{insert specialist filed here}

				Operation	al Phase				
		A	Iternative ?	1- Substatio	on 1, Route	e Option 1			
Potential Impact		Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence
	Nature of impact:					N/A	I	T	
	Without Mitigation								
Disturbance to underlying	degree to which impact can be reversed:								
geology	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:					Direct			
	Without Mitigation	2	4	4	5	50	Medium	-	Medium
Reduction in land availaibility for grazing	degree to which impact can be reversed:				Medium	I			
animals due to theland being occupied by the transmission and	degree of impact on irreplaceable resources:				Low				
substation infrastructure		Powerline and outside of the s				the extent of th	e project footprint, and	activities	

	With Mitigation	1	4	2	3	21	Low	-	Medium			
	Nature of impact:				1	Direct						
	Without Mitigation	2	4	4	3	30	Low	-	Medium			
Vegetation cleared for	degree to which impact can be reversed:				High							
powerlines and substation,	degree of impact on irreplaceable resources:		Low									
traffic movement on site, resulting in a higher potential for soil erosion. Mitigation Measures Mitigation Measures Mitigation Measures								minimum to hould be ter erosion				
	With Mitigation	1	4	2	2	14	Low	-				
	Nature of impact:											
	Without Mitigation	2	4	2	2	16	Low	-	Medium			
Potential spillage of	degree to which impact can be reversed:		High									
	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures			ages are possibl		unding around	anding in storage areas storage of hazardous ma es.					
	With Mitigation	1 4 0 1 5 Low - Me										
	Nature of impact:					Direct						
	Without Mitigation	2	5	4	4	44	Medium	-	Medium			
Alterations of flow regimes of watercourses, in close degree to which impact can be reversed:												

proximity to the site, or that is proposed to be traversed.	degree of impact on irreplaceable resources:				Low				
	Mitigation Measures	span across the	e watercourse is as possible). Th	s minimalised to	restrict the nu	mber of pylons wi	gnment must endeavo ithin a system (which sitioned above the 1:1	should be	
	With Mitigation	2	1	2	2	10	Low	-	Medium
	Nature of impact:					Not Applicable			
	Without Mitigation								
Permanent degradation of wetland/riparian habitat due to the	degree to which impact can be reversed:								
· · ·	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:				1	Direct			
	Without Mitigation	2	5	2	3	27	Low	-	
	degree to which impact can be reversed:				High				
Potential contamination of groundwater through leaks or spills of oil, grease or	degree of impact on irreplaceable resources:				Low				
fuel.	Mitigation Measures	All equipmen	•			be placed under a ed and kept in goc	n drip tray. Vehicles as od working order.	ssociated with	
	With Mitigation	1	5	0	2	12	Low	-	
	Nature of impact:					Direct			

	Without Mitigation	2	5	4	3	33	Medium	-				
	degree to which impact can be reversed:				Moderat	e	·					
Previously disturbed areas	degree of impact on irreplaceable resources:				Moderat	e						
will remain vulnerable to erosion for some time into the operational phase	Mitigation Measures	 All roads and dissipate any e Regular mon of the disturba All erosion p 	l other hardene energy in the wa itoring for erosi ince.	d surfaces shou ater which may p ion after constru ed should be rea	d have runoff coose an erosion action to ensure	ontrol features risk. that no erosion	and Rehabilitation Plan which redirect water flo n problems have develop g the appropriate erosio	ow and ped as result				
	With Mitigation	2	2	4	3	24	Low	-	Medium			
	Nature of impact:		Direct									
	Without Mitigation	2	4	4	3	30	Low	-	Medium			
	degree to which impact can be reversed:		Moderate									
Previously disturbed areas will remain vulnerable to	degree of impact on irreplaceable resources:				Moderat	-						
alien plant invasion for some time	Mitigation Measures	natural regene • Due to the d plant species a implemented. rapidly if not c • Regular mon	eration of the loo isturbance at th ire likely to be a Problem wood ontrolled. itoring for alien	cal indigenous s e site as well as long-term prob y species such a	pecies. the increased ri lem at the site a s Prosopis are a ie development	unoff generated and a long-term Iready present footprint as we	d after construction to e d by the hard infrastruct control plan will need t in the area and are likel ell as adjacent areas whi ms.	ture, alien to be y to increase				
	With Mitigation	1	4	2	2	14	Low					
	Nature of impact:					Direct						

	Without Mitigation	3	4	10	3	51	Medium	-	Medium			
Collisions of Red Data avifauna with the	degree to which impact can be reversed:			<u> </u>	Low		<u> </u>					
earthwire of the proposed 132kV powerlines	degree of impact on irreplaceable resources:				High							
	Mitigation Measures		igh must be con tions of line that				le positions have been c erters (BFDs).	letermined, to				
	With Mitigation	3	4	10	2	34	Medium	-	Medium			
	Nature of impact:				_	Direct			-			
	Without Mitigation	3	4	0	1	7	Low	-	Medium			
	degree to which impact can be reversed:		1		High							
Electrocution of Red Data avifauna	degree of impact on irreplaceable resources:		Low									
	Mitigation Measures	No mitiga	No mitigation is required due to the low risk of electrocution posed by the steel monopole double circuit structures									
	With Mitigation	3	4	0	1	7	Low	-	Medium			
	Nature of impact:		<u>I</u>	Į	Į	Direct			<u> </u>			
	Without Mitigation	3	4	0	1	7	Low	-	Medium			
Electrocution of Red Data avifauna in the substation	degree to which impact can be reversed:				High							
yard	degree of impact on irreplaceable resources:				Low							
		he hardware w	vithin the substa				tion for electrocution at					
	Mitigation Measures		ed that if on-goi	ng impacts are i	recorded once c	perational, site	e specific mitigation be a	pplied				
	Mitigation Measures With Mitigation Nature of impact:		ed that if on-goi 4	ng impacts are i 0	recorded once o	perational, site 7 Not Applicable	Low	pplied -	Medium			

	Without Mitigation								
Physical disturbance of	degree to which impact can be reversed:								
	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:					Not Applicable	1		
	Without Mitigation								
Physical disturbance of	degree to which impact can be reversed:								
	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:					Direct			
	Without Mitigation	2	5	4	2	22	Low	-	Medium
Intrusion on sonso of place	degree to which impact can be reversed:	Low- The visua	Il impact can be		versed after clos vegetation rehal		power infrastructure is	removed and	
and rural landscape	degree of impact on irreplaceable resources:	L	ow-No impact c	n irreplaceable	resource, if lan	dforms remain	unaffected as proposed		
	Mitigation Measures						ction. Roads should be a es are well maintained.	appropriately	
	With Mitigation	2	5	4	2	22	Low	-	Medium
	Nature of impact:					Direct			
	Without Mitigation	2	5	4	3	33	Medium	-	

Visual impact of	degree to which impact can be reversed:	Low- The visua	al impact can be		ersed after clos vegetation reha		power infrastructure is	s removed and					
transmission lines and power tower	degree of impact on irreplaceable resources:	l	Low-No impact on irreplaceable resource, if landforms remain unaffected as proposed.										
	Mitigation Measures						ction. Roads should be es are well maintained.	appropriately					
	With Mitigation	2	5	4	3	33	Medium	-					
	Nature of impact:		Direct										
	Without Mitigation	2											
	degree to which impact can be reversed:		Low										
Increased traffic generation around the study area by maintenance	degree of impact on irreplaceable resources:		Low										
vehicles	Mitigation Measures	suggested that • intersection of the South A • Construction	The posted speed limit on the R354 in the vacinity of the proposed development is currently 120km/h. it is ggested that the speed limit should be reduced in advance of the intersection with the access road. Intersection warning signs should be erected either side of the access road in accordance with the requirements the South African Road Traffic Signs Manual. Construction vehicles should only use the roads during the daylight hours. no construction vehicles should be be perational from 6pm- 6am.										
	With Mitigation	2	1	2	2	10	Low	-					
	Nature of impact:			-		Not Applicable							
	Without Mitigation												
Acoustic impact on	degree to which impact can be reversed:												
residential receptors	degree of impact on irreplaceable resources:												
	Mitigation Measures												
	With Mitigation												
	Nature of impact:					Direct							

	Without Mitigation	2	4	4	4	40	Medium	-	Medium			
Change in conce of place	degree to which impact can be reversed:			High - remo	l oval of the prope	osed infrastruc	ture					
Change in sense of place	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures		Implementat	ion of recomme	ndations contai	ned in the Visu	al Impact Assessment					
	With Mitigation Nature of impact:	2	4	4	4	40 Direct	Medium	-	Medium			
	Without Mitigation	4	4	8	5	80	High	-	Medium			
Evacuation of power	degree to which impact can be reversed:		N/A									
Evacuation of power	degree of impact on irreplaceable resources:		N/A									
	Mitigation Measures		N/A									
	With Mitigation	4	4	8	5	80	High	-	Medium			
				Powerline	- No-Go							
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		ignificance :(E+D+M)*P)	Status (+ve or -ve)	Confidence			
	Nature of impact:					Direct						
	Without Mitigation	1	1	0	1	2	Low					
Previously disturbed areas will remain vulnerable to	reversed:				N/A	I						
erosion for some time into the operational phase.	degree of impact on irreplaceable resources:				N/A							
	Mitigation Measures				N/A							
	With Mitigation											

	Nature of impact:					Direct					
	Without Mitigation	1	1	0	1	2	Low				
Previously disturbed areas will remain vulnerable to	degree to which impact can be reversed:				N/A						
alien plant invasion for some time	degree of impact on irreplaceable resources:				N/A						
	Mitigation Measures				N/A						
	With Mitigation										
	Nature of impact:					Direct					
	Without Mitigation	3	5	2	5	50	Medium	+	Medium		
Maintenance of the existing landscape and	degree to which impact can be reversed:				N/A						
sense of place	degree of impact on irreplaceable resources:		N/A								
	Mitigation Measures				N/A						
	With Mitigation										
	Nature of impact:		[[Direct			T		
	Without Mitigation	4	5	8	5	85	High	-	Medium		
No infrastructure for the	degree to which impact can be reversed:				N/A						
evacuation of power	degree of impact on irreplaceable resources:				N/A						
	Mitigation Measures				N/A						
	With Mitigation	4	5	8	5	85	High				

{insert specialist filed here}

			De	commissio	ning Phase							
	Substation 1 Route Option 1- Powerline Alternative 1											
Potential Impact		Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence			
	Nature of impact:					Not Applicable						
	Without Mitigation											
	degree to which impact can be reversed:											
geology	degree of impact on irreplaceable resources:											
	Mitigation Measures											
	With Mitigation											
	Nature of impact:			-		Direct	-	-				
	Without Mitigation	2	2	4	3	24	Low	-	Medium			
	degree to which impact can be reversed:				High							
	degree of impact on				Low							

Increased potential of soil erosion		outside of the be kept to a m stockpiles shou decommission conditions for period is expect the topsoil. As impacted land	of disturbance should be (where practical) limited to the extent of the project footprint, and activities le of the site should be kept to a minimum. Traffic from vehicles associated with the decommissioning should be to a minimum to reduce soil compaction, and limited to existing roadways where practical. Long term soil biles should be appropriately redistributed to the site to infill any excavations incurred during the missioning phase. Artificial erosion control measured should be removed to establish natural erosion cions for the area. Although expected to be nominal in this area, the topsoil removed during the construction d is expected to have a higher fertility than the subsoil horizons. In addition, vegetation seeds are stored in psoil. As a result, the topsoil should be kept separate from the subsoils, and should be returned to the ted land to reinstate the land capability, with topsoil being returned as the top layer. Soil compaction during atement should be minimised to ensure infiltration representative of the regional soils is maintained									
	With Mitigation	1	2	2	2	10	Low	-	Medium			
	Nature of impact:		Direct									
	Without Mitigation	2	2	2	2	12	Low	-	Medium			
Ū.	reversed:		•		High							
	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures						ding in storage areas of age of hazardous materi					
	With Mitigation	1	2	0	1	3	Low	-	Medium			
	Nature of impact:		T	F	1	Direct			1			
	Without Mitigation	2	2	6	5	50	Medium	-	Medium			
Alterations of flow regimes of watercourses, in close	degree to which impact can be reversed:				High							
provimity to the site or	degree of impact on irreplaceable resources:		Low									
	Mitigation Measures		fter the decommissioning, rehabilitation of the site must occur immediately to ensure no residual impacts emain. A rehabilitation specialist must compile the rehabilitation plan and monitoring its implementation.									
	With Mitigation	2	1	2	2	10	Low	-	Medium			

	Nature of impact:					Direct	-					
	Without Mitigation	2	3	6	5	55	Medium	-				
Temporary/ Permanent degradation of	degree to which impact can be reversed:				High							
wetland/riparian habitat due to the proposed traversing powerlines	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures						to ensure no residual in nonitoring its implement					
	With Mitigation	2	1	2	2	10	Low	-	Medium			
	Nature of impact:		-	-	•	Direct	-		-			
	Without Mitigation	2	2 1 6 3 27 Low -									
	degree to which impact can be reversed:		High									
Potential contamination of groundwater through	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures	Adequate ab	lution facilities r	nust be placed	onsite.		nderneath at all times. a on an impermeable su	urface.				
	With Mitigation	1	1	2	2	8	Low	-				
	Nature of impact:					Direct						
	Without Mitigation	2	2 2 4 3 24 Low - Medium Moderate Low - Medium									
	degree to which impact can be reversed:											
	degree of impact on irreplaceable resources:											

Faunal impacts due to decommissioning of the wind farms	Mitigation Measures	removed to a s • All hazardou accidental che related to the • All vehicles a susceptible sp • All above-gro												
	With Mitigation	2												
	Nature of impact:					Direct								
	Without Mitigation	2	2	4	4	32	Medium	-	Medium					
	degree to which impact can be reversed:		Moderate											
	degree of impact on irreplaceable resources:		Low											
Soil Erosion follwing decommissioning	Mitigation Measures	dissipate any e • There should ensure that no erosion contro • All erosion p structures and	Any roads that will not be rehabilitated should have runoff control features which redirect water flow and ssipate any energy in the water which may pose an erosion risk. There should be regular monitoring for erosion for at least 2 years after decommissioning by the applicant to insure that no erosion problems develop as result of the disturbance, and if they do, to immediately implement rosion control measures. All erosion problems observed should be rectified as soon as possible, using the appropriate erosion control ructures and revegetation techniques. All disturbed and cleared areas should be revegetated with indigenous perennial shrubs and grasses from the cal area.											
	With Mitigation	2	2 2 4 2 16 Low -											
	Nature of impact:		Direct											
	Without Mitigation	2	2 2 2 3 18 Low - Medium											
	degree to which impact can be reversed:													

	degree of impact on irreplaceable resources:				Low								
Alien Plant Invasion following decommissioning	Mitigation Measures	construction to • Due to the di decommission returned. • Regular mon • Regular alien	encourage nation sturbance at the ing and regular of itoring for alien	ural regeneration e site alien plant control will need plants within th be conducted u	on of the local in t species are like d to be impleme e disturbed are using the best-p	ndigenous specie ely to be a long-t ented until a cov as for at least tw	et aside and replaced at es. term problem at the site er of indigenous specie vo years after decommi s for the species concert	e following s has ssioning.					
	With Mitigation	2											
	Nature of impact:					Direct			1				
	Without Mitigation	2	2 1 6 3 27 Low - Me										
	degree to which impact can be reversed:		High										
Displacement due to habitat destruction and	degree of impact on irreplaceable resources:		Low										
		 Access to the species. Measures to Maximum us minimum as fa The recomm as far as limitar 	Activity should be restricted to the immediate footprint of the infrastructure. Access to the remainder of the site should be strictly controlled to prevent unnecessary disturbance of priority ecies. Measures to control noise and dust should be applied according to current best practice in the industry. Maximum use should be made of existing access roads and the construction of new roads should be kept to a nimum as far as practical. The recommendations of the ecological and botanical specialist studies must be strictly implemented, especially far as limitation of the footprint and rehabilitation of disturbed areas is concerned.										
	With Mitigation	2	1	4	2	14	Low						
	Nature of impact: Without Mitigation	1	1	4	3	Direct	Low		Medium				
	degree to which impact can be reversed:	I	High										

Displacement of Red Data	degree of impact on irreplaceable				Low								
avifauna due to habitat	resources:				LOW								
destruction and disturbance associated with the decomissioning of the substation	Mitigation Measures	 Access to the species. Measures to Maximum us minimum as fa The recomm 	e remainder of t control noise ar te should be ma ir as practical. endations of the	he site should b nd dust should b de of existing ac e ecological and truction footprin	e strictly contro be applied accor ccess roads and botanical speci nt and rehabilita	olled to prevent rding to current the constructio alist studies mu ation of disturbe	the infrastructure. unnecessary disturband best practice in the ind n of new roads should b st be strictly implement ed areas is concerned.	ustry. be kept to a					
	With Mitigation Nature of impact:	1	1	2	3	12 Not Applicable	Low	-					
	Without Mitigation												
Physical disturbance of	degree to which impact can be reversed:												
archaeological sites	degree of impact on irreplaceable resources:												
	Mitigation Measures												
	With Mitigation												
	Nature of impact:		1	1		Not Applicable	Г						
	Without Mitigation												
Physical disturbance of	degree to which impact can be reversed:												
palaeontological sites	degree of impact on irreplaceable resources:												
	Mitigation Measures												
	With Mitigation												
	Nature of impact:					Direct							

	Without Mitigation	2	2	4	4	32	Medium	-	Medium- High				
Visual impact during	degree to which impact can be reversed:				High								
	degree of impact on irreplaceable resources:				Low								
	Mitigation Measures	0				•	mmissioning. The decor must be included in the	•					
	With Mitigation	2											
	Nature of impact:		Direct										
	Without Mitigation	2	2 1 2 3 15 Low - Mediur										
la successi das fCa	degree to which impact can be reversed:		Low										
Increased traffic generation around the study area by vehicles associated with	degree of impact on irreplaceable resources:		Low										
decommissioning.	Mitigation Measures	suggested that • intersection v of the South Af • Vehicles asso	the speed limit warning signs sh rican Road Traf	should be redu hould be erected fic Signs Manua decommissioni	ced in advance of d either side of t l. ng should only u	of the intersect he access road	ment is currently 120kn ion with the access road in accordance with the uring the daylight hours	d. requirements					
	With Mitigation	2	1	2	2	10	Low	-					
	Nature of impact:					Dircet							
	Without Mitigation	2	2 2 4 4 <u>32</u> Medium - High										
	degree to which impact can be reversed:		High										
Acoustic impact on residential receptors	degree of impact on irreplaceable resources:				Low								

		potential to ge • When workir minimum as fa	nerate noise are ng near (within 5	e planned during 500 m) a potenti	g periods of the ial sensitive rece	day that will re eptor, limit the	hat activities with the gr sult in the least disturba number of simultaneous	ance.	a			
	With Mitigation	2	2	4	3	24	Low	-	High			
	Nature of impact:		1			Direct			1			
	Without Mitigation	2	1	6	3	27	Low	+	Medium			
Gain of short term	degree to which impact can be reversed:	an be N/A :										
employment	degree of impact on irreplaceable resources:		Low									
	Mitigation Measures	Appointme	Appointment of local contractors; Employment of local labour as far as possible, particularly for semi- and unskilled opportunities.									
	With Mitigation	2	1	6	4	36	Medium	+				
	Nature of impact:			1		Direct			1			
	Without Mitigation	2	1	4	4	28	Low	-	Medium			
Nuisance from noise, dust	degree to which impact can be reversed:		High									
and traffic disturbances	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures	Air quality, noi	se and traffic re	lated mitigatior	n measures reco EMPr	ommended by r	elevant specialists and in	ncluded in the				
	With Mitigation	2	2 1 4 3 21 Low -									
	Nature of impact:					Direct						
	Without Mitigation	2	1	6	3	27	Low	-	Medium			
	degree to which impact can be reversed:		High									

Increased risk to neighbouring land users	degree of impact on irreplaceable resources:				Low				
	Mitigation Measures		e held liable for				e signed by the contract amage that can be linke		
	With Mitigation	2	1	4	3	21	Low		
	Nature of impact:			Γ	ſ	I	I	1	
	Without Mitigation								
	degree to which impact can be reversed:								
	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:								
	Without Mitigation								
	degree to which impact can be reversed:								
	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
				Powerline	- No-Go				
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence
	Nature of impact:		, , ,		<u> </u>	Direct	· · ·	· · · /	L
	Without Mitigation	3	5	2	5	50	Medium	-	Medium

Loss of employment and local economic	degree to which impact can be reversed:				N/A					
development opportunities	degree of impact on irreplaceable resources:				N/A					
	Mitigation Measures				None					
	With Mitigation	3	2	2	5	35	Medium	-		
	Nature of impact:		Direct							
	Without Mitigation	2	5	2	5	45	Medium	-	Medium	
Maintenance of existing landscape and sense of	degree to which impact can be reversed:				N/A					
place	degree of impact on irreplaceable resources:				N/A					
	Mitigation Measures				None					
	With Mitigation	2	5	2	5	45	Medium	-		

{insert specialist filed here}

				Cumulative					
			Ро	werline Al	ternative 1				
Potential Impact		Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence
	Nature of impact:				1		1		
	Without Mitigation								
Impacts on Broad-Scale Ecological Processes and	degree to which impact can be reversed:								
Loss of Landscape Connectivity	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:						1		
	Without Mitigation								
Effect on South Africa's commitment to	degree to which impact can be reversed:								
conservation	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:					Direct			

	Without Mitigation	2	4	4	5	50	Medium	-	Low				
Reduction in land availaibility for grazing animals due to the land	degree to which impact can be reversed:				Low								
being occupied by the transmission and substation infrastructure	degree of impact on irreplaceable resources:				Low								
	Mitigation Measures			ept to a minimu		the extent of the	e project footprint, and	activities					
	With Mitigation												
	Nature of impact:					Direct							
	Without Mitigation	2	2 4 4 3 30 Low - Lo										
Increased potential for soil	degree to which impact can be reversed:		High										
erosion due to vegetation clearance, soil disturbance	degree of impact on irreplaceable resources:		Low										
and a high traffic movement onsite.	Mitigation Measures	outside of the s reduce soil con appropriately s action is consic	ite should be ke npaction, and lin tored with the u	ept to a minimu mited to existing use of vegetatio owever backfilli	m. Traffic of ma groadways whe n cover. Wind e	intenance vehi re practical. Loi erosion is domii	project footprint, and a cles should be kept to a ng term soil stockpiles s nant for the region. Wat or Reno Mattresses sho	minimum to hould be er erosion					
	With Mitigation	1	4	2	2	14	Low	-	Low				
	Nature of impact:					Direct							
	Without Mitigation	2	4	2	2	16	Low	-					
as oils, fuel, grease from	degree to which impact can be reversed:		High										
construction vehicles, and sewage from on-site sanitation systems	degree of impact on irreplaceable resources:				Low								
	Mitigation Measures						ding in storage areas of age of hazardous mater						

	With Mitigation	1	4	0	1	5	Low	-	
	Nature of impact:								
	Without Mitigation								
	degree to which								
CHIMINIALIVE Development	impact can be								
offects on local econonia	reversed:								
development opportunities	degree of impact on								
	irreplaceable								
	resources:								
	Mitigation Measures								
	With Mitigation								

Impacts Identified in the BAR

				Constructio	on Phase							
		AI	ternative 2	2 (Substatio	on 1, Route	Option 2)						
Potential Impact		Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence			
	Nature of impact:					Direct						
	Without Mitigation	1	1	0	1	2	Low	-				
Disturbance to underlying geology for the	degree to which impact can be reversed:				Low			•				
construction of the powerlines	degree of impact on irreplaceable resources:		Low									
	Mitigation Measures	Du	Due to the low impact significance, mitigation measures are not considered to be necessary.									
	With Mitigation	1	1	0	1	2	Low	-				
	Nature of impact:				-	Direct						
	Without Mitigation	1	1	0	1	2	Low	-				
Disturbance to underlying geology for the	degree to which impact can be reversed:				Low							
construction of the Substation	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures	Du	e to the low imp	oact significance	, mitigation mea	asures are not co	onsidered to be necessa	iry.				
	With Mitigation	1	1	0	1	2	Low	-				
	Nature of impact:		·	·		Dircet						
	Without Mitigation	2	2	4	5	40	Medium	-	Medium			

Reduction in land availaibility for grazing animals due to the land	degree to which impact can be reversed:				Low							
being occupied by the transmission and substation infrastructure	degree of impact on irreplaceable resources:				Low							
substation initiastructure	Mitigation Measures	Areas of co	nstruction shoul		ctical) limited to should be kept		the project footprint, an	d activities				
	With Mitigation	1	2	2	4	20	Low	-	Medium			
	Nature of impact:					Direct		•				
	Without Mitigation	2	2	4	3	24	Low	-	Medium			
	degree to which impact can be reversed:				High							
clearance, soil disturbance and a high traffic movement onsite.	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures		is of construction should be (where practical) limited to the extent of the project footprint, and activities ide should be kept to a minimum. Traffic of construction vehicles should be kept to a minimum to reduce soil									
	With Mitigation	1	2	2	2	10	Low	-	Medium			
	Nature of impact:					Direct	•					
	Without Mitigation	2	2	2	2	12	Low	-	Medium			
Potential spillage of hazardous substances such as oils, fuel, grease from	degree to which impact can be reversed:				High							
construction vehicles, and sewage from on-site sanitation systems	degree of impact on irreplaceable resources:				Low							
samation systems	Mitigation Measures		•	0			inding in storage areas o age of hazardous materia					
	With Mitigation	1	2	0	1	3	Low	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	2	2	4	4	32	Medium	-	Medium			
Alterations of flow regimes of watercourses, in close	degree to which impact can be reversed:				High							

proximity to the site, or that is proposed to be traversed.	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures				• •		e rehabilitated before m the chosen alignment m	-				
	With Mitigation	2	2	2	3	18	Low	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	2	2	6	5	50	Medium	-	Medium			
	degree to which impact can be reversed:		High									
Temporary degradation of wetland/riparian habitat	degree of impact on irreplaceable resources:				Low							
due to the proposedproposed positioning of the powerlines and pylons	Mitigation Measures	habitats potent freshwater spe functional asse freshwater hab habitats. A fres an in-depth site	tially affected by cialist to assess ssment should t itat assessment hwater habitat	y the site and po specific areas w be conducted sh must provide ro specialist be pre- to any site wor	werlines. At this ithin the site. Th ould BioTherm I ecommendation sent onsite duri k to assess the a	s stage design de herefore, a more be recognised as as in terms of py ng the construct area for any wet	S and EcoServices) of free etails should be available in-depth and thorough a Preferred Bidder. The lon positions in relation tion phase of the project ands and watercourses	e allowing the freshwater e detailed to freshwater t, and conduct				
	With Mitigation	1	2	4	3	21	Low	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	2	1	6	3	27	Low	-				
Potential contamination of	degree to which impact can be reversed:				High							
groundwater through	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures	Cement must	be mixed on ar	impermeable s	urface and not o	on the bare grou						
	With Mitigation	1	1	2	2	8	Low	-	Medium			
	Nature of impact:		-	-	-	Direct						
	Without Mitigation	2	2	8	3	36	Medium	-	Medium			

	degree to which impact can be reversed:				Moderat	e				
	degree of impact on irreplaceable				Moderat	9				
Impacts on vegetation and protected plant species	Mitigation Measures	are be avoided • Ensure that la transformed ar • Minimise the by the operation • All roads buil steep areas. • Preconstruct principles are a spills, avoiding • Demarcate all	where possible ay-down and oth reas if possible. development for onal phase of the t for construction ion environmen adhered to. This fire hazards, mi	ner temporary in potprint as far as e development. on should have v tal induction for includes aware nimizing wildlife ared with const	nfrastructure is v s possible and re vater diversion a all construction ness as to no litt interactions, re ruction tape or s	vithin low sensi habilitate distu ind erosion con staff on site to ering, appropri maining within	ure that sensitive habita tivity areas, preferably p rbed areas that are no lo trol structures present, o ensure that basic enviro ate handling of pollutior demarcated constructic . However caution shoul	oreviously onger required especially in onmental n and chemical on areas etc.		
	With Mitigation	2	2	4	3	24	Low	-	Medium	
	Nature of impact:		1	I		Direct				
	Without Mitigation	2	2	4	4	32	Medium	-	Medium	
	degree to which impact can be reversed:		Low							
	degree of impact on irreplaceable resources:									

Impacts on Fauna due to constructtion activities	Mitigation Measures	 During constr location by the The illegal col Personnel shou No fires shou No fuelwood No dogs or ca If any parts of (such as most L All hazardous accidental cher related to the r No unauthori 	econstruction walk-through of the power line to identify areas of faunal sensitivity.ring construction any fauna directly threatened by the construction activities should be removed to a safetion by the ECO or other suitably qualified person.a illegal collection, hunting or harvesting of any plants or animals at the site should be strictly forbidden.onnel should not be allowed to wander off the construction site.fires should be allowed within the site as there is a risk of runaway veld fires.fuelwood collection should be allowed on-site.dogs or cats should be allowed on site apart from that of the landowners.ny parts of site such as construction camps must be lit at night, this should be done with low-UV type lightsn as most LEDs), which do not attract insects and which should be directed downwards.hazardous materials should be stored in the appropriate manner to prevent contamination of the site. Anytental chemical, fuel and oil spills that occur at the site should be cleaned up in the appropriate manner ased to the nature of the spill.unauthorized persons should be allowed onto the site and site access should be strictly controlled and vehiclesh need to roam around the site should be accompanied by the ECO or security personnel.								
	Nature of impact:				<u> </u>	Direct					
	Without Mitigation	2	2	8	3	36	Medium	-	Medium		
	degree to which impact can be reversed:				Moderate	e					
	degree of impact on irreplaceable resources:				Low						
Increased Soil Erosion risk during construction	Mitigation Measures	 Roads should vegetation. Disturbance r activities shoul Regular moni Erosion probl Sediment trappresent during A low cover of 	In off management and erosion control should be integrated into the project design. bads should have runoff control and water management infrastructure present to limit erosion and damage to etation. sturbance near to drainage lines should be avoided and sensitive drainage areas near to the construction vities should demarcated as no-go areas. egular monitoring for erosion problems along the access roads and other cleared areas. osion problems should be rectified on a regular basis. diment traps may be necessary to prevent erosion and soil movement if there are topsoil or other waste heaps sent during the wet season. low cover of vegetation should be left wherever possible within the construction footprint to bind the soil, vent erosion and promote post-disturbance recovery of an indigenous ground cover.								
	With Mitigation	2	2	4	3	24	Low	-	Medium		

	Nature of impact:					Direct						
	Without Mitigation	2	1	8	3	33	Medium	-	Medium			
	degree to which impact can be reversed:				High							
Displacement of Red Data avifauna due to habitat	degree of impact on irreplaceable resources:				Low							
destruction and disturbance associated with the construction of the powerlines	Mitigation Measures	 Access to the species. Measures to Maximum us minimum as fa The recommendation 	remainder of th control noise ar e should be mad r as practical. endations of the	ne site should be Id dust should b le of existing acc ecological and	e applied accorc cess roads and th botanical specia	led to prevent u ling to current k he construction list studies mus	infrastructure. Innecessary disturbance Dest practice in the indus of new roads should be t be strictly implemented d areas is concerned.	stry. kept to a				
	With Mitigation	2	1	4	2	14	Low	-	Medium			
	Nature of impact:		Direct									
	Without Mitigation	1	1	4	3	18	Low	-	Medium			
	degree to which impact can be reversed:		High									
Displacement of Red Data avifauna due to habitat	degree of impact on irreplaceable resources:		Low									
destruction and disturbance associated with the construction of the substation	Mitigation Measures	 Access to the species. Measures to Maximum us minimum as fa The recommendation 	remainder of th control noise ar e should be mad r as practical. endations of the	ne site should be Id dust should b le of existing acc ecological and	e applied accorc cess roads and th botanical specia	led to prevent u ling to current k he construction list studies mus	infrastructure. Innecessary disturbance Dest practice in the indus of new roads should be t be strictly implemented d areas is concerned.	stry. kept to a				
	With Mitigation	1	1	2	3	12	Low	-				
	Nature of impact:		Direct									

	Without Mitigation	2	5	4	2	22	Low	-	Medium
	degree to which impact can be reversed:				Low				
Physical disturbance of archaeological sites during	degree of impact on irreplaceable resources:				Low- Medi	um			
the construction of the powerlines	Mitigation Measures	 If any high co notified; 	ncentrations of remains are und	archaeological r	material, such a	s stone artefacts	nd must be declared a ' s are recovered, SAHRA < must stop in that area	must be	
	With Mitigation	4	5	6	1	15	Low	-	
	Nature of impact:				1	Not Applicable	1		-
	Without Mitigation							-	Medium
	degree to which impact can be reversed:				·	•			
Vandalism of Heritage items	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation							-	Medium
	Nature of impact:					Direct			
	Without Mitigation	4	5	8	3	51	Medium	-	Medium
	degree to which impact can be reversed:				Low				
Physical disturbance of archaeological sites during	degree of impact on irreplaceable resources:				Moderat	e			

the construction of Substation 1	Mitigation Measures	 proposed locat A 20m buffer If any high constitution 	ion SDubstation must be placed ncentrations of remains are unc	1; around the grav archaeological r	ves identified at naterial, such as	Substation 1 an	mage to the graves iden d must be declared a "N s are recovered, SAHRA s must stop in that area	lo-Go″ area; must be					
	With Mitigation	4	5	6	1	15	Low	-	Medium				
	Nature of impact:					Direct							
	Without Mitigation	1	5	2	2	16	Low	-	Medium				
	degree to which impact can be reversed:		High Low										
	degree of impact on irreplaceable resources:												
Physical disturbance of palaeontological sites	Mitigation Measures	bones, teeth, fe • Safeguarding followed by rep • Recording an pertinent conte • Curation of fe • Pre-Construct	ossil wood) on a of chance fossil porting of finds t d judicious samp extual data. ossil material wit tion specialist pa	n on-going basis finds (preferabl o Heritage Wes bling of significa hin an approve alaeontologist si	during the cons y in situ) during tern Cape. nt chance fossil d repository by a urvey of the uns	struction phase. the constructio finds by a qualif a qualified palae tudies powerlin	n phase by the responsi ied palaeontologist, tog	ble ECO, ether with the ucky 206 and					
	With Mitigation	1	5	2	1	8	Low	-	Medium				
	Nature of impact:					Direct							
	Without Mitigation	2	2	6	4	40	Medium	-	Medium- High				
	degree to which impact can be reversed:	High- The visual impact can be completely reversed if vehicles, equipment, rubble and any other construction materials are removed after construction.											
Visual impact during construction due to dust,	degree of impact on irreplaceable resources:		Low- Dust and ed	quipment are no	ot likely to impa	ct on any irrepla	ceable visual resources						

vehicles and equipment												
		The handling	and transportat	ion of materials	which may gen	erate dust must	be avoided during high	wind				
	Mitigation Measures	conditions.										
	gattori incacai co			ction facilities m ires must be inc			ctly controlled.					
			i controi measi	ares must be mu		IF1.						
	With Mitigation	2	2	4	3	24	Low		Medium- High			
	Nature of impact:	2	2	•		Direct	LOW	I				
	Without Mitigation	2	2	4	4	32	Medium	-	Medium- High			
	degree to which											
Visual impact during	impact can be		High- The visual impact can becompletely reversed, if vegetation is rehabilitated.									
construction due to	reversed: degree of impact on											
	irreplaceable		Low- From a visual perspective can be re-established.									
	resources:		Low- from a visual perspective can be re-established.									
	Mitigation Measures	 The construct vegetation. 	e existing									
	With Mitigation	2	2	2	4	24	Low	-	Medium- High			
	Nature of impact:			[[Direct		1				
	Without Mitigation	2	1	2	3	15	Low	-				
	degree to which											
Increased traffic generation	impact can be				Low							
around the study area by	reversed: degree of impact on											
construction vehicles-	irreplaceable				Low							
	resources:											
	Mitigation Measures						nent is currently 120km	/h. it is				
		00	the speed limit				on with the access road.					
	With Mitigation Nature of impact:	2	l	2	2	10 Direct	Low	-				
	Without Mitigation	2	2	4	4	32	Medium	-	High			
	degree to which											
	impact can be				High							
Acoustic impact on	reversed:											

residential receptors	degree of impact on irreplaceable resources:				None						
	Mitigation Measures	•				nmunities so that vill result in the lea	activities witj the gre ast disturbance.	atest potential			
	With Mitigation	2	2	4	3	24	Low	-	High		
	Nature of impact:					Direct					
	Without Mitigation	3	2	4	3	27	Low	+	Medium		
Increase in employment	degree to which impact can be reversed:				None						
opportunities	degree of impact on irreplaceable resources:				None						
	Mitigation Measures		pointment of local contractors; Employment of local labour as far as possible, particularly semi-skilled and skilled opportunities;								
	With Mitigation	3	2	4	4	36	Medium	+	Medium		
	Nature of impact:					Indirect					
	Without Mitigation	2	2	6	3	30	Low	-	Medium		
	degree to which impact can be reversed:	Medium - difficult to manage or control influx of job seekers and associated local impacts									
Disruption through influx of job seeks	degree of impact on irreplaceable resources:				Low						
	Mitigation Measures					local employment rea by contractors	t, engage with local n /developer	nunicipality in			
	With Mitigation	2	2	6	2	20	Low	-	Medium		
	Nature of impact:					Indirect					
	Without Mitigation	2	2	6	3	30	Low	-	Medium		
Increase in communicable	degree to which impact can be reversed:	Medium - difi	ficult to manage	or control com	municable diseas	se which could per	manently impact loca	al populations			
diseases and reduced public health	degree of impact on irreplaceable resources:				High						

	Mitigation Measures	Development of	of a labour force	Health and Saf	ety Plan, HIV/AI	DS awareness, pre	evention and testing can	npaign					
	With Mitigation	2	2	6	2	20	Low	- Medium					
	Nature of impact:					Direct							
	Without Mitigation	2	2	4	3	24	Low	- Medium					
Nuisance from noise, dust	degree to which impact can be reversed:	Medium - i	mplementation	of EMPr measu	res to reduce no negate comp		ic related impacts, but u	Inlikely to					
and traffic disturbances	degree of impact on irreplaceable resources:				Low								
	iviltigation ivieasures	Air quality, noi the EMPr		ated mitigatior		mmended by the i	elevant specialists and i						
	With Mitigation	2	2	2	2	12	Low	- Medium					
	Nature of impact:		T			Indirect							
	Without Mitigation	2	2	6	3	30	Low	- Medium					
	degree to which impact can be reversed:	Н	High - provision of compensation to farmers for damage to infrastructure, stock theft, etc.										
Increased risk to neighbouring land users	degree of impact on irreplaceable resources:				Low								
	Mitigation Measures					0 5	e contractor; Contractor d to construction worke						
	With Mitigation	2	2	4	3	24	Low	- Medium					
	Nature of impact:					Direct							
	Without Mitigation	2	2	6	4	40	Medium	- Medium					
	degree to which impact can be reversed:		High - provis	sion of compen	sation to farme	rs for losses result	ing from veld fires						
Increased risk of veld fires	degree of impact on irreplaceable resources:				Low								
	Mitigation Measures	open fires allo	ws on site for co	oking/heating;	activities that p		es that may pose a fire r e property managed and e provided)						

	With Mitigation	2	2	4	3	24	Low	-	Medium
				Powerline	- No-Go				
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	(S=	gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence
	Nature of impact:					Direct			
	Without Mitigation	1	1	0	1	2	Low	+	Medium
Impacts on vegetation and protected plant species	degree to which impact can be degree of impact on irreplaceable resources:				N/A N/A				
	Mitigation Measures		1	-	N/A		1		
	With Mitigation								
	Nature of impact:					Direct			1
	Without Mitigation	1	1	0	1	2	Low	+	Medium
Formal increases dura to	degree to which				N/A				
Faunal impacts due to construction activities	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:		1	T	l	Direct		1	1
	Without Mitigation	1	1	0	1	2	Low	+	Medium
Increased Soil Erosion risk	degree to which impact can be reversed:			·	N/A				
during construction	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:					Direct			
	Without Mitigation								

The no-go option will result in no additional impacts on	reversed:				N/A				
avifauna and will maintain	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:					Direct			
	Without Mitigation	2	5	2	5	45	Medium	-	Medium
	degree to which impact can be reversed:				N/A				
development	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				None				
	With Mitigation	3	5	2	5	50	Medium	-	Medium
	Nature of impact:		1	1		Direct			
	Without Mitigation	2	5	2	5	45	Medium	+	
Maintenance of the existing landscape and sense of	i evel seu.				Direct				
place	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				None				
	With Mitigation	2	5	2	5	45	Medium	+	Medium

BioTherm Energy - Maralla Powerline

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Significance Rating Table

				Operation	al Phase				
		Substa	tion 1 Rou ⁻	te Option 2	2- Powerlir	ne Alternat	ive 2		
Potential Impact		Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence
	Nature of impact:			-		Not Applicable			
	Without Mitigation								
Disturbance to underlying	degree to which impact can be reversed:								
geology	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:					Direct		1	1
	Without Mitigation	2	4	4	5	50	Medium	-	Medium
Reduction in land availaibility for grazing animals due to theland	degree to which impact can be reversed:				Low				
being occupied by the transmission and substation infrastructure	degree of impact on irreplaceable resources:				Low				
	Mitigation Measures	Powerline a	Powerline and substation Infrastructure should be limited to the extent of the project footprint, and activities outside of the site should be kept to a minimum.						
	With Mitigation	1	4	0	1	5	Low	-	Medium
	Nature of impact:					Direct			

	Without Mitigation	2	4	4	3	30	Low	-	Medium			
Vegetation cleared for powerlines and substation, soil disturbance and stockpiles, and increased	degree to which impact can be reversed:				High							
traffic movement on site, resulting in a higher potential for soil erosion.	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures	Traffic of mai	ntenace vehicle		t to a minimum sed roadways w		ompaction, and limited	to existing or				
	With Mitigation	1	4	2	2	14	Low	-	Medium			
	Nature of impact:		•	•		Direct						
	Without Mitigation	2	4	2	2	16	Low	-	Medium			
Potential spillage of hazardous substances such	degree to which impact can be reversed:		High									
as oils, fuel, grease from maintenance vehicles.	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures		•	•			anding in storage areas o storage of hazardous ma					
	With Mitigation	1	4	0	1	5	Low	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	2	5	8	4	60	Medium	-	Medium			
Alterations of flow regimes	degree to which impact can be reversed:				High							
of watercourses, in close proximity to the site, or that is proposed to be	degree of impact on irreplaceable resources:				Low							
traversed.	Mitigation Measures	span across the avoided as far	Powerlines must only cross perpendicular to a watercourse and the chosen alignment must endeavour that the pan across the watercourse is minimalised to restrict the number of pylons within a system (which should be provided as far as possible). The proposed powerlines and pylons should be positioned above the 1:100 floodline of any watercourse.									
	With Mitigation	2	1	2	2	10	Low	-	Medium			
	Nature of impact:		•	·		Direct		-				

	Without Mitigation	2	2	8	5	60	Medium	-	Medium				
wetland/riparian habitat	degree to which impact can be reversed:				High								
due to the proposedproposed positioning of the	degree of impact on irreplaceable resources:				Low								
powerlines and pylons	Mitigation Measures		I where spillage	s are possible. T			ing in storage areas of h age of hazardous mater						
	With Mitigation	1	4	0	1	5	Low	-	Medium				
	Nature of impact:			_	_	Direct							
	Without Mitigation	2	4	2	3	24	Low	-					
	degree to which impact can be reversed:		High										
groundwater through leaks	degree of impact on irreplaceable resources:		Low										
or spills of oil, grease or fuel.	Mitigation Measures	All equipment	equipment that has the potential to leak oil or fuel must be placed under a drip tray. Vehicles associated with the maintenace activities are to be serviced and kept in good working order.										
	With Mitigation	1	1 5 0 2 12 Low - Medium										
	Nature of impact:					Direct							
	Without Mitigation	1	5	4	4	40	Medium	-	Medium				
	degree to which impact can be reversed:	Moderate											

	degree of impact on irreplaceable resources:		Moderate Frosion management at the site should take place according to the Erosion and Rehabilitation Plan.										
will remain vulnerable to erosion for some time into the operational phase		 All roads and other hardened surfaces should have runoff control features which redirect water flow and dissipate any energy in the water which may pose an erosion risk. Regular monitoring for erosion after construction to ensure that no erosion problems have developed as result of the disturbance. All erosion problems observed should be rectified as soon as possible, using the appropriate erosion control structures and revegetation techniques. ation 1 5 4 2 20 Low - Mediu 											
	With Mitigation	1	5	4	2	20	Low	-	Medium				
	Nature of impact:		1			Direct							
	Without Mitigation	1	5	4	4	40	Medium	-	Medium				
	degree to which												
	impact can be				Moderate	e							
	reversed:												
	degree of impact on												
	irreplaceable				Moderate	е							
Previously disturbed areas	resources:												
will remain vulnerable to alien plant invasion for some time	Mitigation Measures	natural regene • Due to the di plant species a implemented. rapidly if not co • Regular moni runoff from the • Regular alien	Wherever excavation is necessary, topsoil should be set aside and replaced after construction to encourage atural regeneration of the local indigenous species. Due to the disturbance at the site as well as the increased runoff generated by the hard infrastructure, alien lant species are likely to be a long-term problem at the site and a long-term control plan will need to be nplemented. Problem woody species such as Prosopis are already present in the area and are likely to increase apidly if not controlled. Regular monitoring for alien plants within the development footprint as well as adjacent areas which receive unoff from the facility as there are also likely to be prone to invasion problems. Regular alien clearing should be conducted using the best-practice methods for the species concerned. The use f herbicides should be avoided as far as possible.										
	With Mitigation	2	2	4	3	24	Low	-	Medium				
	Nature of impact:		• • • • • • • • • • • • • • • • • • •			Direct							
	Without Mitigation	3											

Collisions of Red Data avifauna with the	degree to which impact can be reversed:		Low									
earthwire of the proposed 132kV powerlines	degree of impact on irreplaceable resources:				High							
	Mitigation Measures			ducted by the av t will need to be		Bird Flight Dive		letermined, to				
	With Mitigation	3	4	10	3	51	Medium	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	3	4	0	1	7	Low	-				
	degree to which impact can be reversed:		High									
Electrocution of Red Data avifauna	degree of impact on irreplaceable resources:		Low									
	Mitigation Measures	No mitiga	tion is required	due to the low r	risk of electrocu structure		he steel monopole doul	ole circuit				
	With Mitigation	3	4	0	1	7	Low	_	Medium			
	Nature of impact:		•	, , , , , , , , , , , , , , , , , , ,	•	Direct	2011					
	Without Mitigation	3	4	0	1	7	Low	-				
	degree to which		3 4 0 1 7 Low - High									
Electrocution of Red Data	impact can be reversed:				High							
Electrocution of Red Data avifauna in the substation yard	impact can be				Low							
avifauna in the substation	impact can be reversed: degree of impact on irreplaceable resources: Mitigation Measures				Low		ation for electrocution a site specific mitigation					
avifauna in the substation	impact can be reversed: degree of impact on irreplaceable resources:				Low				Medium			
avifauna in the substation	impact can be reversed: degree of impact on irreplaceable resources: Mitigation Measures	is recomm	ended that if on	-going impacts a	Low complex to wa		site specific mitigation Low					

Physical disturbance of	degree to which impact can be reversed:								
archaeological sites	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:					Not Applicable			
	Without Mitigation								
Physical disturbance of	degree to which impact can be reversed:								
palaeontological sites	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:					Direct		-	
	Without Mitigation	2	5	2	2	18	Low	-	Medium
	degree to which impact can be reversed:	Low-	The visual impa	act can be comp	bletely reversed	after closure of	facility, if towers remo	wed.	
Intrusion on sense of place and rural landscape	degree of impact on irreplaceable resources:	L	ow- No impact o	on irreplaceable	resource, if lan	ndforms remain	unaffected as proposed	J.	
	Mitigation Measures						ction. Roads should be es are well maintained.	appropriately	
	With Mitigation	2	5	2	2	18	Low	-	Medium
	Nature of impact:					Direct			
	Without Mitigation	2	5	2	3	27	Low		Medium
Visual impact of transmission lines and	degree to which impact can be reversed:	Low-	The visual impa	act can be comp	bletely reversed	after closure of	facility, if towers remo	oved.	

power tower	degree of impact on irreplaceable resources:	placeable Low- No impact on irreplaceable resource, if landforms remain unaffected as proposed.										
	Mitigation Measures						ction. Roads should be a es are well maintained.	appropriately				
	With Mitigation	2	5	2	3	27	Low	-	Medium			
	Nature of impact:		•			Direct	•	•				
	Without Mitigation	2	1	2	2	10	Low	-				
Increased traffic generation around the	degree to which impact can be reversed:				Low							
study area by maintenance vehicles	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures		The posted speed limit on the R354 in the vacinity of the proposed development is currently 120km/h. it is uggested that the speed limit should be reduced in advance of the intersection with the access road.									
	With Mitigation	2	1	2	1	5	Low	-				
	Nature of impact:					Not Applicable						
	Without Mitigation											
Acoustic impact on	degree to which impact can be reversed:											
residential receptors	degree of impact on irreplaceable resources:											
	Mitigation Measures											
	With Mitigation											
	Nature of impact:					Direct						
	Without Mitigation	2	4	4	4	40	Medium	-	Medium			
Change in sense of place	degree to which impact can be reversed:			High - remo	oval of the prop	osed infrastruct	ure					
change in sense of place	degree of impact on irreplaceable resources:				Low							

	Mitigation Measures		Implementat	ion of recomme	ndations contai	ned in the Visua	al Impact Assessment		
	With Mitigation	2	4	4	4	40	Medium	-	Medium
	Nature of impact:			-		Direct	-		
	Without Mitigation	4	4	8	5	80	High	-	Medium
Evacuation of power	degree to which impact can be reversed:				N/A				
	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation	4	4	8	5	80	High	-	Medium
				Powerline	- No-Go				
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence
	Nature of impact:					Direct	· / /	<u> </u>	
	Without Mitigation	1	1	0	1	2	Low		
Previously disturbed areas will remain vulnerable to	degree to which impact can be reversed:				N/A		'		
erosion for some time into the operational phase.	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:			-		Direct			
	Without Mitigation	1	1	0	1	2	Low		
Previously disturbed areas	degree to which impact can be reversed:				N/A				

alien plant invasion for some time	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:		1		-	Direct			1
	Without Mitigation	3	5	2	5	50	Medium	+	Medium
Maintenance of the existing landscape and	degree to which impact can be reversed:				N/A				
sense of place	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:		1	F	T	Direct			
	Without Mitigation	4	5	8	5	85	High	-	Medium
No infrastructure for the	degree to which impact can be reversed:				N/A				
evacuation of power	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation	4	5	8	5	85	High		

BioTherm Energy - Maralla Powerline

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Significance Rating Table

Decommissioning Phase											
	Substati	on 1 Route	e Option 2-	Powerline	Alternativ	e 2 (Prefer	rred Alternative))			
Potential Impact		Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence		
	Nature of impact:					Not Applicable		1 1			
	Without Mitigation										
Disturbance to underlying	degree to which impact can be reversed:										
geology	degree of impact on irreplaceable resources:										
	Mitigation Measures										
	With Mitigation										
	Nature of impact:					Direct		1			
	Without Mitigation	2	2	4	3	24	Low	-			
	degree to which impact can be reversed:				High						
erosion	degree of impact on irreplaceable resources:				Low						
	Mitigation Measures	outside of the s	site should be k	ept to a minimu	m. Traffic of de-	-construction ve	project rootprint, and a ehicles should be kept to Long term soil stocknike	o a minimum			
	With Mitigation Nature of impact:	1	2	2	2	10 Direct	Low	-			

	Without Mitigation	2	2	2	2	12	Low	-				
Potential spillage of hazardous substances such as oils, fuel, grease from	degree to which impact can be reversed:				High							
construction vehicles, and sewage from on-site sanitation systems	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures		e proper handling and storage of hazardous materials, the use of hardstanding in storage areas of hazardous ubstances and where spillages are possible. The use of bunding around storage of hazardous materials and 1 2 0 1 3 Low - 1 2 0 1 3 Low - Direct									
	With Mitigation	1										
	Nature of impact:											
	Without Mitigation	2	3	6	5	55	Medium	-				
Alterations of flow regimes of watercourses, in close proximity to the site, or	degree to which impact can be reversed:		High									
that is proposed to be traversed.	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures			,			ately to ensure no residu nd monitoring its impler	•				
	With Mitigation	2	1	2	2	10	Low	-				
	Nature of impact:		•	-	•	Direct						
	Without Mitigation	2	3	6	5	55	Medium	-	Medium			
Temporary/ Permanent degradation of wetland/riparian habitat	degree to which impact can be reversed:				High							
due to the proposed traversing powerlines	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures		After the decommissioning, rehabilitation of the site must occur immediately to ensure no residual impacts remain. A rehabilitation specialist must compile the rehabilitation plan and monitoring its implementation.									
	With Mitigation	2	1	2	2	10	Low	-	Medium			
	Nature of impact:					Direct		•				
	Without Mitigation	2	1	6	3	27	Low	-				

	degree to which												
	impact can be				High								
	reversed:												
Potential contamination of	degree of impact on												
groundwater through	irreplaceable				Low								
	resources:												
	Mitigation Measures	Adequate ab	lution facilities r	must be placed of	onsite.		iderneath at all times. a on an impermeable si	urface.					
	With Mitigation		Direct										
	Nature of impact:												
	Without Mitigation	2	2	4	4	32	Medium	-	Medium				
	degree to which		•	•									
Found impacts due to	impact can be		Moderate										
Faunal impacts due to decommissioning of the	reversed:												
wind farms	degree of impact on												
wind faiths	irreplaceable				Low								
	resources:												
	Mitigation Measures	 Any potentia removed to a s 		iuna such snake	s or fauna threa	tened by the de	ecommissioning activitie	es should be					
	With Mitigation	2	2	4	2	16	Low	-					
	Nature of impact:					Direct							
	Without Mitigation	2	2	4	4	32	Medium	-					
	degree to which												
	impact can be				Moderate	9							
	reversed:												
	degree of impact on												
	irreplaceable		Low										
	resources:												

Soil Erosion follwing decommissioning	Mitigation Measures	dissipate any e • There should ensure that no erosion contro • All erosion pi structures and											
	With Mitigation	2	2 2 4 2 16 Low -										
	Nature of impact:		Direct										
	Without Mitigation	2											
	degree to which impact can be reversed:		Moderate										
	degree of impact on irreplaceable resources:				Low								
Alien Plant Invasion following decommissioning	Mitigation Measures	construction to • Due to the di decommission returned. • Regular mon • Regular alien	o encourage nat isturbance at the ing and regular o itoring for alien	ural regeneration e site alien plan control will nee plants within the be conducted	on of the local in t species are like d to be impleme ne disturbed are using the best-p	idigenous specie ely to be a long- ented until a cov as for at least tw	et aside and replaced a es. term problem at the sit ver of indigenous specie wo years after decommi s for the species concer	e following es has issioning.					
	With Mitigation	2	2	4	2	16	Low	-					
	Nature of impact:		Direct										
	Without Mitigation	2	2 1 6 3 27 Low - Medium										
babitat destruction and	degree to which impact can be reversed:		High										

with the de-commissioning of the powerlines	degree of impact on irreplaceable resources:				Low				High
	Mitigation Measures		 Activity sheet 	ould be restrict	ed to the immed	diate footprint o	f the infrastructure.		
	With Mitigation	2	1	4	2	14	Low		Medium
	Nature of impact:					Direct			
	Without Mitigation	1	1	4	3	18	Low	-	Medium
avifauna due to habitat destruction and	degree to which impact can be reversed:				High				
disturbance associated with the decomissioning of the substation	degree of impact on irreplaceable resources:				Low				
	Mitigation Measures						he infrastructure. unnecessary disturband	ce of priority	
	With Mitigation	1	1	2	3	12	Low	-	
	Nature of impact:		I	1	1	Not Applicable		1	
	Without Mitigation								
Physical disturbance of	degree to which impact can be reversed:								
archaeological sites	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:				·	Not Applicable			
	Without Mitigation								
	degree to which								
	impact can be								
Physical disturbance of	reversed:								
palaeontological site	degree of impact on								
,	irreplaceable								
	resources:								

	Mitigation Measures	5											
	With Mitigation												
	Nature of impact:		ł		ł	Direct							
	Without Mitigation	2	2	4	3	24	Low	-					
Visual impact during decommissionig due to	degree to which impact can be reversed:				Low								
dust, vehicles and equipment	degree of impact on irreplaceable resources:				Low								
	Mitigation Measures	footprint must	be kept as sma	ll as possible. Du	ust and litter co	ntrol measures	mmissioning. The deco must be included in the	•					
	With Mitigation	2	2	2	3	18	Low	-					
	Nature of impact:		1	1		Direct		•	-				
	Without Mitigation	2	1	2	3	15	Low	-					
Increased traffic generation around the study area by vehicles	degree to which impact can be reversed:		Low										
associated with decommissioning.	degree of impact on irreplaceable resources:		Low										
	Mitigation Measures						oment is currently 120ki ion with the access roa						
	With Mitigation	2	1	2	2	10	Low	-					
	Nature of impact:					Direct							
	Without Mitigation	2	2	4	4	32	Medium	-	High				
Acoustic impact on	degree to which impact can be reversed:				High								
residential receptors	degree of impact on irreplaceable resources:				Low								
	Mitigation Measures						hat activities with the great the great the great the second second second second second second second second s						
	With Mitigation	2	2	4	3	24	Low	-					

	Nature of impact:					Direct						
	Without Mitigation	2	1	6	3	27	Low	+	Medium			
Gain of short term	degree to which impact can be reversed:				N/A							
employment	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures	Appointm	ent of local con		ment of local la unskilled opport		oossible, particularly for	semi- and				
	With Mitigation	2	1	6	4	36	Medium	+				
	Nature of impact:					Direct						
	Without Mitigation	2	1	4	4	28	Low	-	Medium			
Nuisance from noise, dust	degree to which impact can be reversed:		High									
and traffic disturbances	degree of impact on irreplaceable resources:		Low									
	Mitigation Measures	Air quality, no	Air quality, noise and traffic related mitigation measures recommended by relevant specialists and included in the EMPr									
	With Mitigation	2	1	4	3	21	Low	-				
	Nature of impact:					Indirect						
	Without Mitigation	2	1	6	3	27	Low	-	Medium			
Increased risk to	degree to which impact can be reversed:		•	•	High		•					
neighbouring land users	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures						e signed by the contract amage that can be linke					
	With Mitigation	2	1	4	3	21	Low					
				Powerline	- No-Go							
Potential Impact	Mitigation	Extent	Duration	Magnitude	Probability	Si	gnificance	Status	Confidence			

ι στοπτιαι πηραστ	เพาะเมูละเบา	(E)	(D)	(M)	(P)	(S=	(E+D+M)*P)	(+ve or -ve)	CONTRACTICE		
	Nature of impact:					Direct					
	Without Mitigation	3	5	2	5	50	Medium	-	Medium		
Loss of employment and local economic	degree to which impact can be reversed:				N/A						
development opportunities	degree of impact on irreplaceable resources:										
	Mitigation Measures				None						
	With Mitigation	3	2	2	5	35	Medium	-			
	Nature of impact:		Direct								
	Without Mitigation	2	5	2	5	45	Medium	-	Medium		
Maintenance of existing	degree to which				N/A						
landscape and sense of place	degree of impact on irreplaceable resources:				N/A						
	Mitigation Measures		None								
	With Mitigation	2	5	2	5	45	Medium	-			

BioTherm Energy - Maralla Powerline

Impacts Identified in the BAR

Significance Rating Table

	Construction Phase											
		AI	ternative 3	3 (Substatio	on 2, Route	Option 1)						
Potential Impact		Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence			
	Nature of impact:					Direct						
	Without Mitigation	1	1	0	1	2	Low	-				
Disturbance to underlying geology for the	degree to which impact can be reversed:				Low							
construction of the powerlines	degree of impact on irreplaceable resources:		Low									
	Mitigation Measures	Du	Due to the low impact significance, mitigation measures are not considered to be necessary.									
	With Mitigation	1	1	0	1	2	Low	-				
	Nature of impact:					Direct						
	Without Mitigation	1	1	0	1	2	Low	-				
Disturbance to underlying geology for the	degree to which impact can be reversed:				Low							
construction of the Substation	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures	Du	e to the low imp	oact significance	, mitigation mea	asures are not co	onsidered to be necessa	ary.				
	With Mitigation	1	1	0	1	2	Low	-				
	Nature of impact:					Dircet						
	Without Mitigation	2	2	4	5	40	Medium	-	Medium			

Reduction in land availaibility for grazing animals due to the land	degree to which impact can be reversed:				Low							
being occupied by the transmission and substation infrastructure	degree of impact on irreplaceable resources:				Low							
substation initiastructure	Mitigation Measures	Areas of co	nstruction shoul		ctical) limited to should be kept		the project footprint, an	d activities				
	With Mitigation	1	2	2	4	20	Low	-	Medium			
	Nature of impact:					Direct		•				
	Without Mitigation	2	2	4	3	24	Low	-	Medium			
	degree to which impact can be reversed:		High									
clearance, soil disturbance and a high traffic movement onsite.	degree of impact on irreplaceable resources:		Low									
	Mitigation Measures	Areas of constr outside should										
	With Mitigation	1	2	2	2	10	Low	-	Medium			
	Nature of impact:					Direct	•					
	Without Mitigation	2	2	2	2	12	Low	-	Medium			
Potential spillage of hazardous substances such as oils, fuel, grease from	degree to which impact can be reversed:				High							
construction vehicles, and sewage from on-site sanitation systems	degree of impact on irreplaceable resources:				Low							
samation systems	Mitigation Measures		•	0			inding in storage areas o age of hazardous materia					
	With Mitigation	1	2	0	1	3	Low	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	2	2	4	4	32	Medium	-	Medium			
Alterations of flow regimes of watercourses, in close	degree to which impact can be reversed:	High										

proximity to the site, or	degree of impact on										
that is proposed to be	irreplaceable				Low						
traversed.	resources:										
	Mitigation Measures						e rehabilitated before m the chosen alignment m				
	With Mitigation	2	2	2	3	18	Low	-	Medium		
	Nature of impact:		• •		• •	Direct		•			
	Without Mitigation	2	2	4	4	32	Medium	-	Medium		
wetland/riparian habitat	degree to which impact can be reversed:										
proposed proposed	degree of impact on irreplaceable resources:		Low nore in-depth and thorough freshwater functional assessment should be conducted should BioTherm be cognised as a Preferred Bidder. The detailed freshwater habitat assessment must provide recommendations in								
	Mitigation Measures										
	With Mitigation	1	2	4	3	21	Low	-	Medium		
	Nature of impact:					Direct					
	Without Mitigation	2	1	6	3	27	Low	-			
	degree to which impact can be reversed:				High						
groundwater through	degree of impact on irreplaceable				Low						
	resources:		t that has the ne	toptial to spill a	r loak must hav	o a drip trav up	derneath at all times.				
	Mitigation Measures					on the bare grou					
	With Mitigation	1	1	2	2	8	Low	-			
	Nature of impact:					Direct		I			
	Without Mitigation	2	2	4	3	24	Low	-	Medium		
	degree to which impact can be reversed:				Moderat	e					
	degree of impact on irreplaceable resources:				Moderat	e					

	Mitigation Measures	are be avoided • Ensure that la transformed ar • Minimise the by the operatio • All roads buil steep areas. • Preconstruct principles are a spills, avoiding • Demarcate al to avoid using	econstruction environmental induction for all construction staff on site to ensure that basic environmental ciples are adhered to. This includes awareness as to no littering, appropriate handling of pollution and chemical s, avoiding fire hazards, minimizing wildlife interactions, remaining within demarcated construction areas etc. marcate all areas to be cleared with construction tape or similar material. However caution should be exercised void using material that might entangle fauna.224216Low-N									
	Nature of impact:	۷.	Z Z 4 Z 10 LOW - IVI Direct									
	Without Mitigation	2	2	4	3	24	Low	-	Medium			
	degree to which impact can be reversed:		l		Low							
	degree of impact on irreplaceable resources:				Low							
Impacts on Fauna due to constructtion activities	Mitigation Measures	Personnel shou • No fires shou • No fuelwood • No dogs or ca • If any parts o (such as most L • All hazardous accidental cher related to the r • No unauthori	 de illegal collection, hunting or harvesting of any plants or animals at the site should be strictly forbidden. de illegal collection, hunting or harvesting of any plants or animals at the site should be strictly forbidden. de offees should be allowed to wander off the construction site. de offees should be allowed within the site as there is a risk of runaway veld fires. de of uelwood collection should be allowed on-site. de odgs or cats should be allowed on site apart from that of the landowners. any parts of site such as construction camps must be lit at night, this should be done with low-UV type lights h as most LEDs), which do not attract insects and which should be directed downwards. dental chemical, fuel and oil spills that occur at the site should be cleaned up in the appropriate manner as ted to the nature of the spill. dental chemical persons should be allowed onto the site and site access should be strictly controlled and vehicles ch need to roam around the site should be accompanied by the ECO or security personnel. 									
	With Mitigation	1	2	2	3	15	Low	-	Medium			

	Nature of impact:		Direct										
	Without Mitigation	2	2	8	4	48	Medium	-	Medium				
	degree to which impact can be reversed:				Moderate	e							
	degree of impact on irreplaceable resources:				Moderate	e							
 Increased Soil Erosion risk during construction Runoff management and erosion control should be integrated into the project design. Roads should have runoff control and water management infrastructure present to limit erosion and damage to vegetation. Disturbance near to drainage lines should be avoided and sensitive drainage areas near to the construction activities should demarcated as no-go areas. Regular monitoring for erosion problems along the access roads and other cleared areas. Erosion problems should be rectified on a regular basis. Sediment traps may be necessary to prevent erosion and soil movement if there are topsoil or other waste heaps present during the wet season. A low cover of vegetation should be left wherever possible within the construction footprint to bind the soil, prevent erosion and promote post-disturbance recovery of an indigenous ground cover. 													
	With Mitigation	2	2	2	3	18	Low	-	Medium				
	Nature of impact:					Direct							
	Without Mitigation	2	1	6	3	27	Low	-	Medium				
	degree to which impact can be reversed:				High								
	degree of impact on irreplaceable resources:				Low								
destruction and disturbance associated with the construction of the powerlines• Construction activity should be restricted to the immediate footprint of the infrastructure. • Access to the remainder of the site should be strictly controlled to prevent unnecessary disturbance of priority species. • Measures to control noise and dust should be applied according to current best practice in the industry. • Maximum use should be made of existing access roads and the construction of new roads should be kept to a minimum as far as practical. • The recommendations of the ecological and botanical specialist studies must be strictly implemented, especially as far as limitation of the construction footprint and rehabilitation of disturbed areas is concerned.													
	With Mitigation	2	1	4	2	14	Low	-	Medium				

	Nature of impact:					Direct						
	Without Mitigation	1	1	4	3	18	Low	-	Medium			
	degree to which impact can be reversed:				High							
Displacement of Red Data	degree of impact on irreplaceable resources:				Low							
destruction and disturbance associated with the construction of the substation	Mitigation Measures	 Access to the species. Measures to Maximum us minimum as fa The recommendation 	remainder of th control noise ar e should be mad r as practical. endations of the	nd dust should b de of existing acc ecological and	e strictly control e applied accord cess roads and t botanical specia	led to prevent u ling to current t he construction list studies mus	infrastructure. unnecessary disturbance best practice in the indus n of new roads should be st be strictly implemented areas is concerned.	try. kept to a				
	With Mitigation	1	1	2	3	12	Low	-	Medium			
	Nature of impact:		Direct									
	Without Mitigation	4	5	4	2	26	Low	-	Medium			
	degree to which impact can be reversed:		Low									
Physical disturbance of archaeological sites during	degree of impact on irreplaceable resources:				High							
the construction of the powerlines	Mitigation Measures	area; • If any high co notified;	ncentrations of remains are un	archaeological ı	material, such as	s stone artefact	ion 1 and must be declard s are recovered, HWC mi k must stop in that area a	ust be				
	With Mitigation	4	5	4	1	13	Low	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	4	4 5 4 2 26 Low - Medium									

	degree to which impact can be reversed:				Low							
Physical disturbance of archaeological sites during the construction of	degree of impact on irreplaceable resources:				High							
Substation 2	Mitigation Measures	area; • If any high co notified;	ncentrations of remains are und	archaeological r	naterial, such a	s stone artefacts	on 1 and must be declare s are recovered, HWC mu c must stop in that area a	ust be				
	With Mitigation	4	4 5 4 1 13 Low - M									
	Nature of impact:		Direct									
	Without Mitigation	1	5	2	2	16	Low	-	Medium			
	degree to which impact can be reversed:	Low										
Physical disturbance of palaeontological sites	degree of impact on irreplaceable resources:		Low									
paraoontorogical sites	Mitigation Measures	bones, teeth, fe • Safeguarding followed by rep • Recording an pertinent conte	ossil wood) on a of chance fossil porting of finds t d judicious samp	n on-going basis finds (preferabl to Heritage Wesi bling of significar	during the con y in situ) during tern Cape. nt chance fossil	struction phase. the constructio finds by a qualif	n phase by the responsil	ble ECO,				
	With Mitigation	1	5	2	1	8	Low	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	2	2 2 6 4 40 Medium - Medium									
	degree to which impact can be reversed:	High- The v	isual impact can			cles, equipment, fter construction	rubble and any other co n.	onstruction				
Visual impact during construction due to dust, vehicles and equipment	degree of impact on irreplaceable resources:	I	Low- Dust and equipment are not likely to impact on any irreplaceable visual resources.									

	Mitigation Measures	conditions. • The building s	 The building site and construction facilities must be well maintained and strictly controlled. Dust and Litter control measures must be included in the EMPr. 											
	With Mitigation	2	2	4	4	32	Medium	-	Medium- High					
	Nature of impact:		1			Direct	-	1	1					
	Without Mitigation	2	2	4	4	32	Medium	-	Medium- High					
	degree to which impact can be reversed:		High- The visual impact can be completely reversed, if vegetation is rehabilitated.											
construction due to	degree of impact on irreplaceable resources:													
vegetation clearing	Mitigation Measures	vegetation.	he construction footprint must be kept as small as possibke, to avoid unneccessary disruption to the existing jetation. Io blanket clearing or removal of vegetation outside of the building zone is allowed.											
	With Mitigation	2	2	2	4	24	Low	-	Medium- High					
	Nature of impact:		•	•		Direct	1							
	Without Mitigation	2	1	2	3	15	Low	-						
Increased traffic generation around the study area by	degree to which impact can be reversed:				Low									
construction vehicles.	degree of impact on irreplaceable resources:													
	Mitigation Measures					•	nent is currently 120km/ on with the access road.	/h. it is						
	With Mitigation	2	1	2	2	10	Low	-						
	Nature of impact:					Direct								
	Without Mitigation	2												

Acoustic impact on	degree to which impact can be reversed:				High							
residential receptors	degree of impact on irreplaceable resources:				None							
	Mitigation Measures	•					it activities witj the grea east disturbance.	itest potential				
	With Mitigation	2	2	4	3	24	Low	-	High			
	Nature of impact:					Direct						
	Without Mitigation	3	2	4	3	27	Low	+	Medium			
Increase in employment	degree to which impact can be reversed:	None										
opportunities	degree of impact on irreplaceable resources:	None										
	Mitigation Measures	Appointme	pointment of local contractors; Employment of local labour as far as possible, particularly semi-skilled and unskilled opportunities;									
	With Mitigation	3	2	4	4	36	Medium	+	Medium			
	Nature of impact:					Indirect						
	Without Mitigation	2	2	6	3	30	Low	-	Medium			
Disruption through influx of	degree to which impact can be reversed:	Ν	/ledium - difficul	t to manage or c	ontrol influx of	job seekers and	associated local impacts	\$				
job seeks	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures						ent, engage with local m by contractors/develope					
	With Mitigation	2	2	6	2	20	Low	-	Medium			
	Nature of impact:					Indirect						
	Without Mitigation	2	2	6	3	30	Low	-	Medium			
	degree to which											
Increase in communicable diseases and reduced	impact can be reversed:	Medium - diff	icult to manage	or control comn	nunicable diseas	se which could p	ermanently impact loca	l populations				
public health	degree of impact on irreplaceable				High							

	Mitigation Measures	Developme	nt of a labour fo	rce Health and S	Safety Plan, HIV/	AIDS awarenes	s, prevention and testin	g campaign			
	With Mitigation	2	2	6	2	20	Low	-	Medium		
	Nature of impact:					Direct	•				
	Without Mitigation	2	2	4	3	24	Low	-	Medium		
Nuisance from noise, dust and traffic disturbances	degree to which impact can be reversed:	Medium - iı	mplementation	of EMPr measur	es to reduce nois negate comple		Iffic related impacts, but	unlikely to			
	degree of impact on irreplaceable				Low						
	Mitigation Measures	Air quality, no	bise and traffic re	elated mitigatio	n measures reco the EMPr		ne relevant specialists ar	nd included in			
	With Mitigation	2	2	2	2	12	Low	-	Medium		
	Nature of impact:					Indirect					
	Without Mitigation	2	2	6	3	30	Low	-	Medium		
Increased risk to	degree to which impact can be reversed:	н	igh - provision o	fcompensation	to farmers for d	amage to infras	structure, stock theft, et	С.			
	degree or impact on irreplaceable				Low						
	Mitigation Measures		velopment of a code of conduct for construction workers, to be signed by the contractor; Contractor to be held ole for compensating farmers for any losses and/or damage that can be linked to construction workers								
	With Mitigation	2	2	4	3	24	Low	-	Medium		
	Nature of impact:					Direct					
	Without Mitigation	2	2	6	4	40	Medium	-	Medium		
	degree to which impact can be reversed:		High - provis	sion of compens	sation to farmers	for losses resu	Iting from veld fires				
	degree or impact on irreplaceable				Low						
	Mitigation Measures						ties that may pose a fire be property managed ar				
	With Mitigation	2	2	4	3	24	Low	-	Medium		
				Powerline	- No-Go						
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence		
	Nature of impact:			•	· · · · · · · · · · · · · · · · · · ·	Direct					
		1	1	0	1	2	Low	+	Medium		
	Without Mitigation	I		U		2	2000		Inculari		

protected plant species	degree of impact on irreplaceable resources:		N/A								
	Mitigation Measures				N/A						
	With Mitigation										
	Nature of impact:			•		Direct					
	Without Mitigation	1	1	0	1	2	Low	+	Medium		
	degree to which impact can be			•	N/A						
Faunal impacts due to construction activities	degree of impact on irreplaceable resources:		N/A								
	Mitigation Measures				N/A						
	With Mitigation										
	Nature of impact:					Direct					
	Without Mitigation	1	1	0	1	2	Low	+	Medium		
	degree to which			•	N/A						
Increased Soil Erosion risk during construction	degree of impact on irreplaceable resources:				N/A						
	Mitigation Measures				N/A						
	With Mitigation										
	Nature of impact:		•			Direct	•				
The no-go option will result	Without Mitigation										
in no additional impacts on	degree to which		•		N/A		•				
•	impact can be degree of impact on irreplaceable resources:				N/A						
	Mitigation Measures				N/A						
	With Mitigation										
	Nature of impact:					Direct					
	Without Mitigation	2	5	2	5	45	Medium	-	Medium		
Loss of employment and	degree to which impact can be				N/A						

development	degree of impact on irreplaceable resources:		N/A								
	Mitigation Measures				None						
	With Mitigation	3	5	2	5	50	Medium	-	Medium		
	Nature of impact:					Direct			-		
	Without Mitigation	2	5	2	5	45	Medium	+			
Maintenance of the existing	degree to which				Direct						
landscape and sense of	degree of impact on										
	irreplaceable resources:				N/A						
	Mitigation Measures		None								
	With Mitigation	2	5	2	5	45	Medium	+	Medium		

{insert specialist filed here}

	Operational Phase											
		S	ubstation 2	2 Route Op	tion 1- Alte	ernative 3						
Potential Impact		Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence			
	Nature of impact:		•			Not Applicable						
	Without Mitigation											
Disturbance to underlying	degree to which impact can be reversed:											
geology	degree of impact on irreplaceable resources:											
	Mitigation Measures											
	With Mitigation											
	Nature of impact:		1			Direct			1			
	Without Mitigation	2	4	4	5	50	Medium	-	Medium			
Reduction in land availaibility for grazing animals due to theland	degree to which impact can be reversed:				Low							
being occupied by the transmission and substation infrastructure	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures	Powerline a	nd substation Ir		ould be limited ⁻ e site should be		the project footprint, a num.	and activities				
	With Mitigation	1	4	2	3	21	Low	-	Medium			
	Nature of impact:					Direct						

	Without Mitigation	2	4	4	3	30	Low	-	Medium
soil disturbance and	degree to which impact can be reversed:				High				
resulting in a higher	degree of impact on irreplaceable resources:				Low				
potential for soil erosion.	Mitigation Measures	Traffic of main	ntenace vehicle		ot to a minimum sed roadways w		ompaction, and limited	to existing or	
	With Mitigation	1	4	2	3	21	Low	-	Medium
	Nature of impact:			•		Not Applicable			-
	Without Mitigation								
Potential spillage of	degree to which impact can be reversed:								
hazardous substances such as oils, fuel, grease from maintenance vehicles.	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:		•	•		Direct			
	Without Mitigation	2	5	4	4	44	Medium	-	Medium
Alterations of flow regimes of watercourses, in close	degree to which impact can be reversed:				High				
proximity to the site, or that is proposed to be traversed.	degree of impact on irreplaceable resources:				Low				
ti aversed.		span across the	e watercourse is as possible). The	s minimalised to	o restrict the nu	mber of pylons v	gnment must endeavou within a system (which s ositioned above the 1:1	should be	

	With Mitigation	2	1	2	2	10	Low	-	Medium
	Nature of impact:				1	Not Applicable			
	Without Mitigation								
due to the	impact can be reversed:								
positioning of the	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:					Direct			
	Without Mitigation	2	5	2	3	27	Low	-	
	degree to which								
	impact can be				High				
	reversed:								
	degree of impact on								
Potential contamination of	irreplaceable				Low				
groundwater through leaks	resources:								
	Mitigation Measures	All equipment	the mainte	nace activities a	are to be service	d and kept in go	a drip tray. Vehicles as bod working order.	sociated with	
	With Mitigation	1	5	0	2	12	Low	-	
	Nature of impact:				1	Direct			
	Without Mitigation	2	5	4	3	33	Medium	-	
Previously disturbed areas	degree to which impact can be reversed:				Moderate	e			

erosion for some time into	degree of impact on													
the operational phase	irreplaceable				Moderate	е								
	resources:													
	Mitigation Measures						and Rehabilitation Plan which redirect water flo							
	With Mitigation	2	2	4	3	24	Low	-						
	Nature of impact:		-		1	Direct			-					
	Without Mitigation	2	4	4	4	40	Medium	-	Medium					
	degree to which impact can be reversed:		Moderate											
Previously disturbed areas will remain vulnerable to	degree of impact on irreplaceable resources:		Moderate ever excavation is necessary, topson should be set aside and replaced after construction to encourage											
alien plant invasion for some time		natural regene • Due to the d plant species a implemented. rapidly if not c • Regular mon runoff from th	ration of the loc isturbance at the re likely to be a Problem woody ontrolled. itoring for alien e facility as there	al indigenous s e site as well as long-term prob y species such a plants within th e are also likely	pecies. the increased ru lem at the site a s Prosopis are a ne development to be prone to i	unoff generated and a long-term lready present footprint as we nvasion proble	d by the hard infrastruct control plan will need t in the area and are likel ell as adjacent areas whi	ture, alien to be y to increase ich receive						
	With Mitigation	1	4	2	3	21	Low							
	Nature of impact:					Direct								
	Without Mitigation	3	4	10	3	51	Medium	-	Medium					
Collisions with the earthwire of the proposed	degree to which impact can be reversed:				Low				Medium					
132kV powerlines	degree of impact on irreplaceable resources:				High				Medium					
	Mitigation Measures	• A walk-through must be conducted by the avifaunal specialist after final pole positions have been determined, to demarcate sections of line that will need to be mitigated with Bird Flight Diverters (BFDs).							Medium					
	With Mitigation	3	4	10	2	34	Medium		Medium					
	Nature of impact:					Negative								

	Without Mitigation	3	4	0	1	7	Low		High				
Electrocution of Red Data	degree to which impact can be reversed:				High		I		High				
avifauna	degree of impact on irreplaceable resources:				Low				High				
	Mitigation Measures	No mitiga	ition is required	due to the low	risk of electrocu structure		he steel monopole dou	ıble circuit	High				
	With Mitigation	3	4	0	1	7	Low		High				
	Nature of impact:					Negative							
	Without Mitigation	3	4	0	1	7	Low		High				
Electrocution of Red Data	degree to which impact can be reversed:		High										
avifauna in the substation yard	degree of impact on irreplaceable resources:		Low										
	Mitigation Measures	The hardware is recomm	hardware within the substation yard is too complex to warrant any mitigation for electrocution at this stage is recommended that if on-going impacts are recorded once operational, site specific mitigation be applied										
	With Mitigation	3	4	0	1	7	Low		High				
	Nature of impact:					Not Applicable							
	Without Mitigation												
Physical disturbance of	degree to which impact can be reversed:												
archaeological sites	degree of impact on irreplaceable resources:												
	Mitigation Measures												
	With Mitigation												
	Nature of impact:					Not Applicable							
	Without Mitigation												

Physical disturbance of	degree to which impact can be reversed:											
palaeontological sites	degree of impact on irreplaceable resources:											
	Mitigation Measures											
	With Mitigation											
	Nature of impact:		1			Direct			1			
	Without Mitigation	2	5	4	2	22	Low	-	Medium			
Intrusion on sense of place		Low- The visua	al impact can be		ersed after clos egetation rehat		power infrastructure is	s removed and				
and rural landscape	degree of impact on irreplaceable resources:		Low- No impact on irreplaceable resource, if landforms remain unaffected as proposed.									
	Mitigation Measures	•	atural Vegetation must be re-established on disturbed areas after construction. Roads should be appropriately stabilised to avoid erosion and visual scars. Ensure all structures are well maintained.									
	With Mitigation	2	5	4	2	22	Low	-	Medium			
	Nature of impact:		1			Direct						
	Without Mitigation	2	5	4	3	33	Medium	-	Medium			
Visual impact of transmission lines and	degree to which impact can be reversed:	Low- The visua	al impact can be		ersed after clos egetation rehat		power infrastructure is	s removed and				
power tower	degree of impact on irreplaceable resources:		·	·			unaffected as proposed					
	Mitigation Measures						ction. Roads should be es are well maintained.	appropriately				
	With Mitigation	2	5	4	3	33	Medium	-	Medium			
	Nature of impact:		-			Direct						
	Without Mitigation	2	1	2	2	10	Low	-				
Increased traffic generation around the	degree to which impact can be reversed:				Low							

study area by maintenance vehicles	irreplaceable				Low				
	resources:								
	Mitigation Measures						ment is currently 120ki ion with the access roa		
	With Mitigation	2	1	2	1	5	Low	-	
	Nature of impact:					Not Applicable			
	Without Mitigation								
Acoustic impact on	degree to which impact can be reversed:								
residential receptors	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:				•	Direct			
	Without Mitigation	2	4	4	4	40	Medium	-	Medium
Change in sense of place	degree to which impact can be reversed:			High - remo	oval of the prop	osed infrastruct	ure		
change in sense of place	degree of impact on irreplaceable resources:				Low				
	Mitigation Measures		Implementati	on of recomme	ndations contai	ned in the Visua	al Impact Assessment		
	With Mitigation	2	4	4	4	40	Medium	-	Medium
	Nature of impact:					Direct	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
	Without Mitigation	4	4	8	5	80	High	-	Medium
Evacuation of power	degree to which impact can be reversed:				N/A				
	degree of impact on irreplaceable resources:				N/A				

	Mitigation Measures				N/A				
	With Mitigation	4	4	8	5	80	High	-	Medium
				Powerline	- No-Go				
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence
	Nature of impact:					Direct			
	Without Mitigation	1	1	0	1	2	Low		
will remain vulnerable to	degree to which impact can be reversed:				N/A				
the operational phase.	degree of impact on irrenlaceable				N/A				
	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:					Direct			1
	Without Mitigation	1	1	0	1	2	Low		
Previously disturbed areas will remain vulnerable to	degree to which impact can be reversed:				N/A				
alien plant invasion for some time	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:					Direct			
	Without Mitigation	3	5	2	5	50	Medium	+	Medium
Maintenance of the existing landscape and	degree to which impact can be reversed:				N/A				
sense of place	degree of impact on irreplaceable resources:				N/A				

	Mitigation Measures		N/A									
	With Mitigation											
	Nature of impact:					Direct		•				
	Without Mitigation	4	5	8	5	85	High	-	Medium			
No infrastructure for the	degree to which impact can be reversed:				N/A							
evacuation of power	degree of impact on irreplaceable resources:				N/A							
	Mitigation Measures				N/A							
	With Mitigation	4	5	8	5	85	High					

{insert specialist filed here}

			De	commissio	ning Phase)			
		Substa	tion 1 Rou ⁻	te Option 2	2- Powerlin	e Alternat	ive 3		
Potential Impact		Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence
	Nature of impact:		-			Not Applicable			
	Without Mitigation								
Disturbance to underlying	degree to which impact can be reversed:								
geology	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:		1	ſ	I	Direct		-	
	Without Mitigation	2	2	4	3	24	Low	-	
Increased potential of soil erosion due to removal of powerlines and	degree to which impact can be reversed:				High				
substations, soil disturbance and a high traffic movement on site.	degree of impact on irreplaceable resources:				Low				
	Mitigation Measures						project footprint, and a ehicles should be kept		
	With Mitigation	1	2	2	2	10	Low	-	
	Nature of impact:					Direct			

	Without Mitigation	2	2	2	2	12	Low	-					
Potential spillage of hazardous substances such as oils, fuel, grease from	degree to which impact can be reversed:		<u> </u>		High								
construction vehicles, and sewage from on-site sanitation systems	degree of impact on irreplaceable resources:				Low								
	Mitigation Measures		•	•			anding in storage areas storage of hazardous ma						
	With Mitigation	1	1 2 0 1 3 Low - Direct										
	Nature of impact:												
	Without Mitigation	2	2	4	4	32	Medium	-					
Alterations of flow regimes of watercourses, in close proximity to the site, or	degree to which impact can be reversed:		High										
that is proposed to be	degree of impact on irreplaceable resources:		Low										
	Mitigation Measures		After the decommissioning, rehabilitation of the site must occur immediately to ensure no residual impacts remain. A rehabilitation specialist must compile the rehabilitation plan and monitoring its implementation.										
	With Mitigation	2	1	2	2	10	Low						
	Nature of impact:		•			Direct		•					
	Without Mitigation	2	3	4	4	36	Medium						
Temporary/ Permanent degradation of wetland/riparian habitat	degree to which impact can be reversed:				High								
due to the proposed traversing powerlines	degree of impact on irreplaceable resources:		High										
	Mitigation Measures						Itely to ensure no residund monitoring its impler						
	With Mitigation	2	1	2	2	10	Low	-					
	Nature of impact:					Direct			•				
	Without Mitigation	2	1	6	3	27	Low	-					

	degree to which												
	impact can be				High								
Potential contamination of					· · · g· ·								
groundwater	degree of impact on												
9	irreplaceable				Low								
	resources:				2011								
		All equipmer	quipment that has the potential to spill or leak must have a drip tray underneath at all times.										
	Mitigation Measures		quate ablution facilities must be placed onsite.										
	With Mitigation	1	1	2	2	8	Low	-					
	Nature of impact:					Direct							
	Without Mitigation	2	2	4	4	32	Medium	-	Medium				
Faunal impacts due to	degree to which impact can be reversed:		Moderate										
decommissioning of the wind farms	degree of impact on irreplaceable resources:		Low										
	Mitigation Measures	Any potentia removed to a second		iuna such snake	es or fauna threa	tened by the d	lecommissioning activitie	es should be					
	With Mitigation	2	2	4	2	16	Low	-					
	Nature of impact:					Direct							
	Without Mitigation	2	2	4	4	32	Medium	-	Medium				
	degree to which impact can be reversed:		Moderate										
Soil crosion following the	degree of impact on irreplaceable resources:		Low										

decommissining	 Any roads that will not be rehabilitated should have runoff control features which redirect water flow and dissipate any energy in the water which may pose an erosion risk. There should be regular monitoring for erosion for at least 2 years after decommissioning by the applicant to ensure that no erosion problems develop as result of the disturbance, and if they do, to immediately implement erosion control measures. All erosion problems observed should be rectified as soon as possible, using the appropriate erosion control structures and revegetation techniques. All disturbed and cleared areas should be revegetated with indigenous perennial shrubs and grasses from the local area. With Mitigation 2 2 4 2 16 Low 												
	With Mitigation	2	2 2 4 2 16 Low -										
	Nature of impact:					Direct							
	Without Mitigation	2	2	4	4	32	Medium	-	Medium				
	degree to which impact can be reversed:		Moderate										
	degree of impact on irreplaceable resources:		Low										
	Mitigation Measures	 construction to Due to the d decommission returned. 	herever excavation is necessary for decommissioning, topsoil should be set aside and replaced after struction to encourage natural regeneration of the local indigenous species. Je to the disturbance at the site alien plant species are likely to be a long-term problem at the site following commissioning and regular control will need to be implemented until a cover of indigenous species has irned.										
	With Mitigation	• Regular mon	2	$\frac{1}{2}$		18 101 at least to 18	wo years after decommi	-					
	Nature of impact:	2	2	2	5	Direct							
	Without Mitigation	2	1	6	3	27	Low	-	Medium				
habitat destruction and	degree to which impact can be reversed:		•		High				High				
with the de-commissioning	degree of impact on irreplaceable resources:				Low				High				
	Mitigation Measures		Activity should be restricted to the immediate footprint of the infrastructure.										
	With Mitigation	2	2 1 4 2 14 Low Medium										
	Nature of impact:		Direct										

	Without Mitigation	1	1	4	3	18	Low	-	Medium
Displacement of Red Data			<u> </u>						
	impact can be				High				High
destruction and	reversed:								
	degree of impact on				Low				Lliab
with the decomissioning of the substation	resources:				High				
		• De	comissioning ac	ture					
	Mitigation Measures		connissioning de	itur o.					
	With Mitigation	1	1		Medium				
	Nature of impact:		1	T	-				
	Without Mitigation		<u></u>						
	degree to which								
	impact can be reversed:								
Physical disturbance of	degree of impact on								
archaeological sites	irreplaceable								
	resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:		1	I	T	Not Applicable	Γ	T	
	Without Mitigation								
	degree to which impact can be								
Physical disturbance of	reversed:								
palaeontological site	degree of impact on								
	irreplaceable								
	resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:					Direct			
	Without Mitigation	2	2	6	4	40	Medium	-	

Visual impact during decommissionig due to	degree to which impact can be reversed:				Low							
dust, vehicles and equipment	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures						mmissioning. The deco must be included in the					
	With Mitigation	2	2	4	4	32	Medium	-				
	Nature of impact:		L			Drect		1				
	Without Mitigation	2	1	2	3	15	Low	-				
Increased traffic generation around the study area by vehicles	degree to which impact can be reversed:	Low										
associated with decommissioning. degree of impact on irreplaceable Low												
	Mitigation Measures		• The posted speed limit on the R354 in the vacinity of the proposed development is currently 120km/h. it is suggested that the speed limit should be reduced in advance of the intersection with the access road.									
	With Mitigation	2	1	2	2	10	Low	-				
	Nature of impact:		1			Direct						
	Without Mitigation	2	2	4	4	32	Medium	-				
Acoustic impact on	degree to which impact can be reversed:				High							
residential receptors	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures						nat activities with the gr sult in the least disturba					
	With Mitigation	2	2	4	3	24	Low	-				
	Nature of impact:					Direct						
	Without Mitigation	2	1	6	3	27	Low	+	Medium			
Gain of short term	degree to which impact can be reversed:				N/A							

employment	degree of impact on											
	irreplaceable resources:				Low							
	Mitigation Measures	Appointme	ent of local cont		ment of local la unskilled opport		ossible, particularly for	semi- and				
	With Mitigation	2	1	6	4	36	Medium	+				
	Nature of impact:					Direct						
	Without Mitigation	2	1	4	4	28	Low	-	Medium			
	degree to which impact can be reversed:				High							
and traffic disturbances	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures	Air quality, noi	uality, noise and traffic related mitigation measures recommended by relevant specialists and included in the EMPr									
	With Mitigation	2	1	4	3	21	Low	-				
	Nature of impact:			F		Indirect			1			
	Without Mitigation	2	1	6	3	27	Low	-	Medium			
Increased risk to	degree to which impact can be reversed:		High									
neighbouring land users	degree of impact on irreplaceable resources:				Low							
							e signed by the contrac amage that can be linke					
	With Mitigation	2	1	4	3	21	Low					
				Powerline	- No-Go							
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence			
	Nature of impact:		• •			Direct						
	Without Mitigation	3	5	2	5	50	Medium	-	Medium			

Loss of employment and local economic	degree to which impact can be reversed:				N/A				
development opportunities	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				None				
	With Mitigation	3	2	2	5	35	Medium	-	
	Nature of impact:					Direct			
	Without Mitigation	2	5	2	5	45	Medium	-	Medium
Maintenance of existing	degree to which			•	N/A			•	
landscape and sense of	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				None				
	With Mitigation	2	5	2	5	45	Medium	-	

Impacts Identified in the BAR

	Construction Phase												
		А	Iternative 4	4- Substatio	on 2, Route	e Option 2							
Potential Impact		Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence				
	Nature of impact:		_			Direct							
	Without Mitigation	1	1	0	1	2	Low	-					
Disturbance to underlying geology for the	degree to which impact can be reversed:				Low								
construction of the powerline	degree of impact on irreplaceable resources:		Low										
	Mitigation Measures	Du	Due to the low impact significance, mitigation measures are not considered to be necessary.										
	With Mitigation	1	1	0	1	2	Low	-					
	Nature of impact:		-		-	Direct							
	Without Mitigation	1	1	0	1	2	Low	-					
Disturbance to underlying geology for the	degree to which impact can be reversed:				Low								
construction of the Substation	degree of impact on irreplaceable resources:				Low								
	Mitigation Measures	Du	e to the low imp	oact significance	, mitigation mea	asures are not co	onsidered to be necessa	ıry.					
	With Mitigation	1	1	0	1	2	Low	-					
	Nature of impact:					Dircet							
	Without Mitigation	2	2	4	5	40	Medium	-	Medium				

Reduction in land availaibility for grazing animals due to theland	degree to which impact can be reversed:				Low							
being occupied by the transmission and substation infrastructure	degree of impact on irreplaceable resources:				Low							
Substation in astructure	Mitigation Measures	Areas of co	nstruction shou		ctical) limited to should be kept		the project footprint, an	d activities				
	With Mitigation	1	2	2	4	20	Low	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	2	2	4	3	24	Low	-	Medium			
Increased potential for soil erosion due to vegetation	degree to which impact can be reversed:				High							
clearance, soil disturbance and a high traffic movement onsite.	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures		as of construction should be (where practical) limited to the extent of the project footprint, and activities side should be kept to a minimum. Traffic of construction vehicles should be kept to a minimum to reduce soil									
	With Mitigation	1	2	2	2	10	Low	-	Medium			
	Nature of impact:		•			Direct	1					
	Without Mitigation	2	2	2	2	12	Low	-	Medium			
Potential spillage of hazardous substances such as oils, fuel, grease from	degree to which impact can be reversed:				High							
construction vehicles, and sewage from on-site sanitation systems	degree of impact on irreplaceable resources:				Low							
sanitation systems	Mitigation Measures		•	•			inding in storage areas o age of hazardous materia					
	With Mitigation	1	2	0	1	3	Low	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	2	2	6	4	40	Medium	-	Medium			
Alterations of flow regimes of watercourses, in close	degree to which impact can be reversed:				High							

proximity to the site, or	degree of impact on												
that is proposed to be	irreplaceable				Low								
traversed.	resources:												
	Mitigation Measures						te rehabilitated before n the chosen alignment m						
	With Mitigation	2	2	2	3	18	Low	-	Medium				
	Nature of impact:					Direct							
	Without Mitigation	2	2	8	5	60	Medium	-	Medium				
Temporary degradation of wetland/riparian habitat due to the	degree to which impact can be reversed:				High								
proposed proposed positioning of the powerlines and pylons	degree of impact on irreplaceable resources:				Low								
powernines and pytons	Mitigation Measures		in-depth and thorough freshwater functional assessment should be conducted should BioTherm be sed as a Preferred Bidder. The detailed freshwater habitat assessment must provide recommendations in										
	With Mitigation	1	2	4	3	21	Low	-	Medium				
	Nature of impact:					Direct							
	Without Mitigation	2	1	6	3	27	Low	-					
Potential contamination of	degree to which impact can be reversed:		High										
groundwater through	degree of impact on irreplaceable resources:				Low								
		All equipmen	t that has the po	otential to spill o	or leak must hav	e a drip tray und	derneath at all times.						
	Mitigation Measures				urface and not c								
	With Mitigation	1	1	2	2	8	Low	-					
	Nature of impact:				•	Direct							
	Without Mitigation	2	2	8	4	48	Medium	-	Medium				
	degree to which												
	impact can be		Moderate										
	reversed:												
	degree of impact on												
	irreplaceable				Moderate	e							
	resources:												

Impacts on vegetation and protected plant species	Mitigation Measures	are be avoided • Ensure that I transformed a • Minimise the by the operati • All roads bui steep areas. • Preconstruct principles are a spills, avoiding • Demarcate a to avoid using	onstruction environmental induction for all construction staff on site to ensure that basic environmental oles are adhered to. This includes awareness as to no littering, appropriate handling of pollution and chemical avoiding fire hazards, minimizing wildlife interactions, remaining within demarcated construction areas etc. arcate all areas to be cleared with construction tape or similar material. However caution should be exercised id using material that might entangle fauna.224324Low-N									
	Nature of impact:	2	Z	4	3	Direct	LUW	-	Medium			
	Without Mitigation	2	2	4	4	32	Medium		Medium			
	degree to which	2	2	4	4	52	Iviediditi		Medium			
	impact can be reversed:				Low							
	degree of impact on irreplaceable resources:				Low							
Impacts on Fauna due to constructtion activities		Personnel sho • No fires shou • No fuelwood • No dogs or c • If any parts of (such as most • All hazardou accidental che related to the • No unauthor	uld not be allow uld be allowed w d collection shou ats should be all of site such as co LEDs), which do s materials shou emical, fuel and c nature of the sp rized persons sho	ed to wander off vithin the site as a ld be allowed on owed on site apa nstruction camp not attract insec ld be stored in th bil spills that occu ill.	the construction there is a risk of p-site. art from that of s must be lit at r ts and which sho ne appropriate r ur at the site sho conto the site and	n site. runaway veld f the landowners hight, this shoul ould be directed nanner to preve ould be cleaned d site access sho	:. d be done with low-UV d downwards. ent contamination of th up in the appropriate n puld be strictly controlle	type lights e site. Any nanner as				
	With Mitigation	1	2	2	3	15	Low	-	Medium			
	Nature of impact:					Direct						

	Without Mitigation	2	2	8	4	48	Medium	-	Medium		
	degree to which impact can be reversed: degree of impact on irreplaceable				Moderate						
Increased Soil Erosion risk during construction• Runoff management and erosion control should be integrated into the project design. • Roads should have runoff control and water management infrastructure present to limit erosion a vegetation. • Disturbance near to drainage lines should be avoided and sensitive drainage areas near to the cor activities should demarcated as no-go areas.Mitigation Measures• Regular monitoring for erosion problems along the access roads and other cleared areas. • Erosion problems should be rectified on a regular basis. • Sediment traps may be necessary to prevent erosion and soil movement if there are topsoil or other present during the wet season. • A low cover of vegetation should be left wherever possible within the construction footprint to bi prevent erosion and promote post-disturbance recovery of an indigenous ground cover.								ruction waste heaps			
	With Mitigation	2	2	2	3	18	Low	-	Medium		
	Nature of impact:					Direct					
	Without Mitigation	2	1	8	4	44	Medium	-	Medium		
	degree to which impact can be reversed:		High								
Displacement of Red Data avifauna due to habitat	degree of impact on irreplaceable resources:				Low						
destruction and disturbance associated with			Construction activity should be restricted to the immediate footprint of the infrastructure. Access to the remainder of the site should be strictly controlled to prevent unnecessary disturbance of priority ecies. Measures to control noise and dust should be applied according to current best practice in the industry. Maximum use should be made of existing access roads and the construction of new roads should be kept to a nimum as far as practical. The recommendations of the ecological and botanical specialist studies must be strictly implemented, especially far as limitation of the construction footprint and rehabilitation of disturbed areas is concerned.								
the construction of the powerlines	Mitigation Measures	species. • Measures to o • Maximum use minimum as fai • The recomme	control noise an e should be mad r as practical. endations of the	d dust should be e of existing acc ecological and b	e applied accord ess roads and th potanical special	ing to current k ne construction ist studies mus	best practice in the indus of new roads should be t be strictly implemente	stry. kept to a			
	Mitigation Measures	species. • Measures to o • Maximum use minimum as fai • The recomme	control noise an e should be mad r as practical. endations of the	d dust should be e of existing acc ecological and b	e applied accord ess roads and th potanical special	ing to current k ne construction ist studies mus	best practice in the indus of new roads should be t be strictly implemente	stry. kept to a	Medium		

	Without Mitigation	1	1	4	3	18	Low	-	Medium
	degree to which impact can be reversed:				High				
Displacement of Red Data	degree of impact on irreplaceable resources:				Low				
destruction and disturbance associated with the construction of the substation	Mitigation Measures	 Access to the species. Measures to Maximum us minimum as fa The recommendation 	remainder of th control noise an e should be mac r as practical. endations of the	e site should be d dust should be le of existing acc ecological and l	e applied accord cess roads and th potanical special	ed to prevent u ing to current b ne construction list studies must	infrastructure. nnecessary disturbance est practice in the indus of new roads should be t be strictly implemented d areas is concerned.	try. kept to a	
	With Mitigation	1	1	2	3	12	Low	-	Medium
	Nature of impact:					Direct			
	Without Mitigation	4	5	4	2	26	Low	-	Medium
	degree to which impact can be reversed:				Low				
powerlines	degree of impact on irreplaceable resources:				High				
	Mitigation Measures	 A 20m buffer area; 	must be placed	around the cold	onel ruins ideniti	fied at Substatio	on 1 and must be declare	ed a "No-Go"	
	With Mitigation	4	5	4	1	13	Low	-	Medium
	Nature of impact:					Direct			
Dhysical disturbance of	Without Mitigation	4	5	4	2	26	Low	-	Medium
the construction of	degree to which impact can be reversed:				Low				

	degree of impact on irreplaceable resources:				High				
	Mitigation Measures	 A 20m buffer area; 	must be placed	around the colo	onel ruins idenit	ified at Substati	ion 1 and must be declar	ed a "No-Go"	
	With Mitigation	4	5	4	1	13	Low	-	Medium
	Nature of impact:					Not Applicable	2		
	Without Mitigation							-	Medium
Vandalism of Heritage	degree to which impact can be reversed:								
items	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation							-	Medium
	Nature of impact:					Direct			
	Without Mitigation	1	5	2	2	16	Low	-	Medium
Physical disturbance of	degree to which impact can be reversed:				Low				
palaeontological sites	degree of impact on irreplaceable resources:				Low				
	Mitigation Measures		f all surface clea ossil wood) on a) by the ECO for fossil ma	aterial (e.g.	
	With Mitigation	1	5	2	1	8	Low	-	Medium
	Nature of impact:					Direct			
	Without Mitigation	2	2	4	4	32	Medium	-	Medium- High
Visual impact during	degree to which impact can be reversed:	High- The v	isual impact can			cles, equipment fter constructio	, rubble and any other co n.	onstruction	

vehicles and equipment	degree of impact on irreplaceable resources:	l	low- Dust and e	quipment are no	ot likely to impac	ct on any irrepla	aceable visual resources.					
	Mitigation Measures	• The handling conditions.	and transportat	ion of materials	which may gene	erate dust must	be avoided during high	wind				
	With Mitigation	2	2	4	3	24	Low	-	Medium- High			
	Nature of impact:					Direct						
	Without Mitigation	2	2	4	3	24	Low	-	Medium- High			
Visual impact during construction due to	degree to which impact can be reversed:		High- The visu	ual impact can b	ecompletely rev	versed, if veget	ation is rehabilitated.					
vegetation clearing	degree of impact on irreplaceable resources:		Low- From a visual perspective can be re-established.									
	Mitigation Measures	vegetation.										
	With Mitigation	2	2	2	3	18	Low	-	Medium- High			
	Nature of impact:					Direct						
	Without Mitigation	2	1	2	3	15	Low	-				
Increased traffic generation around the study area by	degree to which impact can be reversed:	Low										
construction vehicles-	degree of impact on irreplaceable	Low										
	Mitigation Measures						nent is currently 120km/ on with the access road.	/h. it is				
	With Mitigation	2	1	2	2	10	Low	-				
	Nature of impact:					Direct						
	Without Mitigation	2	2	4	4	32	Medium	-	High			
Acoustic impact on	degree to which impact can be reversed:				High							
residential receptors	degree or impact on irreplaceable				Low							
	Mitigation Measures	•					at activities witj the grea least disturbance.	atest potentia				
	With Mitigation	2	2	4	3	24	Low	-	High			
	Nature of impact:					Direct						
	Without Mitigation	3	2	4	3	27	Low	+	Medium			

Increase in employment opportunities	degree to which impact can be reversed:				None					
opportunities	uegree or impact on irreplaceable				None					
	Mitigation Measures	Appointme	nt of local contr		nent of local lab unskilled opport		ssible, particularly semi-	skilled and		
	With Mitigation	3	2	4	4	36	Medium	+	Medium	
	Nature of impact:					Indirect				
	Without Mitigation	2	2	6	3	30	Low	-	Medium	
Disruption through influx of job seeks	degree to which impact can be reversed:	N	ledium - difficul	t to manage or o	control influx of	job seekers and	associated local impact	S		
JOD SEEKS	uegree or impact on irreplaceable				Low					
	Mitigation Measures	A Manage employment expectations as far as possible, prioritise local employment, engage with local municipality i								
	With Mitigation	2	2	6	2	20	Low	-	Medium	
	Nature of impact:		•	•		Indirect		•		
	Without Mitigation	2	2	6	3	30	Low	-	Medium	
Increase in communicable diseases and reduced	degree to which impact can be reversed: degree of impact on	Medium - diff	icult to manage	or control comr		se which could	permanently impact loca	al populations		
public health	irrenlaceable				High					
	Mitigation Measures	Developme	nt of a labour fo	rce Health and S	Safety Plan, HIV	AIDS awarenes	s, prevention and testing	g campaign		
	With Mitigation	2	2	6	2	20	Low	-	Medium	
	Nature of impact:					Direct				
	Without Mitigation	2	2	4	3	24	Low	-	Medium	
Nuisance from noise, dust and traffic disturbances	degree to which impact can be reversed:	Medium - ir	nplementation	of EMPr measur	es to reduce noi negate compl		affic related impacts, but	unlikely to		
	uegree or impact on irreplaceable				Low					
	Mitigation Measures	Air quality, no	ise and traffic re	elated mitigatio	n measures reco the EMPi		he relevant specialists ar	nd included in		
	With Mitigation	2	2	2	2	12	Low	-	Medium	
	Nature of impact:	Indirect								
	Without Mitigation	2	2	6	3	30	Low	-	Medium	

Increased risk to	degree to which impact can be reversed:	Hi	igh - provision o	fcompensation	to farmers for d	amage to infras	structure, stock theft, et	С.	
neighbouring land users	uegree or impact on irreplaceable				Low				
	Mitigation Measures						he contractor; Contractor ed to construction work		
	With Mitigation	2	2	4	3	24	Low	-	Medium
	Nature of impact:					Direct			
	Without Mitigation	2	2	6	4	40	Medium	-	Medium
	degree to which impact can be reversed:		High - provi	sion of compens	ation to farmers	for losses resu	Iting from veld fires		
Increased risk of veld fires	degree of impact on irreplaceable resources:				Low				
	Mitigation Measures						ties that may pose a fire be property managed ar		
	With Mitigation	2	2	4	3	24	Low	-	Medium
				Powerline	- No-Go				
Potential Impact	Mitigation	Extent	Duration	Magnitude	Probability		gnificance	Status	Confidence
•	ç	(E)	(D)	(M)	(P)		(E+D+M)*P)	(+ve or -ve)	
	Nature of impact:		1	1		Direct		•	1
	Without Mitigation	1	1	0	1	2	Low	+	Medium
	uegree to which impact can be				N/A				
Impacts on vegetation and protected plant species	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:					Direct			
	Without Mitigation	1	1	0	1	2	Low	+	Medium
	degree to which		1		N/A				
Faunal impacts due to construction activities	impact can be degree of impact on irreplaceable resources:				N/A				

	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:					Direct			
	Without Mitigation	1	1	0	1	2	Low	+	Medium
	degree to which				N/A				
Increased Soil Erosion risk during construction	impact can be degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:					Direct			
The no-go option will result	Without Mitigation								
in no additional impacts on	degree to which				N/A				
avifauna and will maintain the current ecological integrity	degree of impact on irreplaceable resources:				N/A				
	Mitigation Measures				N/A				
	With Mitigation								
	Nature of impact:					Direct			
	Without Mitigation	2	5	2	5	45	Medium	-	Medium
Loss of employment and	degree to which				N/A				
local economic development	impact can be degree of impact on irreplaceable				N/A				
	Mitigation Measures				None				
	With Mitigation	3	5	2	5	50	Medium	-	Medium
	Nature of impact:					Direct			
	Without Mitigation	2	5	2	5	45	Medium	+	
	degree to which impact can be				Direct				
Maintenance of the existing									
landscape and sense of place	degree of impact on irreplaceable resources:				N/A				

Mitigation Measures				None				
With Mitigation	2	5	2	5	45	Medium	+	Medium

{insert specialist filed here}

				Operation	al Phase				
		Substa	tion 2 Rou ⁻	te Option 2	2- Powerlin	e Alternat	ive 4		
Potential Impact		Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence
	Nature of impact:					Not Applicable			
	Without Mitigation								
Disturbance to underlying	degree to which impact can be reversed:								
geology	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation	1	4	2	3	21	Low	-	
	Nature of impact:		1			Direct			1
	Without Mitigation	2	4	4	5	50	Medium	-	Medium
Reduction in land availaibility for grazing animals due to theland	degree to which impact can be reversed:				Low	-			
being occupied by the transmission and substation infrastructure	degree of impact on irreplaceable resources:				Low				
	Mitigation Measures	Powerline a	nd substation Ir		ould be limited t e site should be		the project footprint, a num.	and activities	
	With Mitigation	1	4	2	3	21	Low	-	Medium
	Nature of impact:					Direct			

	Without Mitigation	2	4	4	3	30	Low	-	Medium			
Vegetation cleared for the powerlines and substation, soil disturbance and stockpiles, and increased	degree to which impact can be reversed:				High		· · · · ·					
traffic movement on site, resulting in a higher potential for soil erosion.	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures	Traffic of mai	ntenace vehicle		t to a minimum sed roadways w		ompaction, and limited	to existing or				
	With Mitigation	1	4	2	2	14	Low	-	Medium			
	Nature of impact:		•	-	-	Direct						
	Without Mitigation	2	4	2	2	16	Low	-	Medium			
Potential spillage of hazardous substances such	degree to which impact can be reversed:				High							
as oils, fuel, grease from maintenance vehicles.	degree of impact on irreplaceable resources:		Low									
	Mitigation Measures		The proper handling and storage of hazardous materials, the use of hardstanding in storage areas of hazardous substances and where spillages are possible. The use of bunding around storage of hazardous materials and									
	With Mitigation	1	4	0	1	5	Low	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	2	5	8	4	60	Medium	-	Medium			
Alterations of flow regimes	degree to which impact can be reversed:				High							
of watercourses, in close proximity to the site, or that is proposed to be	degree of impact on irreplaceable resources:				Low							
u avel seu.	traversed. Powerlines must only cross perpendicular to a watercourse and the chosen alignment must endeavour that the span across the watercourse is minimalised to restrict the number of pylons within a system (which should be avoided as far as possible). The proposed powerlines and pylons should be positioned above the 1:100 floodline of any watercourse.											
	With Mitigation	2	1	2	2	10	Low	-	Medium			
	Nature of impact:					Direct						

	Without Mitigation	2	2	8	5	60	Medium	-	Medium	
	degree to which impact can be reversed:				High					
Permanent degradation of wetland/riparian habitat	degree of impact on irreplaceable resources:				Low					
due to the proposedproposed positioning of the powerlines and pylons	Mitigation Measures	habitats poten the freshwater freshwater fun detailed freshv freshwater hak and conduct ar	tially affected b specialist to as actional assessm vater habitat as bitats. A freshwa n in-depth site v	y the site and po sess specific are nent should be c sessment must ater habitat species	owerlines. At th as within the si onducted shoul provide recomn cialist be preser o any site work t	is stage design of te. Therefore, a d BioTherm be nendations in te nt onsite during to assess the are	EIS and EcoServices) of f details should be availab more in-depth and thou recognised as a Preferre erms of pylon positions the construction phase ea for any wetlands and use.	ole allowing rough ed Bidder. The in relation to of the project,		
	With Mitigation	1	2	4	3	21	Low	-	Medium	
	Nature of impact:			-		Direct			•	
	Without Mitigation	2	5	2	3	27	Low	-		
Potential contamination of groundwater through leaks					High					
	degree of impact on irreplaceable resources:				Low					
	Mitigation Measures	All equipmen					r a drip tray. Vehicles as ood working order.	sociated with		
	With Mitigation	1 5 0 2 12 Low - Media								
	Nature of impact:					Direct				
	Without Mitigation	2	5	4	3	33	Medium	-		
	degree to which impact can be reversed:				Moderat	e				

Previously disturbed areas	o resources:												
erosion for some time into the operational phase	 the operational phase All roads and other hardened surfaces should have runoff control features which redirect water flow and dissipate any energy in the water which may pose an erosion risk. Regular monitoring for erosion after construction to ensure that no erosion problems have developed as result of the disturbance. All erosion problems observed should be rectified as soon as possible, using the appropriate erosion control structures and revegetation techniques. 												
	With Mitigation	2	2	4	3	24	Low	-					
	Nature of impact:		Direct										
	Without Mitigation	2											
	degree to which		Moderate										
	degree of impact on irreplaceable resources:		Moderate nerever excavation is necessary, topsoil should be set aside and replaced after construction to encourage										
Previously disturbed areas will remain vulnerable to alien plant invasion for some time	Mitigation Measures	natural regene • Due to the di plant species a implemented. rapidly if not co • Regular moni runoff from the • Regular alien	ration of the loc sturbance at the re likely to be a Problem woody ontrolled. toring for alien e facility as there clearing should	al indigenous sp e site as well as long-term prob y species such a plants within th e are also likely	becies. the increased r lem at the site a s Prosopis are a e development to be prone to using the best-p	unoff generated and a long-term Iready present footprint as we invasion probler	d by the hard infrastruct control plan will need to in the area and are likely ell as adjacent areas whi	ure, alien o be y to increase ch receive					
	With Mitigation	2											
	Nature of impact:					Negative							
	Without Mitigation	3	4	10	4	68	High	-	Medium				
Collisions with the	degree to which impact can be reversed:				Low				Medium				

132kV powerlines	degree of impact on irreplaceable resources:				High				Medium			
	Mitigation Measures	 A walk-throu de 	gh must be con emarcate sectio	ducted by the a ns of line that w	vifaunal special ill need to be m	ist after final po nitigated with Bi	le positions have been o rd Flight Diverters (BFD	determined, to s).	Medium			
	With Mitigation	3	4	10	3	51	Medium		Medium			
	Nature of impact:			•		Negative	-	-	-			
	Without Mitigation	3	4	0	1	7	Low		High			
	degree to which impact can be reversed:				High				High			
avifauna	degree of impact on irreplaceable resources:				Low				High			
	Mitigation Measures	No mitiga	No mitigation is required due to the low risk of electrocution posed by the steel monopole double circuit structures									
	With Mitigation	3	4	0	1	7	Low		High			
	Nature of impact:											
	Without Mitigation	3	4	0	1	7	Low		High			
	degree to which impact can be reversed:		High									
Electrocution of Red Data avifauna in the substation	degree of impact on irreplaceable resources:				Low				High			
yard	Mitigation Measures						ation for electrocution , site specific mitigation		High			
	With Mitigation	3	4	0	1	7	Low		High			
	Nature of impact:					Not Applicable			•			
	Without Mitigation											
							•					

Physical disturbance of	degree to which impact can be reversed:								
archaeological sites	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:					Not Applicable			
	Without Mitigation								
Physical disturbance of	degree to which impact can be reversed:								
palaeontological sites	degree of impact on irreplaceable resources:								
	Mitigation Measures								
	With Mitigation								
	Nature of impact:					Direct			
	Without Mitigation	2	5	2	2	18	Low	-	Medium
Intrusion on sense of place	degree to which impact can be reversed:	Low- The visua	Il impact can be		ersed after clos egetation rehat		power infrastructure is	removed and	
and rural landscape	degree of impact on irreplaceable resources:	Lo	ow- No impact o	on irreplaceable	resource, if lan	dforms remain	unaffected as proposec	I.	
	Mitigation Measures						ction. Roads should be a es are well maintained.	appropriately	
	With Mitigation	2	5	2	2	18	Low	-	Medium
	Nature of impact:					Direct			
	Without Mitigation	2	5	2	3	27	Low	-	Medium
Visual impact of transmission lines and	degree to which impact can be reversed:	Low-	The visual impa	act can be comp	oletely reversed	after closure of	facility, if towers remo	ved.	

power tower	degree of impact on irreplaceable resources:	L	ow- No impact o	on irreplaceable	resource, if lar	dforms remain	unaffected as proposed	ł.			
	Mitigation Measures						ction. Roads should be a es are well maintained.	appropriately			
	With Mitigation	2	5	2	3	27	Low	-	Medium		
	Nature of impact:					Direct					
	Without Mitigation	2	1	2	2	10	Low	-			
Increased traffic generation around the	degree to which impact can be reversed:				Low						
study area by maintenance vehicles	degree of impact on irreplaceable resources:	eplaceable Low Sources:									
	Mitigation Measures • The posted speed limit on the R354 in the vacinity of the proposed development is currently 120km/h. it is suggested that the speed limit should be reduced in advance of the intersection with the access road.										
	With Mitigation	2	1	2	1	5	Low	-			
	Nature of impact:					Not Applicable					
	Without Mitigation										
Acoustic impact on	degree to which impact can be reversed:										
residential receptors	degree of impact on irreplaceable resources:										
	Mitigation Measures										
	With Mitigation										
	Nature of impact:					Direct					
	Without Mitigation	2	4	4	4	40	Medium	-	Medium		
Change in sense of place	degree to which impact can be reversed:		•	High - remo	oval of the prop	osed infrastruct	ure				
5	degree of impact on irreplaceable resources:				Low						

	Mitigation Measures		Implementati	ion of recomme	ndations contair	ned in the Visu	al Impact Assessment					
	With Mitigation	2	4	4	4	40	Medium	-	Medium			
	Nature of impact:					Direct						
	Without Mitigation	4	4	8	5	80	High	-	Medium			
Evacuation of power	degree to which impact can be reversed:				N/A							
	degree of impact on irreplaceable resources:				N/A							
	Mitigation Measures				N/A							
	With Mitigation	4	4	8	5	80	High	-	Medium			
				Powerline	- No-Go							
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		gnificance (E+D+M)*P)	Status (+ve or -ve)	Confidence			
	Nature of impact:		Direct									
	Without Mitigation	1	1	0	1	2	Low					
Previously disturbed areas will remain vulnerable to	degree to which impact can be reversed:											
erosion for some time into the operational phase.	degree of impact on irreplaceable resources:				N/A							
	Mitigation Measures				N/A							
	With Mitigation											
	Nature of impact:			1		Direct						
	Without Mitigation	1	1	0	1	2	Low					
Previously disturbed areas will remain vulnerable to	reversed:				N/A							
alien plant invasion for some time	degree of impact on irreplaceable resources:				N/A							

	Mitigation Measures		N/A									
	With Mitigation											
	Nature of impact:					Direct	-	-				
	Without Mitigation	3	5	2	5	50	Medium	+	Medium			
Maintenance of the	degree to which impact can be reversed:				N/A							
existing landscape and sense of place	degree of impact on irreplaceable resources:				N/A							
	Mitigation Measures		N/A									
	With Mitigation											
	Nature of impact:		_	-	_	Direct						
	Without Mitigation	4	5	8	5	85	High	-	Medium			
No infrastructure for the	degree to which impact can be reversed:				N/A							
evacuation of power	degree of impact on irreplaceable resources:				N/A							
	Mitigation Measures											
	With Mitigation	4	5	8	5	85	High					

BioTherm Energy - Maralla Powerline

{insert specialist filed here}

Significance Rating Table

Decommissioning Phase										
		Substa	tion 2 Rou ⁻	te Option 2	2- Powerlin	ne Alternat	ive 4			
Potential Impact		Extent (E)	Duration (D)	Magnitude (M)	Probability (P)		ignificance (E+D+M)*P)	Status (+ve or -ve)	Confidence	
	Nature of impact:					Not Applicable)			
	Without Mitigation									
Disturbance to underlying	degree to which impact can be reversed:									
geology	degree of impact on irreplaceable resources:									
	Mitigation Measures									
	With Mitigation									
	Nature of impact:					Direct		•		
	Without Mitigation	2	2	4	3	24	Low	-		
Increased potential of soil	degree to which impact can be reversed:				High					
erosion	degree of impact on irreplaceable resources:				Low					
	Mitigation Measures						the project footprint, ar vehicles should be kept			
	With Mitigation	1	2	2	2	10	Low	-		
	Nature of impact:					Direct				

	Without Mitigation	2	2	2	2	12	Low	-	Medium			
0	reversed:				High							
construction vehicles, and sewage from on-site sanitation systems	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures		he proper handling and storage of hazardous materials, the use of hardstanding in storage areas of hazardous substances and where spillages are possible. The use of bunding around storage of hazardous materials and									
	With Mitigation	1	2	0	1	3	Low	-	Medium			
	Nature of impact:		1	1	1	Direct						
	Without Mitigation	2	2	6	5	50	Medium	-				
Alterations of flow regimes of watercourses, in close proximity to the site, or	degree to which impact can be reversed:	egree to which npact can be High										
that is proposed to be traversed.	degree of impact on irreplaceable resources:		Low									
	Mitigation Measures		After the decommissioning, rehabilitation of the site must occur immediately to ensure no residual impacts remain. A rehabilitation specialist must compile the rehabilitation plan and monitoring its implementation.									
	With Mitigation	1	2	2	2	10	Low	-				
	Nature of impact:		•	•		Direct						
	Without Mitigation	2	3	6	5	55	Medium	-				
Temporary/ Permanent degradation of	degree to which impact can be reversed:				High							
due to the proposed traversing powerlines	e to the proposed litroplascable											
	Mitigation Measures						ately to ensure no residu nd monitoring its impler					
	With Mitigation	2	1	2	2	10	Low	-				
	Nature of impact:					Direct						
	Without Mitigation	2	1	6	3	27	Low	-				

Potential contamination of	degree to which impact can be reversed:				High							
groundwater	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures			otential to spill on the spill of the spill		/e a drip tray ur	nderneath at all times.					
	With Mitigation	1	1	2	2	8	Low	-				
	Nature of impact:		Direct									
	Without Mitigation	2	2	4	4	32	Medium	-	Medium			
Faunal impacts due to decommissioning of the	degree to which impact can be reversed:		Moderate									
wind farms	degree of impact on irreplaceable resources:		Low									
	Mitigation Measures		ny potentially dangerous fauna such snakes or fauna threatened by the decommissioning activities should be noved to a safe location.									
	With Mitigation	2	2	4	2	16	Low	-				
	Nature of impact:					Direct						
	Without Mitigation	2	2	4	4	32	Medium	-	Medium			
Soil erosion following the	degree to which impact can be reversed:				Moderate	9						
decommissining	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures			habilitated shou ter which may p			which redirect water fl	ow and				
	With Mitigation	2	2	4	2	16	Low	-				
	Nature of impact:					Direct						
	Without Mitigation	2	2	4	4	32	Medium	-	Medium			
	degree to which											
	impact can be				Moderate	9						
	reversed:											

following decommissioning	degree of impact on irreplaceable resources:		Low								
	Mitigation Measures					osoil should be s Idigenous specie	et aside and replaced a	ıfter			
	With Mitigation	2	2	2	2	12	Low	-			
	Nature of impact:					Direct		-	•		
	Without Mitigation	2	1	6	3	27	Low	-	Medium		
Displacement due to habitat destruction and disturbance associated	degree to which impact can be reversed:				High				High		
with the de-commissioning of the powerlines	degree of impact on irreplaceable resources:		Low • Activity should be restricted to the immediate footprint of the infrastructure.								
	Mitigation Measures										
	With Mitigation	2	1	4	2	14	Low		Medium		
	Nature of impact:		_			Negative					
	Without Mitigation	1	1	4	3	18	Low	-	Medium		
Displacement of Red Data avifauna due to habitat destruction and	degree to which impact can be reversed:				High				High		
disturbance associated with the decomissioning of the substation	degree of impact on irreplaceable resources:				Low				High		
	Mitigation Measures	• De	comissioning ac	tivity should be	restricted to the	e immediate foo	otprint of the infrastruc	ture.			
	With Mitigation	1	1	2	3	12	Low		Medium		
	Nature of impact:					Not Applicable					
	Without Mitigation										
Physical disturbance of	degree to which impact can be reversed:										
archaeological sites	degree of impact on irreplaceable resources:										

	Mitigation Measures											
	With Mitigation											
	Nature of impact:		•	•	•	Not Applicable	•	<u>-</u>				
	Without Mitigation											
Physical disturbance of	degree to which impact can be reversed:											
	degree of impact on irreplaceable resources:											
	Mitigation Measures											
	With Mitigation											
	Nature of impact:		1	1	1	Direct		1				
	Without Mitigation	2	2	4	4	32	Medium	-				
Visual impact during decommissing due to dust,	degree to which impact can be reversed:		High									
vehicles and equinment	degree of impact on irreplaceable resources:		Low									
	Mitigation Measures						ommissioning. The dec ires must be included ir					
	With Mitigation	2	2	2	4	24	Low	-				
	Nature of impact:		•	•	•	Direct			-			
	Without Mitigation	2	1	2	3	15	Low	-				
Increased traffic generation around the study area by vehicles	degree to which impact can be reversed:				Low							
associated with decommissioning.	degree of impact on irreplaceable resources:				Low							
	Mitigation Measures	suggested that					ment is currently 120ki ion with the access roa					
	With Mitigation	2	1	2	2	10	Low	-				

	Nature of impact:	Direct								
Acoustic impact on residential receptor	Without Mitigation	2	2	4	4	32	Medium	-		
	degree to which impact can be reversed:	High								
	degree of impact on irreplaceable resources:	Low Planning construction activities in consultation with local communities so that activities with the greatest								
	Mitigation Measures	potential to ge								
	With Mitigation	2	2	4	3	24	Low	-		
Gain of short term employment	Nature of impact:	Direct								
	Without Mitigation	2	1	6	3	27	Low	+	Medium	
	degree to which impact can be reversed:	N/A								
	degree of impact on irreplaceable resources:	Low								
	Mitigation Measures	Appointm								
	With Mitigation	2	1	6	unskilled opport 4	36	Medium	+		
	Nature of impact:	Direct								
Nuisance from noise, dust and traffic disturbances	Without Mitigation	2	1	4	4	28	Low	-	Medium	
	degree to which impact can be reversed:	High								
	degree of impact on irreplaceable resources:	Low								
	Mitigation Measures	Air quality, noise and traffic related mitigation measures recommended by relevant specialists and included in the EMPr								
	With Mitigation	2	1	4	3	21	Low	-		
	Nature of impact:					Indirect				

Increased risk to neighbouring land users	Without Mitigation	2	1	6	3	27	Low	-	Medium
	degree to which	High							
	degree of impact on irreplaceable resources:		Low						
	iviltigation ivieasures	Development of a code of conduct for decommissioning phase workers, to be signed by the contractor. Contractor to be held liable for compensating farmers for any loses and/or damage that can be linked to							
	With Mitigation	2	1	4	3	21	Low		
				Powerline	- No-Go				
Potential Impact	Mitigation	Extent (E)	Duration (D)	Magnitude (M)	Probability (P)	Significance Status (S=(E+D+M)*P) (+ve or -ve)		Confidence	
Loss of employment and local economic development opportunities	Nature of impact:	Direct							
	Without Mitigation	3	5	2	5	50	Medium	-	Medium
	degree to which	N/A							
	degree of impact on irreplaceable resources:	N/A							
	Mitigation Measures	None							
	With Mitigation	3	2	2	5	35	Medium	-	
Maintenance of existing landscape and sense of place	Nature of impact:	Direct							
	Without Mitigation	2	5	2	5	45	Medium	-	Medium
	degree to which impact can be reversed:	N/A							
	degree of impact on irreplaceable resources:	N/A							
	Mitigation Measures	None							
	With Mitigation	2	5	2	5	45	Medium	-	