

## PROJECT IMPACT ASSESSMENT, SIGNIFICANCE AND MITIGATION MEASURES SUMMARY

The following impact rating approach used by EnviroAfrica CC is a basic exponential rating system to assess actual and potential negative and positive environmental impacts.

Environmental activities or aspects are identified, based on:

- the phases of the project,
- the nature (or description) of the actual and potential impacts of the activities.

For every project activity or aspect, various environmental impacts are listed. Every negative impact is allocated a -value as per each of the following criteria:

- Probability (Likelihood)
- Extent
- Duration (Frequency)
- Consequence (Receiving Environment)
- Magnitude (Intensity/severity)

Every positive impact is allocated a +value as per each of the following criteria:

- Probability (Likelihood)
- Extent
- Duration (Frequency)
- Magnitude (Intensity/severity)

Once a value is allocated for each of the criterion, the scores are averaged to determine the final impact rating see Table 1 below.

EnviroAfrica then further assesses environmental <u>significance</u>, based on the nature of the impact, as per the score and colour key which forms part of Table 1 below. This results in impacts having either a low (indicated in green), medium (indicated in yellow) or high (indicated in orange and red) negative significance, and a low (light blue), medium (blue) or a high (dark blue) positive significance.

**Note:** i. As a baseline, impact rating values/scores are allocated taking the **worst-case** scenario into account i.e. with no mitigation. The baseline rating is compared with those after mitigation has been taken into account i.e. the post-mitigation rating. Post mitigation rating is used for the actual impact assessment.



### Table 1: Environmental Significance Rating Methodology (rating criteria and significance key)

SIGNIFICANCE CRITIERIA	Very High	High	Medium	Low	Negligible (very low)
Value	16	8	4	2	1
Probability (likelihood) (P)		Definite. Impact will definitely occur (impact will occur regardless of any prevention measures)	Highly probable. Very likely for impact to occur.	Probable. Impact may likely occur.	Improbable. Low likelihood/unlikely for impact to occur.
Extent (E)	Impact potentially reaches beyond national boundaries	Impact has definite provincial/potential national consequences	Impact confined to regional area/ town	Impact confined to local region and impact on neighbouring properties	Impact confined to project property / site
Duration (D)		Permanent The impact is expected to have a permanent impact, with very little to no rehabilitation possible	Long-Term The impact is expected to last for a long time after construction with rehabilitation expected to be 15-50 years. Impact is reversible but only with long- term mitigation	Medium-term The impact is expected to last for some time after construction with rehabilitation expected to be 2 - 15 years. Impact is reversible but only with on- going mitigation	Short-term / temporary The impact is expected to be temporary or last for a relatively short time with rehabilitation expected to be <2years. The impact is reversible through natural process and/or some mitigation.
Magnitude (Intensity/ Severity) (M)	It is expected that the activity will have a very severe to permanent impact on the surrounding environment. Functioning irreversibly impaired. Rehabilitation often impossible or unfeasible	It is expected that the activity will have a severe impact on the surrounding environment. Functioning may be severely impaired and may be temporarily cease. Rehabilitation will be needed to restore system integrity	It is expected that the activity will have an impact on the surrounding environment, but it will maintain its function, even if moderately modified (overall integrity not compromised). Rehabilitation easily achieved	It is expected that the activity will have a perceptible impact on the surrounding environment, but it will maintain its function, even if slightly modified (overall integrity not compromised). Rehabilitation easily achieved	It is expected that the impact will have little or no effect on the integrity of the surrounding environment
Receiving environment (Consequence): (RE)	Very sensitive, pristine area – protected site or species permanently or seasonally present	Unused area containing only indigenous fauna / flora species	Unused area containing indigenous and alien fauna / flora species	Semi-disturbed area already rehabilitated / recovered from prior impact, or with moderate alien vegetation	Disturbed area/ transformed/ heavy alien vegetation

## **ENVIRONMENTAL RATING SIGNIFICANCE KEY:**

# **Negative Impacts**

SI	GNIFICANCE RATING		Final rating score / value range	
Very Significant		Very High	-11 to -16	
	Significant	High	-7 to <-11	
	Increasing Significance	Medium	-4 to <-7	
	Incignificant	Low	-2 to <-4	
	Insignificant	Very Low	-1 to <-2	

# **Positive Impacts**

SIG	NIFICANCE	RATING	Final rating score / value range
	Significant	High	10 to 16
	Increasing Significance	Medium	4 to <10
	Insignificant	Low	1 to <4



	Natur	e of Impact	Impact Assessment Ranking and Proposed Mitigation			
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)	
			CONST	RUCTION PHASE		
1	Terrestrial Biodiversity	Loss of highly degraded and transformed habitat.	Low (Negative)	Vegetation clearing: Clear vegetation only within the proposed development footprint, minimising the impact on the surrounding area. Erosion control: Implement erosion control measures to prevent soil erosion and habitat degradation. Noise and Vibration Control: Use construction methods that minimise noise and vibrations to reduce disturbances to wildlife. Invasive Species Control: Manage and control invasive species that may have been introduced during construction. Also, utilise existing roads and access points to gain entry the sites. However, these measures will not alter the determined impact significance.	Low (Negative)	
2	Terrestrial Biodiversity	Loss of degraded watercourse habitat.	Medium (Negative)	Vegetation clearing: Clear vegetation only within the proposed development footprint, minimising the impact on the surrounding area. Erosion control: Implement erosion control measures to prevent soil erosion and habitat degradation. Noise and Vibration Control: Use construction methods that minimise noise and vibrations to reduce disturbances to wildlife. Invasive Species Control: Manage and control invasive species that may have been introduced during construction. Also, utilise existing roads and access points to gain entry the sites.	Medium (Negative)	
3	Terrestrial Biodiversity	Potential impact on protected areas, CBA's, ESA's or Centre's of Endemism.	Low (Negative)	Construction will directly impact CBA1 and in ESA1. However, this area has experienced significant human-induced impacts, leading to the loss of key biodiversity elements characteristic of Swartland Alluvium Renosterveld. Ensure that the proposed activity does not have any additional impact on the areas associated with CBA1 and ESA1.	Low (Negative)	
4	Terrestrial Biodiversity	Cumulative impact.	Low (Negative)	The surrounding area has been transformed due to agricultural development, and the proposed development will also not result in the loss of SCC or any remnant vegetation characterised as Swartland Alluvium Renosterveld (SANBI Red List of Ecosystems: Remnants, 2021).	Low (Negative)	



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5	Freshwater Resources	Mobilisastion of soil during construction activities resulting soil washing into the river along with stormwater.	Low (Negative)	Implement erosion control measures to prevent loose soil and sediments from moving down the drainage line along with stormwater. For example, erosion control blankets, silt fences or mulching exposed soil to reduce erosion. Prevent litter and rubbish entering the drainage line with wate management.	Low (Negative)	
6	Archaeological Heritage	No impacts expected.		No further mitigation is recommended concerning these resources, since there is no reason to believe that the proposed development will impact archaeological heritage resources (Heritage Western Cape, 2024). However, should any heritage resources, including evidence of graves and human burials, archaeological material and palaeontological material be discovered during the execution of the activities above, all works must be stopped immediately, and Heritage Western Cape must be notified without delay.		
7	Palaeontological Heritage	No impacts expected.		No further mitigation is recommended concerning these resources, since there is no reason to believe that the proposed development will impact archaeological heritage resources (Heritage Western Cape, 2024). However, should any heritage resources, including evidence of graves and human burials, archaeological material and palaeontological material be discovered during the execution of the activities above, all works must be stopped immediately, and Heritage Western Cape must be notified without delay.		
8	Agriculture	The development will not have a significant impact on agricultural activities in the area and poses no threat to food security.	Low (Negative)	<ul> <li>Due to the linear nature and low impact on existing agricultural activities, it is the specialist's opinion that the development continues, provided the following conditions are met:</li> <li>1. Good fencing is used during construction</li> <li>2. Minimal footprint inside agricultural lands</li> </ul>	Low (Negative)	
9	Visual	Visual impact of development on surrounding landscape.	Medium to Low (Negative)	This impact is however temporary and not uncommon during construction of infrastructure. The visual impact during construction is therefore low and temporary No mitigation measures are deemed necessary.	Medium to Low (Negative)	



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10	Socio-economic	Increase employment opportunities & skills.	Low (Positive)	<ul> <li>Contractors, employing or seeking to employ local HDIs who are suitably qualified, should get preference;</li> <li>The municipality, local community and local community organizations should be informed of the project and potential job opportunities by the developer;</li> <li>A database of locally based firms, including SMME's owned and run by HDIs that qualify as service providers (construction companies, catering companies, waste collection companies, site cleaning companies etc.) should be compiled by the developer prior to the commencement of the tender process. These firms should be invited to render services where required.</li> <li>Establish a Monitoring Committee for the construction and decommissioning phase in collaboration with representatives of the local community. The Monitoring Committee has to ensure that the EMPr is implemented and that any problems that arise which are associated with the construction and decommissioning phase, are addressed.</li> <li>Require the contractor to enhance formal and informal skills transfer: Such a programme should be offered in liaison with an accredited Further Education and Training College like the West Coast College or University of Technology.</li> </ul>	Low (Positive)	
11	Socio-economic	Increased income	Low (Positive)	<ul> <li>Developer and contractor to act as reference for locals employed.</li> <li>Developer and contractor to liaise with existing or future projects to access employment for locals.</li> </ul>	Low (Positive)	
12	Socio-economic	Increased Local Sales and GGP.	Low (Positive)	<ul> <li>Contractors should be directed by tender criteria to purchase locally and to make use of local service providers.</li> <li>Spending money locally purchasing from locals and South African should benefit employees. The proposed development should leverage discount in the local economy of the municipal area and province and employees should be made aware of it.</li> <li>Small business should be supported (i.e. skills training, assistance and guidance to set up small businesses) and joint ventures with previous disadvantaged persons should be promoted.</li> </ul>	Low (Positive)	



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				<ul> <li>The promotion of joint ventures between small business (owned by previous disadvantaged persons) and more established business should be encouraged.</li> </ul>	
13	Socio-economic	Increased use of social amenities and services.	Low (Negative)	<ul> <li>To adhere to international construction, health and safety standards and precaution measures.</li> <li>To provide health and social training for the project team and in the community which include.</li> <li>HIV/AIDs and Covid awareness training.</li> </ul>	Unlikely/negligible
14	Socio-economic	Increased motorised and non- motorised traffic levels.	Low (Negative)	<ul> <li>Upgrade road signs to address the movement conflict.</li> <li>Road signs for protecting pedestrians crossing and accessing public roads should be displayed.</li> <li>Provide transport to decrease pedestrian traffic.</li> <li>Restrict heavy vehicles to specific hours.</li> <li>Erect road signs signalling times when heavy vehicles will make use of the road or rads will be closed.</li> <li>Adhere to national traffic safety standards and precaution measures.</li> <li>Contractor/ Implementation agent to provide a traffic safety awareness programme amongst the project team and the community, particularly the kids.</li> </ul>	Low (Negative)



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15	Socio-economic	Increased noise and dust levels.	Low (Negative)	<ul> <li>Dust creation must be controlled as per construction management and control code.</li> <li>Noise creation should be controlled as per construction management and control code.</li> <li>Appoint an Environmental Control Officer to supervise construction and building.</li> <li>Adhere to the Environmental Management Plan (EMPr) for the Construction Phase.</li> <li>All workers and management must undergo an induction course.</li> <li>Enforce strict operating hours for heavy vehicles and construction activities on site to reduce noise and dust impacts on adjacent landowners.</li> <li>Implementation of dust suppression measures.</li> <li>Access must be on recognized routes.</li> <li>Litter and littering must be strictly controlled.</li> <li>All construction waste and building rubble must be removed off site.</li> </ul>	Low (Negative)
16	Socio-economic	Change in sense of place	Low (Negative)	<ul> <li>Clear all alien vegetation.</li> <li>Keep disturbed areas to a minimum.</li> <li>Pylons and similar structures must be in keeping with regional planning policy documents, especially the principles of critical regionalism, namely sense of place, sense of history, sense of nature, sense of craft and sense of limits.</li> <li>Utilize existing roads and tracks to the maximum extent possible.</li> <li>Provide pedestrian walkways where desire lines are identified.</li> <li>At the substations, any outdoor lighting must be strictly controlled so as to prevent light pollution.</li> <li>All lighting must be installed at downward angles. Use only minimum wattage light fixtures.</li> <li>Site tidiness should be maintained at all times including during construction.</li> </ul>	Low (Negative)



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17	Socio-economic	Decreased community stability and safety.	Low (Negative)	<ul> <li>Ensure that the contractor (implementation agent) employ at least 80% locals of whom 80% were previously disadvantaged across all skills categories (unskilled, semi-skilled and skilled).</li> <li>If not suitably qualified, make an effort to transfer skills on the job.</li> <li>Establish a Monitoring Committee for the construction phase in collaboration with representatives of the local community. The Monitoring Committee has to ensure that the proposed powerline is implemented and that any problems that arise and is associated with the demolition of the informal structures and construction phase, is addressed.</li> </ul>	Low (Negative)	
18	Socio-economic	Employment equity of vulnerable groups.	Low (Positive)	<ul> <li>Reserve 60% jobs for youth and 50% for women: Of the 28 opportunities generated during the construction period, and the 23 opportunities reserved for locals, 17 opportunities should be earmarked to be taken up by people 35 years of age and younger and 14 opportunities by women.</li> <li>Require contractor to facilitate mechanisms to enable youth to access employment.</li> <li>Pay youth market related prices for the job.</li> <li>Require contractor to facilitate that youth gain equal access to training and education opportunities.</li> <li>Municipality facilitates that youth and women gain equal access to training and education opportunities.</li> <li>Municipality facilitate access to employment be a project component and youth and women should gain equal access to training and education opportunities.</li> <li>Municipality to facilitate access to employment for youth and women.</li> <li>Pay youth and women market related prices and the same as men for the job.</li> </ul>	Low (Positive)	



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			OPE	RATIONAL PHASE	
1	Terrestrial Biodiversity	Continued encroachment of disturbed areas by alien invasive plant species.	Medium (Negative)	Continue and enhance efforts to control and manage alien invasive plant species in the areas surrounding the impacted area.	Low (Negative)
2	Freshwater	Rubble in river from repairing damaged pylons or replacing overhead cables if necessary.	Low (Negative)	Prevent rubble from entering the river.	Low (Negative)
3	Archaeological Heritage	No impacts expected.		No further mitigation is recommended concerning these resources, since there is no reason to believe that the proposed development will impact archaeological heritage resources (Heritage Western Cape, 2024). However, should any heritage resources, including evidence of graves and human burials, archaeological material and palaeontological material be discovered during the execution of the activities above, all works must be	
4	Palaeontological Heritage	No impacts expected.		stopped immediately, and Heritage Western Cape must be notified without delay. No further mitigation is recommended concerning these resources, since there is no reason to believe that the proposed development will impact archaeological heritage resources (Heritage Western Cape, 2024). However, should any heritage resources, including evidence of graves and human burials, archaeological material and palaeontological material be discovered during the execution of the activities above, all works must be stopped immediately, and Heritage Western Cape must be notified without	
5	Agricultural	The development will not have a significant impact on agricultural activities in the area and poses no threat to food security.	Low (Negative)	<ul> <li>delay.</li> <li>Due to the linear nature and low impact on existing agricultural activities, it is the specialist's opinion that the development continues, provided the following conditions are met:</li> <li>1. Good fencing is used during construction</li> <li>2. Minimal footprint inside agricultural lands</li> </ul>	Low (Negative)



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6	Visual	Visual impact of development on surrounding landscape.	Medium to Low (Negative)	The overall impact is rated as medium to low, and no mitigation measures are deemed necessary.	Medium to Low (Negative)	
7	Socio-economic	Increased employment opportunities, skills and income.	Low (Positive)	<ul> <li>Contractors, employing or seeking to employ local HDIs who are suitably qualified, should get preference;</li> <li>The municipality, local community and local community organizations should be informed of the project and potential job opportunities by the developer;</li> <li>Skills transfer and development, formally and informally, should be implemented together with local education and skills training providers (e.g. job shadowing).</li> <li>Developer, municipality and business owners to liaise with existing or future projects to enhance employment opportunities for locals.</li> <li>Developer and contractor to act as reference for locals employed.</li> </ul>	Low (Positive)	
8	Socio-economic	Economic growth & increased local sales and GGP.	Low (Positive)	<ul> <li>Business should be directed to purchase locally and to make use of local service providers.</li> <li>Spending money locally purchasing from locals and South African should benefit merchants. Any discount leveraged in the local economy of the municipal area should benefit locals.</li> <li>Small business should be supported (i.e. skills training, assistance and guidance to set up small businesses) and joint ventures with previous disadvantaged persons should be promoted.</li> <li>The promotion of joint ventures between small business (owned by previous disadvantaged persons) and more established business should be encouraged.</li> </ul>	Low (Positive)	
9	Socio-economic	Enhanced supply of bulk services (Electricity generated gets distributed and more households have access to electricity.)	High (Positive)	The impact of the distribution and transmission of electricity rates high positive and no mitigation is recommended.	High (Positive)	



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10	Socio-economic	Changed sense of place.	Medium (Negative)	Although the powerline adds to the space crowding component, the scale is low and within acceptable levels of change. The study concludes that the overall impact is low, and no issues have been identified which require further studies or modelling. No mitigation measures are deemed necessary.	Low (Negative)	
11	Socio-economic	Loss of Agricultural Land (food security potential).	Low (Negative)	<ul> <li>Reliable and good fencing is used during construction.</li> <li>Pylon footprints inside agricultural fields is kept to a minimum.</li> <li>Implement an effective system of storm water run-off control at any point where run-off water might accumulate. The system must effectively collect and safely disseminate any run-off water from all accumulation points and it must prevent any potential down slope erosion.</li> <li>Any occurrences of erosion must be attended to immediately and the integrity of the erosion control system at that point must be amended to prevent further erosion from occurring there.</li> <li>Maintain where possible all vegetation cover and facilitate re-vegetation of denuded areas throughout the site, to stabilize disturbed soil against erosion, and to reduce dust formation.</li> <li>If an activity will mechanically disturb the soil below surface in any way, then any available topsoil should first be stripped from the entire surface to be disturbed and stockpiled for re-spreading during rehabilitation. During rehabilitation, the stockpiled topsoil must be evenly spread over the entire disturbed surface, and then stabilized by facilitating vegetation cover.</li> <li>Enhance on-site conservation where appropriate.</li> </ul>	Low (Negative)	
12	Socio-economic	Loss of biodiversity	Low (Negative)	<ul> <li>Vegetation Management: Restrict clearing to the proposed development footprint, ensuring minimal disturbance to existing habitats.</li> <li>Habitat Restoration: Implement targeted restoration efforts in moderately degraded watercourses to enhance biodiversity.</li> <li>Invasive Species Control: manage and control Invasive Alien Plants (IAPs) during the operational phase to prevent further encroachment. Continuous monitoring and prompt intervention are essential.</li> </ul>	Low (Negative)	



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13	Socio-economic	Deterioration of ecological infrastructure (water courses).	Medium (Negative)	<ul> <li>Proper drainage infrastructure around access and maintenance roads to prohibit preferential flow paths.</li> <li>Immediate stabilisation and rehabilitation of disturbed areas during the construction phase as stormwater can wash sand and mud into small wetlands, trenches and streams.</li> <li>Remove and control invasive vegetation on-route as an ongoing standard operating procedure.</li> </ul>	Low (Negative)
14	Socio-economic	Property values decrease.	Medium (Negative)	<ul> <li>Transmission line to be located a 100m away from any residential property.</li> </ul>	Low (Negative)
15	Socio-economic	Economic growth and increased SMME participation. Economic Injection because of bulk service.	Low (Positive)	<ul> <li>Offer rebates to investors to establish businesses and industry.</li> <li>Promote joint ventures between small business (owned by previous disadvantaged persons) and more established businesses.</li> <li>Implement formal small business training and mentoring programmes.</li> <li>Provide urban spaces to conduct business.</li> <li>Establish a mechanism to enable investment into small businesses.</li> </ul>	Low (Positive)
16	Socio-economic	Employment equity of vulnerable groups.	Medium (Positive)	<ul> <li>Municipality facilitates that youth and women gain equal access to training and education opportunities: Skills development and improvement of educational qualifications should be a project component and youth and women should gain equal access to training and education opportunities.</li> <li>Reserve 60% of jobs for youth and 50% for women. Proposed 132kV powerline.</li> <li>Pay youth and women equal and market related prices for the job.</li> <li>Municipality to facilitate access to employment for youth and women.</li> </ul>	Medium (Positive)