# Application for Environmental Authorization for Proposed Development of Custodian Sites and Management Infrastructure within Lapalala Wilderness, Limpopo Province

## APPENDIX G IMPACT ASSESSMENT TABLES

**Compiled by:**


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**On behalf of:**

Lapalala Wilderness (Pty) Ltd.

**March 2017**

# 1. ASSESSMENT CRITERIA

The impacts anticipated to occur as a result of the proposed development are assessed/ evaluated to determine their significance. The following assessment criteria are used:

**Extent** (how far the impact extends):

- **(1) Very low:** within the site only
- **(2) Low:** within the local neighbourhoods
- **(3) Medium:** within the region
- **(4) High:** Nationally
- **(5) Very high:** Internationally

**Duration** (the timeframe over which the effects of the impact will be felt):

- **(1) Very short:** 0-2 years
- **(2) Short:** 3-5 years
- **(3) Medium:** 5-15 years
- **(4) Long:** >15 years
- **(5) Permanent**

**Magnitude** (the severity or size of the impact):

- (**0) None**
- **(2) Minor**
- **(4) Low**
- **(6) Moderate**
- **(8) High**
- **(10) Very High**

**Probability** (the likelihood of the impact actually occurring):

- **(1) Very improbable:** Less than 20% sure of the likelihood of an impact occurring
- **(2) Improbable:** 20-40% sure of the likelihood of an impact occurring
- **(3) Probable:** 40-60% sure of the likelihood of an impact occurring
- **(4) Highly probable:** 60-80% sure of the likelihood of that impact occurring
- **(5) Definite:** More than 80% sure of the likelihood of that impact occurring

The **significance** of the potential visual impact is determined by the sum of the individual scores for extent, duration and magnitude multiplied by the **probability** of the impact occurring i.e. **significance = (extent + duration + magnitude) x probability.**

The significance rating scale is interpreted as follows:

- **(2-12) Negligible**: Impact would be of a very low order. In the case of negative impacts, almost no mitigation and or remedial activity would be needed, and any minor steps, which might be needed, would be easy, cheap, and simple. In the case of positive impacts, alternative means would almost all likely be better, in one or a number of ways, than this means of achieving the benefit.

- **(13-30) Low:** Impact would be of a low order and with little real effect. In the case of negative impacts, mitigation and / or remedial activity would be either easily achieved or little would be required, or both. In case of positive impacts alternative means for achieving this benefit would likely be easier, cheaper, more effective, less time-consuming, or some combination of these.

- **(31-56) Moderate**: Impact would be real but not substantial. In the case of negative impacts, mitigation and / or remedial activity would be both feasible and fairly easily possible. In the case of positive impacts, other means of achieving these benefits would be about equal in time, cost, and effort.

- **(57-90) High**: Impacts of a substantial order. In the case of negative impacts, mitigation and / or remedial activity would be feasible but difficult, expensive, time-consuming or some combination of these. In the case of positive impacts, other means of achieving this benefit would be feasible, but these would be more difficult, expensive, time-consuming or some combination of these.

- **(91-100) Very High:** Of the highest order possible. In the case of negative impacts, there would be no possible mitigation and / or remedial activity and in the case of positive impacts, there is no real alternative to achieving the benefit.

# 2. ENVIRONMENTAL IMPACT ASSESSMENT

The tables that follow detail the assessment of the significance of anticipated environmental impact during the entire project life cycle according to the impact assessment criteria. The findings of the various specialists appointed as part of the BAR process have informed the impact assessment below. These impacts been supplemented with additional impacts as deemed appropriate by the EAP.

## 2.1 Impacts that may result from the Planning and Design Phase

Planning and design phase impacts refer to those impacts that may be mitigated through planning decisions. In this respect, the potential impacts are articulated as '**risks**' rather than '**impacts**', because in reality, no impact occurs on the ground at all during the planning phase. The rationale behind this approach is to demonstrate the mitigating effect of environmentally responsible and appropriate planning and design during this phase.

| **Potential impacts:** | Extent (1-5) | Duration (1-5) | Magnitude (0-10) | Probability (1-5) | **Significance** | **Proposed mitigation:** | Extent (1-5) | Duration (1-5) | Magnitude (0-10) | Probability (1-5) | **Significance** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ALTERNATIVE A1 (PREFERRED ALTERNATIVE)** | | | | | | | | | | | |
| **Direct Impacts** | | | | | | | | | | | |
| **Ground water** | | | | | | | | | | | |
| None. | | | | | | • | | | | | |
| **Hydrology (surface water)** | | | | | | | | | | | |
| Risk to ecological function of the riparian habitat along the Lephalala, Bloklandspruit, Klein Mogalakwena Rivers and drainage lines due to the placement of structures and infrastructure within the habitat.<br><br>This is of particular relevance to road crossings and sites located near to the watercourses such as the Mohlatse Plains, Tamboti, Kogong View, | 1 | 4 | 8 | 4 | **52 M** | • Planning and compliance, including ground water, surface water and storm water management as per the EMPr (section 7.1).<br>• Development footprint planning as per the EMPr (section 7.2). | 1 | 4 | 4 | 3 | **27 L** |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| Rundgren's Rest, Marula, Rapula Rocks, Rapids, Mooka, Lepotedi, Melora, Modumela, Kwena, Drangonfly, Molope Plains, Burkia, Bushmans Painting, Elephant Pool. | | | | | | | | | | | |
| Risk to hydrological function (quality and fluctuation properties) along the Lephalala, Bloklandspruit, Klein Mogalakwena Rivers and drainage lines due to activity and disturbance within the watercourse.<br><br>This is of particular relevance to road crossings and sites located near to the watercourses such as the Mohlatse Plains, Tamboti, Kogong View, Rundgren's Rest, Marula, Rapula Rocks, Rapids, Mooka, Lepotedi, Melora, Modumela, Kwena, Drangonfly, Molope Plains, Burkia, Bushmans Painting, Elephant Pool. | 2 | 5 | 8 | 4 | **60 H** | | 2 | 5 | 4 | 3 | **33 M** |
| **Soil** | | | | | | | | | | | |
| Erosion risk to soils due to increased hard surface, associated increase in storm water runoff and the placement of roads on steep slopes. | 1 | 4 | 8 | 4 | **52 M** | • Planning and compliance, including ground water, surface water, storm water management and waste management as per the EMPr (section 7.1).<br>• Development footprint planning as per the EMPr (section 7.2). | 1 | 4 | 4 | 3 | **27 L** |
| **Air** | | | | | | | | | | | |
| None. | | | | | | • | | | | | |
| **Biodiversity (Flora)** | | | | | | | | | | | |
| Risk to Waterberg Mountain Bushveld vegetation classified as Least Threatened and associated loss of species richness due to the placement of structures and infrastructure and the game drive routes. | 3 | 4 | 6 | 4 | **52 M** | • Planning and compliance, including protected species, storm water management and waste management as per the EMPr (section 7.1).<br>• Development footprint planning as per the EMPr (section 7.2). | 3 | 4 | 4 | 3 | **33 M** |
| Risk to sensitive habitats, specifically riparian zones along the Lephalala River due to the placement of structures and infrastructure and certain game drive routes. | 3 | 4 | 8 | 4 | **60 H** | | 3 | 4 | 4 | 3 | **33 M** |
| Risk to Conservation Important Species and | 3 | 5 | 8 | 4 | **64** | | 3 | 5 | 4 | 2 | **24** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| protected trees. I.e. *Sclerocarya birrea subsp. caffra, Scadoxus puniceus, Huernia cf. zebrine, Aloe spicata, Boscia albitrunca, Elaeodendron transvaalense, Combretum imberbe, Spirostachys Africana, Ansellia Africana, Drimia sanguinea, Boophone disticha* due to the placement of structures and infrastructure within the habitat and/ or within the demarcated buffer zones. | | | | | **H** | | | | | | **L** |
| **Biodiversity (Fauna)** | | | | | | | | | | | | |
| Risk to the riparian zone which acts as a wildlife corridor and is an important faunal habitat for the confirmed Vulnerable-listed species such as the African Finfoot and Hippopotamus due removal and alternation of the habitat and the development of structures, infrastructure and game drive routes. | 1 | 4 | 8 | 4 | **52 M** | • Planning and compliance, including protected species, storm water management and waste management as per the EMPr (section 7.1).<br>• Development footprint planning as per the EMPr (section 7.2). | 1 | 4 | 4 | 3 | **27 L** |
| Risk of habitat fragmentation due to removal and alteration of the habitat and the development of structures, infrastructure and game drive routes. | 1 | 4 | 8 | 4 | **52 M** | | 1 | 4 | 4 | 3 | **27 L** |
| **Land Use & Agricultural Potential** | | | | | | | | | | | | |
| None. | | | | | | • | | | | | | |
| **Heritage** | | | | | | | | | | | | |
| Risk to rock art sites located at certain custodian sites, namely Bushman painting, Rapids and Kgokong Pan. | 3 | 5 | 8 | 4 | **64 H** | • Planning and compliance including heritage as per the EMPr (section 7.1.). | 3 | 5 | 6 | 2 | **28 L** |
| Risk to Late Iron Age sites located on certain custodian sites and along certain proposed access routes.<br><br>This is of particular relevance to Melora and Modumela custodian sites and proposed access roads. | 3 | 5 | 8 | 4 | **64 H** | | 3 | 5 | 6 | 3 | **42 M** |
| Risk to possible grave site located on the custodian site Burkia. | 3 | 5 | 10 | 4 | **72 H** | | 3 | 5 | 6 | 2 | **28 L** |
| **Visual** | | | | | | | | | | | | |
| Risk to visual quality of the surrounding area and | 3 | 4 | 8 | 4 | **60** | • Development footprint planning as per the EMPr | 3 | 4 | 4 | 3 | **33** |

| | | | | | | | | | | | | |
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| sense of place due to the development of structures and infrastructure throughout the Lapalala Wilderness Reserve within an otherwise natural environment. | | | | | **H** | (section 7.2).<br>• Visual environment planning as per the EMPr (section 7.3). | | | | | **M** |
| Risk of glare from high-tech and reflective materials used for solar panels throughout the Lapalala Wilderness Reserve. | 2 | 4 | 10 | 4 | **64 H** | | 2 | 4 | 4 | 3 | **30 L** |
| **Socio-economics** | | | | | | | | | | | |
| None. | | | | | | • | | | | | |
| **Municipal services & traffic** | | | | | | | | | | | |
| None. | | | | | | • | | | | | |
| **Indirect Impacts** | | | | | | | | | | | |
| None | | | | | | | | | | | |
| **Cumulative Impacts** | | | | | | | | | | | |
| **Biodiversity (Flora)** | | | | | | | | | | | |
| Cumulative loss of Waterberg Mountain Bushveld vegetation classified as Least Threatened and associated loss of species richness. This will result in the overall reduction of Waterberg Mountain Bushveld vegetation. | 3 | 4 | 6 | 4 | **52 M** | • Planning and compliance, including protected species, storm water management and waste management as per the EMPr (section 7.1).<br>• Development footprint planning as per the EMPr (section 7.2). | 3 | 4 | 4 | 3 | **33 M** |
| Cumulative loss of sensitive habitats, specifically riparian zones. This will result in the overall reduction of riverine vegetation. | 3 | 4 | 8 | 4 | **60 H** | | 3 | 4 | 4 | 3 | **33 M** |
| Cumulative reduction of Conservation Important Species and protected trees. I.e. *Sclerocarya birrea subsp. caffra, Scadoxus puniceus, Huernia cf. zebrine, Aloe spicata, Boscia albitrunca, Elaeodendron transvaalense, Combretum imberbe, Spirostachys Africana, Ansellia Africana, Drimia sanguinea, Boophone disticha*. This will result in the overall loss of these species. | 3 | 5 | 8 | 4 | **64 H** | | 3 | 5 | 4 | 3 | **36 M** |
| **Biodiversity (Fauna)** | | | | | | | | | | | |
| Cumulative loss of faunal habitat. | 2 | 4 | 8 | 3 | **42 M** | • Planning and compliance, including protected species, storm water management and waste | 2 | 4 | 4 | 2 | **20 L** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | management as per the EMPr (section 7.1).<br>• Development footprint planning as per the EMPr (section 7.2). | | | | | | |
| **Heritage** | | | | | | | | | | | | |
| Cumulative loss of rock art and Late Iron Age sites which would result in an overall loss of these artefacts. | 1 | 5 | 8 | 4 | **56 M** | • Planning and compliance, including protected species, heritage, storm water management and waste management as per the EMPr (section 7.1).<br>• Development footprint planning as per the EMPr (section 7.2). | 1 | 5 | 4 | 2 | **20 L** |

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| **ALTERNATIVE A2 (TECHNOLOGY)** | | | | | | | | | | | | |
| **Direct Impacts** | | | | | | | | | | | | |
| **Ground water** | | | | | | | | | | | | |
| None. | | | | | | • | | | | | | |
| **Hydrology (surface water)** | | | | | | | | | | | | |
| Risk to ecological function of the riparian habitat along the Lephalala, Bloklandspruit, Klein Mogalakwena Rivers and drainage lines due to the placement of structures and infrastructure within the habitat/ buffer zones.<br><br>Increased impact is expected due to the installation of Eskom power cables under watercourses. | 1 | 4 | 10 | 4 | **60 H** | • As per Alternative 1 | 1 | 4 | 8 | 4 | **52 M** |
| Risk to hydrological function (quality and fluctuation properties) along the Lephalala, Bloklandspruit, Klein Mogalakwena Rivers due to activity and disturbance within the watercourse.<br><br>Increased impact is expected due to the installation of Eskom power cables under watercourses. | 2 | 5 | 10 | 4 | **68 H** | | 2 | 5 | 8 | 3 | **45 M** |
| **Soil** | | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | | |
| **Air** | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| None. | | | | | | • | | | | | | |
| **Biodiversity (Flora)** | | | | | | | | | | | | |
| Risk to Waterberg Mountain Bushveld vegetation classified as Least Threatened and associated loss of species richness due to the placement of structures and infrastructure and the game drive routes.<br><br>Increased impact is expected owing to the extension of the existing overhead powerlines. This will result in the development footprint increasing and being located outside of the custodian development sites. | 3 | 4 | 8 | 4 | **60 H** | • As per Alternative 1 | 3 | 4 | 4 | 3 | **33 M** |
| Risk to sensitive habitats, specifically riparian zones along the Lephalala River due to the placement of structures and infrastructure and certain game drive routes.<br><br>Increased impact is expected owing to the extension of the existing overhead powerlines. This will result in the development footprint increasing and being located outside of the custodian development sites. | 3 | 4 | 10 | 4 | **68 H** | | 3 | 4 | 8 | 4 | **60 H** |
| **Biodiversity (Fauna)** | | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | | |
| **Land use and Agricultural potential** | | | | | | | | | | | | |
| None. | | | | | | • | | | | | | |
| **Heritage** | | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | | |
| **Visual** | | | | | | | | | | | | |
| Risk to visual quality of the surrounding area and sense of place due to the development of structures and infrastructure throughout the Lapalala Wilderness Reserve within an otherwise natural environment.<br><br>Increased impact is anticipated owing to the | 3 | 4 | 10 | 4 | **68 H** | • As per Alternative 1 | 3 | 4 | 8 | 3 | **45 M** |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| extension of the existing overhead powerlines. | | | | | | | | | | | |
| **Socio economics** | | | | | | | | | | | |
| None. | | | | | | • | | | | | |
| **Services & traffic** | | | | | | | | | | | |
| None. | | | | | | • | | | | | |
| **Indirect Impacts** | | | | | | | | | | | |
| None | | | | | | | | | | | |
| **Cumulative Impacts** | | | | | | | | | | | |
| **Biodiversity (Flora)** | | | | | | | | | | | |
| Cumulative loss of Waterberg Mountain Bushveld vegetation classified as Least Threatened and associated loss of species richness due to the placement of structures and infrastructure and the game drive routes.<br><br>Increased impact is expected owing to the extension of the existing overhead powerlines. This will result in the development footprint increasing and being located outside of the custodian development sites. | 3 | 4 | 8 | 4 | **60 H** | • As per Alternative 1 | 3 | 4 | 4 | 3 | **33 M** |
| Cumulative loss of sensitive habitats, specifically riparian zones along the Lephalala River due to the placement of structures and infrastructure and certain game drive routes.<br><br>Increased impact is expected owing to the extension of the existing overhead powerlines. This will result in the development footprint increasing and being located outside of the custodian development sites. | 3 | 4 | 10 | 4 | **68 H** | | 3 | 4 | 8 | 4 | **60 H** |
| **Biodiversity (Fauna)** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |

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| **NO-PROJECT ALTERNATIVE** |
| **Direct Impacts** |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| None. | | | | | | • | | | | | |
| **Indirect Impacts** | | | | | | | | | | | |
| None. | | | | | | • | | | | | |
| **Cumulative Impacts** | | | | | | | | | | | |
| None. | | | | | | • | | | | | |

## 2.2 Impacts that may result from the Construction Phase

Construction phase impacts refer to those impacts that may be mitigated through sound construction management.

| **Potential impacts:** | Extent (1-5) | Duration (1-5) | Magnitude (0-10) | Probability (1-5) | **Significance** | **Proposed mitigation:** | Extent (1-5) | Duration (1-5) | Magnitude (0-10) | Probability (1-5) | **Significance** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ALTERNATIVE A1 (PREFERRED ALTERNATIVE)** | | | | | | | | | | | |
| **Direct Impacts** | | | | | | | | | | | |
| **Ground water** | | | | | | | | | | | |
| Depletion of ground water due to overuse and waste during construction activities | 2 | 1 | 6 | 3 | **27 L** | • Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)<br>• Site establishment, including site demarcation, accommodation, pollution control and access roads as per the EMPr (section 8.2)<br>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).<br>• Vehicles and equipment management as per the EMPr (section 8.7). | 2 | 1 | 4 | 2 | **14 L** |
| Pollution and contamination of ground water due to:<br>• Surface runoff<br>• Unmanaged sewage discharge, leaks and spills<br>• Solvent, paints and chemical spills<br>• Hydrocarbon and fuel leaks and spills | 2 | 1 | 8 | 3 | **33 M** | | 2 | 1 | 4 | 2 | **14 L** |
| **Hydrology (surface water)** | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| Disturbance and loss of ecological function of the habitat (physical structure) along the Lephalala, Bloklandspruit, Klein Mogalakwena Rivers and drainage lines due to:<br><br>• Clearing and destruction of riparian and wetland vegetation<br>• Loss of fringing vegetation and erosion of denuded areas<br>• Invasion by alien invasive trees and plants<br>• Alteration in natural fire regimes<br>• Shading of natural vegetation<br>• Destabilization of banks<br><br>This is of particular relevance to road crossings and sites located near to the watercourses such as the Mohlatse Plains, Tamboti, Kogong View, Rundgren's Rest, Marula, Rapula Rocks, Rapids, Mooka, Lepotedi, Melora, Modumela, Kwena, Drangonfly, Molope Plains, Burkia, Bushmans Painting, Elephant Pool. | 1 | 1 | 8 | 4 | **40 M** | • Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)<br>• Site establishment, including site demarcation, accommodation, pollution control, access roads and protection of the riparian system as per the EMPr (section 8.2)<br>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).<br>• Stockpiles, storage and handling as per the EMPr (section 8.4).<br>• Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).<br>• Alien plant control as per the EMPr (section 8.6).<br>• Vehicles and equipment management as per the EMPr (section 8.7).<br>• Socio-economic management, including staff, visual as per the EMPr (section 8.8).<br>• Fire management as per the EMPr (section 8.9).<br>• Rehabilitation as per the EMPr (section 8.10). | 1 | 1 | 6 | 3 | **24 L** |
| Pollution and contamination of surface water of the Lephalala, Bloklandspruit, Klein Mogalakwena Rivers due to:<br><br>• Unmanaged runoff of grey water, cement slurry and wash water.<br>• Unmanaged sewage discharge, leaks and spills<br>• Solvent, paints and chemical spills<br>• Litter and other inert construction waste.<br>• Hydrocarbon and fuel leaks and spills | 3 | 1 | 8 | 3 | **36 M** | | 3 | 1 | 4 | 2 | **26 L** |
| Disturbance and loss of hydrological function (quality and fluctuation properties) of the Lephalala, Bloklandspruit, Klein Mogalakwena Rivers | 2 | 5 | 8 | 4 | **60 H** | | 2 | 5 | 4 | 3 | **33 M** |

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| particularly at the new River crossings due to:<br><br>• Impeded and / or redirected flow due to activity within the water course<br>• Uncontrolled discharges into the water resource (storm water)<br>• Alteration of surface characteristics (roughness) due to activity within the water course<br>• Removal of stabilising vegetation<br>• Sedimentation and siltation from erosion<br>• Destabilization of banks<br><br>This is of particular relevance to road crossings and sites located near to the watercourses such as the Mohlatse Plains, Tamboti, Kogong View, Rundgren's Rest, Marula, Rapula Rocks, Rapids, Mooka, Lepotedi, Melora, Modumela, Kwena, Drangonfly, Molope Plains, Burkia, Bushmans Painting, Elephant Pool. | | | | | | | | | | | |
| **Soil** | | | | | | | | | | | |
| Soil contamination and pollution due to:<br><br>• Unmanaged surface runoff (grey water, cement slurry and wash water)<br>• Unmanaged sewage discharge, leaks and spills<br>• Solvent, paints and chemical spills<br>• Litter and other inert construction waste.<br>• Hydrocarbon and fuel leaks and spills | 1 | 1 | 6 | 4 | **32 M** | • Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)<br>• Site establishment, including site demarcation, accommodation, pollution control and access roads as per the EMPr (section 8.2)<br>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3). | 1 | 1 | 4 | 3 | **18 L** |
| Soil erosion by wind and rain due to:<br><br>• The removal of stabilising vegetation<br>• Soil compaction by movement of construction vehicles, equipment and activities<br>• Decrease in water infiltration and an increase of | 1 | 4 | 6 | 3 | **33 M** | • Stockpiles, storage and handling as per the EMPr (section 8.4).<br>• Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).<br>• Vehicles and equipment management as per the | 1 | 4 | 4 | 2 | **18 L** |

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| water runoff in construction areas<br>• Disturbance of sensitive (sodic) soils<br>• Bank destabilisation due to construction of river crossings<br><br>Particularly with regards to road crossings and roads on steep slopes. | | | | | | EMPr (section 8.7).<br>• Rehabilitation as per the EMPr (section 8.10). | | | | | | |
| **Air** | | | | | | | | | | | | |
| Air pollution due emissions from construction vehicles and equipment. | 3 | 1 | 4 | 4 | **32 M** | • Site establishment, including site demarcation, accommodation, pollution control and access roads as per the EMPr (section 8.2)<br>• Stockpiles, storage and handling as per the EMPr (section 8.4).<br>• Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).<br>• Vehicles and equipment management as per the EMPr (section 8.7).<br>• Socio-economic management, including visual as per the EMPr (section 8.8).<br>• Fire management as per the EMPr (section 8.9).<br>• Rehabilitation as per the EMPr (section 8.10). | 3 | 1 | 4 | 3 | **24 L** |
| Dust liberated by general construction activities and movement of construction vehicles. | 2 | 1 | 6 | 4 | **36 M** | | 2 | 1 | 4 | 3 | **21 L** |
| Smoke from open fires used by site staff for heating and cooking as well as from uncontrolled fires. | 2 | 1 | 6 | 3 | **27 L** | | 2 | 1 | 4 | 2 | **14 L** |
| **Biodiversity (Flora)** | | | | | | | | | | | | |
| *Removal of invader alien species found in the riparian zones located along the banks of the watercourses (positive impact).* | *1* | *1* | *4* | *3* | ***18 L*** | • Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)<br>• Site establishment, including site demarcation, accommodation, pollution control, access roads, protection of flora, and protection of the riparian system as per the EMPr (section 8.2)<br>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).<br>• Stockpiles, storage and handling as per the EMPr | *1* | *1* | *4* | *5* | ***30 L*** |
| Loss of Waterberg Mountain Bushveld vegetation classified as Least Threatened and associated loss of species richness due to:<br><br>• Site clearing ahead of construction<br>• General construction activities and movement of construction vehicles<br>• Unmanaged sewage discharge, leaks and spills | 1 | 4 | 4 | 5 | **45 M** | | 1 | 4 | 2 | 4 | **28 L** |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • Solvent, paints and chemical spills<br>• Hydrocarbon and fuel leaks and spills<br>• Litter and other inert construction waste | | | | | | (section 8.4).<br>• Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).<br>• Alien plant control as per the EMPr (section 8.6).<br>• Vehicles and equipment management as per the EMPr (section 8.7).<br>• Fire management as per the EMPr (section 8.9).<br>• Rehabilitation as per the EMPr (section 8.10). | | | | | |
| Disturbance of sensitive habitats, specifically riparian zones due to:<br><br>• Site clearing ahead of construction<br>• General construction activities and movement of construction vehicles<br>• Unmanaged sewage discharge, leaks and spills<br>• Solvent, paints and chemical spills<br>• Litter and other inert construction waste.<br>• Hydrocarbon and fuel leaks and spills<br><br>This is of particular relevance to road crossings and sites located near to the watercourses such as the Mohlatse Plains, Tamboti, Kogong View, Rundgren's Rest, Marula, Rapula Rocks, Rapids, Mooka, Lepotedi, Melora, Modumela, Kwena, Drangonfly, Molope Plains, Burkia, Bushmans Painting, Elephant Pool. | 1 | 4 | 8 | 4 | **52 M** | | 1 | 4 | 8 | 3 | **39 M** |
| Destruction and damage to Conservation Important Species and protected trees. I.e. *Sclerocarya birrea subsp. caffra, Scadoxus puniceus, Huernia cf. zebrine, Aloe spicata, Boscia albitrunca, Elaeodendron transvaalense, Combretum imberbe, Spirostachys Africana, Ansellia Africana, Drimia sanguinea, Boophone disticha* due to:<br><br>• Site clearing ahead of construction<br>• General construction activities and movement of construction vehicles | 1 | 5 | 8 | 4 | **56 M** | | 1 | 5 | 4 | 3 | **30 L** |
| Increase in exotic vegetation/alien species and bush encroachment into disturbed soils and areas due to: | 1 | 4 | 8 | 4 | **52 M** | | 1 | 4 | 8 | 2 | **26 L** |

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| • Unmanaged cleared and disturbed areas, as well as, stockpiles<br>• Unrehabilitated areas cleared and disturbed during construction<br>• Construction vehicles operating on other sites and carrying material and seed onto site<br><br>Bush encroachment is the process, which transforms grassy vegetation into a woody species-dominated one. This is recognised as a very serious problem throughout Sub-Saharan Africa, as it means that large areas of grazing lands are lost (or reduced in capacity), and it transforms habitats and reduces species diversity. | | | | | | | | | | | |
| **Biodiversity (Fauna)** | | | | | | | | | | | |
| Loss of riparian vegetation (faunal habitat) which acts as a wildlife corridor and is an important faunal habitat for the confirmed Vulnerable-listed species such as the African Finfoot and Hippopotamus due to:<br><br>• Site clearing ahead of construction<br>• General construction activities and movement of construction vehicles<br>• Construction dust<br>• Construction material, litter and other inert construction waste | 1 | 4 | 8 | 4 | **52 M** | • Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)<br>• Site establishment, including site demarcation, accommodation, pollution control, access roads, protection of flora, protection of the riparian system and protection of fauna as per the EMPr (section 8.2)<br>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).<br>• Erosion control, including excavation, backfilling and trenching as per the EMPr (section 8.5).<br>• Alien plant control as per the EMPr (section 8.6).<br>• Vehicles and equipment management as per the EMPr (section 8.7).<br>• Socio-economic management, including staff as per the EMPr (section 8.8).<br>• Fire management as per the EMPr (section 8.9).<br>• Rehabilitation as per the EMPr (section 8.10). | 1 | 4 | 6 | 2 | **22 L** |
| Loss of general faunal habitat and ecological connectivity. | 2 | 4 | 8 | 4 | **56 M** | | 2 | 4 | 4 | 3 | **30 L** |
| Mortality of fauna due to:<br><br>• Dangerous trenches and excavations | 2 | 1 | 10 | 3 | **39 M** | | 2 | 1 | 4 | 2 | **14 L** |

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| • Persecution and extermination<br>• Solvent, paints and chemical spills (poisoning)<br>• Construction material, litter and other inert construction waste (suffocation)<br>• Collisions with construction vehicles | | | | | | | | | | | | |
| Poaching and snaring of fauna on site by construction staff. | 2 | 1 | 10 | 3 | **39 M** | | 2 | 1 | 6 | 3 | **27 L** |
| Increased opportunity for smuggling of poached items out of the Lapalala Wilderness Reserve due to regular presence of large construction vehicles. | 2 | 1 | 10 | 3 | **39 M** | | 2 | 1 | 6 | 3 | **27 L** |
| **Land Use & Agricultural Potential** | | | | | | | | | | | | |
| None. | | | | | | • | | | | | | |
| **Heritage** | | | | | | | | | | | | |
| *Possible discovery of new important artefacts (positive impact)* | *1* | *1* | *6* | *3* | ***24 L*** | • Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)<br>• Site establishment, including site demarcation, access roads and protection of cultural heritage as per the EMPr (section 8.2) | *1* | *1* | *6* | *3* | ***24 L*** |
| Damage to and / or destruction of archaeological, paleontological or historical artefacts unearthed during construction due to:<br><br>• Site clearing ahead of construction<br>• General construction activities and movement of construction vehicles<br><br>This is of particular relevance to the following custodian sites: Melora, Bushmans Painting, Rapids, Kgokong Pan and Modumela. | 1 | 5 | 6 | 3 | **36 M** | | 1 | 5 | 2 | 2 | **16 L** |
| Damage to and/or destruction of rock art sites located at certain custodian sites, namely Bushman painting, Rapids and Kgokong Pan. | 1 | 5 | 6 | 2 | **24 L** | | 1 | 5 | 2 | 1 | **8 N** |
| Damage to and/or destruction of Late Iron Age sites located on certain custodian sites and along certain proposed access routes.<br><br>This is of particular relevance to Melora and | 1 | 5 | 6 | 3 | **36 M** | | 1 | 5 | 4 | 2 | **20 L** |

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| Modumela custodian sites and proposed access roads. | | | | | | | | | | | |
| Damage to and/or destruction of possible grave site located on the custodian site Burkia. | 1 | 5 | 10 | 5 | **80 H** | | 1 | 5 | 10 | 1 | **16 L** |
| **Visual** | | | | | | | | | | | |
| Visual impact of construction, lighting and dust on sensitive visual receptors owing to the presence of construction equipment, camps and workers. | 2 | 1 | 8 | 4 | **44 M** | • Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)<br>• Site establishment, including site demarcation, accommodation, pollution control and access roads as per the EMPr (section 8.2)<br>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).<br>• Stockpiles, storage and handling as per the EMPr (section 8.4).<br>• Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).<br>• Vehicles and equipment management as per the EMPr (section 8.7).<br>• Socio-economic management, including staff, visual as per the EMPr (section 8.8).<br>• Fire management as per the EMPr (section 8.9).<br>• Rehabilitation as per the EMPr (section 8.10). | 2 | 1 | 4 | 3 | **21 L** |
| Visual impact of construction, lighting and dust on conservation areas within the region (Waterberg Biosphere Reserve). | 3 | 1 | 6 | 4 | **40 M** | | 3 | 1 | 2 | 2 | **12 N** |
| **Socio-economics** | | | | | | | | | | | |
| *Stimulation of the local economy, especially the local service delivery industry (i.e. accommodation, catering, cleaning, transport and security, etc.). (positive impact)* | *3* | *1* | *4* | *2* | ***16 L*** | • Socio-economic planning as per the EMPr (section 7.4).<br>• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)<br>• Site establishment, including accommodation and access roads as per the EMPr (section 8.2)<br>• Vehicles and equipment management as per the EMPr (section 8.7). | *3* | *1* | *4* | *3* | ***24 L*** |
| *Creation of short-term employment and business opportunities and the opportunity for skills development and on-site training. (Positive impact).*<br><br>*Jobs and employment opportunities will be created,* | *2* | *1* | *6* | *3* | ***27 L*** | | *2* | *1* | *6* | *4* | ***36 M*** |

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| *with a percentage being low and semi-skilled.* | | | | | | • Socio-economic management, including staff as per the EMPr (section 8.8).<br>• Fire management as per the EMPr (section 8.9). | | | | | |
| Noise, dust and safety impacts and disturbance to adjacent landowners and other custodians due to general construction activities and movement of construction vehicles. | 2 | 1 | 6 | 4 | **36 M** | | 2 | 1 | 4 | 3 | **21 L** |
| An increase in construction workers and associated increase in social problems for the community, including:<br><br>• An increase in alcohol and drug use;<br>• An increase in crime levels;<br>• An increase in teenage and unwanted pregnancies;<br>• An increase in prostitution;<br>• An increase in sexually transmitted diseases (STDs).<br>• An increase in vandalism. | 3 | 1 | 4 | 3 | **24 L** | | 3 | 1 | 4 | 2 | **16 L** |
| Increase in casual workers and associated increase in poaching. | 1 | 1 | 8 | 4 | **40 M** | | 1 | 1 | 4 | 4 | **24 L** |
| Increased risk of veld fires due to the presence of construction workers on site. | 2 | 1 | 10 | 4 | **52 M** | | 2 | 1 | 4 | 3 | **21 L** |
| **Services & traffic** | | | | | | | | | | | | |
| Increase in traffic on the surrounding roads due to construction vehicles. | 2 | 1 | 6 | 4 | **36 M** | • Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)<br>• Site establishment, including access roads as per the EMPr (section 8.2)<br>• Vehicles and equipment management as per the EMPr (section 8.7).<br>• Socio-economic management, including visual as per the EMPr (section 8.8). | 2 | 1 | 4 | 3 | **21 L** |
| Increase in the number and frequency of construction vehicles accessing the site and the resultant noise, dust, and safety impacts on other road users, residents of the local community and adjacent landowners. | 2 | 2 | 6 | 4 | **40 M** | | 2 | 1 | 2 | 3 | **15 L** |
| **Indirect Impacts** | | | | | | | | | | | | |
| **Biodiversity (Flora)** | | | | | | | | | | | | |
| Loss of floral biodiversity, Conservation Important Species and protected trees due to increased | 3 | 1 | 6 | 3 | **30 L** | • As above | 3 | 1 | 4 | 2 | **16 L** |

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| incidence of veld fires | | | | | | | | | | | |
| **Biodiversity (Fauna)** | | | | | | | | | | | |
| Loss of faunal biodiversity due to increased incidence of veld fires | 3 | 1 | 8 | 3 | **36 M** | • As above | 3 | 1 | 6 | 2 | **20 L** |
| **Socio-economics** | | | | | | | | | | | |
| Loss of property and threat to human life due to increased incidence of veld fires | 3 | 1 | 6 | 3 | **30 L** | • As above | 3 | 1 | 4 | 2 | **16 L** |
| **Traffic and services** | | | | | | | | | | | |
| Degradation of local roads due to the increase in the numbers of heavy vehicles. | 2 | 1 | 6 | 4 | **36 M** | • As above | 2 | 1 | 4 | 3 | **21 L** |
| **Cumulative Impacts** | | | | | | | | | | | |
| **Biodiversity (Flora)** | | | | | | | | | | | |
| Cumulative loss of Loss of Waterberg Mountain Bushveld vegetation classified as Least Threatened and associated loss of species richness. | 3 | 4 | 6 | 3 | **39 M** | • Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)<br>• Site establishment, including site demarcation, accommodation, pollution control, access roads, protection of flora, and protection of the riparian system as per the EMPr (section 8.2)<br>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).<br>• Stockpiles, storage and handling as per the EMPr (section 8.4).<br>• Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).<br>• Alien plant control as per the EMPr (section 8.6).<br>• Vehicles and equipment management as per the EMPr (section 8.7).<br>• Fire management as per the EMPr (section 8.9).<br>• Rehabilitation as per the EMPr (section 8.10). | 3 | 4 | 2 | 3 | **27 L** |
| Cumulative loss of ecological function of sensitive habitats, specifically riparian zones. | 3 | 4 | 8 | 3 | **45 M** | | 3 | 4 | 6 | 2 | **26 L** |
| Cumulative reduction and damage to Conservation Important Species and protected trees. I.e. *Sclerocarya birrea subsp. caffra, Scadoxus puniceus, Huernia cf. zebrine, Aloe spicata, Boscia albitrunca, Elaeodendron transvaalense, Combretum imberbe, Spirostachys Africana, Ansellia Africana, Drimia sanguinea, Boophone disticha* | 3 | 5 | 8 | 4 | **64 H** | | 3 | 5 | 4 | 2 | **24 L** |
| **Biodiversity (Fauna)** | | | | | | | | | | | |
| Cumulative loss of faunal habitat, particularly the sensitive riparian habitat. | 2 | 4 | 8 | 3 | **42 M** | • Pre-construction planning, including planning and preparation as per the EMPr (section 8.1) | 2 | 4 | 6 | 2 | **20 L** |

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| | | | | | | • Site establishment, including site demarcation, accommodation, pollution control, access roads, protection of flora, protection of the riparian system and protection of fauna as per the EMPr (section 8.2)<br>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).<br>• Erosion control, including excavation, backfilling and trenching as per the EMPr (section 8.5).<br>• Alien plant control as per the EMPr (section 8.6).<br>• Vehicles and equipment management as per the EMPr (section 8.7).<br>• Socio-economic management, including staff as per the EMPr (section 8.8).<br>• Fire management as per the EMPr (section 8.9).<br>• Rehabilitation as per the EMPr (section 8.10). | | | | | |
| **Heritage** | | | | | | | | | | | | |
| Cumulative loss of rock art and Late Iron Age sites resulting in an overall loss of these artefacts. | 1 | 5 | 8 | 4 | **56 M** | • Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)<br>• Site establishment, including site demarcation, access roads and protection of heritage resources as per the EMPr (section 8.2) | 1 | 5 | 4 | 2 | **20 L** |
| **Socio-economics** | | | | | | | | | | | | |
| *Community upliftment and the opportunity to up-grade and improve skills levels in the area. (positive impact)* | *3* | *1* | *2* | *2* | ***12 N*** | • Socio-economic planning as per the EMPr (section 7.4).<br>• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)<br>• Site establishment, including accommodation and access roads as per the EMPr (section 8.2)<br>• Vehicles and equipment management as per the EMPr (section 8.7).<br>• Socio-economic management, including staff as per the EMPr (section 8.8).<br>• Fire management as per the EMPr (section 8.9). | *3* | *1* | *4* | *3* | ***24 L*** |

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| **Services & traffic** | | | | | | | | | | | |
| Cumulative increase in traffic and the resultant noise, dust, and safety impacts on other road users, residents of the local community and adjacent landowners. | 3 | 1 | 6 | 4 | **40 M** | • Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)<br>• Site establishment, including access roads as per the EMPr (section 8.2)<br>• Vehicles and equipment management as per the EMPr (section 8.7).<br>• Socio-economic management, including visual as per the EMPr (section 8.8). | 3 | 1 | 4 | 2 | **16 L** |

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| **ALTERNATIVE A2 (TECHNOLOGY)** | | | | | | | | | | | |
| **Direct Impacts** | | | | | | | | | | | |
| **Ground water** | | | | | | | | | | | |
| As per Alternative 1. | | | | | | • As per Alternative 1 | | | | | |
| **Hydrology (surface water)** | | | | | | | | | | | |
| Disturbance and loss to ecological function of the riparian habitat along the Lephalala, Bloklandspruit, Klein Mogalakwena Rivers due to:<br><br>• Clearing and destruction of riparian and wetland vegetation<br>• Loss of fringing vegetation and erosion of denuded areas<br>• Invasion by alien invasive trees and plants<br>• Alteration in natural fire regimes<br>• Shading of natural vegetation<br>• Destabilization of banks<br><br>Increased impact is expected owing to the extension of the existing overhead powerlines. This will result in the development footprint increasing and being located outside of the custodian development sites. | 1 | 1 | 8 | 5 | **50 M** | • As per Alternative 1 | 1 | 1 | 6 | 3 | **27 L** |

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| Pollution and contamination of surface water of the Lephalala, Bloklandspruit, Klein Mogalakwena Rivers due to:<br><br>• Unmanaged runoff of grey water, cement slurry and wash water.<br>• Unmanaged sewage discharge, leaks and spills<br>• Solvent, paints and chemical spills<br>• Litter and other inert construction waste.<br>• Hydrocarbon and fuel leaks and spills<br>• Destabilization of banks<br><br>Increased impact is expected owing to the extension of the existing overhead powerlines. This will result in the development footprint increasing and being located outside of the custodian development sites. | 3 | 1 | 8 | 3 | **36 M** | | 3 | 1 | 6 | 3 | **30 L** |
| Disturbance and loss of hydrological function (quality and fluctuation properties) of Lephalala, Bloklandspruit, Klein Mogalakwena, particularly at the road river crossings due to:<br><br>• Impeded and / or redirected flow due to activity within the water course<br>• Uncontrolled discharges into the water resource (storm water)<br>• Alteration of surface characteristics (roughness) due to activity within the water course<br>• Removal of stabilising vegetation<br>• Sedimentation and siltation from erosion<br><br>Increased impact is expected owing to the extension of the existing overhead powerlines. This will result in the development footprint increasing | 2 | 5 | 10 | 4 | **68 H** | | 2 | 5 | 6 | 3 | **42 M** |

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| and being located outside of the custodian development sites. | | | | | | | | | | | |
| **Soil** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| Soil erosion by wind and rain due to:<br><br>• The removal of stabilising vegetation<br>• Soil compaction by movement of construction vehicles, equipment and activities<br>• Decrease in water infiltration and an increase of water runoff in construction areas<br>• Disturbance of sensitive (sodic) soils<br>• Bank destabilisation due to construction of river crossings<br><br>Increased impact is expected owing to the extension of the existing overhead powerlines. This will result in the development footprint increasing and being located outside of the custodian development sites. The removal of stabilizing vegetation along the banks of the watercourses could lead to bank destabilization. | 1 | 4 | 8 | 4 | **52 M** | | 1 | 4 | 6 | 3 | **33 M** |
| **Air** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Biodiversity (Flora)** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| Loss of Waterberg Mountain Bushveld vegetation classified as Least Threatened and associated loss of species richness due to:<br><br>• Site clearing ahead of construction<br>• General construction activities and movement of construction vehicles<br>• Unmanaged sewage discharge, leaks and spills | 1 | 4 | 6 | 5 | **55 M** | | 1 | 4 | 4 | 4 | **36 M** |

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| • Solvent, paints and chemical spills<br>• Hydrocarbon and fuel leaks and spills<br>• Litter and other inert construction waste<br><br>This impact is expected to be slightly higher owing to the increase in the development footprint due to the extension of the powerlines. | | | | | | | | | | | |
| Disturbance of sensitive habitats, specifically riparian zones due to:<br><br>• Site clearing ahead of construction<br>• General construction activities and movement of construction vehicles<br>• Unmanaged sewage discharge, leaks and spills<br>• Solvent, paints and chemical spills<br>• Litter and other inert construction waste.<br>• Hydrocarbon and fuel leaks and spills<br><br>This impact is expected to be slightly higher owing to the increase in the development footprint due to the extension of the powerlines. | 1 | 4 | 10 | 4 | **60 H** | | 1 | 4 | 8 | 3 | **39 M** |
| **Biodiversity (Fauna)** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| Loss of riparian vegetation (faunal habitat) which acts as a wildlife corridor and is an important faunal habitat for the confirmed Vulnerable-listed species such as the African Finfoot and Hippopotamus due to:<br><br>• Site clearing ahead of construction<br>• General construction activities and movement of construction vehicles<br>• Construction dust<br>• Construction material, litter and other inert | 1 | 4 | 10 | 4 | **60 H** | | 1 | 4 | 8 | 3 | **39 M** |

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| construction waste<br><br>This impact is expected to be slightly higher owing to the increase in the development footprint due to the extension of the powerlines. | | | | | | | | | | | |
| **Land use and Agricultural potential** | | | | | | | | | | | |
| None. | | | | | | • | | | | | |
| **Heritage** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Visual** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Socio-economics** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Municipal services and traffic** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Indirect Impacts** | | | | | | | | | | | |
| **Biodiversity (Flora)** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Biodiversity (Fauna)** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Socio-economics** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Traffic and services** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Cumulative Impacts** | | | | | | | | | | | |
| **Biodiversity (Flora)** | | | | | | | | | | | |
| Cumulative loss of Loss of Waterberg Mountain Bushveld vegetation classified as Least Threatened and associated loss of species richness.<br><br>This impact is expected to be slightly higher owing to the increase in the development footprint due to the extension of the powerlines. | 3 | 4 | 6 | 3 | **39 M** | • As per Alternative 1 | 3 | 4 | 2 | 3 | **27 L** |
| Cumulative loss of ecological function of sensitive | 3 | 4 | 8 | 4 | **60** | | 3 | 4 | 6 | 3 | **39** |

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| habitats, specifically riparian zones.<br><br>This impact is expected to be slightly higher owing to the increase in the development footprint due to the extension of the powerlines. | | | | | **H** | | | | | | **M** |
| **Biodiversity (Fauna)** | | | | | | | | | | | |
| Cumulative loss of faunal habitat, particularly the sensitive riparian habitat.<br><br>This impact is expected to be slightly higher owing to the increase in the development footprint due to the extension of the powerlines. | 2 | 4 | 10 | 3 | **48 M** | • As per Alternative 1 | 2 | 4 | 8 | 2 | **28 L** |
| **Heritage** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Socio-economics** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Services & traffic** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |

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| **NO-PROJECT ALTERNATIVE** | | | | | | | | | | | |
| **Direct Impacts** | | | | | | | | | | | |
| None | | | | | | • | | | | | |
| **Indirect Impacts** | | | | | | | | | | | |
| None. | | | | | | • | | | | | |
| **Cumulative Impacts** | | | | | | | | | | | |
| None. | | | | | | • | | | | | |

## 2.3 Impacts that may result from the Operational Phase

Operational phase impacts refer to those impacts that may be mitigated through effective and efficient operating procedures.

| Potential impacts: | Extent (1-5) | Duration (1-5) | Magnitude (0-10) | Probability (1-5) | **Significance** | Proposed mitigation: | Extent (1-5) | Duration (1-5) | Magnitude (0-10) | Probability (1-5) | **Significance** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ALTERNATIVE A1 (PREFERRED ALTERNATIVE)** | | | | | | | | | | | |
| **Direct Impacts** | | | | | | | | | | | |
| **Ground water** | | | | | | | | | | | |
| Depletion of ground water resources due to over use and waste during operation. | 3 | 4 | 4 | 3 | **33 M** | • Biodiversity management, including access roads and resource management as per the EMPr (section 9.1)<br>• Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)<br>• Erosion control as per the EMPr (section 9.3)<br>• Socio economic management, including staff management as per the EMPr (section 9.5)<br>• Vehicles and equipment management as per the EMPr (section 9.4) | 3 | 4 | 2 | 2 | **18 L** |
| Pollution and contamination of ground water due to:<br>• Unmanaged storm water runoff<br>• Unmanaged sewage discharge<br>• Sewage leaks and spills<br>• Herbicides, pesticides and fertilisers<br>• Discharge and spill of solvents, paints, chemicals and cleaning products<br>• Discharge and spill of hydrocarbons and fuel | 3 | 4 | 6 | 3 | **39 M** | | 3 | 4 | 4 | 2 | **22 L** |
| **Hydrology (surface water)** | | | | | | | | | | | |
| Disturbance and loss of ecological function of the habitat (physical structure) along the Lephalala, Bloklandspruit, Klein Mogalakwena Rivers due to:<br>• Encroachment of alien invasive species<br>• Uncontrolled vegetation clearing and access by staff and custodians/ guests | 1 | 4 | 8 | 3 | **39 M** | • Biodiversity management, including access roads, resource management, protection of flora and alien plant control as per the EMPr (section 9.1)<br>• Materials management, including solid, liquid and hazardous waste, fuel and hazardous material as per the EMPR (section 9.2)<br>• Erosion control as per the EMPr (section 9.3) | 1 | 4 | 4 | 2 | **18 L** |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| This is of particular relevance to road crossings and sites located near to the watercourses such as the Mohlatse Plains, Tamboti, Kogong View, Rundgren's Rest, Marula, Rapula Rocks, Rapids, Mooka, Lepotedi, Melora, Modumela, Kwena, Drangonfly, Molope Plains, Burkia, Bushmans Painting, Elephant Pool. | | | | | | • Vehicles and equipment management as per the EMPr (section 9.4)<br>• Socio economic management, including staff management as per the EMPr (section 9.5)<br>• Fire management as per the EMPr (section 9.6) | | | | | |
| Pollution and contamination of surface water due to:<br><br>• Unmanaged storm water runoff<br>• Litter and uncontrolled waste<br>• Sewage leaks and spills<br>• Herbicides, pesticides and fertilisers<br>• Discharge and spill of solvents, paints, chemicals and cleaning products<br>• Discharge and spill of hydrocarbons and fuel<br><br>This is of particular relevance to road crossings and sites located near to the watercourses such as the Mohlatse Plains, Tamboti, Kogong View, Rundgren's Rest, Marula, Rapula Rocks, Rapids, Mooka, Lepotedi, Melora, Modumela, Kwena, Drangonfly, Molope Plains, Burkia, Bushmans Painting, Elephant Pool. | 2 | 4 | 6 | 3 | **36 M** | | 2 | 4 | 4 | 2 | **20 L** |
| Disturbance and loss of hydrological function (quality and fluctuation properties) along the Lephalala, Bloklandspruit, Klein Mogalakwena Rivers due to:<br><br>• Uncontrolled discharges into the water resource (storm water)<br>• Alteration of surface characteristics (roughness) due to activity within the water course (uncontrolled access by staff and custodians/ guests) | 1 | 4 | 8 | 3 | **39 M** | | 1 | 4 | 4 | 2 | **18 L** |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • Removal of stabilising vegetation (uncontrolled clearing and access by staff and custodians/ guests)<br>• Sedimentation and siltation from erosion<br><br>This is of particular relevance to road crossings and sites located near to the watercourses such as the Mohlatse Plains, Tamboti, Kogong View, Rundgren's Rest, Marula, Rapula Rocks, Rapids, Mooka, Lepotedi, Melora, Modumela, Kwena, Drangonfly, Molope Plains, Burkia, Bushmans Painting, Elephant Pool. | | | | | | | | | | | |
| **Soil** | | | | | | | | | | | |
| Soil contamination and pollution due to:<br><br>• Unmanaged storm water runoff<br>• Litter and uncontrolled waste<br>• Sewage leaks and spills<br>• Herbicides, pesticides and fertilisers<br>• Discharge and spill of solvents, paints, chemicals and cleaning products<br>• Discharge and spill of hydrocarbons and fuel | 1 | 4 | 6 | 3 | **33 M** | • Biodiversity management, including access roads, resource management, protection of flora and alien plant control as per the EMPr (section 9.1)<br>• Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)<br>• Erosion control as per the EMPr (section 9.3)<br>• Vehicles and equipment management as per the EMPr (section 9.4)<br>• Socio economic management, including staff management as per the EMPr (section 9.5) | 1 | 4 | 4 | 2 | **18 L** |
| Soil erosion due to:<br><br>• Soil compaction by uncontrolled movement of staff and guests (especially vehicles)<br>• Runoff over exposed or cleared areas that have failed to rehabilitate.<br>• Disturbance of sensitive soils by uncontrolled movement of staff and custodians/ guests (especially vehicles)<br><br>Particularly on steep slopes | 1 | 4 | 8 | 3 | **39 M** | | 1 | 4 | 4 | 2 | **18 L** |
| **Air** | | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Air pollution by emissions from increased numbers of game drive vehicles and private vehicles. | 3 | 4 | 4 | 3 | **33 M** | • Socio economic management, including staff management as per the EMPr (section 9.5) | 3 | 4 | 4 | 3 | **33 M** |
| **Biodiversity (Flora)** | | | | | | | | | | | |
| Loss of Waterberg Mountain Bushveld vegetation classified as Least Threatened and associated loss of species richness due to:<br><br>• Uncontrolled vegetation clearing and access by staff and custodians/ guests<br>• Encroachment of alien invasive species<br>• Litter and waste | 1 | 4 | 6 | 3 | **33 M** | • Biodiversity management, including access roads, resource management, protection of flora and alien plant control as per the EMPr (section 9.1)<br>• Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)<br>• Erosion control as per the EMPr (section 9.3)<br>• Vehicles and equipment management as per the EMPr (section 9.4)<br>• Socio economic management, including staff management as per the EMPr (section 9.5)<br>• Fire management as per the EMPr (section 9.6) | 1 | 4 | 4 | 2 | **18 L** |
| Disturbance of sensitive habitats, specifically riparian zones due to:<br><br>• Uncontrolled vegetation clearing and access by staff and custodians/ guests<br>• Encroachment of alien invasive species<br>• Litter and waste | 1 | 4 | 8 | 3 | **39 M** | | 1 | 4 | 4 | 3 | **27 L** |
| Destruction and damage to Conservation Important Species and protected trees. I.e. *Sclerocarya birrea subsp. caffra, Scadoxus puniceus, Huernia cf. zebrine, Aloe spicata, Boscia albitrunca, Elaeodendron transvaalense, Combretum imberbe, Spirostachys Africana, Ansellia Africana, Drimia sanguinea, Boophone disticha* due to uncontrolled vegetation clearing and access by staff and custodians/guests. | 1 | 5 | 8 | 3 | **42 M** | | 1 | 5 | 4 | 2 | **20 L** |
| Increase in exotic vegetation/alien species and bush encroachment into disturbed soils and areas in the event that the rehabilitation process is not successful.<br><br>Colonisation and re-emergence of exotic vegetation / alien species and bush encroachment into disturbed soils and poorly rehabilitated areas. Alien | 1 | 4 | 8 | 3 | **39 M** | | 1 | 4 | 6 | 2 | **22 L** |

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| invasive species tend to out-compete indigenous, slower growing species and could also result in unsuccessful rehabilitation. | | | | | | | | | | | |
| **Biodiversity (Fauna)** | | | | | | | | | | | |
| Loss of faunal habitat due to:<br>• Uncontrolled vegetation and bush clearing and access by staff and custodians/guests<br>• Encroachment of alien invasive species<br>• Litter and waste | 1 | 4 | 6 | 3 | **33 M** | • Biodiversity management, including access roads, resource management, protection of flora, alien plant control and protection of fauna as per the EMPr (section 9.1)<br>• Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)<br>• Erosion control as per the EMPr (section 9.3)<br>• Vehicles and equipment management as per the EMPr (section 9.4)<br>• Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5)<br>• Fire management as per the EMPr (section 9.6) | 1 | 4 | 4 | 2 | **18 L** |
| Faunal disturbances, displacement of taxa and changes in distribution and abundance due to:<br>• Uncontrolled vegetation and bush clearing and access by staff and custodians/guests<br>• General operations (activities) of the facility<br>• Noise from custodians/guests, staff and vehicles<br>• Night drives<br>• Perimeter safety fences | 1 | 4 | 6 | 4 | **44 M** | | 1 | 4 | 4 | 3 | **27 L** |
| Mortality of fauna due to:<br>• Persecution and extermination<br>• Solvents, paints, chemicals and cleaning products (poisoning)<br>• Litter and waste (suffocation) | 2 | 4 | 4 | 4 | **40 M** | | 2 | 4 | 4 | 2 | **20 L** |
| Poaching and snaring of faunal species by staff. | 2 | 4 | 6 | 3 | **36 M** | | 2 | 4 | 6 | 2 | **24 L** |
| **Land Use & Agricultural Potential** | | | | | | | | | | | |
| None. | | | | | | • | | | | | |
| **Heritage** | | | | | | | | | | | |
| Damage to and / or destruction of archaeological, paleontological or historical artefacts owing to uncontrolled access by custodians, guests and staff. | 1 | 4 | 8 | 4 | **52 M** | • Resource management, including the protection of heritage resources as per the EMPr (section 9.1) | 1 | 4 | 4 | 2 | **18 L** |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| This is of particular relevance to the following custodian sites: Melora, Bushmans Painting, Rapids, Kgokong Pan and Modumela. | | | | | | | | | | | |
| Damage to and/or destruction of rock art sites due to:<br>• Uncontrolled access by custodians/guests/staff<br>• Litter, smoking, fires<br>• Sites being touched by custodians/guests/staff<br><br>located at certain custodian sites, namely Bushman painting, Rapids and Kgokong Pan. | 1 | 5 | 8 | 3 | **42 M** | | 1 | 5 | 4 | 2 | **20 L** |
| Damage to and/or destruction of Late Iron Age sites owing to uncontrolled access by custodians, guests and staff.<br><br>This is of particular relevance to Melora and Modumela custodian sites and proposed access roads. | 1 | 5 | 8 | 3 | **42 M** | | 1 | 5 | 4 | 2 | **20 L** |
| Damage to and/or destruction of possible grave site located on the custodian site Burkia. | 1 | 5 | 10 | 3 | **48 M** | | 1 | 5 | 2 | 1 | **8 N** |
| **Visual** | | | | | | | | | | | |
| Potential visual impact on sensitive visual receptors in close proximity to the proposed developments. | 1 | 4 | 6 | 3 | **33 M** | • Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5) | 1 | 4 | 4 | 3 | **24 L** |
| Potential visual impact on sensitive visual receptors within the region | 2 | 4 | 4 | 3 | **30 L** | | 2 | 4 | 4 | 2 | **20 L** |
| Potential visual impact on protected and conservation areas (i.e. the Waterberg Biosphere Reserve) within the study area. | 2 | 4 | 4 | 3 | **30 L** | | 2 | 4 | 2 | 1 | **8 N** |
| Potential visual impact of the solar panels on sensitive visual receptors in close proximity thereto | 2 | 4 | 6 | 3 | **36 M** | | 2 | 4 | 2 | 2 | **16 L** |
| The potential visual impact of safety and security lighting of the developments at night on sensitive visual receptors in close proximity | 2 | 4 | 6 | 3 | **36 M** | | 2 | 4 | 4 | 2 | **20 L** |
| **Socio-economics** | | | | | | | | | | | |
| *Stimulation of the local economy, especially the* | *3* | *4* | *4* | *2* | **22** | • Socio economic management, including staff | *3* | *4* | *4* | *3* | ***33*** |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *local service delivery industry (accommodation, catering, cleaning, transport, security etc.). (positive impact)* | | | | | ***L*** | management and visual impact management as per the EMPr (section 9.5) | | | | | ***M*** |
| *Generation of funds to contribute to the conservation of the Lapalala Wilderness Reserve (positive impact)* | *1* | *4* | *2* | *2* | ***14 L*** | | *1* | *4* | *4* | *3* | ***27 L*** |
| *Creation of long term employment and business opportunities as well as opportunities for skills development and transfer (positive impact)* | *2* | *4* | *6* | *4* | ***48 M*** | | *2* | *4* | *8* | *4* | ***56 H*** |
| *Creation of opportunities for local SMME's (positive impact)* | *2* | *4* | *6* | *3* | ***36 M*** | | *2* | *4* | *6* | *4* | ***48 M*** |
| Impact on adjacent land uses and activities. | 2 | 4 | 2 | 3 | **24 L** | | 2 | 4 | 2 | 1 | **8 N** |
| **Service and traffic** | | | | | | | | | | | |
| *Operational cost of running services and infrastructure, specifically electricity (positive impact).*<br><br>*Operational cost is expected to be minimal in the long term as a result of off-grid design.* | *1* | *4* | *2* | *4* | ***28 L*** | • Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5) | *1* | *4* | *2* | *4* | ***28 L*** |
| Increase in traffic on the surrounding roads due to increased visitor numbers. | 2 | 4 | 6 | 4 | **48 M** | | 2 | 4 | 4 | 3 | **30 L** |
| Increase in the number and frequency of vehicles accessing the site, and the resultant noise, dust, and safety impacts on other road users, residents of the local community and adjacent landowners. | 2 | 4 | 6 | 4 | **48 M** | | 2 | 4 | 4 | 2 | **20 L** |
| **Indirect Impacts** | | | | | | | | | | | |
| **Visual** | | | | | | | | | | | |
| The potential visual impact of the development on the visual character of the landscape and sense of place of the region (particularly the Waterberg Biosphere Reserve). | 3 | 4 | 8 | 4 | **60 H** | • Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5) | 1 | 4 | 2 | 4 | **28 L** |
| **Cumulative Impacts** | | | | | | | | | | | |
| **Biodiversity (Flora)** | | | | | | | | | | | |
| Cumulative loss of Loss of Waterberg Mountain | 3 | 4 | 6 | 3 | **39** | • Biodiversity management, including access roads, | 3 | 4 | 4 | 2 | **22** |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bushveld vegetation classified as Least Threatened and associated loss of species richness. | | | | | **M** | resource management, protection of flora and alien plant control as per the EMPr (section 9.1) | | | | | **L** |
| Cumulative disturbance of sensitive habitats, specifically riparian zones | 3 | 4 | 6 | 3 | **39 M** | • Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)<br>• Erosion control as per the EMPr (section 9.3)<br>• Vehicles and equipment management as per the EMPr (section 9.4)<br>• Socio economic management, including staff management as per the EMPr (section 9.5)<br>• Fire management as per the EMPr (section 9.6) | 3 | 4 | 4 | 2 | **22 L** |
| Cumulative reduction and damage to Conservation Important Species and protected trees. I.e. *Sclerocarya birrea subsp. caffra, Scadoxus puniceus, Huernia cf. zebrine, Aloe spicata, Boscia albitrunca, Elaeodendron transvaalense, Combretum imberbe, Spirostachys Africana, Ansellia Africana, Drimia sanguinea, Boophone disticha..* | 3 | 5 | 6 | 3 | **42 M** | | 3 | 5 | 6 | 2 | **28 L** |
| **Heritage** | | | | | | | | | | | |
| Cumulative loss of rock art an Late Iron Age sites resulting in an overall deduction in these artefacts. | 3 | 5 | 6 | 3 | **42 M** | • Resource management, including the protection of heritage resources as per the EMPr (section 9.1) | 3 | 5 | 4 | 2 | **24 L** |
| **Visual** | | | | | | | | | | | |
| The accumulation of built forms and within an otherwise natural environment. | 3 | 4 | 8 | 4 | **60 H** | • Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5) | 3 | 4 | 4 | 2 | **22 L** |
| **Socio-economics** | | | | | | | | | | | |
| *Creation of permanent employment and skills and development opportunities for members from the local community and creation of additional business and economic opportunities in the area (positive impact)* | *3* | *4* | *2* | *2* | ***18 L*** | • Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5) | *3* | *4* | *4* | *3* | ***33 M*** |
| *Promotion of social and economic development in the local communities and improvement in the overall wellbeing of the community (positive impact)* | *3* | *4* | *2* | *2* | ***18 L*** | | *3* | *4* | *2* | *3* | ***27 L*** |
| **Services and traffic** | | | | | | | | | | | |
| Cumulative increase in traffic on the surrounding roads due to increased visitor numbers. | 3 | 4 | 6 | 3 | **39 L** | • Planning and compliance, including waste management as per the EMPr (section 7.1)<br>• Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2) | 3 | 4 | 4 | 2 | **22 L** |
| Cumulative increase in the number and frequency of vehicles accessing the site, and the resultant noise, dust, and safety impacts for other road users, adjacent landowners and residents of the local | 3 | 4 | 4 | 3 | **33 L** | | 3 | 4 | 4 | 2 | **22 L** |

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| communities. | | | | | | • Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5) | | | | | | |
| Waste disposal practices will have an accumulative effect on the local landfill site's capacity to absorb waste. | 3 | 4 | 6 | 4 | **52 M** | | 3 | 4 | 4 | 2 | **22 L** |

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| **ALTERNATIVE A2 (TECHNOLOGY)** | | | | | | | | | | | | |
| **Direct Impacts** | | | | | | | | | | | | |
| **Ground water** | | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | | |
| **Hydrology (surface water)** | | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | | |
| **Soil** | | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | | |
| **Air** | | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | | |
| **Biodiversity (Flora)** | | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | | |
| **Biodiversity (Fauna)** | | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | | |
| **Land use and agriculture potential** | | | | | | | | | | | | |
| None. | | | | | | • | | | | | | |
| **Heritage** | | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | | |
| **Visual** | | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | | |
| Visual impact of the overhead powerlines on the sense of place of the region. | 2 | 4 | 8 | 5 | **70 H** | | 2 | 4 | 6 | 4 | **48 M** | |
| **Socio-economics** | | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | | |
| **Services and traffic** | | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | | |
| Operational cost of running services and | 1 | 4 | 6 | 5 | **55** | | 1 | 4 | 6 | 5 | **55** | |

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| infrastructure, specifically electricity. Increased impact is expected due to higher operational cost in the long term as a result of complete dependence on Eskom utility | | | | | **M** | | | | | | **M** |
| **Indirect Impacts** | | | | | | | | | | | |
| **Visual** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Cumulative Impacts** | | | | | | | | | | | |
| **Biodiversity (Flora)** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Heritage** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Visual** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Socio-economics** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |
| **Services and traffic** | | | | | | | | | | | |
| As per Alternative 1 | | | | | | • As per Alternative 1 | | | | | |

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| **NO-PROJECT ALTERNATIVE** | | | | | | | | | | | |
| **Direct Impacts** | | | | | | | | | | | |
| No stimulation of the local economy, especially the local service delivery industry. | 3 | 4 | 6 | 4 | **52 M** | • None. | 3 | 4 | 6 | 4 | **52 M** |
| No short term and long-term employment through skills development and on-site training. | 3 | 4 | 6 | 4 | **52 M** | • None. | 3 | 4 | 6 | 4 | **52 M** |
| **Indirect Impacts** | | | | | | | | | | | |
| None. | | | | | | • | | | | | |
| **Cumulative Impacts** | | | | | | | | | | | |
| No opportunity to up-grade and improve skill levels in the area. | 3 | 4 | 6 | 4 | **52 M** | • None. | 3 | 4 | 6 | 4 | **52 M** |

## 2.4 Decommissioning Phase

The decommissioning of the facility is not anticipated at this stage and, therefore, no impacts are assessed.