

**Application for Environmental Authorization for  
Proposed Timeshare Resort Located on Portion 101 Tenbosch near The Crocodile  
River, Mpumalanga Province**

**APPENDIX F IMPACT ASSESSMENT TABLES**

Compiled by:



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November 2016

# 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
<b>ALTERNATIVE A1 (PREFERRED ALTERNATIVE)</b>											
<b>Direct Impacts</b>											
<b>Ground water</b>											
None.						•					
<b>Hydrology (surface water)</b>											
Risk to ecological function of the riparian habitat along the Crocodile River due to the placement of structures and infrastructure within the habitat/ buffer zones.	2	4	8	4	<b>56 M</b>	<ul style="list-style-type: none"> <li>• Planning and compliance, including ground water, surface water and storm water management as per the EMPr (section 7.1).</li> <li>• Development footprint planning as per the EMPr (section 7.2).</li> </ul>	2	4	4	3	<b>30 L</b>
Risk to hydrological function (quality and fluctuation properties) along the Crocodile River and drainage lines due to activity and disturbance within the watercourse.	2	5	8	4	<b>60 H</b>		2	5	4	3	<b>33 M</b>

<i>This is particularly relevant due to the trenching of cables and water lines.</i>												
<b>Soil</b>												
Erosion risk to soils due to increased hard surface and associated increase in storm water runoff.	1	4	8	4	<b>52 M</b>	<ul style="list-style-type: none"> <li>• Planning and compliance, including ground water, surface water, storm water management and waste management as per the EMPr (section 7.1).</li> <li>• Development footprint planning as per the EMPr (section 7.2).</li> </ul>	1	4	4	2	<b>18 L</b>	
<b>Air</b>												
None.												
<b>Biodiversity (Flora)</b>												
Risk to Tshokwane-Hlane Basalt Lowveld vegetation classified as Least Threatened and associated loss of species richness due to the placement of structures and infrastructure.	3	4	6	4	<b>52 M</b>	<ul style="list-style-type: none"> <li>• Planning and compliance, including protected species, storm water management and waste management as per the EMPr (section 7.1).</li> <li>• Development footprint planning as per the EMPr (section 7.2).</li> </ul>	3	4	2	3	<b>27 L</b>	
Risk to sensitive habitats, specifically riparian zones due to the placement of structures and infrastructure.	3	4	8	4	<b>60 H</b>		3	4	4	2	<b>22 L</b>	
Risk to plant species of conservation importance: protected trees <i>Sclerocarya birrea subsp. cafra</i> , <i>Combretum imberbe</i> and <i>Philenoptera violacea</i> and provincially protected species <i>Aloe marlothii</i> and <i>Crinum stuhlmannii</i> due to the placement of structures and infrastructure within the habitat.	3	5	8	4	<b>64 H</b>		3	5	4	3	<b>36 M</b>	
<b>Biodiversity (Fauna)</b>												
Risk to Riparian forest, Closed Woodland and wetland faunal habitat, which has a high to moderate significance for fauna species conservation and habitat fragmentation due to removal and alteration of the existing habitat and the development of structures and infrastructure.	1	4	8	4	<b>52 M</b>	<ul style="list-style-type: none"> <li>• Planning and compliance, including protected species, storm water management and waste management as per the EMPr (section 7.1).</li> <li>• Development footprint planning as per the EMPr (section 7.2).</li> </ul>	1	4	4	3	<b>27 L</b>	
<b>Land Use &amp; Agricultural Potential</b>												
Loss of potentially arable land due to the development of permanent structures and infrastructure.	1	4	4	3	<b>27 L</b>	<ul style="list-style-type: none"> <li>• Development footprint planning as per the EMPr section 7.2).</li> </ul>	1	4	2	2	<b>14 L</b>	

<b>Heritage</b>											
None.							•				
<b>Visual</b>											
Risk to visual quality of the surrounding area and sense of place due to the development of structures and infrastructure at the proposed site within an otherwise natural environment.	3	4	8	4	<b>60 H</b>	<ul style="list-style-type: none"> <li>• Development footprint planning as per the EMPr (section 7.2).</li> <li>• Visual environment planning as per the EMPr (section 7.3).</li> </ul>	3	4	4	2	<b>22 L</b>
Risk of lighting impact at night due to the operation of the Resort.	3	4	8	4	<b>60 H</b>		3	4	4	3	<b>33 M</b>
<b>Socio-economics</b>											
None.							•				
<b>Municipal services &amp; traffic</b>											
None.							•				
<b>Indirect Impacts</b>											
None											
<b>Cumulative Impacts</b>											
<b>Biodiversity (Flora)</b>											
Cumulative loss of Tshokwane-Hlane Basalt Lowveld vegetation classified as Least Threatened and associated loss of species richness. This will result in the overall reduction of Tshokwane-Hlane Basalt Lowveld vegetation	3	4	6	4	<b>52 M</b>	<ul style="list-style-type: none"> <li>• Planning and compliance, including protected species, storm water management and waste management as per the EMPr (section 7.1).</li> <li>• Development footprint planning as per the EMPr (section 7.2).</li> </ul>	3	4	2	3	<b>27 L</b>
Cumulative loss of sensitive habitats, specifically riparian zones. This will result in the overall reduction of riverine vegetation.	3	4	8	4	<b>60 H</b>		3	4	4	2	<b>22 L</b>
Cumulative reduction of plant species of conservation importance: protected trees <i>Sclerocarya birrea subsp. cafra</i> , <i>Combretum imberbe</i> and <i>Philenoptera violacea</i> and provincially protected species <i>Aloe marlothii</i> and <i>Crinum stuhlmannii</i> This will result in the overall loss of these species.	3	5	8	4	<b>64 H</b>		3	5	4	3	<b>36 M</b>
<b>Biodiversity (Fauna)</b>											

Cumulative loss of Riparian forest, Closed Woodland and wetland faunal habitat.	2	4	10	3	<b>48 M</b>	<ul style="list-style-type: none"> <li>• Planning and compliance, including protected species, storm water management and waste management as per the EMPr (section 7.1).</li> <li>• Development footprint planning as per the EMPr (section 7.2).</li> </ul>	2	4	6	2	<b>24 L</b>
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<b>ALTERNATIVE A2 (LAYOUT)</b>											
<b>Direct Impacts</b>											
<b>Ground water</b>											
None.						•					
<b>Hydrology (surface water)</b>											
As per Alternative 1						• As per Alternative 1					
<b>Soil</b>											
As per Alternative 1						• As per Alternative 1					
<b>Air</b>											
None.						•					
<b>Biodiversity (Flora)</b>											
Risk to Tshokwane-Hlane Basalt Lowveld vegetation classified as Least Threatened and associated loss of species richness due to the placement of structures and infrastructure.	3	4	6	4	<b>52 M</b>	<ul style="list-style-type: none"> <li>• Planning and compliance, including protected species, storm water management and waste management as per the EMPr (section 7.1).</li> <li>• Development footprint planning as per the EMPr (section 7.2).</li> </ul>	3	4	2	3	<b>27 L</b>
Risk to sensitive habitats, specifically riparian zones due to the placement of structures and infrastructure.  Increased impact is expected due of the placement of chalets within the riparian buffer.	3	4	8	4	<b>60 H</b>		3	4	4	4	<b>44 M</b>
Risk to plant species of conservation importance: protected trees <i>Sclerocarya birrea subsp. cafra</i> , <i>Combretum imberbe</i> and <i>Philenoptera violacea</i> and provincially protected species <i>Aloe marlothii</i> and <i>Crinum stuhlmannii</i> due to the placement of structures and infrastructure within the habitat.	3	5	8	4	<b>64 H</b>		3	5	4	3	<b>36 M</b>
<b>Biodiversity (Fauna)</b>											

As per Alternative 1						• As per Alternative 1					
<b>Land Use &amp; Agricultural Potential</b>											
As per Alternative 1						• As per Alternative 1					
<b>Heritage</b>											
None.						•					
<b>Visual</b>											
As per Alternative 1						• As per Alternative 1					
<b>Socio-economics</b>											
None.						•					
<b>Municipal services &amp; traffic</b>											
None.						•					
<b>Indirect Impacts</b>											
None											
<b>Cumulative Impacts</b>											
<b>Biodiversity (Flora)</b>											
Cumulative loss of Tshokwane-Hlane Basalt Lowveld vegetation classified as Least Threatened and associated loss of species richness. This will result in the overall reduction of Tshokwane-Hlane Basalt Lowveld vegetation	3	4	6	4	<b>52 M</b>	<ul style="list-style-type: none"> <li>• Planning and compliance, including protected species, storm water management and waste management as per the EMPr (section 7.1).</li> <li>• Development footprint planning as per the EMPr (section 7.2).</li> </ul>	3	4	2	3	<b>27 L</b>
Cumulative loss of sensitive habitats, specifically riparian zones. This will result in the overall reduction of riverine vegetation.  Increased impact is expected due to the placement of chalets within the riparian buffer.	3	4	8	4	<b>60 H</b>		3	4	4	4	<b>44 M</b>
Cumulative reduction of plant species of conservation importance: protected trees <i>Sclerocarya birrea subsp. caffra</i> , <i>Combretum imberbe</i> and <i>Philenoptera violacea</i> and provincially protected species <i>Aloe marlothii</i> and <i>Crinum stuhlmannii</i> This will result in the overall loss of these species.	3	5	8	4	<b>64 H</b>		3	5	4	3	<b>36 M</b>
<b>Biodiversity (Fauna)</b>											

As per Alternative 1						• As per Alternative 1					
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<b>ALTERNATIVE A3 (TECHNOLOGY ALTERNATIVE)</b>											
<b>Direct Impacts</b>											
<b>Ground water</b>											
None.						•					
<b>Hydrology (surface water)</b>											
As per Alternative 1	2	4	8	4	56 M	• As per Alternative 1	2	4	4	3	30 L
<b>Soil</b>											
Erosion risk to soils due to increased hard surface and associated increase in storm water runoff.  This impact is expected to be slightly higher owing to the installation of solar panels	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). • Development footprint planning as per the EMPr (section 7.2).	1	4	4	2	18 L
<b>Air</b>											
None.						•					
<b>Biodiversity (Flora)</b>											
As per Alternative 1						• As per Alternative 1					
<b>Biodiversity (Fauna)</b>											
As per Alternative 1						• As per Alternative 1					
<b>Land Use &amp; Agricultural Potential</b>											
As per Alternative 1						• As per Alternative 1					
<b>Heritage</b>											
None.						•					
<b>Visual</b>											
Risk of glare from high-tech and reflective materials used for solar panels	3	4	10	4	68 H	• Development footprint planning as per the EMPr (section 7.2). • Visual environment planning as per the EMPr (section 7.3).	3	4	4	4	44 M
<b>Socio-economics</b>											

None.						•						
<b>Municipal services &amp; traffic</b>												
None.						•						
<b>Indirect Impacts</b>												
None												
<b>Cumulative Impacts</b>												
<b>Biodiversity (Flora)</b>												
As per Alternative 1						• As per Alternative 1						
<b>Biodiversity (Fauna)</b>												
As per Alternative 1						• As per Alternative 1						

<b>NO-PROJECT ALTERNATIVE</b>												
<b>Direct Impacts</b>												
None.						•						
<b>Indirect Impacts</b>												
None.						•						
<b>Cumulative Impacts</b>												
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:						Proposed mitigation:					
	Extent (1-5)	Duration (1-5)	Magnitude (0-10)	Probability (1-5)	Significance		Extent (1-5)	Duration (1-5)	Magnitude (0-10)	Probability (1-5)	Significance
<b>ALTERNATIVE A1 (PREFERRED ALTERNATIVE)</b>											
<b>Direct Impacts</b>											
<b>Ground water</b>											
Depletion of ground water due to overuse and waste during construction activities	3	2	6	3	<b>33 M</b>	<ul style="list-style-type: none"> <li>Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> </ul>	3	2	4	2	<b>18 L</b>
Pollution and contamination of ground water due to: <ul style="list-style-type: none"> <li>Surface runoff</li> <li>Unmanaged sewage discharge, leaks and spills</li> <li>Solvent, paints and chemical spills</li> <li>Hydrocarbon and fuel leaks and spills</li> </ul>	3	2	8	3	<b>39 M</b>	<ul style="list-style-type: none"> <li>Site establishment, including site demarcation, accommodation, pollution control and access roads as per the EMPr (section 8.2)</li> <li>Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).</li> <li>Vehicles and equipment management as per the EMPr (section 8.7).</li> </ul>	3	2	4	2	<b>18 L</b>
<b>Hydrology (surface water)</b>											
Disturbance and loss of ecological function of the habitat (physical structure) along the Crocodile River and drainage lines due to: <ul style="list-style-type: none"> <li>Clearing and destruction of riparian and wetland vegetation</li> <li>Loss of fringing vegetation and erosion of denuded areas</li> <li>Invasion by alien invasive trees and plants</li> </ul>	1	2	6	4	<b>36 M</b>	<ul style="list-style-type: none"> <li>Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> <li>Site establishment, including site demarcation, accommodation, pollution control, access roads and protection of the riparian system as per the EMPr (section 8.2)</li> <li>Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).</li> </ul>	1	2	4	2	<b>14 L</b>

<ul style="list-style-type: none"> <li>Alteration in natural fire regimes</li> <li>Shading of natural vegetation</li> </ul>						<ul style="list-style-type: none"> <li>Stockpiles, storage and handling as per the EMPr (section 8.4).</li> </ul>					
Pollution and contamination of surface water of the Crocodile River and drainage lines due to: <ul style="list-style-type: none"> <li>Unmanaged runoff of grey water, cement slurry and wash water.</li> <li>Unmanaged sewage discharge, leaks and spills</li> <li>Solvent, paints and chemical spills</li> <li>Litter and other inert construction waste.</li> <li>Hydrocarbon and fuel leaks and spills</li> </ul>	3	2	6	3	<b>33 M</b>	<ul style="list-style-type: none"> <li>Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).</li> <li>Alien plant control as per the EMPr (section 8.6).</li> <li>Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>Socio-economic management, including staff, visual as per the EMPr (section 8.8).</li> <li>Fire management as per the EMPr (section 8.9).</li> </ul>	3	2	4	2	<b>18 L</b>
Disturbance and loss of hydrological function (quality and fluctuation properties) of the Crocodile River and the drainage lines due to: <ul style="list-style-type: none"> <li>Impeded and / or redirected flow due to activity within the water course</li> <li>Uncontrolled discharges into the water resource (storm water)</li> <li>Alteration of surface characteristics (roughness) due to activity within the water course</li> <li>Removal of stabilising vegetation</li> <li>Sedimentation and siltation from erosion</li> </ul>	2	5	8	4	<b>60 H</b>	<ul style="list-style-type: none"> <li>Rehabilitation as per the EMPr (section 8.10).</li> </ul>	2	5	4	2	<b>22 L</b>
<b>Soil</b>											
Soil contamination and pollution due to: <ul style="list-style-type: none"> <li>Unmanaged surface runoff (grey water, cement slurry and wash water)</li> <li>Unmanaged sewage discharge, leaks and spills</li> <li>Solvent, paints and chemical spills</li> <li>Litter and other inert construction waste.</li> <li>Hydrocarbon and fuel leaks and spills</li> </ul>	1	2	6	4	<b>36 M</b>	<ul style="list-style-type: none"> <li>Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> <li>Site establishment, including site demarcation, accommodation, pollution control and access roads as per the EMPr (section 8.2)</li> <li>Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).</li> </ul>	1	2	4	2	<b>14 L</b>
Soil erosion by wind and rain due to:	1	4	6	3	<b>33 M</b>	<ul style="list-style-type: none"> <li>Stockpiles, storage and handling as per the EMPr (section 8.4).</li> </ul>	1	4	4	2	<b>18 L</b>

<ul style="list-style-type: none"> <li>• The removal of stabilising vegetation</li> <li>• Soil compaction by movement of construction vehicles, equipment and activities</li> <li>• Decrease in water infiltration and an increase of water runoff in construction areas</li> <li>• Disturbance of sensitive soils</li> </ul>						<ul style="list-style-type: none"> <li>• Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).</li> <li>• Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>• Rehabilitation as per the EMPr (section 8.10).</li> </ul>					
<b>Air</b>											
Air pollution due emissions from construction vehicles and equipment.	3	1	4	4	<b>32</b> <b>M</b>	<ul style="list-style-type: none"> <li>• Site establishment, including site demarcation, accommodation, pollution control and access roads as per the EMPr (section 8.2)</li> <li>• Stockpiles, storage and handling as per the EMPr (section 8.4).</li> <li>• Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).</li> <li>• Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>• Socio-economic management, including visual as per the EMPr (section 8.8).</li> <li>• Fire management as per the EMPr (section 8.9).</li> <li>• Rehabilitation as per the EMPr (section 8.10).</li> </ul>	3	1	4	3	<b>24</b> <b>L</b>
Dust liberated by general construction activities and movement of construction vehicles.	2	1	6	4	<b>36</b> <b>M</b>		2	1	4	3	<b>21</b> <b>L</b>
Smoke from open fires used by site staff for heating and cooking as well as from uncontrolled fires.	2	1	6	3	<b>27</b> <b>L</b>		2	1	4	2	<b>14</b> <b>L</b>
<b>Biodiversity (Flora)</b>											
<i>Removal of invader alien species found on site (positive impact).</i>	1	1	4	3	<b>18</b> <b>L</b>	<ul style="list-style-type: none"> <li>• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> <li>• 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)</li> <li>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).</li> <li>• Stockpiles, storage and handling as per the EMPr (section 8.4).</li> </ul>	1	1	4	5	<b>30</b> <b>L</b>
Loss of Tshokwane-Hlane Basalt Lowveld vegetation classified as Least Threatened and associated loss of species richness due to: <ul style="list-style-type: none"> <li>• Site clearing ahead of construction</li> <li>• General construction activities and movement of construction vehicles</li> <li>• Unmanaged sewage discharge, leaks and spills</li> <li>• Solvent, paints and chemical spills</li> <li>• Hydrocarbon and fuel leaks and spills</li> </ul>	1	4	4	5	<b>45</b> <b>M</b>		1	4	2	4	<b>28</b> <b>L</b>

<ul style="list-style-type: none"> <li>Litter and other inert construction waste</li> </ul>							<ul style="list-style-type: none"> <li>Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).</li> <li>Alien plant control as per the EMPr (section 8.6).</li> <li>Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>Fire management as per the EMPr (section 8.9).</li> <li>Rehabilitation as per the EMPr (section 8.10).</li> </ul>						
Disturbance of sensitive habitats, specifically riparian zones due to: <ul style="list-style-type: none"> <li>Site clearing ahead of construction</li> <li>General construction activities and movement of construction vehicles</li> <li>Unmanaged sewage discharge, leaks and spills</li> <li>Solvent, paints and chemical spills</li> <li>Litter and other inert construction waste.</li> <li>Hydrocarbon and fuel leaks and spills</li> </ul>	1	4	8	3	<b>39</b>	<b>M</b>		1	4	8	2	<b>26</b>	<b>L</b>
Destruction and damage to plant species of conservation importance: protected trees <i>Sclerocarya birrea subsp. cafra</i> , <i>Combretum imberbe</i> and <i>Philenoptera violacea</i> and provincially protected species <i>Aloe marlothii</i> and <i>Crinum stuhlmanni</i> due to: <ul style="list-style-type: none"> <li>Site clearing ahead of construction</li> <li>General construction activities and movement of construction vehicles</li> </ul>	1	5	8	4	<b>56</b>	<b>M</b>		1	5	4	2	<b>20</b>	<b>L</b>
Increase in exotic vegetation/alien species and bush encroachment into disturbed soils and areas due to: <ul style="list-style-type: none"> <li>Unmanaged cleared and disturbed areas, as well as, stockpiles</li> <li>Unrehabilitated areas cleared and disturbed during construction</li> <li>Construction vehicles operating on other sites and carrying material and seed onto site</li> </ul> <p>Bush encroachment is the process, which transforms grassy vegetation into a woody species-dominated one. This is recognised as a very serious</p>	1	4	8	4	<b>52</b>	<b>M</b>		1	4	6	2	<b>22</b>	<b>L</b>

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.													
<b>Biodiversity (Fauna)</b>													
Loss of faunal habitat for conservation-important fauna species particularly Riparian Forest found along the drainage lines and the Closed Woodland vegetation due to:  <ul style="list-style-type: none"> <li>• Site clearing ahead of construction</li> <li>• General construction activities and movement of construction vehicles</li> <li>• Construction dust</li> <li>• Construction material, litter and other inert construction waste</li> </ul>	2	4	6	4	<b>48 M</b>	<ul style="list-style-type: none"> <li>• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> <li>• 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)</li> <li>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).</li> <li>• Erosion control, including excavation, backfilling and trenching as per the EMPr (section 8.5).</li> <li>• Alien plant control as per the EMPr (section 8.6).</li> <li>• Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>• Socio-economic management, including staff as per the EMPr (section 8.8).</li> <li>• Fire management as per the EMPr (section 8.9).</li> <li>• Rehabilitation as per the EMPr (section 8.10).</li> </ul>	2	4	4	2	<b>20 L</b>		
Loss of general faunal habitat and ecological connectivity.	3	4	6	4	<b>52 M</b>	<ul style="list-style-type: none"> <li>• Socio-economic management, including staff as per the EMPr (section 8.8).</li> <li>• Fire management as per the EMPr (section 8.9).</li> <li>• Rehabilitation as per the EMPr (section 8.10).</li> </ul>	3	4	4	3	<b>33 M</b>		
Mortality of fauna due to:  <ul style="list-style-type: none"> <li>• Dangerous trenches and excavations</li> <li>• Persecution and extermination</li> <li>• Solvent, paints and chemical spills (poisoning)</li> <li>• Construction material, litter and other inert construction waste (suffocation)</li> <li>• Collisions with construction vehicles</li> </ul>	2	1	8	3	<b>33 M</b>	<ul style="list-style-type: none"> <li>• Socio-economic management, including staff as per the EMPr (section 8.8).</li> <li>• Fire management as per the EMPr (section 8.9).</li> <li>• Rehabilitation as per the EMPr (section 8.10).</li> </ul>	2	1	4	2	<b>14 L</b>		
Poaching and snaring of fauna on site and in the greater Kruger National Park by construction staff.	2	1	10	3	<b>39 M</b>		2	1	6	2	<b>18 L</b>		
<b>Land Use &amp; Agricultural Potential</b>													
None.						•							
<b>Heritage</b>													
Damage to and / or destruction of archaeological, paleontological or historical artefacts unearthed during construction.	1	5	4	2	<b>20 L</b>	<ul style="list-style-type: none"> <li>• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> </ul>	1	5	2	1	<b>8 N</b>		

						<ul style="list-style-type: none"> <li>Site establishment, including site demarcation, access roads and protection of cultural heritage as per the EMPr (section 8.2)</li> </ul>					
<b>Visual</b>											
The visual impact of construction, lighting and dust on adjacent tourism developments and KNP tourists as well as, the presence of construction equipment, camps and workers	2	1	8	4	<b>44 M</b>	<ul style="list-style-type: none"> <li>Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> <li>Site establishment, including site demarcation, accommodation, pollution control and access roads as per the EMPr (section 8.2)</li> <li>Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).</li> <li>Stockpiles, storage and handling as per the EMPr (section 8.4).</li> <li>Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).</li> <li>Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>Socio-economic management, including staff, visual as per the EMPr (section 8.8).</li> <li>Fire management as per the EMPr (section 8.9).</li> <li>Rehabilitation as per the EMPr (section 8.10).</li> </ul>	2	1	4	3	<b>21 L</b>
Visual impact of construction, lighting and dust on observers travelling along game drive routes within the KNP	2	1	6	3	<b>27 L</b>		2	1	4	2	<b>14 L</b>
The visual impact of construction, lighting and dust on locals using the District Road owing to the presence of construction equipment, camps and workers	2	1	6	4	<b>36 M</b>		2	1	4	3	<b>21 L</b>
<b>Socio-economics</b>											
<i>Stimulation of the local economy, especially the local service delivery industry (i.e. accommodation, catering, cleaning, transport and security, etc.). (positive impact)</i>	3	1	4	2	<b>16 L</b>	<ul style="list-style-type: none"> <li>Socio-economic planning as per the EMPr (section 7.4).</li> <li>Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> <li>Site establishment, including accommodation and access roads as per the EMPr (section 8.2)</li> <li>Vehicles and equipment management as per the EMPr (section 8.7).</li> </ul>	3	1	4	3	<b>24 L</b>
<i>Creation of short-term employment and business opportunities and the opportunity for skills development and on-site training. (Positive impact).  Jobs and employment opportunities will be created, with a percentage being low and semi-skilled.</i>	2	1	6	3	<b>27 L</b>		3	1	6	4	<b>40 M</b>

Noise, dust and safety impacts and disturbance to KNP tourists and adjacent tourism development due to general construction activities and movement of construction vehicles	2	2	8	4	<b>48 M</b>	<ul style="list-style-type: none"> <li>• Socio-economic management, including staff as per the EMPr (section 8.8).</li> <li>• Fire management as per the EMPr (section 8.9).</li> </ul>	2	1	4	3	<b>21 L</b>
An increase in construction workers and associated increase in social problems for the community, including: <ul style="list-style-type: none"> <li>• An increase in alcohol and drug use;</li> <li>• An increase in crime levels;</li> <li>• An increase in teenage and unwanted pregnancies;</li> <li>• An increase in prostitution;</li> <li>• An increase in sexually transmitted diseases (STDs).</li> <li>• An increase in vandalism.</li> </ul>	3	1	4	3	<b>24 L</b>		2	1	4	3	<b>21 L</b>
Increase in casual workers and associated increase in poaching.	2	1	8	4	<b>44 M</b>		2	1	4	4	<b>28 L</b>
Increased risk of veld fires due to the presence of construction workers on site.	3	1	10	4	<b>56 M</b>		2	1	4	3	<b>24 L</b>
<b>Services &amp; traffic</b>											
Increase in traffic on the D1870 and on other local roads due to construction vehicles.	2	1	6	4	<b>36 M</b>	<ul style="list-style-type: none"> <li>• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> <li>• Site establishment, including access roads as per the EMPr (section 8.2)</li> <li>• Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>• Socio-economic management, including visual as per the EMPr (section 8.8).</li> </ul>	2	1	4	3	<b>21 L</b>
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 tourism developments.	2	1	6	4	<b>36 M</b>		2	1	2	3	<b>15 L</b>
<b>Indirect Impacts</b>											
<b>Biodiversity (Flora)</b>											
Loss of floral biodiversity, plant species of conservation importance and protected trees due to increased incidence of veld fires	3	1	6	3	<b>30 L</b>	• As above	3	1	4	2	<b>16 L</b>

<b>Socio-economics</b>													
Loss of property and threat to human life due to increased incidence of veld fires	3	1	6	3	<b>30 L</b>	• As above	3	1	4	2	<b>16 L</b>		
<b>Traffic and services</b>													
Degradation of local roads due to the increase in the numbers of heavy vehicles.	2	1	6	4	<b>36 M</b>	• As above	2	1	4	3	<b>21 L</b>		
<b>Cumulative Impacts</b>													
<b>Biodiversity (Flora)</b>													
Cumulative loss of Tshokwane-Hlane Basalt Lowveld vegetation classified as Least Threatened and associated loss of species richness.	3	4	4	3	<b>33 M</b>	<ul style="list-style-type: none"> <li>• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> <li>• 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)</li> <li>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).</li> <li>• Stockpiles, storage and handling as per the EMPr (section 8.4).</li> <li>• Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).</li> <li>• Alien plant control as per the EMPr (section 8.6).</li> <li>• Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>• Fire management as per the EMPr (section 8.9).</li> <li>• Rehabilitation as per the EMPr (section 8.10).</li> </ul>	3	4	2	2	<b>18 L</b>		
Cumulative loss of ecological function of sensitive habitats, specifically riparian zones.	3	4	8	3	<b>45 M</b>		3	4	6	2	<b>26 L</b>		
Cumulative reduction and damage to plant species of conservation importance: protected trees ( <i>Sclerocarya birrea subsp. cafra</i> , <i>Combretum imberbe</i> and <i>Philenoptera violacea</i> and provincially protected species <i>Aloe marlothii</i> and <i>Crinum stuhlmanni</i> )	3	5	6	3	<b>42 M</b>		3	5	4	2	<b>24 L</b>		
<b>Biodiversity (Fauna)</b>													
Cumulative loss of faunal habitat, particularly Riparian Forest found along the drainage lines and the Closed Woodland vegetation.	2	4	8	3	<b>42 M</b>	<ul style="list-style-type: none"> <li>• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> <li>• 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)</li> </ul>	2	4	6	2	<b>20 L</b>		

						<ul style="list-style-type: none"> <li>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).</li> <li>• Erosion control, including excavation, backfilling and trenching as per the EMPr (section 8.5).</li> <li>• Alien plant control as per the EMPr (section 8.6).</li> <li>• Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>• Socio-economic management, including staff as per the EMPr (section 8.8).</li> <li>• Fire management as per the EMPr (section 8.9).</li> <li>• Rehabilitation as per the EMPr (section 8.10).</li> </ul>					
<b>Socio-economics</b>											
<i>Community upliftment and the opportunity to upgrade and improve skills levels in the area. (positive impact)</i>	3	1	2	2	<b>12 N</b>	<ul style="list-style-type: none"> <li>• Socio-economic planning as per the EMPr (section 7.4).</li> <li>• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> <li>• Site establishment, including accommodation and access roads as per the EMPr (section 8.2)</li> <li>• Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>• Socio-economic management, including staff as per the EMPr (section 8.8).</li> <li>• Fire management as per the EMPr (section 8.9).</li> </ul>	3	1	4	3	<b>24 L</b>
<b>Services &amp; traffic</b>											
Cumulative increase in traffic and the resultant noise, dust, and safety impacts on other road users, residents of the local community and adjacent tourism developments.	3	1	6	4	<b>40 M</b>	<ul style="list-style-type: none"> <li>• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> <li>• Site establishment, including access roads as per the EMPr (section 8.2)</li> <li>• Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>• Socio-economic management, including visual as per the EMPr (section 8.8).</li> </ul>	3	1	4	2	<b>16 L</b>

ALTERNATIVE A2 (LAYOUT ALTERNATIVE)											
Direct Impacts											
Ground water											
As per Alternative 1						• As per Alternative 1					
Hydrology (surface water)											
<p>Disturbance and loss of ecological function of the habitat (physical structure) along the Crocodile River and drainage lines due to:</p> <ul style="list-style-type: none"> <li>• Clearing and destruction of riparian and wetland vegetation</li> <li>• Loss of fringing vegetation and erosion of denuded areas</li> <li>• Invasion by alien invasive trees and plants</li> <li>• Alteration in natural fire regimes</li> <li>• Shading of natural vegetation</li> </ul> <p>This impact is expected to be slightly higher due to certain chalets being located within the riparian buffer</p>	1	1	8	4	<b>40 M</b>	<ul style="list-style-type: none"> <li>• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> <li>• Site establishment, including site demarcation, accommodation, pollution control, access roads and protection of the riparian system as per the EMPr (section 8.2)</li> <li>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).</li> <li>• Stockpiles, storage and handling as per the EMPr (section 8.4).</li> <li>• Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).</li> <li>• Alien plant control as per the EMPr (section 8.6).</li> </ul>	1	1	6	3	<b>24 L</b>
<p>Pollution and contamination of surface water of the Crocodile River and drainage lines due to:</p> <ul style="list-style-type: none"> <li>• Unmanaged runoff of grey water, cement slurry and wash water.</li> <li>• Unmanaged sewage discharge, leaks and spills</li> <li>• Solvent, paints and chemical spills</li> <li>• Litter and other inert construction waste.</li> <li>• Hydrocarbon and fuel leaks and spills</li> </ul> <p>This impact is expected to be slightly higher due to certain chalets being located within the riparian buffer and therefore closer to the Crocodile River</p>	3	2	6	3	<b>33 M</b>	<ul style="list-style-type: none"> <li>• Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>• Socio-economic management, including staff, visual as per the EMPr (section 8.8).</li> <li>• Fire management as per the EMPr (section 8.9).</li> <li>• Rehabilitation as per the EMPr (section 8.10).</li> </ul>	3	2	4	2	<b>18 L</b>

Disturbance and loss of hydrological function (quality and fluctuation properties) of the Crocodile River and the drainage lines due to:	2	5	8	4	<b>60 H</b>		2	5	4	2	<b>22 L</b>
<ul style="list-style-type: none"> <li>Impeded and / or redirected flow due to activity within the water course</li> <li>Uncontrolled discharges into the water resource (storm water)</li> <li>Alteration of surface characteristics (roughness) due to activity within the water course</li> <li>Removal of stabilising vegetation</li> <li>Sedimentation and siltation from erosion</li> </ul>											
<b>Soil</b>											
As per Alternative 1						• As per Alternative 1					
<b>Air</b>											
As per Alternative 1						• As per Alternative 1					
<b>Biodiversity (Flora)</b>											
<i>Removal of invader alien species found on site (positive impact).</i>	1	1	4	3	<b>18 L</b>	• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)	1	1	4	5	<b>30 L</b>
Loss of Tshokwane-Hlane Basalt Lowveld vegetation classified as Least Threatened and associated loss of species richness due to:	1	4	4	5	<b>45 M</b>	<ul style="list-style-type: none"> <li>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)</li> <li>Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).</li> <li>Stockpiles, storage and handling as per the EMPr (section 8.4).</li> <li>Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).</li> </ul>	1	4	2	4	<b>28 L</b>
Disturbance of sensitive habitats, specifically riparian zones due to:	1	4	8	4	<b>52 M</b>	<ul style="list-style-type: none"> <li>Alien plant control as per the EMPr (section 8.6).</li> <li>Vehicles and equipment management as per the EMPr (section 8.7).</li> </ul>	1	4	8	3	<b>39 M</b>
<ul style="list-style-type: none"> <li>Site clearing ahead of construction</li> </ul>											

<ul style="list-style-type: none"> <li>• General construction activities and movement of construction vehicles</li> <li>• Unmanaged sewage discharge, leaks and spills</li> <li>• Solvent, paints and chemical spills</li> <li>• Litter and other inert construction waste.</li> <li>• Hydrocarbon and fuel leaks and spills</li> </ul> <p>This impact is expected to be slightly higher due to certain chalets being located within the riparian buffer</p>						<ul style="list-style-type: none"> <li>• Fire management as per the EMPr (section 8.9).</li> <li>• Rehabilitation as per the EMPr (section 8.10).</li> </ul>					
<p>Destruction and damage to plant species of conservation importance: protected trees <i>Sclerocarya birrea subsp. caffra</i>, <i>Combretum imberbe</i> and <i>Philenoptera violacea</i> and provincially protected species <i>Aloe marlothii</i> and <i>Crinum stuhlmanni</i> due to:</p> <ul style="list-style-type: none"> <li>• Site clearing ahead of construction</li> <li>• General construction activities and movement of construction vehicles</li> </ul>	1	5	8	4	<b>56 M</b>		1	5	4	2	<b>20 L</b>
<p>Increase in exotic vegetation/alien species and bush encroachment into disturbed soils and areas due to:</p> <ul style="list-style-type: none"> <li>• Unmanaged cleared and disturbed areas, as well as, stockpiles</li> <li>• Unrehabilitated areas cleared and disturbed during construction</li> <li>• Construction vehicles operating on other sites and carrying material and seed onto site</li> </ul> <p>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</p>	1	4	8	4	<b>52 M</b>		1	4	6	2	<b>22 L</b>

reduced in capacity), and it transforms habitats and reduces species diversity.														
<b>Biodiversity (Fauna)</b>														
As per Alternative 1							• As per Alternative 1							
<b>Land Use &amp; Agricultural Potential</b>														
As per Alternative 1							• As per Alternative 1							
<b>Heritage</b>														
As per Alternative 1							• As per Alternative 1							
<b>Visual</b>														
As per Alternative 1							• As per Alternative 1							
<b>Socio-economics</b>														
As per Alternative 1							• As per Alternative 1							
<b>Services &amp; traffic</b>														
As per Alternative 1							• As per Alternative 1							
<b>Indirect Impacts</b>														
<b>Biodiversity (Flora)</b>														
As per Alternative 1							• As per Alternative 1							
<b>Socio-economics</b>														
As per Alternative 1							• As per Alternative 1							
<b>Traffic and services</b>														
As per Alternative 1							• As per Alternative 1							
<b>Cumulative Impacts</b>														
<b>Biodiversity (Flora)</b>														
Cumulative loss of Tshokwane-Hlane Basalt Lowveld vegetation classified as Least Threatened and associated loss of species richness.	3	4	4	3	<b>33 M</b>	<ul style="list-style-type: none"> <li>• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)</li> <li>• 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)</li> <li>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).</li> </ul>	3	4	2	2	<b>18 L</b>			
Cumulative loss of ecological function of sensitive habitats, specifically riparian zones.  This impact is expected to be higher due to certain chalets being located within the riparian buffer	3	4	8	4	<b>60 H</b>		3	4	6	3	<b>39 M</b>			
Cumulative reduction and damage to plant species of conservation importance: protected trees	3	5	6	3	<b>42 M</b>		3	5	4	2	<b>24 L</b>			

( <i>Sclerocarya birrea subsp. cafra</i> , <i>Combretum imberbe</i> and <i>Philenoptera violacea</i> and provincially protected species <i>Aloe marlothii</i> and <i>Crinum stuhlmanni</i> )						<ul style="list-style-type: none"> <li>• Stockpiles, storage and handling as per the EMPr (section 8.4).</li> <li>• Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).</li> <li>• Alien plant control as per the EMPr (section 8.6).</li> <li>• Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>• Fire management as per the EMPr (section 8.9).</li> <li>• Rehabilitation as per the EMPr (section 8.10).</li> </ul>					
<b>Biodiversity (Fauna)</b>											
As per Alternative 1						• As per Alternative 1					
<b>Socio-economics</b>											
As per Alternative 1						• As per Alternative 1					
<b>Services &amp; traffic</b>											
As per Alternative 1						• As per Alternative 1					

<b>ALTERNATIVE A3 (TECHNOLOGY ALTERNATIVE)</b>											
<b>Direct Impacts</b>											
<b>Ground water</b>											
As per Alternative 1						• As per Alternative 1					
<b>Hydrology (surface water)</b>											
As per Alternative 1						• As per Alternative 1					
<b>Soil</b>											
As per Alternative 1						• As per Alternative 1					
<b>Air</b>											
As per Alternative 1						• As per Alternative 1					
<b>Biodiversity (Flora)</b>											
As per Alternative 1						• Pre-construction planning, including planning and preparation as per the EMPr (section 8.1)					
Loss of Tshokwane-Hlane Basalt Lowveld vegetation classified as Least Threatened and associated loss of species richness due to:	1	4	4	5	<b>45 M</b>	• Site establishment, including site demarcation, accommodation, pollution control, access roads,	1	4	2	3	<b>21 L</b>

<ul style="list-style-type: none"> <li>• Site clearing ahead of construction</li> <li>• General construction activities and movement of construction vehicles</li> <li>• Unmanaged sewage discharge, leaks and spills</li> <li>• Solvent, paints and chemical spills</li> <li>• Hydrocarbon and fuel leaks and spills</li> <li>• Litter and other inert construction waste</li> </ul> <p>This impact is expected to be slightly lower to power being supplied by solar panels which is less invasive than burying cables.</p>						<ul style="list-style-type: none"> <li>• protection of flora, and protection of the riparian system as per the EMPr (section 8.2)</li> <li>• Materials management, including solid, liquid and hazardous waste, concrete and cement work, fuel and hazardous material as per the EMPr (section 8.3).</li> <li>• Stockpiles, storage and handling as per the EMPr (section 8.4).</li> <li>• Erosion control, including water management, storm water management, excavation, backfilling and trenching as per the EMPr (section 8.5).</li> <li>• Alien plant control as per the EMPr (section 8.6).</li> <li>• Vehicles and equipment management as per the EMPr (section 8.7).</li> <li>• Fire management as per the EMPr (section 8.9).</li> <li>• Rehabilitation as per the EMPr (section 8.10).</li> </ul>					
<b>Biodiversity (Fauna)</b>											
As per Alternative 1						<ul style="list-style-type: none"> <li>• As per Alternative 1</li> </ul>					
<b>Land Use &amp; Agricultural Potential</b>											
None.						<ul style="list-style-type: none"> <li>•</li> </ul>					
<b>Heritage</b>											
As per Alternative 1						<ul style="list-style-type: none"> <li>• As per Alternative 1</li> </ul>					
<b>Visual</b>											
As per Alternative 1						<ul style="list-style-type: none"> <li>• As per Alternative 1</li> </ul>					
<b>Socio-economics</b>											
As per Alternative 1						<ul style="list-style-type: none"> <li>• As per Alternative 1</li> </ul>					
<b>Services &amp; traffic</b>											
As per Alternative 1						<ul style="list-style-type: none"> <li>• As per Alternative 1</li> </ul>					
<b>Indirect Impacts</b>											
<b>Biodiversity (Flora)</b>											
As per Alternative 1						<ul style="list-style-type: none"> <li>• As per Alternative 1</li> </ul>					
<b>Socio-economics</b>											
As per Alternative 1						<ul style="list-style-type: none"> <li>• As per Alternative 1</li> </ul>					

<b>Traffic and services</b>												
As per Alternative 1							• As per Alternative 1					
<b>Cumulative Impacts</b>												
<b>Biodiversity (Flora)</b>												
As per Alternative 1							• As per Alternative 1					
<b>Biodiversity (Fauna)</b>												
As per Alternative 1							• As per Alternative 1					
<b>Socio-economics</b>												
As per Alternative 1							• As per Alternative 1					
<b>Services &amp; traffic</b>												
As per Alternative 1							• As per Alternative 1					

<b>NO-PROJECT ALTERNATIVE</b>												
<b>Direct Impacts</b>												
None							•					
<b>Indirect Impacts</b>												
None.							•					
<b>Cumulative Impacts</b>												
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
<b>ALTERNATIVE A1 (PREFERRED ALTERNATIVE)</b>											
<b>Direct Impacts</b>											
<b>Ground water</b>											
Depletion of ground water resources due to over use and waste during operation.	3	4	4	3	<b>33 M</b>	<ul style="list-style-type: none"> <li>Biodiversity management, including access roads and resource management as per the EMPr (section 9.1)</li> <li>Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)</li> <li>Erosion control as per the EMPr (section 9.3)</li> <li>Socio economic management, including staff management as per the EMPr (section 9.5)</li> <li>Vehicles and equipment management as per the EMPr (section 9.4)</li> </ul>	3	4	2	2	<b>18 L</b>
Pollution and contamination of ground water due to: <ul style="list-style-type: none"> <li>Unmanaged storm water runoff</li> <li>Unmanaged sewage discharge</li> <li>Sewage leaks and spills</li> <li>Herbicides, pesticides and fertilisers</li> <li>Discharge and spill of solvents, paints, chemicals and cleaning products</li> <li>Discharge and spill of hydrocarbons and fuel</li> </ul>	3	4	6	3	<b>39 M</b>		3	4	4	2	<b>22 L</b>
<b>Hydrology (surface water)</b>											
Disturbance and loss of ecological function of the habitat (physical structure) along the Crocodile River and drainage lines due to: <ul style="list-style-type: none"> <li>Encroachment of alien invasive species</li> <li>Uncontrolled vegetation clearing and access by staff and guests</li> </ul>	1	4	8	3	<b>39 M</b>	<ul style="list-style-type: none"> <li>Biodiversity management, including access roads, resource management, protection of flora and alien plant control as per the EMPr (section 9.1)</li> <li>Materials management, including solid, liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)</li> <li>Erosion control as per the EMPr (section 9.3)</li> </ul>	1	4	4	2	<b>18 L</b>
Pollution and contamination of surface water due to:	2	4	6	3	<b>36</b>		2	4	4	2	<b>20</b>

<ul style="list-style-type: none"> <li>• Unmanaged storm water runoff</li> <li>• Litter and uncontrolled waste</li> <li>• Sewage leaks and spills</li> <li>• Herbicides, pesticides and fertilisers</li> <li>• Discharge and spill of solvents, paints, chemicals and cleaning products</li> <li>• Discharge and spill of hydrocarbons and fuel</li> </ul>					<b>M</b>	<ul style="list-style-type: none"> <li>• Vehicles and equipment management as per the EMPr (section 9.4)</li> <li>• Socio economic management, including staff management as per the EMPr (section 9.5)</li> <li>• Fire management as per the EMPr (section 9.6)</li> </ul>					<b>L</b>
Disturbance and loss of hydrological function (quality and fluctuation properties) along the Crocodile and drainage lines due to: <ul style="list-style-type: none"> <li>• Uncontrolled discharges into the water resource (storm water)</li> <li>• Alteration of surface characteristics (roughness) due to activity within the water course (uncontrolled access by staff and guests)</li> <li>• Removal of stabilising vegetation (uncontrolled clearing and access by staff and guests)</li> <li>• Sedimentation and siltation from erosion</li> </ul>	1	4	8	3	<b>39 M</b>		1	4	4	2	<b>18 L</b>
<b>Soil</b>											
Soil contamination and pollution due to: <ul style="list-style-type: none"> <li>• Unmanaged storm water runoff</li> <li>• Litter and uncontrolled waste</li> <li>• Sewage leaks and spills</li> <li>• Herbicides, pesticides and fertilisers</li> <li>• Discharge and spill of solvents, paints, chemicals and cleaning products</li> <li>• Discharge and spill of hydrocarbons and fuel</li> </ul>	1	4	8	3	<b>39 M</b>	<ul style="list-style-type: none"> <li>• Biodiversity management, including access roads, resource management, protection of flora and alien plant control as per the EMPr (section 9.1)</li> <li>• Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)</li> <li>• Erosion control as per the EMPr (section 9.3)</li> <li>• Vehicles and equipment management as per the EMPr (section 9.4)</li> </ul>	1	4	4	2	<b>18 L</b>
Soil erosion due to: <ul style="list-style-type: none"> <li>• Soil compaction by uncontrolled movement of staff and guests (especially vehicles)</li> </ul>	1	4	8	3	<b>39 M</b>	<ul style="list-style-type: none"> <li>• Socio economic management, including staff management as per the EMPr (section 9.5)</li> </ul>	1	4	4	2	<b>18 L</b>

<ul style="list-style-type: none"> <li>Runoff over exposed or cleared areas that have failed to rehabilitate.</li> </ul>												
<b>Air</b>												
Air pollution by emissions from increased numbers of vehicles	3	4	4	3	<b>33 M</b>	<ul style="list-style-type: none"> <li>Socio economic management, including staff management as per the EMPr (section 9.5)</li> </ul>	3	4	4	3	<b>33 M</b>	
<b>Biodiversity (Flora)</b>												
Loss of Tshokwane-Hlane Basalt Lowveld vegetation classified as Least Threatened and associated loss of species richness due to: <ul style="list-style-type: none"> <li>Uncontrolled vegetation clearing and access by staff and guests</li> <li>Encroachment of alien invasive species</li> <li>Litter and waste</li> </ul>	1	4	6	3	<b>33 M</b>	<ul style="list-style-type: none"> <li>Biodiversity management, including access roads, resource management, protection of flora and alien plant control as per the EMPr (section 9.1)</li> <li>Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)</li> <li>Erosion control as per the EMPr (section 9.3)</li> <li>Vehicles and equipment management as per the EMPr (section 9.4)</li> <li>Socio economic management, including staff management as per the EMPr (section 9.5)</li> <li>Fire management as per the EMPr (section 9.6)</li> </ul>	1	4	4	2	<b>18 L</b>	
Disturbance of sensitive habitats, specifically riparian zones due to: <ul style="list-style-type: none"> <li>Uncontrolled vegetation clearing and access by staff and guests</li> <li>Encroachment of alien invasive species</li> <li>Litter and waste</li> </ul>	1	4	6	3	<b>33 M</b>		1	4	4	2	<b>18 L</b>	
Destruction and damage to plant species of conservation importance: protected trees ( <i>Sclerocarya birrea subsp. cafra</i> , <i>Combretum imberbe</i> and <i>Philenoptera violacea</i> and provincially protected species <i>Aloe marlothii</i> and <i>Crinum stuhlmannii</i> ) due to uncontrolled vegetation clearing and access by staff and guests.	1	5	6	3	<b>36 M</b>		1	5	4	2	<b>20 L</b>	
Increase in exotic vegetation/alien species and bush encroachment into disturbed soils and areas in the event that the rehabilitation process is not successful. Colonisation and re-emergence of exotic vegetation / alien species and bush encroachment into	2	4	8	3	<b>42 M</b>		2	4	6	2	<b>24 L</b>	

disturbed soils and poorly rehabilitated areas. Alien invasive species tend to out-compete indigenous, slower growing species and could also result in unsuccessful rehabilitation.												
<b>Biodiversity (Fauna)</b>												
Loss of faunal habitat due to:  <ul style="list-style-type: none"> <li>Uncontrolled vegetation clearing and access by staff and guests</li> <li>Encroachment of alien invasive species</li> <li>Litter and waste</li> </ul>	1	4	6	3	<b>33 M</b>	<ul style="list-style-type: none"> <li>Biodiversity management, including access roads, resource management, protection of flora, alien plant control and protection of fauna as per the EMPr (section 9.1)</li> <li>Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)</li> <li>Erosion control as per the EMPr (section 9.3)</li> <li>Vehicles and equipment management as per the EMPr (section 9.4)</li> <li>Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5)</li> <li>Fire management as per the EMPr (section 9.6)</li> </ul>	1	4	4	2	<b>18 L</b>	
Faunal disturbances, displacement of taxa and changes in distribution and abundance due to:  <ul style="list-style-type: none"> <li>Uncontrolled vegetation clearing and access by staff and guests</li> <li>General operations (activities) of the facility</li> <li>Noise from guests, staff and vehicles</li> </ul>	1	4	6	4	<b>44 M</b>		1	4	4	2	<b>18 L</b>	
Mortality of fauna due to:  <ul style="list-style-type: none"> <li>Persecution and extermination</li> <li>Solvents, paints, chemicals and cleaning products (poisoning)</li> <li>Litter and waste (suffocation)</li> </ul>	2	4	4	4	<b>40 M</b>		2	4	4	2	<b>20 L</b>	
Poaching and snaring of faunal species by staff.	2	4	6	3	<b>36 M</b>		2	4	6	2	<b>24 L</b>	
<b>Land Use &amp; Agricultural Potential</b>												
None.						•						
<b>Heritage</b>												
None.						•						
<b>Visual</b>												
Visual Impact of the timeshare resort and infrastructure on KNP tourists using game drive routes	2	4	4	3	<b>30 L</b>		2	4	2	2	<b>16 L</b>	

Visual Impact of the timeshare resort on protected and conservation areas (ie KNP)	2	4	4	3	<b>30 L</b>	• Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5)	2	4	2	2	<b>16 L</b>
Visual impact of the resort on observers travelling along local roads	2	4	2	1	<b>8 N</b>		2	4	2	1	<b>8 N</b>
Visual Impact of the resort and infrastructure on adjacent tourism developments.	2	4	6	3	<b>36 M</b>		2	4	2	2	<b>16 L</b>
Visual Impact of lighting of the resort on adjacent tourism developments and observers residing in close proximity.	2	4	4	3	<b>30 L</b>		2	4	4	2	<b>20 L</b>
Impact on the character of the landscape and sense of place of the region	3	4	6	4	<b>52 M</b>		3	4	4	2	<b>22 L</b>
<b>Socio-economics</b>											
<i>Stimulation of the local economy, especially the local service delivery industry (accommodation, catering, cleaning, transport, security etc.). (positive impact)</i>	3	4	4	2	<b>22 L</b>	• Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5)	3	4	4	3	<b>33 M</b>
<i>Creation of long term employment and business opportunities as well as opportunities for skills development and transfer (positive impact)</i>	3	4	6	4	<b>52 M</b>		3	4	8	4	<b>60 H</b>
<i>Creation of opportunities for local SMME's (positive impact)</i>	2	4	6	3	<b>36 M</b>		3	4	6	4	<b>52 M</b>
Noise impact on conservation areas within the region, specifically KNP	3	1	4	4	<b>48 M</b>		3	1	2	3	<b>21 L</b>
<b>Service and traffic</b>											
Operational cost of running services and infrastructure, specifically electricity	1	4	6	4	<b>44 M</b>	• Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5)	1	4	6	4	<b>44 M</b>
Increase in traffic on the D1870 and on other roads due to increased visitor numbers.	2	4	6	4	<b>48 M</b>		2	4	4	3	<b>30 L</b>
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 tourism developments.	3	4	6	4	<b>52 M</b>		3	4	4	2	<b>22 L</b>
<b>Indirect Impacts</b>											
<b>Visual</b>											

Visual impact of the proposed development of the timeshare resort on the sense of place and visual character of the region.	3	4	6	4	<b>39 M</b>	<ul style="list-style-type: none"> <li>Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5)</li> </ul>	2	4	2	4	<b>24 L</b>
<b>Cumulative Impacts</b>											
<b>Biodiversity (Flora)</b>											
Cumulative loss of Tshokwane-Hlane Basalt Lowveld vegetation classified as Least Threatened and associated loss of species richness.	3	4	6	3	<b>39 M</b>	<ul style="list-style-type: none"> <li>Biodiversity management, including access roads, resource management, protection of flora and alien plant control as per the EMPr (section 9.1)</li> </ul>	3	4	4	2	<b>22 L</b>
Cumulative disturbance of sensitive habitats, specifically riparian zones	3	4	6	3	<b>39 M</b>	<ul style="list-style-type: none"> <li>Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)</li> </ul>	3	4	4	2	<b>22 L</b>
Cumulative reduction and damage to plant species of conservation importance: protected trees ( <i>Sclerocarya birrea subsp. caffra</i> , <i>Combretum imberbe</i> and <i>Philenoptera violacea</i> and provincially protected species <i>Aloe marlothii</i> and <i>Crinum stuhlmannii</i> )	3	5	6	3	<b>42 M</b>	<ul style="list-style-type: none"> <li>Erosion control as per the EMPr (section 9.3)</li> <li>Vehicles and equipment management as per the EMPr (section 9.4)</li> <li>Socio economic management, including staff management as per the EMPr (section 9.5)</li> <li>Fire management as per the EMPr (section 9.6)</li> </ul>	3	5	4	2	<b>24 L</b>
<b>Visual</b>											
The accumulation of built forms and within an otherwise natural environment.	3	4	6	4	<b>52 M</b>	<ul style="list-style-type: none"> <li>Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5)</li> </ul>	3	4	4	2	<b>22 L</b>
<b>Socio-economics</b>											
<i>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)</i>	3	4	2	2	<b>18 L</b>	<ul style="list-style-type: none"> <li>Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5)</li> </ul>	3	4	4	3	<b>33 M</b>
<i>Promotion of social and economic development in the local communities and improvement in the overall well being of the community (positive impact)</i>	3	4	2	2	<b>18 L</b>		3	4	2	3	<b>27 L</b>
<b>Services and traffic</b>											
Cumulative increase in traffic on the D1870 and on other roads due to increased visitor numbers.	3	4	6	3	<b>39 L</b>		3	4	4	2	<b>22 L</b>

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 tourism development and residents of the local communities.	3	4	4	3	<b>33 L</b>	<ul style="list-style-type: none"> <li>• Planning and compliance, including waste management as per the EMPr (section 7.1)</li> <li>• Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)</li> <li>• Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5)</li> </ul>	3	4	4	2	<b>22 L</b>
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<b>ALTERNATIVE A2 (LAYOUT ALTERNATIVE)</b>											
<b>Direct Impacts</b>											
<b>Ground water</b>											
As per Alternative 1						• As per Alternative 1					
<b>Hydrology (surface water)</b>											
As per Alternative 1						• As per Alternative 1					
<b>Soil</b>											
As per Alternative 1						• As per Alternative 1					
<b>Air</b>											
As per Alternative 1						• As per Alternative 1					
<b>Biodiversity (Flora)</b>											
Loss of Tshokwane-Hlane Basalt Lowveld vegetation classified as Least Threatened and associated loss of species richness due to:	1	4	6	3	<b>33 M</b>	<ul style="list-style-type: none"> <li>• Biodiversity management, including access roads, resource management, protection of flora and alien plant control as per the EMPr (section 9.1)</li> <li>• Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)</li> <li>• Erosion control as per the EMPr (section 9.3)</li> <li>• Vehicles and equipment management as per the EMPr (section 9.4)</li> </ul>	1	4	4	2	<b>18 L</b>
<ul style="list-style-type: none"> <li>• Uncontrolled vegetation clearing and access by staff and guests</li> <li>• Encroachment of alien invasive species</li> <li>• Litter and waste</li> </ul>											
Disturbance of sensitive habitats, specifically riparian zones due to:	1	4	6	4	<b>44 M</b>	<ul style="list-style-type: none"> <li>• Socio economic management, including staff management as per the EMPr (section 9.5)</li> <li>• Fire management as per the EMPr (section 9.6)</li> </ul>	1	4	4	3	<b>27 L</b>
<ul style="list-style-type: none"> <li>• Uncontrolled vegetation clearing and access by staff and guests</li> </ul>											

<ul style="list-style-type: none"> <li>• Encroachment of alien invasive species</li> <li>• Litter and waste</li> </ul> <p>This impact is expected to be slightly higher due to certain chalets being located within the riparian buffer</p>											
<p>Destruction and damage to plant species of conservation importance: protected trees (<i>Sclerocarya birrea subsp. caffra</i>, <i>Combretum imberbe</i> and <i>Philenoptera violacea</i> and provincially protected species <i>Aloe marlothii</i> and <i>Crinum stuhlmannii</i>) due to uncontrolled vegetation clearing and access by staff and guests.</p>	1	5	6	3	<b>36 M</b>						
<p>Increase in exotic vegetation/alien species and bush encroachment into disturbed soils and areas in the event that the rehabilitation process is not successful.</p> <p>Colonisation and re-emergence of exotic vegetation / alien species and bush encroachment into disturbed soils and poorly rehabilitated areas. Alien invasive species tend to out-compete indigenous, slower growing species and could also result in unsuccessful rehabilitation.</p>	2	4	8	3	<b>42 M</b>						
<b>Biodiversity (Fauna)</b>											
As per Alternative 1						• As per Alternative 1					
<b>Land Use &amp; Agricultural Potential</b>											
None.						•					
<b>Heritage</b>											
None.						•					
<b>Visual</b>											
As per Alternative 1						• As per Alternative 1					
<b>Socio-economics</b>											
As per Alternative 1						• As per Alternative 1					
<b>Service and traffic</b>											
As per Alternative 1						• As per Alternative 1					

<b>Indirect Impacts</b>											
<b>Visual</b>											
As per Alternative 1							• As per Alternative 1				
<b>Cumulative Impacts</b>											
<b>Biodiversity (Flora)</b>											
Cumulative loss of Loss of Tshokwane-Hlane Basalt Lowveld vegetation classified as Least Threatened and associated loss of species richness.	3	4	6	3	<b>39 M</b>	<ul style="list-style-type: none"> <li>• Biodiversity management, including access roads, resource management, protection of flora and alien plant control as per the EMPr (section 9.1)</li> <li>• Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)</li> <li>• Erosion control as per the EMPr (section 9.3)</li> <li>• Vehicles and equipment management as per the EMPr (section 9.4)</li> <li>• Socio economic management, including staff management as per the EMPr (section 9.5)</li> <li>• Fire management as per the EMPr (section 9.6)</li> </ul>	3	4	4	2	<b>22 L</b>
Cumulative disturbance of sensitive habitats, specifically riparian zones  This impact is expected to be slightly higher due to certain chalets being located within the riparian buffer	3	4	6	4	<b>52 M</b>		3	4	4	3	<b>33 M</b>
Cumulative reduction and damage to plant species of conservation importance: protected trees ( <i>Sclerocarya birrea subsp. cafra</i> , <i>Combretum imberbe</i> and <i>Philenoptera violacea</i> and provincially protected species <i>Aloe marlothii</i> and <i>Crinum stuhlmannii</i> )	3	5	6	3	<b>42 M</b>		3	5	4	2	<b>24 L</b>
<b>Visual</b>											
As per Alternative 1						• As per Alternative 1					
<b>Socio-economics</b>											
As per Alternative 1						• As per Alternative 1					
<b>Services and traffic</b>											
As per Alternative 1						• As per Alternative 1					

<b>ALTERNATIVE A3 (TECHNOLOGY ALTERNATIVE)</b>											
<b>Direct Impacts</b>											
<b>Ground water</b>											
As per Alternative 1						• As per Alternative 1					
<b>Hydrology (surface water)</b>											
As per Alternative 1						• As per Alternative 1					

<b>Soil</b>											
Soil contamination and pollution due to:	1	4	8	3	<b>39 M</b>	<ul style="list-style-type: none"> <li>Biodiversity management, including access roads, resource management, protection of flora and alien plant control as per the EMPr (section 9.1)</li> <li>Materials management, including solid liquid and hazardous waste, fuel and hazardous material as per the EMPr (section 9.2)</li> <li>Erosion control as per the EMPr (section 9.3)</li> <li>Vehicles and equipment management as per the EMPr (section 9.4)</li> </ul>	1	4	4	2	<b>18 L</b>
<ul style="list-style-type: none"> <li>Unmanaged storm water runoff</li> <li>Litter and uncontrolled waste</li> <li>Sewage leaks and spills</li> <li>Herbicides, pesticides and fertilisers</li> <li>Discharge and spill of solvents, paints, chemicals and cleaning products</li> <li>Discharge and spill of hydrocarbons and fuel</li> </ul>											
Soil erosion due to:	1	4	8	3	<b>39 M</b>	<ul style="list-style-type: none"> <li>Socio economic management, including staff management as per the EMPr (section 9.5)</li> </ul>	1	4	4	2	<b>18 L</b>
<ul style="list-style-type: none"> <li>Soil compaction by uncontrolled movement of staff and guests (especially vehicles)</li> <li>Runoff over exposed or cleared areas that have failed to rehabilitate</li> <li>Uncontrolled sotrmwater runoff</li> </ul>											
This impact is anticipated to be slightly higher owing to increase in hard surfaces (solar panels)											
<b>Air</b>											
As per Alternative 1						<ul style="list-style-type: none"> <li>As per Alternative 1</li> </ul>					
<b>Biodiversity (Flora)</b>											
As per Alternative 1						<ul style="list-style-type: none"> <li>As per Alternative 1</li> </ul>					
<b>Biodiversity (Fauna)</b>											
As per Alternative 1						<ul style="list-style-type: none"> <li>As per Alternative 1</li> </ul>					
<b>Land Use &amp; Agricultural Potential</b>											
None.						<ul style="list-style-type: none"> <li></li> </ul>					
<b>Heritage</b>											
None.						<ul style="list-style-type: none"> <li></li> </ul>					
<b>Visual</b>											
As per Alternative 1						<ul style="list-style-type: none"> <li>Socio economic management, including staff management and visual impact management as per the EMPr (section 9.5)</li> </ul>					
Visual impact of solar panels mounted on the roofs on KNP tourists and adjacent tourism developments	2	4	8	3	<b>42 M</b>		2	4	4	3	<b>30 L</b>
<b>Socio-economics</b>											

As per Alternative 1						• As per Alternative 1					
<b>Service and traffic</b>											
Operational cost of running services and infrastructure, specifically electricity (positive impact)	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
Operational cost is expected to be minimal in the long term as a result of off-grid design.											
Increase in traffic on the D1870 and on other 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 tourism developments.	3	4	6	4	52 M		3	4	4	2	22 L
<b>Indirect Impacts</b>											
<b>Visual</b>											
As per Alternative 1						• As per Alternative 1					
<b>Cumulative Impacts</b>											
<b>Biodiversity (Flora)</b>											
As per Alternative 1						• As per Alternative 1					
<b>Visual</b>											
As per Alternative 1						• As per Alternative 1					
<b>Socio-economics</b>											
As per Alternative 1						• As per Alternative 1					
<b>Services and traffic</b>											
As per Alternative 1						• As per Alternative 1					

<b>NO-PROJECT ALTERNATIVE</b>											
<b>Direct Impacts</b>											
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
<b>Indirect Impacts</b>											

None.						•					
<b>Cumulative Impacts</b>											
No opportunity to up-grade and improve skill levels in the area.	3	4	6	4	<b>52 M</b>	• None.	3	4	6	4	<b>52 M</b>

## 2.4 Decommissioning Phase

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