



**24G Rectification Process for activities  
commenced with at Ekland Safaris, Makhado  
Local Municipality, Limpopo Province**

**Draft Environmental Impact Report**

**Manupont 124 (Pty) Ltd**

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*Bringing ideas  
to life*



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# Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Project Background	1
1.2	Environmental Assessment Practitioner (EAP)	3
<b>2</b>	<b>Location of the Activity</b>	<b>6</b>
<b>3</b>	<b>Description of the Activity</b>	<b>7</b>
3.1	Listed and Specified Activities	7
3.2	Details of Alternatives Considered	8
<b>4</b>	<b>Policy &amp; Legislative Context</b>	<b>9</b>
<b>5</b>	<b>Need and Desirability of the Project</b>	<b>12</b>
<b>6</b>	<b>Public Participation</b>	<b>13</b>
6.1	Details of the Public Participation Process (PPP)	13
6.2	Summary of Issues Raised by I&APs	14
<b>7</b>	<b>Environmental Attributes of the Project Area</b>	<b>16</b>
7.1	Biophysical Attributes	16
7.2	Socio-economic attributes	17
<b>8</b>	<b>Impacts &amp; Risks</b>	<b>19</b>
8.1	Methodology used to Determine and Rank Impacts and Risks	19
8.2	Operational Phase Impacts	21
8.3	Decommissioning Impacts	31
<b>9</b>	<b>Environmental Impact Statement</b>	<b>36</b>
<b>10</b>	<b>Recommendations</b>	<b>39</b>
10.1	Specialist Findings and Impact Management Outcomes	39
<b>11</b>	<b>Conclusion</b>	<b>41</b>
11.1	Assumptions, Uncertainties and Gaps	41
11.2	Reasoned Opinion for Authorisation	41
<b>12</b>	<b>Undertaking by the EAP</b>	<b>42</b>

## Figures

Figure 1   Location of Ekland Safaris, within the Machado Local Municipality, Limpopo Province.	5
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## Tables

Table 1   Details of the EAP	4
Table 2   Activity location details	6
Table 3   Listed and specified activities triggered at Ekland Safaris Game Farm	7
Table 4   Applicable legislation, policies and/or guidelines that were or are relevant	9
Table 5   Socio-economic value of Ekland Safaris (for the Section 24G Application)	12
Table 6   Details of the PPP undertaken to date	13
Table 7   Summary of comments and issues raised by I&APs during initial project phases	14
Table 8   Socio-economic profile of the MLM in terms of employment status and income distribution	18
Table 9   Highest education levels of all ages in the MLM	18
Table 10: Assessment criteria for the evaluation of impacts	19
Table 11: Definition of significance ratings	20
Table 12: Definition of probability ratings	20
Table 13: Definition of confidence ratings	20
Table 14: Definition of reversibility ratings	21
Table 15: Ecological importance of vegetation communities present within the site	22
Table 16: Significance of biodiversity impacts	23
Table 17: Significance of increased soil erosion and storm water	24
Table 18: Significance of impact on groundwater and surface water	26
Table 19: Significance of heritage and palaeontological impact	27
Table 20: Significance of improper sanitation and waste management	28
Table 21 Significance of the visual impact during construction	29
Table 22: Impact on land use	30
Table 23   Socio-economic value of Ekland Safaris (activities associated with the Section 24G Application)	30
Table 24: Positive socio-economic impact during operation	31
Table 25: Ecological impact during decommissioning phase	32
Table 26: Impact on ground and surface water resources during decommissioning phase	32
Table 27: Impact on soil erosion during decommissioning phase	33
Table 28: Increased traffic during decommissioning phase	34
Table 29: Dust generation during decommissioning phase	34
Table 30: Waste generation and disposal during decommissioning phase	35
Table 31: Socio-economic impact during decommissioning phase	35
Table 32: Operational phase impact summary	37
Table 33: Decommissioning phase impact summary	38

# Appendices

Appendix A: Locality Map

Appendix B: Layout and designs of respective facilities included within the application

Appendix C: Site Photos

Appendix D: Public Participation Documentation

Appendix D1: Interested and Affected Party Register

Appendix D2: Background Information Document

Appendix D3: Newspaper advert of proof of placement

Appendix D4: Site notices and proof of site notices placed

Appendix D5: Comments and response report

Appendix D6: Minutes of meeting conducted (Mulambwane CPA)

Appendix E: Specialist Reports

Appendix E1: Ecological Impact Assessment of Main Lodge Area (Post Development)

Appendix E2: Grave Management Report

Appendix E3: Watercourse and Aquatic Ecological Assessment

Appendix E4: Sulphur Springs Wetland Delineation and Vegetation Assessment

Appendix E5: Geo-Hydrological Assessment

Appendix F: Draft Environmental Management Plan

Appendix G: Declaration of the EAP

# 1 Introduction

Manupont (Pty) Ltd, (henceforth Manupont), the owner of Ekland Safaris located between Louis Trichardt and Musina in the Limpopo Province, recently upgraded various facilities and infrastructure within the private reserve. Some of the activities undertaken within the reserve, constitute listed activities under the Environmental Impact Assessment (EIA) Regulations promulgated in terms of the National Environmental Management Act, 1998 (NEMA) (Act No. 107 of 1998). The development activities in question were commenced with during August 2017, and applicant were made aware of the requirement for an Environmental Authorisation (EA) by the Limpopo Department of Economic Development, Environment and Tourism (LEDET).

Manupont has undertaken to apply for an EA through a rectification process in terms of section 24G of NEMA. A Water Use Licence Application will also be submitted to the Department of Water and Sanitation (DWS) for various water use activities.

## 1.1 Project Background

Ekland Safaris is an existing private reserve whose facilities were constructed prior to 2000. In 2017, the new owner decided to upgrade and refurbish the existing facilities on the property to become one of the top luxury establishments in the world with only selected wealthy guests to be accommodated at this luxury facility. The upgrading and refurbishment included the following:

### Upgrading the fence surrounding Ekland Safaris:

The fencing included the construction of a double fence (Clearview fencing on the inner boundary and electric fencing on the outer boundary of the farm). The fencing activity also included the establishment of a patrol road, limited to 4m in width, located between the Clearview fence and the electric fence. The purpose of the double fence and patrol road is to aid in the protection of rhinos and other endangered wildlife on the property.

A number of storm water structures and culverts were also constructed as stream crossings to ensure that the patrol road and perimeter fence does not wash away during the rainy season. Some structures were existing structures which were refurbished, some were combined to form one water crossing and some structures were new.

### Upgrading of Main Lodge and surrounding area:

The Main Lodge at Ekland Safaris was an existing facility, constructed prior to 2003. The recent construction activities at the Main Lodge included the following:

- Refurbishment of 15 existing facilities;
- The construction of the following structures:
  - Two additional chalets;
  - Clinic (approximately 500m<sup>2</sup>);
  - Building for goods being received (approximately 500m<sup>2</sup>);
  - Laundry and garages (approximately 500m<sup>2</sup>);
  - Presidential Villa (approximately 1,500m<sup>2</sup>);
  - Spa and gym;
  - Two lifts along the cliff which connect the Owners Villa with the rest of the Chalets;
  - 480kl reservoir (approximately 600m<sup>2</sup>); and
  - Additional access roads to Main Lodge and the reservoir (all roads are restricted to 4m in width).

### Upgrading of Pienaar Lodge and surrounding area:

Pienaar Lodge was also constructed prior to 2003. The upgrading and refurbishment of Pienaar Lodge included the following:

- Seven existing units have been reconfigured into a five-suite lodge to accommodate eight guests;
- The following were constructed:

- Drop off area (approximately 400m<sup>2</sup>);
- Four additional buildings within the existing transformed area;
- Laundry (approximately 300m<sup>2</sup>);
- Two buildings for staff accommodation (totalling approximately 500m<sup>2</sup>);
- 240kl reservoir (approximately 250m<sup>2</sup>) and
- Additional access road to the drop off area at the lodge (restricted to 4m in width).

#### Upgrading of Leadwood Lodge:

Leadwood Lodge was constructed prior to 2003. The upgrading and refurbishment of Leadwood Lodge included the following:

- Adding six accommodation units; and
- Upgrading the central facility.

#### Upgrading of road infrastructure:

Various existing main routes within Ekland Safaris were surfaced and some storm water culverts were constructed to avoid flooding of newly surfaced roads. These roads remained under 4m in width.

#### Transportation of water:

Water is transported to reservoirs through pipelines of various diameters:

- From the GG1 Reservoir to the Main Lodge Reservoir – 200mm HDPE Class 12 (20l/s) pipeline;
- From the Main Lodge Reservoirs to the Main Lodge – 150mm steel pipeline (32 l/s) and 140mm HDPE Class 20 (10l/s);
- From Pienaar Borehole to Pienaar Reservoir – 110mm uPVC (7l/s).

#### Resurfacing of existing airstrip:

The existing airstrip was also established prior to 2003. Since 2003, an area 1.1km in length by 12m in width has been surfaced, with the widest section of the surfaced area being 20m. Approximately 20m on both sides of the airstrip were kept clear of vegetation for safety purposes.

During the resurfacing of the airstrip, the width of the airstrip increased to approximately 18m with the widest surface area being 28m. The length of the airstrip remained the same at 1.1km.

#### Workshop and garages for vehicle storage:

A workshop of approximately 400m<sup>2</sup>, consisting of an area where vehicles are repaired and parked when not in use, was constructed on land that has previously been disturbed by agricultural activities. Citrus trees were affected by this activity and no indigenous vegetation was cleared.

#### Patel Gate:

Construction of the following has commenced at the gate that would serve as a delivery and distribution centre to the lodge and an entrance for all staff members:

- Changing rooms with shower facilities (approximately 300m<sup>2</sup>); and
- Security access building.

#### Sulphur Springs Day Spa:

The construction of the Sulphur Springs Day Spa included the construction of two buildings, totalling approximately 200m<sup>2</sup> in size. All structures were located outside the 32m buffer area of the spring and less than 300m<sup>2</sup> of indigenous vegetation was cleared for the construction of the Day Spa.

## 1.2 Environmental Assessment Practitioner (EAP)

Aurecon South Africa (Pty) Ltd (henceforth, Aurecon) was appointed by Manupont as the Environmental Assessment Practitioner (EAP) to undertake the necessary Section 24G EA application processes required by the applicable legislation. In this regard, Aurecon has, on behalf of Manupont, applied for the rectification of unlawful commencement of listed activities in terms of Section 24G of the NEMA, as amended, to the competent authority (CA), the Limpopo Department of Economic Development, Environment and Tourism (LEDET).



## 1.2.1 Contact person and correspondence address of the EAP

Table 1 | Details of the EAP

<b>Independent EAP</b>	Aurecon South Africa (Pty) Ltd
<b>Responsible person</b>	Anne-Mari White
<b>Physical address</b>	10 Nel Street Nelspruit 1200
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<b>Email</b>	anne-mari.white@aurecongroup.com
<b>Professional affiliation</b>	Certificated Natural Scientist with the South African Council for Natural Scientific Professions (SACNASP); registration number: 300067/15.

## 1.2.2 Expertise of the EAP

The 24G rectification process is managed by Ms Anne-Mari White, an environmental project leader with Aurecon. She is responsible for the overall management of the project, including client liaison, financial management and progress reporting. Ms White is a Senior Environmental Consultant, who started her studies at the North-West University (NWU) and completed her Bachelor of Science: Environmental Management at the University of South Africa (UNISA) in 2007. In addition to her qualification, she completed short courses in soil classification and wetland delineations (Terrasoil Science), Geographic Information Systems (University of KwaZulu-Natal), and Environmental Impact Assessments (NWU). Ms. White's Curriculum Vitae is attached as **Appendix G**.



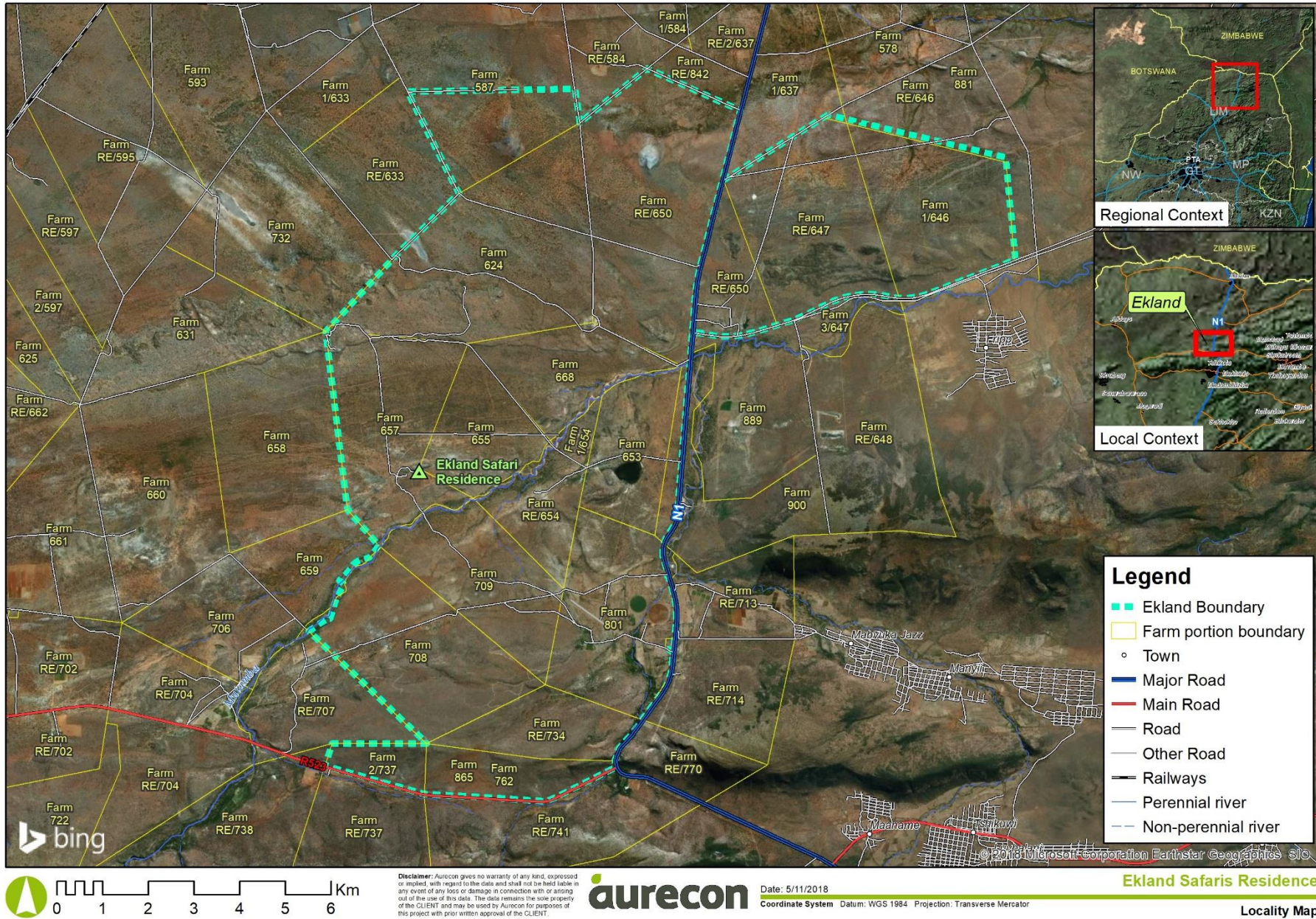


Figure 1 | Location of Eklund Safaris, within the Machado Local Municipality, Limpopo Province

## 2 Location of the Activity

Ekland Safaris is located on a 14,000-hectare area, located along the N1, between Louis Trichardt and Musina in the Limpopo province. Details of the properties included within the boundaries of Ekland Safaris are provided in Table 2.

Table 2 | Activity location details

<b>Farm name</b>	<b>Portion</b>
Johan 762 MS	0
Thorndale 737 MS	2
The Folly 734 MS	Rem
Sandilands 708 MS	0
Wilhelm 801 MS	0
Kalkbult 709 MS	0
Koschade 657 MS	0
Qualipan 655 MS	0
Pienaar 624 MS	0
M'tamba Vlei 654 MS	Rem and Portion1
Sulphur Springs 653 MS	0
Mutamba 668 MS	0
Bekaf 650 MS	Rem and Portion 0
Juliana 647 MS	Remainder
Coen Brits 646 MS	Portion 1



# 3 Description of the Activity

## 3.1 Listed and Specified Activities

The listed and specified activities triggered are provided in Table 3.

Table 3 | Listed and specified activities triggered at Ekland Safaris

Listed activities as described in GN R 982 of 2014 (as amended in 2017)	Description of project activity
<p><b>GN R 983 Activity 12:</b></p> <p>The development of bridges or infrastructure or structures with a physical footprint of 100m<sup>2</sup> or more, where such development occurs within a watercourse.</p>	<p>The patrol road along the fence needs to cross watercourses at various points. For this reason, small bridges/culvert structures were constructed to ensure that the patrol road and perimeter fence does not wash away during the rainy season and to allow for the uninterrupted flow of water.</p>
<p><b>GN R 983 Activity 19:</b></p> <p>The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, pebbles or rock of more than 5 cubic metres from, a watercourse</p>	<p>As part of the construction process, the infilling, depositing or moving of soil within a watercourse was required during the construction of the bridges and culvert structures.</p> <p>An earth berm was also constructed within a watercourse to create a waterhole.</p>
<p><b>GN R 983 Activity 31:</b></p> <p>The decommissioning of existing facilities, structures or infrastructure for –</p> <ul style="list-style-type: none"> <li>(i) Any development and related operation activity or activities listed in Listing Notice 1, 2 or 3 of 2014;</li> <li>(ii) Any expansion and related operation activity or activities listed in Listing Notice 1, 2 or 3 of 2014</li> </ul>	<p>Some structures at the Main Lodge and Pienaar Lodge were also decommissioned (partly dismantled) during the refurbishment of those lodge</p>
<p><b>GN R 983 Activity 48:</b></p> <p>The expansion of</p> <ul style="list-style-type: none"> <li>(v) infrastructure or structures where the bridge is expanded by 100 square metres or more in size within</li> <li>(a) a watercourse</li> </ul>	<p>Some culvert structures were combined (expanded) to form one crossing.</p>
<p><b>GN R 985, activity 6:</b></p> <p>The development of resorts, lodges, hotels, and tourism or hospitality facilities that sleep 15 people or more</p> <ul style="list-style-type: none"> <li>i. Outside urban areas:</li> <li>(ee) within Critical Biodiversity Areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans</li> </ul>	<p>The facilities within Ekland Safaris will be commercially operated after its refurbishment, the listed activity applicable to the refurbishment is the development of a lodge and not just the expansion thereof. This activity is applicable to the Main Lodge, Pienaar Lodge, Leadwood Lodge and Rock Lodge.</p>

<p><b>GN R 985, activity 8:</b></p> <p>The development and related operation of above ground cableways and funiculars outside urban areas.</p>	<p>A lift has been constructed between the Main Lodge chalets and the Presidential villa.</p>
<p><b>GN R 985, activity 12:</b></p> <p>The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>Within:</p> <p>ii. Critical Biodiversity Areas identified in bioregional plans</p>	<p>Ekland Safaris falls within a Critical Biodiversity Area (CBA 2) as identified in the Limpopo Conservation Plan.</p> <p>More than 300 square metres of indigenous vegetation was cleared to make way for the fence and patrol road, the reservoirs, additional facilities at Main, Pienaar and Leadwood Lodges, the widening of the airstrip and structures at the main entrance and Patel Gate.</p> <p>Ekland Safaris does not yet have an approved Maintenance Management Plan and for this reason Activity 12 of GNR 985, 2014, is applicable.</p>
<p><b>GN R 985, activity 14:</b></p> <p>The development of—</p> <p>(ii) infrastructure or structures with a physical footprint of 10 square metres or more;</p> <p>where such development occurs—</p> <p>(a) within a watercourse;</p> <p>and within</p> <p>Critical Biodiversity Areas identified in bioregional plans</p>	<p>Ekland Safaris falls within a Critical Biodiversity Area (CBA 2) as identified in the Limpopo Conservation Plan.</p> <p>Culvert structures and crossings of more than 10 square metres was constructed within watercourses located within Ekland Safaris.</p>

### 3.2 Details of Alternatives Considered

No other sites were considered for the refurbishment of the facilities and infrastructure at Ekland Safaris as these facilities were existing structures which were upgraded.

As the upgrading of the facilities has already been completed, there are also no no-go alternative to be considered. However, for the purpose of the investigation, the no-go option investigated, refers to what the impacts would have been if the facilities were not upgraded or refurbished.

# 4 Policy & Legislative Context

The main legal frameworks that require an EA are listed in Table . Policies and guidelines applicable to the project or project area are also considered herein.

Table 4 | Applicable legislation, policies and/or guidelines that were or are relevant

Applicable legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments considered	Project application and type (permit / licence / authorisation / comment)
The Constitution of South Africa, Act No. 108 of 1996	<p>Manupont (Pty) Ltd will be required to adhere to the Environmental Management Programme (EMPr) requirements to ensure that social and environmental management considerations are considered and implemented.</p> <p>As per Section 24 the Constitution, a public participation process (PPP) will be undertaken as this is considered to be an essential mechanism for informing stakeholders of their rights and obligations in terms of the project.</p>
National Environmental Management Act, 1998 (Act No. 107 of 1998)	A 24G rectification process is undertaken to obtain authorisation for listed activities included within GNR 983, and GNR 985 of 2014 (as amended in 2017), that have commenced without the required environmental authorisation.
National Water Act (NWA), 1998 (Act No. 36 of 1998)	<p>A Water Use License Application is in process for various water use activities for Ekland Safaris under the NWA::</p> <ul style="list-style-type: none"> <li>• Section 21(a): Abstraction of water</li> <li>• Section 21(b): Storage of water</li> <li>• Section 21 (c) &amp; (i): Construction of culvert structures within watercourses / drainage lines.</li> <li>• Section 21 (g): for the use of septic tanks</li> </ul>
National Heritage Resources Act (NHRA), 1999 (Act No.25 of 1999)	The NHRA introduces an integrated and interactive system for the management of the national heritage resources. As the impact already occurred, no Heritage Impact Assessment was conducted for the activities undertaken at Ekland Safaris. However, most activities involved the upgrading and refurbishment of existing facilities within an already transformed footprint. In order to manage national heritage resources, a Grave Management Plan was compiled by an Archaeologist to protect and manage any graves identified within the perimeter of Ekland Safaris.
<p>National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)</p> <p>Threatened Terrestrial Ecosystems for South Africa, 2011</p> <p>Limpopo Conservation Plan, 2013</p>	<p>The Act provides for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998; the protection of species and ecosystems that warrant protection;</p> <p>Ekland Safaris is located within a Critical Biodiversity Area (CBA 2) as defined under the Limpopo Conservation Plan and is therefore an ecosystem which warrants protection.</p>
General Notice No. R.152 of 2007: NEMBA: Threatened or Protected Species Regulations	There are various threatened and protected species within Ekland Safaris, however, as the activity already occurred, it is uncertain whether any threatened or protected species were affected by the activities. GNR 152 of 2007 requires the applicant to apply for a permit for the removal or relocation of protected or threatened species.

<p>Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)</p>	<p>The Act provides for the control over the utilisation of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combatting of weeds and invader plants</p> <p>The properties included within Ekland Safaris are zoned for agricultural purposes. Game farming is taking place within the boundaries of the reserve as the property has low agricultural potential due to the scarcity of water. Ekland Safaris will be responsible for the conservation of the soil and water resources on the property and to manage invasive plant species. Measures for the management of these resources are included within this report.</p>
<p>National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)</p>	<p>The National Environmental Management: Waste Act provides for the management of waste by requiring measures for the prevention of pollution and ecological degradation, in order to protect health of people and the environment.</p> <p>Although no Waste Management License is required for the operation of the facilities at Ekland Safaris, all waste must be managed and disposed of in accordance with this Act and applicable by-laws.</p>
<p>National Veld and Forest Fire Act, 1998 (Act No. 101 of 1998)</p>	<p>The purpose of the National Veld and Forest Fire Act, 1998 is to prevent and combat veld, forest and mountain fires throughout the Republic.</p> <p>Ekland Safaris must adhere to the National Veld and Forest Fire Act, 1998, when any firebreaks are prepared or when any fire outbreak occurs within the perimeter of Ekland Safaris.</p>
<p>Limpopo Environmental Management Act, 2003 (Act No. 7 of 2003)</p>	<p>The Act provides for the protection and conservation of the environment in the Limpopo Province and for a wide variety of matters including protected areas, hunting, fishing, protection of indigenous plants, etc.</p> <p>Ekland Safaris must therefore adhere to the Act and the regulations under the Limpopo Environmental Management Act, 2003.</p>
<p>Restitution of Land Rights, 1994 (Act No. 22 of 1994)</p>	<p>The Act provides for the restitution of rights in land to persons or communities dispossessed of such rights after 19 June 1913 as a result of past racially discriminatory laws or practices.</p> <p>A number of properties within Ekland Safaris have been claimed by the Mulambwane Community Property Association.</p>
<p>Spatial Planning and Land Use Management Act (SPLUMA), 2013 (Act No. 16 of 2013)</p> <p>Makhado Land-Use Scheme, 2009</p> <p>Makhado Spatial Planning Land Development and Land Use Management By-Laws, 2016</p>	<p>The farms and farm portions within Ekland Safaris are currently zoned for agricultural purposes. A change in land use application is currently in process to rezone the areas on which the facilities are located in order to regularise the tourism accommodation and ancillary uses which have recently been upgraded and refurbished.</p> <p>Rezoning application has been submitted to the Makhado Local Municipality for consideration.</p>
<p>National Development Plan (NDP) 2010 - 2030</p>	<p>The NDP proposes that economic transformation and job creation can be achieved each year by, among others, <i>“increasing exports, focusing on those areas where South Africa already has endowment and comparative advantage, such as mining, construction, mid-skill manufacturing, agriculture and agro-processing, higher education, <u>tourism</u> and business services.”</i></p> <p>Ekland Safaris is a luxury facility and the higher the level of facility, the larger the job creation. It is calculated that over 200 permanent job opportunities will be created. Therefore, Ekland Safaris is in line with the NDP 2010 – 2030.</p>
<p>Makhado Local Municipality (MLM) Integrated Development Plan (IDP) (2019/2020 – 2021/2022)</p>	<p>The vision of the IDP for the MLM is <i>“to become a dynamic hub for socio-economic development by 2050”</i> and <i>“to ensure effective utilization of economic resources to address socio-economic imperatives through mining agriculture and tourism”</i>.</p>

	<p>During construction, numerous job opportunities were provided to the local community members. The construction activities were of temporary nature, however, Ekland Safaris is a luxury tourism facility, which will provide over 200 job opportunities during the operational phase and most of the labour will be sourced locally. Ekland Safaris will also be training the local people in the hospitality industry to ensure that they have the necessary skills to conduct their duties. The training of these people provides some of the community members with an opportunity to educate themselves and obtain the necessary skills for future employment opportunities.</p> <p>As per the mission stated within the IDP for the MLM, Ekland Safaris will be addressing the socio-economic imperatives through tourism and will therefore be in line with the MLM, IDP 2019/2020 – 2021/2022.</p>
<p>Promotion of Access to Information Act, (PAIA) 2000 (Act No. 2 of 2000)</p> <p>Promotion of Administrative Justice Act (PAJA), 2000 (Act No. 3 of 2000)</p>	<p>PAIA enables any person to lodge a request for any information that is held by any other person which is required for the exercise of protection of any rights.</p> <p>PAJA enables citizens to actively participate in the decision-making process, ensure that organs of state are accountable and transparent and promote lawful, reasonable and procedurally fair decision-making processes</p> <p>In order to give stakeholders and I&amp;AP's an opportunity to participate in the process, all information pertaining to the application will be made available to all parties for review.</p>



# 5 Need and Desirability of the Project

Manupont is in the process of creating one of the most secure conservation areas in Africa whilst aiming to be the premium luxury safari property in the world catering for discerning guests. From an economic perspective, South Africa is in dire need of investment and Manupont is actively investing in South Africa despite the current risk associated with the land reform debate, among other issues. To date, Manupont has spent over R1.5 billion in South Africa through upgrading this facility, using local labour and contractors.

In terms of employment opportunities, the higher the luxury level of a facility, the larger the job creation. Eight staff members will be appointed for each guest accommodated. Thus, it is calculated that over 220 permanent job opportunities will be created over the next three years.

Authorisation was also applied for another lodge facility within Ekland Safaris, the Lion Farm Lodge, and was approved by the LEDET in February 2019. It is estimated that an additional 180 staff members will be permanently employed within that facility once it is operational.

During guest visits, Ekland Lodge is sold on a sole use basis, marketed to international, high net worth individuals, creating employment for other service providers, staff and specialist skills as follows:

- Haywards Safaris- 5-star camps for extra accommodation (120 staff)
- Motsumi Bush training. All staff are trained on how to be safe within an operating Big 5 area (Game to snake awareness training)
- Evolved Eye – Logistics and support (80 staff)
- Specialist support of medical teams, protection and added security (80 staff)
- Support of local community by making use of local food and beverage suppliers
- Staffing through Workforce, a local company for housekeeping using only local staff
- Support of local hunters and guides (20 staff)
- Support of local vehicle dealerships by purchasing a vehicle fleet of more than 40 vehicles including farm vehicles
- Rangers and security staff for the protection of rhinos and endangered species
- Local transport companies that mobilise staff from local communities
- Support of all local businesses such as restaurants, bars, entertainment offerings in the local area, which includes support of the local Venda traditional village.

The company's goal of creating one of the most secure conservation areas together with employing local community members and providing training to these members in the hospitality industry, benefits the biophysical, social and economic environment. Below is a summary of the socio-economic value of Ekland Safaris.

Table 5 | Socio-economic value of Ekland Safaris

Estimated capital value of Ekland Safaris	R1.53 billion
Permanent new employment opportunities created during the operational phase of the activity	86 permanent job opportunities
Employment created through service providers: <ul style="list-style-type: none"> <li>• Security and anti-poaching;</li> <li>• Gardens and landscaping</li> </ul>	80 job opportunities 60 job opportunities
Capital value – training provided to developing local staff	R 2mil per annum
Estimated current value of the employment opportunities during operation	R19.2mil per annum
Percentage accrued to previously disadvantaged individuals (People of colour and females in the work place, including Management)	Previously disadvantaged individuals = 35% Female = 37%

# 6 Public Participation

## 6.1 Details of the Public Participation Process (PPP)

Consultation with the public is an integral component of the EA process. This process enables Interested and Affected Parties (I&APs) (e.g. directly affected landowners, national, provincial and local authorities, local communities), to raise concerns and comment on the proposed activities, which they feel should be addressed in the EIA process. The PPP has been structured to provide I&APs with an opportunity to gain more knowledge about the proposed project, to provide input through the review of documents and reports, and to voice any issues or concerns at various stages throughout the EIA process.

The PPP to date is summarised in Table 6. The PPP is in accordance with Chapter 6 of the EIA Regulations, 2014 (GN No. 982 of 4 December 2014).

The following guideline documents published by the DEA were also used to inform the PPP approach:

- Public Participation Guidelines (Notice 807 of 2012).

Table 6 | Details of the PPP undertaken to date

Task	Details	Date
<b>Initial Public Participation Phase</b>		
I&AP identification	An I&AP database was developed for the project by establishing the organisations, individuals and landowners in proximity to the project site or with an interest in Ekland Safaris. The database of I&APs includes adjacent landowners, relevant district and local municipal officials, and relevant national and provincial government officials. This database will be continually updated as new I&APs are identified throughout the EIA process. A copy of the I&AP database is included in <b>Appendix D1</b> .	August 2018 – January 2019
Background Information Document distribution	Background Information Documents (BIDs), written in English, were distributed to the identified I&APs for perusal and comment. A copy of the BID is attached in <b>Appendix D2</b> .	January 2019
Newspaper advertisements	A newspaper advertisement was placed in the Limpopo Mirror as notification of the proposed 24G rectification process. Proof of the advertisement is attached in <b>Appendix D3</b> .	18 January 2019
Site notice	A site notice was placed along a public road at the entrance to the Ekland Safaris, as notification of the proposed 24G rectification process. A copy and photographs of the site notice are attached in <b>Appendix D4</b> .	21 January 2019
Addressing comments received	All comments received during the public participation process are collated into the Draft EIR. The responses to these comments from the EAP are provided in the Comments and Response Report (CRR), attached as <b>Appendix D5</b> .	January 2019 - Ongoing
Draft Environmental Impact Report (DEIR) distributed for review	The DEIR was distributed to stakeholders and the I&APs for review during October - November 2019.	October – November 2019
Addressing comments received	All comments received will be collated into the Comments and Responses Report (CRR). The responses to these comments from the applicant and the EAP will be provided in the CRR, attached as <b>Appendix D5</b> . Comments will be added to the CRR as they are received throughout the remainder of the EIA process.	Ongoing

## 6.2 Summary of Issues Raised by I&APs

Comments and issues raised by I&APs, the responses thereto, and the manner in which they were incorporated in the process, are listed in Table 7 (Letters received, and responses issued are found attached - **Appendix D5**).

Table 7 | Summary of comments and issues raised by I&APs during initial project phases

Comment / issue / concern	EAP / applicant's response
<p><b><u>Ms. Marietjie Eksteen – Jacana Environmental</u></b></p> <p>The following issues must be considered in the Environmental Impact Report:</p> <ul style="list-style-type: none"> <li>• Impact on protected species;</li> <li>• Impact on eco-corridors;</li> <li>• Impact on water resources and aquatic habitats;</li> <li>• Impact on heritage and cultural resources;</li> <li>• Impact of electric fence on fauna/avifauna/amphibians/reptiles</li> <li>• Impact of the air strip</li> </ul>	<p>These issues were considered within Section 8 of the Draft EIR.:</p> <ul style="list-style-type: none"> <li>• The impact on biodiversity is assessed and addressed within Section 8.2.1;</li> <li>• The impacts on water resources and aquatic habitats are assessed and addressed within the Watercourse and Aquatic Ecological Assessment (Appendix E3) and Section 8.2.3;</li> <li>• Heritage and Cultural Resources are discussed in Section 7.2.2 and 8.2.4 of the Draft EIR;</li> <li>• The impact of the electric fence is addressed in Section 8.2.1;</li> <li>• The existing airstrip was widened and resurfaced and therefore the most significant impact during the widening of the airstrip involved the clearance of vegetation. Vegetation clearance is discussed and addressed within section 8.2.1.</li> </ul>
<p><b><u>Mulambwane CPA</u></b></p> <p>A response is submitted in our capacity as a land claimant, on properties on which development has taken place:</p> <ul style="list-style-type: none"> <li>- Mopanekop 656 MS;</li> <li>- Sulphur Springs 653 MS;</li> <li>- Pienaar 624 MS;</li> <li>- Sandylands 708 MS;</li> </ul> <p>Mulambwane CPA was never consulted about the development or notified of the sale of the associated properties in order to be afforded an opportunity to comment.</p> <p>Mulambwane CPA seeks to address/clarify the following:</p> <ol style="list-style-type: none"> <li>1. To ensure that the Mulambwane representatives are registered on the Stakeholder database as an affected party.</li> <li>2. To notify the Department that the community will demand that as part of the EIA process, a public, open meeting is held for all stakeholders.</li> <li>3. We would like clarity on how the LEDET allowed this development to take place and reach the stage of completion without any authorisation.</li> </ol>	<p>Aurecon is the appointed consultant required in terms of the provisions of the National Environmental Management Act 107 of 1998 (NEMA), as amended, read with NEMA Regulations to conduct the Environmental Impact Assessment for this project. Aurecon was not involved with the project during the purchasing of the property and for this reason, Aurecon is unable to provide any comments concerning the sale of the property.</p> <ol style="list-style-type: none"> <li>1. All representatives who were included within the email, have been registered on the Stakeholder database;</li> <li>2. A meeting with the Mulambwane CPA and the EAP was scheduled to provide clarification;</li> <li>3. The LEDET issued Ekland Safaris with a Non-Compliance Notice in accordance with NEMA. After receiving the Non-Compliance Notice from LEDET, Ekland Safaris appointed Aurecon as their Environmental Consultant to assist with the Environmental Application as per the requirements of the NEMA. Various meetings were held with the LEDET and a decision was made that the environmental process in terms of Section 24G of NEMA should be followed as legislatively prescribed.</li> </ol>

Comment / issue / concern	EAP / applicant's response
<p>4. On the BID, the consultants confirm that a Water Use Licence is required. We require confirmation on whether the application has been submitted and we would like to also register as an affected party for this process.</p> <p>5. Was the operation stopped while the 24G application is being done and processed?</p> <p>6. Since the lodge has already been constructed, we would like to know the following:</p> <ol style="list-style-type: none"> <li>How many people were hired during construction?</li> <li>How was the recruitment process done?</li> <li>How many people from the surrounding communities benefitted from the construction and development of the project?</li> <li>How were the contractor appointed? Was any consideration given to local preferential procurement?</li> <li>Did you engage with any heritage specialist and palaeontologist during construction of the lodge, given that the properties are subject to gazetted land claims?</li> </ol> <p>Given that the project is complete without the process to ensure its authorisation, we lodge our objection to the 24G application, and the process to now legitimise what is totally illegal, and abhorrent to communities whose ancestral and heritage resources are being plundered with no regard, the impact on the environment, our water resources and the biodiversity in the area.</p> <p>We would want to see the following report being compiled as part of the EIA process:</p> <ol style="list-style-type: none"> <li>Socio Economic Report;</li> <li>Heritage Impact Assessment, together with a heritage management plan</li> <li>Paleontological assessment</li> <li>Biodiversity report</li> <li>Geo-hydrological Assessment</li> </ol>	<ol style="list-style-type: none"> <li>A Water Use License is required for specific activities at Ekland Safaris. In this regard, an integrated Water Use License is in the process of being compiled and submitted. A pre-application meeting with the Department of Water and Sanitation (DWS) was held on 25 January 2019. We are conducting a combined public participation process for both the Section 24G Environmental Application as well as the Integrated Water Use License Application. Mulambwane CPA is therefore also registered as an interested and affected party for the water use licensing process.</li> <li>The Non-Compliance Notice referred to above required Manupont to cease with specified construction activities until the Section 24G Environmental process has been completed. Various consultations were held with the LEDET to discuss all other activities commenced with at site, and no directive was issued by the LEDET to halt any other activities. Instead, the LEDET requested that all activities be applied for within the Section 24G Environmental Application process.</li> <li>All questions that require clarity was be addressed at the meeting held with Mulambwane CPA (Appendix D6) and was also addressed within the EIA Report distributed for public comment.</li> </ol> <p>With regards to the specialist studies requested, most of the development entailed the upgrading and refurbishment of existing facilities. The area impacted by development activities was mostly restricted to areas that have been transformed by the existing facilities prior to 2001. When an area has already been impacted, specialist investigations are seldom required because an impact can only be assessed if the conditions prior to development were known and investigated. However, a Biodiversity Assessment was conducted for specific areas identified by the LEDET to be of high sensitivity (Appendix E1) and a Geo-Hydrological Assessment provided information regarding the impact on water quantity and quality (Appendix E5).</p> <p>Due to the unavailability of the Mulambwane CPA to assist with the identification of any possible grave sites, a Grave Management Plan was compiled to outline measures to be taken when any graves are identified within the reserve.</p>

# 7 Environmental Attributes of the Project Area

This section provides a description of the environmental attributes associated with the development footprint. It describes the geographical, physical, biological, social, economic, heritage and cultural aspects of the project site.

## 7.1 Biophysical Attributes

### 7.1.1 Biodiversity

The study area is located north of the Soutpansberg, approximately 40km north of the town Louis Trichardt by road (N1) and in accordance with the Limpopo Conservation Plan, the study area located within the Critical Biodiversity Area-2 (CBA-2). The landscape is comprised of the plains to the north of the Soutpansberg Mountains with prominent rock outcrops (hills) and ridges in areas.

On a national level, the study area is situated within the savannah biome, and is classified by Acocks (1953) as Sourish Mixed Bushveld (A19) and Mixed Bushveld (A18). Classified on a local scale and according to a more detailed system (Mucina & Rutherford, 2006) these areas are classified as *Musina Mopane Bushveld* (SVmp 1) on the plains and *Limpopo Ridge Bushveld* (SVmp 2) on the scattered ridges and outcrops. Both of these units have a *Least Threatened* conservation status and are poorly protected.

The Musina Mopane Bushveld is characterized by undulating to very irregular plains with some hills at an altitude of around 600m. On areas with deep sandy soils, the *Kirkia acuminata* (White Syringa) is one of the dominant tree species along with *Colophospermum mopane* (Mopane), *Combretum apiculatum* (Red Bushwillow) and *Grewia spp.* (Raisin bushes). The herbaceous layer is poorly developed, especially where mopane occurs in dense stands. This vegetation type is classified as poorly protected and “Least threatened” with 2% statutorily conserved in the Mapungubwe National Park, as well as the Nzhelele, Nwanedi, Musina and Honnet Nature Reserves. About 3% is transformed, mainly by cultivation, and soil erosion is moderate to high. The conservation target is 19%.

The Limpopo Ridge Bushveld vegetation type covers the irregular hills and ridges of much of the area in the vicinity of the Limpopo River. The altitude varies from 300 m to 700 m in the east, with some hills reaching 1 000 m in the west. The vegetation structure is moderately open savannah with a poorly developed ground layer. *Kirkia acuminata* (White Syringa) is prominent on many of the ridges along with *Adansonia digitata* (Baobab). On shallow calcareous gravel and calcium-silicate soils, the shrub *Catophractes alexandri* is dominant. Areas of sandstone of the Clarens Formation are prominent in places such as Mapungubwe National Park. Although not as prominent as at Mapungubwe National Park, sandstone ridges also occur in the study area. This vegetation type is classified as moderately protected and “Least Threatened”, with some 18% statutorily conserved in the Kruger and Mapungubwe National Parks. Only about 1% is transformed, mainly by cultivation and mining. The conservation target is 19%.

### 7.1.2 Soils and Geology

Ekland Safaris is mostly underlain by the Tshipise Member of the Clarens Formation, Karoo Supergroup, comprising fine grained whitish to pinkish sandstone. Various sandstone bedrock outcrops are present within the property. The soil profile within Ekland Safaris consist mostly of non-cohesive, silty sands, underlain by weathered sandstone bedrock.

### 7.1.3 Climate

The climate is semi-arid and influenced by the mountain range that is orientated east to west. The mountain range acts as a barrier between the Indian Ocean south-eastern maritime climate and the northern continental climate influences. Rainfall during the summer months (October and March) is 300 to 400 mm with very dry winters from May to August. Summers are very hot, and temperatures range from 0.9 – 39.9 °C and the area is generally frost free. Climate is affected by the wind patterns from mountains.



## 7.2 Socio-economic attributes

### 7.2.1 Land Use

Due to the arid climate, the low rainfall in the area and the lack of water for irrigation purposes, the properties within the area are not well suited for intensive agricultural production and for this reason the farms surrounding the application properties are large farm portions that are mainly used for game/cattle farming purposes. Some of the properties within Ekland Safaris have been accommodating private guests for over 18 years.

The Mulambwane Community Property Association (MCPA), claimed four of the properties included within Ekland Safaris. The properties gazetted include:

- Mopanekop 656-MS (reregistered to Koschade 657-MS);
- Sulphur Springs 653-MS
- Pienaar 624-MS
- Sandylands 708-MS

A land use agreement between Manupont and the MCPA is being negotiated.

#### Mining Right Application on surrounding properties

Boabab, which is a 69% subsidiary of MC Mining, is the holder of a mining right for the mining of coal in respect of farms Windhoek 847-MS, Mutamba 668-MS, Tanga 849-MS, Daru 848-MS, Fripp645-MS, Lukin 643-MS, and Salaita 188-MT, which are located east of Ekland Safaris and directly north of the Lion Farm, located within the boundaries of Ekland Safaris. This potential coal mining project is referred to as the Makhado Colliery.

MbeuYashu, of which MC Mining is the majority shareholder, submitted an application for a Mining Right for the Greater Soutpansberg Generaal Project which includes the farm Generaal 587-MS, Joffre 584-MS, Kleineberg 636-MS, Bekaf 650-MS, Juliana 647-MS, Rissik 637-MS, Fanie 578-MS, Coen Brits 646-MS, Coen Brits 881-MS, Boas 642-MS, Phantom 640-MS, Van Deventer 641-MS, Wildgoose 577-MS, Chase 576-MS, Strayt 183-MT, Nakab 184-MT, Riet 182-MT, Schuitdrift 179-MT, Mount Stuart 153-MT, Ter Blance 155-MT, Septimus 156-MT. This project is located directly north of Ekland Safaris.

Construction of the Makhado Colliery is proposed to commence soon, with the application of the Generaal Project still to be authorised. The land use of the properties surrounding Ekland Safaris to the north and east would therefore conflict with the tourism activities of Ekland Safaris.

Because of these potentially conflicting land uses, MC Mining and Ekland Safaris will be negotiating and signing a land use agreement that would benefit both parties.

### 7.2.2 Heritage and Palaeontology

The Limpopo Province of South Africa has a rich archaeological heritage, not least of which is the sub-continent's first town, Mapungubwe, built a thousand years ago (Huffman 2000, 2007). Occupation of the larger geographical area started to take place since the Early Stone Age times. This is evident by the findings of stone implements, rock paintings and a few engravings belonging to the Early, Middle and Late Stone Age in the area.

The Limpopo Province and especially the Shashe/Limpopo Confluence area (SLCA) and the Limpopo Basin area contains many Iron Age sites.

As the activities already commenced, the impact already occurred, and should there have been any artefacts or findings of cultural or historical significance, it is unlikely it would have remained on the areas impacted. The applicant is however in the process of consulting with a Heritage Specialist to conduct a Heritage Survey for Ekland Safaris in order to identify sites of cultural importance within the reserve, collect possible display materials, and possibly develop a controlled display area that will ensure the responsible management and display of heritage resources found within the reserve.

The Mulambwane Community Property Association (MCPA), which has a registered claim on four of the properties within Ekland Safaris, reported that there are ancestral graves sites within Ekland Safaris. Attempts were made to try and identify the locations of these grave sites but unfortunately the MCPA was unavailable to assist with the identification of the claimed grave sites. The existence, location and number of these claimed grave sites could therefore not be determined.

### 7.2.3 Socio-Economic Aspects

Based on the last census conducted, the total population of Makhado Local Municipality is currently at 416,728 people of which 191,694 people are economically active. The high percentage of the population which is economically inactive can be attributed to the high percentage of the population being under the age of 15. Of the 191,694 economically active (employed or unemployed but looking for work) citizens of the MLM, 25.9% are unemployed (IDP – 2019/2020 – 2021/2022). The economic profile of the MLM is outlined in Table .

Table 8 | Socio-economic profile of the MLM in terms of employment status and income distribution

Employment status	Number
Employed	78,768
Unemployed	45,705
Discouraged work seeker	24,383
Not economically active	151,186
Income	Percentage
No income	41.8%
R1 – R3 200	47.7%
R3 201 - R 12 800	5.1%
R12 801 – R25 600	1.4%
R25 601 – R51 200	0.3%
R51 201 – R102 400	0.05%
R102 401 – R204 800	0.03%
R204 801 +	0.03%

The highest educational level for all ages in the MLM is shown in Table .

Table 9 | Highest education levels of all ages in the MLM

Group	Percentage
No Schooling	10.6%
Some Primary	24.3%
Completed Primary	5.02%
Some Secondary	29.1%
Completed Secondary	12.1%
Higher Education	4.8%
Not Applicable	13.6%

# 8 Impacts & Risks

In this section, the impacts and risks that have been identified are assessed according to their nature, significance, consequence, extent, duration and probability. The degree to which the impacts can be reversed, may cause irreplaceable loss of resources, and the degree to which the impacts can be avoided, managed or mitigated, are provided. The impacts are also classified as positive or negative in terms of their geographical, physical, biological, social, economic, heritage and cultural aspects. The level of residual risk is provided as well as the measures to mitigate the impacts and risks are provided within this report.

The methodology used in determining and ranking these impacts and risks is also discussed. Therefore, this section satisfies Section 3 (1) (h) (v) – (viii) and (i) and (j) of Appendix 3 of the EIA Regulations of 2014 (GN R 982 of 2014).

Since this EIA report is submitted as part of a 24G rectification process, alternatives would not have been selected as prescribed in the EIA Regulations. A detailed impact assessment of the preferred alternative (the current development) is thus undertaken in this EIA report.

## 8.1 Methodology used to Determine and Rank Impacts and Risks

This section outlines the method used for assessing the significance of the potential environmental impacts. These impacts are for the construction, operational and decommissioning phases of the project.

For each impact, the **EXTENT** (spatial scale), **MAGNITUDE** and **DURATION** (time scale) are described, as shown in **Table 10**. These criteria are then used to determine the **SIGNIFICANCE** of the impact, firstly in the case of no mitigation and then with the most effective mitigation measure(s) in place. The mitigation described in the BAR represents the full range of plausible and pragmatic measures but does not necessarily imply that they would be implemented.

The following tables show the scales used to assess these variables and defines each of the rating categories.

Table 10: Assessment criteria for the evaluation of impacts

Criteria	Category	Description
Extent or spatial influence of impact	Regional	Beyond a 30km radius of the candidate site.
	Local	Within a 30km radius of the candidate site.
	Site-specific	On site or within 100 m of the candidate site.
Magnitude of impact (at the indicated spatial scale)	High	Natural and/ or social functions and/ or processes are <i>severely</i> altered
	Medium	Natural and/ or social functions and/ or processes are <i>notably</i> altered
	Low	Natural and/ or social functions and/ or processes are <i>slightly</i> altered
	Very low	Natural and/ or social functions and/ or processes are <i>negligibly</i> altered
	Zero	Natural and/ or social functions and/ or processes remain <i>unaltered</i>
Duration of impact	Long-term	More than 10 years after construction
	Medium-term	Up to 5 years after construction
	Construction-term	Up to 3 years

The **SIGNIFICANCE** of an impact is derived by considering magnitude, duration and extent of each impact. The criteria employed in arriving at the different significance ratings is shown in Table 11.



Table 11: Definition of significance ratings

Significance ratings	Level of criteria required
<b>High</b>	<ul style="list-style-type: none"> <li>High magnitude with a regional extent and long-term duration</li> <li>High magnitude with either a regional extent and medium-term duration or a local extent and long-term duration</li> <li>Medium magnitude with a regional extent and long-term duration</li> </ul>
<b>Medium</b>	<ul style="list-style-type: none"> <li>High magnitude with a local extent and medium-term duration</li> <li>High magnitude with a regional extent and construction period or a site-specific extent and long-term duration</li> <li>High magnitude with either a local extent and construction period duration or a site-specific extent and medium-term duration</li> <li>Medium magnitude with any combination of extent and duration except site specific and construction period or regional and long term</li> <li>Low magnitude with a regional extent and long-term duration</li> </ul>
<b>Low</b>	<ul style="list-style-type: none"> <li>High magnitude with a site-specific extent and construction period duration</li> <li>Medium magnitude with a site-specific extent and construction period duration</li> <li>Low magnitude with any combination of extent and duration except site specific and construction period or regional and long term</li> <li>Very low magnitude with a regional extent and long-term duration</li> </ul>
<b>Very low</b>	<ul style="list-style-type: none"> <li>Low magnitude with a site-specific extent and construction period duration</li> <li>Very low magnitude with any combination of extent and duration except regional and long term</li> </ul>
<b>Neutral</b>	<ul style="list-style-type: none"> <li>Zero magnitude with any combination of extent and duration</li> </ul>

Once the significance of an impact has been determined, the **PROBABILITY** and **CONFIDENCE** of this impact are determined using the rating systems outlined in **Table 12** and **Table13**. The significance of an impact should always be considered in concert with the probability of that impact occurring. Confidence provides an indication of the degree of certainty that can be placed in the impact prediction. Lastly, the **REVERSIBILITY** of the impact is estimated using the rating system outlined in **Table14**.

Table 12: Definition of probability ratings

Probability ratings	Criteria
<b>Definite</b>	Estimated greater than 95 % chance of the impact occurring.
<b>Probable</b>	Estimated 5 to 95 % chance of the impact occurring.
<b>Unlikely</b>	Estimated less than 5 % chance of the impact occurring.

Table 13: Definition of confidence ratings

Confidence ratings	Criteria
<b>Certain</b>	Wealth of information on and sound understanding of the environmental factors potentially influencing the impact.
<b>Sure</b>	Reasonable amount of useful information on and relatively sound understanding of the environmental factors potentially influencing the impact.
<b>Unsure</b>	Limited useful information on and understanding of the environmental factors potentially influencing this impact.

Table 14: Definition of reversibility ratings

Reversibility ratings	Criteria
Irreversible	The activity will lead to an impact that is in all practical terms permanent.
Reversible	The impact is reversible within 2 years after the cause of the impact is removed.

## 8.2 Operational Phase Impacts

Since the impact has already occurred and all infrastructure has already been constructed, this report will focus on the operational and decommissioning impacts of the existing activities and structures.

The significance of all identified impacts is assessed in terms of the criteria described above.

The operation of the facilities is likely to result in a number of negative and positive impacts on the biophysical and social environments. The significance of these impacts can be mitigated by the implementation of an Environmental Management Programme (see attached as Appendix F).

The bio-physical issues identified include:

- Fauna and flora (destruction/conservation of habitat)
- Erosion and storm water control
- Groundwater and surface water impact
- Sanitation and waste management

The socio-economic impacts identified include:

- “Sense of place” – visual impact
- Impact on heritage resources
- Conflicting land use of adjacent properties
- Noise pollution
- Employment opportunities (long-term)

### 8.2.1 Biodiversity impacts (fauna and flora)

#### Description of the potential impact

On a national level, the study area is situated within the savannah biome and on a local scale and according to a more detailed system (Musina & Rutherford, 2006) these areas are classified as *Musina Mopane Bushveld* on the plains and *Limpopo Ridge Bushveld* on the scattered ridges and outcrops. Both of these units have a *Least Threatened* conservation status and are poorly protected.

The Limpopo Conservation Plan (LCP) is a systematic conservation plan adopted by the Province (LEDET, 2013). According to this plan, the total study area is defined as Critical Biodiversity Area-2 (CBA-2). Ekland Safaris falls within the management objectives for CBA-2 which describes the following land uses to be compatible: “*Current agricultural practices including arable agriculture, intensive and extensive animal production, as well as game and ecotourism operations, as long as they are managed in a way to ensure populations of threatened species are maintained and the ecological processes which support them are not impacted.*”

The following vegetation communities and habitats are represented within the study area and the sensitivities of these plant communities and habitats are described below:

Table 15: Ecological importance of vegetation communities present within the site

Community / Habitat	Ecological Importance/Biodiversity Value	Sensitivity Rating
Site Reference	Terrestrial and Riparian Communities	
<b>Mixed woodland and plains</b>	Although this term is wide it best describes the vegetation found on the plains. This community can be classified to lower levels, but this would make it unnecessarily difficult to cross-reference the document. This woodland is well represented across the larger study area and provides important habitat to fauna associated with the plains.	<i>Medium</i>
<b><i>Androstachys</i> closed woodland and rocky outcrops</b>	This is a unique community restricted to the rock outcrops. The trees are slow growing and very durable. This woodland community and rocky substrate provide micro-habitat to a wide range of fauna. The large outcrops will provide macro-habitat to an even wider range of fauna.	<i>Very high</i>
<b>Riparian woodland and watercourses</b>	This woodland, although poorly developed, provides important hydrological and ecological functions. Fauna associated with thickets will use this as refuge and it serves as an ecological corridor.	<i>High</i>

## Impact Assessment

The activities which required the removal of vegetation included the following:

- Establishment of the double fence and patrol road all along the boundary of Ekland Safaris;
- Expansion of the Main, Pienaar and Leadwood Lodge;
- Establishment of some access roads within the property;
- Construction of reservoirs;
- Construction of the security building at Patel Gate;
- Widening of the airstrip.

The impacts associated with the removal of indigenous vegetation already occurred prior to assessing the environmental impacts and obtaining Environmental Authorisation, and therefore no Ecological Impact Assessment was conducted for the Section 24G Environmental Authorisation Application.

Due to the sensitivity of rocky outcrops, Afrika Enviro and Biology was requested to assess the ecological impact resulting from the construction of the Villa on the rocky outcrop near the Main Lodge facilities (Refer to Appendix E1). This assessment noted that rocky outcrops are sensitive bio-ecological features and development on top of these outcrops can potentially have significant impacts on biodiversity and ecological functions. The magnitude of consequences resulting from the construction of the Villa, is discussed below:

- Loss and fragmentation of habitat
  - The site is located near the existing lodge area and therefore no additional fragmentation of habitat was necessary for provision of services and infrastructure;
  - From aerial footage, the ecologist noted that the construction activities were strictly confined to the development site and vegetation clearing was kept to a minimum;
  - The remainder of the outcrop remains in a natural state and similar habitat is present on other outcrops in the immediate surrounds;
  - The impact has a low magnitude, and the consequence of this impact is permanent and of long duration.
- Loss of vegetation
  - From aerial images, it was concluded that the affected area on the outcrop consisted of open woodland sparsely populated with trees and shrubs;
  - It is concluded that the loss of woody vegetation was low;
  - This consequence is localised to site level;
  - The impact has a low magnitude and the consequence of this impact is permanent and has a long-term effect.
- Loss of important flora communities and individuals
  - Site clearing has led to the loss of important flora communities and individuals. This may include prominent stands of trees or large / protected individual trees or herbaceous / xerophytic plants that have not yet been identified;
  - The magnitude of this impact is unknown and cannot be assessed without a pre-development site investigation. However, this consequence is localised to site level and similar vegetation and habitat is present on the outcrops nearby;

- This impact has an unknown magnitude and the consequence of this impact is permanent and has a long-term effect.
- Loss of fauna
  - Site clearing has led to the loss of fauna individuals. In general, rocky outcrops provide macro and micro habitat for a wide range of fauna, including sensitive taxa. It should be considered that the presence of the existing lodge and its associated activities has already discouraged larger, sensitive taxa from using the outcrop habitat;
  - As this project's activities are localized to the site footprint, it can be assumed that a limited loss of habitat for animals has occurred and smaller less mobile fauna could have been killed. Mobile taxa would have fled to the surrounding area because of the disturbance and repopulate as similar species will be present in the adjoining area;
  - It is not anticipated that any group of fauna is negatively affected in the long term. This impact has a low magnitude and the consequence of this impact is permanent and has a long-term effect.
- Ecological functions and connectivity
  - The fragmentation of habitat resulting from the activities have influenced the ecological functions of the local area. The loss of habitat and changes to the natural environment is very localized and small;
  - It is unlikely that ecological functions or connectivity with the surrounding environment has occurred. This impact has an insignificant magnitude.

The other activities associated with the clearance of vegetation, could not be assessed by the Ecologist as the vegetation has already been removed and no footage was available for the affected areas prior to construction.

Most of the above construction activities involved the expansion of existing facilities within areas that have been previously disturbed, and therefore indigenous vegetation clearance was limited. However, vegetation clearance for the establishment of the double fence and patrol road was significant. The area that was cleared in addition to what was required for the double fence and patrol road, was subsequently revegetated.

Except for the area on which the Villa has been constructed (rocky outcrop), all other affected areas are classified as Mixed Woodland and Plains, which are of medium sensitivity. The infrastructure constructed for the upgrading and refurbishment of Ekland Safaris would have a long-term effect in terms of the fragmentation of habitat but is reversible should the structures ever be decommissioned.

Due to the localised extent and long duration of the impact, the impact resulting from the clearance of vegetation has been assessed to be of medium significance prior to mitigation measures being implemented.

An electric fence has also been installed along the boundary of Ekland Safaris. Although electric fences are effective and economical, they do result in electrocution of non-target species such as tortoises, porcupines, rock monitors etc. However, Ekland Safaris has erected a double fence: Clearvu fencing along the inside boundary and electrical fencing along the outside boundary of the property with a patrol road separating the two fences. Thus, the possibility of small species within Ekland Safaris reaching the electric fence and being electrocuted is minimised and is regarded to be of low significance. The erection of the perimeter fence has a significant positive impact in ensuring the protection of endangered and critically endangered species such as white and black rhinoceros, pangolins and African rock pythons

As the facilities applied for within this application have already been constructed, the no-go alternative is not relevant to this application. The impact associated with the decommissioning of the respective facilities are however included within Section 8.3.1.

When assessing the cumulative impact on the biodiversity within the 14,000-hectare property, the impact on the biodiversity is of low significance prior to the implementation of mitigation measures, as the footprint of the respective upgraded facilities is minimal when compared to the extent of Ekland Safaris property.

Table 16: Significance of biodiversity impacts

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Clearance of vegetation	Medium	Local	Long term	Definite	Sure	Reversible	Medium	Low
Electric fencing	Low	Local	Long term	Probable	Sure	Reversible	Low	Low

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Cumulative Impact	Medium	Local	Long term	Definite	Sure	Reversible	Low	Low

### Mitigation Measures

As the impact has already occurred, the following is proposed to be implemented during the operational phase:

- Implement an alien invasive management plan to ensure that invasive vegetation does not establish on site or the surrounding area;
- Use only locally available indigenous flora for landscaping purposes;
- Prevent and manage soil erosion; and
- Do not use electrocution apparatus to eliminate insects at night as many innocent invertebrates, reptiles and small mammals are also at risk.

## 8.2.2 Impact on increased soil erosion and storm water

### Description of the potential impact

The infrastructure applied for is dispersed over a large project area and therefore the possibility of soil erosion and significance of the impacts resulting from storm water, might be greater at certain activities/structures than others. Most development took place on relatively flat topography, which reduces the possibility of soil erosion. Development areas where soil erosion might be of higher significance due to possible improper storm water management, would be the Villa, which has been constructed on top of the rocky outcrop, the earth berm constructed within the watercourse, and the concrete base at the grid fences along the boundary of Ekland Safaris. The construction phase has been completed and any erosion noticed during and after the construction phase was addressed during the rehabilitation of the sites.

### Impact Assessment

During operation, disturbed areas on steep slopes would be prone to erosion if storm water measures were not implemented effectively. However, professional engineers were consulted during construction and erosion protection and prevention measures were taken in area that would be prone to erosion. The impact is medium significance prior to the implementation of mitigation measures.

When assessing the cumulative impact of soil erosion and storm water management of all activities within greater Ekland Safaris Reserve, the impact was assessed to be of medium significance prior to the implementation of mitigation measures.

Table 17: Significance of increased soil erosion and storm water

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Erosion, and Storm water control								
Ekland upgrading and refurbishment	Medium	Site Specific	Long-term	Probable	Sure	Reversible	Medium	Low
Cumulative Impact	Medium	Local	Long-term	Probable	Sure	Reversible	Medium	Low

### Mitigation Measures

- The Authorisation Holder must monitor the site and manage drainage of all constructed areas to avoid standing water and soil erosion. Gabions or other storm water preventative measures must be used in areas that are prone to erosion;

- Earth berms constructed within watercourses must be reinstated with a minimum slope ration of 3:1, although 5:1 is recommended. This will prevent any further erosion from occurring and provide a stable enough slop for vegetation to establish;
- Where hard engineering structures are required to stabilise the earth berms or the spillway (due to extensive erosion), use should be made of gabion baskets or reno mattresses, in consultation with a civil engineer and a freshwater specialist. The use of these methods should be minimised as far as possible.
- Storm water must be controlled and channelled to prevent soil loss from the site;

Please refer to the Environmental Management Programme (Appendix F) for all other measures to be implemented to minimise the impact of increased erosion and storm water.

### 8.2.3 Impact on groundwater yield and surface water

#### Description of the potential impact

During construction, the following activities took place near ground and/or surface water resources:

- Fencing activities crossing drainage lines/watercourses;
- Establishment of water pipeline infrastructure (crossing watercourses/drainage lines)
- Resurfacing of the existing access roads crossing watercourses (installation of culverts);
- Construction of an earth berm within a watercourse to establish a waterhole; and
- Construction of the Sulphur Springs Day Spa (in close proximity to the spring, but outside the 32m buffer area).

All areas affected by the construction of the above have since been rehabilitated.

During the operational phase, the only area where surface and/or groundwater could be affected are the boundary fence, operation of the Sulphur Spring Day Spa, and the earth berms located within the watercourse.

A Wetland Delineation was conducted at the Sulphur Springs Day Spa to ensure that all structures were established outside the 32m boundary of the wetland area. The wetland area was found to be very small and if conserved with a buffer zone it would not be significantly affected by the proposed activity. The small wetland is also found to be of a seasonal or temporary nature and is not important for biodiversity maintenance. For this reason, a large buffer zone was not necessary. According to the specialist, a 32m buffer zone as subject to the EIA regulations was subsequently found to be more than adequate as a buffer zone.

A Geo-Hydrological Assessment was conducted, based on 12 boreholes within the boundaries of the property. This study found that the availability of ground water within the study area is moderate to high, with groundwater occurrences confined to several major structures present within the boundaries of Ekland Safaris (Please refer to Appendix E5). These systems are recharged by the Mutamba River, where high yielding boreholes associated with fault systems have been drilled. Boreholes with significant yields occur within the project area (ranging from 900 to 39,600 litres/hour with an average yield of 13,209 litres/hour). The groundwater quality of boreholes located within the property boundaries varies. Seven of the twelve boreholes complied with the SANS standards. The remaining five boreholes reported water quality not fit for human consumption without prior treatment. Excessive water usage could deplete the aquifer and as the aquifer system has been classified as a “Sole Aquifer System”, there are no other reasonable alternatives for the supply of water.

#### Impact Assessment

The Present Ecological State (PES) of surface watercourses as assessed within the Hydrological Assessment (Appendix E3) is largely classified as category B or C, which indicates that the watercourses are largely natural with few to moderately modifications. The Ecological Importance and Sensitivity (EIS) of these watercourses were largely assessed to be medium to high (Hydrological Assessment, Appendix E3).

Although these watercourses were classified to still be in a relatively good condition, the operation of the above water uses, such as the establishment of the fence, operation of the Sulphur Springs Day Spa and earth berms, pose a low risk to the ecological integrity of the watercourses, and the impact is therefore rated to be of medium significance prior to the implementation of mitigation measures.

The Geo-Hydrological Assessment indicated that the tested boreholes can supply a total volume of 1,394ML/annum which can supply the calculated demand of 270ML/annum. Therefore, the impacts on the aquifer to meet the required water demand is low.



Additional development within the boundaries of Ekland Safaris will require additional water to be abstracted from the aquifer. The Geo-Hydrological Assessment indicated that there is sufficient water within the boundaries of Ekland Safaris to meet the additional requirements. The cumulative impact is therefore of low significance.

Table 18: Significance of impact on groundwater and surface water

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Ground and surface water impact								
Ekland upgrading and refurbishment	Medium	Local	Long-term	Unlikely	Sure	Reversible	Medium	Low
Water resource consumption	Medium	Local	Long-term	Unlikely	Sure	Reversible	Low	Very Low
Cumulative Impact	Medium	Local	Long-term	Unlikely	Probable	Reversible	Low	Very Low

### Mitigation Measures

- During maintenance activities of the Sulphur Spring Spa, no personnel may be permitted to enter the wetland area, unless it entails maintenance activities of the wetland;
- It is recommended that no further landscaping within the wetland takes place at Sulphur Springs to allow wetland species to establish and proliferate. The spread of alien invasive species must be controlled;
- No fertilisers may be added to the wetland at Sulphur Springs to encourage wetland vegetation growth
- Where earth berms were placed with watercourses, sufficient water quantities must be released (via spillway during high flow periods or pipe outlet during low flow periods) to ensure ongoing functioning of the downstream watercourses and ensure maintenance of water quantity, habitat, biota and water quality resource quality objectives for the downstream Mutamba River;
- Where hard engineering structures are required to stabilise the earth berms or the spillway (due to extensive erosion), use should be made of gabion baskets or reno mattresses, in consultation with a civil engineer and a freshwater specialist. The use of these methods should be minimised as far as possible;
- All disturbed areas must be revegetated with indigenous vegetation species. A graminoid mix is recommended to be established on the earth berms, while appropriate facultative riparian species be considered for the areas where erosion gullies will be rehabilitated;
- Spillages of any hazardous materials should be cleaned immediately to avoid contamination of runoff;
- The conditions contained in the Water Use Licence must be adhered to; and
- Water consumption must be within the limits authorised within the Water Use License.

Please refer to the Environmental Management Programme (Appendix F) for all other measures to be implemented to minimise any impact on ground or surface water.

## 8.2.4 Impact on heritage and paleontological resources

### Description of potential impact

No Heritage or Palaeontological Assessment was conducted prior to the commencement of the expansion and refurbishment activities and therefore it cannot be determined whether any artefacts of cultural or historical significance was impacted upon during the construction phase. Most of the activities commenced with, included the expansion and refurbishment of existing facilities and therefore most of the areas affected was previously disturbed. The area which would have been the most sensitive in terms of palaeontology, would have been the rocky outcrop on which the Villa was constructed. As no Palaeontological Assessment was conducted prior to the establishment of the Villa, it is uncertain whether any palaeontological sites were affected by the development. However, according to the online SAHRIS Palaeo-sensitivity map for the area (<https://sahris.sahra.org.za/map/palaeo>), the area has moderate to low

sensitivity for palaeontology, with areas of high sensitivity in this region only being located adjacent to the Limpopo River.

In terms of the existence of graves within Ekland Safaris, no graves have yet been identified on the property. Ekland Safaris has received communication from the Mulambwane Community Property Associated (CPA), claiming that their ancestral grave sites are located within the property boundaries. Together with the Mulambwane CPA, an attempt was made to try and identify the graves. Despite several attempts being made to get involve members of the Mulambwane CPA in a site investigation in order to locate the claimed graves, this was impossible due to the unavailability of the members of this CPA.

This G&A Heritage Consultants was appointed to compile an Ancestral Grave Management Plan for inclusion in the Environmental Management Programme for the management of the claimed graves and burial sites within Ekland Safaris and to ensure that family members have access to these grave sites, if requested. The Ancestral Grave Management Plan is attached as Appendix E2.

### Impact Assessment

During operation of the activities included within this application, the only aspect on heritage resources which possibly would require management, would be the protection of grave sites within the boundaries of Ekland Safaris. However, it must be emphasised this is a speculative impact, since the graves are claimed to exist but have not been located, because the members of the community claiming their existence have not availed themselves for a site visit to confirm their location. As these grave sites could not yet be located, the management thereof is challenging. However, with the implementation of the Ancestral Grave Management Plan, the impacts associated with the protection of the graves (if they exist on the site) and providing the family members with access to these grave sites, are minimised.

As a pre-development investigation could not be conducted to identify any findings which could have been of heritage of cultural value, the cumulative impact of all the activities which forms part of this application on site, could not be assessed. However, no graves or other cultural artefacts are known to have been uncovered during construction.

Table 19: Significance of heritage and palaeontological impacts

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Heritage and Palaeontological impact								
Grave identification and management	Medium	Site-specific	Long-term	Unlikely	Unsure	Irreversible	Medium	Low

### Mitigation Measures

It is important that the claimed graves, in the event that they are identified, are listed within the larger project development plan to ensure that proposed developments do not damage or infringe upon them or the family's right to access. It is recommended that a buffer zone of at least 50m around identified graves be observed and further that the burial sites be monitored on a six-monthly basis during the operational phase of the project.

### 8.2.5 Impact on sanitation and waste management

#### Description of potential impact

Should solid waste not be managed properly, it could have the following impacts:

- Visual (littering);
- Could cause injury or deaths to animals;
- Act as health and safety hazards to people; and
- Attract vermin.

Solid waste generated during the operational phase of the development will be collected, temporarily stored on site and removed by a third-party contractor to the nearest registered landfill site



Septic tanks have been installed for the treatment of sewage at all the facilities applied for within this application. If septic tanks are not properly maintained, surface and/or ground water can become contaminated, which leads to pollution problems.

### Impact Assessment

Although the respective facilities will not be occupied throughout the year, it is expected that waste would still be generated by the over 200 permanent staff employed by Ekland Safaris. Inappropriate temporary storage and disposal of waste could have a significant impact on the environment as explained above and is therefore of medium significance prior to the implementation of mitigation measures.

No septic tanks were installed near any surface or ground water resources. However, septic tanks must be regularly maintained during the operational phase to prevent any pollution to the surrounding environment. The significance of the impact of the use of septic tanks is low.

The generation of waste by Ekland Safaris will add to the amount of waste currently being disposed at the Makhado Waste Disposal Facility. Thus, the cumulative impact can be regarded to be of medium significance if mitigation measures are not implemented.

Table 20: Significance of improper sanitation and waste management

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Sanitation and waste management								
Ekland upgrading and refurbishment	Medium	Site-specific	Operation	Probable	Sure	Reversible	Medium	Low
Cumulative Impact	Medium	Local	Operation	Probable	Sure	Reversible	Medium	Low

### Mitigation Measures

- All waste generated within the boundaries of Ekland Safaris must be transported to a temporary waste storage facility, preferably located near the service entrance gate to enable easy access for the third-party contractor for the removal to a registered landfill site;
- Temporary waste storage facilities must be enclosed;
- General waste must be recycled as far as possible to reduce the quantity of waste transported to the registered landfill site;
- Septic tanks must be inspected regularly to ensure optimal operation and reduce the possibility of pollution.

Other recommended mitigation measures are included within the Environmental Management Programme (Appendix F).

### 8.2.6 Visual Impact

#### Description of the potential impact

Any structural development normally has a negative visual impact on surrounding land users as vegetation is cleared and replaced by structures or infrastructure. The architectural designs of the structures associated with the expansion and refurbishment of Ekland Safaris have been designed to blend with the natural surrounds and does not impose significant negative visual impacts. Besides the fence and structures erected at the main gate and service entry gate of Ekland Safaris, no other structures are visible to any neighbouring land owner or road user.

### Impact Assessment

The aesthetics surrounding all lodges and the visibility of other structures from the respective facilities within Ekland Safaris, is very important and consequently all facilities have been designed to blend with the natural environment. The architectural designers had to also ensure that no other structures or infrastructure is visible from these facilities. Due to these requirements, the visual impact is of very low significance.

Due to the large extent of Ekland Safaris, the cumulative visual impact is of low significance.

Table 21 Significance of the visual impact during construction

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Visual Impact								
Ekland upgrading and refurbishment	Low	Site-specific	Long-term	Unlikely	Sure	Reversible	Low	Very Low
Cumulative Impact	Low	Local	Lon-term	Unlikely	Sure	Reversible	Low	Very Low

### Mitigation Measures

- No mitigation required as architectural designs blend in with the natural environment.

### 8.2.7 Potential conflict with other land uses

#### Description of potential impact

Due to the semi-arid climate in the area and the lack of water for irrigation purposes, the properties within the area are not well suited for agricultural production and for this reason the farms surrounding the application properties are large farm portions that are mainly used for game/cattle farming purposes. Some of the properties within Ekland Safaris, have been accommodating private guests for over 18 years. The operation of Ekland Safaris will therefore be in line with the current and proposed land use of the area. From this perspective, conflict with other land uses is minimal.

MC Mining submitted three mining right applications in 2013, for three open cast mining pits located north-east of Ekland Safaris. There is a direct conflict to land uses between the mining project and the tourism facilities. The conflicting land uses were discussed and addressed within the Environmental Impact Assessment process conducted for the Lion Farm Lodge which was approved in February 2019. MC Mining lodged an appeal to the Lodge’s environmental authorisation, upon which the MEC requested that a land use agreement be compiled and signed between the respective parties. This process is ongoing.

#### Impact Assessment

The accommodation facilities have been developed in areas that have low/medium agricultural potential and have previously not been used for agricultural purposes. One of the main objectives of the tourist accommodation development is to act as an alternative to the agricultural production on the property. Due to crop farming not being feasible, Ekland Safaris’ tourism land use is compatible with game farming, and with the land uses identified in the SDF.

With respect to the conflicting land uses of mining proposed north-east of Ekland Safaris and the operation of the tourism facilities on Ekland Safaris, the mining company alleges that tourism activities will affect the mining company’s ability to exploit minerals adjacent to Ekland Safaris, as the mining operation would increase noise and dust and have a possible negative visual impact on visitors of Ekland Safaris. This conflicting land use will impact the tourism activities of Ekland Safaris negatively.

As per the instruction of the MEC of LEDET, Manupont and MC Mining must, in consultation with the MEC of LEDET, compile and sign a land use agreement to resolve any issues relating to the conflicting land uses. The activities associated with this application are located far from the areas proposed for mining purposes, however the land use agreement to be compiled and signed by both parties would aim to resolve any conflicting land use issues.

Taking the above aspects into consideration, the impact on land use can be regarded to be of low significance.

Cumulatively, it is important to point out that only small areas of each of the subject properties within Ekland Safaris will be used for the tourist accommodation and ancillary uses. The footprint of development is on average less than 0.2% of each property where development took place. The remaining 99.8% is used for game farming. Cumulatively, the impact is therefore also of very low significance.

Table 22: Impact on land use

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Land Use								
Ekland Upgrading and Refurbishment	Low	Local	Long-term	Definite	Sure	Reversible	Low (-)	Very Low (-)
Cumulative Impact	Low	Local	Long-term	Definite	Sure	Reversible	Low (-)	Very Low (-)

### Mitigation Measures

- As required by the MEC of LEDET, a Land Use Agreement must be compiled and signed between Manupont and MC Mining to address and agree on the conflicting surrounding land uses for the benefit of both parties.

## 8.2.8 Socio-Economic Impacts

### Description of the potential impact

To date, Manupont have spent approximately R1.53 billion on the upgrading and refurbishment of Ekland Safaris to ensure that the facility is up to standard for high net worth individuals. In terms of the employment opportunities, the higher the luxury level of a facility, the larger the job creation. Eight staff members will be appointed for each guest accommodated. Therefore, it is calculated that over 220 permanent job opportunities will be created over the next three years.

During guest visits, employment opportunities are also created for the following categories of service providers, staff, and professionals:

- Haywards Safaris- 5-star camps for extra accommodation (120 staff)
- Motsumi Bush training. All staff are trained on how to be safe within an operating Big 5 area (Game to snake awareness training)
- Evolved Eye – Logistics and support (80 staff)
- Specialist support of medical teams, protection and added security (80 staff)
- Support of local community by making use of certain local food and beverage suppliers,
- Staffing through Workforce, a local company for housekeeping using only local staff
- Support of local hunters and guides (20 staff)
- Support of local vehicle dealerships by purchasing a vehicle fleet of more than 40 vehicles including farm vehicles
- Employment of rangers and security for the protection of rhinos and endangered species
- Local Transport companies that mobilise staff from local communities
- Support of all local social businesses such as restaurants, bars, entertainment offerings in the local area which includes support of the local Venda traditional village.

Below is a summary of the socio-economic value of Ekland Safaris:

Table 23 | Socio-economic value of Ekland Safaris (activities associated with the Section 24G Application)

Estimated capital value of Ekland Safaris	R1.53 billion
Permanent new employment opportunities created during operation	86 permanent job opportunities
Employment created through service providers:	
<ul style="list-style-type: none"> <li>Security and anti-poaching;</li> <li>Gardens and landscaping</li> </ul>	<p>80 job opportunities</p> <p>60 job opportunities</p>
Capital value – training provided to developing and local staff	R 2 mil per annum
Estimated current value of the employment opportunities during operation	R19.2 mil per annum

Percentage accrued to previously disadvantaged individuals (People of colour, females, in the work place, including Management)	Previously disadvantaged individuals = 35% Female = 37%
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From the information provided above, it is evident that Manupont have invested a significant amount of money in Ekland Safaris and will also continue to invest by providing much needed job opportunities and training to local residents.

### Impact Assessment

The establishment of over 200 permanent job opportunities, together with the use of local suppliers and companies, will have a positive socio-economic impact on the local community as this will give members of the local community the opportunity to provide for their families and improve their living conditions. In contrast to other land uses such as mining which has a limited life span, tourism is a non-consumptive land use which would provide long-term sustainable job opportunities and therefore the impact is positive and of high significance.

Besides the job opportunities created by the establishment and operation of the facilities within Ekland Safaris, various other local suppliers and professionals are benefitting from the operation of the facility and therefore the cumulative impact is of high significance.

Table 24: Positive socio-economic impact during operation

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Job opportunities (+)								
Ekland Upgrading and Refurbishment	High	Local	Long-term	Definite	Sure	Reversible	Medium (+)	High (+)
Cumulative Impact	High	Local / Regional	Long-term	Definite	Sure	Reversible	Medium (+)	High (+)

### Mitigation Measures

It is imperative that unskilled labour is sourced locally, and local suppliers are used for goods and services that can be obtained locally.

## 8.3 Decommissioning Impacts

The decommissioning of the facilities within Ekland Safaris are not being proposed or preferred. However, should Ekland Safaris propose to decommission any of the facilities, the activity is likely to have the following impacts:

- Ecological Impact;
- Impact on surface and ground water;
- Increased soil erosion;
- Traffic Impact;
- Dust generation;
- Concrete waste generation and disposal;
- Socio-economic impact;

### 8.3.1 Ecological Impact

#### Description of the Impact

Should any structures be decommissioned, some vegetation clearance of the directly adjacent areas might be required to ensure that all structures and infrastructure can be transported from the reserve. Areas where vegetation have established over numerous years, would be affected by the decommissioning activities.

#### Impact Assessment

Should the facilities be decommissioned, vegetation clearance would be of short duration and the impact could be reversed if the areas are rehabilitated. For this reason, the impact is regarded to be of low significance.

Table 25: Ecological impact during decommissioning phase

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Decommissioning of structures	Medium	Site Specific	Short-term	Definite	Sure	Reversible	Medium (-)	Low (-)

#### Mitigation Measures

- Vegetation removal must be limited to areas which are necessary for the successful decommissioning of structures and infrastructure;
- The removal of protected or Red Data Species must be avoided. If it cannot be avoided, a permit must be obtained prior to the removal of any such species;
- Employ an alien invasive management plan to ensure that invasive vegetation does not establish on site or the surrounding area; and
- Use only locally available indigenous flora for landscaping and rehabilitation purposes.

### 8.3.2 Impact on surface and ground water

#### Description of the impact

The Sulphur Springs Day Spa and some fencing and water crossings are the only activities located in close proximity to a watercourse/wetland, and for this reason decommissioning activities such as hazardous substance spillages, sedimentation and erosion, etc. might have an impact on the watercourse/wetland if these activities aren't appropriately mitigated.

#### Impact Assessment

Should the structures ever be decommissioned, the impact would be of a short duration as the area would be rehabilitated after all structures have been removed. The impact is therefore of low significance with the implementation of mitigation measures.

Table 26: Impact on ground and surface water resources during decommissioning phase

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Decommissioning of structures	Medium	Site Specific	Short-term	Probable	Sure	Reversible	Medium (-)	Low (-)

## Mitigation Measures

- Spillages of any potentially hazardous materials should be cleaned immediately to avoid contamination of runoff;
- Mixing or decanting of all chemicals and hazardous substances must take place either on a tray or on an impermeable surface;

Refer to the Environmental Management Programme (Appendix F) for all other measures to be implemented to minimise any impact on ground or surface water.

### 8.3.3 Increased soil erosion

#### Description of the impact

The owners Villa is located on relatively steep slopes and therefore, should the structures ever be decommissioned, the possibility of erosion is increased when the area is cleared, and structures are removed.

#### Impact Assessment

The clearance of vegetation, disturbance of soil and especially the topography of the proposed site, increases the risk of erosion. However, the Villa was constructed on a rocky surface which in itself minimises the possibility of soil erosion. Due to the topography, the significance of this impact has been given a medium rating without the implementation of mitigation measures. Erosion protection measures are also proposed at all areas where the possibility of erosion is increased. After mitigation measures, the impact is assessed to be of low significance.

Table 27: Impact on soil erosion during decommissioning phase

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Increased soil erosion	Medium	Site Specific	Short-term	Probable	Sure	Reversible	Medium (-)	Low (-)

## Mitigation Measures

- The contractor must monitor the site and manage drainage of the construction site to avoid standing water and soil erosion. Sand bags must be used in areas that are prone to erosion;
- Storm water must be controlled and channelled to prevent soil loss from the site;
- The time that stripped areas are exposed without vegetation must be minimised wherever possible; and
- Replacement of topsoil and revegetation must commence immediately after the completion of an activity.

### 8.3.4 Increased traffic

#### Description of the impact

During decommissioning, construction vehicles will be travelling to and from the site, transporting construction rubble, structures and infrastructure from the site. The increased vehicular movement might have an impact on the traffic flow of the N1.

#### Impact Assessment

The amount of additional vehicular movement during the decommissioning phase would not be of such an extent that it would cause congestion of the N1. All decommissioning activities would be conducted far from any national or provincial road. However, the transporting vehicles would be travelling on the N1 highway to dispose of concrete rubble, structures or infrastructure. The impact is of a temporary nature and is therefore of low significance.

Table 28: Increased traffic during decommissioning phase

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Increase in traffic on the N1								
Decommissioning of structures	Medium	Local	Short-term	Unlikely	Sure	Reversible	Low (-)	Very Low (-)

### Mitigation Measures

The contractor must monitor traffic flow on the N1 during the decommissioning phase of the development and should any congestion be noted as a result of construction vehicles travelling on the N1 highway, the contractor should limit movement on the N1 to low traffic flow periods.

### 8.3.5 Dust generation

#### Description of the impact

Should the facilities be decommissioned, the clearance activities will generate dust. Activities would include the disturbance of the soil surface, vehicular movement on dirt roads, and temporary clearance of vegetation.

#### Impact Assessment

All facilities associated with the operation of Ekland Safaris are located far from any neighbouring receptors and for this reason, should the facilities ever be decommissioned, the impact would be of low significance when mitigation measures are implemented.

Table 29: Dust generation during decommissioning phase

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Dust generation								
Decommissioning of structures	Low	Site Specific	Short-term	Probable	Sure	Reversible	Low (-)	Very Low (-)

### Mitigation Measures

- Dust generation can be controlled by minimising the speed of vehicles travelling on dirt roads;
- Areas where the generation of dust is excessive, can be mitigated by spraying the dirt road with water.

### 8.3.6 Waste generation and disposal

#### Description of the impact

Construction waste would be generated during the decommissioning phase and it is essential that the management of this waste is effective to prevent any pollution. As structures would be decommissioned, there would be no sanitation facilities on the site and therefore the activities could potentially lead to pollution if adequate temporary facilities are not provided.



## Impact Assessment

The improper storage and disposal of concrete waste and other waste associated with the decommissioning of the facilities, could have a significant impact on the affected environment and therefore mitigation measures are required to ensure that waste is disposed of appropriately. The impact is therefore rated to be of medium significance prior to the implementation of mitigation measures.

Table 30: Waste generation and disposal during decommissioning phase

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Decommissioning of structures	Medium	Local	Long-term	Probable	Sure	Reversible	Medium (-)	Low (-)

## Mitigation Measures

- Waste generated during the decommissioning of facilities must be stored within a designated area and be disposed of on a regular basis. Concrete rubble which cannot be used by neighbouring communities, must be disposed of at a registered land fill site.

### 8.3.7 Socio-Economic Impact

#### Description of potential impact

Should the facilities ever be decommissioned, temporary job opportunities would be created during the decommissioning phase of the project, however, over 200 permanent job opportunities would be lost if the facilities cease to operate.

## Impact Assessment

There will be a positive economic impact during the decommissioning phase, as temporary employment will be provided. However, in the long term the decommissioning of the facilities would have a negative impact on the surrounding communities as over 200 job opportunities would be lost. The long term negative impacts outweigh the short term positive impact associated with the decommissioning of the facilities. Therefore, the socio-economic impact is of high significance if the facilities are ever decommissioned.

Table 31: Socio-economic impact during decommissioning phase

IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
Loss of permanent job opportunities	High	Regional	Long-term	Definite	Sure	Reversible	High (-)	High (-)

## Mitigation Measures

There is unfortunately no mitigation for the permanent job losses should the facilities ever be decommissioned. Ekland Safaris are however providing training in the hospitality industry to all employees which would assist employees to apply for positions at other facilities. Employees would therefore have the necessary skills to work within the hospitality industry.



# 9 Environmental Impact Statement

As discussed previously, this application for an EA is part of a 24G rectification process. Therefore, an EA is sought for activities and a development footprint which is established. In this regard, the impacts assessed, focused on the operational and possible decommissioning phase of the project.

As can be seen in the Environmental Impact Assessment Summary for operation and decommissioning (respectively Table 32 and Table 33) below, it was found that:

- The most significant impacts during operation without mitigation are:
  - Impact on biodiversity with the clearance of vegetation and fragmentation of habitat;
  - Erosion;
  - Ground and surface water pollution;
  - Impact on heritage and paleontological resources;
  - Waste generation and disposal; and
  - Socio-economic impacts of the surrounding environment.

The significance of the all negative impacts during the operation of the facility would reduce to LOW after mitigation.

Should the facilities be decommissioned, and mitigation measures be implemented during the decommissioning phase, the impacts were also found to be of low significance. However, the impact resulting from the loss of permanent job opportunities would have a highly negative impact on the socio-economic environment.

Table 32: Operational phase impact summary

OPERATIONAL PHASE								
IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
<b>Ecological: Clearance of vegetation</b>	Medium	Local	Long term	Definite	Sure	Reversible	Medium	Low
<b>Ecological: Electric fencing</b>	Low	Local	Long term	Probable	Sure	Reversible	Low	Low
<b>Erosion and Storm Water Control</b>	Medium	Site Specific	Long-term	Probable	Sure	Reversible	Medium	Low
<b>Ground and surface water pollution</b>	Medium	Local	Long-term	Unlikely	Sure	Reversible	Medium	Low
<b>Water consumption</b>	Medium	Local	Long-term	Unlikely	Sure	Reversible	Low	Very Low
<b>Impact on heritage and paleontological resources</b>	Medium	Site-specific	Long-term	Unlikely	Unsure	Irreversible	Medium	Low
<b>Sanitation and waste management</b>	Medium	Site-specific	Operation	Probable	Sure	Reversible	Medium	Low
<b>Visual Impact</b>	Low	Site-specific	Long-term	Unlikely	Sure	Reversible	Low	Very Low
<b>Impact on Land Use</b>	Low	Local	Long-term	Definite	Sure	Reversible	Low (-)	Very Low (-)
<b>Socio-Economic Impact</b>	High	Local	Long-term	Definite	Sure	Reversible	Medium (+)	High (+)

Table 33: Decommissioning phase impact summary

DECOMMISSIONING PHASE								
IMPACT	BEFORE MITIGATION							AFTER MITIGATION
	Magnitude	Extent	Duration	Probability	Confidence	Reversibility	Significance	Significance
<b>Ecological:</b> <b>Clearance and damage of indigenous vegetation</b>	Medium	Site Specific	Short-term	Definite	Sure	Reversible	Medium (-)	Low (-)
<b>Ground and surface water impact</b>	Medium	Site Specific	Short-term	Probable	Sure	Reversible	Medium (-)	Low (-)
<b>Soil Erosion</b>	Medium	Site Specific	Short-term	Probable	Sure	Reversible	Medium (-)	Low (-)
<b>Traffic Impact</b>	Medium	Local	Short-term	Unlikely	Sure	Reversible	Low (-)	Very Low (-)
<b>Dust Generation</b>	Low	Site Specific	Short-term	Probable	Sure	Reversible	Low (-)	Very Low (-)
<b>Waste management</b>	Medium	Local	Long-term	Probable	Sure	Reversible	Medium (-)	Low (-)
<b>Socio-Economic Impact</b>	High	Regional	Long-term	Definite	Sure	Reversible	High (-)	High (-)

It must also be noted that to date, Manupont has in total spent approximately R1.53 billion on Ekland Safaris and would be contributing to the local community by providing training to all staff which is estimated at a cost of approximately R2 million per annum. The cost of employment during the operational phase is estimated at R19.2 million per annum while additional employment opportunities are created for other service providers and specialist skills. It must also be noted that in contrast to other land uses such as mining which has a limited life span, tourism is a non-consumptive land use which would provide long-term sustainable job opportunities to local residents and suppliers.

When considering the above Environmental Impact Statement, which summarises the impacts assessed within Section 8 of the Draft EIA Report, it is evident that the significance of these impacts **without mitigation**, range from **medium to low** significance. However, with the implementation of the suite of recommended mitigation measures, the significance of most of the negative impacts would be minimised and would be of **low significance**.

Associated with the project is the positive social impact being of **high** significance due to the over 200 permanent employment opportunities being created. Unemployed individuals in the area would therefore benefit by the operation of Ekland Safaris.

If the Section 24G Environmental Authorisation Application is authorised, the implementation of all mitigation measures listed and the Draft Environmental Management Programme (Appendix F), should be included as a condition of approval. On this basis it is the opinion of the EAP that the application should be authorised.

# 10 Recommendations

## 10.1 Specialist Findings and Impact Management Outcomes

The specialist studies conducted concluded the following and made the following recommendations to mitigate any adverse impact on the environment:

- Post construction Ecological Impact Assessment of the Main Lodge area (Appendix E1);

According to the post-construction assessment conducted for the Main Lodge area, the specialist noted that rocky outcrops are sensitive bio-ecological features and development on such rocky outcrops could have a significant impact on biodiversity and ecological functions if not managed properly. The impact on biodiversity and ecological functions were assessed according to the loss and fragmentation of habitat, loss of vegetation, loss of important flora communities and individuals, as well as the loss of fauna.

The assessment concluded that the ecological impact at the Main Lodge, specifically the rocky outcrop considered to be a sensitive environment, is of low significance and subsequently the decommissioning of the facility and rehabilitation of the area is not required.

As construction has already been completed, the ecologist recommended the following general measures to be implemented:

- Use only indigenous flora for landscaping.
- Implement an alien invader vegetation control program.
- Prevent and manage soil erosion.
- Do not use electrocution apparatus to eliminate insect at night as many innocent invertebrates, reptiles and small mammals are also at risk.

- Grave Management Report (Appendix E2);

The Mulambwane Community Property Association (MCPA) claims that this community has ancestral graves on the Ekland property. However, despite invitations to assist with finding their location, the location and number of these claimed graves could not be determined due to the unavailability of the MCPA members. An archaeologist was requested to compile a report to outline the management principles that should be considered for any identified graves' preservation and to provide the necessary access to the next of kin.

- Watercourse and Aquatic Ecological Assessment (Appendix E3);

The freshwater ecological assessment was conducted for the water use licence application which is currently in process. The report therefore refers to water uses identified within the boundaries of Ekland Safaris. Some of the activities investigated as part of the water use licensing process, are also investigated within the Section 24 G Environmental Authorisation process and therefore reference is also made to the finding of the freshwater ecological assessment.

The impact of the concrete and grid fence crossing the Mutamba River, the operational activities near the sulphur Spring Day Spa and the operation of the earth berms located within ephemeral drainage lines, were found to be of low significance.

Based on the findings of the freshwater ecological assessment, the following mitigation measures were recommended by the specialist:

- It is strongly advised the steel grid structure atop the concrete base (focus area 3) be spaced a minimum of 150mm between the balusters to allow free movement of smaller faunal species through the fence (thus allowing for migratory movement), but still maintain security of the reserve;
- Where erosion is noted at the concrete base, it must be infilled and compacted or protected from erosion by other means;
- All alien and invasive vegetation species must be eradicated where disturbances to the river has occurred. These species must be removed by hand (no mechanical nor chemical treatments allowed), since the alien vegetation species identified within the river is saplings and can easily be removed;

- During general maintenance activities of the Sulphur Spring Spa, no personnel may be permitted to enter the wetland flat, unless it entails maintenance activities of the wetland;
- The earth berms must be reinstated with a minimum slope ratio of 3:1, although a 5:1 ratio is recommended. This will prevent any further erosion from occurring and provide a stable enough slope for vegetation to establish on;
- Where hard engineering structures are required to stabilise the earth berms or the spillway (due to extensive erosion), use should be made of gabion baskets or reno mattresses, in consultation with a civil engineer and a freshwater specialist;
- All disturbed areas must be revegetated with indigenous vegetation species.

- Sulphur Springs Wetland Delineation and Vegetation Verification (Appendix E4):

The project area was assessed prior to the construction of the Day Spa and the specialist investigation concluded that the Sulphur Springs project area was not deemed to be ecologically sensitive and that the activities associated with the Day Spa would not have a significant impact on the natural environment. This was motivated by the fact that the design incorporated most of the natural vegetation without the consequence of loss of vegetation. The vegetation that was lost is well represented in the surrounding area and no threatened species were present or affected.

The wetland area was also found to be very small and if conserved with a buffer zone it would not be significantly affected by the proposed activity. No alternatives were therefore deemed necessary.

The small wetland is of a seasonal / temporary nature and is not important for biodiversity maintenance. For this reason, a large buffer zone was not necessary. The 32m buffer zone as subject to the EIA regulations was subsequently found to be more than adequate as a buffer zone.

- Geo-Hydrological Assessment (Appendix E5):

The Geo-Hydrological Assessment conducted for Ekland Safaris, concluded the following:

- The study area can be regarded as having a moderate to high groundwater potential with groundwater occurrences confined to several major structures present within the property boundaries. These fractured systems are recharged by the Mutamba River where high yielding boreholes associated with these fault systems have been drilled. The Mutamba River also has well developed alluvial deposits.
- The results of the hydro census confirmed that groundwater plays an important role within the project area and is used for agricultural and domestic applications. Boreholes with significant yields occur within the project area (ranging from 900 to 39 600 litres/hour with an average yield of 13209 litres/hour). The static water level as measured within the boreholes during the hydro census ranges between artesian and 52 meters below ground level with the majority of the boreholes having a static water level of less than 25 meters below ground level.
- The groundwater quality of boreholes located within the property boundaries varies. Twelve water samples were collected from the boreholes during the constant discharge tests and submitted for a water quality analysis. The results were compared to the SANS 241-1:2015 Drinking Water Standards. Seven of the twelve boreholes complied with the SANS standards. The remaining five boreholes reported water quality not fit for human consumption without prior treatment.
- Based on the results of the constant discharge tests performed on the production boreholes, the tested boreholes can supply a total volume of 1394 ML/annum which can supply in the calculated annual demand of 270 ML.

Based on the above conclusions, the following recommendations are made:

- In order to mitigate potential contamination of the aquifers underlying the project area, a groundwater management programme needs to be developed and implemented as part of the environmental management program.
- As part of the groundwater management program, a groundwater monitoring program should be implemented. Should it become evident from the monitoring program that pollution of the groundwater occurs or anomalous lowering in static water levels occur, corrective and remedial actions should be implemented.

# 11 Conclusion

## 11.1 Assumptions, Uncertainties and Gaps

This report is based on the following assumptions:

- The information provided by Manupont is accurate, sufficient and unbiased, and no information that could change the outcome of the EIA process has been withheld.
- In addition to this EA process, the impacts of the project on the surrounding water resources and related mitigation will be assessed and described in the Integrated Water Use Licence Application (IWULA).
- The proponent will follow the conditions of the EA and applicable legislation.

## 11.2 Reasoned Opinion for Authorisation

The authorisation of the activities and facilities at Ekland Safaris will allow the proponent to lawfully operate the tourism facility at the site. The continuation of its operations will ensure that the employment and contractor opportunities it currently provides, are maintained.

Furthermore, after mitigation, few moderate impacts remain, and most of these can be mitigated to a Low or Very Low level through the continued implementation of the EMPr and regular monitoring of compliance thereto.



# 12 Undertaking by the EAP

I, *Anne-Mari White*, declare that –

- I act as the independent environmental practitioner in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental impact assessments, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in regulation 8 of the Regulations when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- I will keep a register of all interested and affected parties that participated in a public participation process;
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not;
- all the particulars furnished by me in this report are true and correct;
- will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations;
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act;
- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014.



Signature of the environmental assessment practitioner

*Aurecon South Africa (Pty) Ltd*

Name of company

3 October 2019

Date



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to life*

**Document prepared by**

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