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**ENVIRONMENTAL AUDIT REPORT NR. 1:  
CHIEFS TENTED CAMPS: TSHOKWANE  
KRUGER NATIONAL PARK**

**DFFE: 14/1/16/3/3/1/2532**



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MARCH 2023**

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<b><u>CONTENTS</u></b>	<b><u>PAGE</u></b>
Distribution List	3
1. Abbreviations	4
2. Executive Summary: Rating	6
3. Project Background	7
4. Audit Process	8
5. Audit Methodology	8
6. Audit Survey	9
7. Audit Inspection Checklist: Audit Results	10
8. Audit Findings	32
9. Recommendations	32
10. Conclusion	33
Audit Photographs	34

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Director Compliance Monitoring	Department of Forestry, Fisheries and Environment	1
Ralf Kalwa	Rhengu Environmental Services	1
<b>TOTAL</b>		<b>12</b>

## **1. Abbreviations**

ASAP	As soon as possible
BEE	Black Economic Empowerment
C	Compliant
CLO	Community Liaison Officer
COF	Certificate of Fitness
CTC	Chiefs Tented Camps
DAFF	Department of Agriculture, Forestry and Fisheries
DFFE	Department of Forestry, Fisheries and Environment
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EM	Environmental Manager
EMPr	Environmental Management Programme
EMS	Environmental Management System
GM	General Manager
HIA	Heritage Impact Assessment
HIV	Human Immunodeficiency Virus
I&AP's	Interested and Affected Parties
IEM	Integrated Environmental Management
KNP	Kruger National Park
NA	Not Applicable
NC	Non-Compliant
NEMA	National Environmental Management Act
OHASA	Occupational Health and Safety Act
OMPr	Operational Management Programme
OP	Outpost
ORD	Off Road Driving
ORDE	Off Road Driving Event
PPP	Public Private Participation

RES	Rhengu Environmental Services
ROW	Right of Way
SABS	South African Bureau of Standards
SAHRA	South African Heritage Resources Agency
SANParks	South African National Parks
SR	Section Ranger
STD	Sexually Transmitted Diseases
WULA	Water Use Licence Application

**2: EXECUTIVE SUMMARY: RATING**

<b>ISSUE</b>	<b>RATING</b>
<b>CHIEFS TENTED CAMP (CTC) OPERATIONAL IMPACTS AND ACTIVITIES</b>	
Key Conditions of the Environmental Authorisation	13/13
Key Conditions of the Environmental Management Programme	
Socio Economic Impact	4/4
Biophysical Impact	9/9
Visual and Aesthetic Impact	2/2
Cultural Heritage	1/1
Vehicles and Equipment	5/5
Site Layout	1/1
Protection of Fauna and Flora	2/2
Trenching	3/3
Water Use	6/6
Soil Protection, Contamination and Responses	4/4
Storage and Management of Toxic and Hazardous Substances	1/1
Storm Water Management	2/2
Signage	1/1
Fire Risk	9/9
Flood Risk	6/6
Dangerous Animals	8/8
Power Failures	3/3
Medical Emergency	4/4
Evacuation	1/1
<b>TOTAL</b>	<b>85/85= 100%</b>

### **3. PROJECT BACKGROUND: MOBILE SEASONAL TENTED CAMPS:**

**3.1. Introduction:** Environmental Impact Reports including an Environmental Management Programme (EMPr) were prepared and submitted to the Department of Forestry, Fisheries and Environment (DFFE) in 2022 and approved as per Environmental Authorisation (EA) Ref: DFFE 14/12/16/3/3/1/2532. The developments are located in the Tshokwane- and Satara Regions of the Kruger National Park (KNP).

The development- and construction planning process commenced in March 2023 and as per the conditions listed in the EA several environmental audits must be undertaken to ensure compliance with the contents of the EIA, the EA, the Specialist Studies and the EMPr.

The purpose of the EMPr is to ensure that specific measures are taken to avoid or mitigate potentially significant impacts identified in the Environmental Impact Assessment.

**3.2. Applicable Legislation:** Legislation and guidelines that were considered for this operational management programme are listed as follows:

- National Environmental Management Act (No. 107, 1998).
- National Water Act (No. 36, 1998).
- Conservation of Agricultural Resources Act (No. 43, 1983).
- National Environmental Management: Biodiversity Act (No.10, 2004).
- National Environmental Management: Protected Areas Act (No. 57, 2003) as amended by the National Environmental Management: Protected Areas Amendment Act (No 31 of 2004).
- KNP Best Practice Manual (van der Merwe, L. 2004).
- Specifications for the Construction of Roads in the KNP and Concession Areas. V&V Consulting Engineers (June 2001).
- The Environmental Authorisations and Environmental Management Programmes issued for the two developments.

### **3.3. Monitoring and Auditing**

Rhengu Environmental Services (RES) represented by Ralf Kalwa (ECO), will ensure that all the **conditions** as set out in the environmental documentation are met and implemented as stipulated during audits conducted in conjunction with SANParks officials including representatives from the concession operators.

The role of the Environmental Control Officer (ECO) and independent audit teams are well defined within the framework of Integrated Environmental Management (IEM). The operators, together with the ECO will ensure **compliance** in terms of this process.

### 3.4. Contact Details of Responsible Persons

#### 1. Auditor/ECO: Ralf Kalwa

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#### 2. Section Ranger: Tshokwane: Rob Thomson

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#### 3. Environmental Manager: Kruger National Park: Shane Gertze

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#### 7. Chiefs Tented Camps: Environmental Officer (EO): Etienne Krige

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### 4. AUDIT PROCESS

The EMPr addresses the mitigation measures and management requirements for the various activities of the construction process, the operations and details specific actions to be followed. The EMPr is to be used by the designated operators, staff members, Licence Holders and contractors involved with the development of the facilities.

The roles of the Auditor/ECO and the Operators are well described in the Integrated Environmental Management (IEM) process and are highlighted in the EMPr which was accepted and signed by the various role players.

Through a process of regular audits, the Auditor/ECO will assess whether the various role players are compliant with the contents of the EMPr and the conditions listed in applicable national legislation.

### 5. AUDIT METHODOLOGY

Issues of **non-compliance** with the above will be highlighted and responsible persons will be required to address these issues with immediate effect. Issues of non-compliance are described as **findings**. Findings are described as follows:

The term **FINDINGS** is directly linked to the term **non-conformance** or **non-compliance** of an aspect described in the EMPr. The operator/contractor must ensure that findings are addressed timeously as they reflect a mistake, which requires rectification.

The term **RECOMMENDATION** is used to convince the operator/contractor into addressing an issue, which is based on a proven track record. E.g., remove all waste regularly to prevent spillages and incidents of pollution.



Findings are categorised in terms of **importance, priority and function. The following is applicable:**

**Negative Impact Finding** (Procedurally incorrect): An aspect which is described in the EMPr and which is not implemented as per procedure or could result in a significant environmental impact will result in a **Negative Impact Finding**. This is regarded as a non-compliance with or a non-conformance of the EMPr.

**Operational Management Finding:** This finding is less important than the category above and has its foundations in aspects of maintenance and operations, e.g., a leaking tap, a dustbin without a lid, a blocked drain etc. Corrective actions will have to be described in an **ACTION PLAN**.

**Findings** may or may not result in a **breach of contract or in breach of legislation**. The ECO, the Operator and SANParks will analyse the list of findings and together with the developer/contractor determine whether all possible **corrective actions** have been implemented and all **“avenues of solution”** have been investigated. Should normal procedures prove inadequate and result in a lack of progress, a breach in the contract/legislation may be issued.

## **6. AUDIT SURVEY**

The ECO (Ralf Kalwa: Rhengu Environmental Services) inspected the development site at Tshokwane on **14 March 2023** to undertake the **first environmental audit** as prescribed by the Integrated Environmental Management (IEM) process and as per the conditions described in the Environmental Authorisations/Documents.

**Objectives:** The objective of the audit was to reaffirm the layout of the various activities and to induct the fencing- and decking contractors in terms of their obligations towards compliance with the EMPr. This inspection is considered a pre-construction evaluation. The following aspects were addressed:

- Met the developer/contractors of Chiefs Tented Camps and discussed the **implications of compliance** with the Environmental Authorisation and the Environmental Management Programme (EMPr).
- An on-site inspection of the site and affirmation of the site **layout plan** and the process to be followed to ensure **site establishment**.
- **Evaluated compliance** with the contents of the EMPr, the EA and associated documents (where applicable).
- Collated the results in an **Audit Report**.
- **Submitted recommendations (where applicable)** pertaining to remedial actions and or methods of rehabilitation and mitigation.

### 7. AUDIT INSPECTION CHECKLIST: AUDIT RESULTS

**Instructions:** Mark the applicable box. "Green" is always compliant, and "Red" is always non-compliant. In the comment column describe the finding when applicable and remedial actions required. Recommendations are also listed.

<b>Place: Tshokwane Region: KNP.</b>		<b>Project: Chiefs Tented Camp (CTC): Tshokwane.</b>			
<b>Date: 14 March 2023.</b>		<b>Project Reference: DFFE: 14/12/16/3/3/1/2532</b>			
<b>Name of Auditor: Ralf Kalwa: Rhengu Environmental Services.</b>					
Issue	Requirements and Conditions of the EA and the EMPr	C	NC	NA	Comments, Issues, Findings, Action Required and Responsibility
OPERATION PHASE					
<b>1.Key Conditions of the Environmental Authorisation. The contents of the EA remains applicable at all times.</b>	<b>1. Condition 13:</b> Adhere to the layout plans as submitted as part of the Basic Assessment Report (BAR) dated August 2022.	C	NC	NA	The Environmental Officer (EO: Etienne Krige) will be on site daily to ensure compliance.
	<b>2. Condition 22:</b> Appoint an ECO for the duration of the construction period.	C	NC	NA	Rhengu Environmental Services (Ralf Kalwa) has been appointed.
	<b>3. Conditions 23-26:</b> The details of the ECO must be submitted to DFFE; the ECO must keep records of activities on site, the problems identified, transgressions noted and tasks undertaken by the ECO. The ECO will remain employed until the rehabilitation programme is completed and operations commence.	C	NC	NA	A notification was submitted to DFFE.
	<b>4. Condition 27:</b> All documentation, e.g. audit/monitoring/compliance reports and notifications required as per the EA must be submitted to DFFE.	C	NC	NA	
	<b>5. Condition 30:</b> The holder of the EA must submit final audit reports to DFFE within 30 days after construction and rehabilitation programmes are completed.	C	NC	NA	Noted.
	<b>6. Condition 32:</b> Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant- and competent authority in respect of the development.	C	NC	NA	An environmental file has been submitted to the EO. All subsequent documents will be filed accordingly.
	<b>7. Condition 36:</b> The footprint of the development must be limited to the areas required for actual construction works and operational activities.	C	NC	NA	<b>Developer take note.</b>

<b>8. Condition 37:</b> No-Go areas including sensitive- and buffer areas outside of the footprint must be clearly demarcated.	C			The Ripape River is regarded as a sensitive zone. <b>Contractors take note.</b>
<b>9. Condition 38:</b> All disturbed soil must be reclaimed using indigenous plants commensurate with the Tshokwane Landscape. See EMPr for detail.	C			Noted.
<b>10. Condition 39:</b> Implement an intergrated waste management programme which includes recycling, re-use and reduction of waste. All waste must be disposed of at a registered/accredited landfill site.	C			<b>Developer take note.</b>
<b>11. Condition 40:</b> Should any archaeological sites, artefacts, fossils or graves be exposed during the construction work the work in the vicinity of the find must be stopped and the SAHRA must be informed. The services of an accredited heritage professional must be obtained for the assessment of the find.	C			
<b>12. Condition 41:</b> All alien- and invader plants must be managed in accordance with legislation and plants must be managed and eradicated for the duration of the operation.	C			None observed on-site currently.
<b>13. Condition 43:</b> A copy of the EA, the audit and monitoring reports including the EMPr must be made available at the site for inspections by relevant persons/authorities.	C			An environmental file has been submitted to the EO

<b>2. Key Conditions of the Environmental Management Programme (EMPr): Construction Phase.</b>	<b><u>1. Socio-economic impact management outcomes and actions related to the establishment/breakdown phase:</u></b>	<b>C</b>			<b>Developer take note.</b>
	<ul style="list-style-type: none"> <li>Ensure that employment opportunities are made available to adjacent communities. Where skills are not present or adequate and it is practically possible, relevant capacity building should be carried out.</li> </ul>				
	<ul style="list-style-type: none"> <li>As above and ensure that BEE obligations as per the PPP Agreement are fulfilled.</li> </ul>	<b>C</b>			
	<ul style="list-style-type: none"> <li>Implement a continuous programme of environmental awareness and responsibility training and ensure that senior employees demonstrate implementation of the requirements of the EMPr.</li> </ul>	<b>C</b>			
	<ul style="list-style-type: none"> <li>Make every effort to ensure that the staff experience is wilderness based and that they have a full knowledge of all the sustainability technologies applied in the establishment and breakdown of the camps.</li> </ul>	<b>C</b>			
	<b><u>2. Biophysical impact management outcomes and actions related to the establishment/breakdown phase:</u></b>	<b>C</b>			<b>Developer/contractors take note.</b>
	<ul style="list-style-type: none"> <li>Ensure that staff are made aware of the threat of poaching and the roll that they can play in assisting the Section Ranger with reporting any suspicious activities in proximity to the sites.</li> </ul>				
<ul style="list-style-type: none"> <li>Limit clearing to the immediate development footprint and ensure no encroachment on adjacent natural areas. Also retain all trees and shrubs and plan and develop to integrate these into the development footprint. Where clearing of small shrubs and over-hanging vegetation is required the former must be replanted in an area that will not be disturbed and the material from the latter must be used as screening between tents. The nursery at Skukuza must also be notified and given the opportunity for accessing such material. Where access tracks and paths are created, these must avoid the need for any clearing and only disturb the grass layer.</li> </ul>	<b>C</b>			<b>Developer take note. Do not clear shrubs/brush indiscriminately. Ensure that neighbouring guest tents are shielded from each other by maintaining the general ambience of the surrounding vegetation.</b>	

	<ul style="list-style-type: none"> <li>Limit disturbance of vegetation cover as discussed above and ensure that any invasive alien plants that emerge in the concession area are removed by hand pulling before the establishment of the camps. The Section Rangers may assist with the identification of the plants with their annual pre-season site inspections.</li> </ul>				
	<ul style="list-style-type: none"> <li>Train all personnel in the need to be aware of all fauna species and the need to keep the level of noise and disturbance to an absolute minimum and ensure that these requirements are met at all times.</li> </ul>	C			
	<ul style="list-style-type: none"> <li>Monitor the extent of dust generation and vegetation coating and apply dust suppression measures as required.</li> </ul>	C			
	<ul style="list-style-type: none"> <li>Harvest brush from the dominant shrub species in the area and stack the brush on the exposed surfaces parallel to the contour. Note that this action can only take place under the strict guidance of the Section Ranger and the ECO.</li> </ul>	C			
	<ul style="list-style-type: none"> <li>Compile and implement a strict solid waste management plan which applies the “reduce, reuse and recycle” policy linked to the waste management policy of the KNP. Ensure that all solid waste is washed, compacted, securely stored and frequently removed off site to the solid waste management facility at Skukuza, Satara or outside the KNP.</li> </ul>	C			
	<ul style="list-style-type: none"> <li>No vehicles to be serviced and/or repaired on site and to be in good working order with a full service history.</li> <li>All vehicles to be monitored for leaks and drip trays to be placed under all vehicles parked on site.</li> <li>Spills and drips are to be addressed immediately with contaminated soil being removed and disposed of outside the KNP at a registered facility.</li> <li>Fuels and oils are to be stored in controlled, monitored and locked facilities in the relevant storage areas and are to be issued under strict control with registers maintained.</li> <li>The bulk storage of fuels and oils to be in bunded facilities. Chemical toilets to be provided for staff and resultant liquid</li> </ul>	C			<p><b>EO: Take note. Ensure that drip trays, bunds and storage facilities are brought onto site as the development unfolds.</b></p>

	waste to be collected, stored and then transported to the waste water treatment facility at Skukuza or Satara.				
	<ul style="list-style-type: none"> <li>All staff to be made fully aware of the fact that no harvesting of animals and/or plants on, adjacent to the sites or anywhere in the KNP is allowed and will not be tolerated and that perpetrators will be immediately dismissed. The Section Ranger should be alerted to the incident/s in order to implement the KNP crime management procedures.</li> <li>Staff movements are to be restricted to the immediate camp footprints of the sites and no access beyond these will be allowed. No wood is to be harvested for the purposes of making fires and fuel for cooking and heating must be provided by gas or fuel efficient technology such as rocket stoves or geysers. Wood fuel is to be brought in from outside the KNP and preferably from a source that utilises invasive alien species.</li> </ul>	C			EO: Take note. Ensure that no biological materials are harvested and that gas facilities are activated on site as the development unfolds.
	<p><b><u>3. Visual and aesthetic impact management outcomes and actions related to the establishment/breakdown phase:</u></b></p> <ul style="list-style-type: none"> <li>Time the transportation of camp equipment outside of peak game drive times and ensure that drivers are well aware of and adhere to the rules of the roads in the KNP.</li> <li>Plan and implement the transportation of camp equipment in such a way that it takes place over as short a period of time as possible achieving the balance between the size and number of vehicles required for this purpose.</li> </ul>	C			Developer take note
	<ul style="list-style-type: none"> <li>Ensure that activities on site are strictly limited to the camp footprint and that the footprint is laid out to ensure that all components will be screened from the tourist roads</li> </ul>	C			Developer take note

	<p><b><u>4. Cultural heritage impact management outcomes and actions related to the establishment/breakdown phase:</u></b></p> <ul style="list-style-type: none"> <li>• All staff are to be made fully aware of the possibility of finding cultural heritage and/or paleontological features such as pot shards, stone tools, arrow heads, fossils, etc.; and that these are not to be removed.</li> <li>• In the event of any cultural heritage and/or paleontological features being located, a <b><u>Chance Find Procedure</u></b> must be immediately initiated which includes the following: <ul style="list-style-type: none"> <li>• all work in- and around the affected area to cease and the area to be clearly demarcated with no further access permitted;</li> <li>• immediately engage an independent archaeologist or palaeontologist to assess the situation and to provide advice as to how it should be addressed;</li> <li>• proposed actions will depend on the significance of the find but include: <ul style="list-style-type: none"> <li>• application for a permit from SAHRA to remove the features;</li> <li>• the undertaking of a heritage impact assessment and implementation of its recommendations.</li> </ul> </li> <li>• work on the affected area may only proceed once the above have been implemented.</li> </ul> </li> <li>• Regarding the site of Chief Malihane's Residence just north of the Satara Mananga Site the following is required: <ul style="list-style-type: none"> <li>• Demarcation of Chief Malihane's Residence Site with a fence to prevent any accidental damage to the site during the development of the Seasonal Mobile Tented Camp here.</li> <li>• Erecting information signage at the site.</li> <li>• In order to properly demarcate the site, a detailed assessment of the historical site should be undertaken to determine its extent.</li> <li>• Drafting of and submission of a Cultural Heritage Management Plan for Chief Malihane's Residence.</li> <li>• Detailed historical-archaeological research on the site should also be considered in order to recover as much information</li> </ul> </li> </ul>	C			Developer take note.
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	on the site and its history to preserve it for future generations.	■	■	■	
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<b>3. Key Conditions of the Environmental Management Programme (EMPr): Operational Phase.</b>	<b><u>1. Socio-economic impact management outcomes and actions related to the establishment/breakdown phase:</u></b>			NA	The facilities will become operational in May 2023.
	<ul style="list-style-type: none"> <li>Ensure that employment opportunities are made available to adjacent communities. Where skills are not present or adequate and it is practically possible, relevant capacity building should be carried out.</li> </ul>				
	<ul style="list-style-type: none"> <li>As above and ensure that BEE obligations as per the PPP Agreement are fulfilled.</li> </ul>			NA	
	<ul style="list-style-type: none"> <li>Implement a continuous programme of environmental awareness and responsibility training and ensure that senior employees demonstrate implementation of the requirements of the EMPr.</li> </ul>			NA	
	<ul style="list-style-type: none"> <li>Make every effort to ensure that the staff experience is wilderness based and that they have a full knowledge of all the sustainability technologies applied in the establishment and breakdown of the camps.</li> </ul>			NA	
	<b><u>2. Biophysical impact management outcomes and actions related to the establishment/breakdown phase:</u></b>			NA	
	<ul style="list-style-type: none"> <li>Ensure that staff and guests are made aware of the threat of poaching and the roll that they can play in assisting the Section Ranger with reporting any suspicious activities in proximity to the sites.</li> </ul>				
<ul style="list-style-type: none"> <li>Position the fence as close to the camp layout as possible to ensure that the area excluded from large mammal access is as small as possible.</li> </ul>			NA		

	<ul style="list-style-type: none"> <li>• Train all staff in the need to be aware of all fauna species and the need to keep the level of noise and disturbance to an absolute minimum and ensure that these requirements are met at all times.</li> <li>• No music to be played in the staff village and back of house.</li> <li>• Provide guests with a thorough briefing on arrival as to the need to behave appropriately, to keep their voices down and to respect the wilderness setting and other guests. Any entertainment provided for the guests must be in line with the cultural and wilderness context of the camp, it must be 'un-plugged', timed for the evenings and for a limited period of time.</li> </ul>			NA	
	<ul style="list-style-type: none"> <li>• Monitor the extent of dust generation and vegetation coating and apply dust suppression measures as required, e.g., vehicles to travel no faster than 20km/hour and dusty sections to be kept damp.</li> </ul>			NA	
	<ul style="list-style-type: none"> <li>• Position and manage all tracks and paths in a way that will ensure that any runoff generated by unlikely precipitation events will be contained and that erosion risk is limited. Monitor the situation closely during any precipitation events to check for potential run-off and install barriers to remedy these immediately.</li> </ul>			NA	
	<ul style="list-style-type: none"> <li>• Compile and implement a strict solid waste management plan which applies the "reduce, reuse and recycle" policy linked to the solid waste management policy of the KNP. Ensure that all solid waste is washed, compacted, securely stored and frequently removed off site to the solid waste management facility at Skukuza, Satara or outside on the KNP where it will be deposited in a licensed waste management facility.</li> </ul>			NA	
	<ul style="list-style-type: none"> <li>• No vehicles to be serviced and/or repaired on site and to be in good working order with a full service history.</li> <li>• All vehicles to be monitored for leaks and drip trays to be placed under all vehicles parked on site.</li> </ul>			NA	

	<ul style="list-style-type: none"> <li>• Spills and drips are to be addressed immediately with contaminated soil being removed and disposed of outside the KNP at a registered facility.</li> <li>• Fuels and oils are to be stored in controlled, monitored and locked facilities in the relevant storage areas and are to be issued under strict control with registers maintained.</li> <li>• The bulk storage of fuels and oils to be minimised and to be in bunded facilities.</li> <li>• Grease traps to be installed in the kitchens, to be well maintained and regularly emptied and cleaned with captured grease being securely stored and frequently removed for deposit at a registered waste management facility outside the KNP.</li> <li>• Black and grey water management facilities to be provided for both staff and guests that ensure that this waste water is captured and contained, regularly removed either directly or to a bunded temporary holding and treatment facility, and then removed off site to the Satara/Skukuza waste water management facility.</li> <li>• Sufficient ablution facilities must be provided for both guests and staff during the establishment/breakdown and operational phases.</li> </ul>				
	<ul style="list-style-type: none"> <li>• All staff and guests to be made fully aware of the fact that no harvesting of animals and/or plants on, adjacent to the sites or anywhere in the KNP is allowed and will not be tolerated and that perpetrators will be immediately dismissed (staff) or expelled at cost (guest). In both instances the Section Ranger will be alerted in order to implement the KNP crime management procedures.</li> <li>• Staff and guest movements are to be restricted to the immediate camp footprints of the sites and no access beyond these will be allowed, unless on a guided trail.</li> <li>• No wood is to be harvested for the purposes of making fires and fuel for cooking and heating must be provided by gas or fuel efficient technology such as rocket stoves or geysers</li> </ul>			NA	

	<p>where the fuel is brought in from outside the KNP and preferably from a source that utilises invasive alien species. Where possible solar power technology must be used.</p> <ul style="list-style-type: none"> <li>• Camp fires are to be fuelled using wood from invasive alien plants obtained outside the KNP.</li> </ul>				
	<p><b><u>3. The visual/aesthetic impact management outcomes and actions related to the operational phase:</u></b></p> <ul style="list-style-type: none"> <li>• Time the movement of delivery and service vehicles outside of peak game drive times and ensure that drivers are well aware of and adhere to the rules of the roads in the KNP.</li> <li>• Ensure that activities on site are strictly limited to the camp footprint and that the footprint is laid out to ensure that all components will be screened from the tourist roads.</li> <li>• Realign the Mananga 4x4 route as per Figure 14 in the BAR.</li> </ul>			NA	
	<p><b><u>4. The cultural heritage impact management outcome and action related to the operational phase:</u></b></p> <ul style="list-style-type: none"> <li>• All staff and guests are to be made fully aware of the possibility of finding cultural heritage features such as pot shards, stone tools, arrow heads, etc.; and that these are not to be removed.</li> <li>• In the event of any cultural heritage features being located, a <b><u>Chance Find Procedure</u></b> must be immediately initiated which includes the following: <ul style="list-style-type: none"> <li>• access to the affected area to cease and the area to be clearly demarcated with no further access permitted;</li> <li>• immediately engage an independent archaeologist to assess the situation and to provide advice as to how it should be addressed;</li> <li>• proposed actions will depend on the significance of the find but include: <ul style="list-style-type: none"> <li>• application for a permit from SAHRA to remove the features;</li> <li>• the undertaking of a heritage impact assessment and implementation of its recommendations.</li> </ul> </li> <li>• access to the affected area may only be allowed once the above have been implemented.</li> </ul> </li> </ul>			NA	

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|  | <ul style="list-style-type: none"><li>• Regarding the site of Chief Malihane's Residence just north of the Satara Mananga Site the following is required:</li><li>• Demarcation of Chief Malihane's Residence Site with a fence to prevent any accidental damage to the site during the development of the Seasonal Mobile Tented Camp here.</li><li>• Erecting information signage at the site.</li><li>• In order to properly demarcate the site, a detailed assessment of the historical site should be undertaken to determine its extent.</li><li>• Drafting of and submission of a Cultural Heritage Management Plan for Chief Malihane's Residence.</li><li>• Detailed historical-archaeological research on the site should also be considered in order to recover as much information on the site and its history to preserve it for future generations</li></ul> |  |  |  |  |
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<b>4. Key Conditions of the Environmental Management Programme (EMPr): Additional Environmental Management Requirements.</b>	<b>1. Vehicles and Equipment:</b> <ul style="list-style-type: none"> <li>All vehicles used by the operator, contractors and sub-contractors are to comply with the South African Traffic Ordinance. All drivers and vehicles shall be licensed and shall be in a road worthy condition and shall be well maintained. Vehicles are to be insured against accidents and third party liability. All vehicles shall undergo regular checks to ensure they are roadworthy and free of oil or other lubricant leaks. The ECO may at any time request the road worthy certificate of a vehicle, or for leaks to be repaired.</li> </ul>	C			Developer take note.
	<ul style="list-style-type: none"> <li>All vehicle fuelling and maintenance is to occur off-site in areas specifically maintained for these activities e.g., the fuelling stations at Skukuza and Satara.</li> </ul>	C			Developer take note.
	<ul style="list-style-type: none"> <li>In the case of 'on-site' equipment, these may be fuelled on-site with the condition that the fuelling will take place over an impervious surface, such as a spill tray, to prevent fuel spillage onto the soil.</li> </ul>	C			EO: Ensure drip trays/spill kits are available on site.
	<ul style="list-style-type: none"> <li>The servicing and repair of equipment is to take place in a workshop 'off site' specifically designed for this purpose. In the event of an on-site emergency repair, the operator or contractor will ensure that all work is conducted over an impervious layer, preventing spillage of oils and fuels into the environment.</li> </ul>	C			
	<ul style="list-style-type: none"> <li>Sufficient absorbent materials and spill kits must be available on site to assist with clean-up operations.</li> </ul>	C			EO: Ensure drip trays/spill kits are available on site.

<p><b>2. Site Layout:</b></p> <ul style="list-style-type: none"> <li>The layout of the sites is to be done in conjunction with the ECO, Section Ranger, and the project manager, prior to any vegetation clearing. The site to be impacted must be clearly marked and approved by the ECO and Section Ranger prior to any establishment activities taking place, in order to ensure as little site clearance as possible. The construction site must be clearly marked with access and no-go areas. No contractors, sub-contractors and staff are allowed outside of the indicated access areas. Impact on a no-go area may incur a fine.</li> </ul>	C			<p><b>A follow-up inspection will take place once the development sites have been cleared of vegetation.</b></p>
<p><b>3. Protection of Fauna and Flora:</b></p> <ul style="list-style-type: none"> <li>No foreign materials may be nailed or attached to any trees.</li> </ul>	C			<p><b>Developer/contractors take note.</b></p>
<ul style="list-style-type: none"> <li>No firewood or any other plant material or animals may be collected, killed or removed from the site. The operator, contractor/s, sub-contractors will be held responsible for any illegal action by any staff members or guests, e.g. poaching, setting of snares, fishing etc.</li> </ul>	C			<p><b>Developer/contractors take note.</b></p>
<p><b>4. Trenching:</b></p> <ul style="list-style-type: none"> <li>Every attempt must be made to limit the need for trenching but when excavating trenches, topsoil and sub soils must be kept separate in order to facilitate the soils being replaced in the right order with trench closure. Topsoil, the upper 5-10cm of soil, often contains the right amounts of humus and seeds to assist good rehabilitation of vegetation after the breakdown and removal of all camp infrastructure.</li> </ul>	C			<p><b>Developer/contractors take note.</b></p>
<ul style="list-style-type: none"> <li>Pipes should be buried at a minimum of one metre, if possible, to avoid elephant damage; unless it can be assured that the perimeter fencing will be sufficiently robust to prevent elephant from entering the camp precincts.</li> </ul>	C			<p><b>Bury all water pipes at a depth of 1m.</b></p>
<ul style="list-style-type: none"> <li>Contractors are to ensure that the pipes to be installed in a trench are available on site before excavating the trench. Trenching should only be done for the length of services which can be installed in one day. No trenches should be left open overnight.</li> </ul>	C			<p><b>Install logs into trenches that are open overnight. This will allow animals that fall into the trench an opportunity to escape.</b></p>

	<b>5. Water Use:</b> <ul style="list-style-type: none"> <li>The operator, contractor/s and sub-contractor/s will be responsible for making sure sufficient potable water is available for the workers during the establishment and breakdown phases.</li> </ul>	C			<b>Developer/contractors take note. Measure all water use and submit monthly reports to SANParks and the ECO. 6.4kl/day were approved in the EIA documents.</b>
	<ul style="list-style-type: none"> <li>The ECO is to provide training as to correct and safe water usage practices relevant to all phases of the activities.</li> </ul>	C			<b>No ponding allowed.</b>
	<ul style="list-style-type: none"> <li>No landscaping is allowed within the camp precincts and therefore no watering of gardens, with the exception of small contained gardens that may provide for the catering requirements of the camps.</li> </ul>	C			
	<ul style="list-style-type: none"> <li>Where hose pipes are used to refill water storage containers, these must be entire and are to be fitted with nozzles or taps at the discharge end to improve water saving. Hose pipes must not be left unattended while delivering water.</li> </ul>	C			<b>Developer/contractors take note.</b>
	<ul style="list-style-type: none"> <li>All water storage and reticulation infrastructure must be regularly and frequently monitored for leaks and those found must be immediately repaired.</li> </ul>	C			<b>Developer/contractors take note.</b>
	<ul style="list-style-type: none"> <li>All bulk water outlet points must be provided with a shallow impermeable container filled with stones, of approximately not greater than 2.5cm in diameter, in order to arrest and attenuate overflows and spills.</li> </ul>	C			



	<p><b>6. Soil Protection, Contamination and Responses:</b></p> <ul style="list-style-type: none"> <li>In the few instances where soil is to be excavated, it is essential that topsoil is kept separate from sub-soil. In most cases the topsoil is clearly defined from the sub-soil by a colour change. If in doubt, the top 100mm may be considered as topsoil.</li> </ul>	C			Developer/contractors take note.
	<ul style="list-style-type: none"> <li>Soil removed can be stored in stockpiles not higher than 1.5 metres. This is to prevent anoxic conditions from occurring in the stockpiles. The stockpiles should be wetted occasionally in order to maintain the micro-organisms. It should also be protected from being blown and/or washed away and this may be achieved through the stacking and securing of brush on the stockpiles.</li> </ul>	C			
	<ul style="list-style-type: none"> <li>The topsoil should be used as a primary rehabilitation measure as it contains the seedbank and micro- organisms related to the site. The topsoil, in rehabilitation, should be at least 50mm deep and careful watering as well as physical weed control should be implemented.</li> </ul>	C			
	<ul style="list-style-type: none"> <li>Should any soil contamination occur, it is to be reported to the ECO, immediately. Polluted soils must be remediated. This can usually be done <i>in situ</i> with an appropriate hydrocarbon destroying microbe solution. If <i>in situ</i> remediation is not possible, the soil shall be removed and stored in an area determined by the ECO and shall be labelled as to the form of contamination to prevent its future use. After consultation with the project manager, the contaminated soil will be disposed of, in the manner determined by legislation.</li> </ul>	C			EO: Ensure that a 200 litre drum is available on site to store contaminated soils.

	<p><b><u>7. Storage and Management of Toxic and Hazardous Substances:</u></b></p> <ul style="list-style-type: none"> <li>In the context of these camps; toxic and hazardous materials are likely to be fuels, cooking oils and cleaning substances. These substances must be stored in safe, lockable and bunded facilities, whose access is strictly controlled and monitored. The use of these substances must also be very carefully managed and strictly controlled to ensure maximum efficiency of use and no spillages. Where spillages occur, these need to be immediately remedied through the application of absorbent materials and/or the use of spill-kits specifically designed for these substances. Note that spill-kits must be kept on site and all staff are to be trained in their use and application.</li> </ul>	C			EO: Ensure drip trays/spill kits are available on site.
	<p><b><u>8. Storm Water Management:</u></b></p> <ul style="list-style-type: none"> <li>In the unlikely event of storm water management being required during the establishment/breakdown and operational phases of the camps, it will be necessary that trained staff carry out an inspection of all camp components during the event in order to identify the possibility of runoff concentration occurring. Where such instances are found, immediate measures must be put in place to prevent the unnatural channelling of such runoff, such as the creation of small berms to arrest the runoff, the positioning of brush packs to break the energy of runoff from tent roofs and the positioning of brush packs in natural drainage channels to slow the velocity of the storm water runoff to prevent unnatural and accelerated erosion from occurring.</li> </ul>	C			Developer take note.
	<ul style="list-style-type: none"> <li>Once the camps have been broken down at the end of the season, all exposed surfaces must be manually scarified and covered in brush packs to ensure that they are protected from high energy rainfall events at the onset of the wet season.</li> </ul>	C			Developer take note.

	<p><b>9. Signage:</b></p> <ul style="list-style-type: none"> <li>The use and placement of signage will be to ensure that KNP visitors who are not making use of these camps are clearly directed away from them so as to avoid unauthorised entry and use. Such signage needs to be placed at the two Park and Ride facilities at the Tshokwane Picnic Site and the Satara Rest Camp, and at the beginning of the access track off the S86 for the Tshokwane site and the S90 for the Satara site. The design of these signs must be in line with what is used and approved by SANParks.</li> </ul>	C			Developer take note.
	<p><b>10. Fire Risk:</b></p> <ul style="list-style-type: none"> <li>There are two aspects that need to be considered here, i.e., the risk of veld fire/s to the camps themselves and the risk that camp activities may cause internal damage as well as a veld fire/s. The operator must compile and implement a fire <b>risk management strategy</b> that includes the following measures:</li> </ul>	C			EO: Compile and submit a Fire Risk Strategy to SANParks and the ECO.
	<ul style="list-style-type: none"> <li>The operator must liaise with the Section Ranger to establish a suitable firebreak on the perimeter of the concession area.</li> </ul>	C			Developer take note.
	<ul style="list-style-type: none"> <li>All staff are to be trained and equipped to respond appropriately in the event of the camps needing to be protected from external fires, including access to well-equipped first-aid facilities with trained staff to administer first-aid when necessary.</li> </ul>	C			Developer take note.
	<ul style="list-style-type: none"> <li>Communication linkages must be established and equipment obtained and maintained to ensure easy access to/with communication with the Section Ranger</li> </ul>	C			Developer take note.

	<ul style="list-style-type: none"> <li>All staff and guests must be fully aware of the risk of fire and must be informed of the responses required in the event of this threat becoming real, i.e., contributing to the fighting of the fire and/or the evacuation of the camp. The latter will require clear processes for alerting staff and guests, gathering at a pre-determined emergency assembly point/s, and the orderly use of evacuation routes.</li> </ul>	C			Developer take note.
	<ul style="list-style-type: none"> <li>The use of fire, in any form, for cooking, heating and the provision of light must be minimised as far as possible with solar technology being applied wherever possible. Solar lamps must be used to light pathways and illuminate communal areas, while solar power generation and storage technologies must be used to ensure that guest and staff tents do not require the use of paraffin or gas lamps for illumination at night.</li> </ul>	C			Developer take note. Green energy options must be optimised at all levels of operations.
	<ul style="list-style-type: none"> <li>Gas must be the only source of energy for cooking and refrigeration.</li> </ul>	C			Green energy options must be optimised at all levels of operations.
	<ul style="list-style-type: none"> <li>Heating of water for staff and guest ablutions must be at a centralised and fuel-efficient source such as a rocket geyser fuelled by paraffin.</li> </ul>	C			Green energy options must be optimised at all levels of operations.
	<ul style="list-style-type: none"> <li>Open wood burning fires must be limited to communal guest areas and must be carefully contained and managed and immediately and completely extinguished once the guests have left the communal area.</li> </ul>	C			

	<p><b>11. Flood Risk:</b></p> <ul style="list-style-type: none"> <li>Local knowledge states that the incidence of flooding in both the Nwaswitsontso and Mavumbye systems is rare with flood events being contained in the water courses and being limited to the wet season. It is therefore highly unlikely that this risk will materialise while the camps are in operation. However, in order to manage this risk, the following is recommended:</li> </ul>	C			Developer take note.
	<ul style="list-style-type: none"> <li>Daily monitoring of weather forecasts must be maintained in order to ensure that camp operations are fore warned of any potential rainfall events in the catchments of these two systems.</li> </ul>	C			
	<ul style="list-style-type: none"> <li>Close liaison with the Section Rangers must be maintained in the event of significant rainfall events being forecast.</li> </ul>	C			
	<ul style="list-style-type: none"> <li>Guests and staff are to be made fully aware of the risk as well as the appropriate responses in the event of flooding occurring.</li> </ul>	C			Developer take note.
	<ul style="list-style-type: none"> <li>Emergency assembly points and evacuation routes must be well demarcated according to an emergency evacuation protocol and illustrations clearly posted at vantage points where guests and staff will see and take note of them.</li> </ul>	C			
	<ul style="list-style-type: none"> <li>In the event where out-of-season flooding may have impacted on some of the camp layout, it will be important for the Section Ranger to communicate this to the operator as soon as possible, in case an amendment to the environmental authorisation may be required.</li> </ul>	C			

<p><b>12. Dangerous Animals:</b></p> <ul style="list-style-type: none"> <li>All staff and guests are to be made fully aware of the risks posed by dangerous animals while working and staying in camps that are tightly nested into the natural environment.</li> </ul>	C			Developer take note.
<ul style="list-style-type: none"> <li>All staff and guests are to be made fully aware of the relevant responses when encountering dangerous animals and preventative measures that need to be taken to limit such encounters such as checking in shoes for scorpions before putting them on, wearing long sleeve shirts and trousers in the evening against mosquito stings, etc.</li> </ul>	C			
<ul style="list-style-type: none"> <li>Selected staff are to be trained in the administering of first aid and well stocked first-aid kits are to be kept in obvious locations in the camps and are to be regularly checked and restocked.</li> </ul>	C			Developer take note. First Aid equipment must be brought onto site during site establishment.
<ul style="list-style-type: none"> <li>In the event of encounters resulting in injuries that are beyond the first-aid capabilities of the staff in camp, the victim/s are to be evacuated to the nearest suitable treatment facility.</li> </ul>	C			
<ul style="list-style-type: none"> <li>Liaison with the Section Ranger must be maintained in order to ensure that they are kept aware of wild animal encounters that have the potential of or caused damage to persons and/or property.</li> </ul>	C			
<ul style="list-style-type: none"> <li>The perimeter fence must be checked on a daily basis to ensure that it remains serviceable and effective with any signs of malfunction being immediately and satisfactorily addressed.</li> </ul>	C			Developer take note.
<ul style="list-style-type: none"> <li>Guest movement during the night must be minimised as far as possible and must be accompanied by suitably trained staff equipped with high-powered LED torches.</li> </ul>	C			Developer take note.
<ul style="list-style-type: none"> <li>Guest and staff movements are to be limited to clearly designated paths and areas with no unguided movement being allowed.</li> </ul>	C			Developer take note.

<b>13. Power Failures:</b> <ul style="list-style-type: none"> <li>Solar power packs must be regularly and frequently checked to ensure that they are functioning optimally.</li> </ul>	C			Developer take note.
<ul style="list-style-type: none"> <li>Where malfunction is detected, these must be immediately remedied through replacement or repair.</li> </ul>	C			Developer take note.
<ul style="list-style-type: none"> <li>A standby diesel or gas generator must be available and tied into the power supply to key facilities where important aspects of camp management are handled such as communications and the recharging of torch and radio batteries.</li> </ul>	C			Developer take note.
<b>14. Medical Emergency:</b> <ul style="list-style-type: none"> <li>A medical emergency plan must be compiled by the operator, staff and guests are to be well aware of its provisions and requirements.</li> </ul>	C			Developer take note.
<ul style="list-style-type: none"> <li>Included in this plan must be the localities and contact details for medical facilities in proximity of the camps, both within and outside of the KNP.</li> </ul>	C			
<ul style="list-style-type: none"> <li>Selected staff are to be trained in first-aid and well stocked first-aid kits are to be kept in obvious and clearly demarcated localities in the camps.</li> </ul>	C			
<ul style="list-style-type: none"> <li>A close communication link must be established and maintained with the Section Rangers to ensure that any medical emergency can be brought to their attentions and that they are then able to provide assistance where necessary.</li> </ul>	C			
<b>15. Evacuation:</b> <ul style="list-style-type: none"> <li>As above, this aspect has already been alluded to with specific recommendations being made. It is important that all staff and guests are made fully aware of an evacuation procedure inclusive of emergency assembly points and evacuation routes.</li> </ul>	C			Developer take note.

### 8. Audit Findings:

<b>Negative Impact Findings: Chiefs Tented Camps: Tshokwane: EA and EMPr.</b>	
<b>Finding Number</b>	<b>Issue</b>
<b>None.</b>	<ul style="list-style-type: none"> <li>No negative impact findings were registered during the pre-development audit.</li> </ul>
<b>Operational Management Findings: Chiefs Tented Camps: Tshokwane: EA and EMPr.</b>	
<b>Finding Number</b>	<b>Issue</b>
<b>None.</b>	<ul style="list-style-type: none"> <li>No operational management findings were registered during the pre-development audit.</li> </ul>

### 9. Recommendations and Findings:

The following recommendations are submitted in no order of priority:

#### 9.1. Findings: See par. 9 above.

- No findings were registered during this pre-development audit.

#### 9.2. Recommendations: The following recommendations are submitted for implementation:

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| <ul style="list-style-type: none"> <li><b><u>Monthly Reports and Water Quality Tests:</u></b> Please submit your monthly reports and water test results via email on a monthly basis to SANParks and the ECO.</li> <li>6.4kl/day were approved in the EIA documents.</li> </ul> |
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| <ul style="list-style-type: none"> <li><b><u>Developer/Environmental Officer (EO):</u></b> The following aspects must receive attention and require implementation as the project unfolds: <ul style="list-style-type: none"> <li>First Aid equipment must be brought onto site during site establishment.</li> <li>Green energy options must be optimised at all levels of operations.</li> <li>Compile and submit a Fire Risk Strategy to SANParks and the ECO.</li> <li>Ensure drip trays/spill kits are available on site.</li> <li>Ensure that bunds and storage facilities are brought onto site as the development unfolds.</li> <li>Ensure that a 200-litre drum is available on site to store contaminated soils.</li> <li>Install logs into trenches that are open overnight. This will allow animals that fall into the trench an opportunity to escape.</li> <li>Bury all water pipes at a depth of 1m.</li> <li>An environmental file has been submitted to the EO. All subsequent documents must be filed accordingly.</li> <li>Do not clear shrubs/brush indiscriminately. Ensure that neighbouring guest tents are shielded from each other by maintaining the general ambience of the surrounding vegetation.</li> <li>Ensure that no biological materials are harvested and that gas facilities are activated on site as the development unfolds.</li> </ul> </li> </ul> |
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- **Fencing:** The following fencing specifications will be implemented following confirmation by SANParks Officials:
- Three strand fence. Knee high to a buffalo, chest high to a buffalo then an “Elephant” strand at 2000mm.
- Strands remains poly cord for ease of use on site.
- Bobbins cannot be nailed to trees, however cable ties or binding wire may be used.
- Strands to run from tree to tree (tensioned).
- The fence must blend in with the environment.
- Proper 16j energizer must be installed.
- Alignment as per the approved layout plan.
- Gates to be manual with spring insulated grips.
- Opening to the riverbed adjacent to the main deck to be indicated on site.
- Discretion can be applied for where the lines run along the riverbank to be less visible and indeed where the bank is vertical not at all if appropriate.

## **10. Conclusion**

The compliance rating for this audit survey was calculated at **100%**.

**Environmental Audit Survey Photographs: Tshokwane Site: March 2023**



**Figure 1. Vegetation: All approved development envelopes as per the EA must be cleared to determine the placement of infrastructure.**



**Figure 2: Trees: Adhere to the clearing protocol as per the conditions listed in the environmental documents. Do not damage large trees and or shrubs.**



**Figure 3: Riparian Embankment: The placement of the fence must follow a practical alignment which will be functional, unobtrusive and effective.**



**Figure 4: Ripape River: At all times the contractors staff must respect the sensitive riparian zone. No washing of equipment, clothes and or pollution of this system is allowed.**