INFORMATION MEMORANDUM ISSUED BY SOUTH AFRICAN NATIONAL PARKS IN RESPECT OF THE BLACK WATER TUBING IN THE TSITSIKAMMA SECTION OF THE GARDEN ROUTE NATIONAL PARK

(BLACKWATER TUBING)

IMPORTANT NOTICE

South African National Parks **("SANParks")** has produced this Information Memorandum in connection with the public private partnership (PPP) opportunity available for the BlackWater Tubing in the Tsitsikamma National Park (TNP)

No representation or warranty, express or implied, is made, or responsibility of any kind is or will be accepted, by SANParks, with respect to the accuracy and completeness of this Information Memorandum, and any liability in connection with the use by any Interested Party of the information contained in this Information Memorandum is hereby disclaimed.

This Information Memorandum has been provided to the recipient to assist in making its own appraisal of the opportunity presented herein. However, this Information Memorandum is not intended to serve as the basis for an investment decision on the opportunity, and each recipient is expected to make such independent investigation and to obtain such independent advice, as he or she may deem necessary for a decision.

South African National Parks may amend or replace any information contained in this Information Memorandum at any time, without giving any prior notice or providing any reason.

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1. INTRODUCTION

1.1 This Information Memorandum is issued by South African National Parks ("SANParks") in accordance with the guidelines for Public-Private Partnerships ("PPPs") contained in National Treasury's Tourism Management Toolkit and compliance with Treasury Regulation 16 issued in terms of the Public Finance Management Act 1999.

1.2 SANParks is currently investigating the feasibility of a PPP opportunity in which it gives a selected private party (Bidder) the rights to the commercial use of the Tsitsikamma National Par (TNP) for the operation of the Black Water Tubingin the TNP.

1.3 SANParks makes no guarantees about and takes no responsibility for the accuracy and completeness of this Information Memorandum and disclaims any liability for any interested party's use of the information.

1.4 This Information Memorandum is not intended to serve as the basis for an investment decision. Each recipient is expected to make an independent investigation and to obtain the necessary independent advice regarding the PPP opportunity.

1.5 SANParks may change or replace any information contained in this Information Memorandum at any time, without giving any prior notice or providing any reason.

1.6 In a typical PPP agreement in this sector, the private party is granted rights to finance, refurbish, design, build, maintain and operate a tourism facility on state conservation land for a period likely to provide a fair return on investment. In return, the private party will meet agreed environmental, heritage, development, operating, and broad-based B-BBEE obligations, and pay a PPP fee to SANParks. At the end of the agreement term, the facility reverts to SANParks.

1.7 SANParks is following the PPP feasibility and procurement processes set out in *National Treasury's PPP Toolkit for Tourism*. The toolkit can be downloaded from **www.gtac.gov.za**.

2. SANPARKS' VISION, MISSION, AND KEY STRATEGIC OBJECTIVES

2.1 SANParks' Vision and Mission

South African National Parks was established as a parastatal through an Act of Parliament in 1927. As per the Public Finance Management Act, Act 1 of 1999 (as amended by Act 29 of 1999), SANParks is a Schedule 3(a) "public entity" that functions under the ambit of the National Environmental Management Act ("**NEMA**"): Protected Areas Act, 2003 (Act 57 of 2003) read concurrently with the Biodiversity Act of 2004 and the Protected Areas Act. The core mandate of SANParks is the conservation and Management of biodiversity and associated cultural heritage through a system of National Parks. SANParks is also involved in the promotion and Management of nature-based tourism and delivers both conservation Management and tourism services through an authentic people-centered approach on all its programmes.

The organisation's operations are guided by its vision statement (the word picture of the future) and mission statement (depicting the purpose of its existence). As a public entity, the organisation is committed to acting in pursuance of the transformation of South Africa's society in support of entrenching South Africa's democracy. In this regard, the organisation has adopted a transformation mission to guide its efforts accordingly.

VISION: A world-class system of sustainable national parks reconnecting and inspiring society.

MANDATE: Delivery of Conservation Mandate by Excelling in the Management of a National Park System.

MISSION: Develop, protect, expand, manage and promote a system of sustainable national parks that represents natural and cultural heritage assets, through innovation, excellence, responsible tourism, and just socio-economic benefit for current and future generations.

Although SANParks receives an annual subsidy from Government, all revenues generated in national parks are retained and applied to the execution of its mandate, as determined by the Board of Trustees.

2.2 Organisational Environment

SANParks' business operations are founded on three important core pillars:

2.2.1 **Sustainable Conservation** – the primary mandate of the organisation is the

conservation of South Africa's biodiversity, landscapes, and associated heritage assets through a system of National Parks.

2.2.2 **Diverse and Responsible Tourism** – the organisation has a significant role in the promotion of South Africa's nature-based tourism or ecotourism business, targeted at both international and domestic tourism markets. The eco-tourism pillar of the business architecture provides for the organisation's self-generated revenues from commercial operations that are necessary to supplement government seed funding of conservation management. A significant element of the ecotourism pillar is the Commercialisation Strategy which (through the implementation of Public-Private Partnerships) SANParks has adopted to expand tourism products and the generation of additional revenue for funding of conservation and socio-economic development.

2.2.3 **Socio-Economic Transformation** – SANParks has taken a strategic decision to expand its role in the developmental support provided to neighbouring communities as an entity of the developmental state. In addition, SANParks is required to build constituencies at international, national, and local levels, in support of the conservation of the natural and cultural heritage of South Africa through its corporate social investment. It has to ensure that a broad base of South Africans participates and get involved in biodiversity initiatives, and further that all its operations have a synergistic existence with neighbouring or surrounding communities for their educational and socio-economic benefit, hence, enabling the broader society to be connected to national parks.

The mandate of the organisation is derived from its biodiversity conservation role, thus the conservation pillar is regarded as the basis upon which the other two core pillars' programmes and activities are directed. In addition to the core (Conservation) and sub-core business functions (Tourism and Constituency Building) that provide SANParks with a level of uniqueness, the organisation has generic support functions of Chief Financial Officer (which includes Finance; Supply Chain Management; Legal Services; Risk Management and Strategy Management) and Corporate Services (which includes Information Technology; Enterprise Applications; Corporate Social Responsibility and Corporate Communications); and Human Resources.

3. RESPONSIBLE TOURISM STANDARDS

3.1 Responsible Tourism

Responsible Tourism is a tourism Management strategy embracing planning, Management, product development, and marketing to bring about positive economic, social, cultural, and environmental impacts. Responsible Tourism provides for the following:

- generates economic benefits for local people and enhances the well-being of host communities;
- improves working conditions and access to the industry;
- involves local people in decisions that affect their lives and life chances;
- makes positive contributions to the conservation of natural and cultural heritage to the maintenance of the world's diversity;
- provides more enjoyable experiences for tourists through more meaningful connections with local people and a greater understanding of local cultural, social, and environmental issues;
- minimises negative economic, environmental, and social impacts; and
- is culturally sensitive, engenders respect between tourists and hosts, and builds local pride and confidence.

3.2 National Responsible Tourism Guidelines

In 2002, the Department of Environmental Affairs and Tourism ("DEAT") published National Responsible Tourism Guidelines (attached as **Annexure 3**), reflecting South Africa's vision to manage tourism in a way that contributes to the quality of life of all South Africans. The Guidelines aim to set benchmark standards for accommodation and transport Bidders, tourism associations, and custodians of our cultural and natural heritage. The objective is to ensure that our tourism sector keeps pace with international trends towards responsible business practice – and gains the market advantage in doing so. In 2003, DEAT published the Responsible Tourism Handbook, which took it one step further by giving practical examples of how tourism Bidders can improve their economic, social, and environmental practices.

Various institutions/organisations offer environmental Management consulting and accreditation services to all business sectors interested in implementing

environmentally friendly business practices and hence offer Environmental Rating Programmes. Such eco-labelling schemes include:

- ISO 14001
- Green Globe
- Blue Flag
- NEAP
- Heritage
- Eco quest
- Fair Trade in Tourism

3.3 The National Minimum Standard for Responsible Tourism (SANS 1162)

The National Minimum Standard for Responsible Tourism (SANS 1162) was developed with the objective of establishing a common understanding of responsible tourism by developing a single set of standards to be applied throughout South Africa by harmonising the different sets of criteria that were used for certifying the sustainability of tourism businesses. The National Minimum Standard for Responsible Tourism consists of 41 criteria divided into four categories i.e. sustainable operations and management, economic criteria, Social and cultural criteria, and environmental criteria.

3.4 SANParks Responsible Tourism Strategy

South African National Parks is also in the process of drafting a Responsible Tourism Strategy. The purpose of developing this responsible tourism strategy and implementation plan is to consistently integrate the principles of the national responsible tourism guidelines into South African National Parks operations.

This strategy and plan will help to reduce fragmentation of responsible tourism activities by SANParks and its business partners, by providing a framework for a coordinated approach. It will also reduce the disparity between levels of responsible tourism practiced, monitored, and reported between SANParks tourism operations and concessionaires (who are contractually required to practice responsible tourism). Implementation of strategy and plan will help address potential future problems, such as mitigation and adaptation to climate change. The strategy is also a response to the increased market demand for responsible holidays from tourists and will enable SANParks to put into place the conditions that are required to position the national park systems as responsible destinations.

The responsible tourism strategy is divided into three sections:

- The alignment of the principles of Responsible Tourism with existing corporate values and actions, with amendments to policies and procedures to accommodate Responsible Tourism values and indicators
- Recommended additions to the SANParks scorecard to include Responsible Tourism indicators
- Processes required to embed awareness of and decision-making and actions aligned with Responsible Tourism throughout the organisation.

3.4.1 Objectives of the Responsible Tourism Strategy

The objectives of the responsible tourism strategy and implementation plan aim to provide a basis for decision making, and guidance for divisions to develop action plans that comply with this policy. The objectives are:

- Align SANParks operations with the national policy on responsible tourism;
- Enhance responsible tourism awareness and Management skills among protected area managers and tourism officers and business partners within SANParks;
- Enhance responsible tourism awareness and skills among SANParks' external stakeholders, including communities, and suppliers;
- Integrate responsible tourism principles and actions into Management plans for each national park in South Africa;
- Establish a practical framework for monitoring, evaluation, and reporting in national park destinations; and
- Integrate responsible tourism into the performance Management frameworks of the organisation, individual parks, and individual staff members.

3.4.2 Guiding Principles of the Responsible Tourism Strategy

The guiding principles of the responsible tourism strategy and implementation plan are that they are:

- based on the national responsible tourism guidelines (DEAT, 2002);
- aligned with the national Minimum Standards for Responsible Tourism;
- aligned with SANParks Corporate Strategic Business Plan, and cognisant of the Conservation Development Framework and Park Management Plans;
- easy to understand and implement;
- adaptive and flexible;
- monitored at both a corporate and operational level;
- developed and implemented through a participatory process by a broad range of SANParks stakeholders, including business partners;
- initially focus on quick wins, that can be used to promote the responsible tourism agenda throughout the organisation; and
- address initiatives that facilitate the achievement of SANParks core objectives (e.g., better relations with local communities, reducing poaching, helping park expansion).

4. ARTICULATION OF SANPARKS' COMMERCIALISATION POLICY, OBJECTIVES, AND STRATEGY

4.1 The Motivation for Commercialisation

"Global conventions and programmes alone are not enough to ensure the continued existence of, and sufficient funding for, protected areas. In times of fiscal austerity and tightening government budgets – especially in developing countries, which are home to much of the world's biodiversity – traditional funding sources are increasingly under threat. Innovative alternatives to these traditional sources are needed in order to secure the long-term viability of protected areas." (IUCN, 1998)

In order to encourage greater efficiency in the delivery of public services, the Cabinet in April 1997 approved the establishment of an interdepartmental task team chaired by the Department of Finance, to explore how public-private partnerships could improve infrastructure and service delivery efficiency, and make more efficient use of under-utilised state assets. The key objectives of this programme were to develop a package

of cross-sectoral and inter-Institutional policies and legislative and regulatory reform.

In October 1998, the Department of Environmental Affairs and Tourism articulated the need for SANParks to prepare for a lesser dependence on state funding, which would increasingly be aimed at funding the essential conservation requirements. This formed the basis of the Commercialisation Strategy adopted by SANParks in 2000 with its foundation in the economic theory which defines the State's responsibility as one of performing a regulatory function and intervening in the market-place only where there is market failure. The objective was to reduce the dependence on state funding and improve existing operational efficiencies. This does not imply that SANParks has to be independent of the State but rather that the collective funding sources (i.e. state funding, private donations, NGO and international donations, SANParks' tourism activities, and commercialisation) must be able to "sustain" the total business of SANParks. Sustainable tourism development depends on a partnership and balance between the social, technological, economic, environmental, and political values and benefits. Hence, should one source of funding be threatened, SANParks must be able to absorb such withdrawal without compromising its sustainability.

The implementation of the Commercialisation Strategy 2000, resulted in the awarding of 11 (eleven) concession sites to Private Bidders, seven of which are in Kruger National Park, two in Addo Elephant National Park, and two in the Table Mountain National Park.

In addition to the concessions, the Commercialisation Strategy 2000 also resulted in the awarding of 21 shops and 17 restaurants across all national parks to Private Bidders. Facilities were upgraded by the Bidders and SANParks receives a PPP Fee from these Bidders.

4.2 The Strategic Plan for Commercialisation 2006

Following the implementation of the Commercialisation Strategy 2000, there have been significant developments in SANParks' approach to PPP initiatives. SANParks accordingly developed the Strategic Plan for Commercialisation 2006 to accommodate and benefit from:

(i) The experience and specialist skills acquired;

(ii) The lessons learned from implementation and management of PPPs;

(iii) Legislative requirements; and

(iv) The extended scope of projects identified to enable SANParks to improve its

infrastructure towards 2010 and beyond, generate revenues, promote B-BBEE and create employment.

The objective of the strategy is to ensure that SANParks has the fundamentals including capacity in place for managing existing, and for entering into new PPPs successfully. In addition, SANParks has a responsibility towards creating tourism infrastructure in the longer term as compared to a tourism organisation run by a private company. Such infrastructure will enable South Africa to compete with global tourism destinations like Brazil, Thailand, etc. Commercialisation through Public-Private Partnerships provides SANParks the opportunity to achieve this goal.

4.3 The Strategic Plan for Commercialisation 2019

- ✓ The Strategic Plan for Commercialisation 2019
- ✓ The Strategic Plan for Commercialisation ("SPfC") is updated every five years. The following outlines the major changes of the SPfC 2019 - 2024:
- ✓ The SPfC 2019 – 2024 reaffirmed that PPPs are envisioned to continue playing a key role in executing on SANParks' mandate and achieving its strategic objectives, particularly in terms of revenue generation and contributing towards socio-economic transformation.
- ✓ The SPfC highlighted the importance of tourism as an engine for job creation and a driver of sustainable socio-economic development. As such, particular focus will be placed on using PPPs as a mechanism to promote economic transformation in the industry.
- ✓ The SPfC was updated to reflect a revised checklist for all commercial opportunities identified.
- ✓ Finally, the SPfC 2019 - 2024 addressed the need for additional capacity in the Business Development Unit to accelerate the implementation of PPPs.

4.4 Benefits of the SANParks Commercialisation Strategy

The achieved high-level commercialisation objectives for SANParks include the following; revenue generation; loss minimisation or savings on existing operations; optimal use of under-performing assets; job creation and poverty alleviation; BBBEE; infrastructure upgrades; upgrade/development of historical and/or cultural sites; tourism promotion and further biodiversity protection and conservation. PPPs in SANParks has proved to be an important service delivery mechanism. The SANParks

Commercialisation Strategy has yielded the following benefits to SANParks:

4.4.1 **Strategic Value**

Implementation of the Commercialisation Strategy has resulted in increased market segmentation and product and price differentiation with 508 additional guest beds in the five-star segment resulting in increased economic activity and foreign exchange generation. In addition, it has resulted in improved efficiencies of the restaurant and retail facilities, contributing to an enhanced visitor experience to the guests of SANParks. The strategy has also resulted in an increased contribution to the broader economy through the tourism multiplier effect and SANParks' image has improved considering that national parks are being put to responsible and sustainable use for the economic development of the country.

4.4.2 **Monetary Value**

The Commercialisation Strategy has resulted in a total contribution of R1.393 billion by March 2021.

4.4.3 **Increased Infrastructure**

The Commercialisation Strategy rollout has resulted in increased infrastructure in National Parks to the value of R958 million with the assets ultimately reverting to SANParks. In addition, it has resulted in the refurbishment of the aging infrastructure of both the restaurant and retail facilities to the value of R20 million.

4.4.4 **Risk Transfer**

The strategy has resulted in significant commercial risk transfer to the private sector including EIA risk, construction risk, availability risk, insolvency risk, market demand or volume risk, and operating risk. However, SANParks is still exposed to the risks experienced by the Bidder and hence effective contract management is essential.

4.4.5 **Socio-Economic Value**

The strategy resulted in broadening the participation of B-BBEE partners in the tourism industry thereby contributing to the demographic restructuring of the industry and poverty alleviation. Private Party agreements included the following contractual commitments:

- increased employment in the tourism industry with 2100 new jobs excluding construction;
- 79% of employees recruited from local communities adjacent to the Parks;
- Reported spend of R 75 million per annum with local community SMME's;
- Considerable continuous skills transfer and training; and
- The tourism multiplier effect on the broader economy.

4.4.6 **Environmental Value**

The environmental regulations that apply to the commercial Bidders are in many instances superior creating a benchmark in SANParks' nature-based tourism operations and over time, SANParks will be obliged to comply with these standards. This can only be to the long term benefit of our national parks

5. SANPARKS' LEGAL MANDATE

5.1 National Environmental Management: Protected Areas Act 2003 (Act no. 57 of 2003) ("NEMPAA") as amended by the National Environmental Management: Protected Areas Amendment Act (Act No 31 of 2004)

5.1.1 **Protected Area**

NEMPAA provides for:

- the protection and conservation of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes;
- for the establishment of a national register of all national, provincial, and local protected areas;
- for the Management of those areas in accordance with national norms and standards;
- for intergovernmental co-operation and public consultation in matters concerning protected areas;
- for the continued existence, governance, and functions of South African National Parks; and
- for matters in connection therewith.

The Tsitsikamma Storm River Section of the Garden Route Natioal Parkis an area declared, or regarded as having been declared, in terms of section 28 of NEMPAA as a protected environment. Section 92(1)(a) of the NEMPAA specifically states

that SANParks is the Management authority for any protected area and is obliged in terms of section 92(2) to manage all such protected areas according to the provisions of the NEMPAA and the Management plan to be prepared for the protected area concerned.

5.1.2 **Section 50**

(1) Section 50 (1) of NEMPAA allows SANParks to:

(a) carry out or allow—

(i) a commercial activity in the park, reserve, or site; or

(ii) an activity in the park, reserve or site aimed at raising revenue;

(b) enter into a written agreement with a local community inside or adjacent to the park, reserve, or site to allow members of the community to use in a sustainable manner biological resources in the park, reserve, or site; and

(c) set norms and standards for any activity allowed in terms of paragraph (a) or (b).

(2) An activity allowed in terms of subsection (1)(a) or (b) may not negatively affect the survival of any species in or significantly disrupt the integrity of the ecological systems of the national park, nature reserve, or world heritage site.

(3) The Management authority of the national park, nature reserve, or world heritage site must establish systems to monitor—

(a) the impact of activities allowed in terms of subsection (1)(a) or (b) on the park, reserve, or site and its biodiversity; and

(b) compliance with—

(i) any agreement entered into in terms of subsection (1)(b); and

(ii) any norms and standards set in terms of subsection (1)(c).

(4) Any activity carried out lawfully in terms of any agreement which exists when this section takes effect may continue until the date of termination of such agreement, provided that the agreement may not be extended or varied so as to expire after the original intended expiry date without the consent of the Minister.

(5) No development, construction, or farming may be permitted in a national park, nature reserve, or world heritage site without the prior written approval of the Management authority.

5.1.3 **Section 55 and 56**

Section 55 sets out the functions of SANParks which functions include inter alia responsibility to:

- protect, conserve and control all protected areas under its Management including all biodiversity found therein (section 55(1)(b));
- to carry out any development and construct or erect any works necessary for the Management of the area (section 55(2)(e));
- take reasonable steps to ensure the security and well–being of visitors and staff (section 55(2)(e));
- provide accommodation and facilities for visitors and staff (section 55(2)(h));
- to carry on any business or trade or provide other services for the convenience of visitors and staff (section 55(2)(i));
- determine and collect fees for entry or stay in the area or for any services provided by it (section 55(2)(i));
- authorise any person, subject to such conditions and the payment of such fees as it may determine, to carry on any business or trade or provide any service which SANParks may carry on or provide in the area in terms of the NEMPAA ((section 55(2)(i)).

Section 55(2)(i) also authorises SANParks to authorise another person, subject to such conditions and the payment of such fees as it may determine, to provide any service which SANParks may otherwise provide in the Golden Gate Highlands National Park.

Section 56 (c) also specifically allows SANParks to hire or let any property, for the purpose of performing any of its functions in any protected area placed under its Management and control.

Accordingly, SANParks has the legal mandate in terms of the NEMPAA to enter into PPP Agreements.

5.2 The Public Finance Management Act 1 of 1999 ("the PFMA")

SANParks is a Schedule 3A public entity for the purpose of the PFMA. As such, SANParks is bound to the provisions of the PFMA which regulates the financial management of all national and provincial governments and agencies; ensures that all revenue, expenditure, assets, and liabilities of those governments are managed efficiently and effectively; provides for the responsibilities for those entrusted with financial management in those governments, and governs all matters connected therewith.

5.2.1 Sections 50 and 51

Section 50 of the PFMA deals with many fiduciary duties placed on the accounting authorities of public entities which are subjected to the provisions of the PFMA, and inter alia requires the accounting authority for a public entity to:

- exercise the duty of utmost care to ensure reasonable protection of assets and records of the public entity;
- act with fidelity, honesty, integrity, and in the best interests of the public entity in managing the financial affairs of the public entity;
- seek, within the sphere of influence of that accounting authority, to prevent any prejudice to the financial interests of the state.

Section 51 deals with many general responsibilities of accounting authorities and provides that the accounting authority for a public entity must ensure that a public entity has and maintains inter alia effective, efficient, and transparent systems of financial and risk management and internal control as well as an appropriate procurement and provisioning system which is fair, equitable, transparent, competitive and cost-effective.

5.2.2 Regulation 16

This last aspect is taken further in Regulations 16A7.4 and 16A7.5 of the National Treasury Regulations promulgated in terms of section 76 of the PFMA in Government Gazette Notice No. R 225, Government Gazette No. 27388 dated 15 March 2005 and amended by Government Gazette Notice No. R 146, GG 29644 dated 20 February 2007, which Regulations state that:

- *Reg. 16A7.4 The letting of immovable state property must be at the market–*

related tariffs unless the relevant treasury approves otherwise. No state property may be let free of charge without the prior approval of the relevant treasury.

- *Reg. 16A7.5 The accounting officer or accounting authority must review, at least annually when finalising the budget, all fees, charges, rates, tariffs or scales of fees, or other charges relating to the letting of state property to ensure sound financial planning and Management.*

These National Treasury Regulations first came into operation on 25 May 2002 and have applied to the business of SANParks since that date.

Hence there is sufficient responsibility placed on SANParks under the PFMA to manage and to lease out all state assets placed under its Management and control in the Golden Gate Highlands National Park in a manner that is fair and equitable to all, is transparent and competitive, and occurs on a basis that is the market – related and supports sound financial planning and management within SANParks.

6. PROJECT DESCRIPTION - BLACKWATER TUBING IN THE STORMS RIVER MOUTH TSITSIKAMMA NATIONAL PARK

6.1 Opportunity

6.1.1 An investment opportunity exists within the Tsitsikamma Section of the Garden Route National Park. This opportunity is to operate, for commercial purposes, Black Water Tubing in the Tsitsikamma Section of the GRNP for a period term of 10 years.

6.1.2 Tubing the Storms River is the original experience that set the adventure scene in Tsitsikamma some 50 years ago and introduced the Storms River Gorge as one of the first iconic adventure attractions on the Garden Route. The delicate negotiation with this phenomenal river on specialized one-man inflatable river tubes takes you on an unforgettable journey through Tsitsikamma's diverse habitat.

6.1.3 Blacktubing is a unique experience that includes paddling, swimming, bouldering and shortwalks – an activity that combines inflatable river tubes and stand-up paddle boards (SUPs).

I. Guests shall be driven in OSV from the meeting to point to the launch point

II. **+-20 Mins** drive deep into the Tsitsikamma Forest and launch spot

6.1.4 This is a great and exciting way to experience the beauty of the Tsitsikamma Forest and trained Tour guides and divers will make sure that the trip is packed with information regarding the StormRiver.

6.1.5 The opportunity may be complemented by other related activities that the preferred bidder deems fit to enhance returns to investments. Bidders are encouraged to include proposals of complementary products in Section 3 of the RFP and shall be subjected to SANParks' approval.

6.1.6 **Community Trust**

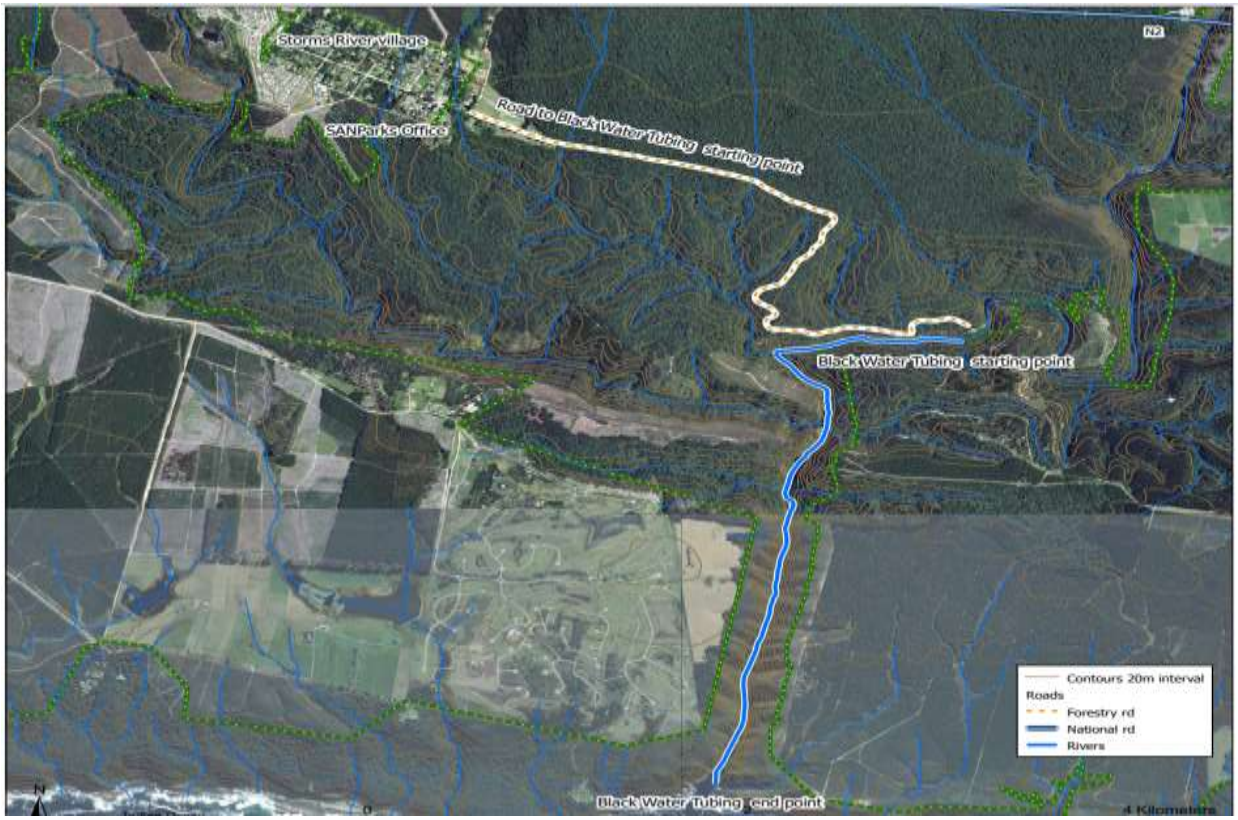
6.1.6.1 **NB:** For this opportunity, 5% free equity will be contributed directly to the Community Trust (as nominated by SANParks Social Economic Transformation Department).

6.1.7 **Location**

6.1.7.1 Situated in the picturesque tourist region known as the Garden Route, Tsitsikamma protects a wonderland of inter-tidal and marin life. This is one of the largest single unit ,arine Protected Areas in the world, conserving 11% of South Africa's temperate south coast rocky shoreline.

6.1.7.2 The Storms River mouth Rest Camp, is situated some 615km from Cape Town, 195km from Port Elizabeth and 68km from Plettenberg Bay. The access route from the N2 highway is tarred and in the middle of George and Port Elizabeth.

6.1.7.3 The below map shows the area or responsibility used for Black Water Tubing adventure:



6.1.7.4 **IMPORTANT NOTICE: BIDDER'S SITE VISIT FOR DUE DILIGENCE ASSESSMENT WILL BE ARRANGED TOGETHER WITH A BIDDER'S CONFERENCE\BRIEFING**

6.1.8 Infrastructure

6.1.8.1 Road and Tracks

Tarred access from the main entrance of the Stormsriver entry point – to the activity launch area..

6.1.8.2 Access

SANParks shall ensure that, for the duration of the PPP Agreement, the Operator, its guests, employees, agents and invitees have reasonable access to the selected site, subject to the provisions of the PPP Agreement, the Park Rules and other regulations, or legislation, which may be in place from time to time. In addition the standards, quality and nature of the access routes and control points, in place at the time of the agreement being entered into, will remain the same during the PPP Term.

6.1.8.3 Office and Administrative Space

No office and administrative space will be made available by SANParks – this shall be the responsibility of the Private Party.

6.1.8.4 Electricity

No electricity will be made available by SANParks – this shall be the responsibility of the Private Party.

6.1.8.5 Water Supply

No water will be made available by SANParks – this shall be the responsibility of the Private Party.

6.1.8.6 Waste

Solid waste must be separated onsite into recyclable and non-recyclable waste, and stored safely before disposal at an authorised Park's waste facilities.

The Operator will be required to provide a plan for waste disposal, in accordance with Environmental Guidelines for Operator's Operation within The South African National Parks, provided in Annexure 1 of this document.

6.1.8.7 Telecommunication

The appointed Operator will be responsible for arranging communication infrastructure for the operation of the activity.

6.1.8.8 Staff Housing

No staff housing will be made available. This is in line with SANParks' strategy to only have staff that renders essential services stay in the park. In light of this transport of staff must be arranged by the Private Party and the Private Party is requested to arrange staff accommodation outside the Park.

6.1.9 Fire / Natural Disaster Management

Natural disasters, such as floods and wildfires, pose a significant risk to the Garden Route National Park. As described in the Park Management Plan, the GRNP is required to have a Risk Management Programme in place to respond to risk events. In light of this, the Operator will be required to assess all risks related to extreme environmental / weather conditions and develop appropriate response plans and emergency escape routes, which will be subject to approval by SANParks.

6.1.10 Environmental Considerations

Environmental authorisation is required for certain prescribed activities, or activities that might affect designated areas, such as a national park. The successful Bidder will need to undertake their own internal processes to confirm environmental authorisation requirements for the site with the competent authority prior to the development of the Black Water Tubingat any site at their own cost.

The Operator will be required to operate in accordance with the Environmental Guidelines for Operator's Operation within The South African National Parks, provided in the **Annexure 1** of this document, as well as any other site-specific requirements identified during the environmental authorisation (if applicable) or by SANParks, including commitments made in the Bid Submission under Section 4 of the Request for Proposal (RFP). Furthermore, the TNP Environmental Manager must be involved in any process to identify environmental risks to a site and the associated mitigation measures. This includes processes to obtain environmental authorisations for the selected sites, as well as subsequent environmental compliance auditing. All mitigation measures are subject to approval by

SANParks.

In addition to the above, the Environmental Manager, local Section Ranger and any other designated staff will monitor and audit the Black Water Tubingat any stage during operation Phase. Additional requirements to mitigate environmental risks include:

- No bush clearing is allowed, either to enhance game viewing, obtain firewood, or for any other purpose. Pruning of trees will be allowed within the limitations imposed on and / or exemption granted to SANParks through legislation.

- The introduction of alien vegetation is not permitted under any circumstances. One of the main threats to the biodiversity of the TNP is considered to be the introduction and spread of alien vegetation. The possibility of importing alien plants, etc. is very real, and continuous monitoring of the area is necessary to ensure that this does not take place. The presence of alien biota must be reported to the local Section Ranger immediately.

The following requirements from the Operator on biodiversity protection and conservation will also apply:

- SANParks reserves the right to undertake all conservation management activities, including monitoring, culling, capture and research with due cognisance to the sensitivities surrounding some of these activities and the possible impacts they might have on the operations of the Operator. Game control activities will refer to normal management, capture and culling activities;

- Cooperation in terms of anti-poaching, patrols, monitoring etc.

6.1.11 **Value-for-Money Objectives**

The value-for-money objectives for the project have to be aligned with SANParks' strategic objectives included in the Strategic Plan for Commercialisation. Setting these objectives at the inception phase are vital as they provide the benchmarks for the feasibility and procurement phases. During the management of the PPP agreement, they are used to measure the success of the project.

The Value-for-Money Objectives for the project are:

- Tourism promotion;
- Job creation;
- Revenue generation for SANParks;
- Infrastructure upgrades;
- Loss minimisation or savings on existing operations; and
- Biodiversity protection and conservation.

7. VISITOR STATISTICS

7.1 Summary of visitor statistics for the Garden Route National Park 2022/23

SUMMARY OF VISITOR STATISTICS FOR THE TWELVE MONTHS ENDED MARCH 2023 FOR PARKS (EXCL KNP)

	ACCOMMODATION (EXCL CAMPING)								CAMPING						GUESTS TO PARK/ CLUSTER		TOTAL ACTIVITIES	
	UNIT NIGHTS SOLD	Previous year	UNIT OCC	Previous year	BED NIGHTS SOLD	Previous year	BED OCC	Previous year	SITE NIGHTS SOLD	Previous year	CAMP SITE OCC	Previous year	PERSON NIGHTS SOLD	Previous year		Previous year		Previous year
GARDEN ROUTE	**14.6%**		**0.9%**		**6.5%**		**0.1%**		**-1.2%**		**0.1%**		**-7.9%**		**28.9%**		**33.0%**	
GARDEN ROUTE	24,808	21,656	45.2%	44.3%	56,859	53,386	37.6%	37.5%	27,775	28,125	24.1%	24.0%	73,498	79,818	372,218	288,655	16,031	12,056
Tsitsikamma Section	17,145	14,056	49.3%	47.5%	38,970	35,218	42.5%	41.9%	13,729	14,416	22.6%	22.9%	36,656	41,665	237,113	159,683	8,083	5,775
Natures Valley	1,686	1,671	38.5%	38.2%	3,144	3,315	33.2%	34.9%	4,675	3,540	21.8%	16.1%	8,825	10,273				
Storms River Mouth	15,459	12,385	50.8%	49.2%	35,826	31,903	43.6%	42.8%	9,054	10,876	23.1%	26.6%	27,831	31,392				
Knysna Section	439	538	20.2%	24.6%	1,064	1,277	16.3%	19.5%	470	513	21.5%	23.4%	1,108	1,247	40,060	36,261	6,499	5,193
Wilderness Section	7,224	7,062	40.4%	41.1%	16,825	16,891	31.6%	32.7%	13,576	13,196	25.8%	25.2%	35,734	36,906	95,045	92,711	1,449	1,088
CLUSTER TOTAL	**24,808**	**21,656**	**45.2%**	**44.3%**	**56,859**	**53,386**	**37.6%**	**37.5%**	**27,775**	**28,125**	**24.1%**	**24.0%**	**73,498**	**79,818**	**372,218**	**288,655**	**16,031**	**12,056**
TOTAL PARKS	**149,599**	**140,840**	**52.8%**	**51.2%**	**342,766**	**332,653**	**40.2%**	**40.4%**	**101,807**	**110,752**	**34.5%**	**37.4%**	**268,463**	**302,346**	**3,358,553**	**2,159,697**	**66,866**	**38,991**
DIFFERENCE	**6.2%**		**1.6%**		**3.0%**		**-0.2%**		**-8.1%**		**-3.0%**		**-11.2%**		**55.5%**		**71.5%**	

7.2 **Top Five Parks – Highest *Guests to Parks***

Position	**Park**	**Guests to Park (6 months)** *2021/22 in brackets*	**% of total** *2021/22 in brackets*
1	Kruger	**1,063,933** *(657,142)*	**50%** **(45.9***%)*
2	Table Mountain	**817,556** *(347,162)*	**31.3%** *(24.2%)*

3	Garden Route	**129,020** *(92,097)*	**6%** *(6.4%)*
4	Addo	**79,220** *(54,755)*	**3.7%** *(3.8%)*
5	West Coast	**74,906** *(110,725)*	**2.1%** *(7.7%)*
Total			**93.1%** *(88%)*

8. PPP AGREEMENT

The PPP Agreement will be made available shortly after the opportunity is advertised and will be distributed to the interested parties. A draft copy of the PPP Agreement needs to be signed and submitted as part of the bid. Minor changes might occur following the site visits and bidders conference. A final copy will be signed following the award of the tender.

8.1 Term of Agreement

The term of the PPP Agreement shall be for ten (10) years from the Effective Date, subject to termination in accordance with the PPP Agreement. Effective Date is defined as the earlier of Operation Commencement Date or 12 (twelve) months from Signature Date.

8.2 Financial Terms

Under the PPP Agreement, the PPP fee income to SANParks shall be the higher of:

8.2.1 the Minimum PPP Fee set by SANParks increased annually by CPI; or

8.2.2 the Variable PPP Fee (the successful bidder's percentage of actual gross revenue earned by the successful bidder in each project year).

Irrespective of which these elements determine the final amount payable in any given Project Year, the payment schedule will be as follows:

8.2.3 The higher of the Minimum PPP Fee or the Variable PPP Fee shall be payable by the Private Party to SANParks within 7 (seven) Business Days following the end of each month, free of deduction or set-off, to SANParks;

8.2.4 For purposes of reconciling the PPP Fees payable by the Private Party in any given Financial Year, the Private Party shall, within 120 (one hundred and twenty)

days after the end of each Financial Year, furnish its audited financial statements to SANParks, where after SANParks shall verify and reconcile the PPP Fees due against the PPP Fees paid in the relevant Financial Year.

8.2.5 No PPP Fees shall be payable before the Effective Date of the PPP Agreement.

8.2.6 Any overdue payment by either SANParks or the Bidder shall be subject to an interest charge as per SANParks' Financial Rules and Regulations.

8.3 Minimum PPP Fee

SANParks retains the right not to award the Bid in the unlikely event that only one Bid is received and the PPP Fee Offer does not meet SANParks' minimum requirements.

The Minimum PPP Fee for each of the tourism products are as follows:

MINIMUM PPP FEE	
Per Month (Excl VAT)	**Per Annum (Excl VAT)**
R 11 000	R128 000.00

The Minimum PPP Fee above are at May 2023 prices and will be adjusted annually throughout the term of the PPP Agreement according to the movement in the Consumer Price Index.

8.4 Principal Obligations of the Bidder

SANParks requires the successful Bidder to comply with the following:

8.4.1 The Bidder is obliged to acquire SANParks' consent before making use of any SANParks trade names and or logo's in any way.

8.4.2 The Bidder must adhere to SANParks conservation regulations.

8.4.3 The Bidder must adhere to the SANParks' normal operating hours for transportation of goods and services.

8.4.4 The Bidder is obliged to procure adequate insurance for each of the tourism products offered and other insurable properties including property and casualty insurance, business interruption insurance, third party liability, and employer's liability insurance.

8.4.5 The Bidder is obliged to disclose all aspects of the business to SANParks and their representatives.

8.4.6 The Bidder is responsible for the submission of audit reports, and any other reports and information, as contractually required by SANParks.

8.4.7 The Bidder will be required to obtain all relevant and third-party insurances.

8.4.8 The Bidder's financial obligations shall not impact on SANParks, and the Bidder will need to provide SANParks with its yearly audit certificate and any relevant communication from the auditor.

8.4.9 The Bidder will be obliged to apply and obtain a relevant liquor license if required.

8.4.10 The Bidder is obliged not to pledge the credit of SANParks in any form.

8.4.11 The Bidder is required to operate according to the hours specified by SANParks for Tsitsikamma National Park.

8.4.12 The Bidder is obliged to acquire SANParks consent before any changes being made to the shareholding, or selling of the Business.

8.4.13 At the time of submitting the Bid, each of the Bidder must submit a Bid Bond, the amount of R 32 000.00 (Thirty Two Thousand Rand) in the format to be provided in the RFP. The purpose of the Bid Bond is to ensure that all Bidders present valid and serious Bids and that the winning Bidder subsequently executes the PPP Agreement. The Bid Bonds of unsuccessful bidders shall be returned to them following the signature of the PPP Agreement.

8.4.14 The Bidder shall provide a Performance Bond exclusive of VAT, which shall secure the Bidder's performance under the PPP Agreement. The format shall be provided in the RFP. For this opportunity, the amount of R128 000.00 (One Hundred and Twenty Eight Thousand Rand) exclusive of VAT, shall be secured by the Bidder's performance under the PPP agreement.

8.4.15 The Bidder is responsible for the transport of their employees to their workplace if so required.

8.4.16 The Bidder is obliged to transport its staff to the required medical facilities.

8.4.17 The Bidder is obliged to comply with and adhere to SANParks Policies and initiatives i.e. HIV Aids Policy, Health, and Safety Forums, and Covid Regulations etc.

8.5 Principal Obligations of SANParks

8.5.1 SANParks shall give reasonable assistance in the form of advice, introductions, and documentary support to the Bidder in its dealings with Relevant Authorities and otherwise in connection with obtaining the necessary licenses and permits.

8.5.2 SANParks will operate and manage the Park and will promote it in such a manner as to ensure the continued viability and sustainability of TNP as National Parks and as a sustainable and attractive tourist and conservation undertaking.

8.6 Access

8.6.1 SANParks shall ensure that**,** for the duration of the PPP Agreement**,** the Bidder, its guests, employees, agents, and invitees have reasonable access to the selected site, subject to the provisions of the PPP Agreement**,** the Park Rules and other regulations, or legislation, which may be in place from time to time. In addition, the standards, quality, and nature of the access routes and control points, in place at the time of the agreement being entered into, will remain the same during the PPP Term.

8.6.2 The Bidder will be entitled to access to the site, during the period of operation and the operational hours will be determined in consultation with the TNP Management.

8.6.3 Normal gate hours will apply with special late access that will have to be arranged in consultation with the TNP Management.

8.7 Branding

8.7.1 The Bidder shall not, in the operation, promotion or marketing of the PPP Facility, be entitled to use, directly or indirectly, any commercial branding similar to any branding used outside of the Protected Area by the Bidder, or any of its associated

companies or competitors, without the prior written consent of SANParks;

8.7.2 Any commercial branding developed by the Bidder in respect of the Black Water Tubingmay not be used outside the Protected Area without SANParks' prior written consent; and

8.7.3 The use of any branding, logo, trademark, trade name, get up, signage, outdoor advertising, livery, promotion, promotional or marketing material or other proprietary intellectual property in connection with the Black Water Tubingshall require the prior written approval of SANParks.

8.8 **Intellectual Property**

8.8.1 The use of any branding, logo, trademark, trade name, and get up, signage, outdoor advertising, promotion, promotional or marketing material, or other proprietary intellectual property in connection with the Black Water Tubingshall require the prior written approval of SANParks.

8.8.2 It is specifically recorded that all intellectual property rights whatsoever, whether capable of registration or not, regarding SANParks' trademarks, names, logo, image, and all other intellectual property matters relating to SANParks, its name, logo, and/or image shall remain the sole property of SANParks.

8.8.3 Subject to existing rights and obligations, SANParks shall, on application by the Bidder, grant a non-exclusive right and license to the Bidder to use SANParks' trademarks that relate to the Park. Should any of SANParks' trademarks, names, logos, images, and all other intellectual property matters be required for use outside of the PPP Agreement, they will be subject to terms and conditions negotiated with SANParks. This includes the granting of licenses to trade merchandise with SANParks' trademarks, names, logos, images, and all other intellectual property matters outside of SANParks' retail facilities.

8.8.4 In order to establish and maintain high standards of style, quality, and proprietary associated with the Park, in the event the Bidder desires to use SANParks' trademarks or logos which relate to the Park in any way, the Bidder shall first submit the concept or a sample of the proposed use to SANParks for approval. Under no circumstances shall any use of SANParks' trademarks or logos, which relate to the Park, or the image or likeness of any trademark, logo, or image, which SANParks in good faith believes reflects unfavourably upon or disparages the Park, be approved. If SANParks approves the concept or sample, the Bidder shall not depart therefrom in any material respect without SANParks' further written

approval.

8.8.5 If at any time SANParks withdraws its approval for the specified use of any trademark or logo, the Bidder shall forthwith discontinue all use of SANParks' trademark or logo and shall remove from public sale or distribution, any previously approved product in respect of which SANParks has rescinded approval.

8.8.6 The Bidder acknowledges that the name of the Park (the "Protected Name") is associated with and peculiar to the Park and is the intellectual property of SANParks. Consequently, the Bidder agrees that the sole and exclusive ownership of the Protected Name shall vest in SANParks, and should the Bidder utilise the Protected Name, it does so only in terms of the PPP Agreement and with the prior written approval of SANParks.

8.8.7 In circumstances where the Bidder utilises any of the Protected Names, either singularly or in combination or association with any other name, it does so only in terms of the PPP Agreement and on termination of the PPP Agreement, the Bidder shall not be entitled to operate or conduct any business using the Protected Name in combination or association with any other name.

8.8.8 In circumstances where the name chosen by the Bidder and approved by SANParks is not part of SANParks' intellectual property, then the rights of SANParks contemplated in this paragraph will not be applicable and the intellectual property will be the sole property of the Bidder.

8.9 **Performance Standards**

8.9.1 The Bidder will be responsible for the set-up, operation, maintenance, and management of the water based activities.

8.9.2 SANParks shall require the Bidder to perform to certain standards including but not limited to:

8.9.2.1 Quality standards and best industry practice;

8.9.2.2 The Environmental Guidelines are attached in **Annexure 1**;

8.9.2.3 The applicable Regulatory Provisions, prevailing laws, policy directives and standards of the State and any Relevant Authority and where appropriate Protected Area Regulations, Protected Area Rules and Protected Area Management Plan; and

8.9.2.4 Accreditation from the Tourism Grading Council of South Africa ("TGCSA") or

Certificate of Acceptability or other, where applicable.

8.9.2.4.1 Such accreditation will be compulsory and should be obtained within 12 months from Operation Commencement Date and renewed thereafter on an annual basis.

8.9.2.4.2 Failure to obtain and maintain the applicable grading will be grounds for termination of the PPP Agreement.

8.9.2.4.3 Information on the TGCSA accreditation, categories, process, etc. can be obtained from the website: **www.tourismgrading.co.za**.

8.9.2.4.4 Information on the Certificate of Acceptability can be found at your local municipality.

9. BIDDERS REQUIRED QUALIFICATION CRITERIA

9.1 In order to participate in the bidding process, bidders are required to meet the following qualification criteria:

9.1.1 **Capacity**

9.1.1.1 Given that the project may entail risk to both the preferred Bidder and SANParks, interested parties must demonstrate financial strength of a minimum business turnover over of R 500 000.00 per annum.

9.1.1.2 The submitting company or SPV may be the following;

9.1.1.2.1 a single concessionaire that knows how to successfully run a business, with the required experience and business turnover stated above or;

9.1.1.2.2 a single concessionaire without the required experience but with the required turnover stated above, that has partnered with a technical partner with the required experience for this opportunity – such technical partner consisting of at least 5 members who possess 3 years industry practice and experience in this opportunity and 30% shareholdership of the SPV.

9.1.1.3 As the preferred Bidder must be an SPV, it must demonstrate financial strength with reference to the asset value of its shareholders in proportion to their shareholding. The interested party must also demonstrate, to SANParks'

satisfaction, that its shareholders are solvent. Audited financial statements or independently reviewed financial statements, along with a letter confirming that the asset value exceeds the stipulated amount and that the shareholders are solvent, must be provided if demanded by SANParks in order to illustrate any assertion made by an interested party in this regard.

9.1.1.4 In this opportunity, the Private Party must undertake to contribute 5% free equity directly to the Community Trust (as nominated by SANParks Social Economic Transformation Department and;

9.1.2 **Financial Requirements**

9.1.2.1 The Submitting Company shall submit the following economic and financial documentation:

9.1.2.1.1 audited or independently reiewed financial statements corresponding to the last two (2) years**;**

9.1.2.2 If the qualification criteria are being met by reference to any other companies, whether current or intended Shareholders or partners, then these companies must submit the same information.

9.1.2.3 If the financial criteria are being met by companies that are privately held, and do not produce audited statements or independently reviewed financial statements, or by private individuals, then these companies or individuals must produce a statement of assets, with confirmation of ownership, certified by a qualified auditor.

9.1.3 Confirmation of funding within 120 days from the date on which the e-mail with this letter notifying you of such was sent by SANParks.

9.1.4 **Tourism and BlackWater Tubing Adventure Experience**

9.1.4.1 The project is likely to require interested parties with substantial experience and expertise in the tourism market. Interested parties are therefore required to provide examples of projects conducted by the interested parties. If the interested party is an unincorporated SPV or new company incorporated for purposes of the PPP Opportunity, then it can meet this criterion with reference to the qualifications of any one of its parent shareholder, if the shareholder holds at least 30% of the total equity in the proposed SPV or company that will undertake this PPP opportunity. Therefore interested parties are required

to have either;

9.1.4.1.1 The operator must have been in the Black Water TAdventure industry for at least three (3) years

NB: Operating Entity will submit company details as an entity that has operated the water based adventure opportunity. Where member\s experience is used for this purpose, Curriculum Vitaes of atleast 5 members must be submitted.

9.1.4.1.2 Number of functional operations: There should be at least one (1) functional operation currently operated or members forming the SPV must at least show proof of 3 year personal experience in the operations/employment of this opportunity.

10. RELATIVE WEIGHTING OF BID SUBMISSIONS

As per the provisions of the Preferential Procurement Policy Framework Act, 2000 ("PPPFA"), bids will be evaluated on three main elements: Functionality, B-BBEE, and the PPP Fee Offer.

The weighting of the elements:

- The Functionality score is only used to pre-qualify the bidders and only bidders who achieved the 75% for Functionality are considered in the final stage where B-BBEE and price will be the determining factor.
- The PPP Fee Offer will be weighted at 80% of the overall bid score and **B-BBEE** will be weighted at 20% of the overall bid score (The provisions of the Preferential Procurement Policy Framework Act, 2000 ("PPPFA") apply).
-

Within the Functionality element, the relative weighting for the **TNP Water Based Activities** will be:

Elements	Financing and Capital Plan	Business and Operational Plan	Development, and Environmental Plan	Risk Matrix	B-BBEE Proposal
Weight	10%	35%	20%	15%	20%

10.1 **Financing and Capital Plan (10%)**

The purpose of the Financing and Capital plan is to assess the ability of the Bidder to secure adequate finance to implement the project and determine the capital investment proposed for the project.

10.2 **Risk Matrix (15%)**

A bidder must indicate the extent to which the bid complies with the risk allocation of the risk matrix, provided in the RFP.

10.3 **Development and Environmental Plan (20%)**

The purpose of the evaluation of development and environmental proposals is to ensure that bidders understand and have fully planned for the prevailing environmental and heritage issues that apply to the investment area as well as the Environmental and Heritage Guidelines and have factored those issues into their plans.

10.4 **Business and Operational Plan (35%)**

The purpose of the evaluation of the Business and Operational plans is to ensure that the bidder has fully developed all business aspects of the proposed tourism project, and is proposing credible schemes which are based on generally accepted business principles applicable to tourism projects, and which are in line with SANParks' specifications, provided in the RFP.

10.5 **B-BBEE Proposal (20%)**

The Bidder's SPV is expected to outline their B-BBEE plans through the Tourism B-BBEE scorecard with targets per sub section.

11. PROJECT TIMETABLE

EVENT	DATE
Public Advertisements	22 October 2023
Provide Information Memorandum, RFP and PPP Agreement to Interested Parties	22 – 27 October 2023
Registration for Bidders' Conference and Site Visit	Open 23 Oct - Close 30 Oct 2023
Due Diligence Site Visits and Bidders Conference • Kayak-Lilo & BlackWater Tubing • Segway Transporter & Bidders Conference	 1 November 2023 2 November 2023
Answer and Questions	On-Going via email
Tender Submission	1 December 2023

12. ANNEXURE 1 – ENVIRONMENTAL GUIDELINES FOR BIDDER'S OPERATION WITHIN THE SOUTH AFRICAN NATIONAL PARKS

12.1 Introduction

12.1.1 This is the required undertaking by the Bidder to conduct, manage and carry out the Project at all times in an environmentally responsible way by adopting appropriate operating methods and practices for conducting such a Project in a declared National Park.

12.1.2 The Bidder is required to undertake all reasonable steps in conducting the Project to prevent and limit the occurrence of any Environmental or health hazards and to ensure the health and safety of the Private Parties and the general public.

12.2 Legislative Basis for these Guidelines

SANParks is bound by a number of statutes with relevance to environmental ion management of Parks, including (without limitation) the Constitution of the Republic of South Africa 1996, the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) (NEMPAA); the National Water Act 36 of 1998; the Water Services Act, 108 of 1997; the National Environmental Management Act, 107 of 1998 (NEMA); the National Veld and Forest Act,101 of 1998; the Hazardous Substances Act, 15 of 1973; and the National Heritage Resources Act.

Authorisation of any development in a Protected Area is governed by the NEMA and the NEMPAA, and regulations. Any changes to infrastructure or operations require written approval from SANParks and are subject to the prescribed policies and procedures.

The process for set-up and operation of the TNP water based activities will be undertaken as per SANParks internal policies and procedures, and authorisations given by the Department of Environmental,Forestry and Fisheries where relevant.

12.3 Guidelines Based on SANParks Internal Requirements

In terms of the National Environmental Management Act (Act No. 107 of 1998, as amended) and the 2014 Environmental Impact Regulations (GN R982, R983, R984 and R985 of 04 December 2014) as amended a Basic Assessment Report (Listing Notices 1 and 3) or a Scoping and EIA process (Listing Notice 2) is required if a listed

activity is triggered. The NEMA EIA Regulations, 2014 and listing notices, were subsequently amended on 07 April 2017 (refer to GN R324, R325, R327 of 07 April 2017) and is being referred to as NEMA EIA Regulations, 2014, as amended.

A Basic Assessment Report is not triggered as no new infrastructure is anticipated for the water-based activities. However, maintenance on the existing footprint may be required during the concession period.

SANParks requires that the national environmental management principles in Chapter 2 of NEMA are implemented, including the following sustainable development considerations:

(i) that the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

(ii) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

(iii) that the disturbance of landscapes and sites that constitute the nation‘s cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;

(iv) that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner;

(v) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;

(vi) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;

(vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and;

(viii) that negative impacts on the environment and on people‘s environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.

In addition, Section 28 of the National Environmental Management Amendment Act: Duty of Care (NEMAA, Act 62 of 2008) principles should be implemented. “Every

person who causes, has caused, or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot be reasonably avoided or stopped, to minimise and rectify such pollution or degradation of the environment"

12.4 **Precautionary Principle**

Ecological and natural resource processes are not always clearly understood, nor are the interactions among such processes. SANParks recognises that issues may arise suddenly, or circumstances change, due to limitations in current knowledge. SANParks has endeavoured to identify these limitations wherever possible and to design the concession/Bidder management process in a way that minimises the environmental risk to the national assets under its control. However, situations may arise where changes that have not been anticipated may cause SANParks to require adaptations to the management of the area.

12.5 **Code of Conduct**

12.5.1 The Bidder undertakes to induct all staff employed on the relevant Park's Code of Conduct.

12.5.2 The Bidder confirms that the Code of Conduct is understood and will be complied with.

12.6 **Environmental Responsibility**

12.6.1 The Bidder acknowledges that SANParks has an active role to play in Responsible Tourism and expects the same from Private Parties that operate in National Parks. SANParks subscribes to the minimum standard of Responsible Tourism (SANS 1162) (**Annexure 2**) and expects the same from Private Parties that operate commercial outlets in National Parks.

12.6.2 Undertaking from the Bidder to conduct, manage and carry out the Project at all times in an environmentally responsible way by adopting appropriate operating methods and practices for conducting such a Project in a proclaimed National Park.

12.6.3 The Bidder undertakes to take all reasonable steps in conducting the Project to prevent and limit the occurrence of any environmental or health hazards and to

ensure the health and safety of the Private Parties and the public.

12.6.4 Bidders must include an Environmental Management Method Statements (EMMS) to ensure the tourism offering can be achieved in an environmentally sustainable manner. The objective of the EMMS is to provide details regarding the scope of the project in a step-by-step description in accordance to the guidelines outlined below;

12.6.4.1 **Section 1 – Administrative details**

12.6.4.1.1 Project name

12.6.4.1.2 Details of the Project Manager of the project

12.6.4.1.3 Details of the individual that prepared the EMMS

12.6.4.2 **Section 2 – Project details**

12.6.4.2.1 Project objective

12.6.4.2.2 The location of the proposed activity (receiving environment)

12.6.4.2.3 A photographic record of the current situation

12.6.4.2.4 Activities to be undertaken

12.6.4.2.5 Work hours and project team (number of people involved)

12.6.4.2.6 Timing – duration of project

12.6.4.2.7 Technical specifications (if relevant)

12.6.4.2.8 Site Development Plan (if relevant)

12.7 **Regulatory Provisions**

12.7.1 The Bidder undertakes to adhere to the Regulatory Provisions and the Environmental Specifications.

12.7.2 The Bidder undertakes to comply with its statutory duties in terms of the Environmental Laws and to take reasonable measures to prevent pollution or degradation from occurring, continuing or recurring or, in so far as such harm to

the Environment is authorised by SANParks, to minimise and rectify such pollution or degradation of the Environment.

12.7.3 The Bidder undertakes to comply at all times with the provisions of the Environmental Guidelines.

12.7.4 The Bidder acknowledges that the terms and conditions set forth in the Environmental Guidelines are subject to amendment.

12.7.5 The Bidder undertakes to comply with amended Environmental Guidelines.

12.8 **Environmental Impact**

12.8.1 Confirmation that all legislative requirements including Environmental Impact Assessment (EIA) or Basic Assessment (BA) requirements are understood and will be complied with, where applicable.

12.8.2 The Bidder undertakes to bring to the attention of SANParks any matter which may, in its view, have a detrimental impact on the Environment within the Protected Area.

12.9 **Solid Waste Management:**

12.9.1 The Bidder undertakes to manage all waste that is generated in such a way that direct and indirect impacts are kept to a minimum.

12.9.2 The Bidder undertakes to achieve Solid Waste Management Best Practices which implies the following:

12.9.2.1 Manage solid waste from source to disposal (use of green bags for recycling waste and black bags for non-recycled waste as per national parks' Waste management system);

12.9.2.2 Strive to eliminate non-recyclable or hazardous packaging or containers at the procurement phase;

12.9.3 The Bidder undertakes to include the following policies in waste management:

12.9.3.1 Green Procurement Policy: This policy defines the procedures that the Bidder will implement to ensure that all produce, containers, and packaging comes from suppliers that under-write environmental principles and that waste be recyclable as far as possible;

12.9.3.2 Hazardous Waste Policy: The Hazardous Waste Policy defines procedures

that the Bidder will implement to manage any hazardous waste, to ensure that it is firstly minimised, but also that it is stored and discarded safely and legally.

12.9.4 The Bidder will follow the following guidelines to minimise the effect of the solid waste on the ecosystem:

12.9.4.1 Minimise solid waste production at all sources, by striving for the minimisation of all waste.

12.9.4.2 Maximise the recycling of solid waste. Glass, tin, paper, and cardboard must be sorted on-site for recycling, while actual recycling will take place off-site at the approved camp waste disposal site.

12.9.4.3 All waste must be removed to the respective approved camp waste disposal site and incinerator for disposal and recycling. The dumping and disposal of waste other than at the approved waste site are strictly prohibited and failure to comply may result in termination.

12.9.4.4 Waste storage areas must remain visually hidden from visitors and problemtic animals in the Park .

12.9.4.5 Packaging and containers given to visitors must be environmentally friendly, biodegradable, and recyclable.

12.9.4.6 The distribution of plastic bags and polystyrene to visitors is strictly prohibited and only brown paper bags are allowed to be given for the purpose of carrying items purchased.

12.9.4.7 Ensure that all areas are kept free of litter by promoting an ethic amongst guests and staff alike and soliciting the co-operation of all staff to pick up litter wherever they find it.

12.10 **Liquid Waste Management**

12.10.1 Liquid waste refers to the sewerage as well as greywater;

12.10.2 The Bidder undertakes to manage liquid waste in accordance with national and local legislation requirements;

12.10.3 The Bidder undertakes to design management techniques to be both economically viable and environmentally sustainable;

12.10.4 The Bidder undertakes to implement waste procedures that optimise the principles of waste reduction and waste recycling and ensures that the end product does not pollute the environment;

12.11 **Water Management and Guidelines**

12.11.1 The Bidder undertakes to implement water conservation measures in the design and implementation of their operations;

12.11.2 The Bidder undertakes to:

12.11.2.1 Monitor the use of water;

12.11.2.2 Educate staff via on-site notices on the use of water;

12.11.2.3 Aim to avoid accidental loss through effective maintenance, installing quality storage and reticulation systems, and implementing leak detection systems.

Note: The successful bidder must install water meters (approved by SANParks) to meter water usage as well as report water consumption and performance.

12.12 **Chemical Substances**

12.12.1 The Bidder (including staff of the Bidder) undertakes to not use any of the chemicals that are banned from use in TNP (as determined by any Environmental Manager in National Parks);

12.12.2 The Bidder acknowledges that all chemicals listed as “Prohibited” (**Annexure 4**) may not be brought into or used in the TMNP.

12.12.3 The Bidder undertakes to ensure safe storage and disposal of preferred chemicals (**Annexure 5**) and their containers;

12.12.4 The Bidder undertakes to have a specific disposal system for toxic or other waste regarded as being dangerous under supervision of the Technical Services Department;

12.12.5 The Bidder undertakes to only use environmentally friendly and biodegradable detergents and cleaning agents

12.13 **Pest Control**

12.13.1 The Bidder undertakes to comply with the integrated pest management plan as provided by SANParks;

12.13.2 Where and if required the Bidder undertakes to control bats as outlined in the SANParks Bat Management Plan;

12.13.3 The Bidder undertakes to make use of preferred pest control chemicals as outlined

in the SANParks Pest Control Report.

12.14 **Visual Impacts**

12.14.1 Describe building materials to be used (where applicable) for all structures and obtain approval from SANParks where appropriate;

12.14.2 Describe efforts to minimise the visual impacts of the development, including lighting;

12.14.3 Provide and how the visual impacts of these will be minimised;

12.14.4 Specifically, outline how brand signage and colors will be mitigated to complement the environment; and

12.14.5 The Bidder undertakes to implement mitigation measures in order to reduce the visual impact in the park.

12.15 **Safety, Security and Fire Management**

12.15.1 The Bidder undertakes:

12.15.1.1 To display emergency numbers visibly ;

12.15.1.2 To keep emergency plans and immediate action drills approved by SANParks;

12.15.1.3 OHS plan relevant to water based activities in place and regular OHS meetings held;

12.16 **Monitoring and Compliance**

12.16.1 The Bidder agrees to cooperate with SANParks in compiling a monitoring checklist that encompasses all environmental conditions. The checklist would be used for auditing purposes and would be conducted at agreed intervals; and

12.16.2 The Bidder agrees that SANParks will monitor, evaluate and score the operations (based on the line items in the checklist) and that a score of less than 85% for three (3) consecutive audits would imply a material breach of contract.

12.16.3 The Bidder acknowledges and agrees that failure to comply with any of the environmental standards and requirements will result in a fine / penalties being issued to the Bidder.

13. ANNEXURE 2 – SANS 1162:2016 – SOUTH AFRICAN NATIONAL STANDARD RESPONSIBLE TOURISM REQUIREMENTS

The National Minimum Standard for Responsible Tourism (SANS 1162) was developed with the objective of establishing a common understanding of responsible tourism by developing a single set of standards to be applied throughout South Africa by harmonising the different sets of criteria that were used for certifying the sustainability of tourism businesses. The National Minimum Standard for Responsible Tourism consists of 41 criteria divided into four categories i.e. sustainable operations and management, economic criteria, social and cultural criteria, and environmental criteria.

14. ANNEXURE 3 – NATIONAL RESPONSIBLE TOURISM GUIDELINES FOR SOUTH AFRICA (MAY 2002)

14.1 Guiding Principles for Economic Responsibility

Tourism still plays a relatively small role in the South African economy and it has a long way to go if it is to fulfill its potential to significantly contribute to national income. Traditionally the main focus of governments has been on the growth in international arrivals and total foreign exchange earnings and is now on fostering entrepreneurial opportunities for the historically disadvantaged, poverty relief, employment, and local economic development. Both domestic and international tourism can create employment; it is a relatively labour intensive industry and it employs a multiplicity of skills from accountants and hairdressers to tour guides and trackers. Tourism can provide very good skills development opportunities for local communities.

The White Paper concluded in 1996 that tourism development in South Africa had largely been a missed opportunity; and that the focus on a narrow market has reduced the potential of the industry to spawn entrepreneurship and to create new services, like local entertainment and handicrafts, and to drive local economic development. The formal tourism sector provides major opportunities for the informal sector. Tourists travel to the 'factory' to consume the product; they travel to the destination to enjoy their holiday. Tourism is a "final good", all the final touches have to be provided in South Africa and so the value is captured here. The value of a taxi ride from the airport, wildlife viewing, and restaurant meals all accrue to the local economy – the challenge is to maximize it by reducing leakages and developing the multiplier effect. Tourist enterprises attract domestic and international tourists and create opportunities for small entrepreneurs and economic linkages, for example, agriculture, hunting, handicraft production, and a wide range of service industries that tourists are likely to consume in the destination.

South Africa is now beginning to work on maximising the local economic benefits that tourism can bring to an area; there is much to be gained from creating a more diversified tourism product and marketing a wider range of experiences, activities, and services to tourists. Established enterprises can gain by encouraging and assisting the development of the complementary product – the larger and more diversified the local tourism base, the more successful enterprises in the area will be. The White Paper identified a wide range of opportunities for historically disadvantaged groups ranging from small guesthouses, shebeens, and restaurants with local cuisine, through community tour guiding, music, dance and story-telling, arts and crafts, traditional

hunting and medicine to laundry, gardening, and specialty agriculture. Tourism provides particular opportunities for local economic development in rural areas where it can provide people with an alternative to moving to urban areas. Tourism must be market-related. If community-based and other tourism development processes are not planned, implemented, and managed according to market demands then far too many South Africans, especially the poor, are facing not merely “missed” opportunities, but the hard realities of failed or under-performing products to which tourists simply do not come. The African cultural tourism experience needs to be woven into the fabric of the mainstream South African tourism product.

Domestic tourism plays an important part in the South African tourism sector and it is expected to continue to grow, as historically disadvantaged people become tourists and travellers themselves. Whether the tourists are domestic or international, their expenditure in local communities contributes to the economic development of the area. The greater the proportion of total tourism spending that stays in the local area, the stronger and more diverse the local economic base. The multiplier effect is greatest where the local linkages are strongest – the imperative is clear, source the inputs for all tourism enterprises as locally as possible in order to maximise local economic benefit and to assist in diversifying the local economy. Reducing economic leakages from the local area and increasing linkages will bring significant local economic development and assist in local economic diversification. Similarly, the development of the complementary product will strengthen the local economy and local enterprises, groups of established enterprises working together can make a significant difference. Strong economic linkages at the local level were identified in the White Paper as a critical success factor in the local economy.

There is an increasing aspiration for Fair Trade in Tourism in several of the international originating markets; part of a trend towards increasing demand for equitably traded products. Increasing numbers of consumers are purchasing products that demonstrably benefit local communities more fairly than competitor products. The IUCN South Africa Fair Trade in Tourism marketing initiative has identified a set of principles that embody a strong commitment to responsible tourism. It is a good example of a responsible tourism marketing association with a vision of just, participatory and ethical tourism that provides meaningful benefits to hosts and visitors alike. The principles of Fair Trade should be part of the culture of responsible tourism.

14.2 Economic Objectives and Indicators

14.2.1 Assess economic impacts as a pre-requisite to developing tourism

(a) Extend the season of enterprises by developing new products to create better employment conditions and to provide a stronger base for local economic development. Monitor occupancies or seasonality of employment over the year to show progress in extending the season;

(b) The historically disadvantaged are a significant emerging domestic tourism market. Identify and encourage commercial responses to this opportunity;

(c) Recognise that our cultural heritage should not only be assessed in economic terms and that tourism can create revenue from the cultural heritage, traditional ways of life, and wildlife and habitats;

(d) Encourage business relationships between foreign entrepreneurs and local and emerging entrepreneurs;

(e) Always consider the opportunity costs of tourism for local communities and their livelihoods, and be prepared to accept that there may be more appropriate economic opportunities for the area. Maintain and encourage economic diversity, avoid over-dependency on tourism;

(f) Plan initiatives and investment to contribute to the broader local economic development strategy (for example, Integrated Development Plans (IDP's) for the area);

(g) Planning authorities need to consider how they can intervene to avoid tourism developments where they may cause adverse effects such as local land price inflation, loss of access to resources, or undermining sustainable livelihoods;

(h) Exercise a preference for business and land tenure arrangements that directly benefit local communities and/or conservation;

(i) Conduct market and financial feasibility assessments before raising expectations and exposing the community or local entrepreneurs to risk.

14.2.2 Maximising local economic benefits – increasing linkages and reducing leakages

(a) Encourage all establishments to upgrade their standards of service, particularly small, medium and micro-enterprises and emerging entrepreneurs, and to maximise their revenue earning potential by adding value;

(b) Encourage the informal sector to become part of the formal sector;

(c) Buy locally-made goods and use locally provided services from locally owned businesses wherever quality, quantity, and consistency permit. Monitor the proportion of goods and services the enterprise sourced from businesses with 50 km and set a 20% target for improvement over three years;

(d) Help local communities or emergent entrepreneurs to develop their product so that it can be more easily used by others and marketed to tourists;

(e) Co-operate with other formal sector businesses to maximise benefits for local community enterprises – for example, a community laundry or tailoring business may only be viable if a group of enterprises commits to source supplies there. Showcase the initiative and be explicit about whether community projects are funded by tourism revenue to the enterprise, donations from tourists or tour Bidders, or funds from donor aid agencies;

(f) Give customers the opportunity to purchase locally produced crafts and curios, set targets to increase the proportion of sales of goods sourced within 20 km of the enterprise. Assist local craft workers to develop new products to meet market demand as evidenced in the enterprise.

14.2.3 **Ensure communities are involved in and benefit from tourism**

(a) Government and established businesses need to redress previous imbalances and enable the historically disadvantaged to engage in the tourism sector. For example, they should source 15% of services and 15% of products, increasing by 5% per year, for 3 years, from historically disadvantaged groups, and/or individuals, and report on purchasing activities;

(b) Work closely with local communities, small, medium, and micro-enterprises, and emerging entrepreneurs to develop new products that provide complementary products for formal sector tourism enterprises;

(c) Develop partnerships and joint ventures in which communities have a significant stake, and with appropriate capacity building, a substantial role in Management. Communal land ownership can provide equity in enterprises;

(d) Identify projects that the enterprise can support that will benefit the poor. Identify at least one project;

(e) Assist the development of local communities and emergent entrepreneurs with visitor feedback on their products;

(f) Consider guaranteeing loans for promising projects in communities or with emerging entrepreneurs, and providing marketing, training, and managerial support;

(g) Foster the development of community-based tourism products by providing marketing and mentoring support;

(h) Encourage visitors to spend more money in the local economy, and visit local bars and restaurants and participate in tours to local areas, bringing business to local communities. Where appropriate treat this as part of the business of the enterprise and charge a booking fee or commission, or sell craft and local food products through the mainstream enterprise;

(i) Encourage tour Bidders to be more innovative in their itineraries, by for example including shebeens, local museums, arts, and craft shops, and local ethnic restaurants in their tour itineraries, and by doing so encourage visitor spend;

(j) Consider using local entrepreneurs (particularly emerging and historically disadvantaged entrepreneurs), experienced consultants, and non-governmental organisations in developing community initiatives;

(k) Be transparent when reporting community benefits to distinguish between benefits to employees, benefits to emerging or community-based entrepreneurs, and community benefits, for example, leasehold payments that go to community projects (grinding mills or school books) or are distributed as household income in the local area;

(l) Consider establishing targets to monitor progress in achieving objectives.

14.2.4 **Marketing & Product Development**

(a) Lack of market access is a major constraint on the growth of new enterprises. Enterprises should provide information about local services and attractions provided in local communities, and encourage their clients (individuals and Bidders) to use them;

(b) Consider co-operative advertising, marketing, and the promotion of new and emerging products and attractions;

(c) Ensure that the visual way in which the product is presented includes local cultural elements and emphasises the richness of the local complementary product;

(d) Consider developing and marketing fairly traded tourism products;

(e) Foster the development of access opportunities for all visitors and potential visitors, regardless of the physical or mental conditions of the visitor. Public authorities and enterprises need to understand and embrace financial incentives that enhanced accessibility will create, and the positive image such as 'access to all' will provide.

14.2.5 Equitable Business

(a) Enterprises should pay fair prices for local services purchased or packaged as part of mainstream itineraries. Beware of abusing market power and imposing unfair commissions or pushing down prices inequitably;

(b) Develop transparent systems of sharing the benefits of tourism through equitable contracts. (E.g., this can be applied through tendering processes.);

(c) When entering into agreements with local communities or emerging entrepreneurs ensure that the risk is equitably shared;

(d) Recruit and employ staff equitably and transparently and maximise the proportion of staff employed from the local community. Set targets for increasing the proportion of staff and/or of the enterprise wage bill going to communities within 20 km of the enterprise;

(e) Develop a community labour agreement with targets for employment and progression. Recognise that the enterprise can play a significant role in increasing the skills and capacity of the local community and that the enterprise benefits from that;

(f) Go beyond the bare minimum wage rate and invest in local staff – quality is dependent upon well-motivated staff.

14.3 Guiding Principles for Social Responsibility

Batho Pele: Putting People First – One and all should get their fair share

Tourism and the travel industry "is essentially the renting out for short-term lets, of other people's environments, whether that is a coastline, a city, a mountain range or a

rainforest." Tourism is dependent upon the social, cultural, and natural environment within which it occurs, and its success is dependent upon the environment that it operates within. Good relationships with neighbours and with the historically disadvantaged make good business sense. These relationships need to be based on trust, empowerment, co-operation, and partnerships. Too few of the benefits from tourism currently accrue to local communities whose environment is visited.

As was pointed out in the White Paper, the majority of South Africans have never been meaningfully exposed to the tourism sector. In the new South Africa, the government's objective is to ensure that all citizens have equal access to tourism services as consumers and providers. Enterprises and communities need to identify ways in which they can provide a range of tourism experiences sufficiently wide to be accessible to the average South African. Programmes are being established to allow South Africans, and particularly front-line tourism employees, to become "tourists at home". To this end, the notion of *Batho Pele* is a guiding principle.

The opportunity costs of the creation of national parks and subsequent reduced access to natural and cultural resources were often borne by local disadvantaged communities in the past. Such communities did not perceive or receive any significant direct benefits from the change in land use from conservation and tourism. Communities must be empowered to take part in the Management of areas so that they can have a say in the distribution of the benefits and the sustainable use of their environment. Efforts are not being made to enable local communities to experience wildlife in the parks.

One of the key challenges for business, local government, and educators is to develop knowledge amongst the historically disadvantaged regarding what tourism is, and how it can benefit local communities. In the 1996 White Paper, the involvement of local communities and historically disadvantaged groups was identified as a critical success factor. Communities need to be involved in the planning, decision-making, and development of tourism; and in all operational aspects of the industry as tourists, employees, and entrepreneurs. Social exclusion has contributed to the historically narrow, myopic focus of the industry in South Africa. Responsible tourism is about enabling and encouraging historically disadvantaged local communities to access lucrative tourism markets. This is to overcome the problem of visitors being kept within the hotels and resorts and only venturing out to 'sanitised' places of interest. For example, local shebeens and craft vendors rarely see a tourist.

One of the key challenges for the formal sector is to develop ways of engaging with community entrepreneurs and community groups to develop new products and

diversify the industry. The success of township tours is one example of the product development opportunities that exist in the new South Africa. Much more effort needs to be made to improve the linkages between the formal and informal sectors of the tourism sector. The exclusion of the historically disadvantaged has contributed towards poverty and crime – the 'township tours' demonstrate that where local guides act as hosts, and where there are clear benefits both to communities and to historically disadvantaged entrepreneurs, tourists can have a good experience and be assured of their safety. In 1995, involving local communities in tourism, creating employment, training, and awareness programmes were identified as solutions to the problem of security for tourists. There is much still to be done and this is a core challenge for responsible tourism. National priorities for action are described within 3.1: Social objectives and indicators.

The meaningful involvement of historically disadvantaged communities as employees and as entrepreneurs in South Africa is a priority. This requires both market access and capacity building. Training at all levels is essential to the development of a more inclusive industry, able to demonstrate its social responsibility and to develop new products which meet the cultural and "meet the people" interests of tourists. The development and delivery of new quality products for the changing marketplace are of central importance to enable the historically disadvantaged to become part of mainstream tourism. It is also required for social justice and the avoidance of exploitation of local cultures and community groups. The value of the culture of historically disadvantaged people needs to be recognised and new tourism products developed. Their awareness of the opportunities in tourism needs to be a key element in training and education, and these opportunities must be presented in a realistic commercial framework.

14.4 Social Objectives and Indicators

14.4.1 Involve the local community in planning and decision-making

(a) Understand the historical, political, and cultural context of local and host communities and historical relationships with tourism development and protected areas;

(b) Creating opportunities and eliminating barriers to access mainstream tourism markets for local communities, historically disadvantaged people, and individuals;

(c) Understand the local, safety and security, infrastructural, resource,

educational, poverty, disability, and health constraints (e.g. HIV/AIDS), when designing, operating, and marketing tourism;

(d) Encourage proactive participation and involvement by all stakeholders - including the private sector, government at all levels, labour, local communities (their leaders and structures) - at all stages of the tourism life cycle;

(e) Encourage formal and informal sector enterprises to develop effective structures, or join existing bodies, for marketing and tourism development. Create the environment to do so by providing resources, technical and Management capacity;

(f) Encourage successful entrepreneurs, particularly those from the emerging tourism fraternity, to mentor others;

(g) Planning authorities should work to include stakeholders as part of a decision-making process at the destination level, to determine what constitutes sustainable levels of tourism in the social, natural, and economic context;

(h) Programmes of education within school curriculums, and public awareness within communities, are needed regarding the potential positive and negative aspects of tourism;

(i) Post-employment education and training programmes within the framework of the Skills Development Act and South African Qualifications Authority (SAQA) are required to educate employees regarding the potential pros and cons of tourism, and comparative costs and benefits of alternative enterprises in order to aid decision-making;

(j) Involve the local communities in growing the local tourism business by using existing facilities and by developing new activities and attractions. Individual enterprises and groups of enterprises need to develop complementary products. (Report number of new activities/ attractions; number of visitors);

(k) Empower communities to market their cultural traditions and products as assets and enhance their economic opportunities;

(l) Interpretation material and visitor information centers should be developed in consultation with local communities;

(m) Integrate community development goals as identified in the Integrated

Development Plan (and similar processes) into the enterprise's social and sustainability mission and objectives;

14.4.2 **Assess social impacts as a prerequisite to developing tourism**

(a) Identify and monitor potential adverse social impacts of tourism and minimise them in the short and the long-term, and ensure that communities actively participate in the monitoring;

(b) Larger enterprises should appoint a member of staff to take responsibility for developing better local relationships and partnerships. Implement social audits of tourism projects. These can be conducted in an inexpensive, rapid, and participatory way;

(c) Consider schemes to encourage local co-operation and civic pride like an "adopt a school" initiative or 'adopt a street', or other local areas near the enterprise. Work with local government and the local community to identify priority sites, and make them safe and attractive for tourists;

(d) Enterprises should develop strategies to promote equality in terms of gender, ethnicity, age, and disability, and report progress on implementation.

14.4.3 **Maintain and encourage social and cultural diversity**

(a) Develop tourism with dignity, respect, and nurture local cultures (including religion), so that they enrich the tourism experience and build pride and confidence among local communities;

(b) Use tourism as a catalyst for human development, focusing on gender equality, career development, and the implementation of national labour standards. (Report on gender equality and career development);

(c) Tourism development should not compromise respect for social, cultural, and religious rights, or the essential human rights of people to food, a safe and clean environment, work, health, and education;

(d) Support the development of sustainable local handicraft enterprises by assisting with the improvement of design, marketing, production, and packaging skills for craft workers in relation to market demand. Consider specifically what can be done to enhance the skills and earnings of women, particularly in rural areas;

(e) Support visits by local schoolchildren to tourism sites that promote and

display their heritage;

(f) Consider what contributions the enterprise can make to scholarships, local youth sports teams, and other community causes. Monitor and report increasing contributions with respect to the number of projects and level of investment;

(g) Display local cultural artifacts in your enterprise and encourage the development and sale of traditional cultural products, crafts, and folklore. Aim for 25% items for sale at the enterprise from within 50 km, with tours offered to local markets, and try to increase these by 25% over 3 years. Provide customer feedback in order to raise standards;

(h) Be wary of the dangers of commoditisation, and encourage craft and other cultural workers to maintain the authenticity and cultural values of their products. Encourage craft workers to explain the cultural values and history of their crafts;

(i) Give enterprises a local flavour by serving local dishes and source soft furnishings, arts and crafts locally. Monitor the proportion of local dishes on the menu and the proportion of furnishings & crafts locally made, and aim to increase these proportions by 25% over 3 years. Visitors expect to find at least one local dish on their menus;

(j) Identify cultural heritage resources in the local area and where there is sufficient demand from tourists and work with the local community to develop them as sustainable tourism attractions. Consider mission settlements, sites of slave occupation, festivals, struggle related monuments and places, rock art sites, cultural monuments, food, drink, arts and crafts, music, dance, and storytelling;

(k) Encourage tourists to show respect by learning a few words of the local language, (and to use them when talking to local people!) and to learn about the host culture and traditions;

(l) Share enterprise-level knowledge regarding informal sector tourism skills and products. Draw the attention of ground handlers, the media, and tour Bidders to complementary product opportunities in the local community.

14.4.4 **Be sensitive to the host culture**

(a) Respect, invest in, and develop local cultures and protect them from over-

commercialisation and over-exploitation. Encourage workers and staff to observe their religious and cultural practices;

(b) Respect indigenous intellectual property, especially when setting up contractual arrangements for the use of indigenous knowledge;

(c) Use local guides, and encourage them to continually improve their quality, to ensure that the community speaks for itself, and to increase the revenues going into the local community (by higher fees for quality tours). Monitor and report this economic contribution to the community and set targets to increase it annually;

(d) Develop a local social contract for interactions and behavior between the local community and tourists (including responsible bargaining), developed with the participation and contributions from the community, and display it prominently for visitors and publicly within the community;

(e) Create opportunities for visitors to interact with locals in an unstructured, spontaneous manner (e.g. through sporting activities, visits to local schools, shebeens, taverns, restaurants in townships);

(f) In accordance with the Batho Pele principle, provide visitors with inclusive, honest, and reliable information about the history and contemporary life in South Africa, local tourist attractions and facilities;

(g) Promote a sound, proud, service ethic among all participants in the tourism sector;

(h) Promote and ensure the respect and dignity of people in the development, marketing, and promotion of tourism;

(i) Ensure that tourism does not undermine the resource rights, traditional knowledge, and skills of local communities;

(j) Negative social and cultural impacts associated with tourism, such as increased crime, drug and alcohol abuse, prostitution, and crime should be monitored and be proactively addressed in cooperation with the community;

(k) Educate tourists regarding local culture and where necessary make them aware of how they should behave to respect it;

(l) The exploitation of human beings in any form, particularly sexual and when applied to women and children, should be energetically combated with the co-operation of all concerned.

14.5 Guiding Principles for Environmental Responsibility

Responsible tourism implies a proactive approach by the tourism sector to the environment through the promotion of balanced and sustainable tourism. This is particularly important where the focus of the tourism sector and the activities of tourists is the natural environment, as is the case with wildlife viewing, hunting, and marine tourism. There are particular challenges in making nature-based tourism sustainable. Responsible tourism development has to be underpinned by sustainable environmental practices. In the environmental sphere, only conservative decisions based on the precautionary principle can be considered responsible. Cultural heritage is also part of the environment, and the responsibility of the tourism sector towards the cultural environment was considered in the social responsibility guidelines.

Central to environmental responsibility is thinking about the life cycle impact of an enterprise or product, and so these guidelines apply to the stages of design, planning, construction, operation, and decommissioning. The process of managing the business should be fully integrated with environmental Management, throughout the project life cycle (from conceptualisation to decommissioning). In constructing concessions and leasehold developments it is particularly important to ensure that during decommissioning it will be possible to remove all structures and restore the area. Larger businesses should be using Environmental Management Systems to exercise environmental responsibility; for businesses above a defined size in each sector, it would be irresponsible to operate without one.

All tourism enterprises can contribute to environmental sustainability by exercising care in purchasing decisions – by seeking out and supporting responsible producers of the products that are required to run the enterprise, and by making clients aware of the responsible purchasing policy. The practical guidelines and indicators that follow are organised around the key environmental elements of responsible tourism identified in the 1996 White Paper.

14.6 Environmental Objectives and Indicators

14.6.1 Assess environmental impacts as a prerequisite to developing tourism

(a) Plan new developments only in areas where the use of water and other natural resources for tourism will not conflict with local community needs, now or in the foresee-able future. Integrate environmental Management into the project planning cycle;

(b) Follow best practice guidelines on the design, planning, and construction of buildings and associated infrastructure to minimise environmental impacts and to reduce energy requirements for lighting, cooling, and heating;

(c) Use local materials (where sustainable) and local architectural styles on a scale that does not create a negative aesthetic impact;

(d) Avoid damaging the environmental quality of the enterprise's neighbourhood by noise or light pollution;

(e) Design buildings with natural ventilation and actively plan to reduce resource use during the construction and operational phases. Tell visitors what has been done to make the enterprise more environmentally friendly. Quantify the resources "saved";

(f) Plan new developments to have the lowest possible ecological impact, particularly in environmentally sensitive areas such as the coastal zone, indigenous forests, wildlife habitats, and wetlands. Minimise the transformation of the environment around the enterprise;

(g) When developing plans for a new enterprise include elements, which contribute to the maintenance of biodiversity by planting local indigenous and non-invasive species, which provide habitats for birds, bees, and butterflies.

14.6.2 Use local resources sustainably, avoid waste and over-consumption

(a) Meter the quantity of water consumed and manage consumption and leakage to reduce water consumption by percentage to be agreed per annum for 3 years, and report water consumption and performance in monitoring;

(b) Measure electricity consumption and introduce energy-saving measures to achieve a percentage to be agreed on reduction in use per annum over three years. This can be done by for example dimming lights, using low energy appliances and light bulbs, and enhancing the use of natural ventilation;

(c) Monitor the use of diesel, paraffin, and petrol and set targets to reduce consumption and switch to less polluting fuels;

(d) Set targets to increase the proportion of energy used from renewable

resources – for example solar, wind, hydroelectric (increase by 10% over 3 years). Sustainable use of wood, from indigenous and plantation forests, is complex, and great care needs to be taken;

(e) Install and display appropriate technology to reduce consumption of natural resources, production of waste, and incidences of pollution;

(f) Monitor the sewage system and demonstrate how pure the outflow back into the environment is. If the enterprise has one, make the reed bed a valuable habitat feature;

(g) Set percentage targets and time scales for the reduction of waste produced, levels of recycling, and reuse of waste from the enterprise. Set appropriate targets for reduction and/or recycling of waste produced per year for paper (5%), plastics (5%), metal (5%), and glass (5%). Report on progress towards percentage targets over 3 years;

(h) Work with suppliers to minimise the amount of packaging purchased with supplies, and therefore reduce the amount of waste that needs to be disposed of. It may be appropriate for trade associations to conduct these discussions on behalf of members;

(i) Reduce “food miles” by using locally produced food;

(j) Enterprises should assist conservation by investing in sustainable trails, hides, and interpretation. Tell visitors what the enterprise is doing, and claim credit for activities;

(k) Encourage the use of environmentally friendly transport.

14.6.3 Maintain and encourage natural diversity

(a) Encourage visitor behaviour that respects natural heritage and has a low impact upon it;

(b) Discourage the purchase of products that exploit wildlife unsustainably or contribute to the destruction of species or habitats (e.g. some handicrafts; bush meat);

(c) Look for ways in which the enterprise and its guests can assist with the conservation of natural heritage, for example through removing litter;

(d) Invest a percentage of profits or turnover in species conservation or habitat restoration and Management. Report the investment, and try to increase this

by 5% per year;

(e) Avoid pollution by using environmentally friendly chemicals, and by using biodegradable soaps and detergents – tell visitors and staff why the enterprise is doing this and how it benefits the environment;

(f) Work with conservation authorities to ensure that visitors to natural heritage areas are aware of the impacts that they may have on the ecology of the area and how they should behave in order to minimise those impacts;

(g) Ensure that relevant members of staff are familiar with the issues and ways of avoiding environmental impacts – they should abide by the advice and communicate it to guests, and use the services of companies that abide by local environmental Best Practice;

(h) Do not market tourism resources to encourage tourists into ecologically sensitive areas which are vulnerable to irresponsible tourism practices, particular sports or recreational uses discourage these activities (e.g. irresponsible 4x4 use, hunting, diving, or sandboarding).

15. ANNEXURE 4 – PROHIBITED CHEMICALS

CHEMICAL	TRADE NAME	NOTES
Atrazine	Atrazine Gesaprim Atraflo Bladex Terbutal	Toxicity group III
Parathion Diethyl (p –nitropheny) phosphothioate	Folidol Parafos Agrithion	An organophosphate. Extremely toxic, Toxic group I. Banned in 17 countries, restricted use status in RSA.
PCP Pentachlorophenol Pentachlorophenyl	Woodprufe Timerlife Borcide Timbertret Anti-stain	An organochloride
Chlordane Octahoro-a hexahydror-methiodene	Termidan Chlorsdasol	An organochlorine insecticide. Moderately, toxic, toxic group I Banned in 25 countries, restricted status in RSA
Aldicard Methyl-(methylthio)-propinaldehyne Methylcarbonmoy oxine	Termik	A N-Methyl Carbonate insecticide. Extremely toxic, Toxic group I
EDB Dibromoethane	Edabrom Gerbex Aquamix	A halocarbon pesticide. Toxic group II. Banned in 14 countries. Restricted status in RSA.

CHEMICAL	TRADE NAME	NOTES
	Bacfume	
Dieldrin Hexachloro-hexahydro-dimethanonaphthalene Plus derivities Aldrin and Endrin	Aldrin HHDN Shelldrite	An organochlorine insecticide. Highly toxic, Toxic group I. Banned in 34 countries. Restricted status in RSA.
DDT Dichloro-diphenyl trichloro-ethane plus derivities DDE and DDD		
Difethialone	Rattex	
Brodifacoum	Finale	
Difenacoum	Tornadel	
Flocoumafen	Tornadel	
Chlorofluoro-carbon CFC-11 , CFC-12 , CFC-113 , CFC-114 , CFC-115		Total phase-out by 1996. Manreal protocol 1987, amended Copenhagen 1992.
Halon gas Halon -1211 , Halon1301 , Halon -2402		Total phase-out by 1996. Manreal protocol 1987, amended Copenhagen 1992.
Carbon – tetrachloride CC14		Total phase-out by 1996. Manreal protocol 1987, amended Copenhagen 1992.
Methyl-chloroform CH3CC13		Total phase-out by 1996. Manreal protocol 1987, amended Copenhagen 1992.
Hydrochloro-fluocarbon HBFC's		Total phase-out by 1996. Manreal protocol 1987, Copenhagen 1992.
Methyl bromide		Freeze by 1995. Copenhagen protocol 1992.

CHEMICAL	TRADE NAME	NOTES
CH3Br		
Gamma – BHC Hexachlorocyclohexane	Dyant Bexadust Fumitabs Ant and garden spray Nexit Lindane Anticide Gardit Ants Everdeath Lindastof Agronex Linden Woodprufe Blue death Servidol	An irganochloride insecticide. Moderately toxic, Class II
Paraquat Dimethyl-bipyridynium dichloride	Paraquat Chloride Preeglone WPK PARAQUAT Gramoxone	A bipyriyl herbicide. Moderately toxic, Toxic Group II
Hydrochloro-fluorocarbon : HCF's		Total phase out by 2030. Copenhagen protocol 1992.

16. ANNEXURE 5 – PREFERRED CHEMICALS

PEST	SPECIES	MORPHOLOGICAL PHASE	PESTICIDE ACTIVE INGREDIENT	PESTICIDE/CHEMICAL CLASS
Cockroaches	Various spp.	Adult Larvae	Alpha - cypermethrin Deltamethrin Cyfluthrin Beta-cyfluthrin Triflumuron	Pyrethroid Pyrethroid Pyrethroid Pyrethroid Benoylurea
Bed Bugs	Various spp.	n/a	Permethrin	Pyrethroid
Rats and Mice	n/a	n/a	Coumatetralyl Warfarin/Sulphaquinoxaline	Coumarin anti-coagulant Coumarin anti-coagulant
Termites	Sub-terranean wood destroying	n/a	Imidacloprid	Chloronicotinyl
Thatch mites	n/a	n/a	Permethrin	Pyrethroid
Bees	n/a	n/a Permethrin		Pyrethroid Pyrethroid
Ants	n/a	n/a	Permethrin See Cockroach	Pyrethroid See Cockroach
Mosquitoes	n/a	Smooth walls	Beta-cyfluthrin Deltamethrin Cyfluthrin Lambda-cyhalothrin Alpha - cypermethrin	Pyrethroid Pyrethroid Pyrethroid Pyrethroid Cyanamid

PEST	SPECIES	MORPHOLOGICAL PHASE	PESTICIDE ACTIVE INGREDIENT	PESTICIDE/CHEMICAL CLASS
		Rough walls Mozzie nets/clothing	 Permethrin Propoxur Cyfluthrin Cyfluthrin	 Pyrethroid Carbomate Pyrethroid Pyrethroid
Fleas			See Cockroach	See Cockroach
Fishmoths			See Cockroach	See Cockroach
Ticks				Pyrethroid

PESTICIDE	FORM	COMPANY NAME	GRAMS PER ACTIVE INGREDIENT	DOSAGE
Fendona K-Othrine Responsar Tempo Starycide	AL SC EW or HN SC SC	Cyanamid Cyanamid AgrEvo Bayer Bayer Bayer	1g/l 100g/l 60g/l 125g/l 480g/l	Undiluted 25-50ml 40-85ml 20-40ml 10ml/10l
Coopex maxi/mini smoke generator Coopex dust	FD DP	AgrEvo AgrEvo	135g/kg 5g/kg	1 tin/120-1000m3 na
Racumin Kill-it?Rinoxin	CB (l)	Bayer	7.5g/kg	1 part in 15-20 parts bait material undiluted
Premise	SC	Bayer	350g/l	145ml
Coopex maxi/mini smoke generator	FD	AgrEvo	135g/kg	1 tin/120-1000m3
Raidyard Coltar or Jays fluid	Spray			
Coopex ant dust Fendona	DP See Cockroach	AgrEvo See Cockroach	5g/kg na See Cockroach	Na See Cockroach

PESTICIDE	FORM	COMPANY NAME	GRAMS PER ACTIVE INGREDIENT	DOSAGE
Tempo K-Othrin Responsar Icon Fendona	SC EW or HN# WP AL SC	Bayer Bayer Zeneca Cyanamid Cyanamid	125g/l 100g/kg 1g/l 100g/l 60g/l	20-40ml 78g (1 sachet of 62.5g/8l of water) Undiluted 25-50ml 40-85ml
Coopex	WP	AgrEvo	250g/kg	25-50g
Baygon	WP	Bayer	500g/kg	**?**
Baythroid	WP	Bayer	100g/kg	20-40g
Solfac Peripell	EW	Bayer	50g/l 50g/l	40-80ml 66ml
See Cockroach	See Cockroach	See Cockroach	See Cockroach	See Cockroach
See Cockroach	See Cockroach	See Cockroach	See Cockroach	See Cockroach
Bayticol				

17. ANNEXURE 6 – INTEGRATED PEST MANAGEMENT PLAN

17.1 INTRODUCTION AND BACKGROUND

17.1.1 PEST CONTROL: Aiming towards natural and barrier methods (mechanical control) as opposed to chemical control.

All chemicals that are artificially introduced into the natural environment may create an imbalance and have a negative effect on that environment. These effects can range from slight to catastrophic, but will be largely dependent on the type of chemical, the method of application and the dosage applied. Chemicals must be controlled and used in such a way as to impact as little as possible on the natural diversity and functioning of ecosystems.

17.1.2 WARNING ON THE USE OF CHEMICALS

Pesticides are poisonous. Always read carefully and follow all precautions and safety recommendations given on the container label. Store all chemicals in the original labelled containers in a locked cabinet or shed, away from food and out of reach of children and unauthorized persons. Consult the pesticide label to determine active ingredients and signal words. Pesticides applied in your home and landscape can move and contaminate streams, lakes, and rivers. Confine chemicals to the property being treated and never allow them to reach drainage areas. Do not place containers containing pesticide into the rubbish bin, down the sink, toilet, or outside drain. Either use the pesticide according to the label until the container is empty, or take unwanted pesticide to a household hazardous waste collection site. Dispose of empty containers by following label directions. Never reuse or re-burn the containers or dispose of them in such a manner that they may contaminate water supplies or natural waterways.

17.2 TERMINOLOGY

Pest: Any organism occurring in unnaturally high numbers due to human development, which has a deleterious effect on the human population in terms of health and wellbeing.

Pesticide: A species specific chemical component designed to combat a particular pest species that are deemed as having deleterious effects on the resident human population.

Herbicide: A chemical component designed to eliminate a specific type or species of

vegetation.

Active ingredient: the chemical compound within the pesticide that produces the required negative effect on the target species

Synergist: Substance added to pesticide in order to make the active ingredient more effective by performing a catalytic function.

Wetter (spreader): enables the chemical to stick evenly onto the target.

Colouring agent: used to discourage birds, animals, and people from consuming the pesticide.

Bitter compound: prevents animals from swallowing the compound.

Carrying medium: usually inactive and won't have an effect on the pest.

Pesticide toxicity: All pesticides must be considered to be toxic. The relative toxicity, however, varies considerably as does the susceptibility of the human being, animal, or plant. Species, age, sex, physical and nutritional state, and type of formulation are some of the more important factors influencing the potential toxicity and hazard.

LD50: The toxicity of a chemical is expressed as an LD50 value. This is the lethal dosage expressed as mg per kg body mass which will kill 50 % of a random sample of a population of test animals (usually white laboratory rats). This standard makes a comparison of toxicity possible. The potential hazard of a pesticide may not be judged only by its oral toxicity, as many pesticides can be absorbed through the skin, eyes, and or lungs.

Pesticide hazard: Both the concentration of a pesticide and its formulation affect the hazard of a remedy. The higher the concentration of an active ingredient, the more hazardous it becomes. A pesticide formulated as a solution or as an emulsifiable concentrate is more hazardous than when formulated as a dust or as a wettable powder.

Pesticide formulations: Nearly all pesticides have to be formulated in order to enhance their efficacy and to make them suitable for application in a particular manner. Sometimes certain materials such as sticking or wetting agents are added to increase the terminal effectiveness.

AE – Aerosol dispenser

AL – Other liquids to be applied

BB – Bait block

CB – Bait concentrate (solid or liquid for dilution before used as bait)

CS – Capsule suspension (normally diluted in water)

DP – Dusting powder

EC – Emulsifiable concentrate (applied as a liquid after dilution in water)

EW – Emulsion, oil in water (pesticide within oil droplets in water)

FD – Smoke tin

FK – Smoke candle

FT – Smoke tablet

FU – Smoke generator

GA – Gas

GB – Granular bait

GE – Gas generating product

GR – Granule

HN – Hot fogging concentrate

KN – Cold fogging concentrate

OL – Oil miscible liquid – dilute in oil before application

PA – Paste (water based film forming)

SC – Suspension concentrate

SL – Soluble concentrate

SP – Water soluble powder

RB – Ready bait

TB – Tablet

UL – Ultra low volume liquid

VP – Vapour releasing product

WP – Wettable powder

First generation poison: A poison that will only affect the target species, in that it requires multiple feeds to be fatal.

Second generation poison: A poison that will have immediate deadly effects on the

target population, as well as any predatory populations feeding on the dead target or other effected animals.

17.3 **CHEMICAL CLASS OF ACTIVE INGREDIENT**

Chemical class: Classification of chemicals based on the composition of the active ingredient.

17.3.1 **Organochlorine:** E.g. DDT. These compounds take a long time to decompose (e.g. 8 tonnes of DDT will take 90 years to decompose). This means that the long-term effects are much worse than short-term effects, due to the build-up in the environment. All these products should be banned from use in terms of the environmental damage caused. Organochlorine should not be permitted for use in a National Park.

17.3.2 **Organophosphate:** These are acutely toxic in most cases, however, only to animals, not plants. Organophosphates should not be permitted for use within a National Park.

17.3.3 **Pyrethroid:** These compounds are made from the carnation flower, by extracting pyrethrin from the oil. They are made in Kenya. They are mostly highly toxic to insects, fish, and amphibians, but not so toxic to reptiles, birds, and mammals. When used correctly, this is the least harmful class of all chemicals. When chemicals are used within a National Park, it is preferable that they are Pyrethroid in nature.

17.3.4 **Carbamate:** These compounds are medium in toxicity when compared to organophosphates but more toxic than pyrethroids. They do however break down rapidly (chemicals last 4 weeks indoors and only a few days outdoors) and are not very toxic to fish and amphibians. Carbamates should not be used in a National Park.

17.3.5 **RESTRICTED USE OF CHEMICALS WITHIN A National Park**

A management plan for the use of chemicals within National Parks was written by D.A. Zeller and L.E.O. Braak in January 1995. This document contained policies regarding the use of chemicals within National Parks as well as a list of restricted chemicals, prohibited chemicals, and chemicals to be phased out. This list has since been updated by L. Foxcroft in January 2004. The new edition has one list of chemicals, for which the importation and use of within National Parks are strictly prohibited. A second list has been included outlining chemicals that are not

recommended for use within National Parks, based on the chemical class of their active ingredients. Although the prohibited list has been part of the management plans since 1995, a large number of pesticides containing chemicals on these restricted and prohibited lists, are currently available and being sold within both staff and tourist retail outlets inside National Parks.

17.3.6 RATS AND MICE

17.3.6.1 General information

Rats and mice are mostly active at night. They have poor eyesight, but they make up for this with their keen senses of hearing, smell, taste, and touch. Rats and mice constantly explore and learn about their environment memorizing the locations of pathways, obstacles, food and water, shelter, and other elements in their domain. They quickly detect and tend to avoid new objects placed in a familiar environment. Thus, objects such as traps and baits are often avoided for several days or more following their initial placement. Mice and young rats can squeeze beneath a door with only a 2cm gap. If the door is made of wood, rats may gnaw to enlarge the gap. Rats and mice eat a variety of foods including cereal grains, meats, fish, nuts, fruits, slugs, and snails. When searching for food, rats and mice can travel up to 150m from their nests or burrows. Females can wean between 3 – 6 litters per year, each litter containing between 3 – 5 young. Rats consume and contaminate foodstuffs and damage storage containers. They can also cause damage by gnawing electrical wires and wooden structures.

17.3.6.2 Management

Three elements are necessary for a successful rat and mouse management program: sanitation, building construction and rodent proofing, and, if necessary, population control.

17.3.6.3 Mechanical Control

17.3.6.3.1 Sanitation: Sanitation is fundamental to rat control and must be continuous. If sanitation measures are not properly maintained, the benefits of other measures will be lost and rats will quickly return. Good housekeeping in and around buildings will reduce available shelter and food sources for rats and mice. Neat, off-

the-ground storage of pipes, timber, crates, boxes, gardening equipment, and household goods will help reduce the suitability of the area for rats and will also make their detection easier. Garbage and garden refuse should be collected frequently and all garbage containers should have tight fitting covers. Thinning dense vegetation will make the habitat less desirable including climbing hedges such as jasmine and ivy. Trees with branches hanging closer than 1m to the roof should be trimmed.

17.3.6.3.2 Building construction and rodent proofing*:* The most successful and long lasting form of rat control in buildings is to “build them out”. Seal off cracks and openings in building foundations, and any openings for water pipes, electric wires, sewer pipes, drain spouts, and vents. No hole larger than 7mm should be left unsealed. Make sure doors, windows and screens fit tightly. Their edges can be covered with sheet material if gnawing is a problem. Coarse steel wool, wire screen, and lightweight sheet material are excellent materials for plugging gaps and holes. Plastic sheeting, wood, caulking, and other less sturdy materials are likely to be gnawed away. Because rats and house mice are good climbers, openings above ground level must all be plugged, especially all access points in the roof. Chimneys should be covered with wire netting or gauze to prevent rat and mice entry. Check all screens on windows, doors, and air vents are in good condition. Make sure all exterior doors are tight fitting and weatherproofed at the bottom.

17.3.6.3.3 Trapping: This is the safest and most effective way of controlling rats in and around homes. Traps can be used more than once therefore it is a cost effective but more labour-intensive method. The kind of bait used for the trap is important. Dried fruit or bacon makes excellent bait for rats. The bait should be fastened securely to the trigger of the trap with a light string or bit of glue. Soft baits such as peanut butter or cheese can also be used, but rats sometimes take soft baits without setting off the trap. Leaving traps baited but unset until the bait has been taken at least once improves trapping success by making the rodents

more accustomed to the traps. Set traps so the trigger is sensitive and will spring easily. The best places to set traps are in secluded areas where rats are likely to travel and seek shelter. Droppings, gnawing, and damage indicate the presence of rodents, and areas where such evidence is found are usually the best places to set traps, especially when these areas are located between their nests and food sources. Place traps in natural traveling paths such as along a wall, so the rodents will pass directly over the trigger of the trap. Position traps along a wall at right angles, with the trigger end nearly touching the wall. If traps are set parallel to the wall, they should be set in pairs to intercept rodents traveling from either direction. If a rat sets a trap without getting caught, it will be very difficult to catch the rat with the trap again. Other good places for traps are behind objects, in dark corners, on ledges, shelves, branches, fences, pipes, or overhead beams. In overhead places, the traps should be attached securely with screws or wire. In areas where children or birds and other animals might contact traps, place the trap in a box or use a barrier to keep them away. Use as many traps as are practical so trapping time will be short and decisive. A dozen or more traps for a heavily infested home may be necessary. Place rat traps about 5-10 meters apart. Dispose of dead rats by burying them. Do not touch the dead rodent with bare hands and wash thoroughly after handling traps. Live traps are not recommended because trapped rats must either be killed or released elsewhere. Releasing rat’s outdoors is not recommended because of health concerns.

17.3.6.4 **Chemical control**

While trapping is generally recommended for controlling rats indoors, when the number of rats around a building is high, it may be necessary to use toxic baits to achieve adequate control, especially if there is a continuous infestation from surrounding areas. Most toxic baits for rodents contain active ingredients that work as an anticoagulant, causing death by internal bleeding. Most anticoagulant baits have been considered relatively safe baits to use around the house and garden because they require multiple feedings to be

effective. This is referred to as a first generation poison, as only the target animal will be killed. Some of the more lethal rodent poisons that are prohibited for use in a National Park contain a single feed, second generation poison, that will result in death to anything that eats the poison directly from the baits, or indirectly, by eating the dead rodents (e.g. Predators including owls, genets, etc.). Rodent bait should only be used, when placed in a bait station (Rodent bait station made by Bayer). These bait stations protect the bait from weather and restrict accessibility to rodents, providing a safeguard for people and other animals. Place bait stations next to walls or in places where rats will encounter them. Stations that may be accessible to children must be made of sturdy, tamper resistant material and be secured in a way that they cannot be tipped. All bait stations should be clearly labelled. The use of bait stations help rats to feel secure when feeding. Place all bait stations in rat travel-ways or near their burrows. Do not expect rats to go out of their way to find the bait. If you place bait stations above the ground (on fences, eves), make sure they are securely fastened, and won't fall onto the floor where children may find them. Because rats are often suspicious of new or unfamiliar objects, it may take several days for them to enter and feed in bait stations. For best results, make sure there is a continuous supply of bait until feeding stops. It usually takes 5 days or more once the rats start feeding for them to succumb. During the baiting process, dispose of dead rodents by burying them, or placing them in a marked plastic bag, and putting them in the rubbish for incineration at the dump. Use gloves and wash hands thoroughly after handling dead rodents, traps, or bait stations. Additionally, poisoned rats often die in inaccessible locations within a building, leading to persistent and unpleasant odours, so rodent proof the building before you use toxic baits outside. A successful bait formula that can be administered in a Bayer Rodent Bait station can be made up as follows: Dilute 1 part ***Racumin*** (made by Bayer) in 30-40 parts water (8g/l). Dilute 1litre of lecol pinenut with 7 litres of water, and add 40ml of Racumin. Keep this available for 16 days and refill as required. This is a first generation poison, so animals need multiple feeds to die. It will therefore not affect predators feeding on them. Rats drink every 24 hours, therefore bait after dark, in secluded spots to minimize contaminating other small animals. Remove bait stations during the day.

17.3.7 COCKROACHES

17.3.7.1 General information

Cockroaches may become pests in any structure that has food preparation or storage areas. They contaminate food and eating utensils, destroy fabric and paper products, and impart stains and unpleasant odours to surfaces they contact. They may transmit bacteria that cause food poisoning. The skin shed by cockroaches may cause asthma in children if inhaled. In South Africa, the exotic German cockroach is the main pest. Cockroaches are common in kitchens and bathrooms because they favour warm, humid areas that are close to food and water. The German cockroaches are the fastest reproducing of all the pest cockroaches and a single female and her offspring can produce over 30,000 individuals in a year. Egg laying occurs more frequently during warm weather. The female carries around a light tan egg case (6mm long) for about 28 days (1-2 days before the eggs hatch), when she drops it. Each case contains about 30 young and a female may produce a new egg case every few weeks. Young or immature cockroaches undergo gradual metamorphosis resembling the adult visually and in feeding habits, but do not have fully developed wings and are not reproductively active. Cockroaches are white after moulting, but their outer covering thickens and darkens as it hardens within hours. Cockroaches are nocturnal; hiding in dark, warm areas especially narrow spaces where surfaces touch them on both sides.

17.3.7.2 Management

Cockroaches are tropical and like warm hiding places with access to water. If cockroaches have access to food, baits will have limited effect. Sprays lone will also not be effective against cockroaches. An integrated approach is required. The keys to controlling cockroaches are sanitation and exclusion: cockroaches will continue to re-invade as long as the habitat is suitable for them (i.e. available food, water, and shelter). In addition to sanitation and exclusion, baits can be effective. Sprays or dusts that are registered for use on cockroaches may temporarily suppress populations, but they do not provide long-term solutions.

17.3.7.2.1 Mechanical control

Sanitation: Cockroaches thrive where food and water are available to

them. Even tiny amounts of crumbs or liquids caught between cracks provide a food source

Important sanitation measures include:

- Store food in insect-proof containers such as glass jars or sealed plastic containers
- Keep rubbish in containers with tight fitting lids. Remove rubbish, newspapers, magazines, piles of paper bags, rags, boxes, and other items that provide hiding places. Do not store rubbish indoors or close to the house.
- Eliminate plumbing leaks and correct other sources of free moisture. Increase ventilation where condensation is a problem.
- Vacuum cracks and crevices to remove food and debris. Be sure surfaces, where food or beverages have been spilled, are cleaned up immediately. Vacuuming also removes cockroaches, shed skins, and egg capsules. Removing cockroaches reduces their numbers and slows development.
- Trim shrubbery around buildings to increase light and air circulation, especially near vents, and eliminate ivy or other dense ground covers near the house as these may harbour cockroaches.
- Remove trash and stored items such as piles of wood that provide hiding places for cockroaches from around the outside of buildings.

Exclusion and removal of hiding places: During the day, cockroaches hide in cupboard cracks, stoves, crawl spaces, outdoor vegetation, and many other locations. They invade kitchens at night. Limiting hiding areas or avenues of access to living areas is an essential part of an effective management strategy. False-bottom cupboards, hollow walls, and similar areas are common cockroach refuges. Prevent access to the inside of buildings through cracks, conduits, under doors, or through other structural flaws:

- Seal cracks and other openings to the outside
- Look for other methods of entry such as from items being brought into the building, especially appliances, furniture, and items that have been in storage.

- Look for egg sacs glued to the undersides of furniture, in the refrigerator, and other appliance motors, boxes, and other items. Remove and destroy any that are located.
- Locate and seal cracks inside the treatment area where cockroaches can hide.

17.3.7.2.2 Chemical control

Insecticides are most effective in controlling cockroaches when combined with sanitation and exclusion practices that limit the cockroaches' ability to establish or re-invade; **chemical control alone will not solve the problem.** If insecticides are used, they must always be used with extreme care. Indoor chemical control is warranted only in the cockroach population is established but not for an incidental intruder or two.

- ***Fendona*** (Made by Cyanamid, active ingredient = Alpha-cypermethrin) should be diluted at the specified rate and sprayed onto surfaces frequented by cockroaches. Use a higher rate for longer residual action or where infestation is severe. Repeat when necessary.
- ***Staryside*** (made by Bayer, active ingredient = Triflumuron) should be diluted at 10ml per 10l, and applied simultaneously (in the same sprayer) with the adult treatment. In summer, it can be effective for up to 3 months, and in winter, up to 6 months.
- ***Premise cockroach bait gel*** (made by Bayer, active ingredient = imidacloprid). Use in pistol gun, apply in small cracks and holes. Very effective and long lasting. Most insecticides used in baits are slow-acting; cockroaches quickly learn to avoid fast acting ones.

Consequently, an effective bait programme does not give immediate results but may take 7 days or longer. Baits can be quite effective for long-term control of cockroaches unless the cockroaches have other food sources available to them. Baits to not control all cockroaches equally. Female cockroaches with egg cases do very little feeding and avoid open spaces; consequently, they are less likely to be immediately

affected by bait. Baits do not attract cockroaches, so place them near hiding places or where cockroaches are likely to encounter them while foraging. Bait can also be placed near faecal specks and droppings of cockroaches, which contain a natural aggregation pheromone. Look for these faecal specks and droppings under kitchen counters, behind kitchen drawers, and in the back on cabinets. The German cockroach has developed resistance (or tolerance) to many insecticides used for their control. If cockroaches seem to be unaffected a day after the application of the spray, a different material or strategy may be required. After a cockroach control programme has been started, evaluate the effectiveness visually. If populations persist, re-evaluate the situation. Look for other sources of infestation, making sure all possible entryways are blocked, be certain that food and water sources are eliminated as much as possible, and continue sealing and eliminating hiding places. When populations are under control, continue monitoring on a regular basis to make sure re-infestation is not taking place. Maintain sanitation and exclusion techniques to avoid encouraging a new infestation. If severe re infestations continue to occur, consider having the infested area modified or remodeled to reduce the amount of suitable habitat for cockroaches.

17.3.8 FISH MOTHS

17.3.8.1 General information

Fish moths hide during the day but are active at night looking for food and water. Fish moths eat cereals, moist wheat flour, books, paper on which there is glue or paste, wall paper, bookbindings, and starch in clothing. They can live for several months without food. Fish moths live and develop in damp cool places particularly in basements and laundry rooms.

17.3.8.2 Management

17.3.8.2.1 Mechanical control

To keep fish moths away, keep basements, laundry rooms, and bathrooms (especially shower stalls) clean and dry. Plug or putty holes or spaces around pipes. Repair leaks and drips in plumbing. Clean out closets periodically. Collections of magazines, papers, and books

provide food for them. Move books around in bookcases occasionally. Keep foods in containers with tight lids.

17.3.8.2.2 Chemical control

Fish moths can be controlled using the same chemicals used to control cockroaches. A properly and thoroughly applied insecticide will show results in a few weeks. If control is not achieved in 2 or 3 weeks, fish moths are probably coming from untreated areas. Seek these areas out for treatment and also eliminate water sources. Large populations of fish moths cannot be controlled unless their water sources are eliminated. Chemical control advised for cockroaches will also work on fish moths, no additional pesticides are necessary.

17.3.9 BEDBUGS

17.3.9.1 General information

Female bedbugs lay from 200-500 eggs (in batches of 10 – 50) on rough surfaces such as wood or paper. Eggs are covered in a glue and hatch in about 10 days. There are 5 progressively larger nymph stages each requiring a single blood meal before moulting to the next stage. The entire life cycle from egg to adult requires anywhere from 5 weeks to 4 months, depending on temperature. Nymphs and adults generally feed at night and hide in crevices during the day. Common hiding places include seams in mattresses and box springs, cracks in bed frames, under loose wallpaper, behind picture frames, and inside furniture and upholstery. Bed bugs can go without feeding for 80-140 days; older stages can survive longer without feeding than younger ones. Adults have survived without food for as long as 550 days. A bed bug can take 6 times its weight in blood and feeding can take 3 – 10 minutes. Adults live about 10 months and there can be 3-4 generations of bed bugs per year. In addition to leaving a bite wound on their hosts, bed bugs have stink glands that leave odours; they also leave faecal spots on bed sheets and around their hiding places.

17.3.9.2 Management

Infestations of bed bugs can be detected by looking for their faecal spots, egg cases, and shed skins under wallpaper, behind picture frames, and inside

cracks and crevices near beds.

17.3.9.2.1 Mechanical control

Indirect measures can go a long way in controlling bed bugs: keep bats and birds away from houses; clean furnishings, launder bedding and mattress pads and stem-clean mattresses; and prevent bed bugs from getting into homes by removing debris from around the house, repairing cracks in walls, and caulking windows and doors. Simple physical control methods include standing the legs of beds in soapy water, coating the legs with petroleum jelly or double-sided sticky tape. Bed bugs cannot climb polished glass or metal easily and they don't fly. Legs of beds can also be placed inside glass jars or metal cans. Heating to 50 degrees C, or freezing to below 0 will kill most bed bugs.

17.3.9.2.2 Chemical control

Doom dual Action Fogger Insecticide (made by Robertson's homecare, and contains pyrethroid active ingredients) lasts for about 6 months. Also kills adult cockroaches. Ignite and let smoulder for 2-3 hours.

17.3.10 TERMITES

17.3.10.1 General information

Termites are small white, tan, or black insects that can cause severe destruction to wooden structures. They belong to the insect order Isoptera, dating back more than 100 million years. Although many people think termites have only negative impacts, in nature they make positive contributions to the world's ecosystems. Their greatest contribution is the role they play in recycling wood and plant material. Their tunneling efforts also help to ensure that soil is porous, contains nutrients, and is healthy enough to support plant growth. Termites are very important in the Sahara desert where their activity helps to reclaim soils damaged by drying heat and wind and overgrazing by livestock. Termites have become a problem where they consume structural timber. Termites may also damage utility poles, food, books, and household furniture. Termites are social and can form large nests or colonies consisting of very different looking individuals (castes). Physically, the largest individual is the queen. Her function is to lay eggs, sometimes thousands in a single

day. A king is always at her side. Other individuals have large heads with powerful jaws, or a bulblike head that squirts liquid. These individuals are called soldiers. The largest groups of termites in a colony are the workers. They work long hours tending to the queen, building the nest, or gathering food. While other species of social insects have workers, termites are unique in that they have both male and female workers. Termites can be long-lived: queens and kings can live for decades while individual workers can survive several years.

17.3.10.2 **Management**

Successful termite management requires special skills including a working knowledge of building construction and an understanding of termite biology. An integrated programme is required to manage termites. Combine methods such as modifying habitats, excluding termites from the building by physical and chemical means, and using mechanical and chemical means to destroy existing colonies.

17.3.10.2.1 **Inspection***:* Before beginning a control program, thoroughly inspect the building. Verify that there are termites, identify them, and assess the extent of their infestation and damage. Look for conditions in and around buildings that promote termite attack, such as excessive moisture or wood in contact with the soil.

17.3.10.2.2 Mechanical control

Prevention*:* Building design may contribute to termite invasion. Keep all substructural wood at least 30 cm above the soil beneath the building. Alternatively, sink subterranean wood in concrete as a barrier against termites. Identify and correct other structural deficiencies that attract or promote termite infestations. Keep foundation areas well ventilated and dry. Reduce chances of infestation by removing or protecting any wood in contact with the soil. Look for and remove tree stumps, stored wood, untreated fence posts, and buried scrap wood near the structure that may attract termites. Foundation sand barriers can be used for subterranean termite control. Sand with particle size in the range of 10-16 mesh, is used to replace the soil around the foundation of a building. Subterranean termites are unable to construct their tunnels through the sand and

therefore cannot invade wooden structures resting on the foundation.

17.3.10.2.3 Chemical control

Pre-infection treatment of wood: Wood used in foundations and other wood in contact with the soil may be chemically treated to help protect against termite damage in areas where building designs cannot be altered or concrete or sand cannot be used. Treated wood is toxic to termites and discourages new kings and queens from establishing colonies in it. If susceptible wood is used above the treated wood, subterranean termites can build their shelter tubes over chemically treated wood and infest untreated wood above. Use only “exterior grade” treated wood for areas that are exposed to weather; otherwise the chemical that is in the wood may leach from the wood. All topical (applied to wood by painting on) treatments that will be exposed to weather must also have a sealer coat to prevent leaching into the soil following rain. Also, because they contain pesticides, disposal of treated wood requires special handling. CCA (chromated copper arsenate) can be used to treat wood prior to construction. It gives the wood a green tint. Although this is a natural poison, it will not leach much into the soil. **Creosote** is a natural treatment. Wood can be soaked in a hot bath (almost boiling) of creosote until it has penetrated 1/3 of the way into the wood.

Post-infection treatment of wood: Subterranean termites in structures cannot be adequately controlled by fumigation, heat treatment, or freezing because the reproductives or nymphs are concentrated below ground level in structures out of reach of these control measures. The primary methods of controlling these termites are the application of insecticides. Treating infested wood in a structure requires drilling and injecting chemicals into the wood to reach the colony. Alternatively, the infested wood can be sprayed liberally with the insecticide (**Premise**). Spray wood at least 1 m above ground level, and spray the soil all around the infected wooded structure. The use of insecticides should be supplemented with the destruction of their access points or nests. To facilitate control of subterranean termites, destroy their shelter tubes whenever possible to interrupt access to wooden substructures and to open colonies to attack from natural enemies such as ants.

Treatment of soil: Insecticides are applied to the soil either in drenches

or by injection. Special hazards are involved when applying insecticides to the soil around and under buildings. Applications in the wrong place can cause insecticide contamination of plumbing used for water under the treated building. Soil type, weather, and application techniques influence the mobility of insecticides in the soil. Soil applied insecticides must not leach through the soil profile to contaminate groundwater. **Premise** (made by Bayer) is effective in combating subterranean termites. It is expensive but very concentrated and long lasting. One application should be effective for up to 6 years. Dilute as specified (350g/l) and apply in a trench around the building along foundations (6 x 6 inches wide). For existing buildings, apply 3 – 6 l per linear meter (trench treatment). Where possible, treat similarly treat inside along outer foundation walls (suspended floors), of, if impossible, (solid floors), drill through floor adjacent to our foundation walls, flood soil below by injecting emulsion through holes and seal. Ensure that soil along the whole length of the foundation walls is thoroughly treated. For new buildings, prior to construction, apply as an overall drench to soil under floor area at 5l per square meter. Use higher rate on heavy (clay e.g. basalt) soils. Apply to bottom of foundation and service trenches, and to soil on both sides of outer foundation walls at 6l per linear meter (trench treatment). For infested wooden structures, apply Premise in a spray (mix as above) liberally to the infested wood, and surrounding soil.

17.3.11 ANTS

17.3.11.1 General information

Ants are among the most prevalent pests in the household. They are found in any environment where they have food and water. Once ants have established a colony inside or near a building, they may be difficult to control. On outdoor (and sometimes indoor) plants, ants protect and care for honeydew-producing insects such as aphids, increasing damage from these pests. Ants also perform many useful functions in the environment, such as feeding on other pests (e.g. Fleas, caterpillars, and termites), dead insects, and decomposing tissue from dead animals. Ants are close relatives of bees and wasps, and are often confused with termites. Three main characteristics distinguish ants from termites:

- The ant's abdomen is constricted where it joins the thorax, giving it the appearance of having a thin waist; the termite's abdomen is broad where it joins the thorax.

- The ant's hind wings are smaller than its front wings; the termites' front and hind wings are about the same size (shortly after their flights to find new colonies, both ants and termites remove their wings so wings may not always be present).

- Winged female ants and worker ants have elbowed antennae; the termite's antennae are never elbowed.

Ants undergo complete metamorphosis, passing through egg, larval, pupal, and adult stages. Larvae are immobile and wormlike and do not resemble adults. Ants are social insects with duties divided among different types or castes of adult individuals. Queens conduct the reproductive functions of a colony and are larger than any other ants: they lay eggs and sometimes participate in the feeding and grooming of larvae. Female workers, who are sterile, gather food, feed, and care for the larvae, build tunnels and defend the colony; these workers make up the bulk of the colony. Males do not participate in colony activities; their only apparent purpose is to mate with the queens. Few in number, the males are fed and cared for by the workers. Inside a building, household ants feed on sugars, syrups, honey, fruit juice, fats, and meats. Long trails of thousands of ants may lead from nests to food sources, causing considerable concern among building occupants. Outdoors they are attracted to sweet, sticky secretions, or honeydew, produced by aphids. Ant usually nests in soil; nests are often found next to buildings, along sidewalks, or in close proximity to food sources such as trees and plants that harbour honeydew producing insects. They also construct nests under boards, stones, tree stumps or plants, and sometimes under buildings or other protected places. Ants enter buildings seeking food and water, warmth and shelter, or a refuge from dry, hot weather or flooded conditions. They may appear suddenly in buildings if other food sources become unavailable or weather conditions change. A new colony is typically established by a single newly mated queen. After weeks or months of confinement underground, she lays her first eggs. After the eggs hatch, she feeds the white, legless larvae with her own metabolized wing muscles and fat bodies until they pupate. Several weeks later the pupae transform into sterile female adult workers, and the first

workers dig their way out of the nest to collect food for themselves, for the queen (who continues to lay eggs), and for subsequent broods of larvae. As numbers increase, new chambers and galleries are added to the nest. After a few years, the colony begins to produce winged male and female ants, which leave the nest to mate and form new colonies.

17.3.11.2 **Management**

Ant management requires diligent efforts and the combined use of mechanical, cultural, sanitation, and sometimes chemical methods of control. It is unrealistic and impractical to attempt to eliminate ants from an outdoor area. Focus your management efforts on excluding ants from buildings and eliminating their food and water sources. Become aware of the seasonal cycle of ants in your area and be prepared for annual invasions by sealing the building in time.

17.3.11.2.1 Mechanical control

Exclusion and sanitation: To keep ants out of buildings, seal cracks and crevices around foundations that provide entry from the outside, using silicon. Ants prefer to make trails along with structural elements, such as wires or pipes, and frequently use them to enter and travel within a structure to their destination. Indoors, eliminate cracks and crevices wherever possible especially in kitchens and other food preparation and storage areas. Store attractive food items such as sugar, syrup, honey, and other sweets in closed containers that have been washed to remove residues from outer surfaces. Rinse out empty soft drink containers and remove them from the building. Thoroughly clean up grease and spills. Do not store rubbish indoors. Look for indoor nesting sites such as potted plants. If ants are found, remove containers from the building and submerge the pot for 20 minutes in standing water that contains a few droplets of liquid soap. Ant nests may be associated with plants that support large populations of honeydew producing insects. Avoid planting such trees and shrubs near buildings.

17.3.11.2.2 Chemical control

Coopex ant dust (made by AgrEvo) is the only chemical that is legal to use against ants in National Parks. Dust freely along runs and around

nests, repeating where necessary. ***Fendona*** (see cockroach control) is also an effective and approved chemical used in ant control. **This, however, is for use on man-made structures only, not for application to vegetation/in gardens, etc**.

17.3.12 BEES

Bees play a vital role in the functioning of the ecosystem.

17.3.12.1 Management

17.3.12.1.1 Mechanical control

Bees can be smoked out in most cases. Once the bees have been removed, (either by smoke or pesticide), ***Coltar*** (carbolic acid) can be sprayed onto the area to get rid of the smell of the pheromones. If not removed, the pheromones could attract the bees back to the same place. ***Jays fluid*** can be applied to the area after the Coltar to further clean it. These can then be washed off using soapy water. **Brown vinegar** is a bee repellent. Once bees have been removed, it can be applied directly to the area. Pieces of cloth swabbed in brown vinegar can be left in the area to repel the bees.

17.3.12.1.2 Chemical control

It not policy for pesticides to be used to remove bees from any man-made structure except in extreme circumstances. If the bees are posing a threat to humans and the option of smoking them out is not viable, the pesticide *Raidyard* can be used to kill the bees. This can be sprayed from 6m away to avoid danger to the person applying the pesticide. *Permethrin* spray is also a good repellent, and can be sprayed on the cleaned area to repel the bees from re-occupying the space.

17.3.13 SPIDERS

17.3.13.1 General information

Unlike mosquitoes, spiders do not seek people in order to bite them. Generally a spider doesn't try to bite a person unless it is being squeezed, lain on, or

simply provoked to defend itself. Moreover, the jaws of most spiders are so small that the fangs cannot penetrate the skin of an adult person. Sometimes when a spider is disturbed in its web, it may bite instinctively because it mistakenly senses an insect has been caught. Spiders are primarily beneficial and their activities should be encouraged in the garden. Pesticide control is difficult and rarely necessary. The best approach to controlling spiders in and around the home is to remove hiding spots for reclusive spiders and regularly clean webs off the house with brushes and vacuums.

17.3.13.2 **Management**

17.3.13.2.1 Mechanical control

Spiders may enter houses and other buildings through cracks and openings. They may also be carried in on plants, wood, and boxes. Regular vacuuming or sweeping of windows, corners of rooms, storage areas and basements, and other seldom used areas helps remove spiders and their webs. Vacuuming spiders can be an effective control technique because their soft bodies usually do not survive this process. Indoors, a web on which dust has gathered is an old web that is no longer being used by a spider. Individual spiders can also be removed from indoor areas by placing a jar over them and slipping a piece of paper under the jar that then seals off the opening of the jar when it is lifted. To prevent spiders from coming indoors, seal cracks in the foundation and other parts of the structure and gaps around windows and doors. The good screening will keep out spiders but will also keep out the insects that attract the spiders in the first place. In indoor storage spaces, place boxes off the floor and away from walls, where possible, to help reduce their usefulness as a harbourage for spiders. Sealing the boxes with tape will prevent spiders from taking up residence within. Clean up the clutter in garages, sheds, basements, and other storage areas. Outdoors, eliminate places for spiders to hid and build their webs be keeping the area next to the foundation free of trash, leaf litter, heavy vegetation, and other accumulations of materials. Trimming plant growth away from buildings will discourage spiders from first taking up residence near the structure and then moving indoors. Outdoor lighting attracts insects, which in turn attracts spiders. If possible, keep lighting fixtures off structures and away from windows and doorways. Sweep, mop, hose,

and vacuum spiders and webs off buildings regularly.

17.3.13.2.2 Chemical control

Insecticides will not provide long-term control and should not generally be used against spiders. Pesticide control of spiders is difficult unless you actually see the spider and are able to spray it. If you spray a spider, it will be killed only if the spray lands directly on it; the spray residual does not have a long-lasting effect. This means a spider can walk over a sprayed surface a few hours after treatment and not be effected. Control by spraying is only temporary if not accompanied by housekeeping. It is just as easy and much less toxic to catch and remove the spider from the building, or to simply vacuum it up.

17.3.14 SCORPIONS

17.3.14.1 General information

Scorpions are nocturnal, predatory animals that feed on a variety of insects, spiders, and centipedes. Although they have two eyes in the center of the head and usually from two to five more along the margin on each side, they do not see well and depend on touch. Scorpions that hide under stones and other objects during the day tend to carry their stinger to one side, whereas burrowing scorpions hold their stinger up over their backs. Scorpions grow slowly. Depending on the species, they may take between 1-6 years to reach maturity. On average, scorpions may live 3-5 years, but some species can live as long as 10 – 15 years. Scorpions have an interesting mating ritual that may last several hours, with the male grasping the female's pincers in his and leads her in a courtship dance. The male then deposits a sperm packet and manoeuvres the female over it. The sperm packet is drawn into the females opening located near the front on the underside of her abdomen. The female stores the sperm packet, and the sperm is later used to fertilize the eggs. After mating, unless he is quick and able to escape, the male is often eaten by the female. Once impregnated, the gestation period may last several months to a year and a half, depending on the species. A single female may produce 25-35 young. Scorpions are born live and the young climb onto their mothers back. The young remain on their mother's back until the first moult. They assume an independent existence once they leave their mothers back.

Scorpions moult five or six times until they become fully grown adults. Scorpions generally hunt at night using their stinger to paralyze prey. However, if the scorpion is strong enough to overpower its prey, instead of injecting venom, it will simply hold the prey and eat it alive. This conserves venom which can take up to 2 weeks to regenerate, during which time the scorpion's main defence is inactive. Outside during the day, scorpions hide in burrows or debris, under wood, stones, or tree bark, and under floors of buildings in crawl spaces. Indoors, scorpions may be found in cracks and crevices of woodwork, behind baseboards, in closets and attics, and inside walls. Scorpions gain entry into buildings through poorly sealed doors and windows, cracks in foundations, vents that are not properly screened, and through plumbing and other openings.

17.3.14.2 **Management**

17.3.14.2.1 Mechanical control

To prevent stinging encounters with scorpions, do not leave shoes, boots, clothing items, or wet towels outdoors where scorpions can hide. Shake all clothing/bed linen and towels before use. Portable UV lights can be used to detect scorpions as they glow luminously under this light and are easily seen. Outdoor lights attract insects and thus the scorpions that feed on insects. Yellow outdoor lighting is less attractive to insects and is recommended in areas where scorpions are prevalent. The first strategy for control is to modify the area surrounding a house because scorpions are difficult to control with insecticides. Use the following checklist to protect a building:

a) Clean the area by removing all rubbish, logs, stones, brick, and other objects from around the foundation of the building.

b) Prune overhanging tree branches away from the house because they can provide a path to the roof for scorpions.

c) Install weather stripping (rubber seal) around loose fitting doors, between doors and floors, and around windows.

d) Seal all eves, pipes, and other cracks that allow entrance into the home.

e) Make sure window screens fit tightly in the window frame and keep them in good repair.

How to safely capture a scorpion

Scorpions can be captured by placing a medium sized jar over the scorpion and sliding a sheet of heavy paper under the jar, trapping the scorpion. With the sheet of paper securely over the mouth of the jar, invert the jar and the scorpion will fall to the bottom of the jar. Scorpions can also be picked up safely with forceps (10-12 inches) or with other long mechanical devices made for picking up small objects.

17.3.14.2.2 Chemical control

Chemical control of scorpions is not recommended. Apart from the unnecessary negative effects on the environment, pesticides are not very effective against scorpions as they hide in cracks and crevices during daylight hours. Adult scorpions are difficult to kill with pesticides because of their larger body size and thicker cuticle.

17.3.15 **SAFE AND EFFECTIVE PESTICIDE USE**

All pesticides are considered to be potentially poisonous and must be handled accordingly. On the label of each remedy, the minimum requirements for safe handling are given. In the case of many pesticides it is sufficient to follow a few basic rules. These may be summarized as follows:

a) Wear rubber gloves when pouring or measuring a concentrate before dilution. This should be done in such a manner that any fumes or dust will drift away from the applicator. Immediately wash off any spillage on the body with soap and lots of water.

b) Wear an overall or other old clothing that will cover most of the body. These should be regularly washed especially when applying pesticide over an extended period of time. When applying, always keep out of the spray drift or dust cloud.

c) Never smoke, eat or drink during application. Wash at least the hands and face before doing so, during a break.

d) Take a bath after completing the application and change into clean clothes

never continue with another job while still wearing clothes contaminated by a pesticide.

e) In the case of highly poisonous pesticides it is imperative that additional precautions be taken. Special protective clothing in good repair, rubber gloves, and boots, headgear, goggles, and mask or respirator must be worn. The eyes and respiratory tract must be adequately protected.

17.4 REFERENCES

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18. ANNEXURE 7 – BAT MANAGEMENT GUIDELINES

18.1 Introduction and background

Nearly 80% of all bat species in South Africa occur within the National Parks. Of the 42 species recorded within the parks, four species are also listed as threatened and have Red Data status. Bats play an important role in the ecosystem in that they control insect numbers and also contribute towards the pollination and further propagation of various flowering plants. Mosquitoes are among the primary prey of many insectivorous bats and a thriving bat population can consume huge numbers of these potentially dangerous insects. Fruit eating bats on the other hand play a very important role in the pollination of certain fruit bearing trees and the dispersal of their seeds. Despite the above, people often view bats as household pests due to the unpleasant sounds, smells, and possible unhygienic conditions associated with bats roosting in the roofs of houses and accommodation units. With the development of rest camps, staff villages, and concession lodges in the National Parks, bats started colonizing many of these buildings as the thatched roofs, attics and eaves provided ample shelter and roosting sites. Unfortunately, this brought bats into conflict with people. Foreign and local visitors to the national parks often feel threatened by the presence of bats in their accommodation units and the noises, as well as the smells emanating from the bat urine and dung, often lead to complaints regarding quality and maintenance standards in our camps. In order to minimize the problem, bat colonies need to be evicted from the roofs of all accommodation units and houses and all buildings need to be sealed to prevent bat re-colonization. To achieve this may prove to be technically complicated, e.g. in thatched roofs where it is impossible to seal every crack between the thatch and wooden poles. The aim of this document is to provide practical guidelines on the removal of bats and to highlight preventative measures to be taken to minimize recolonisation by bats.

18.2 Management Options

Unfortunately, there are no quick-fix solutions to the bat problems experienced. To achieve any lasting measure of success both a preventative and crises management approach needs to be followed. Preventative management will necessitate a large scale and long term approach, whilst crisis management will focus on interim solutions to the most immediate problems. The Section Ranger from the area should be involved to ensure that no bats are injured and that conservation ethics are upheld during implementation.

18.2.1 Preventative Management (Long Term and Large Scale)

This approach is aimed at preventing bats from establishing new roosting sites in huts/chalets/houses not yet infested. Management action must therefore specifically be aimed at the systematic sealing of all uninhabited units to make them bat proof. This process must be completed before any evictions of bats can start from colonized units. If not, the evicted bat colony will just relocate themselves to the nearest unsealed units once removed. Preventative management thus requires a large scale approach necessitating proper planning and the cost-effective use of available funds and manpower. It remains the only long term solution to the bat problem within the park.

The suggested approach should be the following:

18.2.1.1 Phase 1: Seal – off all units not already occupied by bats

- Identify all structures that are not already colonized by bats and identify all possible bat entry points (usually where the roof and the wall meet).
- Systematically seal all possible entry points in each unoccupied unit using Sista Expanding Foam Filler (Henkel Product available at Mica). This process can take a couple of weeks and will necessitate proper planning between Technical Services and Hospitality staff.
- Expanding Foam Filler is both rodent and insect proof, easy to apply, and will cut down on the time needed to seal the units. Cement is the cheaper option and can be used, but it will crack over time and the bats will re-enter the unit.

18.2.1.2 Phase 2: Evict bats from units already colonized by them

- Ensure that all adjacent chalets/houses are sufficiently sealed before bat eviction start.
- Identify all the chalets/houses occupied by bats as well as the access points the bats use to gain entry.
- Ensure that no access is possible through the thatch/roof of the chalet/house to be sealed.

- Proceed to seal all possible access/exit points, but allow for at least one opening to be left unsealed to allow the bats to escape. If infection is severe allow for 2 or 3 exit points.

- Determine the roost site/s (the colony may have more than 1) within the chalet/house and apply deterrent solution.

- Jeyes fluid should be administered as a deterrent by spraying or painting it onto rafters and beams. Jeyes fluid is a strong smelling substance and the unit will have to be ventilated after application.

- Do not apply the deterrant directly to the roost site. This is merely general practice to avoid any unknown complications.

- The colony should be sufficiently disturbed and leave after the first application, but one may have to apply continuously to remove all individuals.

- If the situation calls for removal by hand, the Section Ranger should be present. Removal by hand should be done with discretion and the utmost care must be taken not to injure any bats.

- The structure must be sealed immediately after exclusion to prevent the bats from returning to the site after the deterrent's smell has dissipated. Sealing should be done so that the entire perimeter of the structure is secure.

- The structure must be monitored subsequent to exclusion and sealing to ensure that the process was successful and bats do not re-enter.

Eviction should preferably be implemented from May to October during the non-breeding season, but special allowance will be given to individual situations outside of this period. If bats have to be evicted from November to April, special care must be taken to ensure safe removal. If the colony that has infested the structure does not have young, then one can follow the above procedure. However, if the colony has young, then it is best to remove the entire colony by hand. All efforts must be made to ensure that the entire colony is caught and moved together. The group should be moved together to a new site, preferably not far from their original roost. The structure should then be

sealed as discussed above.

The exclusion of bats can be avoided during breeding season through continual management of the structures throughout the year.

18.2.1.3 **Phase 3 - Monitor and re-evaluate all the units on a regular basis and ensure that systematic maintenance is done to seal/close any new holes or entry points that might appear.**

Squirrels might pose a limited problem even though bats are not likely to use these entry points. However to ensure that these do not become problem areas these sites must be sealed too as soon as they are located. Many Bat experts and Bat Interest Groups are of the opinion that these areas are not true points of concern, however, there is still a belief that if these sites are left long enough Bats will use them.

18.2.2 **Crises Management (Short Term and Small Scale)**

This approach requires immediate intervention and only provides an interim solution. It is aimed at immediate eviction of bats from a unit and should not take more than 1 to 2 days to complete. No phases are involved, just systematic exclusion:

- Locate the roost site of the bat colony within the hut/chalet/house.
- Spray detergent (Jeyes fluid) on rafters/beams around the roosting site. This will disturb the colony sufficiently and the bats will vacate the unit within a day or two.
- If any bats remain, remove them by hand using gloves. Release the bats at an alternative site nearby only once the unit where they were evicted from has been sealed properly. Approach the Section Ranger for assistance.
- Once all bats have vacated the unit, immediately seal all openings and possible bat entry points with Sista Expanding Foam Filler.

18.3 **Post-Removal Treatment of Roosting Sites**

Once all bats are removed from a unit and the entry points sealed, all roosting sites must be cleaned and disinfected.

The following approach is recommended:

- Mix 10ml Starycide (Bayer) with 10l of water and add 80ml Responsar (Bayer). Do not exceed the prescribed dosages and always wear protective clothing, gloves, and a mask.
- Spray this mixture liberally over the bat faeces and sediment in the roof in order to kill all larvae and other insects.
- Wait for 30 minutes and then remove the faeces and sediment and clean the roof.
- Disinfect the area with the disinfectant Virkon-S to kill all viruses and bacteria.

18.4 **Responsibility Matrix**

RESPONSIBLE PERSONS	**ACTIONS**	**TIME FRAMES**
Hut Attendants and Supervisors	➢ Conduct daily inspection of huts/accommodation units for the presence of bats. ➢ If any signs are found that bats are starting hut/accommodation unit, immediately report it to supervisor and camp hospitality staff	Daily
Hospitality and Duty Managers	➢ Conduct regular a-hoc inspections to ensure that units are bat proof and that scheduled maintenance is done to prevent bat infestation. ➢ Ensure that all reports and complaints regarding bat problems are pointed	Ad-hoc Immediate
Maintenance officers	➢ Conduct regular inspections of all facilities and implement preventative measures. ➢ Systematically seal all units to make them bat proof ➢ Evict bats from units and seal all entry/exit points in accordance with these guidelines. ➢ Once bat eviction completed, clean and disinfect the units in accordance with these guidelines.	Bi-Monthly On-going Immediate Immediate
Section Rangers	➢ Monitor and oversee the eviction of bats to ensure safe sand ethical handling in accordance with these guidelines.	As required

RESPONSIBLE PERSONS	ACTIONS	TIME FRAMES
Technical officers	➢ Conduct random inspections of all facilities to ensure maintenance are done timeously and in accordance with these guidelines. ➢ Partakes in inspections with Hospitality staff to ensure that units are bat proof and that maintenance is done effectively	Ad-hoc and Random Bi- monthly ➢
Corporate Technical Services	➢ Monitor and conduct spot checks to ensure maintenance procedures and programmes are in accordance with these guidelines.	Ad hoc and Random

18.5 **Safety guidelines when handling bats**

- Don't handle bats unless you have to;
- Always wear gloves when handling bats to prevent being bitten;
- If bitten or scratched, use soap and iodine to disinfect wounds.
- Immediately seek medical attention if rabies infection is suspected and also contact the Veterinary Institute near your location for assistance. The number and address below can be contacted as an initial step of enquiry in order to track one closer to your area.

Address:

Rabies Laboratory

Private Bag X5

Onderstepoort 0110

South Africa

Tel: (012) 529 9440 Fax: (012) 529 9390

19. ANNEXURE A – GRNP PARK MANAGEMENT PLAN AND CONSERVATION DEVELOPMENT FRAMEWORK