

# PILANESBERG NATIONAL PARK MANAGEMENT PLAN

**Draft for discussion  
February 2015**



**North West Parks & Tourism  
Board**

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## Authorisation

This Management plan is hereby internally accepted and authorised as the legal requirement for managing Pilanesberg National Park as stated in the Protected Areas Act

Dated September 2015

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Park Manager – **Johnson Maoka**

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Regional Manager – **TO BE COMPLETED**

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Chief Executive Officer: NWP&TB – **TO BE COMPLETED**

### Recommended to North West Parks and Tourism Board

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Chairperson of the NWP&TB - **TO BE COMPLETED**

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Date

### Recommended to the NW Provincial Department of Rural, Environment, and Agricultural Development

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MEC - **XXX TO BE COMPLETED**

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Date

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# 1 The Management Plan

This Management Plan is a requirement of the National Environmental Management: Protected Areas Act [Act 57 of 2003] (NEM: PAA), in particular Sections 39 to 43 has relevance. In addition there are National Guidelines for the Development of a Management Plan for a Protected Area in Terms of NEM: PAA developed by the Department of Environmental Affairs and a Draft North West Province Norms and Standards: Protected Area Management Plans. This Plan is compliant with these Standards and Regulations and is a revision of earlier 2006 and 1994 Plans.

Pilanesberg National Park was proclaimed by the National Parks Act, No 24 of 1987 under the Statutes of the Republic of Bophuthatswana and deemed to have come into effect on 1 April 1984. According to the Proclamation Diagram done in 2003 it measures **48 028.73** ha in extent.

## 1.1 The purpose of this Plan

This Plan provides a policy framework for the North West Parks and Tourism Board (NWP&TB) to manage Pilanesberg national park.

The layout is as follows:

- The first Section of the Management Plan defines the **Context which was applied in developing the Primary and Secondary Objectives** for the Reserve. The subsequent Sections set out Policies, Guidelines and Activities that contribute to achieving these Objectives, which ideally should not change significantly over time; these define the strategic direction for management. However the focus reflected in these interventions must mirror the current prevailing political, economic and social conditions. The most important at the time of developing this Plan are listed and explained in a **Threats and Opportunities** analysis. These will characterize both the Actions required by management and the Priority of these Actions in terms of allocation of resources. These Threats and Opportunities may be modified and adapted as the need arises, but any significant deviation requires the approval of the CEO and/or the Board depending on the nature and extent of the change;
- Each subsequent Section, may contain the following:
  - A **Context** for the Section or Subsection if required. This describes the background which informs the subsequent Policies, Guiding Principles and Activities;
  - A **Policy** which broadly describes the parameters around which decisions will be made;
  - **Guiding Principles**, these are the guidelines or questions that are applied when making management decisions. They may be arranged in a hierarchical order, which would then be numbered with higher numbers carrying higher weighting in a decisions matrix;
  - **Actions** that may be required to achieve the Objectives. Not all Sections or Subsections may have Actions, as some merely provide a framework for decision making.
  - These Actions are detailed in a separate **Activity Plan** with an associated **Costing** (these two items are not included in this Plan, only summaries. They are separate documents including an Excel model). The model is constructed to a high level of detail, which implies cost estimates are presented to the last Rand, in reality these may need to be rounded up to the closest thousand or even 10 thousand Rand. The Activity Plan sets out in more detail the specific activities which are required to achieve the desired output and who is responsible for achieving these. The Costing provides details on the allocation of specific resources including different grades of staff and their time, vehicles type (distance or hours), special equipment and other specific items to achieve the Activity. These can generate activity based budget estimates but they exclude fixed overheads, and provision for replacement of equipment. Income is also estimated including any assumptions used to estimate it. These are then all summarised into a consolidated budget summary. All the costs and income are NOT adjusted for inflation and because the budget extends over 5 years (and longer



for some programmes) it will need to be adjusted accordingly to reflect the effects of inflation on the costs and income.

As with the management of many Protected Areas, budgets may not always be sufficient to cover all the Activities to the extent to which they may need to be undertaken. In addition decision-making is often limited by a lack of knowledge, especially about the ecosystem, or unforeseen circumstances, which suddenly arise, for example the recent sudden surge in rhino poaching. To assist management in this task, risk<sup>1</sup> must be assessed. This includes Threats (current or future), which the system faces, and Opportunities, which may arise. These must be constantly monitored and screened. The most important at the time of drafting of this Plan are identified in Threats and Opportunities Section. However the dynamic nature of these means they must be continually reviewed and these may therefore change during the currency of this Plan.

Threats and Opportunities must underpin management decision-making. These must therefore be properly identified, quantified and ranked. To do this management must continually assess and screen the prevailing social, economic, political and physical environment for Threats and Opportunities. Once identified their likelihood or probability of occurrence must be assessed together with the impact if they do occur. Although probability of occurrence is a useful tool, it often deals inappropriately with so called 'Black Swan Events' (Taleb, 2007). These are highly improbable but have a significant effect when they occur. In the environmental context they are often relevant and must also be considered.

When assessing risk, alternative mitigation measures must be explored and their costs estimated. These must then be balanced against the possible impact or consequence. This is probably the most critical process in management as it underpins the prioritisation of management Actions in this Plan. Management must always document their decision making process, stating their logic and listing alternatives, which they explored. This will not prevent bad decisions but it will improve the process.

The Actions that have been identified in the various Sections of this Plan will be awarded a priority based on those identified in the Threats and Opportunities Section of this Plan. The Prioritisation of the Activities and associated Costing (or budget) has therefore been graded into three categories, these are:

1. **High Priority**, this Activity is so important that if it is not undertaken to the extent set out in the Costing, it **will** have long lasting consequences to the immediate or long term future of the ecosystem or the administrative management of the Park. Any Action must either contribute to mitigating a Threat or developing an Opportunity. Proportion and scale are relevant, expensive interventions must offer significant reward. These may include financial impacts which if the Activity/ies are not done will escalate rapidly;
2. **Medium Priority**, this Activity is important and if it is not undertaken then it **may** have long lasting consequences to the future of the ecosystem or the administrative management of the Park and as a result it may be delayed to a later date or undertaken to a lesser extent.
3. **Low Priority**, these are less important and not attending to them would not have significant or short or medium term consequences. This does not mean they are irrelevant.

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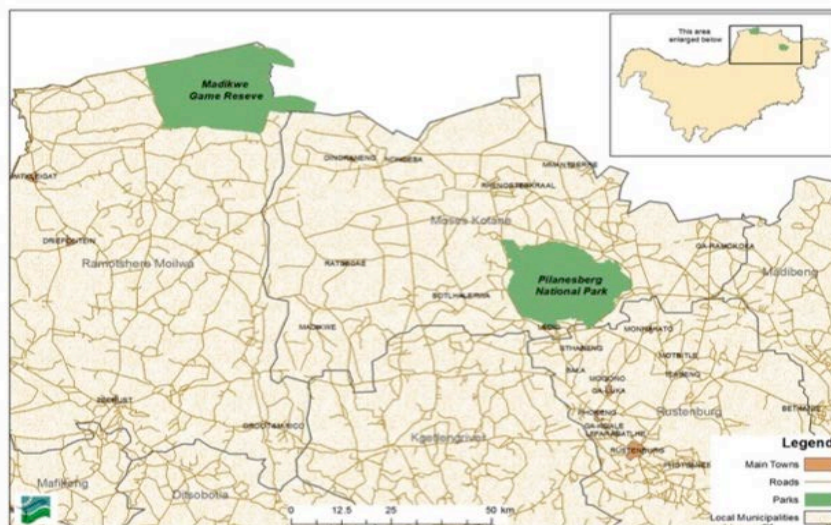
<sup>1</sup> "Risk is the potential that a chosen action or activity (including the choice of inaction) will lead to a loss (an undesirable outcome). The notion implies that a choice having an influence on the outcome exists (or existed)." <http://en.wikipedia.org/wiki/Risk>

## 2 THE OBJECTIVES OF THE PILANESBERG NATIONAL PARK

### 2.1 Context

Pilanesberg National Park was established on 8 December 1979 and was proclaimed under the Statutes of the Republic of Bophuthatswana through the National Parks Act No 24 of 1987 and deemed to have come into existence on 1 April 1984. It is centred approximately at latitude: 25° 15' S and longitude: 27° 05' E and the nearest towns and distances are Mogwase, 3 km, Sun City, 3 km, Rustenburg, 50 km and covers an area of 48 028.73 ha (see Map 2.1). The lowest elevation is 1 050 m and the highest 1 675 m. The annual rainfall is 650 mm with a rainy season in summer from October to March. The annual average temperature ranges from a minimum of 4°C to a maximum of 32°C.

**Map 2.1:** Pilanesberg National Park within the context of the Province and Madikwe Game Reserve.



The park is a very popular tourism destination for both local and international visitors and boasts the 'Big Five'. The nearby Sun City is a popular tourism resort with many of the visitors including a trip to Pilanesberg as part of their stay.

Three land resettlement claims have been awarded to communities inside the park and include the following:

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- **Welgeval171 JP Communal Property Association:** Registration Number: CPA/07/0922/A measuring 2 026.6690 ha;
- **RKM Community Property Association:** Registration No CPA/07/1069/A and measures 261.7645 ha; and
- **The Bakgatla-Ba Kgafela Community Property Association:** Registration No CPA/07/2032/A measuring XXXXha, AWAIT INFO

Co-Management Agreements have not yet been concluded for these claims and remain outstanding. In addition there are several concession agreements concluded with third parties to operate various enterprises with the Park, these are:

- **Golden Leopard Resorts** whom operate the following: Manyane Resort, Bosele Camp, Bakgatla Resort, KeMonate Bush Braai;
- **Legacy Resorts and Hotels** (Pilanesberg Resorts) whom operate the following: KwaMaritane Lodge, Bakubung Lodge, Tshukudu Lodge;
- **Mankwe Game Trackers** which is a Division of Tourvest Holdings (Pty) Ltd and operate game drives, guided game walks, transfers, and hot air balloon safaris.;
- **Cradle Hotels** whom operate the following: Ivory Tree Game Lodge & Shepherds Tree Game lodge and the Pilanesberg Centre;
- **Wilderness Leadership** School; and
- **Kgama Safaris** whom manage the Wildlife Operations.

A portion of land known as the **Black Rhino Reserve** (Zandspruit Development Corporation (Pty) Ltd (Reg No 96/11137/07)) and 2 000 ha in size on the north-western boundary has been incorporated into the park; thus the fence between the properties has been removed and game moves freely between the properties, and thus the effectively conserved area is up to 50, 000 ha. An incorporation agreement between the parties was signed in 2003, which address wildlife security issues.

In 2007 an Initial Strategic Environmental Assessment (iSEA, 2007) was undertaken by Marlene Laros and Associates and the report made a number of recommendations, which are explored further in this revision.

## 2.2 THE PRIMARY OBJECTIVE

The Primary Objective of the Pilanesberg National Park is:

**“to maintain the system’s biodiversity in all forms and to minimise any visual impairment of the natural and cultural landscape”**

## 2.3 THE SECONDARY OBJECTIVES

There are several Secondary Objectives that flow from this broad Primary Objective. These provide strategic focus on where management must concentrate to lend effect to the Primary Objective. The Secondary Objectives of the Pilanesberg National Park are:

- **To provide visitors to the Park with an appealing nature based experience along with associated amenities provided, that this does not compromise the primary objective;**
- **To manage natural and cultural heritage sites in collaboration with local communities and Land Restitution Settlements;**
- **To manage the ecosystem and wildlife populations so that a meaningful contribution will be made towards the conservation of threatened and endangered species;**
- **To cost-effectively conserve Pilanesberg landscapes, ecosystems and biodiversity in an aesthetic state that will achieve the Primary Objective while ensuring resilience and stability which is considered to be sustainable within the climatic and geological constraints of the area;**
- **To create opportunities for people to acquire greater involvement in the conservation and tourism sector;**
- **To provide business opportunities to the Land Restitution landowners in compliance with bilateral Agreements;**
- **To ensure there is adequate funding from the NW Parks and Tourism Board to meet the annual operating and development cost;**
- **To enlarge Pilanesberg’s sphere of influence by collaborating with adjoining properties where the objectives and management will conform to those of the NWP&TB.**

## 2.4 TERTIARY OBJECTIVE

- **Where possible, to generate income and other benefits from the consumptive use of Pilanesberg National Parks natural resources provided that this does not compromise the primary and secondary objectives**

### 3 The management planning context

The biophysical environment, the political and the socio economic situation of the area provide the planning context. The biophysical description and context is detailed by Marlene Laros and Associates (2007), while the local Strategic Development Plan<sup>2</sup> (SDP) and the Integrated Development Plan<sup>3</sup> (IDP) provides the local social, economic and political context.

The following short summary provides the context to the Policies, Objectives and Actions, which are described in this Plan:

- Due to the relatively small size (~48 000 ha), ecological processes cannot be assumed to be mostly operating ‘naturally’ and ‘balancing out over time’ as would be the case in large areas. This means that some form of active management of wildlife numbers, predator-prey interactions, vegetation resources, water distribution, fires and others will be required. On the other hand, at this scale, habitat selection and animal distribution becomes heterogeneous and less predictable.
- The vegetation of Pilanesberg National Park is mostly defined as Pilanesberg Mountain Bushveld, which is unique to the Park, according to Mucina and Rutherford<sup>4</sup> (2006) and it is defined as least threatened; as almost the entirety of it is located within the boundaries of the Park. It does however contain a few species which are on the Red Data list. The average annual rainfall is 650 mm. The Park is an important water catchment area not only providing water for the Park and its wildlife, but also the surrounding areas where groundwater especially in winter is critical. Water remains an important limiting factor for the Province, and it has a unique radial drainage pattern and all water originates within the park and is free of anthropogenic pollutants.
- The historical fauna is typical of the Savanna biome which includes all the classic, high-profile wildlife (ie. predators, megaherbivores, antelope etc) typical of Southern Africa’s woodlands and grasslands. Furthermore, the park is situated along a transition zone between the arid west, and eastern, moister parts, so there is an admixture of fauna that can exist in the park. Due to its geographic location, the park has been able to restore all historical African wildlife that are furthermore also of appeal to tourists. Locally, the park is situated in a dystrophic, nutrient poor ecosystem, which is in fact limiting for animal production (viz ‘sourveld’).
- PNP contains a unique geology found in only three other locations worldwide (ie. Alkaline Ring Structure). It was formed about 1 500 million ago when magma rich in the alkali elements sodium (Na) and potassium (K) welled up from deep below the surface of the Earth where it originated to collect just below the surface. This upwelling magma caused tremendous pressure against the roof of the magma chamber. Eventually the pressure became so intense that circular fractures split the Earth’s crust and magma, gas and pyroclasts violently broke their way through the older cover of the Bushveld Igneous Complex and overlying Waterberg Group rocks, which formed the surface cover in this area at the time. Subsequent to this eruption there was no longer any support for the brittle, stretched crust above the magma chamber, and the crust collapsed into it. Consequently, magma that was still in the magma chamber was forced diagonally upwards along the circular fractures that have developed earlier. The magma that was forced upwards poured out onto the surface as lava where it solidified.
- The Park’s boundary from the north to the east and from the south to south west is a heavily populated urban area with people living immediately adjacent to the boundary fence. Mining impacts the remainder, aside from the incorporated land of the Black Rhino Reserve. This leaves very little land for expansion.
- At least 7 long term (>20 years) concession leases Legacy (3), GLR (2) and Ivory and Shepard’s Tree, traversing Agreements with Mankwe Game Trackers and Black rhino reserve and one short term lease (5 years) for the Pilanesberg Centre (PC) have been entered into with third parties, and three Land Restitution

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<sup>2</sup> Strategic Development Plan 2011 – 2016. Ngaka Modiri Molema District Municipality

<sup>3</sup> Integrated Development Plan 2011-2012. Ngaka Modiri Molema District Municipality.

<sup>4</sup> Mucina, L. and Rutherford, MC (eds) 2006. The vegetation of South Africa, Lesotho and Swaziland. *Strelitzia* 19. South African National Biodiversity Institute, Pretoria.

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Settlements are currently registered over PNP. . These commit management to certain obligations and have influenced the Objectives, Policies and Activities of PNP.

- Past studies (Boonzaaier & Boonzaaier, 1999<sup>5</sup>) have indicated that Pilanesberg has one of the highest visitor use densities of any ‘Big Five’ game reserve when measured as vehicles per km of road or visitor per ha. Recent statistics are not available due to the way they are collected to assess if this is still the case. However permits issued to certain user groups suggest that numbers have remained relatively static since 2010.
- The Park roads and communal visitor facilities can be very congested especially over peak periods. There is a need to provide adequate, well spaced and properly maintained facilities if the visitors are to continue to enjoy their experience.

### **3.1 Threats and Opportunities**

The Objectives and Context provided above informs the strategic management direction of the Park. In the path to realising these, threats and opportunities are encountered. These can represent risks to the achievement of the Objectives. While many of these risks may be small and arise on a daily basis, others loom large and either threaten the future of the Park or impact on achieving the Opportunities. The larger Threats and Opportunities in particular require attention and management interventions, some requiring significant resources that must be provided over the planning horizon of this Plan. Through monitoring the performance of certain parameters, management’s efficiency and effectiveness at achieving the Objectives can be improved.

#### **3.1.1 Threats**

The following have been identified as significant Threats to the achievement of the Objectives:

- Escalating poaching of rhino;
- Infrastructure, especially roads, which support the tourism product are in poor condition and deteriorating;
- Extreme numbers of visitors over peak period;
- Fluctuating standards of GLR products;
- Inadequate visitor comfort stops or activities at inside the Park for visitor use; and
- Income that is inadequate to cover essential operating overheads;
- Crime and theft from visitor facilities;
- Profitability of some of the concessions and tourism opportunities;
- Uncontrolled fires especially from outside the Park; and
- The significant increase in mining immediately adjacent to the park boundary and in the region in general. This increases noise, air and light pollution, while also limiting park expansion and tourism development.
- Opposition to consumptive utilisation, and this is ever increasing in society.

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<sup>5</sup> Boonzaaier WV and Boonzaaier J. 1999. Analysis and comparison of tourism densities within Pilanesberg National Park. NWPTB Report.

### 3.1.2 Opportunities

The following are the Opportunities:

- The administrative capacity of the management at Pilanesberg and Trust offers an opportunity to seek funding from Government, donors and the like to assist, especially with labour intensive projects, with resolving some of the Threats identified above while contributing to the Objectives of the Reserve, which would enhance political support;
- Capturing and utilising the many and diverse stakeholders in Pilanesberg to jointly resolve the Threats;
- A wide range of collaborative research opportunities with third parties;
- Key 1 white rhino and Key 2 black rhino populations offers an opportunity to solicit funding to protect these animals;
- Reinvigoration of the environmental Education Centre and associated interpretation;
- Expansion of the contiguous unfenced area managed under conservation; and
- New shareholder opportunities.
- Revenues from trophy hunting off-takes from excess high profile wildlife (ie. black rhino, lion, elephant).
- Excessive thatching grass in the park can be harvested and utilised by local communities.

## 4 Ecological Management

The park is well fortified by a fence that is designed to contain most of the large animals found within the Park, and can prevent movement into or out of the park for most of the larger terrestrial large mammal species (except leopard). It is also relatively small and cannot contain genetically viable populations of some species in the long term. A large urban population also surrounds it. These factors coupled with the significance of tourism means that many of the habitats and wildlife populations would require some active and adaptive management to maintain some stability and diversity to the wildlife populations and product.

The important ecological implications, which flow from the Objectives of Pilanesberg National Park, include the following:

- The underlying need to provide a tourism product so that economic benefits can be realised means that a stable, diverse and quality game viewing experience must be offered which can be efficiently and sustainably managed.
- The endangered and high value species must be accommodated within the management systems so as to optimise their performance.

### 4.1 The Ecological Vision

*The biodiversity, biophysical processes, non-renewable resources and landscapes of Pilanesberg National Park is well conserved through a consistently applied adaptive management process*

### 4.2 Ecological Objectives:

The following form the ecological Objectives for Pilanesberg National Park

To maintain within acceptable limits of change, the parks floral and animal populations at the level of gene frequencies, and at species levels, the densities, proportions, distribution, variety, patterns and productivity that optimises between competing goals in the following hierarchical order:

- Conserve plant and animal species, sub-species, genotypes, gene frequencies, communities, habitats and/or landscapes that are endangered elsewhere and/or unique to Pilanesberg.
- Minimising interference/disruption with ecological processes that ensure long-term sustainability.



- Ensuring that the game viewing opportunities offered by the Park are highly competitive both nationally and internationally.
- Supplementing park income through the consumption utilisation of animal and plant species that offer financially viable opportunities [hunting, live game sales, venison, medicinal plants etc).

### **4.3 The guiding principles for ecological management**

The principles that will guide management practices and decision-making are:

- Many of the “natural” bio physical processes of the system have been disrupted by historical human interventions and the present interventions such as fencing, means the maintenance or rehabilitation of “natural” bio physical processes cannot be adopted as a realistic primary objective. Nevertheless, contemporary ethics and laws pertaining to soil and water conservation and state of the art scientific knowledge pertaining to resilience and equilibrium / stability concepts should be adhered to as an ancillary objective.
- Stability, diversity and sustainability of all the species are important considerations and although minimal intervention in the ecosystem is the preferred course of management it is recognized that the constraints will imply some active management of some species and/or habitats; these include the following:
  - Species for which the reserve is too small to support genetically viable populations in the long term;
  - Species which would migrate over large areas but are now confined by the fence;
  - Species which would normally display wide fluctuations in population number through mortality and recruitment; and
  - Those species where other population control measures may be impaired or absent;
- Tourism is an essential component of the Primary Objective. It is the fuel which drives the economic benefits from the reserve and where habitat and species manipulations are required to achieve this they must be considered within the ecological Policies and Guidelines; and
- The relatively small and confined nature of the reserve may require rapid responses by management to changing situations, underscoring the need for cost effective, focused and output oriented monitoring.

## **4.4 Vegetation**

### **4.4.1 Context**

The vegetation in Pilanesberg National Park is the primary determinate of the wildlife population, both species mix and numbers. The annual primary production from the vegetation is determined by soils, topography, species composition and structure, and the climate. Rainfall is the most important driving force of the annual primary production in the context of the above variables. The total biomass of herbivores and the relative abundance of the various species over time can also have a significant impact on vegetation composition and structure.

The ‘closed’ (fenced) nature of the system, the extensive distribution of water, coupled with highly variable rainfall and the need to accommodate tourism specifically defines the management options if sufficient vegetation is to be available to support a diverse and stable wildlife product.

## 4.4.2 Policy

*Vegetation will be sustainably managed to conserve plant species, subspecies, genotypes, gene frequencies, communities and/or, habitats that are endangered elsewhere and/or unique to Pilanesberg*

## 4.4.3 Guiding Principles

Where possible natural processes will be encouraged to improve productivity of the vegetation for wildlife and game viewing, fire in particular is seen as an essential tool. Other interventions such as bush clearing or thinning may be required from time to time but only to support the Ecological Objectives.

## 4.4.4 Actions

An appropriate vegetation monitoring system must be implemented and undertaken annually to provide information to management so that their management of the system can be improved. This monitoring must include both quality and quantity of the vegetation within the various vegetation types across the Reserve.

## 4.4.5 Costs

The annual vegetation monitoring is budgeted to cost about R36 000 per annum including staff and vehicle costs.

## 4.5 Fire Management

### 4.5.1 Context

Fire is an absolutely essential element for the maintenance of plant diversity and to enhance game production and viewing. Furthermore, fire is essential to prevent the build-up of excessive fuel loads, which also seeks to attain a security goal. High fuel loads, combined with hot, dry and windy weather conditions towards August-September could lead to extensive fires that could burn the Park in a single event.

Since the inception of the Pilanesberg National Park, a progressive approach has been followed towards fire management based on newly emerging paradigms centred on heterogeneity (Brockett et al. 2001). Fires are ignited to maintain or enhance vegetation heterogeneity, reduce woody plant encroachment, ensure fodder for large herbivores, and increase game visibility for tourists. Fire should thus be applied in such a way as to fulfil its role as a driving force in Pilanesberg National Park, maintaining community vigour as well as structural and compositional characteristics, with due consideration to safety aspects.

### 4.5.2 Fire Policy

*Fire will be used as a management tool to manage fuel loads, improve veld vigour which can enhance game production and viewing of them*

### 4.5.3 Guiding Principles

- Application of an active management and lightning driven patch-burn mosaic by starting fires early in the season and monitoring progress and deciding on appropriate cut-off values later in the season based on fuel loads, past fire history, stocking rates etc.
- Within the overall patch-burning approach, the deliberate burning or protection of pre-defined blocks may be used as a tool to achieve particular veld management objectives.
- Firebreaks to be established each year around the reserve perimeter and vulnerable buildings;
- Responsibility for the above firebreaks lies with the owner/lease holder of the asset being protected. NWP&TB will do the perimeter firebreak;
- Burning undertaken within the legislative and regulatory requirements;
- NWP&TB will be responsible for co-ordinating and implementing actions on all wild veld fires; and
- Planned burns will be done in consultation with Concession holders and Land Owners.

### 4.5.4 Actions

The following are **High Priority Actions**:

- Develop annual patch burning plan;
- Implement firebreaks;
- Implement burning plan;
- Manage wild veld fires; and
- Fire scar mapping.

### 4.5.5 Funding considerations

The cost of the fire plan is R1,69 million. However a large portion of this (R1 036 million) is not funded through the reserve budget but provided by the Working for Fire programme via separate Government funds. Should this funding discontinue, NWP&TB will need to make provision for at least 50% of the above amount, which is deemed essential for the fire programme.

## 4.6 HYDROLOGICAL

### 4.6.1 Context

Pilanesberg is an important water catchment area for the region and therefore water quality and water quantity are important considerations. The large dams and many small wetlands help attenuate floods, improve water quality and maintain stream flow. This means that water for wildlife is widely distributed over Pilanesberg and there is no need to manage water distribution. All water originates within the park, and follows a radial pattern outward, and the only possible contaminants of the water are from faunal and floral origins within the park.

### 4.6.2 POLICY

The policy is:

*To maintain and where necessary restore hydrological processes*

### 4.6.3 Guiding Principles

No specific interventions are identified in this regard as water quality is a function of vegetation management, which is also a function of erosion management. Specific activities have therefore been identified under these sections. There are specific laws and regulations with respect to management of streams, rivers and wetlands as well as the large dams and these must be complied with.

### 4.6.4 Activities

- Annual inspection of dams with associated maintenance for the borehole at Rathogo; and
- Be aware of mining related impacts on water from in particular the periphery

## 4.7 EROSION CONTROL

### 4.7.1 Context

Erosion and deposition are naturally occurring processes and no matter how well managed and protected, a certain amount of soil loss will occur under natural circumstances. However, due to human disturbances, erosion may be accelerated, and this also includes keeping high animal numbers. These disturbances include the development of infrastructure, placement of water and other physical interventions.

This can significantly increase soil loss and accelerated erosion which is not acceptable as it represents a valuable loss of resources, it can also increase sediment loads into rivers external to the park (ie. Elands River) Furthermore, accelerated erosion can threaten existing infrastructure such as roads, and conflict with the objectives of enhancing a visitor experience. Therefore, in general, the aim should be to minimize accelerated erosion. With erosion control, the principle of do it right the first time certainly applies. The benefits of any half-hearted attempt at restoration will most probably be (literally) washed away by the first large storm.

### 4.7.2 Policy

*To avoid actions which will result in accelerated soil loss especially in the development of infrastructure, placement of water points and stocking of game numbers*

### 4.7.3 Guiding Principles

Management will intervene and take active steps to prevent erosion only under the following circumstances:

- When it is a direct result of poorly placed infrastructure or through trampling and overgrazing near artificial water points;

- When a sensitive<sup>1</sup> habitat or species is threatened, such as a wetland;
- Or when a site of cultural significance is threatened;
- When embarking on any of the above interventions the causes of the erosion, if known, should also be ameliorated if possible;
- Be proactive in preventing it for example through maintaining drainage on roads etc.;
- Prevent excessive reduction of vegetation cover (too frequent fires over too small an area, and high animal stocking rates);
- Avoid unnecessary denudation of soil surfaces with new developments;
- No new roads and tracks are to be developed without proper process and consultation; and
- No development of new gravel pits without proper process and consultation.
- All natural erosions, such as landslides can be left and they will be of academic interest.

#### 4.7.4 Activities

In conjunction with the Hydrological Section there is an annual inspection of sites which have been identified as requiring monitoring, budget for staff and vehicle costs is R12 500. This has been identified as a **Low Priority** because it is not currently a significant threatening issue. Only if there is a change in circumstances should this be elevated in its priority ranking. The roads appear to be the most at risk of erosional sources, while the animal numbers are well within their prescribed densities such as not to be such a threat.

### 4.8 BUSH ENCROACHMENT

#### 4.8.1 Context

Pilanesberg is an open savannah, which generally does not suffer from bush encroachment (cf Madikwe), though the low lying peripheral areas are probably more prone. Some of the old lands may periodically thicken up and may need some thinning from time to time. The edges of the roads in some areas often create a hedge due to increased run-off, fertility and reduced impact of fire, these may need to be pruned to improve viewing and to keep the roads open.

#### 4.8.2 Policy

*Bush clearing will be undertaken to enhance the game viewing product, mitigate against unnatural encroachment and to improve visitor safety*

#### 4.8.3 Guiding Principles

- Road verges, picnic sites and vistas to be kept clean as required; and
- Perimeter fence to be kept clear.
- Where evidence of anthropogenically induced encroachment, this is to be ameliorated.

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<sup>1</sup> Sensitive is defined as a vulnerable, threatened or endangered

#### 4.8.4 Actions

This is viewed as a **low priority Activity** on the annual operating budget. However the labour intensive nature of the work implies that opportunistic funding has been secured in the past from government funded work programmes. This will continue to be searched for and secured subject to management capacity to implement it.

### 4.9 ALIEN PLANTS

Invasive alien plants are a moderate threat especially *Lantana*. Although they are currently contained and are held in check by Working for Water and volunteer groups and they must be monitored. The following activities are implemented:

- Working for Water develop and implement this programme;
- Estimated value of work undertaken is R750 000.

### 4.10 Wildlife Management

#### 4.10.1 Context

The wildlife population in Pilanesberg is stable and is characterised by the following:

- The increasing elephant population which is still of moderate size;
- A mesic savannah environment dominated by tall grasses which mature rapidly and loose palatability early in the growing season and produce high fuel loads that are susceptible to frequent very hot fires;
- Mountainous broken topography offering a wide range of habitats;
- Diverse and stable wildlife population;
- Widely distributed surface water;
- Avoid re-introductions but when required ensure the animals are free of diseases especially Tuberculosis B;
- Constrained by a very good quality fence;
- For some species, notably wild dog, lion, possibly black rhino and others, the reserve is too small to support genetically viable populations in the long term. The need to manage these as part of a larger population beyond the reserves' boundary is therefore essential; and
- The overall stocking rate and species mix of the herbivores and predators requires monitoring and probably management intervention of some species.

#### 4.10.2 Carrying capacity and stocking rate

The herbivore population in Pilanesberg National Park will be managed on a fixed stocking rate model based on the Objectives and the Context mentioned above. This is a similar strategy that is applied on a game or stock farm. However, given the relatively large size in the context of a game farm but the relatively small size in the context of a larger protected area (ie. Kruger National Park), implies that the level of management may be intermediate between that of a game farm and an open system protected area. The fixed stocking rate policy will therefore be applied with some flexibility. This will operate within limits and these are:

- during a wet cycle the stocking rate will be managed at an average of 8 ha per Animal Unit (AU);

- during a dry cycle the stocking rate may move to ~11 ha per AU (see Appendix 1 for an explanation).

A wet cycle will be defined as the cumulative moving average rainfall for the past 3 years exceeding the average for Pilanesberg of 650mm. While a dry period will be the cumulative moving average rainfall over 3 years which is below the average by 20%. These are guidelines and must be applied in conjunction with feedback from vegetation and wildlife monitoring data. The 8ha per AU is a conservative figure and should be adequate for most years, even those with slightly below average rainfall. Frequent changes to stocking numbers should not therefore be necessary. However, severe droughts are often characterized by consecutive below average years and the cumulative effect through low primary productivity as indicated by vegetation monitoring may require a revision of the stocking rate, and this is when the average stocking rate may need to be revised to 11ha/AU till conditions improve.

The intention is to manage for a stable wildlife product, which offers some diversity of species and optimizing for those with high tourism value. In this regard prey for the predators is an important consideration and this will most likely comprise impala, blue wildebeest, zebra and kudu (in declining order of abundance). These species which generally reproduce relatively fast will be the primary species for accommodating fluctuations in carrying capacity if necessary. This may require a reassessment of predator population numbers as these species form the main prey animals for them.

This implies that generally only a few species will occur in great numbers. Some species that were originally projected to be very numerous, such as waterbuck, gemsbok, eland and red hartebeest, are unlikely to reach 200 animals each. Species such as eland, sable and others have not performed well and any future re-introductions must be very carefully considered. If the factors limiting their population growth and persistence have not been addressed the NWP&TB will not consider further introductions; however should a donor wish to make funding available without adversely impacting on management then these may be reconsidered in the future.

Some species however are valuable financially, ecologically or culturally; for these species specific management strategy has been developed for both herbivores and predators. In addition, regulations call for some listed species to have specific management plans/strategies.

### **4.10.3 Policy**

*To sustainably manage the large herbivore component at pre-determined population sizes and species structure with due cognisance to rainfall, competitive interactions and predator impacts which will result in a highly satisfactory game viewing experience*

### **4.10.4 Guiding Principles**

The herbivore population will be actively managed within the context of a fixed stocking rate as set out above. This will fluctuate and Upper and Lower Population Limits have been defined for most of the common species. These Limits in the numbers of individual herbivore species are set by an interplay of the following requirements:

- Minimum population size that can fulfil predator demand and that can withstand predator pressure;
- Minimum numbers of common species that make up the filler for a generally good game experience;
- Minimum number of pachyderms (rhino and elephant) to make up the Big Five experience;
- Maximum number as dictated by available vegetation resources;
- Optimizing high value species to contribute to income and conservation priorities;
- Managing some species in compliance with national performance norms and standards;

- Balance between different feeding groups in terms of respective feeding requirements (bulk grazers, mixed feeders, browsers, etc.) and respective role of each feeding group in facilitating/denying the access to vegetation resources by another feeding group;
- There is some flexibility between the number of animals per species and feeder classes but importantly the overall stocking rate must remain within the projected range;
- These requirements, balanced against the low success rate of certain species, may lead to specific species becoming marginal. A decision may then be required as to whether a specific species is allowed to disappear or somehow survive or whether it should be pro-actively removed (see for example sable and gemsbok); and
- Habitat availability.

The estimated upper and lower stocking limits for the more important and significant herbivores are shown in **Table 1**. It includes the guild or type in which the various species have been placed. The Units per animal is the metabolic equivalent for the different species. It is a weight-adjusted measure based on the feed requirements of the animal when compared to a 450 kg beef steer – which is in essence a Large Animal Unit (LAU). It allows for comparisons between different animals and their nutritional needs. The percentages in each feeder category are the percentage in Animal Units allocated to that feeder class of animals. The lower stocking rate limit is based on 11ha/Animal Unit (AU) while the upper limit is based on 8ha per AU.

**Table 1.** A typical Upper and Lower stocking number of animals for various species in Pilanesberg National Park including the number in 2013 after the census; listed by feeder class together with the number of Units per animal and the percentage of the total feed available allocated to each feeder class. The percentages listed are the relative proportion of the animal units available allocated to each feeder class.

Species	Lower No Animals	Upper No Animals	Census 2013
<b>Bulk Grazers</b>	<b>38%</b>	<b>38%</b>	
Buffalo	244	370	219
Hippopotamus	65	86	56
Rhino, white			
Sable	3	5	5
Waterbuck	144	219	172
Zebra	1 015	1 763	1 704
<b>Concentrate grazers</b>	<b>24%</b>	<b>24%</b>	<b>24%</b>
Gemsbok	2	0	1
Red Hartebeest	60	85	58
Wildebeest, Blue	1 487	1 819	1 773
Warthog	285	411	324
Tsessebe	66	71	68
Common Reedbuck	9	11	9
<b>Mixed feeders</b>	<b>30%</b>	<b>30%</b>	<b>30%</b>
Elephant	244	250	211
Eland	53	85	41
Impala	1 998	3 525	3 126
Springbuck	121	147	129
Mountain Reedbuck	97	103	84
Ostrich	12	22	10



<b>Browsers</b>	<b>8%</b>	<b>8%</b>	<b>8%</b>
<b>Rhino, black</b>			
<b>Klipspringer</b>	34	67	43
<b>Kudu</b>	291	617	564
<b>Giraffe</b>	93	164	170

NB: Restrictions on rhino numbers being published.

**Table 1** is a guideline and numbers must be adjusted according to rainfall, predators and relative abundance of species.

## 4.11 POPULATION MANAGEMENT

### 4.11.1 Context

Adopting a fixed stocking rate strategy will require manipulation of some species. In order to implement this, monitoring will be required to assist management in their decision-making. This monitoring system must be effective and efficient and provide the information to an appropriate standard. Some species are also more valuable for tourism, ecologically and/or financially and these aspects must be considered when determining the relative numbers of the different species within the constraints of the resources. Some will have competitive advantages and tend to dominate and appropriate more resources; these may therefore require more management than others. Species which potentially fall into this category in Pilanesberg National Park include elephant, lion and to a lesser extent wild dog. These tend to be either apex predators or megaherbivores.

### 4.11.2 Policy

*Animal numbers may fluctuate within limits depending on available resources. Where possible predators will drive this process, however when it is necessary, population management may take the form of cropping, live capture/sales and/or trophy hunting*

### 4.11.3 Actions

The following interventions are required for herbivore management:

- Monitoring of wildlife populations, see below; and
- Screen any re-introductions for disease and quarantine as required and guided by veterinary input.

## 4.12 PREDATOR MANAGEMENT

### 4.12.1 Policy

The predator numbers must be balanced between meeting tourism objectives and responsible management of the various species. It is recognised that some species are more competitive than others and in this regard some management interventions may be required. Thus the policy for predator management is:

*Predator numbers will be managed to ensure persistence of their main prey species and to ensure the survival of less competitive predators, while always considering the need to cater to the appeal of visitors*

If *best practices* are to be adopted, the following principles will be applied to predator management:

- The diversity of predator species that naturally occurred in the area will be maintained in Pilanesberg National Park;
- The lion, cheetah and wild dog are managed as part of a larger population (ie. metapopulation) from other areas and according to National norms and standards.
- The lion, wild dog and cheetah populations will be managed at levels that can be naturally sustained by the available prey populations and to reduce competition on other predators and smaller wildlife. Their numbers will be based on a fixed stocking rate principle in balance with the prey population;
  - However the predator numbers may vary around their fixed stocking rate so that they remain in balance with the herbivore stocking rate requirements. In times when prey numbers need to be reduced, the predator numbers can be increased and in times when prey numbers need to increase the predator numbers may have to be reduced;
- Species Management Plans have been developed and these provide more information on the individual species (the summary salient features of these have been included in this Plan, see Species Sections below); and
- Reintroductions will be necessary from time to time to ensure the long-term survival of the species. When this is required, the animals must be sourced from known populations which are free of disease and should be screened and quarantined until their disease status can be ascertained.
- Subordinate predators, such as cheetah, wild dog, and leopard can best be managed by some degree of lion management, and this is to attain a diverse predator community not monopolised by one species.

## **4.12.2 WILDLIFE MONITORING**

### **4.12.3 Purpose of monitoring**

The on going monitoring of the wildlife population numbers and performance is essential to determine whether a population is within its targeted numbers. The intensity of monitoring of species must be commensurate with their role and potential impact on the ecosystem, other species and tourism. In addition high value species require higher levels of precision so that management can achieve optimal and even maximal production targets. So for example, rhino may be monitored more intensively the other ungulates.

### **4.12.4 Monitoring of numbers**

Monitoring population numbers for most of the ungulates and predators is essential. The only variable is the degree of precision required for the different species. In this regard the following framework will guide decisions:

- Census techniques must be repeatable; any significant changes must ensure that the results are comparable with previous years, as trends are very significant and important to evaluate. In the event of a new census technique, it may be necessary to implement a period of simultaneous use of both techniques over the changeover period;
- Species whose numbers must be monitored include the following:

- Abundant prey animals, including wildebeest, zebra, impala and kudu which constitute the majority of the diet of the large predators; and these must be monitored at least annually;
- High value species including rhino (black and white) and buffalo, at least annually;
- Elephant, due to their potential impact, at least annually;
- Highly competitive predators which can increase rapidly including lion and wild dog (at least annually);
- Other species on an *ad hoc* basis, such as the cheetah re-introduction; some post release monitoring may be required;
- High value and high impact species to be monitored to a higher level of precision;
- In a system the size of Pilanesberg National Park, no technique is likely to offer the precision required for all species so where possible more than one method may be necessary. However for some species a high level of precision may be readily achievable at little cost, for example the wild dog, which are highly visible and easily recorded by tourist guides; and
- The aerial count is regarded as a total count and a reflection of the minimum number of animals present. Although there is a high cost associated with total counts using a helicopter, they provide probably the best tool currently available to reliably and relatively easily assess the status of most of the significant wildlife populations on reserves the size of Pilanesberg National Park if budgets allow it.

#### 4.12.5 Sex & Age Classification

One of the efficient ways to evaluate the performance of a population is by monitoring its sex and age composition over time (ie. demographics). These data will generally explain why population numbers have either declined, are performing badly or are increasing. It is relatively cheap to undertake, but labour intensive.

The information sought is that which will give the percentage of calves born in relation to the number of adult females (calving/ lambing %), the percentage surviving after one year, the ratio of males to females and the survival rate of yearlings. Longer-lived slow growing species may require more age classes.

#### 4.12.6 Mortality records

Mortality records are also useful but for many species these are difficult to collect as predators scatter bones or leave no trace. However for the larger and the more important species it is essential to record all mortalities. These are important in determining population growth rates and performance and can provide useful support data for improved decision-making, and be the evidence needed to postulate imminent declines. The importance is also extended to the detection of diseases in a population.

#### 4.12.7 Actions

The following two Actions are **High Priority**:

- The herbivores will be counted at least once annually using a consistent method, which is repeatable, and to date three replicates have been achievable – which is a statistical minimum. This will be supported by at least one sex and age classification, which will be used, together with feedback from vegetation monitoring, mortality records and any other monitoring data to determine population estimates. All removals (culling, live or hunting) and introductions must also be recorded.
- Estimated cost for the annual general census and sex and age surveys is ~R535 200. Some species will have specific monitoring programmes and these are defined under different Sections including costs.

- General patrolling which will assist with data collection will also be undertaken with an estimated cost of ~R900 000,.
- Law enforcement especially targeting the increasing threat of rhino poaching will receive priority attention, estimated cost R8,76 million.

#### **4.12.8 SPECIES MANAGEMENT STRATEGIES**

There are several species that will require specific management strategies and plans. This may be for a range of reasons, including their ability to significantly alter habitats or to impact on other species, their tourism value, or their endangered species status, danger to humans, a regulatory requirement and others. A brief overview of the important management principles of these species are listed below, some may have more detailed management plans.

#### **4.12.9 Elephant**

In 2013 the elephant population was estimated at 211 animals. This falls within the target range for the elephant population for Pilanesberg National Park (see Table 1), however the relatively high number of adults, due to the distorted age class re-introduction, means that rapid growth may occur in the future, and signs are that it is occurring in the present. The oldest adult females are no older than 35 years of age. The small size of the Park implies that some form of population management will be required. An Elephant Management Plan (December 2013) has been submitted to the National Department for approval as is required under existing regulations and this includes the option of fertility treatment of adult females to reduce the growth rate. The elephant management plan includes a strategy to limit the growth rate through contraception of a percentage of the adult females. This will be tested over a three to four year period commencing once the Plan is approved.

The elephant population must be monitored annually via a dedicated aerial census to determine their numbers. This must be supported with a sex and age classification and mortality records.

##### **4.12.9.1 Guiding principles**

The following will guide the elephant management:

- The elephant population will be held at a maximal fixed number of 250 individuals which meets tourism, habitat management and herbivore feed requirements;
- Various strategies will be explored to reduce the current numbers to this level (special projects).

##### **4.12.9.2 Activities**

The elephant population must be held at ~250 individuals through the use of contraception of some of the adult females. This has been identified as the **High Priority Special Project**. It is estimated to cost R1,765 million over the next 3 to 4 years.

On-going biennial elephant monitoring is also a **High Priority Project**, the biennial cost is R78 000.

#### 4.12.10 Black rhino

All South African conservation management agencies, including NWP&TB, are signatories of the South African Black Rhino Conservation Plan (initiated in 1989 to facilitate and guide the conservation and recovery efforts for this species). The black rhinoceros at Pilanesberg National Park are of the subspecies *Dicerosbicornis minor*. In accordance with the SA conservation plan, Pilanesberg National Park's black rhino along with other populations of this subspecies form part of the greater *D.b.minor* metapopulation, of which the North West province has been designated for this subspecies in its entirety. It is important to note that Pilanesberg National Park's black rhino population is rated/ ranked by the African Rhino Specialist Group (AfRSG) as an "Important 1" population with potential to be a continentally "Key 2" population (increasing, with 50-100 animals), and should be managed in accordance with the National Black Rhino Conservation Plan. It basically means that the population is of national importance, and potentially also internationally.

This translates into the following Objective:

To manage black rhino (and were necessary their habitats and other competing species) to achieve sustained underlying population growth of at least 5% per annum; and to assist the promotion of longer-term genetic viability in the *d.b.minor* metapopulation by minimizing the loss of genetic heterozygosity. Limiting inbreeding and minimizing genetic drift.

NWP&TB will develop a plan as to how this is to be achieved.

Management must determine in collaboration with the working group a sustainable target for black rhino numbers to ensure this growth rate is maintained. See Rhino Management guidelines in next Section, and these principles apply to both species.

##### 4.12.10.1 Activities

Each year any newly born rhino or unmarked black rhino will be sedated, marked and electronically tagged in Pilanesberg National Park to assist with monitoring using the known group method and as part of the wildlife crime prevention initiative. This, and the annual census, as well as general patrolling information, will all contribute to the conservation of this species. The dedicated programme currently receives R100 000 of which R50 000 is provided by the Copenhagen Zoo. This is a **High Priority Activity**.

#### 4.12.11 White rhino

South Africa developed a white rhino conservation plan in 1999, which was later accepted by the Department of Environmental Affairs (DEA). Pilanesberg National Park's white rhino population is an African Rhino Specialist Group rated continentally "**Key I**" population (increasing, >100 animals), and should be managed in accordance with the National White Rhino Conservation Plan (Anon. 1999). The goals of this **National White Rhino Conservation Plan** are:

- to achieve meta-population growth rates of >5% per year, to ensure long-term genetic and demographic viability;
- to reduce poaching and ensure successful conviction and sentencing in poaching cases;
- to develop socio-economic sustainability of white rhino conservation and the flow of benefits from sustainable use;
- to ensure that nationally accepted standards of animal welfare are implemented in white rhino conservation; and
- to promote and facilitate the participation and involvement of communities and other stakeholders in the conservation and sustainable use of white rhino.

NWP&TB will develop a plan as to how this is to be achieved, and some of the details required in this plan are summarised below:

#### **4.12.11.1 Rhino (black and white) Management guiding principles**

- The annual average proportion of animals removed should not exceed the estimated underlying maximum rate of increase of the white rhino population (this is around 9% in a natural un-manipulated population, however this rate must be estimated for Pilanesberg National Park. In absence of this figure the population must grow at no less than 5% per annum (excluding poaching losses);
- An adequate level of monitoring must exist to allow accurate annual estimates of the white rhino population size, from which the set percentage off takes can then be calculated. Sex and age structure information should also be collected annually to update the white rhino population model (which helps in setting sustainable off take quotas for each sex);
- Monitoring of rhino distributions across Pilanesberg National Park can assist in deciding where the removals should be sourced from; and removals can be done to also stimulate breeding and replace poaching losses
- To ensure optimum recruitment, the overall stocking rate of all species must comply with the figures in the Carrying capacity and stocking rate Section of this Plan;
- Monitoring must be of such a nature that growth rates can be estimated to some degree of precision, better than that done for the ungulate census. This will entail capture-recapture and marking individuals and maintaining a known individual register. Sex and age classification is also essential in supporting these data with mortality records. Vegetation monitoring data must also be used to help support population trends;
- Frequently (annually or biennially) remove animals to ensure the optimal growth rate is achieved;
- Introduce new blood (ie. genetics) every 10 to 20 years and maintain a register of this. Females are best added to existing populations while new areas which may be incorporated could include new males;
- Ensure proper law enforcement measures to reduce the risk of poaching, which is currently a very high risk; and
- Ensure conservation programmes are run with local communities on rhino conservation.

#### **4.12.11.2 Activities**

A sample of about 10 individual white rhino will be sedated, marked and electronically tagged annually in Pilanesberg National Park to assist with monitoring using the known group method and as part of the wildlife crime

prevention initiative. This and the annual census as well as general patrolling all contribute to the conservation of this species. The dedicated programme currently receives R100 000 of which the Copenhagen Zoo provides R50 000. This is a **High Priority Activity**.

## **4.12.12 Buffalo**

The buffalo population on Pilanesberg National Park is currently disease-free (eg. Foot and Mouth Disease FMD, Tuberculosis, and Corridor disease and because of this, live animals are potentially very valuable for sale, and this population originates from stock from the greater Addo Elephant National Park. It is critical that their disease-free status is maintained and any re-introduction of buffalo or any other species should not compromise this. Predation pressure does not seem to limit their growth and as long as this situation persists, a capture/harvest can take place. At their current numbers they are not very visible to tourists and it is proposed by management that their number should be allowed to grow (to between 250 and 370) undisturbed by any live removals until their visibility improves. Anecdotal evidence from management suggests this was the situation in the past but disturbance from large removals seem to have driven them back into thickets.

### **4.12.12.1 Guiding principles**

- The disease-free status of the herd must be maintained and efforts made to ensure this; and
- Their value as an income generating animal as well as their tourism value means the animals must be managed to achieve performance targets, historically this has been 16% and this should be the minimum target in the future.
- Of the 'Big Five', this is one of the species, that is seen the least by visiting tourists, and it would be advantageous to improve the viewing opportunities of this species.

## **4.12.13 Lion**

Lion are the cornerstone of the wildlife experience of the Park for tourists and they also fulfil a very important conservation and ecosystem function. It has also become increasingly evident that in small protected areas predator populations can limit or reduce the populations of some prey species before their own populations become limited by a declining food supply (Tambling, du Toit 2005, Peel & Montague 1999).

The lion populations will therefore be managed so that within an upper limit of (adult killing) lions (Mills & Shenk, 1992), and the number of prides and male coalitions is balanced in order to optimise lion viewing by tourists. When lion removals are undertaken, the individuals to be removed and the method to be employed must be selected so as to minimize disruption of the lion social organisation and the visitor experience.

### **4.12.13.1 Guiding principles**

The following will guide the lion management strategy:

- The lions population numbers will be primarily based on prey availability within the following limits:
  - Males over 2 years of age: 3 – 5 coalitions (6 – 10 animals in two-coalitions);
  - Females over 2 years of age: 3 – 5 prides (9 – 20 animals of 2 to 3 members per pride);
  - This will allow for a total of 15 – 55 (average 35) lions of all age classes above six months (the exact number will be based on available prey biomass). Recognising that 15 is probably too low

to achieve all tourism goals and 52 is probably too high to sustain prey populations without supplementation, the population should be managed to maintain a total population (excl. animals under 6 months) of 30 - 35; and 40 should be seen as a capped maximal figure.

- Sub-adults 6 months to 2 years: 0 – 15 (in the 3 to 6 prides as above);
- Cubs 0 to 6 months: total number not applicable;
- Animals to be monitored to ensure these levels are maintained;
- Meta-population management must be applied together with Lion management Forum to ensure long term genetic survival;
- The age group which should be prioritised for removal is the 1.5 – 3 year olds as recent work by Rob Harrison-White (Pers comm)<sup>2</sup>suggests these animals have a high impact on other animals, especially smaller predators through “inquisitive killing”; and
- Although the original stock was of the “Etosha” bloodline recent research (S Miller Pers comm) suggests this is not applicable. However lions must be disease free and from free ranging populations which best meet those for high tourism value and no history of being so called problem animals, or animals of captive origins.
- The trophy hunting of male lions in excess of their breeding age, can be considered in an individual-specific approach, but care must be taken with sensitivity and due consideration to the interests of other non-consumptive users of the park, and societal opinions at large.

#### **4.12.13.2 Activities**

- Maintain and update register at least quarterly, of all prides including details on births, mortalities, removals and introductions; and
- At least one adult in each pride is to be branded for identification.
- The department (READ) have been assisting with once a month telemetric monitoring as a sideline to cheetah monitoring they do and this can augment the parks needs.
- Cost of lion monitoring ~R142 000 per annum.

### **4.12.14 Wild dogs**

The wild dogs are an important endangered species and are a popular species for tourist viewing. They are managed as part of a larger national population and maintained through management intervention. The national meta-population strategy is coordinated through the Wild Dog Advisory Group – South Africa (WAG-SA), and meetings are held to discuss management of the whole population. The pack generally utilises the outer periphery of the park where they frequently use the fence to hunt prey, and they may also avoid the lions by being in the outer hills, and thus may be why they are not regularly seen by tourists.

#### **4.12.14.1 Guiding principles**

The wild dogs form part of a wider national population and are managed according to these national requirements. However within Pilanesberg National Park the following will apply:

- The number of packs will be limited to no more than one;

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<sup>2</sup>Harrison White (Wildlife Damage Research and management associated with the NWP&TB)



- Groups often breakaway from the main group but these are often temporary. A pack will therefore be defined as a group which has remained separate from other pack for at least 2 months;
- The number of adult individuals (>2 years) in the packs will be limited to 20; and
- An identikit of each individual dog to be developed and maintained.
- The principle collars will be satellite collars using the GPS system, and VHF will be secondary.
- Breakaways, or confirmed dispersers will be captured and removed as and when possible, and decisions could also involve members that are likely to disperse in the pack.

#### **4.12.14.2 Activities**

The wild dogs are to be monitored and managed at the individual dog level. This will imply that identikits must be maintained on all the animals. At least one member of the pack, preferably one of the alphas (ie. dominant male or female), will be satellite collared, for in situ monitoring, as well as the chance of a break out and subsequent monitoring. Cost of programme estimated at ~R57 000pa.

### **4.12.15 Brown hyaena**

#### **4.12.15.1 Context**

No specific management interventions are proposed for brown hyaena, yet they occur at a very high density and for this reason no spotted hyaena will be introduced as it is speculated this is a reason for their high density. Part of a larger study has been aimed at researching them. The value of the Pilanesberg population, is that it is probably the best park in southern Africa to see this species, at reasonable cost, and thus they have a high tourism value in this regard.

#### **4.12.15.2 Guiding Principles**

The brown hyaena population will not be actively managed.

### **4.12.16 Cheetah**

#### **4.12.16.1 Context**

Cheetahs are an important tourist-viewing animal and their numbers are globally threatened. Historically they occurred in the area, but would have probably occurred more on the surrounding plains, so the park is still marginal. They were reintroduced into Pilanesberg National Park but are at very low numbers (ie. 3), with partial augmentation from free ranging individuals from the outside. Without actual knowledge as to their decline, but assumed to be competition from the lion population, and other predators along with a low prey base, a cheetah female has been re-introduced and will be monitored. Annual monitoring estimated to cost about R53 000 pa, but we will be partly assisted by scientific staff from Directorate of Biodiversity Scientific Support from the province's relevant conservation department. This assistance may reduce this burden.

#### **4.12.16.2 Guiding Principles**

The re-introduced cheetah will be managed at the level of the individual. This will continue until the animals have established in Pilanesberg National Park and are breeding successfully. Their numbers must always be monitored, and cheetah management will be intertwined with lion management, as well as integrated burning to enhance open habitats to suit the species.

## **4.12.17 Other Predators**

### **4.12.17.1 Context**

There are several other predators; large and small that occur within Pilanesberg National Park. Some of the better known include leopard, caracal, serval, jackal, genet and many others. These animals will not be managed or monitored during the normal management activities. Their numbers seem to be stable and it is assumed that managing the lion and wild dog numbers that these animals should be able to survive and persist, annual monitoring cost about R10 000.

## 5 Tourism

### 5.1 Context

Studies undertaken by Boonzaaier (1999)<sup>3</sup> indicate that PNP has one of the highest densities of tourists per unit area or per kilometre of road than any other ‘Big Five’ formally protected area in South Africa. This presents both opportunities and challenges for the Pilanesberg Management. It is the most important contributor to economic outputs especially jobs and income generation. Although good game viewing is an important aspect for tourism there are also other issues that must be achieved, these include efficient service, well developed and maintained infrastructure and value for money. The NWP&TB must generate income to contribute to operating costs while accommodating the rights and obligations of a wide range of stakeholders of which many have contractual rights and obligations.

Currently most of the significant challenges that face management are focussed on the tourism aspects. Management need to address these if the Vision and Objectives of Pilanesberg National Park are not to be compromised. These are listed below in order of priority:

1. Maintenance and upgrades of the communal tourism infrastructure;
2. Increasing crime at the lodges;
3. Entrance fee income which has not been increased for four years – this impacts management’s ability to fund critical activities;
4. Congestion in some areas of the Park over short busy periods;
5. The lack of reliable and sufficiently detailed visitor statistics;
6. Busses and coaches that increasingly use the Park;
7. Developments on the periphery of the Park which are not compatible with conservation or tourism;
8. Rhino poaching (see more details under Natural Resource Management)
9. The need to accommodate the rights and obligations of Settlement Agreements and the finalisation of associated Co-management Agreements<sup>4</sup>;
10. There is very little liaison between the tourism stakeholders;
  - a. As a result there is currently no shared branding or marketing of Pilanesberg as a destination;
  - b. General collaboration between the various stakeholders;
11. The need to broaden the product offering to include overnight walking trails, especially in the areas inaccessible to vehicle, as well as mountain biking.

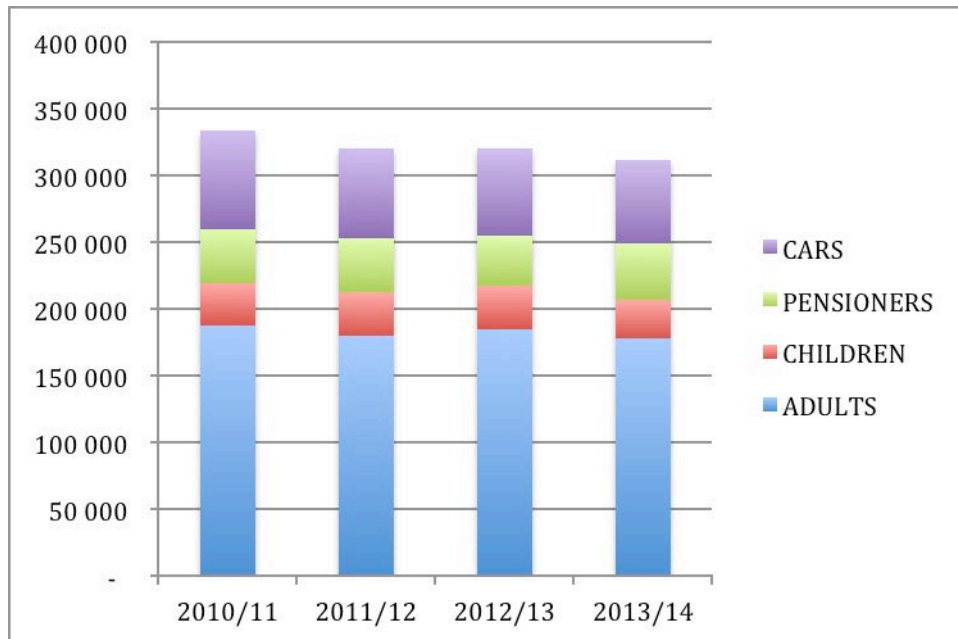
Managing and planning in the tourism environment is important if the product is to grow and remain competitive. However the lack of detailed tourism statistics makes this aspect more difficult. Tourism numbers obtained from entry permits only reflect the visitor category (adult, pensioner and child) and are valid for their length of stay so they do not reflect visitor usage per day. Furthermore, they are not issued to all Park visitors. They do not reflect some of the visitors entering the Park in guided concession vehicles. The total visitors per category between 2010 and 2013 are illustrated in **Figure X.1** below.

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<sup>3</sup>Boonzaaier WV, 1999. Analysis and comparison of tourism densities in Pilanesberg National Park. NWP&TB Report.

<sup>4</sup>Note that the lack of Co-management Agreements of this challenge has been highlighted elsewhere in the Plan where it receives a very high priority due to its impact.

**Figure X1.** The number of visitor per category including vehicles as obtained from visitor entry permits issued between April 2010 and March 2014 for the Park.



## 5.2 VISION

The Vision for tourism is:

*Within the constraints of the appropriate zones, PNP will have all its diverse features fully but aesthetically developed for a wide range of visitors. The hallmark of management will be the skilful blending of visitor facilities and intensive use, with a high level of preservation of aesthetic landscapes, biodiversity and natural ecological functions.*

## 5.3 POLICY

The policies for tourism are:

- Tourism is permitted in PNP for the following reasons:
  - To provide economic benefits (jobs and income to the NWP&TB);
  - To offer visitor enjoyment; and
  - To encourage conservation awareness and interpretation;
- PNP will continue to serve as wide a range of clientele as possible and their solution to tourism pressures will be dealt with through intensive visitor management programmes and provision of activities rather than narrowing down the target markets;
- Tourism will be government led, private sector driven, community based and labour conscious;

- There will be a mix of both self-drive as well as guided game viewing activities. All non-vehicular activities have to be guided, due to the presence of dangerous game, except in the instance of approved self-guided trails in designated areas such as in intensive visitor use zones; Iron age sites, or view points.
- No further accommodation facilities will be developed in the basin;
- Improve access for visitors with disabilities, especially the picnic sites; and
- All tourism initiatives must not compromise the Natural Resource management Vision and Objectives.

## **5.4 Tourism Objectives**

The following tourism Objectives will be explored and where feasible developed:

- To provide and maintain adequate tourism infrastructure to accommodate the needs of Park visitors;
- To monitor visitor numbers and user profiles for planning and management purposes;
- To manage entry fees to optimise income while keeping them affordable;
- To redefine pensioner access;
- To manage busses and coaches so that this market can be accommodated while not detracting from the enjoyment of other users;
- To explore and develop new products which will alleviate pressure in the basin (i.e. centrally situated Mankwe lake area);
- To facilitate the integration of PNP's tourism products with other products and opportunities outside PNP - specifically with neighbouring Councils, landowners and communities.
- Improve collaboration between all stakeholders in the tourism sector operating in Pilanesberg; and
- To ensure Claimant communities and concessionaires rights and obligations are met.

The challenges, opportunities and Objectives, which have been identified, will be achieved through implementing the following Operational Guidelines and Activities.

## **5.5 OPERATIONAL GUIDELINES AND ACTIONS**

### **5.5.1 Management of Tourism Activities and Visitor Densities**

Park Management will remain flexible regarding visitor carrying capacities. Rather than setting fixed limits on visitor numbers, Park Management will facilitate and/or implement a variety of visitor management techniques and/or facilities that are aimed at increasing visitor carrying capacities whilst enhancing visitor satisfaction. These include the strategic placement of tourist facilities, comfort stations, activities and amenities that will reduce congestion on the roads while affording visitors adequate facilities/activities.

### **5.5.2 Actions**

Enhance and where feasible expand and provide additional picnic sites, road network, view points and hides.

### **5.5.3 Infrastructure**

The communal tourism infrastructure on which most visitors rely must be developed and maintained to an appropriate standard. As visitor numbers grow, additional infrastructure may be required to ensure the visitors enjoy their stay and the use of the Park. Currently there is an infrastructure maintenance backlog that requires urgent attention.

### **5.5.4 Actions**

Park management must develop and implement an infrastructure maintenance plan with budgets to ensure adequate maintenance is undertaken (see Infrastructure section for further details). SEE INFRASTRUCTURE SECTION FOR COSTS

### **5.5.5 Monitoring of Visitor Densities and Attitudes**

Visitor entries, usage patterns and visitor reaction to current densities need to be closely monitored, so that the situation can be managed for as long as possible without having to set rigid limitations on entry levels and without having to apply a fixed policy regarding self-drive game viewing.

### **5.5.6 Actions**

Explore and implement a cost effective system, which provides adequate information on Park users to assist with tourism planning. See Administration Section for costs.

### **5.5.7 User Fees**

Access to the Park may be achieved through various mechanisms including directly buying an entry permit for self drive or indirectly through guided drives. Entry permit fees have not been increased for 4 years; a readjustment must be implemented to accommodate the effects on park income caused by inflation over this time. Once implemented the fees must be adjusted annually.

In addition, access for pensioners must be reviewed including the definition of those who qualify. It is common practice that a pensioner must produce proof that they are over 65 years of age and must be SA citizens and permanent residents. Pensioner access fees must also only apply during off peak periods (Monday to Friday) excluding school and public holidays.

### **5.5.8 Actions**

- Adjust fees to accommodate the decline in park income in real terms due to inflation since the last increase in prices and thereafter review annually; and
- Redefine pensioner access..

If user fees are adjusted for inflation based on 2010/11 (Apr to Apr) this will increase income to R19,545 million from the projected R16,44 million for 2014. This assumes no increase for pensioners (stay at R20) but they would pay full rates if visiting in peak periods. This cannot be modelled, as the pensioner visitor stats are not available at this level of resolution.

### **5.5.9 Improve collaboration between tourism stakeholders**

There are many and varied tourism stakeholders in and around the Park whose business and welfare is closely linked to the products offered in the Park. Many have contractual rights and own land within the Parks' boundaries. Most of these stakeholders and/or their clients operate in the communal access areas of the Park. Collaborating and working together with them can enhance their products and the overall economic impact of the Park.

Also there are many activities or developments close to the Park boundary that negatively impact on tourism within the Park. The local and regional Councils are responsible for planning and administering these land uses together with other organs of state including the security sector. Closer collaboration with these councils and government departments should be enhanced through proper and formal communication, which may assist in mitigating some of these impacts.

### **5.5.10 Actions**

- NWP&TB to facilitate the establishment of a Tourism Liaison Forum. The purpose of which is to improve communication between the various tourism stakeholders. It will focus on the following areas:
  - Management of tourists;
  - Communication with councils and other government departments;
  - Security; and
  - Branding and marketing of Pilanesberg as a destination.

No additional costs foreseen, this will be accommodated within the Administration costs.

### **5.5.11 Branding and Marketing**

Pilanesberg as a brand and a destination that must be protected and enhanced. Although all the stakeholders may have their individual marketing and branding initiatives it is important that where possible a collective approach is adopted so that marketing and branding can be optimised. This is best achieved through the Tourism Liaison Forum.

### **5.5.12 Actions**

- The NWP&TB are to provide information to members of the Forum on Provincial tourism promotion and awareness initiatives involving Pilanesberg. Where practical and feasible they should facilitate the involvement of Forum members in these initiatives.

No additional expenses, this will be aligned with current NWP&TB regional and international marketing initiatives.

### **5.5.13 Establish new tourism products**

This is necessary to achieve two outputs, firstly to accommodate the Land Restitution Claimants rights with regards to lodge beds and game drive vehicles and secondly to establish a new product offering. The latter would include low impact overnight walking trails in the Wilderness Zone but also where feasible in areas not accessible to

vehicles. The operating base for these low impact trails would be in the Wildlife Touring Zone or the Restricted Communal Use Zone. The operating bases would provide secure parking, ablutions, reception and storage and possibly overnight accommodation and catering.

### 5.5.14 Actions

- Engage with the Claimant communities to finalise Co-management agreements for awarding their rights with respect to lodge beds and game drive vehicles;
- The Kubu and Mothatha picnic sites must be expanded to cater for larger numbers of visitors over the peak periods, which may require additional ablutions and parking areas. The feasibility of using the old Mankwe tented campsite must be explored for use as a possible additional picnic site, even if just for temporary use over very busy periods. Explore the option of new picnic site at Tsephe and Nkakane junction.;
- Explore the option of a (build/operate/transfer) type of restaurant concession, like the Pilanesberg Centre in the western portion of the park;
- Initiate detailed planning to accommodate overnight low impact walking trails. If the studies indicate it is feasible then implement accordingly. The trails/s would consist of semi/permanent structures outside the Wilderness zone with temporary structures in the Wilderness Zone. Visitors would be guided either on one-day trails or multi day trails, based on the concept such as the De Hoop Whale trail, the Otter trail, or the new Backpacking trails in the Kruger National Park.

### 5.5.15 Estimated costs

Item	Details	Estimated cost
Expand the Kubu picnic site	Refurb current ablutions R100 000. Build new ablutions R600 000. Increase parking, R250 000. Water reticulation R100 000. EIA (done in conjunction with other picnic sites) R50 000	1 100 000
Explore the option of developing a new picnic site at Mankwe and if feasible develop it	EIA (partly funded as part of other picnic site extensions) R100 000, build ablutions and paths to accommodate disabled guests R1 000 000, Develop car park R100 000, Water infrastructure R100 000.	1 300 000
Explore the option of developing a new picnic site at/near the Tshepe & Nkakane junction and if feasible develop it	EIA R100 000, new ablutions R600 000, parking are R150 000, paths, fences etc. R250 000	1 100 000
Upgrade Fish Eagle picnic site	Improve toilets, parking area and general upgrade of facilities R350 000	350 000
Explore restaurant concession like the PC in the west of the Park		350 000
Walking trail feasibility	Conduct operational and business feasibility study, if viable appoint EIA consultants (best done in conjunction with picnic sites)	350 000



Sub-total		4 550 000
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### **5.5.16 Busses and coaches**

Anecdotal evidence suggests there has been a significant increase in the number of coaches and busses visiting Pilanesberg, especially large busses seating 50 passengers or more. Currently these vehicles are restricted to the tarred roads of Tshwene, Kgabo and Kubu drives. This impact is though off-set by the fact that they tend to visit during the less busy mid-week off-season period. Should they increase in numbers and visit over busy periods this could compromise other visitors' enjoyment of the Park.

School groups also visit as part of environmental education and mainly undergo their park visits in a bus.

### **5.5.17 Actions**

- Widen the current roads on which busses may travel for safer two-way travel and overtaking. This initiative is currently being planned but not in response to accommodating busses it will nonetheless help to mitigate some of the impacts associated with large vehicles;
- Engage with the operators of the busses or the trip organisers to establish their growth projections and to agree on an operating procedure to ensure the bus and coach passengers enjoy their trip to the Park while not compromising that of other users. This may entail restricting access of busses and coaches to the mid week - low season only.
- Set weight limits and height restrictions on vehicles.

### **5.5.18 Cost**

See Infrastructure Section for road costs. Other aspects covered in Administration.

### **5.5.19 Temporary Campsites**

There has been a demand, albeit limited, in the past for large (~50 guests) temporary (less than 5 days) campsites. To accommodate this the following operating procedure must be adopted:

- Park Management will determine where these are to be located. Park Management must undertake a scoping of the site to ensure it does not contain any threatened biota and must not disrupt existing users;
- Only nature based events;
- No permanent structures, including roads or track may be developed;
- NWP&TB will provide no equipment;
- Qualified 'Dangerous Game guides are to be present at all times during the establishment, operating and closing phases, Park Management must vet these guides and determine the number required.

### **5.5.20 Cost**

No additional cost implications.

## 6 COMMUNITY PARTICIPATION

### 6.1.1 VISION

Recognising that the Park has had, and will continue to have a significant impact on neighbouring communities and will not be able to achieve its objectives without their understanding and appreciation, it is envisaged that the Park will have the support of all neighbouring and affected communities, especially those that were directly affected by the establishment and existence of the Park.

It is also envisaged that the Park's stimulus to the local and regional economy will be recognised and that it will therefore be seen as an important vehicle through which rural development and transformation is achieved.

### 6.1.2 OBJECTIVE

The primary objective of Community Participation is to fast track community and emerging entrepreneur access to tourism activities and opportunities in and around the Park and to stimulate local economic activities and job creation. *[This will result in public understanding and support for Pilanesberg National Park and its projects and programmes, as a valid and beneficial land use option].*

### 6.1.3 POLICY

The Park, in line with national policies, has an important role to play in community empowerment generally and participation specifically, as acknowledged in the vision above. Capacity building within communities is however a non-core activity of PNP and will therefore be facilitated by optimally utilising the resources and capacities of other support institutions.

PNP management will therefore;

- establish appropriate forums through which communities can give their inputs to decision making and any significant changes in the policies and management of the Park;
- involve itself at all levels of community empowerment and participation;
- facilitate the necessary support mechanisms for community empowerment through external agencies (Donor NGO's, Government, Private Sector) before allocating its own resources;
- pro-actively identify and regularly expose all business opportunities to communities through an open-ended invitation and through a transparent and user-friendly process;
- where feasible, create special programmes and criteria that will give disadvantaged communities and emerging entrepreneurs (including management buyouts) preference of access to outsourcing contracts;
- in the case of tourism-based enterprises and other direct operational opportunities within the Park, limit its role in capacity building to that of a pro-active facilitator, by procuring appropriate support mechanisms within the private sector, NGO's, government and other agencies;
- help encourage environmental education in collaboration with the relevant Department; and
- in the case of peripheral enterprises, support services and industries, and be obliged to expose opportunities to all neighbouring communities and emerging entrepreneurs.

## **6.1.4 STRATEGIES**

Community participation, understanding and support will be obtained through pro-actively implementing the following strategies:

- Establishment of effective communication mechanisms;
- Assisting and encouraging the relevant Department to ensure the facilities in the Park are optimally used for education and awareness programmes that will create the necessary understanding, appreciation and support for PNP, its objectives and its operations;
- Engaging in appropriate partnerships that will access resources and capacities of community empowerment support agencies;
- Constantly identifying opportunities and inviting communities and emerging entrepreneurs to participate;
- Offering preference to communities and emerging entrepreneurs through special selection procedures and support programmes for identified community-based business opportunities; and
- Identifying and optimally utilising the opportunity to tap into the resources of external social programmes that are aligned to the objectives and policies of the Community Participation programmes (eg Poverty Relief, Job Creation, etc.)

## **6.1.5 Guiding Principles and operational guidelines**

### **6.1.6 Community Institutions**

The Park management will maintain formal communication links with communities through recognised and representative (preferably existing regional and tribal) structures. These structures will be allowed representation on the Pilanesberg Communication Forum and their role is to provide a formal communication link with affected communities and to ensure that benefits are accessible to the entire community.

### **6.1.7 Communication**

The Park will regularly engage in two-way communication with the recognised community institutions, allowing regular;

- communication with the Park Head
- dissemination of important information
- exposure to opportunities within PNP
- participation in decision making processes, planning and management issues
- monitoring of community perceptions and attitudes.

Important community related information and programmes will be regularly disseminated through appropriate printed, electronic and other media. Target markets will include appropriate support institutions, government agencies, NGO's and politicians.

All identified opportunities will be regularly exposed to communities and emerging entrepreneurs.

### **6.1.8 Awareness and Education Programme**

The North West Parks and Tourism Board will encourage with the relevant Department to facilitate appropriate education programmes that will create awareness, appreciation and support amongst all communities of the North West Province, for the Protected Areas and their conservation and tourism policies, objectives and projects. The Education Centre and Bosele Camp provide such opportunities.

Such an education programme and its success will constantly be reviewed and improved; will build on previous experiences; and where appropriate, will be integrated with programmes of other government, NGO and private agencies programmes. Appropriate partners, donor organisations and support institutions will therefore be identified and engaged in a joint venture to limit the drain on PNP resources. For example, Education related operations that are aligned with PNP's policies and strategies might be allowed access to PNP and its infrastructure at special rates.

### **6.1.9 Community Empowerment Partnerships**

Where appropriate management will contractually engage Government, NGO, private and other agencies to establish the necessary support mechanisms and institutional capacities that will facilitate entrepreneurial and skills development and access to resources for local communities and entrepreneurs. They may also assist communities in establishing direct relationships with such agencies. All relationships will be established along predetermined guidelines and in accordance with approved programmes that will be monitored at predetermined stages and at regular intervals.

A database of support mechanisms and institutions in the field of capacity building, community empowerment, skills training and funding will be maintained and formal relationships will be established with appropriate role players.

### **6.1.10 Access to Commercial Opportunities within PNP**

Participation in commercial (business) opportunities within PNP, by communities and emerging entrepreneurs, will be pro-actively pursued. Therefore, a permanent inventory will be kept of commercial opportunities available to communities and SMME's inside PNP; of emerging entrepreneurs within the community; and of potentials for management buyouts.

The selection process will be through an open invitation (instead of time limited once-off invitations), which will be regularly communicated to the relevant stakeholders and will, through the selection criteria, be in favour of community-based and emerging entrepreneurs. Provided such an open invitation does exist and was advertised less than 12 months prior, a proposal from a community or emerging entrepreneur that meets all the non-negotiable criteria, may be entertained by following prescribed procedural guidelines for entering into a formal agreement. The success of this programme will be regularly monitored and re-assessed by PNP.

### **6.1.11 Employment and Small Business Development**

Concessionaires inside PNP are obliged to optimise community participation through the application of supportive employment and business contract policies. This will be a material condition of every lease and will automatically be included in every existing contract that is assessed for renewal.

### **6.1.12 Utilising Social Programmes**

Social programmes initiated by external organisations (e.g. Job creation, Poverty relief, training initiatives and NGO support programmes) will be identified and tapped into where it has the potential to support PNP objectives, strategies and projects.

### **6.1.13 Actions**

- Establish and manage community participation and communications forums;
- Assist the relevant Department with Environmental Education in the Park;
- Identify and help facilitate job creation from Park related businesses;
- Provide input to the Park Forum;

Estimated budget for the above programmes is **R424 000**.

## 7 Zoning

### 7.1.1 Context

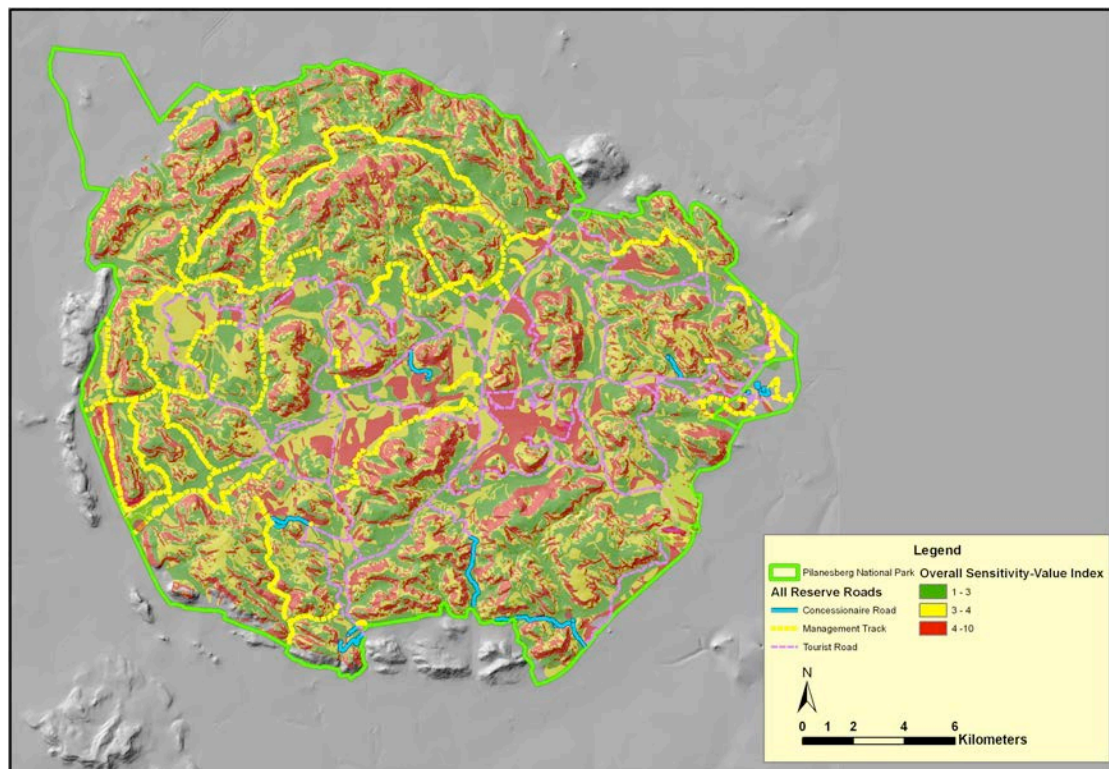
The previous zoning for PNP focussed on tourism use as the basis for defining the zones. Although this is an important aspect for PNP it is deemed more appropriate to use the underlying natural resources and heritage issues as the basis given the emphasis for zoning given the emphasis applied to these in the Park's objectives. The iSEA undertaken by Marlene Laros and Associates (2007) has developed sensitivity values for the Park using these underlying attributes with the aid of GIS.

### 7.1.2 Policy

The underlying basis for the primary zoning in PNP is defined by the following policy:

*PNP will be zoned according to the underlying biodiversity, landscape form and heritage sensitivity while taking into account previous uses of the landscape*

The sensitivity analysis so derived is presented graphically in **Map 7.1** below



**Map 7.1.** The combined biodiversity, landscape and heritage sensitivity for PNP as derived by Marlene Laros and Associates (2007). A score of 1 is low while a score of 10 is very high.

The area of highest use, the central basin, has high sensitivity scores. This is derived to a large degree by the dams and watercourses, low lying plains type habitats as well as heritage (See Heritage Map in Community and Heritage Section). This is not to suggest that previous use must be discontinued but rather future development must consider these aspects when planning or developing new tourism products.

A secondary zoning based on tourism use will be applied, as follows:

- Optimising tourism value while minimising conflict between user groups;
- Providing access for identified target markets;
- Considering the physical, aesthetic and other potentials, capacities and constraints of the terrain;
- The suitability for specific types of developments and activities;
- Providing access to support infrastructure; and
- Creating linkages and relationships with neighbouring zones, developments and activities.

### **7.1.3 GUIDELINES**

Various categories of zones have been identified and are shown on **MAP 7.2**. The criteria for each zone will be developed along principles accepted by the International Union for the Conservation of Nature and Natural Resources (IUCN).

#### **7.1.4 Wilderness Zones (WZ)**

These are areas set aside for the conservation of the natural ecosystem, with limited outside interference. Access is restricted to low density, non-vehicular and high quality guided activities that do not scar the landscape or the environment and may be shared by more than one concessionaire. No permanent developments other than water supply and peripheral management infrastructure will be allowed. This was once a zone where Hunting took place in the park's first management plan.

The recent upsurge in rhino poaching has resulted in more use of the management tracks in this zone.

All the various user groups share this zone for walking trails.

#### **7.1.5 Wildlife Touring Zone (WTZ)**

The largest zone in PNP is set aside for access to the general public as a medium to high density self-guided and guided wildlife touring zone, to satisfy their desire and right to enter state land. Outdoor recreational facilities and extensive visitor comfort stations may be provided within this zone, to optimise the carrying capacity of PNP. Developments should however be kept away from the central basin and be kept as close to the periphery of PNP as possible, to minimise the impact and optimise the visitor carrying capacity of the interior.

### **7.1.6 Exclusive Use Zones (EU).**

These are areas in the immediate environs of a lodge, which ends at the fence of the lodge.

### **7.1.7 Restricted Communal Use Zones (RCU)**

These areas are central or unique areas or features of PNP that are preserved for use by all concessionaires on an equitable basis, but it is not available to self-drive visitors.

It must be realised that the economic viability of the reserve is directly related to income generated from concession fees. Accordingly, the Board is bound to maximise income without detracting from the exclusivity to which the concessionaires are entitled. An area that will always have permanent access to all concessionaires includes the Moloto plain in the north-west quarter of the park.

### **7.1.8 Environmental Education Zone (EEZ)**

An area, which is used for environmental education and self-guided walking and other agreed activities. It does not contain any of the dangerous game (e.g. large predators, elephant, buffalo and rhino) found in the rest of the Park.

### **7.1.9 Intensive Visitor Use Zones (IVU)**

These are areas with intensive facilities and activities for educational and interpretative purposes and may allow self-guided trails as there is no dangerous game in these areas. These zones are accessible to all visitors. To optimise visitor experiences, intensive habitat and wildlife management may occur.

### **7.1.10 Incorporated Land (IL)**

These are privately owned land, which have been incorporated through formal agreement into the management area of the Park, there may be fences separating these areas from the Park.

### **7.1.11 Claimed Land (CL)**

These are portions of the Park, which have been restored to the original owners of the land via the Land Restitution process. Their use is regulated via Settlement and Co-Management Agreements. **AWAIT INPUT ON THE BOUNDRIES, STILL TO BE INSERTED.**

### **7.1.12 Private Development Sites**

These are areas of land which are fenced into the reserve through agreements with the Board, but which are owned by private individuals, companies, trusts, communities, etc. No access is allowed to these areas unless by prior arrangement with the landowners. Park Management, or their nominated agent, will obviously have access for control purposes.

### **7.1.13 Hunting**

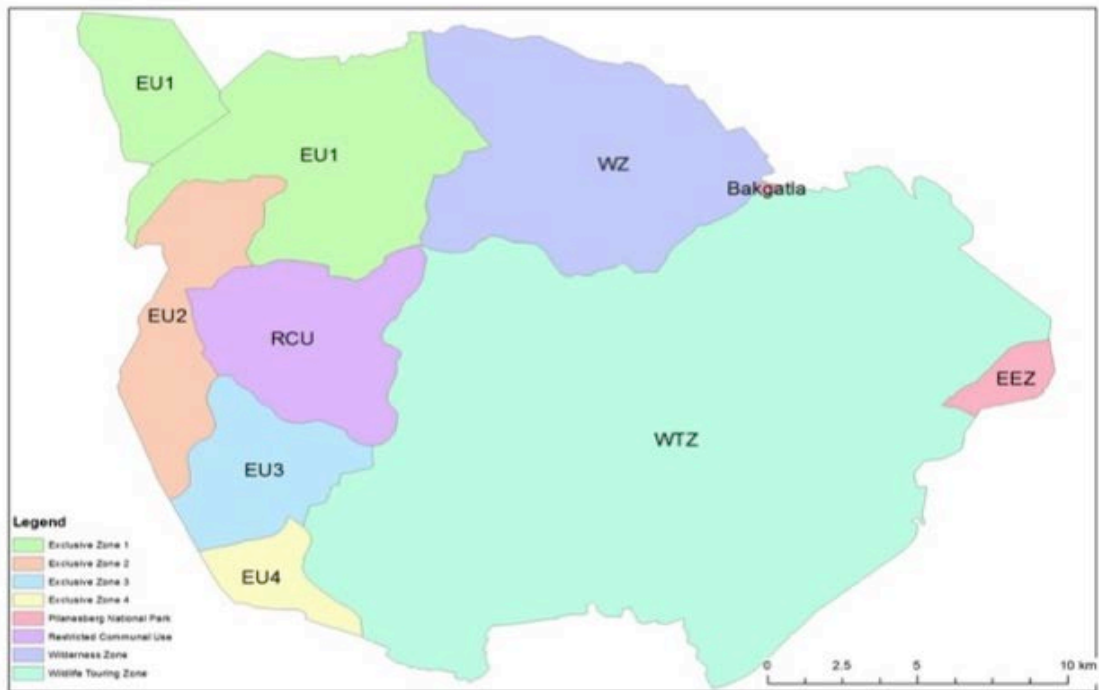


Trophy hunting has continued to decline over time as tourism has increased. There will therefore be much less emphasis on trophy hunting in the future, as broadly speaking benefits from tourism outweigh that of hunting. No portion of the reserve is permanently reserved for hunting. This activity will be conducted under strictly controlled conditions in areas periodically identified for this purpose by Park Management with due consideration being taken of other visitor activities and concessionaire rights. Normally, hunting will not take place in exclusive use zones, but could occur in exceptional circumstances.

### **7.1.14 Other Resource Use**

No portion of the reserve is permanently reserved for resource use (eg. wood collection, thatch harvesting, etc..). Such activities will be conducted under strictly-controlled conditions in areas periodically identified for this purpose by Park Management, in consultation with an ecologist, and with due consideration being taken of concessionaire rights.

**MAP 7.2.** The location of the different zones within the Park



## 8 INFRASTRUCTURE

### 8.1 Context

Infrastructure is an essential element of developing and realising the potential of PNP. It is however costly, both financially and environmentally. Infrastructure is an asset that is developed to achieve an outcome and the costs of developing and maintaining it must be constantly assessed against the benefits it offers. The most appropriate solution must be sought which is environmentally and financially feasible.

The NWP&TB is responsible for the support infrastructure on which the tourism products depend, these include fences, most of the roads & tracks, water for game, NWP&TB staff accommodation, entrance gates and the like. A balance must be struck between what is required and what is affordable. This may require some Stakeholders to develop and maintain some infrastructure to enhance their product offering. Those Stakeholders who have infrastructure in the Park must maintain these within the parameters set out in the bilateral agreements with the NWP&TB.

The NWP&TB will be responsible for ensuring that the conservation infrastructure is developed and maintained and the private sector is responsible for their tourism developments and related products within their respective areas.

Heritage and culturally significant aspects must be considered, especially when demolishing or altering old buildings and sites. Consultation with people who formally lived in the area is important in this regard.

### 8.2 Policy

*The NWP&TB will ensure that the conservation and communal tourism infrastructure is developed and maintained throughout the entire Park. The NWP&TB will decide on what standards and quality are required and what developments will be placed where. This will be done within budgetary constraints, legal requirements and according to needs. For any development an EIA, including heritage aspects, must be undertaken according to Park guidelines*

### 8.3 Guiding Principles

- Infrastructure must be kept to an absolute minimum;
- The costs and benefits of all infrastructure must be continually assessed to determine what is the most appropriate strategy to secure the outcome associated with the asset.
- As a general guideline, Park Management will ensure that most reserve infrastructure, which is the NWP&TB's responsibility, is developed and maintained according to plans and budgets;
- The most cost effective means of doing this will be explored and implemented subject to available funding; and
- Infrastructure maintenance must be prioritised regularly subject to funding availability. As infrastructure deteriorates the cumulative costs of repairing it often escalate rapidly. Cutting on maintenance funding is always tempting, but this must be weighted against the accelerated decline of delaying the repairs.

The following Development and Operational Guidelines apply to various types of infrastructure:

## **8.4 Standards & Responsibilities**

As a general guideline, Park Management will ensure that most Park infrastructure, which is the NWP&TB's responsibility, is developed according to plans and budgets and ensure that these are maintained in good working order. Park Management will monitor and control private sector developments.

## **8.5 Environmental Impact Assessments (EIA's)**

Every development within PNP, whether undertaken by the NWP&TB or by the Private Sector, will be subjected to the EIA process as prescribed in law, before it can be approved and implemented. The developer is responsible for the cost of the EIA.

## **8.6 Roads**

Roads remain one of the most expensive, both financial (to maintain) and environmental (due to their consequent impact), items in the Park. They are however essential for tourism and management. A balance must always be found between the quantity and quality. Roads for sedan type vehicles require a high development and maintenance specification and as a result are a costly item. There is a trade-off between capital costs of the roads and annual maintenance, especially tarred vs. gravel. Where possible, sedan specification roads will be tarred where funding exists. Reserve management will undertake on-going maintenance of the roads, for which equipment has been secured, however periodic upgrades that are costly, are beyond the capability of this equipment.

Park Management will ensure that a road network is developed and maintained within the Wildlife Touring Zone. The following categories of and standards for roads will be available:

### **8.6.1 Main roads - tarred**

These are wide (2 vehicle width) tarred roads with drainage (ie. Mitre drains) and suitable for sedan vehicles and large vehicles including bus/coaches. These will provide almost year round access.

### **8.6.2 Secondary roads - tarred**

These are narrow tarred roads with drainage and are suitable for sedan vehicles and large 23 seater-game drive vehicles only. These will provide almost year round access.

### **8.6.3 Main roads, primary - gravel**

These are wide, double vehicle roads, suitable for sedan access during most<sup>10</sup> of the year. They will be periodically shaped, compacted and where necessary the wearing surface be replaced. The latter however will generally not be done with the in-house equipment but will be contracted to third parties.

### **8.6.4 Main access roads, secondary - gravel**

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<sup>10</sup> Under extreme weather these may be temporarily impassable in some areas for a short to medium periods, ie. 3 to 21 day periods,

These are narrow, single vehicle roads; with passing berths in some places. They are suitable for sedan access during most<sup>11</sup> of the year. They will be periodically shaped, compacted and where necessary the wearing surface be replaced. The latter however will generally not be done with the in-house equipment but will be contracted to third parties. Where these are management tracks, it is important that the condition of the park boundary road is maintained in a condition that allows unimpeded travel to patrolling staff, and that all internal management roads will serve firebreaks by being in good condition especially during the fire-risk season (July – December).

### **8.6.5 Game drive tracks**

These are single vehicle width tracks, which are mostly shaped with machinery using *in situ* material. They are suitable for 4X4 Vehicles and high clearance vehicles for some<sup>12</sup> of the year. They are reserved almost exclusively for management and not for general commuting and use by service vehicles (except for management purposes).

### **8.6.6 Bush tracks**

These are narrow tracks ('twee-spoor'), which have simply been 'cut through the bush'; where there is minimal soil disturbance and removal of trees. They will not be upgraded by management and will only be periodically pruned to control the side growth of vegetation.

### **8.6.7 Road costs**

Costs provided in the costing are based on the above standards and assumptions. Currently there is a significant backlog of maintenance required and this needs time and prioritisation to get to the desired standard.

Funding to maintain all the roads to above standards may prove to be a challenge at times. Prioritisation of the road and track work programme may therefore be necessary for certain sections from time to time. Park management will prioritise this. Road maintenance will be split into two phases, firstly grading, and watering and secondly major refurbishment. The gravel roads should be graded 4 times per year and the shoulder and drains of the tarred road must be kept open either by manual labour or grading, in-house equipment will be used, and estimated annual costs are:

- Gravel roads – R2,07 million;
- Tarred roads R300 000;
- Fence track R32 000;
- Management tracks (slash and hand prune) R73 000.

However in addition to the above the gravel roads require a major rebuild every 10 to 15 years, this requires additional equipment and will need to be contracted out. It is estimated to cost R43 million, or about R4,3 million per year. The tarred road requires a major rebuild and this is estimated at R17,7 million, this must be done within the next 2 to 3 years as the roads are deteriorating rapidly. In

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<sup>11</sup> Under extreme weather these may be temporarily impassable in some areas for a short 3 to 21 day period,

<sup>12</sup> Certain sections of these tracks may be impassable during the wet season. Costly hardening and importing of material will generally not be done to improve these areas for environmental and cost implications.

addition, the fence track needs upgrades in some areas, which is budgeted to cost a further R5,85 million. Additional funding must be sourced for these important programmes.

The roads and tracks in the exclusive use areas will be supplied and maintained by the lessee of the concession area. However, these roads or tracks must be aligned and constructed according to an EIA which will be determined by the Reserve management in consultation with the reserve's ecologist.

### **8.6.8 Staff Accommodation**

NWP&TB will supply staff accommodation for their own staff who will be required to work in the Park, according to NWP&TB policies. The Concessionaires are responsible for supplying their own staff accommodation. If this is located within the Park, then it must be located within their own exclusive use area. Only staff who are directly involved with the day-to-day operations of the facilities may be accommodated within the Park. This accommodation must meet minimum industry standards and must form part of the development plan.

Should Concessionaires supply NWP&TB staff with accommodation, it must be built and maintained according to NWP&TB standards.

On-going maintenance of staff houses and building is estimated to cost about R628 000. In addition annual grounds maintenance adds a further R383 000.

### **8.6.9 Offices & Workshops**

Park Management will operate offices and workshops within the reserve for their own use as required. Should concessionaires require similar facilities for their own use, these must be built according to the development plan in their own exclusive use areas.

### **8.6.10 Services**

Telephones, radios, electricity and water for use by the Concessionaires must be supplied, maintained and paid for by the Concessionaires and they must ensure they have sufficient capacity to supply their needs. Park Management will provide advice and, where necessary, will endeavour to facilitate negotiations with the relevant government departments in order to get these services into the area. All those services required for Park management will be supplied and maintained from PNP's operational costs.

### **8.6.11 Aircraft**

No airstrips will be allowed inside PNP, there is a helipad for use by Park Management at the Management offices at Manyane. No aircraft safaris will be permitted without the written consent of Park Management, but generally would not be encouraged.

### **8.6.12 Visitor Facilities**

Facilities, such as hides, picnic areas, braais sites and waterholes in exclusive use areas must be built and maintained by the Concessionaire but require Park Management's written consent to develop them.

Should Concessionaires wish to construct facilities outside these areas, this must be negotiated and agreed to in writing with other operators in PNP on the principle that it is a communal facility and therefore available and accessible to all. Maintenance of those facilities, however, will be to the cost of the Concessionaire. Park Management will ensure waterholes and/or dams are supplied and maintained in the Wilderness Zone, the Wildlife Touring Zone and the Communal Use Areas, according to the water plan for game. Park Management, in consultation with the reserve's ecologist, will control and regulate these facilities.

These facilities must be serviced and this is budgeted to cost R841 000.

### **8.6.13 Fencing**

Park Management will ensure that adequate fencing is provided and properly maintained to contain the animals that occur in PNP. All NWP&TB staff accommodation and facilities will be protected with fencing from wild animals where relevant. The Concessionaires are responsible for ensuring the safety of their own staff and guests and should fence these areas adequately. Should they not be fenced, then the NWP&TB will not be liable for any claims that may arise from damage to property, injury or loss of life. Erection and maintenance of fencing of private property outside the formally proclaimed Park will be agreed according to the conservation priority the NWP&TB assigns to the land.

The fence must be maintained to contain the Park's dangerous game, this together with a daily patrol costs R753 000. In addition a further R311 000 is budgeted for on-going major repairs of which about R135 000 is funded via the Extended Public Works Programme.

### **8.6.14 Entrance Gates**

All entries into PNP will be under the control of the NWP&TB, although certain functions may be outsourced. Should Concessionaires wish to have additional gates other than those already present, then agreement must be obtained from Park Management and if agreed to then the development, maintenance and staffing costs (staff appointments to be agreed by Park Management) will be borne by the Concessionaires. This includes NWP&TB staff accommodation and salaries and any other costs, if deemed necessary by Park Management.

Costs included under staff accommodation and tourism facilities.

### **8.6.15 Other Infrastructure**

The NWP&TB will only construct structures necessary for management purposes (eg. dams, weirs, waterholes, etc.). Should Concessionaires wish to develop structures other than in their own exclusive use areas, this must be agreed by NWP&TB in consultation with other Concessionaires. This final decision in this regard rests with the NWP&TB.

### **8.6.16 Siting of Lodges**

The lodges and camps should ideally (but not necessarily) be on or as close to the periphery of PNP as possible, to reduce the impact of support services and to reduce the pressures on the central basin. As a general rule, the greater the impact, the closer to the periphery should the developments be. The costs of providing support services will be borne by the Concessionaire.

### **8.6.17 Infrastructure Related to Staff & Visitor Safety**

The Concessionaires are responsible for the safety of their guests, their staff and their families at all times. This includes providing appropriate fencing around facilities and providing adequate security on game drives or walks.

### **8.6.18 Visitor Safety and Security**

The NWP&TB will maintain a secure entry control system, so that visitors and their belongings can be safe and secure. The NWP&TB and the Concessionaires must collaborate to maintain a high level of security and safety for the visitors within PNP however each party is responsible for appropriate indemnity insurance at his own cost.

### **8.6.19 Waste disposal**

Park Management and Concessionaires must adopt a responsible and environmentally-friendly waste management plan. Specifically, liquid waste should be handled on-site according to the development plan in conjunction with the EIA. Solid waste should be separated and sorted on-site and recycled where possible, or disposed of in consultation with Park Management.

## **8.7 Activities**

The following Activities are seen as **High Priority**:

- Undertake an annual infrastructure assessment to evaluate and quantify maintenance requirements. This must then be evaluated, costs developed and a maintenance priority work plan and budget submitted to the Park Management for consideration and approval (estimated cost R89 000 plus procurement and other overheads R132 000); and
- Maintain all essential Park infrastructure in good working order in the most cost effective means possible.

Secure funding for road upgrades and picnic sites (See Tourism Section).



## **9 Administration and Management**

### **9.1 Context**

The management of PNP is vested with the NWP&TB and as such they remain the responsible entity for implementing the Actions and Objectives of this Plan. Operating funding for management activities are raised from two primary sources, namely concession/lease fees, entrance fees and occasionally directly from the Board when required. Periodically there is income earned from the sale of live game depending on availability of a surplus for removal. About two thirds of the income generated annually (~R21 million in 2012/13) from the park is from entry fees with concession fees comprising the remaining third.

Operating costs for 2012/13 was ~R20 million, which the bulk of this (61%) was committed to salaries with maintenance of roads, building and the fence consuming a further 17%. Travel and vehicles ~7% and electricity & water, communications, stationary, printing and security (~10%), while the remainder is split between a range of miscellaneous items.

Funding has also sometimes been secured from government for specific programmes such as job creation and other social interventions. They continue to present an opportunity for grant funding especially for once off development projects.

The interpretation of the Restitution Settlement and how certain clauses relating to benefits will be apportioned could impact on income available for funding operations; this needs to be clarified and appropriate action implemented.

There are a number of identified Stakeholders with specific roles in PNP, the Stakeholders and their roles in the Park are summarised below:

### **9.2 NWP&TB**

As a general principle, the NWP&TB is responsible for managing the biodiversity and associated infrastructure according to the objectives and policies set out in this Plan. The NWP&TB will further encourage, facilitate and co-ordinate the involvement of the private sector and local communities, through agreements where necessary. It is also responsible for facilitating communication channels between the various Stakeholders to ensure a sense of partnership.

### **9.3 Land Owners**

The Land Restitution process in South Africa has restored title to three communities in PNP. These communities have been awarded rights, which are described in their Settlement Agreements, and further issues are currently under discussion in Co-management Agreements. The finalisation of these may impact on the financial and administrative aspects of PNP.

### **9.4 Partners with formal agreements**

Several formal long-term bilateral agreements have been entered into with partners including tourism investors and operators as well as the land claimants. These parties collectively represent a significant investment in PNP. They, together with the NWP&TB, have specified rights and obligations within the Reserve.

## 9.5 Local communities

The communities are responsible for developing democratic, transparent and representative institutions that can manage the economic benefits that can arise from the operation of the reserve to the benefit of all their members.

## 9.6 Policy

The management and administrative policy for PNP management is:

*To responsibly manage PNP's assets in an efficient, effective and collaborate manner for the benefit of the public and Stakeholders*

## 9.7 Guiding Principles

The following principles will guide the decision making process:

- The NWP&TB remains accountable for the Actions, management interventions and the financial management of the Reserves' operations;
- PNP Management must comply with National and Provincial Legislation and Regulations as well as NWP&TB Policies and Procedures and ensure a system is implemented which ensures proper control of finances and resources;
- Revenue generated by the activities of the reserve will be used to further the Objectives of this Plan;
- Activity funding will be collaboratively prioritised according to risks and impacts as set out in this Plan. In the event that there are years of high surplus (above the normal operating requirement), the surplus will be invested in Special Projects which are either revenue enhancing or will result in cost saving improvements; The NWP&TB will establish and maintain a management forum, known as the Pilanesberg Management Forum (PMF) which will work with Stakeholders to achieve the following:
  - To allocate the operating income raised from Pilanesberg to various programmes and activities arising from the Management Plan; and
  - To provide strategic oversight in the formulation of the annual budget and work-plan and approve the same and then monitor its implementation over the year.

The following hierarchy of priorities will be used when formulating and implementing the above decisions:

- to offset development and operational costs of the reserve;
- to finance other developments in the immediate region; and
- to develop conservation projects elsewhere.

The composition of this body would at least include the following:

- At least two executive directors of the NWP&TB with decision making authority over the budget;
- The Manager of the Park, duly appointed by the NWP&TB;

- Representatives of the CPAs;
- The Director of the Pilanesberg Trust, as an observer;
- Representatives of the investors; duly nominated and appointed via an agreed process/procedure; and
- Others whom the Forum may agree to admit in the future.

The Forum must however have the authority to adopt and pass resolutions relating to the above in a democratic manner which reflects the priorities of the of the stakeholders within Pilanesberg so that its overarching Objectives can be met.

Stakeholders may also, in addition to the PMF, form loose associations outside of those already outlined in this Plan to improve the products and operating efficiency of Pilanesberg and the stakeholders. However their mandate will remain limited and no resolutions will be binding upon the parties unless a formal process has been followed within the affected parties Agreement between those affected and the NWP&TB.

## **9.8 Funding**

The dynamic and fluctuating nature of the income generated from operations implies that a continual reprioritisation of activities and associated expenditure will be necessary. This will be achieved within the prioritisation framework set out in this Plan and further refined by the PNP management to ensure activities contribute to the Objectives.

## **9.9 Other organisations and Volunteer Groups**

The NWP&TB encourages assistance from third parties. These are best facilitated via formal agreements. Currently there are several such third party agreements including:

- Honorary Officers whom are appointed under Regulations and assist with visitor management over busy periods;
- Copenhagen Zoo, offer research and other wildlife management assistance;
- Friends of Pilanesberg; they assist with various projects in the Park; and
- Various other organisations.

### **9.9.1 Pilanesberg Wildlife Trust**

A non-profit organisation has been created by the NWP&TB known as the Pilanesberg Wildlife Trust. Its purpose is to help raise funds for conservation and social upliftment. It can therefore leverage donor and other funding for this purpose.

## **9.10 Activities**

The following are identified as **High Priority** Activities:

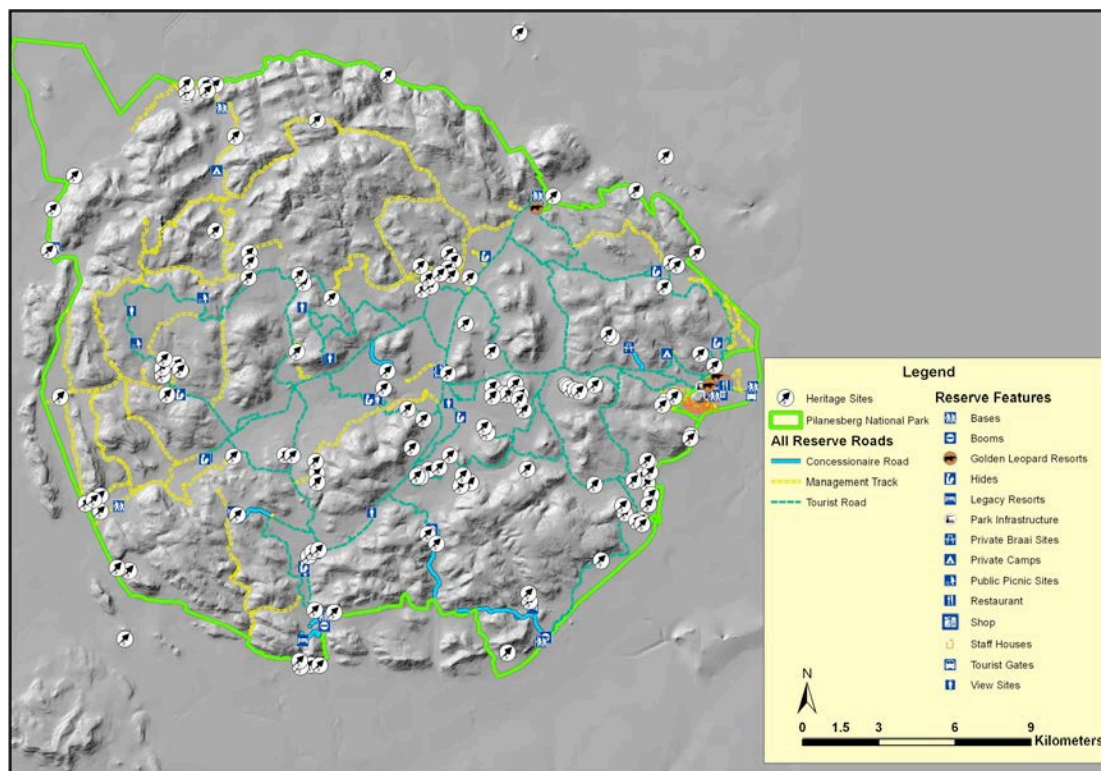
- Managing the Reserve finances including budgets, income and expenditure, estimated cost R1,88 million);
- Securing and maintaining the assets under the control of the Manager (estimated cost R346 000);

- Securing the mandate and principles of the PMF within the NWP&TB operating procedures (estimated cost R54 000);
- Engaging with PMF members (estimated cost R58 000);
- Gate access control and cash management (R3,33 million); and
- Providing adequate administrative services to support other essential Activities in the Reserve.

## 10 Heritage

### 10.1 Context

There are a significant number of heritage sites within the Park, see **Map 10.1**. This is of local significance and in some instances offers some value for tourism. This heritage should be conserved and where possible enhanced and included in the tourism value of the Reserve. The Land Restitution Settlement Agreements and associated Co-management agreements have specified certain areas which are of cultural and historical importance and set out activities to ensure these are appropriately managed.



**Map 10.1.** Heritage sites in Pilanesberg National Park (Marlene Laross and Associated 2007)

### 10.2 Policy

*To conserve and where possible restore the cultural and heritage associated with PNP and where appropriate utilise it for enhancing the tourism products*

### 10.3 Guiding Principles

The Heritage and Cultural aspects of the Park will be conserved within the following guiding principles:

- To comply with the conditions of the Settlement Agreements and collaboratively restore and conserve sites of importance;
- Where appropriate and in consultation with stakeholders, to develop and enhance the tourism value of historical and cultural aspects;

- To establish reasonable and mutually agreed access and use of sites of significance; and
- In collaboration with all stakeholders, ensure that the historical significance of the area is maintained.

## **10.4 Activities**

Ensure sites of significance are protected from damage and access is controlled.

## 11 LAND EXPANSION AND INCORPORATION

### 11.1 VISION

The area available for conservation and for viable ecotourism operations should be made as large as possible.

### 11.2 POLICY

The Board should acquire as much land as is feasible under its title. However, if private landowners or communities wish to have their land ‘fenced into’ PNP (but still retain their title) and thereby allow the game to have unhindered access and allow compatible land management practices and ecotourism operations on their land, then this should be allowed subject to certain conditions.

### 11.3 OPERATIONAL GUIDELINES

#### 11.4 Objective

*Park Management should endeavour to obtain all land within PNP under formal Board title.*

It is recognised that certain expansion opportunities exist along the periphery of PNP that may add significantly to the biodiversity and the size of PNP. Every effort should be made to ensure that these areas are ‘incorporated into’ PNP, as this can expand the socio-economic benefits from PNP through new tourism projects and can offer new commercial opportunities for neighbouring communities and land owners.

#### 11.5 Conditions of Agreement

Land that is owned by individuals or communities who wish to have their land incorporated into the reserve by means of fencing it in, may do so, subject to an agreement that includes *inter alia* the following conditions:

- the land must be fenced according to Board specifications and maintained in this condition at the landowner’s cost;
- damaged fence must be repaired immediately or reported to Park Management. Should there be any breakouts of dangerous game, these must be reported immediately to Park Management;
- the fenced-in area must be registered against the title deed, detailing what restrictions have been imposed on developments and use of the property. These may only be altered with the Chief Executive Officer’s approval;
- if private land is fenced into PNP and should the landowner’s neighbour/s wish to join PNP, the landowner must agree to have the fence removed to allow game access to his/her neighbour’s property;
- for a specified time, no hunting is permitted of any game that did not occur on the property before incorporation into PNP. This time will vary depending on the species involved. Other game may be hunted only if a quota has been set for PNP. PNP’s ecologist will decide on numbers to be removed annually. The landowner will then be given a quota to hunt on his/her land only. This quota will be set in proportion to the amount of game he/she had at the time of incorporation compared with the population in the greater Park. These figures must be

mutually agreed to. Should portions of animal quotas be left, these will be allocated by means of a random draw. Hunting will then only be permitted with permits issued by Park Management;

- no hunting is permitted within one kilometre of the reserve boundary; changing or erection of any fences may only be done with the Chief Executive Officer's approval;
- lodges and other tourist facilities that are built on private land are allowed access to PNP under similar conditions and fees as are charged to other operators in PNP. As a general rule, this should be encouraged as it reduces the impact of the developments in PNP. However, at least 60% of the number of lodges using PNP should be built in PNP itself; and
- Board staff must have free access to the property at all times to inspect the fence, land and game.