

Barberton Complex



Strategic Eco-tourism Development Plan for the Mpumalanga Parks Board

December 2002



**International
Conservation Services**



**Contour Project
Managers**

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Prepared by:

International Conservation Services

PO Box 19139

NELSPRUIT

1200

e-mail: stalmans@ics-consulting.co.za

tel: 0825614598

Maseko Management Services

PO Box 14396

NELSPRUIT

1200

e-mail: jmaseko@mweb.co.za

tel: 0826795668

Contour Project Managers

PO Box 4906

RUSTENBURG

0300

e-mail: contour@mweb.co.za

tel: 014-5372226

Authors & contributors (in alphabetical order):

Mr. Willie Boonzaaier
Mr. Lyndon Estes
Mrs. Marlien Lourens
Prof. Joe Maseko
Mr. Jackson Siboz
Dr. Marc Stalmans
Mr. Katlego Tetjane

Contents	page
Executive summary	1
1. Background to the Strategic Eco-tourism Development Plan	7
2. Scope and limitations of the Strategic Eco-tourism Development Plan	7
3. Role of a development plan	8
4. Methodology	9
5. Physical, biological and historical description	12
6. Determining the development options for the Barberton Complex	17
6.1. General	17
6.2. Individual factors impacting on tourism and development potential	17
6.2.1. Legal and institutional framework	17
6.2.1.1. Legal mandate of the MPB	18
6.2.1.2. Proclamation status of Reserves	18
6.2.1.3. Land claims	18
6.2.1.4. Integrated Development Plans	19
6.2.2. Socio-economic development vision and framework	19
6.2.3. Current land use patterns, needs, rights and aspirations of local communities	20
6.2.4. Environmental sensitivities	20
6.2.5. Physical constraints	21
6.2.6. Products currently on offer	21
6.2.7. Miscellaneous factors	22
6.2.8. Market demand	22
6.3. Guiding principles	27
7. Strategic vision	28
8. Development proposals	31
8.1. Songimvelo Game Reserve	31
8.1.1. Tourism products	31
8.1.2. Zonation	32
8.1.3. Proposed developments	36

8.1.3.1. Permanent overnight accommodation	36
8.1.3.2. Tourism activities	40
8.1.3.3. Required infrastructure	44
8.1.4. Residents and livestock	45
8.1.4.1. Game-fenced area	45
8.1.4.2. Jozefsdal/Diepgezet	47
8.1.4.3. Shyalongubo	47
8.2. Mountainlands	
8.2.1. Tourism products	49
8.2.2. Zonation	50
8.2.3. Proposed developments	53
8.2.3.1. Permanent overnight accommodation	53
8.2.3.2. Tourism activities	54
8.2.3.3. Required infrastructure	55
8.3. Barberton Game Reserve	58
8.3.1. Tourism products	58
8.3.2. Zonation	58
8.3.3. Proposed developments and activities	59
9. Linkages – regional circuits	62
9.1. Product mix, critical mass and compatible land use	62
9.2. Road linkages	65
9.3. Marketing	66
10. Financial assessment	67
10.1. Songimvelo Game Reserve	67
10.1.1. Development and expenditure costs	67
10.1.2. Income	67
10.2. Mountainlands Game Reserve	68
10.3. Barberton Game Reserve	68
10.4. Project facilitation costs	69
10.5. Summary for Barberton Complex	69
11. Implementation and phasing	71

11.1. General	71
11.2. Proposed process	72
11.3. Procurement of capital and investors	72
11.4. Construction and implementation	73
11.5. Ensuring broader participation in tourism	74
12. Conclusion	75
Appendix A: Attendance list of workshops with local stakeholders	76
Appendix B: Socio-economic conditions in the area of the Songimvelo Game Reserve	81
Appendix C: Socio-economic conditions in the area of the Barberton Mountainlands Game Reserve	87
Appendix D: Existing tourism facilities and other attractions in the Barberton Mountainland	93
Appendix E: Miscellaneous impediments to tourism in the Barberton Complex as perceived by workshop participants	98
Appendix F: Market Demand Assessment	100
Appendix G: Input by e-mail received from Prof. Don Lowe (Stanford University, USA) and Prof. Maarten de Wit (University of Cape Town)	117
Appendix H: Core Marketing Plan for the Greater Barberton as prepared by 360 ⁰ Marketing	120
Appendix I: Additional tourism and other products for Songimvelo as identified through the consultative workshop process.	122
Appendix J: Calculation of appropriate number of additional beds and vehicles for the game-fenced section of the Songimvelo Game Reserve	139
Appendix K: Detailed description of 2 main new development sites in the Songimvelo Game Reserve	141
Appendix L: Potential day and overnight hiking trails in the Panhandle section of the Songimvelo Game Reserve	146
Appendix M: Additional tourism and other products for Mountainlands as identified through the consultative workshop process.	150

Barberton Complex

Strategic Eco-tourism Development Plan for the Mpumalanga Parks Board

EXECUTIVE SUMMARY

The aim of this strategic eco-tourism development plan is to identify achievable tourism developments within the physical, ecological, cultural-historical, marketing and socio-economic realities, constraints and opportunities of the Barberton Complex. In particular, the plan concerns the 3 Game Reserves of the Barberton Complex, namely Songimvelo Game Reserve, Barberton Mountainlands Game Reserve and Barberton Game Reserve, that are managed by the Mpumalanga Parks Board.

It is key to a successful eco-tourism development plan that not only an internal focus be applied, but that the external factors are also fully incorporated. The internal focus must ensure the identification of realistic, achievable development opportunities within the conservation, environmental and physical constraints of the Game Reserves in question. The external focus must ensure that the opportunities identified are realistic in terms of current and expected market demand. The proposed concept that integrates the internal and external elements must go further than only ensure greater income to the Parks Board. It must also address the very real socio-economic aspirations and need for community beneficiation. In this way, buy-in by all stakeholders can be achieved

Based on the constraints that were identified during the field assessment phase and market research phase, certain ‘guiding principles’ are proposed for the development of the Barberton Complex. These principles are:

- Develop the 3 Game Reserves as part of an Barberton Mountainland concept rather than as separate, isolated entities;
- Establish linkages between the different tourism products in such a way as to generate additional interest (for example a linkage between the unique geology, the defunct and active mines, and the Umjindini jewellery project);
- Base development opportunities and activities on the natural strengths and attributes of the Barberton Complex (rather than facing stiff competition by offering marginal products which feature strongly elsewhere);
- Do not try to achieve Big Five game status in the 3 Reserves as serious inherent shortcomings will need to be overcome at high cost. Lions would also impact negatively on the major attraction of adventure tourism and hiking.
- Find equitable solutions for the informal residents and for the grazing of livestock that presently severely limit tourism development opportunities;
- Co-ordinate and harmonise zonation of the Game Reserves in the Barberton Complex as far as possible with community and private projects along their common border to limit mutual conflict and maximize zonal benefits;
- Concentrate the bulk of tourism developments in the peripheral zone;
- Maximize socio-economic benefits by complementary developments and activities that address a wide spectrum of interest and income groups;

- Expand tourism benefits beyond direct employment opportunities and curio sales by facilitating community equity participation;
- Facilitate transformation of the tourism industry;
- Limit developmental and operational costs for the MPB by favoring models that allow for private sector investment and operation; and
- Ensure phasing-in of development opportunities in step with the biological restoration of the Game Reserves and growth of the tourism market.

A convergence of factors and initiatives strongly defines the study area. They are:

- On the natural/environmental front
 - The identification of the underlying geology of the Barberton Mountainland as a unique feature of world value and appeal;
 - The identification of the Barberton Centre of Floristic Endemism as being of outstanding plant species diversity and conservation interest.
- On the conservation front
 - The development of a number of Game and Nature Reserves in this area by the MPB and the private sector;
 - The identification of the Songimvelo-Maolotja Transfrontier Conservation Area as a major conservation initiative for the area.
- On the tourism front
 - The identification of the Tourism Biodiversity Corridor from South Africa across Swaziland into Mocambique of which the Barberton Mountainland forms a critical core;
 - The branding of the area as part of the Wild Frontier Tourism Area;
 - The identification of a strategic set of roads that form circuits;
 - The interest and investment of the private sector in tourism in the area (re-development of Msauli Mine Village, ownership-based developments at Nkomazi Wilderness and Dycedale, possible tourism development of Sheba Mine Village by ETC).
 - The compilation of a Core Marketing Plan for the Greater Barberton.

Taking cognisance of these initiatives, in particular the presence of the fast-moving private sector, and the fact that the MPB Reserves face serious limitations for immediate development, it appears that the MPB would not be well placed at this moment in time to proceed with the classic development scenario of identifying development opportunities, procuring investment and generating an income from lease and rental agreements for these new developments.

Therefore, it is strongly recommended that the MPB adopts the following strategic approach:

- To emphasise the marketing of the Barberton Mountainland in its totality as an area of outstanding value that will lead to its recognition as a World Heritage Site;
- To lobby jointly with the Swaziland conservation authorities for this status using the MPB's institutional conservation mandate and conservation credibility with the MPB reserves and Malolotja in Swaziland being core to the World Heritage Site;

- To establish a partnership with the Peace Parks Foundation for support and facilitation for the Songimvelo-Malolotja Transfrontier Conservation Area;
- To act as honest broker to enable the corridor of community land between Nkomazi Wilderness and Songimvelo Game Reserve to become an integral part of the World Heritage Site to the benefit of the Tjakastad community;
- To facilitate the integration of the community land on which the Ebutsini 4x4 Trail is located to become part of the TFCA and WHS;
- To establish linkages and maximise the synergy between the MPB Reserves, community projects and private initiatives in order to establish the Barberton Mountainland as a 'destination';
- To lobby and work hand-in-hand with other Government Departments to establish the required road and services infrastructure that will enable full tourism development of the WHS in general and the MPB and community reserves in particular;

The Barberton Mountainland would certainly meet the criteria required for a natural heritage WHS. It might even meet the criteria for a cultural site, thereby becoming a mixed WHS that holds even more attraction for tourists. Furthermore, based on its size, current conservation initiatives, current legislative, regulatory and institutional protection and status of adjoining land use it is felt that the Barberton Mountainland would also meet the conditions of 'integrity' necessary for WHS recognition.

Pursuing WHS status need not be costly to the MPB. It will require dedicated effort and a champion should be identified. Technical surveys and assessment as to whether the area meets the criteria will need to be conducted but funding and support can be obtained from UNESCO.

Besides the conservation benefit, the MPB can expect to reap important financial benefits. Any tourism development opportunity within a recognised WHS concept is much more likely to attract serious investors and command a higher financial return. Therefore, postponing the procurement process for individual sites may in the end generate a much greater financial benefit to the MPB than that what could be expected from a hasty entry into a saturated market whilst having to overcome negative market perceptions (for example because of the presence of livestock in the Songimvelo Game Reserve).

The MPB will also be able to demonstrate to the public and the Government that this course of action results in much greater overall benefits that are reaching a much larger community than what can be expected from a few small-scale developments. In this way, the MPB would be fulfilling its legal mandate of conservation and economic development.

The proposed strategic approach does not preclude certain developments to be prepared or undertaken in the interim. The emphasis should be on providing the framework that allows for controlled activities that will bring in visitors from outside and thus assist in generating income and interest in the Reserves. It is also important to identify opportunities that may only become viable in future in order to ensure that these development sites do not get lost or get jeopardised by wrong choices.

Combining the constraints of the Barberton Complex with the aspirations of the different stakeholders and the expectations in the tourism market results in a number of logical and achievable products that can be offered. These products are based on the wildlife, scenic, adventure, geological and cultural-historical attractions of the Barberton Complex.

The main opportunities identified are situated within the Songimvelo Game Reserve:

- Confluence Site; a large site at the confluence of the perennial Sandspruit and Komati River with easy access close to the reserve entrance. Suitable for medium-sized to large development (40-80 beds) aimed at the middle- to upper-middle market. Main activities would consist of guided game-drives.
- Kromdraai Camp; existing self-catering facility of 50 wooden chalets that each can accommodate 6 self-catering guests (300 beds). This camp is aimed at the lower-middle to middle income group. An upgrade, refocusing and different management regime of this facility would be required to ensure its success.
- Komati River Lodge – Safari Lodge; The central facility of the existing Komati River Lodge (with a bed capacity of 20) burnt down in 2002. This has effectively closed down this catered lodge aimed at the middle to upper-middle market. The obvious course of action is to rebuild the central facility. It is anticipated that will require funding far in excess of the insurance payout in order to rectify shortcomings. This lodge has always been too cold for comfort in winter. It is no longer considered a suitable site, particularly if the link between Kromdraai Camp and the main plains is opened. For this reason it is strongly recommended that the Lodge should not be rebuild on site but that the alternative Safari Lodge site should be considered. The remaining infrastructure should be removed and the site rehabilitated. The Safari Lodge site is much more peripheral with easier access and services. It also offers much easier access to the main game driving areas. It is suited for a 20 to 40-bed development aimed at the upper-middle income segment of the market.
- Dunbar Corporate facility; This site is situated at the beginning of the Dunbar Valley where the access track from Msauli reaches the valley bottom. The access which requires 5 crossings of the Msoli River and the broad valley ringed by mountains combine to make this one of the most special and attractive destinations in the reserve. This offers the potential for a small 8-unit (16 bed) development aimed at the corporate market.
- Shyalongubo Camping and or Chalets; this development has long been discussed with the Shyalongubo community and a keen interest exists. The initial development could consist of a camping area with ablutions aimed at the angling market and 4x4 trailists. Chalets may later become viable, particularly if road access can be improved. The Dam straddles the Songimvelo boundary. Placing this development on the community side of the border may facilitate the sourcing of development funding.
- Goldfields Training Centre; this existing facility at the main entrance gate has in the past been used for staff training. The need for this facility for this purpose has greatly diminished. A re-focus on the school and tertiary education market may constitute the most appropriate use of this facility.
- Msauli Mine Village; the re-development of the former staff village of the Mine is being driven by the private sector. The proposed project for the upgrade and development of Msauli is estimated at R160 million. This is a most appropriate initiative that could unlock the tourism interest and

investment in the Songimvelo area. The MPB could capitalise on this development by offering activity and traversing opportunities from which it could generate a revenue.

The main developments on the Mountainlands Game reserve would be on the private and community-owned parts. The MPB would benefit from traversing fees from 4x4 and hiking trails that are based on the scenic, geological and cultural-historical attractions of the area. Although one or two small bushcamps might be possible on the Barberton Game Reserve the main use by tourists is expected to be centred around the day-visitor centre, 4x4 and hiking trails. This reserve lends itself well to environmental education and interpretation.

The total number of beds that are proposed for the 3 Reserves are significantly lower than those identified during previous planning exercises. The numbers proposed in the present Plan are however considered more realistic as they take into account the findings of the market demand research.

The creation of a network of roads and tracks as well as strategic bridges will be critical within Songimvelo and Mountainlands to link the different developments sites and activity areas.

Within the current time spirit and pressures on government resources, the involvement of the private sector rather than direct government investment is being more and more preferred. An appropriate procurement process for the fair and transparent allocation of opportunities with the best return to the MPB and the communities involved is required. It is strongly recommended that provision be made for equity participation of the communities involved. This is critical to ensure full buy-in of these communities into the protection and development of the Barberton Complex.

The development of the reserves in the Barberton Complex cannot be achieved in isolation. External linkages and interventions are required. In this regard, the most important are:

- Upgrading of the following roads (in descending order of importance for the successful development of the Barberton Mountainland):
 - Saddleback Pass – Bulembu Borderpost; work to ‘block pave’ this road is scheduled to begin early 2003. This will allow much safer and comfortable traversing across the Mountainland into Swaziland. It will also establish the ‘figure of 8’ arterial road system incorporating the 3 borderposts of Oshoek, Bulembu and Jeppe’s Reef;
 - Elukwatini-Mooiplaas-Ekulundeni-Msauli Mine; the present dirt road should become an all-weather tar road. This would provide much better access to the Songimvelo main plains (Confluence Lodge and Safari Lodge), to Kromdraai Camp and to the Msauli Mine Village;
 - Bulembu Borderpost – Msauli Mine; this would complete the main circuit Barberton - Badplaas –Barberton. This could be ‘block paved’ as it would support the same type of traffic as the Saddleback Pass-Bulembu road;

- Saddleback Pass – Shyalongubo Dam; to be ‘block paved’ in order to unlock the Panhandle area of Songimvelo and the planned developments around Shyalongubo Dam;
 - Shyalongubo Dam – Low’s Creek; this would complete a secondary circuit Barberton-Low’s Creek-Barberton which would benefit the Mountainlands Game Reserve and that could significantly improve visitor flows to the community projects of Shyalongubo and of Lomshiyo.
- Linking in of community-owned land by means of compatible land uses that focus on the unique geological and scenic characteristics of these areas:
- Tjakastad-Mbejeka area – establishment of a corridor between the privately-owned Nkomazi Wilderness to the west and Songimvelo to the east. This project should go further than just function as a corridor. It has its own unique intrinsic potential that be unlocked to the benefit of the people of this area;
 - Ebutsini area – this would provide the logical crossborder linkage with the Malolotja Nature Reserve in Swaziland;
 - Lomshiyo area – as part of the Mountainlands Game Reserve the Lomshiyo community should be encouraged to review their current border fence in order to capitalise on the roadside development opportunities of the farm Crystal Stream.
- Joint marketing effort between all stakeholders within national and provincial structures and strategies.

The overall development costs and benefits will result in additional net operating income to the MPB in excess of R 1,000,000 annually. Of much greater value are the projected benefits (other than direct revenue) from MPB projects on the region. At a capital investment cost of R7,205 million by the MPB (R4,655m on upgrades and R2,550m for initialising costs), the MPB would have created a direct return of R1,025 million by year three after construction, equalling a net return on investment of 14% and a saving of 10,4% on annual operating costs. A local injection into the economy of some R225 million per annum as well as 210 short-term and 350 long-term job opportunities would also have been created.

More important however is the fact that the MPB would have developed a core for the greater Mountainlands tourism industry which one expects would be able to generate at least three times the benefits of the limited properties of the MPB, if one considers the number of beds developed by the known new initiatives in the adjoining areas of Nkomazi, Msoli and Dycedale.

In conclusion, the Barberton Complex faces some meaningful constraints and obstacles to its development. These are however not insurmountable. The most important action for the MPB is to adapt a strategic approach that results in recognition of the whole Barberton Mountainland as an area of outstanding conservation and tourism value. Ideally, this recognition should culminate in achieving World Heritage Site status. Within a World Heritage Site, the individual development opportunities identified for the three MPB reserves will become much more viable and would result in increased financial benefits.

1. Background to the Strategic Eco-tourism Development Plan

The Mpumalanga Parks Board (henceforth MPB) identified the need for a strategic eco-tourism development plan and entered into a tender process during July 2002. The contract was awarded during August 2002 to the consortium made up by International Conservation Services (henceforth ICS), Maseko Management Services and Contour Project Planners. Work on the Strategic Plan commenced in September 2002.

2. Scope and limitations of the Strategic Eco-tourism Development Plan

The strategic eco-tourism development plan is specifically aimed at the 3 Game Reserves of the Barberton Complex, namely Songimvelo Game Reserve, Barberton Mountainlands Game Reserve and Barberton Game Reserve, that are managed by the MPB.

Much planning work has been undertaken since 1996 on these 3 Reserves. Previous planning work has been characterised by the following:

- Separate focus on each Reserve without considering synergies with the others and without much consideration of their common geographical setting;
- Aimed at achieving financial self-sufficiency;
- Based on ‘supply-side’ factors (namely ‘what can the Reserve offer in terms of tourism opportunities?’) without due consideration of ‘demand’ factors (‘what does the market require and how much of it?’).

The results of previous planning work are not necessarily unusable and might still be very relevant. Several factors have however prevented previous plans to come to fruition. The aim is not to re-invent the development wheel but rather to build on existing information, zoom-in on opportunities previously identified and to translate them into practically achievable realities.

The Barberton Mountainlands Game Reserve, Barberton Game Reserve, and the Songimvelo Game Reserve are located within close proximity of one another, and are situated in a region that is currently the focus of important and evolving local tourism and conservation development initiatives (Tourism Biodiversity Corridor, SGR-Malolotja TFCA, Wild Frontier branding etc.). As such, these three game reserves have great potential for the successful creation of tourism products.

A single integrated approach to this region makes strategic sense based on the common geographic location, broad similarity in veldtypes and common marketing characteristics of these 3 reserves. Furthermore, synergies between those three reserves and surrounding projects (both in Mpumalanga and Swaziland) can be developed within such a common approach.

The MPB has listed the following objectives for the this Strategic Development Plan:

- Analyse available information,
- Research existing and future markets,

- Identify product potentials and compare to market potentials,
- Develop product concepts,
- Identify potential development sites,
- Pre-feasibility product assessment, and
- Recommend on implementation programme.

The Strategic Eco-tourism Development Plan is not aimed at:

- Providing a summary or repository of previous information (existing information amounts to a few thousand pages and a single document cannot do justice to all of this);
- Specifying individual development sites and opportunities in minute detail (implementation of proposals will soon necessitate a departure from even the most detailed plans);
- Laying out a detailed implementation schedule (as practical implementation will inevitably require its own time frame, procedures etc. that address specific circumstances and roleplayers)).

For this reason, the detailed information gathered during the community workshops and during the market demand analysis has been summarised in the main body of the report. Full details are presented in Appendices.

3. Role of a development plan

At the Reserve scale, the framework for development is encapsulated in the Strategic Eco-tourism Development Plan (this plan). At this scale, there is a need to view the Reserves within their regional biophysical and socio-economic context, and to explore the opportunities and constraints for development in the area against a background of information concerning biodiversity, cultural history, socio-economics and infrastructure. From this base, a zonation system can be established, indicating a development approach and phasing for areas possessing particular attributes. Opportunities and options for development are identified, priorities are established, and a proposed development programme is prepared.¹ At the site scale, detailed conceptual layouts needs to be prepared. Environmental assessments at this scale seek to determine methods for the mitigation of identified impacts, for implementation during either the construction or in the operational phase.

Tourism development planning can therefore be viewed as one of a hierarchy of plans, ranging from the broad policy and conceptual level through to the detailed design phase. All of these phases are conducted within a framework of IEM (Integrated Environmental Management), to ensure that decision-making neither forecloses better future options nor impacts negatively on essential conservation, environmental, archaeological, historical or cultural attributes.

¹ Adapted from Siyaya Coastal Park Concept Development Plan. Unpublished report by the Kwazulu Natal Nature Conservation Services, January 2001.

The strategic development plan represents a statement made at a particular point in time, interpreting the past and providing guidance for the future. Since any plan is highly dependent on current knowledge, perceptions and skills, no plan should be thought of as a blueprint, which determines all future actions. At best, it assists management to anticipate the future and take account of emerging knowledge. What is required is a process for decision-making for the protected area, and the provision of information relevant for this process, since the choices made in development will themselves become the planning constraints for the future, and indeed, may incur costs which future managers will have to contend with. The present plan, therefore, simply represents a stage which should lead to better informed planning and decision-making.¹

It will be key to a successful eco-tourism development plan that not only an internal focus be applied, but that the external factors are also fully incorporated. The internal focus must ensure the identification of realistic, achievable development opportunities within the conservation, environmental and physical constraints of the Game Reserves in question. The external focus must ensure that the opportunities identified are realistic in terms of current and expected market demand. The proposed concept that integrates the internal and external elements must go further than only ensure greater income to the Parks Board. It must also address the very real socio-economic aspirations and need for community beneficiation. In this way, buy-in by all stakeholders can be achieved.

4. Methodology

Five phases were used in the compilation of the Plan. These 5 phases are:

- Assessment of the current situation;
 - Review of existing literature and reports,
 - Discussions with GM Commercialisation, Reserve management and ecological staff,
 - Assessment of the existing tourism ‘product’, conservation activities, location, access, visibility, surrounding uses, packaging and linkages with nearby attractions, and other factors impacting on the overall marketability of the sites for tourism (although all 3 Game reserves were visited by the consortium members, the consultants relied heavily on their personal knowledge of the areas and potential development sites that have been previously identified),
- Assessment of potential product;
 - Stakeholder workshops held by Maseko Management Services with local stakeholders for the 3 reserves:
 - Songimvelo Game Reserve –2 October 2002, 49 participants,

¹ Adapted from Siyaya Coastal Park Concept Development Plan. Unpublished report by the KwaZulu Natal Nature Conservation Services, January 2001.

- Barberton (for Mountainlands Game Reserve) – 3 October 2002, 24 participants,
 - MPB Head office (for Barberton Game Reserve – 4 October 2002, 9 participants (see Appendix A for list of participants to workshops)),
 - Individual products (tourism, agro-tourism, cultural) that have potential or that have already identifiable sponsors or promoters were identified by the workshop participants,
 - Attractions identified in the field were defined in terms of type, size, location, level of interpretation, market niche, and other factors that provide a basis for forecasting potential.
 - Individual meetings were held with specific roleplayers where it was felt that the individual could provide unique insights and contributions towards the Plan.
- Analysis of market demand;
- Market analysis concentrated only on those products that can be effectively developed in the Barberton Complex (for example, it would have been pointless to assess the demand for water skiing if there are no suitable water surfaces or if the dam structures (such as in the case of Shyalongubo Dam) do not allow for such activities);
 - Detailed analysis of the South African Tourism (‘SAT’) International and Domestic Tourism surveys to ascertain the latest trends in visitor numbers to Mpumalanga and specifically to the Barberton region;
 - Survey of tourism establishments in the reserves and adjacent properties to determine:
 - Current tourism supply;
 - Current tourism demand;
 - Market mix (i.e. international, local, tour groups, conference, day visitor, leisure, etc);
 - Past trends in tourism demand;
 - Level and quality of tourism products; and
 - Seasonality;
 - Interview major incoming tour operators (Springbok Atlas, Welcome Tours, JMT Tours, Holiday Africa and Akilanga Tours) operating in Mpumalanga to determine:
 - Their travel patterns;
 - Their requirements; and
 - Whether they would potentially make use of proposed facilities at Songimvelo and Barberton Mountainlands.
 - Interview of 6 lodge/hotel operators (Wilderness Safaris, Ledged Lodges, Three Cities, Legacy Hotels, ConsCorp, Protea and local investor (Msauli operators)) to determine the potential interest in sites for development in Songimvelo in particular;
 - The conference market was assessed by analysing the demand at existing conference establishments in the area as well as interviewing Professional Conference Organisers (PCO’s) in the Gauteng area;
 - Interview of 4x4 clubs (Land Rover South Africa, Subaru) with regard to their product, knowledge of and interest in the Barberton region and

level of interest in investing in private lodges for entertaining and/or training of their guests and/or employees;

- Pretoria University, University of Witwatersrand and University of Cape Town were interviewed for their interest in possibly using facilities in the area for hosting practical training courses in geology, archaeology, botany, etc.;
- Interview of estate agents in the Barberton area to determine the market for second homes in the region;
- Interview tourism officials in the study area to determine trends in respect of domestic travellers to the area and potential gaps for development in this market;
- Evaluation of existing room night capacity at existing establishments;
- Projections of future day visitors demand and room night demand as well as growth rates were undertaken.

➤ Conceptualisation;

- The information on the current situation, assessment of further potential and market situation was used to formulate an integrated eco-tourism development concept at the scale of the Barberton Complex and at an individual game reserve scale. The conceptualisation was a joint effort by the full consultant team to ensure maximum convergence of ideas and integration of all key elements coming out of the previous 3 study phases.
- development nodes and activity areas were identified.

➤ Recommendations on implementation;

- The appropriate ‘development and operations model’ for the MPB and the Barberton Complex was researched by evaluating current models in the market as well as current trends in development policies and approaches;
- Development priorities and recommended phasing were evaluated based on the current and expected tourism situation as well as taken cognisance of stakeholders expectations and organisational capacity; and
- A financial model was built.

5. Physical, biological and historical description

Much information exists on the physical and biological environment of the Barberton Complex. As stated previously, the aim of the Strategic Plan is not to serve as a repository of existing information. Only the salient points that have direct bearing on the tourism product, tourism carrying capacity and on the environmental sensitivity to development are listed.

Characteristics of the Barberton Complex and the Barberton Mountainland within which the cluster of reserves is embedded are as follows:

- The Barberton Complex in the Mpumalanga Province is bound by Elukwatini to the west, Nelspruit to the north, Low's Creek to the east and the Swaziland border to the south (Fig. 1);
- The 3 Game Reserves that make up the Barberton Complex are underlain by the Barberton Greenstone Belt (Fig. 2). This Archean greenstone belt represents one of the oldest and best preserved volcano-sedimentary succession not only in South Africa, but in the entire world¹. The earliest known record of meteorite impacts on the earth is contained in the Barberton Mountainland. These have been preserved whereas in other areas this record has been obliterated by later plate tectonic events. These meteorite impact deposits provide us with a great deal of information about the rocks and atmosphere on the early Earth. Research in these aspects has recently been funded by the Exobiology Program of NASA because of the insights gained benefit the space exploration programme.
- This is a mountainous region with the lowest point of the 3 Game Reserves at approximately 600 m and the highest peak rising to over 1900m;
- The area falls within the summer-rainfall region and has an average annual rainfall of 800 to 1400 mm. The climate is temperate with mild to cool winters. Fog is common at high altitudes;
- The area is dissected by numerous rivers that have formed deeply incised gorges and valleys. Many of these rivers and streams are perennial and provide clean surface water for human and animal use;
- Generally the soils are leached by the high rainfall and have a low nutrient content. Agricultural potential is limited. Some soils have a heavy metal content that exceeds the recommended norms for safe food production;
- The Complex has a high plant species diversity and falls within the Barberton Centre of floristic endemism². Several species are unique to the area;
- It is the only place where all five species of rock catlets (*Chiloglanis* spp.) occur within the same river system. The area is also home to re-introduced species of great conservation value such as White rhino;

¹ Anhaeusser C.R. 1999. Barberton Greenstone Belt. An introduction to South Africa's geological and mining heritage (Viljoen M.J. & Reimold W.U. Eds.) Mintek, Randburg. Pp. 92-104.

² van Wyk AE & Smith GF, 2001. Regions of Floristic Endemism in Southern Africa: A review with emphasis on succulents. Umdaus Press, Hatfield, South Africa.

- The area does not hold lion, but the other 4 species of the Big Five are found (namely elephant, rhino, buffalo and leopard). Substantial populations of a large diversity of antelope are found on the Songimvelo Game Reserve. Smaller populations that are still expanding following more recent introductions occur on Mountainlands and the Barberton Game Reserve (Table 1);
- The greatest threats to the unique geology and vegetation are plantation forestry (extensive areas), mining (mostly localised impact), subsistence cropping, overgrazing by livestock and commercial sugarcane cropping (outside Barberton Complex near Malelane)(Fig. 2).

The combination of unique geology, high plant species diversity and endemism, its water catchment role, occurrence of fauna elements such as the *Chiloglanis* species of fish and endemic butterflies make the Barberton Complex an area of outstanding conservation value that ranks high on the priority list of the MPB¹.

¹ Emery A.J., Lötter M. & Williamson S.D. 2002. *Determining the conservation value of land in Mpumalanga*. Unpublished report by the Mpumalanga Parks Board to the Department of Water Affairs and Forestry.

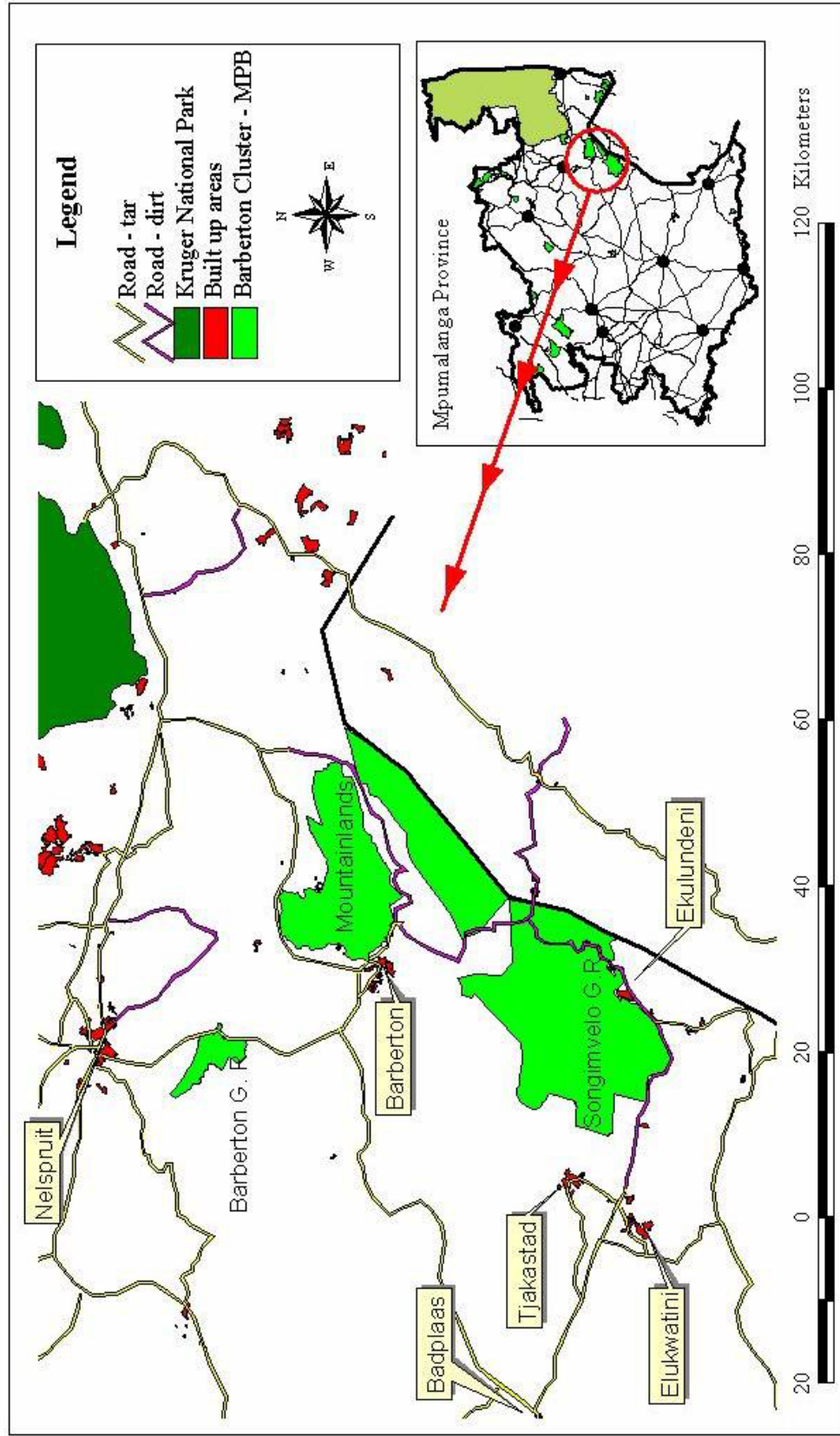


Fig. 1: Locality map of Barberton Cluster

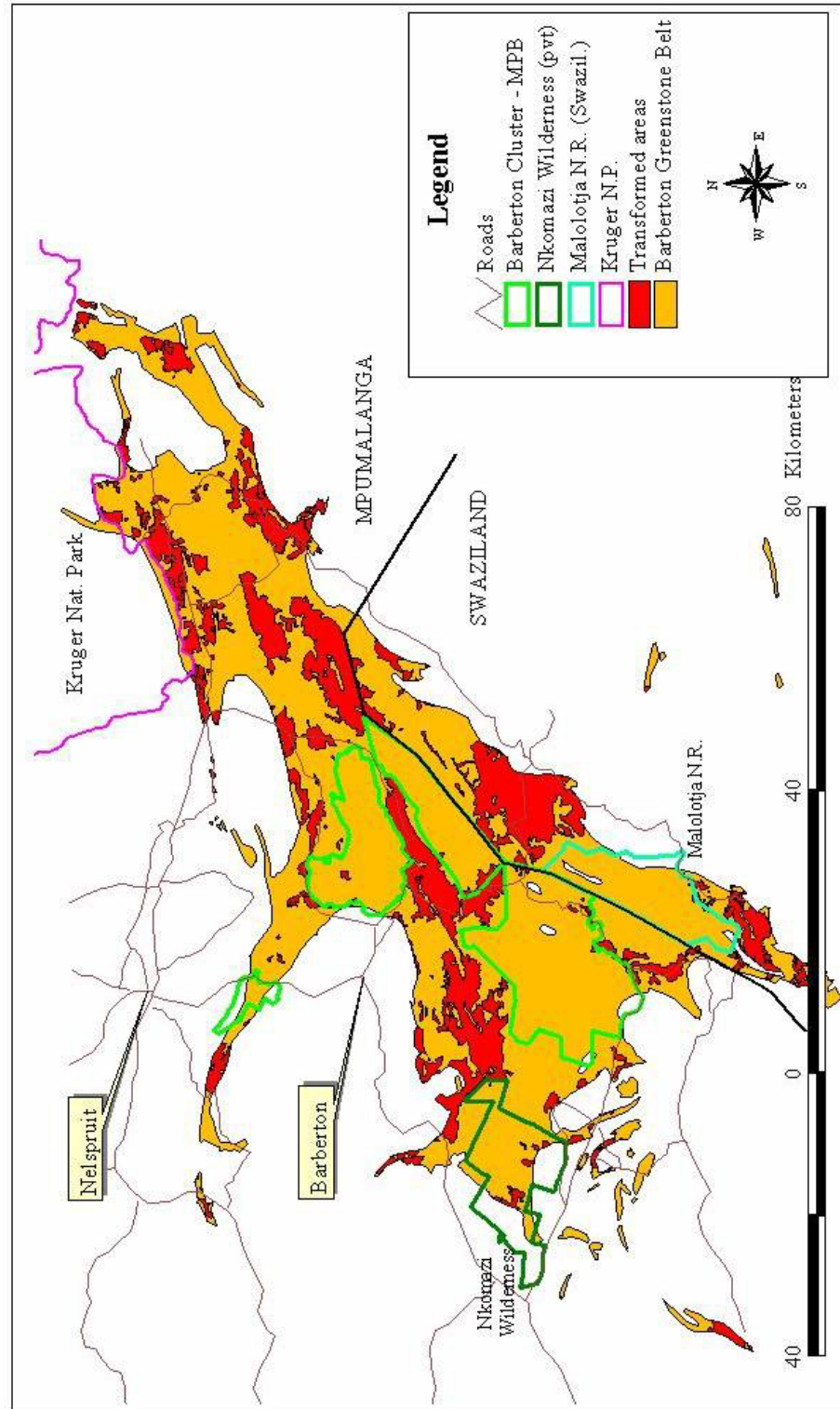


Fig. 2: Barberton Mountainland - Greenstone Belt, transformed areas and Protected areas.

Table 1: Game numbers in the Songimvelo and Barberton Game Reserves (based on helicopter counts).

SPECIES	Songimvelo	Barberton GR
Blesbuck	183	
Blue Wildebeest	259	20
Buffalo	34	
Bushbuck	53	85
Bushpig	11	
Common Reedbuck	6	
Grey Duiker	148	15
Eland	85	
Elephant	53	
Giraffe	72	
Grey Rhebuck	26	
Impala	587	40
Klipspringer	47	8
Kudu	648	70
Mountain Reedbuck	388	60
Oribi	11	
Ostrich	2	
Red Hartebeest	142	
Sable	13	
Springbuck	37	
Tsessebe	30	
Warthog	378	
Waterbuck	123	
White rhino	41	
Zebra	377	60

The Barberton Complex is characterised by a long and diverse history of land use. Stone artefacts dating back 30 000 to 50 000 years have been found in Songimvelo. Stone walled sites of the Later Iron Age (the last 1000 years) are common. Hromnik (1991)¹ argues that many of these sites can actually be linked to Dravidian (Indian) gold miners and traders who were active in this region many centuries ago. The eNcakeni area (mostly the area known today as the SGR) was settled by the bakaNgwane (people of Swaziland) under the eMjindini authority during the reign of King Mswati II (1840-1868) (Van der Merwe & Retief 1995)². During the last 100 years prospecting and mining took place that shaped the history of Barberton and resulted in several attractions particularly in Mountainlands (Eureka City, Sheba Mine...).

¹ Hromnik C.A. 1991. Dravidian gold mining and trade in ancient Komatiland. *Journal of Asian and African Studies*. 26(3&4): 283-290.

² Van der Merwe P.D.R. & Retief E.F. 1995. The Songimvelo Game Reserve inhabitants: individual data & background information. Unpublished Report by Department of Constitutional Development.

6. Determining the development options for the Barberton Complex

6.1. General

A number of factors are of major influence in determining the type, scale and phasing of developments and activities in the Barberton Complex (Fig. 3). These factors are both of an internal and external nature. Their influence can be positive or negative and can be strengthened or mitigated by judicious management actions. Some intrinsic limitations can however not realistically be overcome.

These factors are now briefly discussed. The intention is not to provide an exhaustive treatment of these factors but rather to identify those aspects that have direct bearing on the development opportunities.

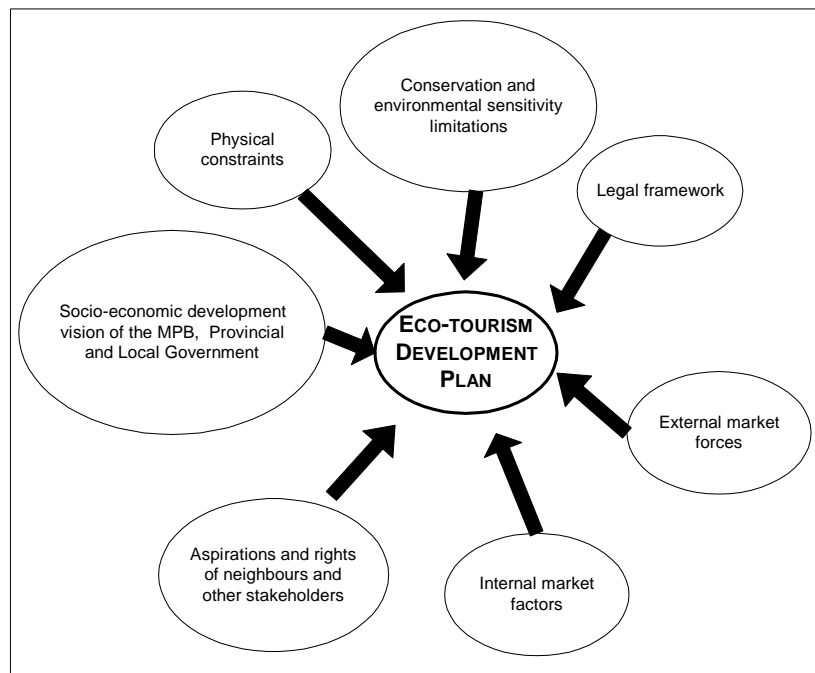


Fig. 3: Internal and external factors determining the potential development and use of the 3 Game Reserves of the Barberton Complex.

6.2. Individual factors impacting on tourism and development potential

6.2.1. Legal and institutional framework

Three elements of a legal nature are of importance in defining the eco-tourism development options of the Barberton Complex. They concern the legal mandate of the MPB, the proclamation status of the Game Reserves and the presence of land claims. From an institutional perspective, the MPB does not operate in a vacuum. It

needs to take cognizance of the Integrated Development Plans compiled for the municipalities within which the Barberton Complex is situated.

6.2.1.1. Legal mandate of the MPB

The core business of the MPB is conservation: ‘The objects of the Board shall be to provide effective conservation management of the natural resources of the Province, and to promote the sustainable utilisation thereof’.

In pursuing its objects the MPB must ‘.... give due regard to national and provincial policies, strategies and programmes in respect of reconstruction and development, environment affairs, eco-tourism and outdoor recreation, as well as the policy goals of

- promoting the creation of economic and employment opportunities, particularly for local disadvantaged persons and communities;
- ensuring equitable accessibility by all people to the Province’s conservation areas;
- maintaining environmentally sound development practices, and promoting bio-diversity in conservation areas;
- endeavouring to make, in so far as possible, the Board’s operations and activities self-financing in their operation; and
- promoting the earning of foreign exchange, particularly through eco-tourism.’¹

The eco-tourism development therefore falls within the mandate of the MPB. It is clear that the Provincial Government expects the MPB to contribute to the Province’s socio-economic development in the course of achieving its conservation mandate.

6.2.1.2. Proclamation status of the Reserves

Although not within the brief of the Development Plan, it should be noted that there appear to be gaps regarding the proclamation of the Reserves. In particular, certain farms within the boundaries of Songimvelo were not properly proclaimed as a Nature Reserve. The farms Avontuur, Hooggenoeg and Geluk situated to the west of the present Songimvelo boundary were originally proclaimed as part of Songimvelo but never incorporated. This proclaimed status could aid the Tjakastad community in the realisation of a community conservation project (see section 9). The proclamation of the Reserves and in particular Songimvelo and Mountainlands should receive priority attention to address all gaps in proclamation.

6.2.1.3. Land claims

Although not within the brief of the Development Plan, it should be noted that the presence of land claims on a number of farms within Songimvelo would impact on development opportunities and potential interest by private sector investors. Similar

¹ extracts from the *Eastern Transvaal Parks Board Act No. 6 of 1995* (only salient points are quoted).

constraints exist around the Sheba Mine area in Mountainlands where the community expects direct benefits from the State Land adjoining their settlement.

These land claims might offer opportunities to attract funding and development support that could benefit the Reserves.

6.2.1.4. Integrated Development Plans

By and large, the existence of the Reserves is acknowledged and incorporated into the Integrated Development Plans of the Albert Luthuli (Songimvelo), Umjindini (Songimvelo, Mountainlands and Barberton Game Reserve) and Mbombela Municipalities (Barberton Game Reserve).

The farms Geluk and Hooggenoeg on communal land near Tjakastad have been zoned as 'Game Reserve' in the IDP of the Albert Luthuli Municipality.

6.2.2. Socio-economic development vision and framework

The MPB's socio-economic policy contains the following provisions regarding the commercialisation of its Reserves:

- As a key Conservation Strategy, Commercialisation is primarily aimed at increasing the ecological sustainability, economic viability and social relevance of the Protected Areas through:
 - Increasing the revenue base for achieving the Core Business of Nature Conservation;
 - Increasing the accessibility of protected areas to the previously disadvantaged; and
 - Creating employment and entrepreneurial opportunities for members of affected communities.

Commercialisation as defined in the policy refers to the process of unlocking commercial opportunities within the protected areas. Of these opportunities, some are specifically related to the achievement of the core business of conservation (e.g. live game sales). Some, however, may be pursued independently of the core business. These opportunities are those that are predominantly related to the development and operation of tourism products.

Commercialisation can take on various forms, ranging from:

- The development and operation of commercial opportunities by the MPB itself;
- Outsourcing, rental and lease arrangements; and
- Management and agency agreements; to
- Private-Public-Partnerships (PPPs) such as Build-Operate-Transfer (BOT) Concessions.

6.2.3. Current land use patterns, needs, rights and aspirations of local communities

As part of the workshops held with the local stakeholders, detailed information was obtained in terms of socio-economic conditions in the affected areas (see Appendix B and C).

The key finding is as follows (using the Songimvelo area as example): only 17% of the population is economically active and has to carry the other 83% on their limited incomes. The unemployed 83% consists of under 15's, the unemployed, but of employable ages as well as those who are not employable such as the aged and the invalids or differently-able individuals.

This clearly means that tourism developments within the existing Game Reserves only are insufficient to absorb the burgeoning numbers of those who enter the labour market annually. Other interventions in the Small, Medium and Micro enterprises (SMME) sector as well as growth in tourism outside of the current Game Reserves is critical. The latter need to take place on privately owned properties as well as on community land within the area of the Barberton Complex.

A number of people are still residing within the Songimvelo Game Reserve. At least 1,000 head of cattle (belonging to both residents and non-residents) graze within the Reserve. This is generally considered as very detrimental in attracting any investment as well as marketing the Reserve to tourists. The impact is most important on the game-fenced section of Songimvelo. A lease agreement has been reached between the MPB and the Jozefsdal/Diepgezet community. The required management and development plan has not yet been drawn for this lease agreement. Certain land use practices (fields on steep slopes, overgrazing of certain slopes and certain settlements in highly visible areas along the main road detracting from the scenery) are detrimental to the conservation status of the area and lessen its tourism potential. The positive cultural value of resident farmers and livestock are not considered to weigh up sufficiently against their negative impact on tourism.

6.2.4. Environmental sensitivities

Any development and tourism use of a National Park or Game Reserve has a certain level of environmental impact. Apart from a direct physical impact, the wilderness character of a place can be affected. It is however important to consider that for example in the Kruger National Park, the negative ecological impacts can mostly be traced back to biological management actions and not to tourism. Except for the <3% of the KNP which is directly disturbed by human infrastructure (camps, roads, dams, bridges etc), there is no area in the KNP in which any component of biodiversity (composition, structure, function) is significantly affected by tourism activities at current or reasonably projected future levels of use.¹

¹ Venter F., Braack L., Nel F., Jordaan W., Gerber F. & Biggs H. 1997. Recreational opportunity zoning within the Kruger National Park. Vol. VIII, Policy proposals regarding

Significant areas of the Barberton Mountainland have been profoundly transformed (Fig. 2). Pine plantations are one of the prime agents of transformation. Not only do they directly impact on the rich plant diversity, but they also obliterate views of outstanding geological formations and they reduce water flow. Mines have a very severe, but mostly local impact. Although mining activities have decreased, some significant operations are currently still active (Sheba, Consort, Fairview Mines). Cropping and livestock grazing (where stocking densities are too high) result in direct losses of species-rich grasslands and indirect losses through increased erosion.

The eco-tourism development of the Barberton Complex should as much as possible avoid further losses of prime, previously unspoilt areas. The key finding is that this places restrictions on the Reserves for large-scale developments, particularly those that require large areas (eg for a golf course). Furthermore, respect of archaeological, historical and cultural sites, history and tradition should form part of environmental sensitivity.

6.2.5. Physical constraints

The topography is generally very broken which reduces the possibility of traversing by vehicle, increases the risk of erosion and complicates as well as increases costs of physical developments such as lodges and rest camps.

The rugged topography together with the presence of mostly sourveld limits the carrying capacity for large wild herbivores. This in turn severely limits the potential for the successful re-introduction of predators such as lion.

The key finding based on the physical constraints is that the establishment of large Big Five areas will be technically difficult and financially expensive.

6.2.6. Products currently on offer

The tourism product currently on offer within the 3 MPB Reserves is limited. It consists of the following:

- Songimvelo Game Reserve;
 - Komati River Lodge (20-bed, catered tent camp). Central complex was burnt earlier in 2002 and the Lodge is no longer operational,
 - Kromdraai Camp (300 bed, self-catering 50 chalet facility with swimming pool),
 - Informal, self-guided 4x4 trail near Shyalongubo Dam (access on arrangement with Reserve management)
 - Guided game-drives by Reserve Management in the Central Basin (on booking – mostly for local schools or tourist staying over at Kromdraai Camp),

issues relating to biodiversity maintenance, maintenance of wilderness qualities and provision of human benefits. KNP Masterplan by SanParks.

- Recreational angling on Shyalongubo Dam (no formal structures in place to control anglers and/or to levy an entrance fee).
- Barberton Mountainlands;
 - Guided 4x4 drives by operators (no formal arrangement with MPB at present)
- Barberton Game Reserve;
 - Day-visitor terrain with ablution, pic-nic and braai facilities.

The tourism product currently on offer outside of the 3 reserves but still within the Barberton Mountainland consists mainly of the following:

- Bed and Breakfast establishments in and around Barberton,
- Restaurants (mostly in Barberton),
- 4x4 trails by operators (mostly ex-Barberton),
- community-owned self-guided 4x4 trail at Ebutsini (adjoining Songimvelo),
- Letubi Eco-trail (near Malelane),
- Mantagomane Lodge near Barberton (with conference facilities).

A comprehensive list of current tourism facilities is provided in Appendix D. It is also obvious that this still an industry in which little transformation has taken place, particularly as far as Black ownership and management is concerned.

6.2.7. Miscellaneous factors

A number of other factors were identified during the workshops as impacting negatively on the tourism potential (Appendix E). The most important factors are poor road infrastructure, signage and a lack of marketing.

6.2.8. Market demand

At a South African scale, and within the Mpumalanga Province in particular, the main interest of overseas tourists lies in the wildlife and the scenic aspects. Although cultural aspects are being strongly marketed they do not yet measure up to the two main attractants of scenery and wildlife.

The findings of the Market Demand are reported on in detail in Appendix F.

Key findings can be summarised as follows:

- Tour operators;
 - The bigger tour operators indicated that their tours run on a weekly basis to the escarpment and Lowveld area, while smaller operators have a group travelling through the area on average once a month. The summer months, mid-October to mid-April, represent the high season for tours to the Lowveld escarpment tours.

- Operators mostly travel through the Barberton area from the Kruger Park on their way to Swaziland. Most operators spend 2 to 3 days in the region of which 1 day includes the north-central Kruger Park, second day includes southern Kruger Park and day 3 the whole of Swaziland. They either use the Jeppes Reef border post in the north or the Oshoek border post towards the south-east of Barberton. None of the tour operators currently overnight in the Barberton area. According to operators, Swaziland offers a different cultural experience and another stamp on the travellers' passport, which is hard to beat. All operators make use of Piggs Peak hotel or hotels in the Mbabane area.
- Operators indicated that Barberton is located in between chosen destinations and can maybe focus on providing meals and proper interpretation/curio facilities for stop-overs. Stop-over time is, however very limited, since crossing the Swaziland border takes up to 2 hours. This is sometimes a negative experience for tourists which could be altered through the proposed Transfrontier Park between South Africa and Swaziland. Operators indicated that their travel patterns might change once the Transfrontier Park has been established and provides border control facilities that are more tourism friendly.
- Operators are of the opinion that tourism facilities proposed at Barberton Mountainlands and Songimvelo would better appeal to smaller operators, independent travellers from overseas and the local market.

➤ 4x4 adventure tourism

- The market for 4x4 off-road adventure activities in South Africa has experienced good growth in the past 5 years. The association estimates that each of the 18 clubs has between 2,000 and 4,000 members and therefore represents an estimated 60,000 individual members. Their individual clubs organise at least 4 to 5 excursions every year, priced at around a R1,000 per couple per weekend. The average group size varies between 15 and 20 vehicles. Destinations are usually within 2 to 3 hours drive from Gauteng.
- A total of five 4x4 Clubs in South Africa were interviewed. Sixty percent of the excursion organisers interviewed are familiar with and have been to the Barberton area in the past. When tested for their interest in Songimvelo and Barberton, all the clubs were positive and indicated that they might be looking at doing a route in the area in the near future.
- Clubs such as Land Rover South Africa and Subaru were further tested for their interest in investing in private lodges for entertaining and/or training of their guests and/or employees. None of the interviewees were interested in investing in lodges in the Barberton area. Reasons for not investing were mainly market focus (vehicle companies are currently spending money on keeping their market share, because of increasing competition) and preference to having alternative adventure venues.

➤ educational markets

- Three institutions, namely Pretoria University, University of Witwatersrand and University of Cape Town were interviewed for their interest in possibly using facilities in the area for hosting practical training courses in geology, archaeology, botany, etc. Managers of course design and off-campus training facilities indicated that on average 5 courses per annum representing 150 students require facilities for training. The Universities currently use a variety of establishments close by such as Palindaba, Natal Coast, Magaliesburg, Waterberg, the West Coast and even some African countries. Barberton is also occasionally used for geological research.
- The average group size of students is 30 and the average length of courses is 7 -14 days. Training usually takes place between June and September every year.
- All the universities indicated that they would be interested in hosting at least 1 or 2 courses in the Barberton area. Student groups require fully catered, dormitory accommodation with a conference room for lecturing. Accommodation pricing should be around R35 per person per night.

➤ lodge operators

- Both Protea and local investors (owners of Msauli) were interested in obtaining a management contract for Kromdraai and/or other potential developments at Songimvelo. The other operators (Wilderness Safaris, Ledge Lodges, Three Cities, Legacy Hotels, Conscorp) were either outright negative or not interested. Main reasons for disinterest in sites at Songimvelo were:
 - Company focus;
 - Concentration on major tourist destinations,
 - no privacy,
 - security risk,
 - not 'upmarket' destination, and
 - lack of accessibility.

➤ conference market

- According to Professional Conference Organisers (PCO's) the most popular destinations for conferences are major business centres such as Johannesburg, Durban and Pretoria. Trends in the industry show that an increasing number of conferences are hosted in and around cities to reduce costs. According to PCO's on average 20% of all conferences organised are hosted at destinations outside of town (2 to 3 hours drive). PCO's indicated that 2 to 3 hours drive from Gauteng is the cut-off point and that they find it hard to sell destinations further away. Popular destinations used are the Kruger National Park, Dullstroom, Pilanesberg and the Drakensberg. None of the PCO's interviewed have used Barberton for a conference before and indicated that should Barberton become

more established and offer products with the same amenities as destinations mentioned above, it could become a more popular destination for conferences. In their opinion, there are currently too many competitive destinations for Barberton to effectively penetrate the market.

➤ projected visitor numbers

- The current demand to Songimvelo, Mountainlands and Barberton Game Reserves is very low and cannot serve as a base for future projections. We have therefore, considering the future initiatives in the region and proper marketing of the reserves and its facilities, assumed that the Barberton Complex reserves' share of visitors to the region will increase. The assumptions for future visitor share are as follows:

	<i>% share of market</i>	
	<i>2003</i>	<i>2010</i>
Songimvelo Game reserve	15%	33%
Mountainlands	6%	20%
Barberton Game	5%	16%

- Projected Day and Overnight Demand for the Barberton Complex Game Reserves until 2010 is as follows using these market shares (Table 2).

Table 2: Projected Day and Overnight Demand for the Barberton Complex Game Reserves

Songimvelo Game Reserve			2003	2006	2010
			<i>15%</i>	<i>26%</i>	<i>33%</i>
% day	35%		7,048	13,170	17,902
%overnight	65%		13,089	24,459	33,247
Total			20,137	37,630	51,149
Barberton Mountainlands Game Reserve			2003	2006	2010
			<i>6%</i>	<i>12%</i>	<i>20%</i>
% day	80%		6,444	13,894	24,799
%overnight	20%		1,611	3,474	6,200
Total			8,055	17,368	30,999
Barberton Game Reserve			2003	2006	2010
			<i>5%</i>	<i>10%</i>	<i>16%</i>
% day	%		6,712	14,473	24,799
%overnight	0%		-	-	-
Total			6,712	14,473	24,799

- Additional room night demand for the Barberton region
 - Because of the proposed plans for the region, the Tourism Biodiversity Corridor, which includes plans to establish a Transfrontier Park between South Africa and Swaziland, future marketing and the proposed infrastructural upgrading of the area will attract additional room night demand. The additional room nights are obtained by subtracting the room night demand taken up by existing establishments from the total room night demand attracted by the area according to our base market share projections and growth predictions. The additional number of room nights is shown in Table 3.

Table 3: Additional Room night Demand

Type of Market	2003	2008
Overseas	1,440	2,307
Domestic	18,243	18,244
Conference (overnight)	1,021	1,846
Educational market	21	70
Total	20,704	22,396

- The additional demand is sufficient to sustain ± 90 additional rooms at an occupancy of 60% in 2003. The developments planned by the private sector by far exceed this figure. **It will therefore be relatively risky for the MPB to physically develop additional bed capacity within the Barberton Complex in the short to medium term.** The strategic planning and promotion of the region is a major challenge especially in respect of ensuring that MPB stays a major role player and benefits from tourism development in the region.

6.3. Guiding principles

With the above limitations in mind, certain ‘guiding principles’ are proposed for the development of the Barberton Complex. These principles are:

- Develop the 3 Game Reserves as part of an Barberton Mountainland concept rather than as separate, isolated entities;
- Establish linkages between the different tourism products in such a way as to generate additional interest (for example unique geology – defunct and active mines – Umjindini jewellery project);
- Base development opportunities and activities on the natural strengths and attributes of the Barberton Complex (rather than facing stiff competition by offering marginal products which feature strongly elsewhere);
- Do not try to achieve Big Five game status in the 3 Reserves as serious inherent shortcomings will need to be overcome at a high cost. Lions would also impact negatively on the major attraction of adventure tourism and hiking. Big Five areas might be possible outside the MPB Reserves (for example on the western side of Nkomazi on account of the gentle topography and close proximity of the Badplaas day-visitor market) and they will add value to the destination as a whole.
- Find equitable solutions for the informal residents and for the grazing of livestock that presently severely limit tourism development opportunities;
- Co-ordinate and harmonise zonation of the Game Reserves in the Barberton Complex as far as possible with Community projects and Private initiatives along their common border to limit mutual conflict and maximize zonal benefits;
- Concentrate the bulk of tourism developments in the peripheral zone;
- Maximize socio-economic benefits by complementary developments and activities that address a wide spectrum of interest and income groups;
- Expand tourism benefits beyond direct employment opportunities and curio sales by facilitating community equity participation;
- Facilitate transformation of the tourism industry;
- Limit developmental and operational costs for the MPB by favoring models that allow for private sector investment and operation; and
- Ensure phasing-in of development opportunities in step with the biological restoration of the Game Reserves and growth of the tourism market.

7. Strategic vision

A convergence of factors and initiatives strongly defines the study area. They are:

- On the natural/environmental front;
 - The identification of the underlying geology of the Barberton Mountainland as a unique feature of world value and appeal (Appendix G);
 - The identification of the Barberton Centre of Floristic Endemism as an area of outstanding plant species diversity and conservation interest.
- On the conservation front;
 - The development of a number of Game and Nature Reserves in this area by the MPB and the private sector;
 - The identification of the Songimvelo-Maolotja Transfrontier Conservation Area as a major conservation initiative for the area.
- On the tourism front;
 - The identification of the Tourism Biodiversity Corridor from South Africa across Swaziland into Mocambique of which the Barberton Mountainland forms a critical core;
 - The branding of the area as part of the Wild Frontier Tourism Area;
 - The identification of a strategic set of roads that form circuits¹;
 - The interest and investment of the private sector in tourism in the area (re-development of Msauli Mine Village, ownership-based developments at Nkomazi Wilderness and Dycedale, possible tourism development of Sheba Mine Village by ETC).
 - The compilation of a Core Marketing Plan for the Greater Barberton (Appendix H).

Taking cognisance of these initiatives, in particular the presence of the fast-moving private sector, and the fact that the MPB Reserves face serious limitations for immediate development, it appears that the MPB would not be well placed at this moment in time to proceed with the classic development scenario of identifying development opportunities, procuring investment and generating an income from lease and rental agreements for these new developments.

Therefore, it is strongly recommended that the MPB adopts the following strategic approach:

- To emphasise the marketing of the Barberton Mountainland in its totality (in line with the Core Marketing Plan) as an area of outstanding value that will lead to its recognition as a World Heritage Site;

¹ Anonymous 2002. Signing to establish and identify the Wild Frontier Tourism Area and tourism routes. Project report No DLC99073/E by DeLeuw Cather (North) (Pty) Ltd for Wild Frontier Regional Tourism Organisation.

- To lobby jointly with the Swaziland conservation authorities for this status using the MPB's institutional conservation mandate and conservation credibility with the MPB reserves and Malolotja in Swaziland being core to the World Heritage Site;
- To establish a partnership with the Peace Parks Foundation for support and facilitation for the Songimvelo-Malolotja Transfrontier Conservation Area;
- To act as honest broker to enable the corridor of community land between Nkomazi Wilderness and Songimvelo Game Reserve to become an integral part of the World Heritage Site to the benefit of the Tjakastad/Mbejeka community;
- To facilitate the integration of the community land on which the Ebutsini 4x4 Trail is located to become part of the TFCA and WHS;
- To establish linkages and maximise the synergy between the MPB Reserves, community projects and private initiatives in order to establish the Barberton Mountainland as a 'destination';
- To lobby and work hand-in-hand with other Government Departments to establish the required road and services infrastructure that will enable full tourism development of the WHS in general and the MPB and community reserves in particular;

Why should the World Heritage Site concept be so strongly supported? Best of the best: that's the lofty standard for making the World Heritage List. Nations lobby hard to get their glorious buildings, wilderness, and historic ruins on the list, a stamp of approval that brings prestige, tourist income, public awareness, and more important, a commitment to save the irreplaceable¹.

In November 1972 the United Nations Educational, Scientific and Cultural Organisation (UNESCO) inaugurated the list by adopting a treaty known as the World Heritage Convention. Its continuing goal is to recruit the world community in identifying cultural and natural properties of 'outstanding universal value'.

It is felt that the Barberton Mountainland would meet one or more of the criteria required for a natural heritage property, namely²:

- Be outstanding examples, representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of land forms, or significant geomorphic or physiographic features; or
- Be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh

¹ O'Neill T. 2002. Saving places. National Geographic. 202(4):58-73.

² World heritage Centre. 1999. Operational guidelines for the implementation of the World Heritage Convention. WHC.99/2 report to UNESCO.

water, coastal and marine ecosystems and communities of plants and animals;
or

- Contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance; or
- Contain the most important and significant natural habitats for *in-situ* conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

This assessment is supported by some of the foremost geologists working in the Barberton Mountainland (Appendix G). In addition to the e-mails by Prof. M. de Wit (UCT) and Prof. D. Lowe (Stanford, USA), there are letters on file from Prof. C.R. Anhaeusser of the Economic Geology Research Unit of the University of the Witwatersrand and of Prof. T Grove of the Department of Earth, Atmospheric, and Planetary Sciences of the Massachusetts Institute of Technology (USA) that all attest to the extraordinary significance and importance of the Barberton Mountainland.

Furthermore, based on its size, current conservation initiatives, current legislative, regulatory and institutional protection and status of adjoining land use it is felt that the Barberton Mountainland would also meet the conditions of ‘integrity’ necessary for recognition.

Pursuing WHS status need not be costly to the MPB. It will require dedicated effort and a champion should be identified. Technical surveys and assessment as to whether the area meets the criteria will need to be conducted but funding and support can be obtained from UNESCO.

Besides the conservation benefit, the MPB can expect to reap important financial benefits. Any tourism development opportunity within a recognised WHS concept is much more likely to attract serious investors and command a higher financial return. Therefore, postponing the procurement process for individual sites may in the end generate a much greater financial benefit to the MPB than that what could be expected from a hasty entry into a saturated market whilst having to overcome negative market perceptions (for example because of livestock in Songimvelo).

The MPB will also be able to demonstrate to the public and the Government that this course of action results in much greater overall benefits that are reaching a much larger community than what can be expected from a few small-scale developments. In this way, the MPB would be fulfilling its legal mandate of conservation and economic development.

The proposed strategic approach does not preclude certain developments to be prepared or undertaken in the interim. The emphasis should be on providing the framework that allows for controlled activities that will bring in visitors from outside and thus assist in generating income and interest in the Reserves. It is also important to identify opportunities that may only become viable in future in order to ensure that these development sites do not get lost or get jeopardised by wrong choices (eg management infrastructure or roads through or in front of a prime development site).

8. Development proposals

8.1. Songimvelo Game Reserve

8.1.1. Tourism products

Combining the constraints of the SGR with the aspirations of the different stakeholders and the expectations in the tourism market results in the following logical and achievable products that can be offered:

- ‘Mainstream’ products
 - a game-based product;
 - guided drives on vehicle;
 - self-guided drives (2x4 and 4x4 vehicles);
 - guided walks on foot;
 - safari’s on elephant back.
 - birding (Songimvelo is recognised as an Important Bird Area¹);
 - Educational experiences linked to niche markets;
 - geology;
 - flora;
 - cultural tours and experiences (archaeological sites (including ‘Dravidian’ sites), local Swazi culture);
 - historical experience (old mines (including ochre mine on Mendon), Sheepbridge);
 - flyfishing (for indigenous yellowfish – Komati & Msoli Rivers);
 - horse riding;
 - mountain biking;
 - self-guided hikes;
 - angling (Shyalongubo Dam);
 - golf (Msauli Mine).
 - Recreational facilities (pic-nic, swimming pool...).
- Additional products
 - a number of potential products and projects have been identified by the workshop participants – a full list and description are provided in Appendix I;
 - these projects may play an important economic role beneficiation of local stakeholders;
 - they are mostly peripheral and supplementary to the developments and activities taking place within the SGR. The MPB should therefore carefully consider these projects in order to assess feasibility and viability as part of a broader socio-economic development programme for the SGR and surrounding area.

¹ Barnes K.N. 1998. Songimvelo Game Reserve. *In* Important Bird Areas of Southern Africa. BirdLife South Africa, Johannesburg.

- there certainly appears to be much interest from entrepreneurs from within previously disadvantaged communities to become active roleplayers in the business of tourism.

The SGR is not well placed to offer the following:

- Big Five game experience (lion would be very expensive to contain within the reserve boundaries and their presence will more than likely sour relationships with surrounding pastoralists);
- Water sports on Shyalongubo Dam (conflict with peaceful atmosphere, structural limitations to the dam wall, Low's Creek Irrigation Board);
- Canoeing/rafting on the Komati River (low winter flows, hippo's and possibly crocodiles);
- Hot-air ballooning (limited plains area, winds).

The different tourism products would cater for a variety of market segments. It is not recommended to target the 5-star market. It would be difficult to provide the exclusivity and game product desired by this market without constraining the other development opportunities. It therefore recommended that the main focus of the development of the SGR should be the middle to upper-middle income groups.

8.1.2. Zonation

Zoning is not a visible element in the landscape (although it is guided by landscape characteristics), but only exists in the manager's or planner's mind. Zoning assists in dealing with the effects of land use decisions on the ecological and social environment. It allows for the realization of potential whilst at the same time providing protection of sensitive resources and elements.¹

An exhaustive review of different zoning schemes falls outside the scope of the present document. In spite of differences in the various existing systems of zonation, they all developed around a common interest, i.e. to provide a framework within which the essential qualities and intrinsic values of a national park or game reserve could be protected and perpetuated, and development may take place within specified limits².

¹ Land use planning of Coutada 16. Part of the Gaza-Kruger-Gonarezhou Transfrontier Park. Unpublished report by the Peace Parks Foundation. April 2001.

² Venter F., Braack L., Nel F., Jordaan W., Gerber F. & Biggs H. 1997. Recreational opportunity zoning within the Kruger National Park. Vol. VIII, Policy proposals regarding issues relating to biodiversity maintenance, maintenance of wilderness qualities and provision of human benefits. KNP Masterplan by SanParks.

The following zonation scheme was adopted¹:

- *Reserve development node*; these sites allow for concentrated nature-based activities in a landscaped setting of less than 10 ha. Views should be of less modified settings. Frequent human or mechanical sounds could characterise such a setting. Key characteristics are; landscaped recreation area, which may contain facilities such as rest camps, camp sites, visitor centres, restaurants, swimming pools and children's playgrounds, management infrastructure, lawns, substrate modification, extensive management of impacts, comfortable and safe experience of nature.
- *Moderate density use zone*; this consists of a partially modified landscape, containing natural areas, evidence of past non-conservation uses, some facility-based recreation e.g. bush camps, hides, picnic sites, self-guided walks, usually about 1 ha in extent; moderate use intensity, management infrastructure, nature experience.
- *Limited use zone*; this consists of areas where the landscape is natural in most respects, with the exception of certain minor structures, which enhance access or mitigate environmental impacts. The focus is on the protection of biodiversity and ecosystem processes. Recreational usage is low in density and frequency and impacts are transient.

The following individual zones and areas have been identified (numbering follows Fig. 4):

- Development nodes;
 - D1: Doornhoek (area of present main entrance, administrative and maintenance complex and Goldfields Training Centre);
 - D2: Doornhoek - present senior staff village;
 - D3: Sandspruit-Komati River confluence (suitable development site, relatively peripheral, easy access and services);
 - D4: Kromdraai Camp area;
 - D5: Msauli Mine Village;
 - D6: Bulembu Borderpost (suitable for outlet for locally produced arts and crafts, information, food and beverage for cross-border trade);
 - D7: Shyalongubo Dam (suitable for recreational development with an emphasis on angling and 4x4).
- Moderate density use zones;
 - M1: Main plains in Komati Valley (main concentration of game, good road infrastructure, very well suited for vehicle traversing and game viewing);
 - M2: Grootboom peripheral area (very peripheral, water and electricity available, close to Grootboom picket, suitable for future recreational use);

¹ as adapted from from Siyaya Coastal Park Concept Development Plan. Unpublished report by the KwaZulu Natal Nature Conservation Services, January 2001.

- M3: Kromdraai-Overberg area (currently concentrated agricultural use, very good game potential, linkage Msauli Mine – Kromdraai, suitable for traversing by vehicle);
- M4: Dunbar Valley (good game potential, suitable for traversing by vehicle);
- M5: Diepgezet-Jozefsdal valley (old mining area, as well as valley upstream from Msauli - natural leisure area for Msauli Mine Village – dependent on current leaseholders (Jozefsdal Community));
- M6: Jozefsdal (concentration of settlements on Jozefsdal – subsistence agricultural use);
- M7: Heemstede (SAPPI pine plantations – by virtue of its current land use and disturbed nature this area can not be a limited use zone and lends itself to further more concentrated activities (dependent on SAPPI as the area is situated on their land);
- M8: Mendon (easily accessible grasslands, geological formations, archeological sites (flints and ochre mine);
- M9: Malondweni (horse riding, 4x4 trails, limited game viewing, cycads)
- M10: Duurstede (4x4 trails, day-hiking trails, mountain biking)

➤ Limited density use zones

- L1: game-fenced area (limited 4x4 traversing, guided walks and wilderness hikes, guided horse riding);
- L2: Jozefsdal-Diepgezet mountainous area (contact zone with Malolotja – self-guided hiking);
- L3: Panhandle (self-guided hiking, limited potential for 4x4 trail).

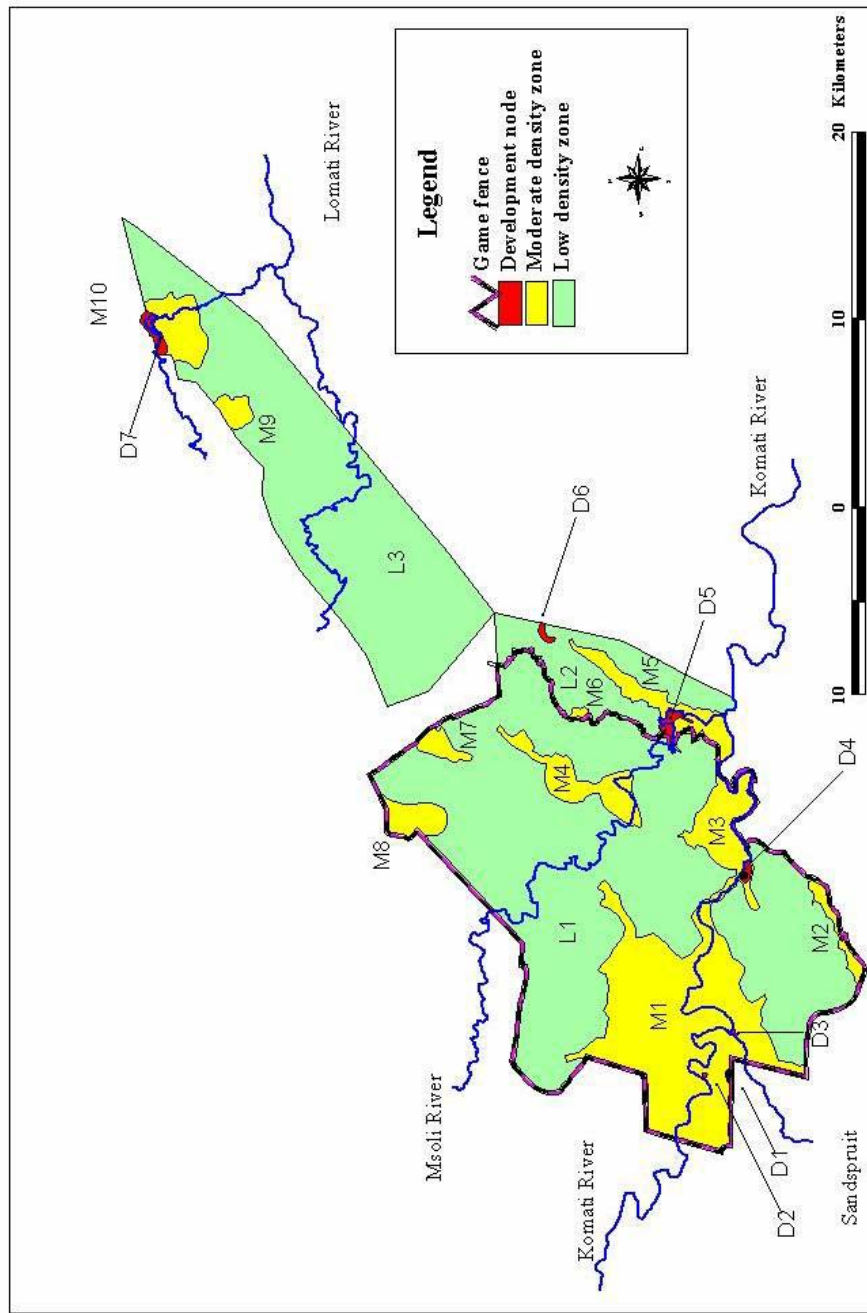


Fig. 4: zonation of the Songimvelo Game Reserve

8.1.3. Proposed developments

All place names used in the following section for the development sites are for illustrative purposes only and do not imply any preference or final choice on the matter.

8.1.3.1. Permanent overnight accommodation

Game viewing represents the main tourism product that can generate significant numbers of visitors that stay overnight in the SGR and who are prepared to pay a substantial fee for this privilege. Good game viewing is restricted to the main plains along the Komati River. A calculation of acceptable bed and vehicle densities (Appendix J) yields a maximum of 100 additional beds for the main plains.

Taking into account the limitations and constraints acting on Songimvelo and considering the conservation and environmental sensitivities, the following development opportunities that offer overnight accommodation are considered appropriate for the SGR (Fig. 5, Fig. 6, Box 1, Box 2)(a detailed description of the Confluence and Safari Lodge sites is provided in Appendix K):

- Confluence Site; a large site at the confluence of the perennial Sandspruit and Komati River with easy access close to the reserve entrance. Suitable for medium-sized to large development (40-80 beds) aimed at the middle- to upper-middle market. Main activities would revolve around guided game-drives.
- Kromdraai Camp; existing self-catering facility of 50 wooden chalets that each can accommodate 6 self-catering guests (300 beds). This camp is aimed at the lower-middle to middle income group. An upgrade, refocusing and different management regime of this facility would be required to ensure its success.
- Komati River Lodge – Safari Lodge; The central facility of the existing Komati River Lodge (with a bed capacity of 20) burnt down in 2002. This has effectively closed down this catered lodge aimed at the middle to upper-middle market. The obvious course of action is to rebuild the central facility. It is anticipated that will require funds far in excess of the insurance payout in order to rectify shortcomings. This lodge has always been too cold for comfort in winter. It is no longer considered a suitable site, particularly if the link between Kromdraai Camp and the main plains is opened (see further on). For this reason it is strongly recommended that the Lodge should not be rebuild on site but that the alternative Safari Lodge site should be considered. The remaining infrastructure should be removed and the site rehabilitated. The Safari Lodge site is much more peripheral with easier access and services. It also offers much easier access to the main game driving areas. It is suited for a 20 to 40-bed development (= the balance of 100 beds following the development of the Confluence site) aimed at the upper-middle income segment of the market.
- Dunbar Corporate facility; This site is situated at the beginning of the Dunbar Valley where the access track from Msauli reaches the valley bottom. The

access which requires 5 crossings of the Msoli River and the broad valley ringed by mountains combine to make this one of the most special and attractive destinations in the reserve. This offers the potential for a small 8-unit (16 bed) development aimed at the corporate market.

- Shyalongubo Camping and or Chalets; this development has long been discussed with the Shyalongubo community and a keen interest exists. The initial development could consist of a camping area with ablutions aimed at the angling market and 4x4 trailists. Chalets may later become viable, particularly if road access can be improved. The Dam straddles the Songimvelo boundary. Placing this development on the community side of the border may facilitate the sourcing of development funding.
- Goldfields Training Centre; this existing facility at the main entrance gate has in the past been used for staff training. The need for this facility for this purpose has greatly diminished. A re-focus on the school and tertiary education market may constitute the most appropriate use of this facility.
- Msauli Mine Village: the re-development of the former staff village of the Mine is being driven by the private sector. The proposed project for the upgrade and development of Msauli is estimated at R160 million. This is a most appropriate initiative that could unlock the tourism interest and investment in the Songimvelo area. The MPB could capitalise on this development by offering activity and traversing opportunities from which it could generate a revenue (see further on). Future plans include the following:
 - A golf estate of 400 stands;
 - The upgrading and redesign of 110 units of which a percentage will be sold as timeshare and the rest be managed by Western Union;
 - A conference centre;
 - A wedding chapel;
 - A health hydro;
 - An eco-tourism training facility;
 - An international hotel school;
 - A museum featuring the mine & power station;
 - Upgrading of the existing hospital (14 beds) to serve permanent residents;

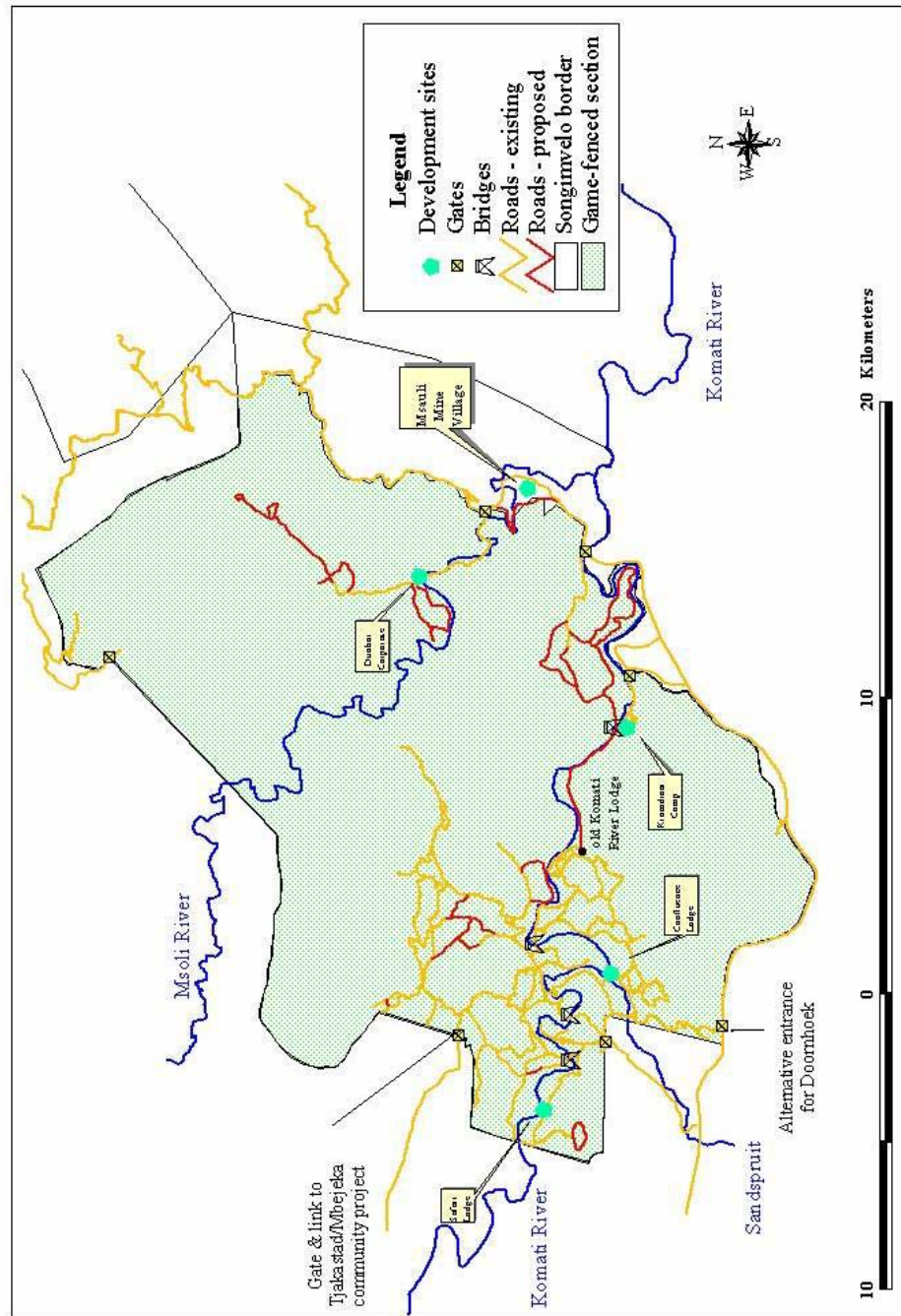
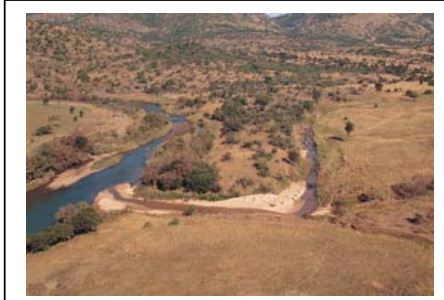


Fig. 5. Proposed development sites and infrastructure in the game-fenced section of the Songinwelo Game Reserve.

Box 1: A visual tour of the main development sites and accompanying landscapes of the Songimvelo Game Reserve (Komati and Dunbar Valley).



Confluence Lodge site nestled between Sandspruit and Komati.



View of Komati Valley with main game-viewing plains.



Game viewing in the Komati Valley.



Kromdraai Camp – chalets.



Existing Komati River Lodge (top left).

View onto Komati River and valley from the proposed Safari Lodge site (top right)



Dunbar Valley (at right).



8.1.3.2. Tourism activities

Activities within the game-fenced section would be mostly guided because of the presence of elephant, rhino and buffalo. In contrast activities in the Jozefsdal/Diepgezet and the Panhandle sections could be mostly self-guided. Activities could consist of the following (see Fig. 5 and Box 2):

- Game drives on main plains;
 - Guided drives by operator for resident guests (100 beds on main plains – 12 vehicles);
 - Guided drives by operator for guests of Kromdraai Camp, Msauli Mine Village, and for visitors residing outside of the SGR (Badplaas Aventura, Nkomazi Wilderness, Tjakastad/Mbejeka community project, and other day-visitors – 4 vehicles).
- Game drives in Dunbar Valley;
 - Self-guided 4x4 drives for residents of corporate units (4 vehicles);
 - Alternatively (if these units are not developed in Dunbar but rather near Msauli) self-drive 4x4 or guided 4x4 drives (4 vehicles).
- Game drives in Kromdraai area;
 - Self-guided drives on plains opposite Kromdraai Camp (20 vehicles maximum). This could be open to guests of Kromdraai Camp, visitors residing in Msauli as well as other day-visitors.
- Guided game walks and hikes, birding, archaeological, geological and flora specialist walks;
 - Short walks and day-walks by operators for the resident visitors to the main plains;
 - Short walks with strong educational/interpretative slant by operators or MPB that focus on niche market;
 - Overnight wilderness hikes by operator (possibly separate concessionaire) in the L1 low density zone with particular focus on the Msoli Valley and the M8 medium density zone of Mendon. This would necessitate the use of temporary fly camps (2 or 3).
- Self-guided, interpretative trail around Kromdraai Camp (already existing) (expansion in range of elephant, buffalo and rhino would need to be monitored for visitor's safety);
- Guided and self-guided 4x4 trails in the M9 and M10 moderate density use zones of Malondweni and Duurstede with use of ablution and camping facilities at Shyalongubo Dam;

- Self-guided hiking in the Panhandle (see Appendix L for a detailed description of potential routes with distances and times);
 - Day-walks from Shyalongubo Dam (Fig. 6);
 - Overnight hikes (Fig. 6).
- Guided flyfishing in the Komati River (focus on yellowfish);
- Self-guided flyfishing in Msoli River (as part of Corporate units);
- Self-guided angling in Shyalongubo Dam;
- Horse riding;
 - in Jozefsdal/Diepgezet valley;
 - at Malondweni making use of existing stables and potentially using existing staff house as overnight accommodation (current poor road access severely hampers opportunities to have visitors bring in their own horses).
- Mountain biking in Jozefsdal/Diepgezet and Malondweni area;
- Bulembu Borderpost trading area - food and beverages, outlet for arts and crafts (to be developed by and for the Jozefsdal community in order to attain vertical integration between natural resource utilisation in the Jozefsdal lease area and the sale of value-added products);
- Cultural experience – potential incorporation of one or more of the resident families in the Kromdraai area in a cultural experience;
- Occasional participation and involvement in management activities (see current Science on Safari type activities whereby tourists pay the MPB for the privilege of being able to experience specialised conservation actions such as marking of rhino);
- Recreation area with ablutions and braai facilities in the Grootboom area. This would need to be in response to rising demand in the future. The site is very peripheral, easily accessible and is close to water and electricity. One might even be able to provide a short self-drive loop in this area.
- Viewpoints and rest areas along Bulembu road in between fenced area and the Panhandle. Technically most of such viewpoints and rest areas would fall on SAPPI land. It remains however important to retain the character of the road as a scenic and rural pass. Furthermore, certain areas are environmentally sensitive. As an example, the best viewing point on the farm Schoonoord on SAPPI land supports a population of the Red Data species *Aloe albida*.

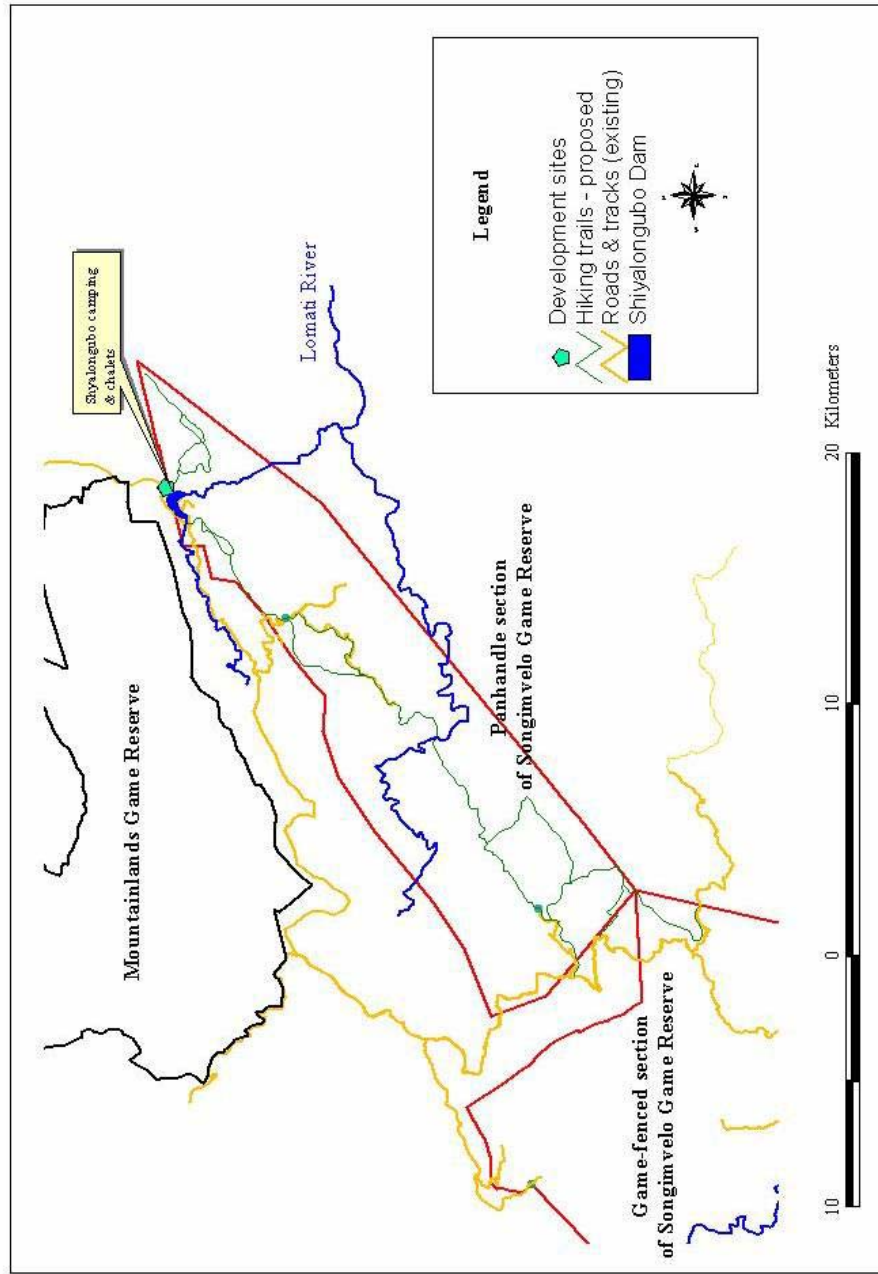


Fig. 6: Panhandle section of the Songimvelo Game Reserve - development site and hiking trails

Box 2: A visual tour of the main development sites, accompanying landscapes and activity areas of the Songimvelo Game Reserve (Panhandle section and other areas outside the Komati Valley).



View of Shyalongubo Dam from community land.



Golf course at Msauli Mine Village – view towards Swaziland border.



Panhandle section of the SGR – typical hiking country.



4x4 trail into Dunbar Valley.



Hiking on Mendon with entrance to the ancient ochre mine in the middle of the photograph.



Occasional snow on high-lying mountains of the SGR.

8.1.3.3. Required infrastructure

The successful operation of the proposed activities and attraction to the proposed developments will require an expansion and upgrade of the existing infrastructure. The main plains of the SGR are too isolated and internal linkages with Kromdraai/Msauli and external linkages with Tjakastad/Nkomazi Wilderness would add tremendous value.

The following improvement on the road system is considered necessary (Fig. 5):

- Access from Von Brandis Mine to the valley opposite Kromdraai Camp (6,5km) (this would realise the first part of the linkage of Msauli Mine Village with the main plains. It would also open up a self-drive area for Kromdraai Camp and Msauli. Very importantly, it would provide for an all-weather access to the Kromdraai Camp instead of using the current road that is below flood level);
- Game viewing tracks in the valley opposite Kromdraai to provide for game viewing for guests of Kromdraai Camp and Msauli Mine Village (13 km);
- Connection road between Kromdraai Camp and the now defunct Komati River Lodge to allow access into the central valley (5km);
- An additional 10 km of game viewing roads on the main plains to provide additional loops and flexibility and thus improve overall vehicle capacity.
- Access track for 4x4's into Dunbar valley (minor repairs only to 4.5km);
- New roads in main Dunbar valley (8km) for 4x4 traversing and reopening the old road to the north (10 km);
- New access gate from Tjakastad (see Section 9 on 'Linkages');

The proposed additions would bring the total length of the road network to 151 km.

Bridges are essential to cross the strong Komati River that bisects the main game viewing plains. The following bridges are critical:

- A new bridge to allow for all-weather access to Kromdraai Camp, simultaneously providing Kromdraai access to the Kromdraai/Overberg valley game viewing area (this will alleviate the current problem of occasional flooding of the current access road to Kromdraai Camp);
- The existing high-water bridge on Laaggenoeg (this bridge is in good condition and no extra work is required);
- A new bridge halfway between the existing low and high water bridges to allow for greater flexibility and usage of the central valley;
- The existing low-water bridge on Doornhoek (this bridge is not in a very good condition and some repairs and upgrades are necessary).

The following gates should be in place:

- Doornhoek: this is the main entrance presently used. This gate will probably always be retained as it offers convenient access to the main administrative and logistical centre of the SGR. Nevertheless a new gate from the main road at Kortbegrip would offer a better alternative for tourists;
- Kortbegrip – new gate as described above;

- Kromdraai gate: this is the currently used to provide access to Kromdraai Camp. The access road to the Camp lies below the flood level of the Komati River and it would be very difficult to upgrade it. Therefore the new proposed Von Brandis gate would make more sense;
- Von Brandis gate: this would become the main gate to Kromdraai Camp as well as to the Kromdraai self-drive area and to provide access to the main plains using the Kromdraai-Komati River Lodge linkage;
- Tjakastad gate: future linkage to the Mbejeka/Tjakastad community (see section 9). Depending on the boundaries of this project, there might be a continuous fenced area which would alleviate the need for a gate in future;
- Dunbar gate: for access to corporate units and/or for organised game drives in the Dunbar Valley;
- Mendon gate: this would not a manned gate open to the general public, but could provide access to organised groups (eg to ochre mine);

The question of new tracks linking certain parts of the reserve across the mountains has often been debated in the past. Examples are the direct linkage of Dunbar with the main plains by means of a track to the Manana area, or the direct link from Ida Doyer to Malondweni. These linkages are physically possible. It is however strongly recommended that the utmost care be exercised if those options are to be considered in future. One will have to deal with very steep slopes in high rainfall areas. The Ida Doyer – Malondweni linkage in particular traverses areas on very erodable shales on Sedan. Any such linkages should be made with the minimum of mechanical excavation and cuttings. One should rather build up the tracks by means of dry walls of packed rock (see for example highly successful example on Ohrigstad Dam Nature Reserve and old mountain passes in the Western Cape). Such linkages will always remain exclusively 4x4 trails and will only permit low volumes of visitors transiting at low speeds.

8.1.4. Residents and livestock

8.1.4.1. Game-fenced area

There are still some 25 families resident within this game-fenced section. They practice subsistence agriculture and/or live from remittances received from family members working outside of the Reserve. These resident families own some 400 to 500 head of cattle that graze in the Reserve. Another 500 head of cattle also graze in the reserve, but are owned by people living outside of the Reserve.

The current situation impacts negatively on the Reserve (Box 3). The reasons for this are:

- The livestock take up grazing capacity. As a result game numbers are below the numbers that should be carried. This results in a lower income from hunting and live capture. The lower game numbers also impact negatively on tourism development potential;
- Livestock detract from tourist's expectations. As a result, investors have been very reluctant to commit themselves to any meaningful tourism development;

- Livestock can transmit diseases which would have devastating consequences on the health and the status of the game (disease-free buffalo);
- All security, fence patrolling and maintenance costs are carried by the Mpumalanga Parks Board.

In light of the constraints already experienced for the development and marketing of the SGR, recognising its tremendous conservation value and considering the very meagre maize harvest reaped in the SGR and the limited return enjoyed from the livestock, the continued presence of the livestock and residents is not considered appropriate. Not only does their presence detract from the conservation of the SGR but it also jeopardises the benefits to surrounding communities that could be derived from tourism. It is simply not a good and rational land use option to carry on with the *status quo*.

So far, all attempts at resolving the livestock and settlement issue have failed. There is no single easy solution to solve the problem if one wants to ensure a fair and equitable outcome to all. Although it often seems to be the easiest solution, any excisions from the SGR should be avoided. As an example, it has been proposed in the past to excise some 1,000 ha near Kromdraai for this purpose. This very area has now become critical in linking Msauli Village to the main body of the reserve and in providing a game viewing area for Kromdraai Camp. Its excision is not a good option.

In order to minimise any negative impact on individual residents and in order to ensure healthy long-term neighbour relations, certain guiding principles should be used for any possible solution. These guiding principles are:

- Solving the issue is a process and not just an action;
- Affected individuals should feel that they are better off following the outcome (whatever form it may take) of the process;
- A combination of approaches should be used that are targeted at addressing individual cases - these could include re-establishment on more appropriate farmland, direct compensation, equity in game, job offers, incorporation into the Reserve with certain conditions etc;
- The grazing issue could (at least in the short-term) be divorced from the residence issue;
- Long-term benefits might be preferable to once-off compensation;

The game-equity option (if socially acceptable) would be easy to implement, without immediate major financial implications and would greatly benefit the game returns and tourism potential for the reserve.

Although there exists some potential to incorporate residents into the tourism development, this seems limited. A reasonable flow of visitors is a pre-requisite for success. Several of the 'cultural village' projects around the Barberton Mountainland (eg Badplaas, Matsulu) have not been successful. As an example of opportunities within Songimvelo, one of the settlements in the Kromdraai area where a traditional healer lives would seem to have good potential as a tourism attraction. However the difficulties in reaching this settlement would severely limit visitor flow. In terms of

ease of access, a likely site seems to exist on Overberg (Fig. 5) that would be easily accessible within the self-drive area of Kromdraai.

8.1.4.2. Jozefsdal/Diepgezet

A number of families live on Jozefsdal/Diepgezet. They have a long-term lease agreement with the MPB.

The Jozefsdal/Diepgezet area is the logical choice for any hiking, horse riding and mountain biking for the Msauli Mine Village. It is recommended that the private sector operator for Msauli reaches an agreement with the Jozefsdal community that ensures a mutually beneficial relationship.

It is critical that the Jozefsdal community exerts proper control of the land to prevent an influx of new settlers as this is not allowed under the lease agreement. There exists a real danger of such influx following the upgrade of the Bulembu road that is planned for 2003 and that will likely lead to a greater traffic flow.

Furthermore, the Jozefsdal community should reach agreement with the MPB on a management and development plan (as part of the lease agreement) that prevents further overgrazing and erosion on the sensitive slopes. This has not only a negative environmental impact but also detracts from the tourism potential.

8.1.4.3. Shyalongubo community

A small number of people nominally live within the reserve borders. As they are in a peripheral position, their continued presence is not considered to be a problem for the tourism development of the area. Nevertheless agreement should be reached with the MPB concerning the livestock that grazes into the reserve as degradation and erosion along certain of the paths has been observed.

Box 3: Residents and livestock in the SGR – impacts and potential cultural products.



Resident family in the SGR. Note large denuded area resulting in erosion on slope.



Livestock and game grazing together near Confluence Lodge site



Goats grazing in Dunbar area. They could be replaced by game.



Erosion scars caused by livestock trails on Hooggenoeg.



Top: beautiful walled settlement on Soodorst that is home to a traditional healer – unfortunately its distance and height above the plains makes access for most tourists difficult.



Top right: Sivivane – stone cairn used to ensure a safe voyage (near Swaziland border).



Right: curio seller near Mooiplaas.

8.2. Mountainlands

8.2.1. Tourism products

Combining the constraints of the Mountainlands with the aspirations of the different stakeholders and the expectations in the tourism market results in the following logical and achievable products that can be offered:

➤ ‘Mainstream’ products

- adventure tourism;
 - 4x4 routes,
 - mountain biking,
 - horse riding,
 - paragliding/hang gliding,
 - abseiling,
 - kloofing
- historical experience (Eureka City, old mines,...);
- Educational experiences linked to niche markets;
 - geology (including historical and active gold mining);
 - flora;
- game-based product;
 - guided drives on vehicle;
 - self-guided drives (2x4 and 4x4 vehicles);
 - guided walks on foot;
 - safari’s on elephant back.
- Birding;
- cultural tours and experiences (archaeological sites (including ‘Dravidian’ sites), local Swazi culture);
- Recreation - pic-nic / braai

➤ Additional products

- a number of potential products and projects have been identified by the workshop participants – a full list and description are provided in Appendix M;
- these projects may play an important economic role beneficiation of local stakeholders;
- they are mostly peripheral and supplementary to the developments and activities taking place within the Mountainlands Reserve. The MPB should therefore carefully consider these projects in order to assess feasibility and viability as part of a broader socio-economic development programme for the MGR and surrounding area.
- There certainly appears to be much interest from entrepreneurs from within previously disadvantaged communities to become active roleplayers in the business of tourism.

The MGR is not well placed to offer the following:

- Big Five game experience (lion would be very expensive to contain within the reserve boundaries and their presence will more than likely sour relationships with surrounding pastoralists of the Shyalongubo, Low's Creek and Crystal Stream communities, the position of elephant should be carefully evaluated before considering their introduction because of their impact on the vegetation, buffalo might present a problem from the veterinary point of view);
- Water-based sports including flyfishing (although many perennial streams are found they are mostly small);

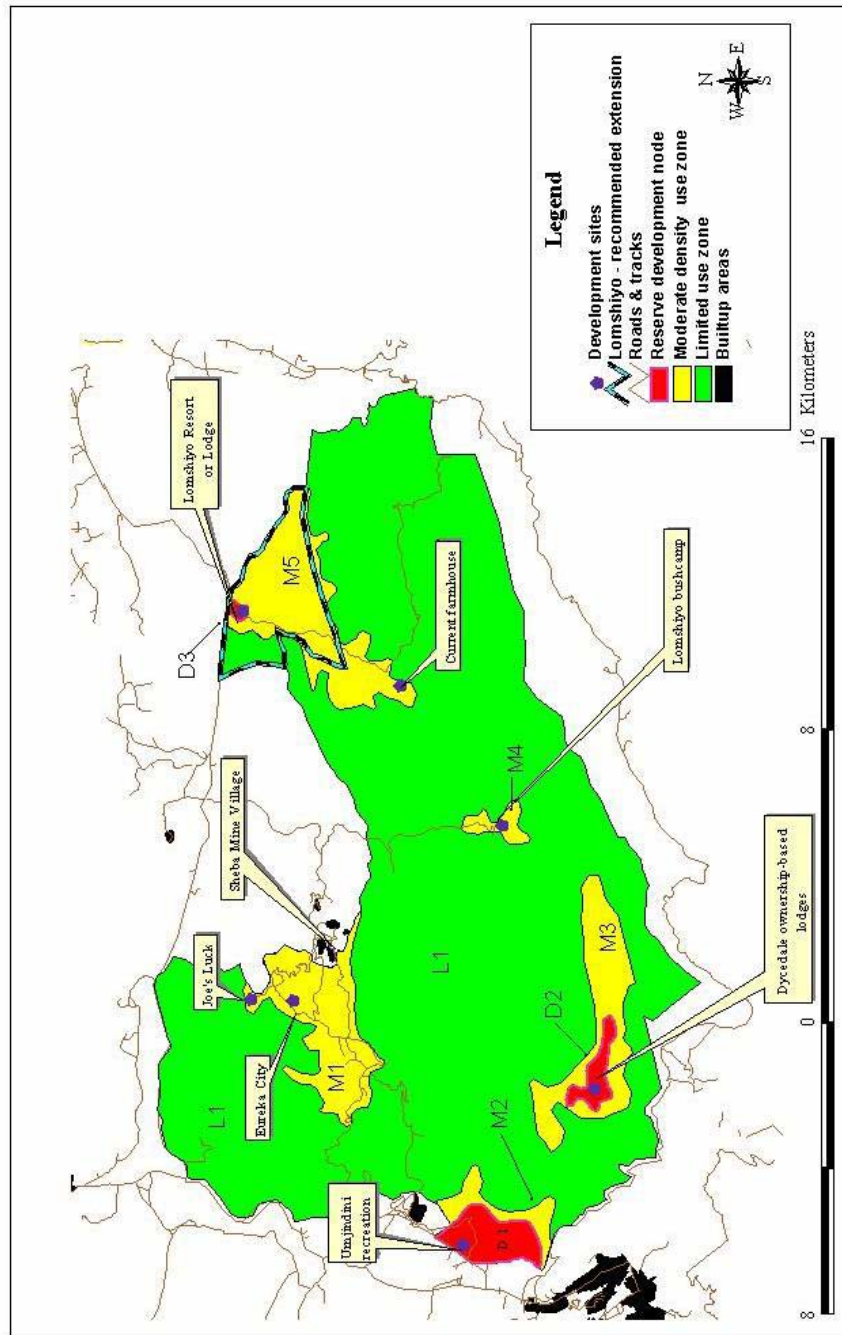
The different tourism products would cater for a variety of market segments. It is not recommended to target the 5-star market. It would be difficult to provide the exclusivity and game product desired by this market without constraining the other development opportunities. It therefore recommended that the main focus of the development of the MGR should be the middle to upper-middle income groups.

8.2.2. Zonation

The same zonation scheme was applied as the one used for Songimvelo. The proposed zonation is depicted in Fig. 7. It should be noted that the zonation represents the consultants' perspective and that this not prescriptive with regard to the private and community-owned land. The respective areas are as follows:

- Development nodes;
 - D1: Umjindini townlands – appropriate placement of a development node in terms of accessibility and proximity to the town of Barberton. The community through the tribal authority are considering a sports stadium and accommodation bordering the reserve. Although these might not necessarily represent the best choices for development, the zonation of the area is correct;
 - D2: Dycedale – owned by the private sector with planned ownership-based development in the accessible valley and old lands;
 - D3: Lomshiyo development node – this node currently falls outside the game fence. A re-alignment of the fence is considered essential to unlock the development opportunities along the busy Barberton-Kaapmuiden road.
- Moderate density use zones;
 - M1: Eureka City zone based on the network of existing mining and prospecting roads. This area is likely to carry quite a bit of game and contains many of the geological and historical attractions (including Eureka City, graveyards...);
 - M2: Umjindini/ETC ownership surrounding the development node. Consists of valley bottom that will likely carry much game;
 - M3: Dycedale/Wonderscheur valley bottom – private land;
 - M4: Colombo valley bottom – owned by the Lomshiyo community with beautiful scenery and offering the ideal setting for a small bushcamp;

- M5: Lomshiyo game-viewing area – this area will hold most of the game on account of its sweet grazing and gentle topography. Only the minor part of the zone is presently contained within the game fence. A re-alignment of the fence is considered essential to develop a game-based product in this area.
- Limited density use zones
 - L1: major part of the MGR covering the MPB, community and private land. Mostly undulating to very rugged countryside that must be traversed on foot, on horseback or by 4x4.



8.2.3. Proposed developments

All place names used in the following section for the development sites are for illustrative purposes only and do not imply any preference or final choice on the matter. Although proposals are made with regard to the private sector and the Lomshiyo community those are not prescriptive. It is a lot more problematic to devise a development plan for Mountainlands as the parties involved may have different ideas and may be able to proceed at a different pace.

Regardless of their differences, the respective parties should realise that ultimately their greatest benefit will lie in linkages. The MPB needs a steady volume of visitors to the Edwin Bray Shaft at Sheba as they may spill over into the reserve. Similarly, ETC will be able to market its mine visits better if they can provide an integrated historical product by adding a visit to Eureka City. The Lomshiyo land potentially offers the best game viewing and/or can provide an outlet for arts and crafts for visitors *en route* to the Malelane Gate of the Kruger National Park.

8.2.3.1. Permanent overnight accommodation

Taking into account the limitations and constraints acting on Mountainlands and considering the conservation and environmental sensitivities, the following development opportunities that offer overnight accommodation are considered appropriate for the MGR (Fig. 7):

- Sheba Mine Village – although this falls technically outside the MGR its close proximity has the potential to generate an appreciable volume of visitors to the reserve;
- Dycedale lodges – this is likely to consist of a number of separate lodges that are physically owned by the investors (ownership-based development). The Dycedale Valley is well suited for the discrete placement of a number of small lodges that will offer privacy and that will blend in with the environment. Benefits to the MBP and Lomshiyo would be from the traversing out of Dycedale onto the surrounding land;
- Umjindini development – as stated earlier the community has expressed interest in a stadium and self-catering overnight accommodation on the townlands. The details, appropriateness and viability still need to be assessed. The limited demand for extra beds in the Barberton area (see findings from section 6.2.8. and Appendix F) need to be considered. A medium to large-scale development should be possible without undue negative environmental impact on the MGR;
- Lomshiyo Resort/Lodge: a successful development of a medium to large-scale facility on Lomshiyo land is dependent on a re-alignment of the fence in order for the development to be situated close to the Barberton-Kaapmuiden tar road. Currently the game viewing area is too limited and is very badly encroached with sickle bush (*Dichrostachys cinerea*)(Box 5). A game product will take time to develop. The site of the old farmhouse (see Box 5) is not suited for a large development. The proposed development along or close to the main road could consist of accommodation, food and beverage facilities, filling station, cultural attractions and an outlet for arts and crafts (including

the establishment of linkages between the product and the occurrence of the natural resource and its harvesting practices in the Reserve);

- Lomshiyo Bushcamp: the possibility exists for a one or two small (8 bed) bushcamps tucked away in more remote valleys. The farm Colombo offers a good opportunity in this regard;
- A facility is presently being used by ETC for the rehabilitation of a slimes dam between the Sheba and Fairview Mines. It might be possible to turn these staff quarters into a guesthouse type accommodation. However, this development is likely to be fairly conspicuous and could interfere with the character of the area. It makes more sense to provide this type of accommodation in the Mine Village from where excursions can be made into the Reserve.

8.2.3.2. Tourism activities

Activities could consist of the following mix of guided and self-guided activities:

- Visits to the Edwin Bray shaft (Golden Quarry) of Sheba Mine. Although technically outside of the MGR, this can be one of the prime catalysts to ensure a spillover of tourists into the MGR. The MPB should thus actively explore formal ties with ETC to facilitate the establishment of integrated tours (with a mine visit, historical visit (Eureka Mine) and natural area (scenery and game) component).
- Guided 4x4 traversing of L1 low density zone. The possibility of self-guided trails could be explored but this would probably have to be confined to a single one-way circuit with limited carrying capacity;
- Self-guided 4x4 access to the M1 zone to Eureka City / Joe's Luck (interpretation information to be provided at those sites);
- Game drives on Crystal Stream and Lancaster sections of Lomshiyo. This will be dependent on the successful rehabilitation of the bush encroached areas and the restocking with game. Guided drives are recommended due to the limited area available for traversing that could easily lead to congestion if selfdrive is allowed;
- Self-guided game walks and hikes, birding, archaeological, geological and flora specialist walks;
 - Short walks and day-walks by operators for the resident visitors to the proposed developments;
 - Short walks with strong educational/interpretative slant by operators or MPB that focus on niche market (particularly mining history and techniques, geology, endemic butterflies);
 - Overnight wilderness hikes in the L1 low density zone. This would necessitate the use of temporary fly camps (2 or 3).
- Access to sites of wilderness and solitude that offer an opportunity for a metaphysical experience;

- Horse riding;
 - in M1, M2 and M3 moderate density use zones,
 - as wilderness trails in L1 zone (could be in the form of overnight trails) (this could include linkages through SAPPI land with the panhandle of Songimvelo);
- Mountain biking in D1, D2, M1, M2, M3 and M4 zones;
- Cultural experience – at Lomshiyo development along Barberton-Kaapmuiden road;
- Occasional participation and involvement in management activities (see current Science on Safari type activities whereby tourists pay the MPB for the privilege of being able to experience specialised conservation actions such as marking of rhino);
- Recreation area with ablutions and braai facilities on the Umjindin townlands.
- Viewpoints and rest areas along Saddleback Pass and Shyalongubo-Low's Creek pass. Technically, these viewpoints and rest areas fall outside the MGR. It remains however important to retain the character of these roads as being scenic and rural.

8.2.3.3. Required infrastructure

The successful operation of the proposed activities and attraction to the proposed developments will require an expansion and upgrade of the existing infrastructure.

The most critical intervention is the realisation of some strategic linkages between the existing tracks in order to enable traversing from Lomshiyo to Sheba/Eureka and to Dycedale (and *vice versa*). The MPB should explore partnerships with ETC considering their expertise and availability of heavy machinery.

The shafts and adits that are still open need to be secured to prevent injury and death of tourists and game alike.

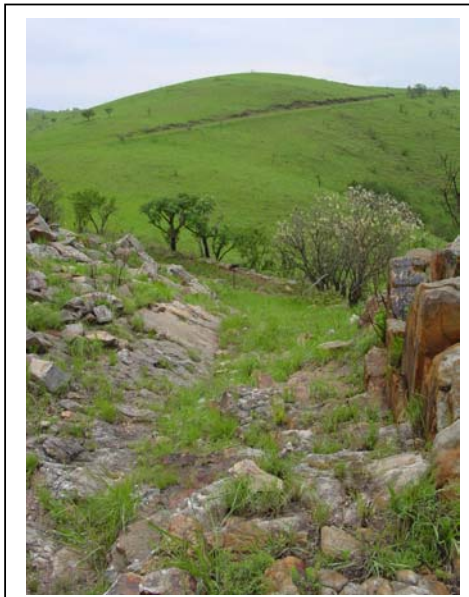
Box 4: A visual tour of the landscapes and activity areas of the Mountainlands Game Reserve.



View onto valley with Sheba Mine.



View from Joe's Luck across Kaap River Valley.



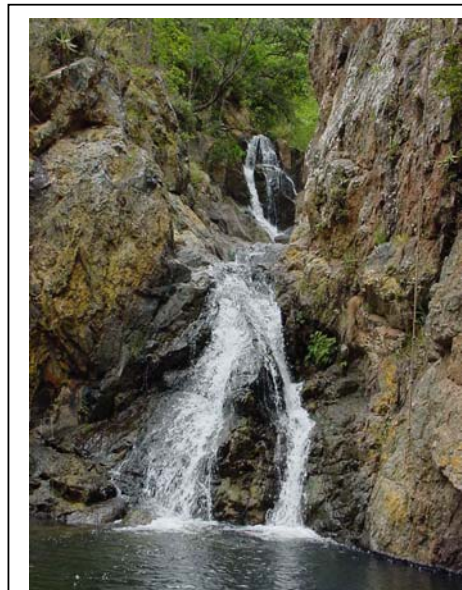
Old oxwagon route.



Old Victoria Hotel at Eureka City.



View from Saddleback pass across Dycedale.



Mountain stream.

Box 5: Lomshiyo community land within Mountainlands Game Reserve – constraints and opportunities.



Current bush-encroached nature of most of the game viewing area on Lomshiyo land.



An example of a site in good condition on Lomshiyo. The same could be achieved through clearing of the encroached areas.



Old farmhouse. Note poor state.



Perennial stream through Lomshiyo.

8.3. Barberton Game Reserve

8.3.1. Tourism products

Combining the constraints of the Barberton Game Reserve with the aspirations of the different stakeholders and the expectations in the tourism market results in the following logical and achievable products that can be offered:

- Recreation - pic-nic / braai
- Environmental education aimed at large, nearby market of learners (focus on geology, water quality – Noordkaap River, flora and fauna);
- Day-hikes;
- Adventure tourism;
 - 4x4 routes,
 - mountain biking,
 - horse riding,
- Birding.

The BGR is not well placed to offer the following:

- Big Five game experience – the reserve is too small for this purpose. White rhino may be considered if the mining shafts are safely closed up.

The different tourism products would cater for a variety of market segments. It is not recommended to target the 5-star market. It would be difficult to provide the exclusivity and game product desired by this market because of the small size of the reserve and its location along the very busy Hilltop pass between Nelspruit and Barberton.

8.2.2. Zonation

The same zonation scheme was applied as the one used for Songimvelo and Mountainlands. The proposed zonation is depicted in Fig. 8. The respective areas are as follows:

- Development nodes;
 - D1: adjoining the very busy R40 road between Barberton and Nelspruit – already disturbed by previous mining and prospecting activities, with easy provision of services.
- Moderate density use zones;
 - M1: Noordkaap valley that can be traversed by vehicle.
- Limited density use zones

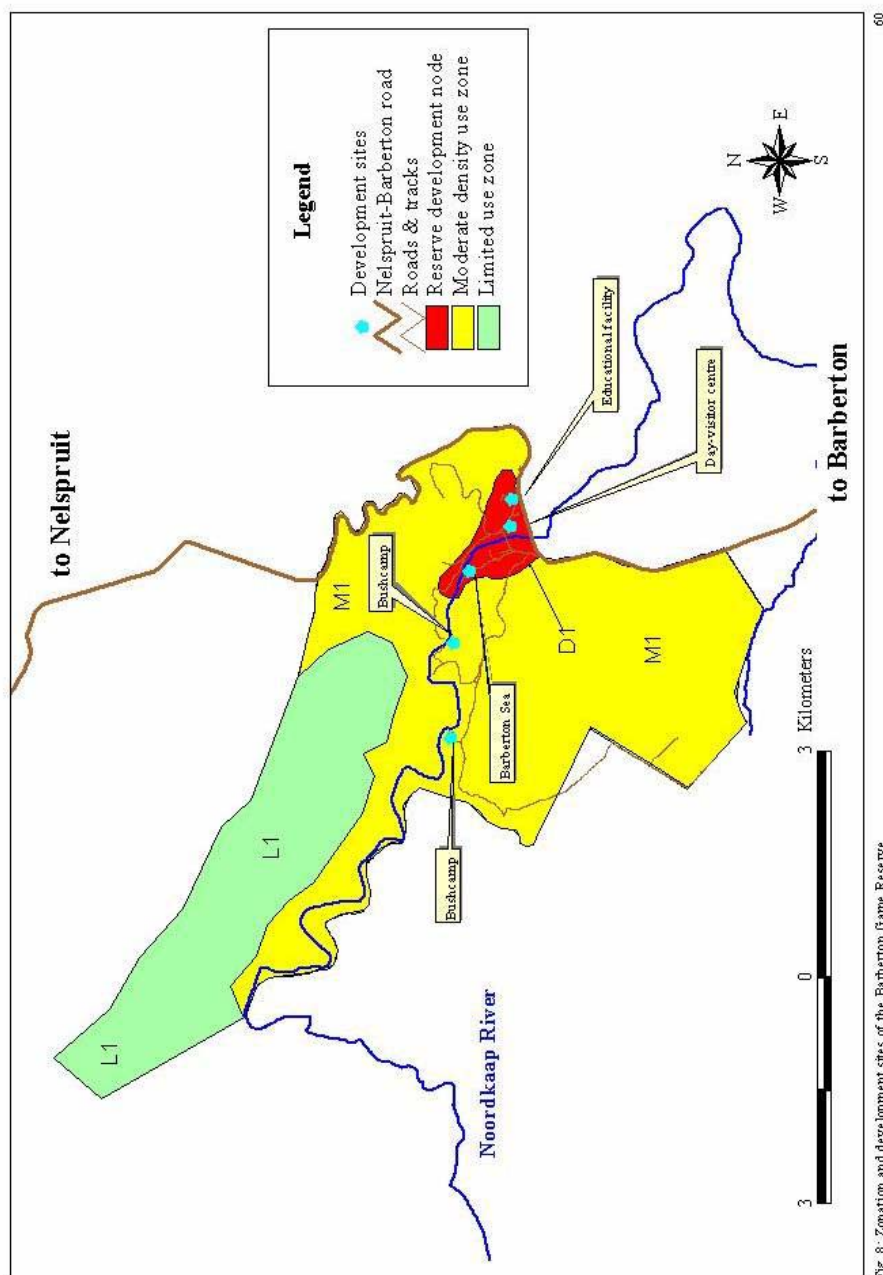
- L1: The granite ridge running in a north-easterly to south-westerly direction that separates the Noordkaap valley from Nelspruit. This zone protects some of the most important habitats in terms of biodiversity found on the reserve, namely grasslands and forests.

8.2.3. Proposed developments and activities

The following physical developments and linked activities are proposed:

- Existing day-visitor centre:
 - Target schools for educational talks and walks during weekdays using the day-visitor centre as a base;
 - Enhance attraction over weekends by providing an opportunity to experience the reserve either:
 - Through the provision of a self-drive loop (taking into account limited area available and high cost of providing a 2x4 standard road,
 - Or arranging guided drives by linking in with existing 4x4 operators in the area on a booking basis.
 - Attract additional people by providing limited access (on a booking basis – 1 group per permit per half-day) to Barberton Sea (Box 6). The difficult access and limited area of sandy ‘beach’ allow only for a single group at a time).
 - Develop kiosk/tea garden as visitor numbers grow;
 - Address entrance fees (consider family/group entrance fees to reduce overall costs) to attract more visitors (considering very low visitor numbers recorded since the opening of the centre);
 - Explore public interest in a mountain biking trail that departs and ends at the day-visitor centre.
- Bushcamps:
 - One or two small (8 bed) self-catering facilities along the banks of the Noordkaap River (Fig. 8),
 - These camps could be linked with existing 4x4 operators in the Nelspruit-Barberton area in terms of marketing and providing a 4x4 experience to the guests.
- Environmental Education Camp:
 - Explore possibility of a partnership with the holder of a 1 ha site (D Rudge) (Fig 8) to establish a camp aimed at the school market.

A large site has been identified in the past along the northern ridge at the top of Hilltop for the development of a Conference Centre. Considering the limited demand at present (section 6.2.8. and Appendix F) this option should be kept on ice and re-assessed some time in future.



Box 6: A visual tour of the main development sites, accompanying landscapes and activity areas of the Barberton Game Reserve.



View from Hilltop onto Noordkaap valley.



Day-visitor centre.



Braai site at day-visitor centre.



'Barberton Sea' – pool and sandy beach in Noordkaap River below broken dam wall..



View from Noordkaap Valley towards Nelspruit.



Blue wildebeest in the Barberton Game Reserve.

9. Linkages – regional circuits

As previously stated, maximum benefits from the individual Reserves and individual development projects will only be realised by achieving synergy and linkages within the Barberton Mountainland. This synergy and linkages are to be achieved through appropriate road infrastructure, marketing and products (product mix, critical mass, compatible land use).

9.1. Product mix, critical mass and compatible land use

It is unlikely that any of the individual current or future products will sufficiently fire up the markets' imagination to result in significant improved visitor numbers. Rather, it will be the number and range of products offered that will instil a sense of 'destination'.

Within this context, it also becomes critical that the most appropriate land-use option be chosen for each area and this land use is compatible with the conservation/eco-tourism land use practised elsewhere in the Barberton Mountainland. Significant areas of community land occur within the Barberton Mountainland. Their full economic potential is by no means being realised. Typically, the corridor between Nkomazi Wilderness and Songimvelo as well as the Ebutsini area only produce marginal returns from agriculture. The communities do not benefit sufficiently from the tremendous intrinsic tourism potential of these areas.

The corridor contains geological features that are central to the World Heritage Site status of the Mountainland (Appendix G). The type locality of 'komatiites' is found near the Komati River at 'Spinifex Creek'. The earliest known evidence of meteorite impacts on Earth is found on Hooggenoeg. The chert on Hooggenoeg contains evidence of the earliest known life forms on Earth.

The best form of land use with the biggest benefits to the Tjakastad/Mbejeka community is undoubtedly one of eco-tourism and conservation. This was identified as early as 1986 which led to the proclamation of the Avontuur, Hooggenoeg and Geluk farms as part of the planned Songimvelo Game Reserve¹. Those particular farms were however never included into Songimvelo. Much agricultural activity still takes place, particularly in the lower valleys. It would require a bold vision from the Tjakastad/Mbejeka communities to implement such a change in land use as it would definitely disrupt the present livelihood of many families and would even require the relocation of some.

It should not be expected for the community to risk such disruption without significant guarantees of a better economic return. The Avontuur-Hooggenoeg corridor should also not be merely seen as an extension of either Nkomazi or Songimvelo. It is recommended that a community project with its own identity be

¹ Anonymous. 1986. Master plan and management guidelines for the Songimvelo Natural Resources Area. Unpublished report by Chris Mulder Assoc. Inc. to the KaNgwane Government, Louieville.

planned and implemented. Such a project should form part of the road towards achieving World Heritage status rather than being a pre-condition to it.

Two scenarios are possible (Fig. 9). The first one establishes a 'high' corridor that will result in relatively little negative impact on agriculture. It will however also realise few benefits as it does not allow for the movement of significant numbers of visitors nor will it support much game. The second scenario with a 'low' corridor would impact significantly on the current agricultural practices but holds great tourism potential. The 'high' corridor would only cover 4,900 ha, whereas the ideal 'low' corridor would cover 9,200 ha. The corridor would be fenced to the north and the south, but would be open to the west with Nkomazi Wilderness and to the east with Songimvelo thereby allowing the free movement of game and a controlled flow of visitors between these areas.

It is recommended that the tarred Tjakastad road be used to channel visitors to the community project with further access to Songimvelo in the form of guided drives and possible access to development sites inside Songimvelo. Outlets for arts and crafts (including cultural activities) could be situated along this road (Fig. 9). A Tjakastad Geological Interpretation and Visitor Centre could be developed by the private sector and community. Local operators could be trained and assisted to establish themselves to provide guided visits to Spinifex Creek.

The Ebutsini area covers 5,600 ha. Its greatest strategic asset is the fact that it provides the logical and only practical linkage with the Malolotja Nature Reserve in Swaziland. It has thus great potential for transborder hiking and 4x4 trails.

The position of the different entities and relationships between the 3 MPB Game Reserves, Malolotja Nature Reserve in Swaziland, community projects and private initiatives is illustrated in Fig. 10. Adjacent projects do not necessarily need to be within a common fence. The Panhandle section of Songimvelo will for example probably never be functionally linked to the already game-fenced section. There might be trails linking the Panhandle with Mountainlands, but again a common fence is not recommended as costs would be high and the benefits in terms of game movement would be limited.

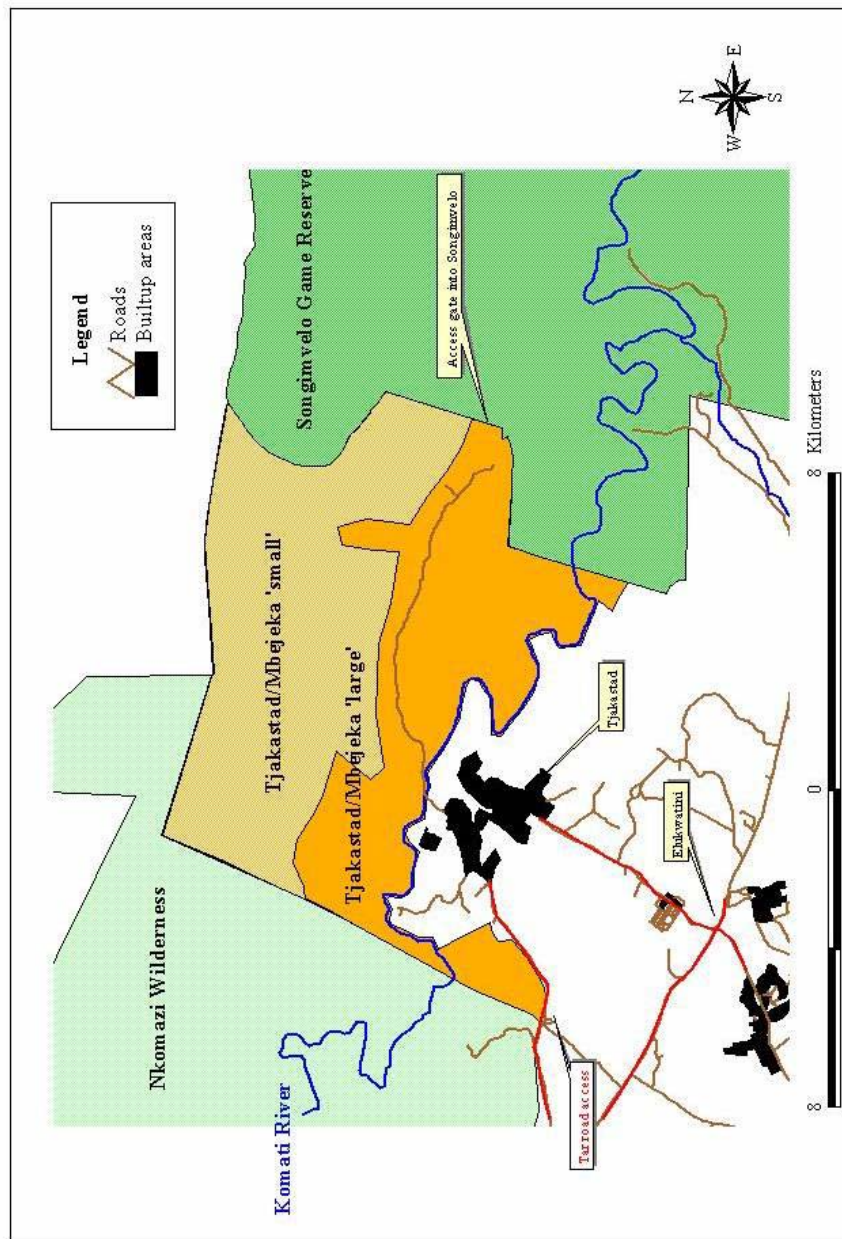


Fig. 9: Tjakastad/Mbejeka Community conservation and tourism development project

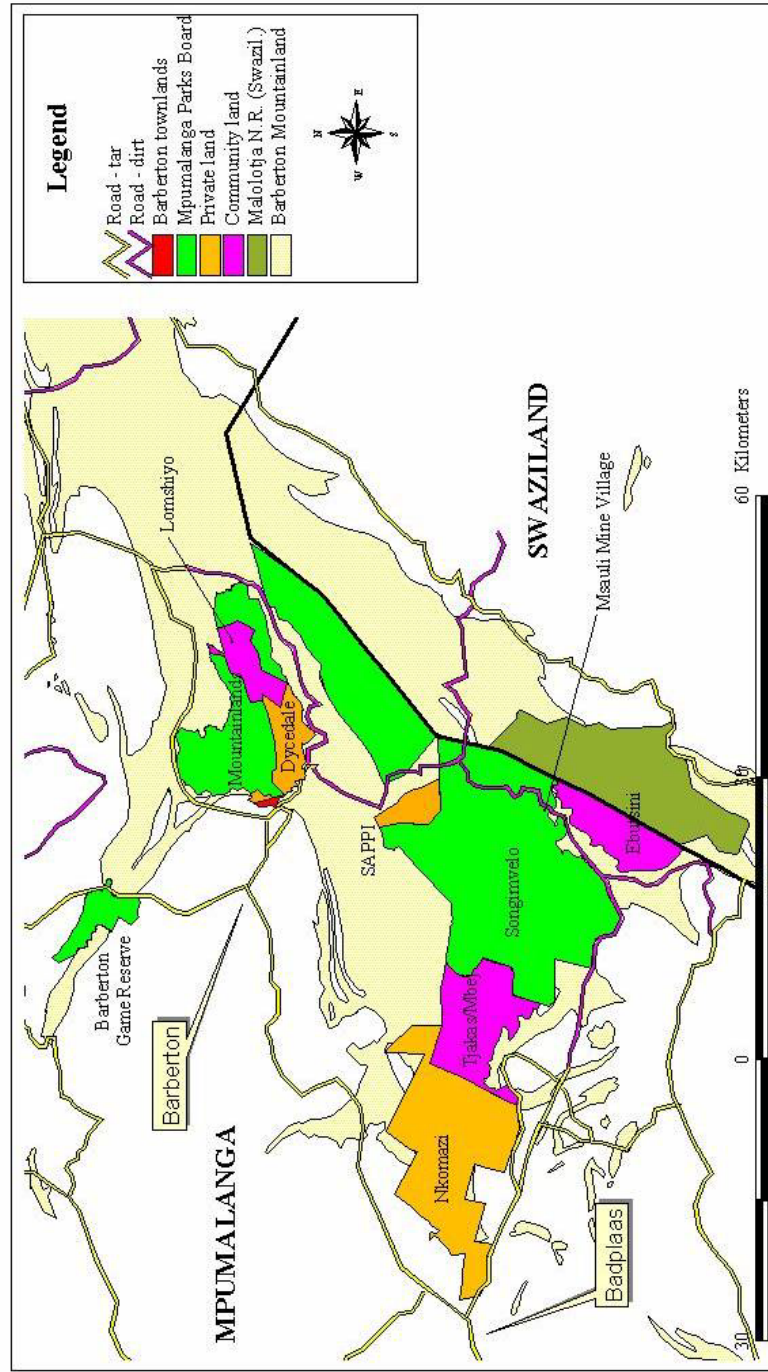


Fig. 10: Relationship of the MPB Protected Areas, Malolotja (Swaziland), community projects and private sector within a TFCA/World Heritage Site project.

64bis

9.2. Road linkages

The individual sections in the Barbeton Mountainland and the individual development sites and activity areas are generally difficult to access particularly with normal 2x4 sedan cars. Furthermore, the attractions are often at the end of a road, rather than being accessible along a circuit.

The following roads (in descending order of importance for the successful development of the Barberton Mountainland) should be improved:

- Saddleback Pass – Bulembu Borderpost; work to ‘block pave’ this road is scheduled to begin early 2003. This will allow much safer and comfortable traversing across the Mountainland into Swaziland. It will also establish the ‘figure of 8’ arterial road system incorporating the 3 borderposts of Oshoek, Bulembu and Jeppe’s Reef;
- Elukwatini-Mooiplaas-Ekulundeni-Msauli Mine; the present dirt road should become an all-weather tar road. This would provide much better access to the Songimvelo main plains (Confluence Lodge and Safari Lodge), to Kromdraai Camp and to the Msauli Mine Village;
- Bulembu Borderpost – Msauli Mine; this would complete the main circuit Barberton - Badplaas –Barberton. This could be ‘block paved’ as it would support the same type of traffic as the Saddleback Pass-Bulembu road;
- Saddleback Pass – Shyalongubo Dam; to be ‘block paved’ in order to unlock the Panhandle area of Songimvelo and the planned developments around Shyalongubo Dam;
- Shyalongubo Dam – Low’s Creek; this would complete a secondary circuit Barberton-Low’s Creek-Barberton which would benefit the Mountainlands Game Reserve and that could significantly improve visitor flows to the community projects of Shyalongubo and of Lomshiyo.

It is strongly recommended that the MPB together with the other stakeholders involved in the area use the Bulembu example to lobby for more ‘poverty relief’ funding for these road improvements.

9.3. Marketing

It is recommended that the MPB teams up with the other stakeholders to achieve maximum positive impact from any marketing done. It will be beyond the individual means of the MPB or any of the other stakeholders to place the Barberton Mountainland on the tourism map. Incorporation into Provincial (MTA) campaigns will be necessary. It will also be beneficial for the MPB to align itself with the Core Marketing Plan for Barberton (see Appendix H).

There are plans afoot to use the old LTK and Panorama buildings along the Barberton-Badplaas road as an information and education centre for the privately-run Nkomazi Wilderness. The MPB should explore the possibility of having its attractions marketed from this venue. Similarly, any community projects (Tjakastad/Mbejeka, Ebutsini, Lomshiyo) should try to benefit from this infrastructure.

It would be generally important for the MPB to link up with the private sector players (Nkomazi Wilderness, Msauli Mine Village, Dycedale, ETC mines) to market its opportunities as the private sector will be the first to attract meaningful numbers of visitors to the Barberton Mountainland.

10. Financial assessment

10.1 Songimvelo Game Reserve

10.1.1. Development and expenditure costs

Apart from regional factors such as distance from tourism markets and the poor access routes of Songimvelo, it's tourism potential is also limited by its rugged topography. It is therefore important that Songimvelo capitalizes on existing and regional initiatives to maximize its tourism potential. It is therefore proposed that linkages are created with neighbouring initiatives such as Msauli Mine Village and Nkomazi Wilderness and that access to the main game plains should be provided for all the major peripheral projects, including Kromdraai Camp.

This will require the development of appropriate infrastructure such as roads and bridges that could facilitate such linkages. To accommodate the game viewing activities contemplated above, it will be necessary to develop a new access road into SGR from Kromdraai Camp. It will also be necessary to build a new bridge across the Komati River near Skaapbrug and another in the centre of the basin, to allow proper access to and vehicular game viewing within the basin.

The main basin is approximately 9,000 ha in extent and is estimated to have 100 km of game viewing tracks. An additional 10 km of road is proposed to allow for a more practical set of game viewing options. The required roads and bridges have been detailed earlier in section 8.1.3.3.

The development costs for Songimvelo are estimated at R 4,655,000 (Table 4). The current operating costs for Songimvelo is R1 254 300 *per annum* plus personnel costs of R2 700 000. The additional costs of maintaining the 51 km of new roads can be estimated at R4 500 per km *per annum*, totalling R229 500.

Table 4: Estimated development costs for the Songimvelo Game Reserve (MPB input)

Item	Qty	Unit	Unit Cost (R)	Estimated Cost
Access road to Kromdraai Valley	6,5	km	80 000	520 000
Kromdraai valley game viewing tracks	13	km	30 000	390 000
Bridge to Kromdraai Camp	1		1 000 000	1 000 000
Road from Kromdraai Camp into basin	5	km	45 000	225 000
Additional roads in basin	10	km	30 000	300 000
Low-water bridge in basin	1		750 000	750 000
Repairs to Dunbar access track for 4x4's	4,5	km	10 000	450 000
New roads and reclaiming old roads in Dunbar	18	km	15 000	270 000
New access gate at Tjakastad	1		500 000	500 000
Demolish Komati River Lodge & rehabilitate			250 000	250 000
TOTAL				R 4 655 000

10.1.2. Income

Income from tourism products is based upon the projected demand and tariffs as follows (see also Table 5):

- Songimvelo Basin: The 2 sites proposed for development (Confluence and Safari lodge site) will be developed by the private sector and can expect to cost in the region of R15 million (R150 000 per bed). At an average rate of R300 per person and a bed occupancy of 40% for the 100 beds, a gross income of R4,4 million can be expected. At an initial concession fee of 5% on turnover, a net benefit of R220 000 can be expected by the year 2007. This should be able to grow to a gross income of approximately R8.5 million and a concession fee of R683 200 by 2010 (in current terms) if it is assumed that occupancies would have grown to 65%, tariffs would have increased by a real 20% and the concession fee would have increased to 8%. No development costs need to be incurred by the MPB, provided the roads and bridges recommended above are in place.
- Kromdraai Camp: this facility has an inherent value of at least R5 million. The proposed upgrading should be done by the private sector and can be expected to cost at least another R5 million. Based on the expected revenues of R1,4 million and a concession fee of 5% in the first year, an income of R70 000 can be generated for MPB in year one. This could grow to R233 333 in 2010 at an occupancy rate of 50% and a lease fee of 10% on turnover. Entrance fees could add another R109 500 to income in 2003 and R182 500 in 2010. Total income for year one is therefore estimated at R179 500 and R415 833 by 2010.
- Msauli Mine Village development: traversing rights for conducted game drives into Songimvelo could achieve an income of R100 000 by year 2010 at an assumed 5 000 guests (50% of all estimated overnight guests) and an average entrance fee of R20 per guest.
- Dunbar Valley: The eight units at Dunbar valley will be developed by the private sector, possibly at a cost of R2 million. At an average rate of R350 per unit per night, Dunbar should generate annual revenues of around R330 000 in 2003 growing to R511 000 in 2010. AT a 5% concession fee in year 1 and a 10% concession fee in 2010, the estimated income to Songimvelo in current terms is R16 500 for year one and R51 100 in 2010. Income from entrance fees are estimated at R17 520 in year one growing to R29 200 in 2010.
- Panhandle: At an estimated 600 visitors per annum participating in adventure activities the potential exists to generate annual revenues of ± R50 000, providing a return of R5 000 per annum to MPB at a concession fee of 5%. The private sector is unlikely to spend more than R250 00 in capital costs.
- Shiyalongubo Dam: Although this facility is expected to generate up to R175 000 per year, this income should all be channelled to the community. Capital costs are estimated to be in the order of R1,0 million.

10.2. Mountainlands Game Reserve

The main tourism products will be developed at Dycedale, Lomshiyo, and the Townlands. As in the case of private sector involvement at Songimvelo, these should

be supported by the MPB. An equitable dispensation for traversing rights and sharing of direct returns and other benefits between the different landowners need to be developed. Until such time, no provision is made for any costs or income being incurred by the MPB.

10.3. Barberton Game Reserve

Hiking trails and a 'novice 4x4' route are the only immediate recommendations for Barberton Reserve, but should only be developed once visitor numbers justify further investments. No capital costs or income are therefore projected. The one or two bushcamps will not be big money spinners given the limited total number of guests that can be accommodated. The educational facility likewise is not expected to generate significant financial benefits.

10.4. Project facilitation costs

To facilitate the process of implementing the development proposals, it is believed that the following costs will have to be incurred:

- Further detail planning costs for road & bridge infrastructure R 800 000
- Process of procuring proposals from private sector R 750 000
- Project management of RFP process R 1 000 000

These facilitation costs of some R2,55 million over the next two years (2003 – 2004) can however be justified considering the projected investment and financial returns.

10.5. Summary for Barberton Complex

The overall development costs and benefits will result in additional net operating income in excess of R 1,000,000 annually (Table 5 and 6). Of much greater value are the projected benefits (other than direct revenue) from MPB projects on the region:

- Jobs created during construction period of two years 200
- Permanent direct jobs created after construction period 200
- Permanent indirect jobs created in the region 150
- Stimulation of local economy (1,8 multiplier effect on revenues of R125m) R225 m pa

At a capital investment cost of R7,205 million by the MPB (R4,655m on upgrades and R2,550m for initialising costs), the MPB would have created a direct return of R1,025 million by year three after construction, equalling a net return on investment of 14% and a saving of 10,4% on annual operating costs. A local injection into the economy of some R225 million per annum as well as 210 short-term and 350 long-term job opportunities would also have been created.

More important however is the fact that the MPB would have developed a core for the greater Mountainlands tourism industry which one expects would be able to generate at least three times the benefits of the limited properties of the MPB, if one considers

the number of beds developed by the known new initiatives in the adjoining areas of Nkomazi, Msoli and Dycedale. The ultimate benefits to the region could therefore be:

- 600 jobs during construction period
- 600 permanent jobs
- 450 permanent indirect jobs
- Stimulation of an economy of some R657 million per annum

Based on the merits of the very positive results reflected above, it is proposed that the DBSA, the IDC, the PPP Unit and/or some other financial institution is approached for the funding of the proposed technical studies, the upgrading of the infrastructure and the facilitation of an investors procurement process.

Table 5: Summary of the development costs and expected returns from the proposed (by 2007 and 2010)

Type of Development	Type of Income	Investment Cost	Investment MPB	Revenues MPB (2007)	Revenues MPB (2010)
Nkomazi/Tjakastad	None	NA	0	0	0
Msoli	Entrance fee	NA	0	0	100 000
Songimvelo basin	Concession	15 000 000	0	220 000	683 200
Kromdraai	Conc + Entr fee	5 000 000	0	179 500	415 833
Dunbar valley	Concession	2 000 000	0	0	51 100
Panhandle	Concession	250 000	0	0	5 000
Shiyalongubo Dam	None	1 000 000	0	0	0
Songimvelo	See above		4 655 000	399 500	1 255 133
Mountainlands GR	None	0	0	0	0
Barberton GR	None	0	0	0	0
Facilitation Costs			2 550 000		
TOTALS		23 250 000	7 205 000	399 500	1 255 133
Additional costs					229 500
Additional Net Operating Income					R 1 025 633

Table 6: Comparison of the net financial results for the MPB prior to development with that after development:

	Songimvelo	Barberton Mountainlands	Barberton GR	Total
Income				
Expenses	3 954 300	3 954 300	1 950 000	9 858 600
Net Operating Costs	3 954 300	3 954 300	1 950 000	9 858 600
Additional Income	1 255 133	0	0	1 255 133
Additional Expenses	229 500	0	0	229 500
Net Improvement (R)	1 025 633	0	0	1 025 633
Net Improvement (%)	26%	0%	0%	10,4%
New Net Operating Costs	2 928 667	3 954 300	1 950 000	8 832 967

11. Implementation and phasing

11.1. General

A general error made in the development of nature and game reserves is an over-estimation of the value of the tourism product, and an under-estimation of the time required to procure sustainable investment¹.

The reality for the Barberton Complex is that, at the moment, there is little conventional tourism product that will convince any major investor to spend money on developing tourist accommodation in or close to the park.

The fact that no bids were received in the recent past for some of the KNP concessions is a good example of how selective and specific the investor market is. This situation will definitely change as the development of the park progresses.

The question is what can be done during the interim period? This could be either a down time that will be used to develop the Reserves whilst accepting that tourism development will only happen in the future, or the situation could be turned into an opportunity.

The Barberton Complex does have a certain visitor appeal at this moment in time, but not necessarily for the conventional game viewing tourist. There is going to be a window period of maybe two to three years, in which the adventure and novelty aspect of an undeveloped wilderness will appeal to a specific sector. This opportunity could be put to the adventure and smaller operator markets and see if they would like to capitalize on this opportunity. This could create visible tourism to the area and create the awareness that is required to get the bigger operators interested at a later stage.

Generally, in the beginning, emphasis should be place on those projects that are not capital intensive and that do not require a long and complicated procurement process. Care should however be taken that any short-term action does not jeopardize the larger, long-term potential of the Reserves. Examples are implementing some form of self-drive through the Songimvelo basin. A framework for this activity has been worked out in the past by the MPB staff. It could be easily implemented. One would need to be careful that marketing time and money on such an interim arrangement is not wasted when such an activity has to be discontinued.

It is strongly recommended that the MPB identifies a champion to drive the strategic view on the Barberton Complex and the whole Barberton Mountainland. This individual should be assigned fulltime to this responsibility. The costs involved are absolutely minor compared to the benefit that can be achieved directly to the MPB and indirectly to the region.

¹ Mr P Fernhead, SanParks. Personal communication to Project Implementation Unit, Limpopo National Park, Mocambique, 2002.

11.2. Proposed process

The following process is proposed:

- Obtain approval for the recommendations contained in this document;
- Procure the necessary funding to implement the proposals;
- Appoint experts to conduct the detail development studies;
- Appoint a project manager to facilitate the process of procuring and adjudicating proposals from developers and operators;
- Supervise implementation of the process

It should be possible to obtain the necessary approvals for this programme on the strength of this comprehensive study. It is assumed that the necessary appointments referred to above can be made shortly and that these studies could be completed by the end of 2003.

11.3. Procurement of capital and investors

Capital should be procured from appropriate financial institutions, based on the viability of this study, for the implementation of these proposals. Apart from funding the entrance gate, road and bridge infrastructure at Songimvelo, the MPB should not fund any commercial developments. The private sector should be contracted through a transparent procurement process to submit proposals for all the development and operating opportunities on a Build (or renovate) Operate and Transfer (BOT) basis. The process should be done in accordance with the guidelines of the national Treasury Department's Public Private Partnership (PPP) unit.

The typical PPP process comprises the following steps:

- Decision to Explore Entering into a PPP Project This process includes the decision to go ahead with the project. This report obviously will inform such a decision. This step also includes final decisions on the phasing and prioritisation of individual sub-projects within the overall project and ensuring that they are included in the budget process.
- Defining the Selected Project It is also necessary to define the selected project, to undertake an options analysis and select the type of PPP (already included in this report).
- Assign a Project Team Once a decision is made on the selected project, a project team needs to be assigned. This team needs to include internal and external advisors. A transaction advisor with the necessary experience and capacity needs to be appointed.
- Feasibility Study A Feasibility Study needs to be prepared which demonstrates affordability and an initial indication of how value-for-money will be achieved through appropriate risk transfer. Most of the information for the Feasibility Study is already contained in this report but may have to be broken down into more detail. The outputs from this phase

needs National Treasury authorisation before the process can be taken any further.

- RFQ Document A Request for Pre-Qualification (RFQ) document with clear qualification criteria has to be prepared and distributed to potential tenderers via a fair and transparent process. Responses have to be evaluated by a qualified panel.
- RFP Document A Request for Proposal (RFP) document and a draft contract needs to be prepared for each sub-project or group of sub-projects. This document has to give clear information on the available project/s, the conditions of tendering, guidelines on the tendering process and the tendering programme that will be followed.
- The National Treasury needs to authorise the RFP documents and draft contracts before they are distributed and they will also oversee the process of distributing the documents, the conduct of the value-for-money test and the subsequent selection of a preferred bidder.
- Tendering Process The RFP documents should be distributed to all qualifying bidders. The evaluation panel needs to evaluate and compare the proposals for “value-for-money” and select a preferred bidder.
- Negotiation and Signing of Contract The final contract needs to be negotiated and signed with the selected private sector party. Before the contract can be signed, National treasury has to approve the budgetary commitments made within the contract.
- Transfer of Responsibility The responsibility for the operation of the project and/or the construction should be transferred to the private sector party.
- Monitor and Control Provision must always be made to monitor and control the project and the implementation of the contract on an ongoing basis.
- Termination It is important that provision is also made for the termination, unwinding and evaluation of the contract at the end of the contract period.

Provided the detail studies are completed during 2003 and the procurement process is initiated shortly, tenders can be awarded by late 2005.

11.4. Construction and implementation

With tenders being awarded by late 2005, construction can start early in 2006 with most facilities opened and operational by the beginning of 2007 (Table 7).

Table 7: Summary of timetable

Activity	2003	2004	2005	2006	2007
Approvals					
Procure funding - facilitation					
Upgrade infrastructure					
Procure proposals					
Award tenders / agreements					
Construction					
New operations start					

11.5. Ensuring broader participation in tourism

As stated earlier it is obvious that there is still little participation (in particular from an investment and entrepreneurial perspective) by previously disadvantaged communities and individuals in the business of tourism. On the other hand, the workshops demonstrated a great local interest in getting involved in this business.

This aspect can be addressed at several levels including the reviving of the Community Forums for the Reserves, intensive training and capacity building programmes, including certain clauses in the procurement process, providing mechanisms for community equity etc.

12. Conclusion

In conclusion, the Barberton Complex faces some meaningful constraints and obstacles to its development. These are however not insurmountable. The most important action for the MPB is to adopt a strategic approach that results in recognition of the whole Barberton Mountainland as an area of outstanding conservation and tourism value. Ideally, this recognition should culminate in achieving World Heritage Site status. Within a World Heritage Site, the individual development opportunities identified for the three MPB reserves will become much more viable and would result in increased financial benefits.

Successful development of the Reserves of the Barberton Complex will play a very important socio-economic role within and outside its boundaries. The provision of infrastructure and the facilitation of cross-border movement of visitors within the Songimvelo-Malolotja Transfrontier Conservation Area are very important. The private sector can play an important role as catalysts by attracting visitors through their ownership-based developments. Much opportunities exist for exciting community-owned projects within the World Heritage Site, in particular for the Tjakastad-Mbejeka area.