6 CHAPTER 6: VISION ................................................................. 162
   6.1 Mbombela IDP Vision ................................................... 162
   6.2 Spatial Principles ....................................................... 164
   6.3 Marco spatial priorities ............................................... 165
       6.3.1 Spatial reconstruction and integration ..................... 165
       6.3.2 Focus investment ................................................. 165
       6.3.3 Management of natural resources ............................ 165
       6.3.4 Spatial planning needs to ensure: .............................. 165
       6.3.5 Development of human resources ............................ 165
       6.3.6 Affordability ..................................................... 165
       6.3.7 Rural development .............................................. 165
       6.3.8 Land reform .................................................... 166
       6.3.9 Enhancing regional accessibility ............................ 166
   6.4 Micro spatial principles ............................................. 166
       6.4.1 Walking distance as the primary measure of access ..... 166
       6.4.2 Integration of urban activities ............................... 166
       6.4.3 Socio-economic integration ................................ 167
       6.4.4 Densification and the urban edge .......................... 167

7 CHAPTER 7: SPATIAL DEVELOPMENT FRAMEWORK .......... 169
   7.1 Structuring elements .................................................. 171
   7.2 Conceptual Framework ................................................ 178
   7.3 Mbombela Strategic Spatial Framework ......................... 179
       7.3.1 Strategy 1: Establish a Municipal Open Space System  (MOSS) 181
       7.3.2 Strategy 2: Protect prime and unique agricultural land 184
       7.3.3 Strategy 3: Focus areas for land reform .................... 187
       7.3.4 Strategy 4: Develop and strengthen rural-based tourism 190
       7.3.5 Strategy 5: Establish an integrated movement system ... 193
       7.3.6 Strategy 6: Direct urban growth and promote compact integrated development ........................................ 201
       7.3.7 Strategy 7: Consolidate and intensify development in economic opportunity zones .................................. 203
   7.4 Mbombela Desired Spatial Pattern ............................... 206
       7.4.1 Zone 1 - Urban Development Zone ........................... 208
       7.4.2 Zone 2 - Kruger National Park Conservation Zone ....... 210
       7.4.3 Zone 3 - Kiepersol-White River Agricultural Zone ....... 212
       7.4.4 Zone 4 - Western Agricultural Zone .......................... 214
       7.4.5 Zone 5 - Central Agricultural Zone .......................... 216

8 CHAPTER 8: SPATIAL FRAMEWORK PROPOSALS ................. 218
   8.1 Introduction .............................................................. 218
   8.2 Traditional Authority Frameworks ................................ 221
       8.2.1 Nkambeni Traditional Authority ............................... 221
       8.2.2 Kgarudi Traditional Authority ................................. 226
       8.2.3 Gutshwa Traditional Authority ................................. 230
       8.2.4 Msogwaba Traditional Authority ............................... 234
       8.2.5 Mbuyane Traditional Authority ................................. 238
       8.2.6 Masoyi Traditional Authority ................................. 242
       8.2.7 Mduli Traditional Authority ..................................... 246
       8.2.8 Mpakeni Traditional Authority ................................. 250
   8.3 Urban Frameworks ..................................................... 254
       8.3.1 Nelspruit (±84 000 people in 2010) ........................... 254
       8.3.2 White River (±33 000 people in 2010) ......................... 261
       8.3.3 Hazyview (2000 people in 2010) ............................... 266
       8.3.4 Kanyamazane (±72 000 people in 2010) ...................... 271
       8.3.5 Matsulu (±60 000 people in 2010) ............................. 275
       8.3.6 Kabokweni (22 171 people in 2010) .......................... 280
8.3.7 Swalala (±14 079 people in 2010) ........................................ 285
8.3.8 Rocky Drift ............................................................ 289
8.3.9 Karino ................................................................. 293
8.3.10 Kruger Mpumalanga International Airport (KMIA) ......... 297
8.3.11 Plaston ................................................................. 301
8.4 Rural Frameworks ...................................................... 305
8.4.1 Elandshoek ............................................................. 305
8.4.2 Kaapsehoop (private town) .......................................... 309
8.4.3 Ngodwana (private town) .......................................... 312
8.4.4 Longmere .............................................................. 316
8.4.5 Cairn/Burnside ....................................................... 319
8.4.6 Alkmaar ................................................................. 323

9 CHAPTER 9: IMPLEMENTATION PLAN ................................ 325
9.1 Introduction .................................................................. 325
9.2 Capital Expenditure Framework ...................................... 326
9.3 Implementation policies and guidelines ......................... 327
  9.3.1 Urban edge policy .................................................. 327
  9.3.2 Residential densification policy ................................ 328
  9.3.3 Infrastructure policy ................................................ 332
  9.3.4 Subsidised housing policy ....................................... 335
  9.3.5 Sustainability policy ................................................ 337
  9.3.6 Demarcation of sites in Traditional Authority Areas ...... 341
  9.3.7 Incentives Policy ..................................................... 342
9.4 Land Use Management System Guidelines ..................... 344
  9.4.1 Residential ........................................................... 344
  9.4.2 Rural residential ..................................................... 346
  9.4.3 Agriculture ........................................................... 347
  9.4.4 Holiday accommodation ......................................... 348
9.5 Sector plan alignment .................................................. 361
9.6 Monitoring and evaluation framework ............................ 362
6 CHAPTER 6: VISION

The purpose of this chapter is to identify the long term spatial vision (20+ years) for Mbombela Local Municipality, which will ultimately be the platform from which the desired spatial pattern will be developed.

The SDF gives spatial effect to the Integrated Development Plan (IDP) and therefore imperative to know what the IDP wishes to achieve in terms of its vision. The IDP vision and key focus areas following from the vision are briefly discussed below.

6.1 Mbombela IDP Vision

According to the reviewed IDP 2010/2011 the vision adopted for Mbombela Local Municipality is:

“Together in partnership, building a model African City of Excellence”.

The mission statement of the municipality is:

“A vision-inspired, high performing and learning municipality that excels in development facilitation and sustainable service delivery through Batho Pele and sound corporate governance principles”.

In order to achieve its vision, the municipality has adopted the following key Strategic Focus Areas:

To initiate a strong and sustainable local or regional economic development and sustainable environmental management.

Corporate Goal:

- Creating an enabling environment that attracts economic growth and become regional competitive;
- To develop and encourage rural development opportunities and activities;
- To develop the physical infrastructure and establish an urban planning strategy for improved municipal planning and development;
- Grow and Develop Mbombela Tourism Capability;
- Promote SMME development and Business Support;
- Transform the municipality to be responsive to business customer needs;
- 2010 FIFA Soccer World Cup as a catalyst for economic and infrastructure development; and
- Sustaining the natural environment.

To strengthen the delivery of basic services and ensure sustained integrated human settlement supported by infrastructure development.

Corporate Goal:

- Provide universal access to basic services;
- Development, regulate and manage built environment;
- Improve public infrastructure maintenance; and
- Improve public transport system.

To formulate broad over-arching human capital and community development.

Corporate Goal:

- Develop the built and human infrastructure capability needed for
business growth;
- Delivery of sustainable community facilities;
- Healthy, safe and secure communities;
- Ensure the safety of citizens; and
- Promoting sports and recreation programmes.

To build strong sustainable governance and institutional structures and arrangements.

Corporate Goal:
- Developing and improving management business processes and systems;
- Improve level of public confidence in the municipality; and
- Provide interface and improve public confidence in Council and Councillors.

To ensure sound and legally financial management and viability.

Corporate Goal:
- Achieve good financial governance.

To redefine strategic macro leadership and coordination structures involving the local, district, provincial and national government.

Corporate Goal:
- Strategic macro leadership development.

Underlying the strategic focus areas, Mbombela has identified seven Key Flagship Programmes that will guide Mbombela and its growth for the next 20 years, as follows:

1. Initiating the Matsafeni/N1 Gateway and Mbombela Golden Triangle Corridor Development.
2. Facilitating the creation of a smart, innovative and learning city lab as well as information and knowledge management repository.
3. Ensuring a sustainable, integrated infrastructure development and basic services provision.
4. Creating a vibrant, safe, clean, healthy and friendly city environment.
5. Re-profiling and repositioning Mbombela and creating a sense of city identity through the successful hosting of a Truly African World Cup which will leave a meaningful legacy in Mbombela, the Mpumalanga Province and the broader region.
6. Deepening democracy, promoting good governance, Batho Pele principles, building and strengthening partnership and social cohesion.
7. Advancing an over-arching human development and community development & the creation of sustainable livelihoods.

Key aspects that transpire from the IDP Vision and Strategic Focus and important therefore to achieve in space, are:

- Sustainable local and regional economic development
- Sustainable environmental management
- Strengthen the delivery of basic services
- Sustainable integrated human settlement supported by infrastructure development.
- Promote human capital and community development.
- Mbombela Spatial Vision

Mbombela seeks to ensure sustainable development of its entire area of jurisdiction where people, the economy and the environment can thrive.

A municipality that:
• Develops sustainable human settlements where residents can lead enriched, healthy and convenient lives.
• Develops its inherent economic opportunities to the benefit of its people.
• Eradicates the dysfunctional spatial structure that was created by past spatial policies.
• Protects and utilises its rich and diverse natural and cultural heritage for the enjoyment of all.

6.2 Spatial Principles

Towards the realisation of its vision, Mbombela adopts the principles set out in the Development Facilitation Act, including:

The principle of efficiency means that the desired result should be achieved with the minimum consumption of resources. The principle includes the following norms:

- Spatial planning should promote the development of compact human settlements and low density urban sprawl should be combated
- The areas where people live and work should be close to each other
- Spatial planning of contiguous municipalities and provinces should relate positively to each other.

The principle of sustainability means the sustainable management and use of the resources making up the natural and built environment and includes the following norms:

Land may be used or developed only in accordance with the law;
- The general interest as reflected in national, provincial and local policies should enjoy preference over private interests in spatial planning, land use management and land development processes and decisions;
- Disaster management, including prevention and mitigation, should be an integral part of spatial planning;

- The protection of natural, environmental and cultural resources should be a primary aim in all spatial planning; and
- Land used for agricultural purposes may only be reallocated to another use where real need exists, and prime agricultural land should as far as possible remain available for production.

The principle of equality means that everyone affected by spatial planning should enjoy equal protection and benefits and that no one should be subjected to unfair discrimination and includes the following norms:

- Public involvement in spatial planning should be inclusive of all persons and communities with an interest in the matter being decided;
- Planning authorities and land use regulators should ensure that previously disadvantaged communities and areas share in the benefits and opportunities flowing from land development; and
- Land use management decisions should be determined taking into account its impact on society as a whole rather than only the narrow interest of that affected.

The principle of integration means that separate and diverse elements involved in spatial planning should be combined and co-ordinated into a more complex or harmonious whole.

The principle includes the following norms: spatial planning should:

- Be co-ordinated and aligned with the policies of other organs of state in any sphere of government;
- Promote efficient, functional and integrated settlements;
- Be guided by the availability of appropriate services and infrastructure, including transportation infrastructure;
- Promote racial integration; and
- Promote mixed land use development.

The principle of fair and good governance means that spatial planning should be democratic, participatory and legitimate in nature, and includes the following norms:
Spatial planning must be lawful, reasonable and procedurally fair;
Everyone whose rights are adversely affected by spatial planning has the right to be given reasons;
Capacities of affected communities should be enhanced to enable them to comprehend and participate meaningfully in spatial planning affecting them; and
Spatial planning decisions should be taken within pre-determined time frames.

6.3 Marco spatial priorities

Development priorities for Mbombela are based on the principles set out in the Mpumalanga Provincial Spatial Development Framework and the Ehlanzeni District Spatial Development Framework.

The development priorities below will guide investment and development spending in the municipality.

6.3.1 Spatial reconstruction and integration

The aim is to eradicate the dysfunctional spatial system that was created by past spatial policies where areas of severe poverty, limited economic opportunities, inferior forms of land tenure and limited social and engineering infrastructure, were far removed from employment opportunities and economic growth areas.

6.3.2 Focus investment

Investment must focus on localities of economic growth or economic potential to attract private sector investment, to stimulate sustainable economic activities and to create long term employment opportunities.

In localities of low economic development potential, investment should focus on human capital development and must be directed to projects and programmes to address poverty.

6.3.3 Management of natural resources

One approach to integrate urban areas is to deliberately protect ecologically sensitive natural open space spaces. By protecting such areas, urban areas are prohibited to sprawl freely and are therefore forced into denser urban agglomerations. Such an approach not only protects agriculture and the environment, but also has added benefit of creating a more rational, cost-effective and manageable urban structure.

6.3.4 Spatial planning needs to ensure:

A balance is reached between the use of resources for infrastructure development and operation and the carrying capacity of ecosystems. That more detailed planning and management takes place where areas have high priority for development and high environmental sensitivity.

6.3.5 Development of human resources

Investment to develop areas of low economic and livelihood potential need to focus not only on basic services but focus on the development of people through skills development and access to knowledge of opportunities. This will facilitate choice and ability to move to areas of greater potential.

6.3.6 Affordability

Mbombela will have to accommodate a greater number of affordable housing units in order to align itself with the aims of the national housing policy. Differentiated need in terms of income levels must be considered in relation to different investment products.

6.3.7 Rural development

Rural development includes issues such as:
• The provision of off-grid services to rural settlements that do not have access to service networks.
• The establishment of periodic markets combined with community services.
• The identification of viable land reform opportunities.

6.3.8 Land reform

Land reform, which includes the restitution, redistribution and tenure reform, plays a major role in providing sustainable socio-economic development of the disadvantaged communities. Land claims and lack of ownership poses a significant challenge to land use management and development in Mbombela.

Tenure reform must set in place viable institutions and tenure forms which address and resolve the current problems of insecurity, inequality, lawlessness and uncertainty regarding land ownership which discourages public and private investment.

6.3.9 Enhancing regional accessibility

Improved regional access via road, rail and air transportation is important

• to unlock the tourism potential,
• to ensure functional urban and rural integration and
• to enhance inter and intra municipal accessibility.

Not all municipalities or regions in Mpumalanga will have the capacity or potential to develop as a significant exporter of products and services. The challenge of these areas is to develop a strong link to a region that does have in effect a strong export driven economy, thereby creating a “niche role” in the broader regional economic system.

6.4 Micro spatial principles

The following spatial principles are proposed to guide the SDF proposals for the settlements within the municipality (micro level). These principles stems from the principles contained in the Development Facilitation Act.

6.4.1 Walking distance as the primary measure of access

International and local studies have shown that a 20 minute walk is about the maximum that people can travel conveniently before there is a need for motorised, public or private transport. An average walking distance of 20 minutes is approximately 1000m.

So, for the purposes of this SDF access, i.e. whether activities are acceptably near or far from one another, will be measured in terms of convenient walking distance.

Fig_: Convenient walking distance

6.4.2 Integration of urban activities

At least 50% of those activities found within urban areas should be within walking distance of where people live. At present distances are often large, particularly for people living in marginalised areas and public transport generally only serves residential to employment trips and not all other activities in which communities engage.

Fig_: Integration of urban activities
6.4.3 Socio-economic integration

Settlements should ideally have many neighbourhoods, which offer different types of housing for different income groups to facilitate social-economic integration between different groups (inclusionary housing).

The complete socio-economic cross-section of a community should be sensitively located within easy access (walking distance) from an urban centre. Socio-economic integration still needs to be informed by current realities facing South African socio-economic conditions.

Therefore, there is a need to acknowledge a further principle in this regard. This principle recognises that communities with very large gaps in levels of living abutting one another can create considerable resistance and objections.

The principle of socio-economic gradient recognises that where there is a relatively small difference in levels of living and property prices between different communities it is generally possible to achieve a high level of integration.

If carefully done, this can result in high levels of urban efficiency and access particularly for the urban poor.

Figure_: Socio-economic integration

6.4.4 Densification and the urban edge

Achieving a settlement pattern that is largely based on walking distance and socio-economic and functional integration requires an adjustment to the land use patterns within urban settlements. This is because the population density of most settlements is too low for viable thresholds to provide sufficient support to public transport services, small businesses and community facilities, and the creation of a “vibe” that make settlements attractive, convenient and pleasant places to live in. Mechanisms to address these challenges are:

6.4.4.1 Densification

Densification should take into account environmental factors such as biodiversity and the water quality and quantity, public open space requirements and areas for economic activity. Densification within existing residential areas should take place without compromising the quality of living principle.
Research indicated that urban settlements begin to achieve acceptable levels of performance at an **average density** of 25u/hectare. It may be that lower densities occur on the urban periphery and much higher densities in the urban core areas.

Low income housing projects should be developed at high densities closer to the urban core, which is more accessible, instead of on the urban fringe where they are generally being located at present.

### Table: Densification opportunities

<table>
<thead>
<tr>
<th>Densify along major routes</th>
<th>Major routes provide more potential for maximising urban opportunities. Ideally this principle should not be applied along freeways or national routes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Densify vacant and under-utilised land</td>
<td>Poorly designed and unsafe open spaces offer potential for densification</td>
</tr>
<tr>
<td>Avoid town cramming</td>
<td>Densify in accordance with a overall framework and not any piece of open space</td>
</tr>
<tr>
<td>Preserve well located open spaces</td>
<td>Higher residential densities warrant access to strategically open space areas</td>
</tr>
</tbody>
</table>

### 6.4.4.2 The urban edge

An important device to assist with the integration of an urban settlement’s land use and to increase densities is the urban edge. An urban edge can assist to encourage inward growth of a settlement in order to achieve sustainable internal densities. An urban edge also plays an important role in protecting important agricultural, scenic and biodiversity land resources in its immediate hinterland.

![Densification and the urban edge](image)
The Spatial Development Framework (SDF) identifies how the spatial form of Mbombela should be shaped to achieve its vision and to give effect to spatial planning principles and priorities underpinned by the different tiers of government as discussed in the preceding chapters.

The SDF for Mbombela consists of a series of plans that vary in the level of detail as indicated below and in Table _: Series of plans constituting the SDF.

1. Level 1: Spatial development proposals for the entire municipal area i.e. the Mbombela Strategic Spatial Framework and Mbombela Desired Spatial Pattern – Chapter 7,

2. Level 2: Spatial development proposals for the traditional authority areas i.e. Traditional Authority Strategic Frameworks for the 9 Traditional Authority Areas – Chapter 8,

3. Level 3: Spatial development proposals made for identified urban and rural nodes i.e. Urban and Rural Strategic Frameworks – Chapter 8.

4. Level 4: Detailed spatial development proposals for identified areas/nodes i.e. Precinct Plans – currently does not part of the SDF.

This chapter:

- Reiterates the Structuring Elements that inform the desired spatial pattern for Mbombela,
- Identifies a Conceptual Framework to showcase basic planning principles to achieve a more rational, cost effective and manageable spatial structure,
- Identifies 7 key spatial strategies for Mbombela, culminating into the Mbombela Strategic Spatial Framework,
- Identifies 5 functional zones that distinguish between urban and rural development, culminating into the Desired Spatial Pattern for Mbombela,
### Table: Series of plans constituting the SDF

<table>
<thead>
<tr>
<th>No</th>
<th>Type of plan</th>
<th>Applicable Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strategic Spatial Framework</td>
<td>Mbombela Locality Municipality (Municipal area of jurisdiction)</td>
</tr>
<tr>
<td>1</td>
<td>Desired Spatial Pattern</td>
<td>Mbombela Locality Municipality (Municipal area of jurisdiction)</td>
</tr>
</tbody>
</table>

#### Traditional Authority Areas

<table>
<thead>
<tr>
<th>No</th>
<th>Traditional Authority Spatial Frameworks</th>
<th>Other Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Lomshiyo, Mpakeni, Msiyane, Msogwaba, Nhambeni, Kgandiso, Melotlou, Usuthwa</td>
<td></td>
</tr>
</tbody>
</table>

#### Urban & Rural Spatial Frameworks

<table>
<thead>
<tr>
<th>No</th>
<th>Regional Activity Node</th>
<th>Other Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1st Order Activity Node</td>
<td>White River, Hazyview, Kanyamazane</td>
</tr>
<tr>
<td>3</td>
<td>2nd Order Activity Node</td>
<td>Matsulu, Kabokweni, Swalala</td>
</tr>
<tr>
<td></td>
<td>Specialty Node</td>
<td>KMIA, Rocky Drift, Karis, Plaston</td>
</tr>
<tr>
<td></td>
<td>Rural Service Centre</td>
<td>Elandsheek, Ngodwana, Kaapsehoop, Longmere, Alkmaar/Caim</td>
</tr>
</tbody>
</table>

#### Precinct Plans
7.1 Structuring elements

Structuring elements, to a large extent, dictate the location of development and direction of growth in a municipality. Structuring elements that influence the spatial form of Mbombela are grouped into two categories, namely:

- Physical elements which relate to the natural and built environments of Mbombela (See Plan: Physical elements).
- External drivers/initiatives which relate to planning initiatives, policies or proposals initiated by different government departments impacting on the municipal area (See Plan: External drivers).

Table: indicates the main physical structuring elements, its location and its implication for development and Table: identifies the main planning policies and the proposals that impact on Mbombela Local Municipality.
Table: Structuring elements: Physical elements *(See Plan_)*

<table>
<thead>
<tr>
<th>Physical elements</th>
<th>Specific character</th>
<th>Location</th>
<th>Implications for development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dolomite rocks</td>
<td>The western escarpment, stretching from the Sudwala caves in the north to Ngodwana in the south, including Kaapsehoop</td>
<td>Special mitigation measures are required if development is considered along this belt.</td>
<td></td>
</tr>
<tr>
<td>Mountainous areas</td>
<td>The larger part of Mbombela has slopes greater than 20%</td>
<td>Slopes greater than 20% are too steep for conventional housing, engineering services are expensive and steep slopes present a high risk for soil erosion</td>
<td></td>
</tr>
<tr>
<td>Water bodies</td>
<td>Dams and rivers</td>
<td>Risk of flooding, rivers are associated with environmentally sensitive habitats that need to be protected, act as physical barriers separating settlements, water is an important source for human settlement, agricultural development and exhibit potential to be tourist destinations.</td>
<td></td>
</tr>
<tr>
<td>High biodiversity areas</td>
<td>Crocodile Gorge, western escarpment areas, Sabie and Crocodile Rivers</td>
<td>Protect areas with a unique biodiversity, ideal for conservation and eco-tourism initiatives.</td>
<td></td>
</tr>
<tr>
<td>Protected areas</td>
<td>Kruger National Park, Methethomusha, Barberton, Coetzeestroom, Wonderkloof, Starvation Creek, Blouswaalvlakte</td>
<td>These reserves dictate the type of land uses to be found within and adjacent to its borders, conservation and tourism uses are priority.</td>
<td></td>
</tr>
<tr>
<td>High and unique potential agricultural land</td>
<td>Along the Crocodile River and its tributaries, Sabie River, North Sand River, Kiepersol area, between Rocky Drift and Nelspruit to the west of the R40, between White River and Karino</td>
<td>Prime or unique agricultural land should as far as possible remain available for production. Land used for agricultural purposes may only be reallocated to another use where real need exists.</td>
<td></td>
</tr>
<tr>
<td>Built environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Settlements</td>
<td>Western Nelspruit-White River and eastern Nsikazi Corridors and Matsulu</td>
<td>These are the focus areas for development, improve access and level of services, prevent urban sprawl, encourage economies of scale, provide the critical mass.</td>
<td></td>
</tr>
<tr>
<td>Main roads</td>
<td>N4, R40, R538, D2296, D2289, D1723 and D725</td>
<td>Improve access to areas, provides visual exposure and mobility, roads act as a physical barrier between settlements, facilitate public transport, development along roads need to conform to specific access requirements.</td>
<td></td>
</tr>
<tr>
<td>Airports</td>
<td><em>(KMIA)</em> and the old Nelspruit Airport</td>
<td>Improve air access, especially the KMIA, it presents opportunities for economic development, development restriction zone around airport with specific aviation requirements.</td>
<td></td>
</tr>
<tr>
<td>Railway lines</td>
<td>Between Mozambique and Gauteng, the Nelspruit-Rocky Drift-Plaston railway line and the railway line along the KNP boundary</td>
<td>Improve rail access, act as a physical barrier, facilitate public transport, railway access is a determining factor for the location of industrial developments, revival of railway network should be encouraged.</td>
<td></td>
</tr>
</tbody>
</table>
Table: Structuring elements: External drivers

<table>
<thead>
<tr>
<th>External drivers</th>
<th>Proposal</th>
<th>Location</th>
<th>Description of proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NATMAP</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic Public Transport Networks (SPTN)</td>
<td>R538/R40 corridor N4 - between Nelspruit and Kaapmuiden</td>
<td>Develop a regional passenger rail system or a light rail transit or a bus rapid transit or provide additional capacity (lanes)</td>
<td></td>
</tr>
<tr>
<td><strong>Mpumalanga ISDF, 2007</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corridor</td>
<td>N4 Maputo Development Corridor</td>
<td>Stimulate regional cooperation and economic development by reviving the trade and tourism route between South Africa and Mozambique.</td>
<td></td>
</tr>
<tr>
<td>Nodes</td>
<td>Hazyview</td>
<td>Agricultural service centre - dominated by agricultural activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nelspruit</td>
<td>Manufacturing Service Centre - process raw material from agriculture and mining to produce goods for businesses and individuals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nelspruit, Whiter River and Hazyview</td>
<td>Commerce and Services Centre - wide range of personal and professional services that are needed to sustain community life, such as health, education, financial, intellectual and civil services.</td>
<td></td>
</tr>
<tr>
<td><strong>Mpumalanga Tourism Growth Strategy, 2007</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product development node</td>
<td>Nelspruit/White River Area</td>
<td>ICC, Sports stadium, Cricket Academy and tourist destination</td>
<td></td>
</tr>
<tr>
<td>Tourism nodes</td>
<td>Hazyview</td>
<td>Centre for residential, resort and adventure tourism</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kruger National Park</td>
<td>Stimulate tourism development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KMIA</td>
<td>Increasing air access to national and international tourists</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sudwala Caves</td>
<td>Important tourist attraction</td>
<td></td>
</tr>
<tr>
<td>Mpumalanga tourism route</td>
<td>N4 (Nelspruit to Maputo) and R40</td>
<td>Improve access for tourism development</td>
<td></td>
</tr>
<tr>
<td>Tourist railway</td>
<td>Sabie/Machadodorp/Barberton to Maputo</td>
<td>Stimulate tourism development</td>
<td></td>
</tr>
<tr>
<td><strong>Ehlanzeni SDF, 2007</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nodes:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional activity node</td>
<td>Nelspruit</td>
<td>These nodes need to form the focus areas to which catalyst development projects are directed providing for sustainable communities, involving: Urban renewal initiatives and economic regeneration, Human resources development, Neighbourhood development The upgrading and restructuring of engineering and social infrastructure, Urban management and Transportation and roads.</td>
<td></td>
</tr>
<tr>
<td>1st order activity node</td>
<td>Hazyview, White River, Swalala</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd order activity node</td>
<td>Matsulu, Kanyamazane, Daantjie, Mswigwaba, Kabokweni</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specialist activity centre</td>
<td>Rocky Drift, Karino, Plaston, KMIA, Ngwodwana, Nelspruit Greenbelt, Mataffin Precinct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External drivers</td>
<td>Proposal</td>
<td>Location</td>
<td>Description of proposal</td>
</tr>
<tr>
<td>------------------</td>
<td>----------</td>
<td>----------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Maputo transportation corridor</td>
<td>N4 road and railway line</td>
<td>All development shall protect the N4’s mobility function</td>
<td></td>
</tr>
<tr>
<td>Nelspruit-White River activity corridor</td>
<td>R40</td>
<td>Supports activity and mobility along the route</td>
<td></td>
</tr>
<tr>
<td>Eastern activity corridor (Nsikazi area)</td>
<td>Kanyamazane CBD, Msogwaba activity spine, Kabokweni CBD and Industrial Area, Swalala (future activity centre), Hazyview CBD</td>
<td>These nodes must form the nucleus to which catalyst developments are directed</td>
<td></td>
</tr>
<tr>
<td>Karino-KMIA-Plaston corridor</td>
<td>R538 connecting the following nodes: Karino industrial/commercial centre, KMIA and industrial area, Plaston industrial/commercial centre</td>
<td>Protect the mobility function of the R538</td>
<td></td>
</tr>
</tbody>
</table>

**Bushbuckridge SDF, 2010**

- **Protected area** Boschhoek: Conserve and sustainable use of commercial nature-based tourism and education
- **Nodes** Mkhuhlu and Acornhoek: Promote the concentration of industrial and agro-processing activities
- **Corridor** R40: Nodal development is supported along this route

**Nkomazi SDF, 2009**

- **Transportation corridor** N4 highway and railway line: A mix of agriculture, conservation and tourism uses interspersed with activity nodes along the N4 are promoted
- **Conservation & eco-tourism** Crocriver Mountain Conservancy: Supports conservation, eco-tourism, hunting safaris and breeding opportunities
- **Agri-tourism** Crocodile River: Eco and agri tourism initiatives are promoted

**Emakhazeni SDF, 2010**

- **Tourism spine** N4 highway: Promotes tourist facilities in the form of accommodation and tourist attractions and economic activities associated with the Maputo Development Corridor
- **Eco-tourism, conservation and agriculture** Tullach Mohr Nature Reserve: Encourage conservation with a balance between agriculture and tourism

**Umjindi SDF, 2009**

- **Protected areas** Barberton Nature Reserve: Encourage conservation and sustainable use of commercial nature-based tourism and education
- **Conservancies** Crocriver Mountain and the Kaap Valley: Promote conservation, eco-tourism, hunting safaris and breeding opportunities

**Thaba Chweu SDF, 2007**

- **Area C - East and west of the R40**: Eco-estates, tourism resorts, nature reserves and protected areas
- **Promote agriculture, forestry and eco-tourism**
<table>
<thead>
<tr>
<th>External drivers</th>
<th>Proposal</th>
<th>Location</th>
<th>Description of proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Luthuli SDF, 2011</td>
<td>Commercial forestry</td>
<td>Focus Area 2</td>
<td>Provide infrastructure to support forestry</td>
</tr>
<tr>
<td>Maputo Development Corridor SDI</td>
<td>Tourism</td>
<td>R40</td>
<td>Utilisation of forestry areas to promote tourism</td>
</tr>
<tr>
<td>Focus areas</td>
<td>R40</td>
<td>Phalaborwa-Tzaneen-Nelspruit Sub Corridor</td>
<td></td>
</tr>
<tr>
<td>Whiter River and Hazyview</td>
<td></td>
<td>Agri-processing centres</td>
<td></td>
</tr>
<tr>
<td>KMIA</td>
<td></td>
<td>Infrastructural – upgrade and industrial park</td>
<td></td>
</tr>
<tr>
<td>Mbombela Stadium</td>
<td></td>
<td>Infrastructural</td>
<td></td>
</tr>
<tr>
<td>Nelspruit</td>
<td></td>
<td>International Convention Centre</td>
<td></td>
</tr>
<tr>
<td>Nelspruit-Phalaborwa SDI</td>
<td>Corridor</td>
<td>R40</td>
<td>Provides opportunities for agriculture and tourism</td>
</tr>
<tr>
<td>Kruger National Park Management Plan</td>
<td>KNP Zoning Plan</td>
<td>The “Primitive” zone impacts on the eastern part of the municipality</td>
<td>The primitive zone promotes resort development and adventure tourism (rock climbing, spelunking, cultural tours, environmental education, picnic sites, swimming pools and small sports facilities)</td>
</tr>
<tr>
<td>Tourism and Biodiversity Corridor SDI</td>
<td>Corridor</td>
<td>This corridor impacts on the south-eastern part of Mbombela</td>
<td>This SDI focuses on the development of internationally competitive tourism and conservation initiatives.</td>
</tr>
<tr>
<td>The Golden Triangle</td>
<td>Commercial or Industrial Development Zone</td>
<td>A conceptual belt along the N4</td>
<td>Promote industrial and commercial development</td>
</tr>
<tr>
<td>Tourism Development Zone</td>
<td>A conceptual belt linking Machadodorp with Sabie and Hazyview, including the R40</td>
<td>Promote tourism development</td>
<td></td>
</tr>
<tr>
<td>Rural Development Zone</td>
<td>A conceptual belt along the Kruger National Park including the Nsikazi area</td>
<td>Implement rural development and service delivery programmes and projects</td>
<td></td>
</tr>
</tbody>
</table>
7.2 Conceptual Framework

Mbombela needs to organize and manage its people, resources and infrastructure in such a manner to achieve an ecological balance as described in Chapter 5.

The conceptual framework below illustrates basic planning principles to apply to achieve an ecological balance and to create a more rational, cost effective and manageable spatial structure. In other words the conceptual framework shows how the ideal spatial structure can be achieved theoretically.

![Figure 2: Conceptual framework](image)

The concept illustrates the following:

- Urban centres, which are key areas to which urban development should be directed and where a higher intensity of land uses and activities are supported.
- Prime and unique agricultural land and environmental sensitive areas, are typical “no go” areas for urban development.
- Mobility routes – mobility should be improved between urban and rural areas and the routes should be utilised for introduce public transport.

It is crucial that this urban-rural relationship be reinforced by strengthening existing urban centres in the one hand and to diversity and protect agriculture and environmental resources on the other. A good road network is the essential link between urban and rural areas.
7.3 Mbombela Strategic Spatial Framework

Seven key spatial strategies have been identified to assist Mbombela achieve its spatial vision, which is the sustainable development of its entire area of jurisdiction where people, the economy and the environment can thrive. These strategies are indicated in Table _ and the intent of each are outlined in the section below.

Table_: Spatial strategies

<table>
<thead>
<tr>
<th>Strategy 1</th>
<th>Establish a Municipal Open Space System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy 2</td>
<td>Protect prime and unique agricultural land</td>
</tr>
<tr>
<td>Strategy 3</td>
<td>Focus areas for land reform</td>
</tr>
<tr>
<td>Strategy 4</td>
<td>Develop and strengthen rural-based tourism</td>
</tr>
<tr>
<td>Strategy 5</td>
<td>Establish an integrated movement system</td>
</tr>
<tr>
<td>Strategy 6</td>
<td>Direct urban growth and promote compact integrated development</td>
</tr>
<tr>
<td>Strategy 7</td>
<td>Consolidate and intensify development in economic opportunity zones</td>
</tr>
</tbody>
</table>

Mbombela Strategic Spatial Framework is the composite map of all 7 spatial strategies (See Plan_: Mbombela Strategic Spatial Framework)
7.3.1 Strategy 1: Establish a Municipal Open Space System (MOSS)

Mbombela's geophysical features (such as mountains and plains), natural resources (such as biodiversity and hydrological systems) and cultural landscapes are central to the way in which residents and visitors identify with Mbombela.

People use natural and more formally developed open spaces for exercise, recreation, and cultural and religious activities, but also derive a sense of well-being from viewing open space, or merely knowing it is there to be used.

In addition, by using the ecological services of nature, Mbombela reduces some of its operating costs, e.g. reeds in wetlands help purify stormwater, and improve river water quality.

For these resources to be used and enjoyed by present and future generations, it is critical that they are defined and protected. Mbombela’s protection-worthy natural resources and assets will determine where urban development should not go in the medium and longer term, and or where the impact of development must be carefully managed.

7.3.1.1 The strategy in space

These resources and assets are defined by the Municipal Open Space System (MOSS). (See Plan: Strategy 1: Establish a Municipal Open Space System. The MOSS aims to establish, consolidate and extend a continuous, linked and managed natural and developed (existing and proposed) open space system as indicated in Figure: Green web concept.

By deliberately protecting such areas, urban areas are prohibited to sprawl freely and are therefore forced into denser urban agglomerations.

7.3.1.2 Mapping the MOSS for Mbombela

The MOSS includes the following different open space types:

Biodiversity areas

The Mpumalanga Biodiversity Conservation Plan (MBCP) groups the Province’s biodiversity assets into different conservation categories. Significant for Mbombela are:

- **Formally proclaimed Protected Areas** including the Kruger National Park, Methethomusha Nature Reserve, Barberton Nature Reserve, Coetzeestroom, Bluuswaalvlakte, Starvation Creek and Wonderkloof Nature Reserves.
- **Irreplaceable Areas** which have the highest biodiversity value located outside the formal Protected Areas Network including the Crocodile Gorge and the western escarpment areas.
- **Ecological and Aquatic Corridors** providing intact mega-pathways for long-term biological movement. The Sabie and Crocodile Rivers are both categorised as ecological and aquatic corridors.

The Crocodile River and adjacent riparian zone in the vicinity of Nelspruit already forms part of the Greenbelt Initiative. The aim of the initiative is to ensure that the Crocodile River in the vicinity of Nelspruit is suitably protected. The initiative includes the Nelspruit Botanical Gardens, which harbours an exceptionally diverse array of indigenous plant species.

River corridors

Apart from the Sabie and Crocodile Rivers, all main rivers in Mbombela should form part of the MOSS. A conceptual buffer was demarcated along the main rivers, including riparian zones to form part of the MOSS. This buffer is wider than the minimum buffer of 32m prescribed by the National Water Act, 1998 (Act 36 of 1998).
Ridges and mountainous areas

Ridges and rocky outcrops are generally associated with high biodiversity values. This is especially relevant to large contiguous areas of ridges which are interconnected.

The MOSS includes mountainous areas with slopes greater than 20%. Slopes greater than 20% are generally considered too steep for conventional housing and urban development.

Natural heritage sites

The Mbombela State of the Environment Report (2003) identifies the following natural heritage sites within Mbombela: These sites form part of the MOSS.

Table 12: Natural heritage sites

<table>
<thead>
<tr>
<th>Name</th>
<th>Size (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kudus Hoek</td>
<td>2 020</td>
</tr>
<tr>
<td>Mbesan</td>
<td>1 882</td>
</tr>
<tr>
<td>Blue Swallow</td>
<td>470</td>
</tr>
<tr>
<td>HL Hall Nature Reserve</td>
<td>±100</td>
</tr>
<tr>
<td>Inhlaba</td>
<td>±50</td>
</tr>
<tr>
<td>Mboho Mkhulu Cave</td>
<td>843</td>
</tr>
<tr>
<td>Poplar Creek</td>
<td>2875</td>
</tr>
<tr>
<td>Spinnnekop se nes</td>
<td>20</td>
</tr>
<tr>
<td>Sudwala Caves / Rainforest</td>
<td>±146</td>
</tr>
<tr>
<td>Lowveld Botanical Gardens</td>
<td>-</td>
</tr>
</tbody>
</table>


The interconnected municipal open space system aims to:

- Improve the multi-functionality of open spaces.
- Improve the recreational connectivity of open spaces, allowing for continuous foot and cycle paths, as well as ecological connectivity, allowing for easier movement of fauna.
- Enhance people’s access to open spaces.
- Protect important sensitive ecosystems and hydrological systems.

- The MOSS intends to enhance the value of the natural and rural environment and green spaces for the people of Mbombela.
7.3.2 Strategy 2: Protect prime and unique agricultural land

Economic development and national food security depend on the availability of productive and fertile agricultural land, which is consistently threatened by the demand for land for residential and industrial development.

The Conservation of Agricultural Resources Act (Act 43 of 1983) provides for the conservation of natural agricultural resources through prevention of erosion and the destruction of water resources, and veld protection measures.

Currently the retention of productive agricultural land is administered through the Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970) which controls the subdivision of agricultural land and its use for purposes other than agriculture.

In the near future the use of this scarce resource will be regulated in terms of the Sustainable Utilisation of Agricultural Resource Bill (SAUR). Enshrined in the SUAR is the national policy on the protection of high potential and unique agricultural land (HPUAL). The Bill tasks provinces with the responsibility of ensuring that the principles of the HPUAL policy are incorporated into municipal IDPs and SDFs.

Criteria for identifying prime and unique agricultural land

- Absence of restrictions on cultivation (e.g. slopes and distance from watercourses);
- Present irrigation (land under permanent or seasonal irrigation is deemed to qualify as prime agricultural land);
- Moisture availability;
- The scarcity factor; and
- Soil type, soil depth and soil texture.

Topsoil depth plays a significant role in determining the agricultural potential of land. Soil depths deeper than 750mm within access of a water source need to be regarded as worthy of protection as a scarce resource.

These criteria are used as guidelines when evaluating an area. Areas that don’t meet the criteria are not automatically available for development or change in land use i.e. areas with a low potential for crop production might have a high potential for grazing, making it an area of high agricultural value. The specific situation or scenario of each application is also considered, i.e. size of area, availability of water, economic viability and sustainable agricultural use and external factors such as political influences, development trends etc.

7.3.2.1 The strategy in space

With the assistance from National Department of Agriculture, Forestry and Fisheries and perusal of the aforementioned criteria the following prime and unique agricultural land has been identified throughout the municipality, the areas surrounding urban centres experiencing the greatest pressure. (See Plan: Strategy 2: Protect prime and unique agricultural land)

- Intensive irrigation farming in the Crocodile and Sabie River catchment areas.
- Irrigation farming in the Kiepersol area.
- Areas along the R538, between Karino and White River and around Primkop Dam
- Intensive farming north-east of Nelspruit around Friedenheim Dam
- The area around the old airport and to the south-west thereof.
- Areas to the west of the R40, between Nelspruit and Rocky Drift
- The area along the North-Sandriver, south-west of Swalala.

Lack of available land for urban expansion around existing urban centres, mainly due to surrounding steep slopes and environmental sensitive areas, makes the take-up of high potential agricultural land for urban development inevitable. The challenge is to ensure that:

a. A balance is reached between the use of resources for infrastructure development and the carrying capacity of ecosystems (environment and agriculture).

b. That more detailed planning and management takes place where areas have high priority for development and high agricultural or environmental significance.

An urban edge is a prominent spatial planning device (tool) to protect valuable agricultural land and ecologically sensitive areas from urban encroachment. A negative aspect associated with an urban edge is that it can restrict the supply of land for development, which could lead to illegal land occupation.
Refer to Section _ for land use management guidelines pertaining to the protection of agricultural land.
7.3.3 Strategy 3: Focus areas for land reform

Although Mbombela Municipality is not the key agent for land reform, the municipality has an obligation to identify focus areas for land reform. The Department of Rural Development and Land Reform should work closely with Mbombela to prepare an Area Based Plan (ABP) in order to incorporate land and agrarian reform projects into its IDP and SDF.

A national land reform programme in South Africa involves restituting land to those who were subject to forced removals. The programme has been implemented with three key elements – restitution, tenure reform and redistribution.

The aim of the strategy

The aim of this strategy is, in the absence of an Area Based Plan, to identify land reform focus areas in Mbombela in order to achieve the strategic objectives put forward by the National Department of Rural Development and Land Reform, being:

- To achieve the national target of redistribution 30% of agricultural land by 2014 for sustainable agricultural development.
- Provide tenure security that creates socio-economic opportunities of people living and working on farms and in communal areas.
- Settle all outstanding land claims by 2009 and implement restitution awards.
- Provide land for sustainable human settlements, industrial and economic development.
- Provide efficient land use and land administration services.
- Provide efficient state land management that supports development.
- Provide a skills development framework for agrarian land reform to all relevant stakeholders.
- Development of programmes for the empowerment of women, children, people with disabilities and those that living with HIV/Aids and older persons.

7.3.3.1 The strategy in space

Land reform focus areas in Mbombela are depicted on Plan_: Strategy 3: Focus areas for land reform)

Tenure reform

Tenure reform and formalisation of settlements is priority within and around identified nodes in the Nsikazi area (See Strategy 7), as well as Mataffin, Matsulu and Ngodwana. Tenure reform and formalisation needs to be attended to in terms of a Tenure Upgrading Programme, preceded by detailed Precinct Development Plans.

Land restitution

A Land Restitution and Investment or Development Plan should be developed for land restitution projects. Settlements that resulted because of land restitution need to conform to the development principles contained in the Spatial Development Framework.

Restituted farm land located further away from urban centres should not be utilised for communal or informal settlement and focus must be on commercial ventures rather than subsistence farming. Refer to Section_ for land use management guidelines pertaining to rural housing.

Land redistribution

The following focus areas are identified for both agricultural and non-agricultural land reform interventions i.e. for agrarian transformation (livestock, cropping and associated value chain development) and rural development (establishment of business initiatives, agro industries, tourism and cultural initiatives).
Table: Land redistribution focus areas

<table>
<thead>
<tr>
<th>Land reform opportunities for:</th>
<th>Focus areas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commercial agriculture</strong></td>
<td>Intensive irrigation farming in the Crocodile and Sabie River catchment areas, where water rights exist. Forestry in the western part of the municipality and north of White River. Banana farming in the Kiepersol area.</td>
</tr>
<tr>
<td><strong>Agri-processing (beneficiation)</strong></td>
<td>Focus on Hazyview (macadamia nuts), White River and Ngodwana (wood cluster and furniture technology), Nelspruit (beneficiation of fruit and mining products), KMIA (fresh produce).</td>
</tr>
<tr>
<td><strong>Tourism</strong></td>
<td>Target areas identified in Strategy 4 for land reform tourism projects.</td>
</tr>
<tr>
<td><strong>Affordable housing</strong></td>
<td>Prioritise Nelspruit, White River, Rocky Drift and Hazyview as locations for affordable housing provision.</td>
</tr>
<tr>
<td><strong>Food security</strong></td>
<td>Vegetable gardens in distant rural settlements located further away from identified activity nodes.</td>
</tr>
</tbody>
</table>

Land acquisition and project formulation within the focus areas needs to be informed by a fine scale assessment (i.e. at farm level) of, amongst others:

**Critical biodiversity areas** – given that such areas will be subject to conservation initiatives and programmes, with such programmes restricting agri-commodity selection, cultivation or livestock production intensity and extent, or promoting non-agricultural activity (e.g. eco-tourism).

**Water availability** – given that the entire municipality is water-poor, with the majority of water rights being issued and no guarantee of new licences being issued.

Other important factors to consider are:
- ownership and land prices;
- available infrastructure buildings, fencing, roads etc;
- resource potential (agricultural potential, mineral deposits, tourism potential etc.)
- proximity to the market

**Conditions applicable to agrarian transformation**

- Focus must be on commercial ventures rather than subsistence farming, since agriculture in Mbombela is an important economic sector.
- The agricultural capability and capacity of the land should not be compromised.
- Development of management skills must form an integral part of land reform projects.
- Access to agricultural support programmes is important i.e. Comprehensive Agricultural Support Programme (CASP), Land Care Programme, Land Redistribution for Agricultural Development Programme (LRAD), Household Food Production, Food Security and Starter Packs and Irrigation, Rehabilitation and Development Programme.
- Land Reform projects should be compliant to the proposals of the Spatial Development Framework.
- Areas identified for emerging or small farmer settlement should be complementary to the current and likely future urban structure.
- Prevent the establishment of small, un-economical farming units through continuous subdivision of land.

Land reform areas that have been settled, where people have moved back onto ancestral and other land, has led to the need for services in previously under or non-serviced areas. From a spatial perspective, the locality of these land reform areas is a critical determinant of their future viability.

Land reform areas close to economic activity centre are beneficial. However in many cases the economic potential of the land in question is inadequate as a source of economic livelihoods and this will have to be addressed in any consideration for future infrastructure investment and development expenditure.
7.3.4 Strategy 4: Develop and strengthen rural-based tourism

The scenic environment (natural resources), coupled with numerous attractions, rich cultural heritage and Kruger National Park, being one of the top ten tourist attractions in South Africa, make Mbombela a sought after destination to tourists.

These attractions need to be consolidated into a municipal wide tourism destination network and need to be made even more accessible. Such a network should form an integral part of the broader Mpumalanga Tourism Growth Strategy.

7.3.4.1 The strategy in space

Existing and proposed attractions determine the configuration of the envisaged network. Tourism areas and routes that should be linked to a broader tourism strategy, include: (See Plan: Strategy 4: Develop and strengthen rural based tourism).

1. Kruger National Park

The KNP is a major tourism draw card. The status of the park is further enhanced by the development of the Greater Limpopo Transfrontier Park and the Kruger to Canyon Biosphere Reserve.

The feel and experience of the Kruger National Park is projected into Mbombela, which serves as a distinguishing feature and has excellent marketing potential. This needs to be retained and strengthened by establishing a tourism belt along the length of the park focussing on internationally competitive tourism and conservation initiatives.

The existing Numbi and Phabeni Gates to the Kruger National Park play an important role towards tourism as well as the two new gates proposed near Luphisi and Makoko, respectively.

2. Nsikazi community tourism

Community tourism is becoming increasingly popular, with tourists wanting to experience South Africa’s rural villages and townships. The Nsikazi area presents ideal opportunities for community tourism.

In this regard a rural/township tourism route is proposed in the Nsikazi area. This route will provide access to local economic development initiatives and improve access to the Kruger National Park, especially with the new gates proposed at Luphisi and Makoko.

3. Sudwala Caves

The Sudwala Caves are known to be the world’s oldest dolomite caves and form an integral part of the Province’s tourist attractions. The regional accessibility to the Sudwala Caves and surrounding archaeological sites need to be enhanced. This requires the upgrading of the Wonderkloof Road.

4. Scenic areas

The scenic areas of Schoemanskloof, Crocodile Gorge, Legogote and Kaapsehoop and its surrounds provide ideal opportunities for nature conservation and eco-tourism initiatives.

Water Resources

Klipkopje, Da Gama, Longmere Dams and the Sabie and Crocodile Rivers exhibit potential to become tourism destinations. These resources should be protected and simultaneously be exploited in a sustainable manner.

5. Existing tourism nodes

- Hall’s Gateway
- Casterbridge
- and Perry’s Bridge

Expansion to these nodes to specialize in the provision of tourist and highway related functions should be encouraged.

6. Cultural Centres

The establishment of commercial and tourist facilities at Shangaan (Hazyview) and Matsulu cultural centres should be encouraged. Tourism is an important economic sector in the region stimulated by the development of previous neglected cultural and historical resources.
7. Tourism accessibility

Kruger Mpumalanga International Airport

The KMIA increases air access to national and international tourists. The further development of the KMIA provides opportunities for the development of tourism and related activities.

Tourism railway

Using the existing rail network, a luxury steam train journey from Sabie/Machadodorp/Barberton to Maputo passing through Nelspruit is proposed. The product would involve day-excursionists as well as overnighters in both directions.

Tourism routes

The following roads are important tourist links:

- The N4 highway unlocks the tourist potential of the Lowveld, providing good local and regional access to nature reserves, conservancies, natural heritage sites and tourist attractive areas which allows for tourist and motorist related activities. The N4 is one of the major branches of the Mpumalanga Route.
- Currently the P17/6 (R538) provides the most direct link between the KMIA and the Numbi, Phabeni and Kruger Gates. This road serves as the main collector road for the proposed rural tourism route.
- The R40 linking Barberton and surrounding attractions to Hazyview providing regional access to prominent tourist destinations in the north i.e.: The Blyde River Canyon, God’s Window, Bourkes Luck Potholes. The R40 is the most common used road to access Numbi and Phabeni Gates and is one of the branches of the Mpumalanga Route.
- The P33-4 road west of Hazyview towards Graskop and east towards Phabeni Gate give access to a number of lodges and tourist facilities.

The development of tourist corridors requires the implementation of certain development guidelines regarding the quality and nature of activities along these routes in order to ensure tourist attractive routes. Tourism routes should focus on supporting the hospitality and tourism industry along it.

The fastest growing segment of tourism in South Africa is eco-tourism, which includes nature photography, bird watching, botanical studies, snorkelling, hiking and mountaineering. The process of declaring Mpumalanga the capital of eco-tourism and nature conservation, inevitably contribute to the development of tourism in Mbombela Local Municipality.

The most suitable form of tourism in rural areas is eco-tourism which aims to balance the needs of people with the need to protect the environment. It is low-impact tourism, which means that it aims to disturb the environment as little as possible.

Eco-tourism has the following advantages:

- Eco-tourism projects are more likely to be sustainable because the natural environment is protected.
- Eco-tourism projects are on a smaller scale than other forms of tourism which makes it easier for rural communities to participate.

Where communities own the land it provides them with the bargaining power needed when entering into partnership with a private tourism company. Such an agreement should provide for local people to enjoy the benefits of employment, skills training and revenue from the tourists.

Refer to Chapter 9 for land use management guidelines pertaining to conservation.
7.3.5 Strategy 5: Establish an integrated movement system

Mbombela must have a movement system that provides all residents with convenient and affordable access to the municipality’s resources and amenities. This movement system have a profound impact on spatial development patterns and accessibility, and hence on economic and social opportunity.

The aim of this strategy is improve mobility and linkage between the eastern and western built-up areas of Mbombela and to promote spatial reconstruction and integration.

In line with Mbombela’s Integrated Transport Plan (ITP) and Land Use Transportation Strategy (LUTS), the movement system cannot simply be reactive to existing demand patterns but must be structured to cater for possible future demands and therefore proposes the following:

- A taxi feeder - line haul system
- Regional roads interventions
- Bus rapid transit system
- Commuter rail system

These interventions are briefly discussed below.

7.3.5.1 Taxi feeder-Line haul system

The taxi feeder–line haul system will consist of: (See Plan_: Strategy 5.1: Feeder and line haul routes and transfer ranks)

1. Collection and distribution feeder services at high frequency by low to medium capacity vehicles. This could be provided by an appropriate combination of taxis and/or minibuses, or even larger buses where volumes are high.

2. Line haul services catering for high passenger volumes over long distances provided by articulated busses and on routes of lower demand by standard buses.

Line haul services are to be provided on roads P17/6-R40 between Swalala and Nelspruit, D2689-D812 between Kabokweni and Rocky Drift, D1723-

D2296 between Lehwu and Nelspruit, D2296 between Kanyamazane and Nelspruit and on the N4 between Matsulu and Nelspruit.

Feeder to line haul interchanges (transfer ranks) serving the eastern residential townships, are located at five locations:

- Swalala – covering the greater Masoyi area
- Kabokweni
- Lehwu – covering the greater Msogwaba area
- Lekazi – covering the greater Lekazi/Kanyamazane area
- Matsulu

These interchange options are located at the confluence of various roads that can be used for feeder services. Equally important, these transfer ranks have been identified as areas to become growing nodes of economic activity.

Public transfer ranks in existing business nodes are located at:

- Nelspruit
- Riverside
- Rocky Drift
- White River
- Hazyview
- Mataffin
7.3.5.2 Regional roads interventions

These projects aim to open up development opportunities and drive economic development in the municipality, but specifically in Nsikazi. These projects are conceptual and require further detailed studies (See Plan: Strategy 5.2: Regional roads interventions projects)

The road interventions are:

1. Kanyamazane Western Bypass

The P258/1, currently the main north-south road in the eastern residential areas, lacks continuity and is interrupted in the Msogwaba area. The extension of the P258/1 to the west of Kanyamazane to link with the N4 in the south will enhance regional accessibility to the eastern residential areas.

2. Upgrade Luphisi Southern Link and Re-align Existing Luphisi Link

The following is proposed to improve east-west linkage: To re-align the final section of the D1723. To upgrade and pave the secondary Luphisi link south of the D1723, the latter can be extended westwards to eventually link with the Kanyamazane Road (D2296).

This new link will provide a parallel route to the D2296 (Kanyamazane road) and thereby alleviate congestion on it as well as ease congestion at the busy Karino intersection (D2296 and R538).

3. Upgrade and extension of R538

The R538 will require upgrading to at least four lanes in future as it forms the secondary north-south route for the eastern residential areas and provides direct access to the KMIA. The proposed upgrades should extend northwards right up to intersection with the P17/6 to the north-east of White River.

4. P166 Western Bypass

As Mbombela continues to develop the importance of the P166 Western Bypass is becoming more and more apparent, which is also one of the recommendations made in the Mbombela ITP (2007). The P166 will have no direct impact on the Nsikazi area, although its importance to Mbombela in general is significant and will indirectly influence the economic development of Nsikazi.

5. New Matsulu direct link with N4

The existing D2977 connecting Matsulu with the N4 does not provide direct linkage but takes a detour to the west before reaching the N4. A direct link to the N4 is proposed and the northern extension thereof to Luphisi.

6. P17/6 Bypass.

The re-alignment of the P17/6 to the west of its current position will increase mobility along the route and may therefore be considered as a continuation of the P166.

The implementation of these road projects will go a long way to relieve congestion and open up areas for development. However, in future car ownership, especially in the poorer eastern residential areas of Nsikazi, will increase as average income levels in these areas rise.

There is no feasible way of accommodating all traffic by means of roads and definite measures should be implemented to reduce private vehicle traffic. The following measures are proposed in terms of the draft 2010 Land Use and Transportation Strategy for the Nsikazi Area in order to make public transport more attractive:

- The implementation of a comprehensive Bus Rapid Transit (BRT) system;
- The implementation of a Commuter Rail System.
7.3.5.3 Bus rapid transport (BRT) system

Bus rapid transport system capacities vary between 5000–12000 passengers/hour/direction. The construction of the High Occupancy Vehicle lane (HOV) on the R40 is potentially the first step of a BRT project and the HOV lanes can easily be extended to stretch along the entire R40 between White River and Nelspruit and hence provide a right-of-way required by such a system.

A phased approach is suggested for the implementation of the system, being: (See Plan_: Strategy 5.3: BRT Service and Feeders)

- The first service running along the R40 between White River and Nelspruit.
- A second service along the Kanyamazane (D2269) between Nsikazi and Nelspruit.
- A third service can link up the other services along the R538 to eventually form a single contra-rotating circulation service.

Existing bus operators can be used to provide the service and taxi operators can provide feeder services.
7.3.5.4 Commuter rail system

It the upper limit of the BRT system is regularly being exceeded, the provision of a rail system would be the next logical step.

A phased approach is suggested for the implementation of a rail system, being: (See Plan_: Strategy 5.4: Commuter rail system)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 2:</td>
<td>Plaston – White River</td>
</tr>
<tr>
<td>Phase 3:</td>
<td>Plaston – KMIA – Tekwane/Karino</td>
</tr>
<tr>
<td>Phase 4:</td>
<td>Mataffin – Nelspruit</td>
</tr>
<tr>
<td>Phase 5:</td>
<td>Tekwane – Karino – Maputo and link with Limpopo via Kruger National Park line.</td>
</tr>
</tbody>
</table>

Land use and transportation integration

For any public transport mode to be sustainable and feasible, appropriate ridership levels must be attained. Ridership is very dependent on **land use density and land use mix**, since different land uses generate different types and frequencies of trips, and different densities attract different volumes of passengers. International studies show that:

- Residential development (with the correct density to support public transport modes) is the primary land use trip generator. Therefore, high-density residential development in and around nodes and along transport routes is important.

- Retail sites generate 10 times more trips per unit than office space, indicating that retail facilities can act as anchors to encourage ridership to a specific destination (station). This type of ridership also occurs during off-peak periods.

- Compared to retail space, office space generates higher peak period trips, as people travel to and from work on a daily basis.

Manufacturing and warehousing have a limited impact on public transport tips, because of the reduced density of people in these establishments.

CBD’s are key places for public transport development because of the generally much higher densities achieved. Densities may relate to both residential (high-rise apartment buildings), and office uses attracting people to the CBD on a daily basis.

Clearly it is imperative to align land use density and mix with mode of transport in order to maximize public ridership, improve feasibility and ensure sustainability.
7.3.6 Strategy 6: Direct urban growth and promote compact integrated development

Mbombela needs actively to pursue a compact form of development, where growth is directed towards areas suitable for development, and away from important resource areas and hazards.

The future spatial development of Mbombela needs to be efficient, it needs to make the most of existing infrastructure investments and capacities, and the resources required for the adequate maintenance of these systems, before creating new infrastructure and maintenance demands.

Land is a scarce resource in Mbombela and a delicate balancing act is needed to deal with competing needs for conservation, productive land and urban development.

A more compact Mbombela will improve its efficiency and sustainability by:

- Helping to protect the environmentally sensitive land by reducing demand for this land,
- Making better use of the municipality's limited resources for infrastructure investments and maintenance,
- Supporting more transport options, as higher densities will provide the required thresholds to make public transport viable and
- Offering a better, more convenient lifestyle for people who cannot drive, such as elderly, very young and disable people, as a greater number of facilities and opportunities will be accessible by foot, bicycle or public transport.

Compact settlements will be achieved through introducing planning tools that contain the settlement footprint (through urban edges) and encourage responsible densification (through strategic infilling and the intensification of land uses within the existing footprint, aligned with concentrations of economic activity, public transport, infrastructure and amenities).

Refer to the Urban edge policy and Residential densification policy in Chapter 9 for more detail on how to compact urban development through densification and urban edges.

7.3.6.1 The strategy in space

Urban development in Mbombela should be directed and compacted within the urban edges of three distinct areas, namely: (See Plan_: Strategy 6: Direct urban growth and promote compact integrated development)

- A northern area including the settlements of Hazyview, Shabalala, Numbi, Mahushu, Swalala and Legogote.
- A larger central area including the settlements of Kabokweni, Clau Clau, Pienaar, Daantjie, Malekutu, Khumbula, Gutshwakop, Msogwaba, Kanyamanzane, Karino, Plaston, White River, Rocky Drift, Nelspruit, Mataffin and
- Matsulu secluded further to the east.
7.3.7 Strategy 7: Consolidate and intensify development in economic opportunity zones

This strategy is advocating that economic activity (formal and informal) be encouraged to locate within economic opportunity zones across the municipality, related to the accessibility grid.

These opportunity zones will be focal points for enabling public sector infrastructure investment (information communication technology, upgrade of roads and utility services). Public infrastructure investment and proactive land management strategies will provide a measure of certainty and direction to private investors.

Such economic opportunity zones should therefore serve as logical investment locations, given their higher thresholds associated with higher densities and concentrated flows of people, are convenient and accessible, as they are served by public transport and public amenities and facilities and are supported by mobility routes that facilitate relative ease of movement of people and freight.

Two forms of economic opportunity zones are envisaged on the accessibility grid, including:

**Nodal development**

Nodes are areas where a higher intensity of land uses and activities are supported and promoted. Table - illustrates the hierarchy of nodes and the development directives applicable to each node. Chapter 8 contains detail development directives for identified nodes.

**Corridor development**

Corridors are links between nodes, along which an increased intensity of development and activities may be encouraged. Depending on the intensity of activity, the width of the strip could range from half a street block to two or more street blocks.

7.3.7.1 The strategy in space

The following nodes and corridors have been identified: (See Plan_: Strategy 7: Consolidate and intensify development in economic opportunity zones)

**The Nsikazi Activity Corridor**

The Nsikazi Activity Corridor consists of a broad strip of urban and semi-urban settlements, stretching from Hazyview in the north to Kanyamazane in the south.

Development within northern Nsikazi is mainly supported by a major collector road (R538), which links with the N4 at Karino, west of Tekwane. Accessibility within southern Nsikazi is restricted to a main road P258/1 linking Kabokweni and settlements to the north-east thereof with Kanyamazane.

The Nsikazi Corridor includes the following activity nodes:

- Kanyamazane CBD
- Msogwaba CBD (proposed)
- Kabokweni CBD
- Swalala CBD (proposed future activity centre)
- Hazyview CBD

**The Tekwane-Msogwaba Activity Corridor**

The Tekwane-Msogwaba Activity Corridor is proposed along the planned Kanyamazane Western Bypass and includes:

- Tekwane industrial (proposed)
- Msogwaba CBD (proposed)

**The Nelspruit/White River Activity Corridor**

The Nelspruit–White River Activity Corridor is situated along Road R40 (P9-2), including the following nodes:

- Nelspruit CBD
The proposed Karino-KMIA-Plaston Activity Corridor along the R538 road provides three specialised activity centres namely:

- Karino Industrial/Commercial Centre, providing the opportunity for a variety of commercial and residential uses at the intersection of the R538 with the N4 at Karino,
- KMIA and industrial area (proposed)
- Plaston Industrial Development Zone (proposed)

The N4 Transportation Corridor

The N4 runs on an east-west axis through the Nelspruit CBD forming the backbone of the Maputo Development Corridor, providing direct access to the economic nodes of Ngodwana Sappi and Nelspruit. It passes the settlements of Tekwane, Kanyamazane and Matsulu to the south.

The aim of this strategy

In line with the National Spatial Development Perspective and the Macro Spatial Priorities for Mbombela the aim of this strategy are as follows:

Investment must focus on localities of economic growth or economic potential to attract private sector investment, to stimulate sustainable economic activities and to create long term employment opportunities. Intensify development within these corridors and multi-functional nodes. This will provide the necessary integrated development system to assure long-term sustainability and the eradication of the dysfunctional spatial structure that was created by past spatial policies. The focus should be on:

- The provision of vibrant and sustainable activity centres within the Nskazi Activity Corridor integrating economic and employment opportunities within these areas.
- The provision of affordable housing within the Nelspruit-White River Activity Corridor to enable all people to live nearer to their place of work promoting social integration.
- The provision of economic opportunities for historically disadvantaged individuals within the Nelspruit-White River Activity Corridor.
- The enhancement of public transportation and the mobility function of link roads between the corridors.
7.4 Mbombela Desired Spatial Pattern

The desired spatial pattern basically distinguishes between urban and rural development areas by means of an urban edge, where:

Rural areas are typically characterised by:

- Primary economic activities i.e.: agriculture, agri-processing, agri-villages, road related purposes including accommodation and vehicle related services, regional services (cemeteries, waste sites, reservoirs, electricity lines), tourism and other uses such as quarries and mining and

Urban areas are typically characterised by:

- Mainly secondary and tertiary economic activity with some primary i.e.: urban agriculture, building materials, resource extraction.
- Engineering services provided on a grid reticulation system
- Settlement contained within an urban edge.

Urban-rural distinction in Mbombela Municipality is made by dividing the municipality into 5 zones, where Zone 1 is mainly urban and Zones 2 to 5 mainly rural in character. (See Plan: Mbombela Desired Spatial Pattern)

1. Zone 1 - Urban Development Zone
2. Zone 2 - Kruger National Park Conservation Zone
3. Zone 3 - Kiepersol-White River Agricultural Zone
4. Zone 4 - Western Agricultural Zone
5. Zone 5 - Central Agricultural Zone

By nature, Zones 2-5 are not “development areas”, so the interventions in these areas should be minimized to aspects such as utilizing certain assets (e.g. high potential agricultural land to promote intensive agriculture and environmental assets to promote tourism), creating rural service centres where rural communities can access day-to-day services, creating rural residential settlements to provide housing opportunities for people who are involved in the rural economy and ensuring sufficient linkages between the rural and urban environments.

Each zone is briefly described below, including strategic objectives and development directives.

*Note: The demarcation of these zones is conceptual and not cadastral specific.*
7.4.1 Zone 1 - Urban Development Zone

7.4.1.1 Description

Zone 1 includes all land situated within the urban edge, including existing built-up areas, areas earmarked for future urban development (next 20 to 30 years) as well as undevelopable land (due to topographical, environmental or any other constraints).

Zone 1 contains the economic opportunity areas (nodes and corridors) identified in Strategy 7.

7.4.1.2 Strategic objectives

The strategic objectives for Zone 1 are twofold:

- Firstly to create a more compact Mbombela that will improve its efficiency and sustainability (Refer to Strategy 6) and
- Secondly, to consolidate and intensify development in economic opportunity zones (Refer to Strategy 7).

7.4.1.3 Development directives

To achieve a more compact Mbombela, urban growth will be directed as follows:

- In the short term, the outward movement of the existing footprints must be restricted as far as possible, in this way, infrastructure capacity and current maintenance challenges can be addressed, and a well-functioning public transport system can be put in place.
- Higher densities must be attained in the existing urban areas and undeveloped areas within the urban edge.
- A greater mix of land use and people will be encouraged.
- In the medium term, all new urban development should take place within the existing urban edge, and a cross-sectoral growth management plan must ensure that the phasing of development is aligned with the provision of infrastructure.

In the long term, if demanded, and once urban service infrastructure can sustain it, the urban edge that acts as a medium-term growth management boundary may be relaxed and re-established at an appropriate location on development corridors linking the above urban zones. See Urban edge policy in Chapter 9 for more detail.

To consolidate and intensify development in economic opportunity zones, the following nodal and corridor directives shall apply:

Nodal directives

The nodes in Mbombela varies from high to lower order nodes depending on their function, size, economic growth potential and history of service delivery to the surrounding areas.

The nodal order determines the development directives and management approach applicable to each node as indicated in Table_: Detailed development directives for selected node are proposed in Chapter 8.

<table>
<thead>
<tr>
<th>Nodal order</th>
<th>Development directives</th>
</tr>
</thead>
</table>
| Regional activity node | Its role and function as regional activity node needs to be maintained through encouraging developments with a regional function (hospital, university, provincial offices, international convention centre etc.)
|                      | Exploit economic opportunities provided by the Maputo Development Corridor SDI
|                      | Increase engineering and social infrastructure. Promote residential densification and mixed land use in selected areas. Provide affordable housing opportunities. |
| Nelspruit            | Its role and function as sub-regional activity node need to be maintained and enhanced. Exploit opportunities provided by the Nelspruit-Phalaborwa SDI
|                      | Increase engineering and social infrastructure. Promote residential densification and mixed use in selected areas. Provide affordable housing opportunities. |
### Nodal order

<table>
<thead>
<tr>
<th>Development directives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kanyamazane</strong></td>
</tr>
<tr>
<td>Develop Kanyamazane into a 1&lt;sup&gt;st&lt;/sup&gt; order activity centre</td>
</tr>
<tr>
<td>Upgrade capacity and level of engineering services and social infrastructure</td>
</tr>
<tr>
<td>Encourage economic development</td>
</tr>
<tr>
<td>Improve existing anchor developments (district offices, stadium, shopping centre etc.)</td>
</tr>
</tbody>
</table>

### 2<sup>nd</sup> Order activity nodes

<table>
<thead>
<tr>
<th>Development directives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Matsulu</strong></td>
</tr>
<tr>
<td>These nodes need to form the focus areas to which catalyst development projects are directed providing for sustainable communities, involving:</td>
</tr>
<tr>
<td>Urban renewal initiatives and economic regeneration, Human resources development, Neighbourhood development, The upgrading and restructuring of engineering and social infrastructure, Urban management and Transportation and roads.</td>
</tr>
<tr>
<td>Existing nodes within Nsikazi need to be regenerated and new nodes accessible to the communities need to be provided</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Development directives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kabokweni</strong></td>
</tr>
<tr>
<td>Kabokweni Swalala (proposed) Msogwaba (proposed)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Development directives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Msogwaba</strong></td>
</tr>
<tr>
<td>These nodes need to form the focus areas to which catalyst development projects are directed providing for sustainable communities, involving:</td>
</tr>
<tr>
<td>Urban renewal initiatives and economic regeneration, Human resources development, Neighbourhood development, The upgrading and restructuring of engineering and social infrastructure, Urban management and Transportation and roads.</td>
</tr>
<tr>
<td>Existing nodes within Nsikazi need to be regenerated and new nodes accessible to the communities need to be provided</td>
</tr>
</tbody>
</table>

### Speciality nodes

<table>
<thead>
<tr>
<th>Development directives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plaston</strong></td>
</tr>
<tr>
<td>Plaston (proposed) KMIA (proposed) Karino (proposed) Rocky Drift</td>
</tr>
<tr>
<td>Opportunity to develop employment centres on the threshold of the Nsikazi corridor</td>
</tr>
<tr>
<td>Target market specific per node such as tourism and industrial</td>
</tr>
<tr>
<td>Enhance the role of Rocky Drift as a regional industrial node through upgrading engineering services</td>
</tr>
</tbody>
</table>

### Rural service centres

<table>
<thead>
<tr>
<th>Development directives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alkmaar</strong></td>
</tr>
<tr>
<td>Elandshoek Ngodwana Kaapsehoop</td>
</tr>
<tr>
<td>These nodes should not be viewed as focus areas for future growth</td>
</tr>
<tr>
<td>Prevent further expansion outside the urban edge</td>
</tr>
<tr>
<td>Improve status of engineering services and social infrastructure</td>
</tr>
</tbody>
</table>

### Corridor directives

<table>
<thead>
<tr>
<th>Development Directives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nsikazi Activity Corridor</strong></td>
</tr>
<tr>
<td>Improve north-south mobility by restricting direct access to adjacent areas</td>
</tr>
<tr>
<td>Encourage a high concentration of mixed land uses in identified activity nodes</td>
</tr>
<tr>
<td>Encourage intensification of land uses along corridor, within the urban edge, without jeopardising the mobility function.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Development Directives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tekwane-Msogwaba Activity Corridor</strong></td>
</tr>
<tr>
<td>Protect the mobility function of the proposed Kanyamazane western bypass</td>
</tr>
<tr>
<td>Encourage a high concentration of mixed land uses in Tekwane and Msogwaba</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Development Directives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nelspruit/White River Activity Corridor</strong></td>
</tr>
<tr>
<td>To achieve accessibility as well as mobility within the corridor the interaction between the R40 (as accessibility road directly supporting land development along the road) and the proposed P166 (as high mobility route west thereof), needs to be improved.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Development Directives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Karino-KMIA-Plaston Activity Corridor</strong></td>
</tr>
<tr>
<td>The mobility function of the R538 should be protected.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Development Directives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N4 Transportation Corridor</strong></td>
</tr>
<tr>
<td>This corridor provides a stimulus for commercial and industrial development within the activity nodes along the route, which includes Nelspruit and Karino. The mobility needs to be enhanced through the provision of by-pass roads within urban areas and selected interchanges and access points. The focus of this corridor is on the long distance haulage of goods and passengers.</td>
</tr>
</tbody>
</table>

Refer to Chapter 9 for land use management guidelines pertaining to urban nodes.
7.4.2 Zone 2 - Kruger National Park Conservation Zone

7.4.2.1 Description

This zone is located along the length of the Kruger National Park and stretches from the northern to the southern municipal boundary, from Sabie River to Nelspruit.

It includes the Methethomusha Nature Reserve, Crocodile Gorge, Crocriver Mountain Conservancy, Legogote Mountain and the existing rural settlements of Luphisi, Mpakeni, Sipelanyane, Buyelani, Mahukube, Mjejane, Makoko and Phameni. Mayfern is an existing agricultural village located east of Nelspruit.

The Sabie, Crocodile, Gutshwa and Nsikazi Rivers are the main rivers traversing this zone. Minor districts roads, mainly gravel, characterise this zone with the exception of the N4 highway and road R536 to Phabeni Gate.

The Maputo railway line is located in the southern part with another railway line running parallel along the length of the KNP. Numbi and Phabeni Gates are two existing gates to the park, two alternative gates are proposed at Makoko and another at Luphisi.

7.4.2.2 Strategic objectives

The strategic objectives for the Kruger National Park Conservation Zone are as follows:

- Internationally competitive tourism and conservation initiatives are supported in this zone to strengthen the Tourism Biodiversity Conservation Initiative between Swaziland and Mpumalanga.
- The feel and experience of the Kruger National Park is projected into Mbombela, which need to be retained and strengthened as it serves as a distinguishing feature and has excellent marketing potential.
- Improve access to the Kruger National Park, especially from the Kruger Mpumalanga International Airport, N4 highway and railway line running parallel to the park's border.
- Exploit the tourism potential provided by the existing Kruger Park Gates and north-south railway line running along the KNP boundary.
- The use of land in this zone should be in support and complimentary to the Kruger National Park and should serve as an interface between the park and the Urban Development Zone.

7.4.2.3 Development directives

A mix of conservation, eco-tourism and agricultural uses are supported within this zone including:

- Formal and informal Protected Areas managed for biodiversity, wildlife production and recreational/educational tourism.
- Eco-estates, lifestyle or investment type recreational ownership such as share block schemes, multi ownership reserves, with limited development on extensive land portions similar to:
  - Bongani Mountain Lodge, Leopard Creek Hotel and Golf Estate, Lala Palm Country Club, Pestana Lodge as well as the exclusive game reserves in Bushbuckridge Local Municipality.
- Resorts and adventure tourism (i.e.: rock climbing, spelunking, cultural tours, environmental education, picnic sites, swimming pools and small sports facilities) are supported along the KNP boundary.
Sabi Sands

- Game farming, hunting safaris and extensive livestock farming and related value chain development are promoted.
- This zone should be protected from urban encroachment. Existing rural settlements within this zone should:
  - Not be viewed as focus areas for future growth or densification and should only accommodate the growth of its existing population through natural growth.
  - Become the focus of the rural areas surrounding them. This will involve creating a local economic base for these settlements, for example subsistence farming or tourism.
  - Development of rivers, natural forests and wetlands is restricted and shall only be allowed after legal environmental procedures have been conformed with.
  - Sand mining can only take place after the consent of the Department of Minerals and Energy has been obtained.

Refer to Chapter 9 for land use management guidelines pertaining to municipalities bordering the Kruger National Park.
7.4.3 Zone 3 - Kiepersol-White River Agricultural Zone

7.4.3.1 Description

This area roughly stretches from Sabie River in the north to the R37 Lydenburg road in the south, the North-Sand River in the east and the municipal boundary in the west.

Commercial farming dominates the area (mainly subtropical farms along the Sabie River and in the Kiepersol area) and forestry plantations. The Kiepersol and Big 5 Centre provide day-to-day services to surrounding farming communities.

Sabie, North-Sand, White River, Sandspruit and Nelsriver are prominent rivers crossing this zone including 3 dams namely Da Gama, Longmere and Klipkopje.

The area is backboned by the R40 route, which is the main road from Nelspruit to Hazyview. The R538 is a major collector road linking White River with Hazyview through Swalala. Regional access roads include the R37 to Lydenburg and the R536 and R537 to Sabie.

Tourist developments opt to locate along the R537 road between Hazyview and Sabie, around the 3 dams and along the R538 road between White River and Legogote.

7.4.3.2 Strategic objectives

The strategic objectives for the Kiepersol-White River Agricultural Zone are as follows:

- Agricultural and strategically located tourism initiatives are encouraged in support of the Nelspruit-Phalaborwa SDI (along the R40) and the Mbombela Golden Triangle.
- Establish and maintain good urban-rural linkage to the main economic centres of Hazyview, White River and Swalala (proposed).
- Exploit the accessibility created by the R40 (Mpumalanga Route) as it opens the area up for tourism development with Klipkopje, Da Gama and Longmere Dams providing the necessary anchors.
- The Sabie River and R536 route provides a potential corridor of both agriculture and tourism development, which must be exploited in an environmentally sustainable way.
- The importance of Hazyview and Kiepersol as agricultural areas needs to be retained by protecting high potential agricultural land (to be used for commercial farming only) and to improve linkages to export markets.
- Small-scale downstream beneficiation of agricultural products should be actively promoted, as these activities can contribute to the growth of the local economy.

7.4.3.3 Development directives

A mix of agriculture, forestry, recreation as well as eco- and adventure tourism is supported within this zone. The following development directives shall apply:

- The land uses shall be restricted to agricultural and tourism activities and uses ancillary and complementary thereto.
- Agricultural and forestry land needs to be conserved and optimally utilised.
- Agri- and forestry villages need to be clustered in order to provide sustainable economic and social infrastructure.
- The provision of agri- and forestry villages shall be in accordance with the demand for local labour.
- Subdivision of farm portions will only be allowed subject to the consent of the National Department of Agriculture, Forestry and Fisheries.
• The utilisation of tourism facilities for permanent or long-term residential use needs to be restricted.
• Development of rivers, natural forests and wetlands is restricted and shall only be allowed after legal environmental procedures have been conformed with.
• Sand mining can only take place with the consent of the Department of Minerals and Energy.
• This zone should be protected from urban encroachment.

**Note:** Table_ illustrates that a more detailed framework is developed for Longmere. Refer to Chapter 8 for further detail.

Refer to Chapter 9 for land use management guidelines pertaining to tourism and agriculture.
7.4.4 Zone 4 - Western Agricultural Zone

7.4.4.1 Description

This zone is located in the western part of the municipal area, west of the R40 road and characterised with steep slopes, high rainfall and various localities where mining took place in the past.

Today this area is dominated by commercial agriculture including forestry plantations on the higher lying areas and intensive agriculture in the valleys along the Elands and Crocodile Rivers and their tributaries. Rural service centres includes Ngodwana, Kaapsehoop, Elandsheok and Alkmaar.

A number of small industries have established in the area. Forestry villages are located at Houtboschoek (SAPPI) and Berlin (Komatiland Forest). Food processing factories are located at Barvale Farm (SAD), Solomon’s Farm and Alkmaar.

Numerous tourist facilities are situated along the N4 highway, including restaurants, tea rooms, hotels, guest houses, lodges, fruit stalls and curios shops. The Sudwala Caves, Schoemanskloof and Kaapsehoop are the most prominent tourist attractions in the area.

The N4 highway and Gauteng-Maputo railway line are the main linkages traversing the area. Other important links include the R539 to Sabie via Sudwala caves and the Ngodwana-Kaapsehoop-Nelspruit link.

7.4.4.2 Strategic objectives

The strategic objectives of the Western Agricultural Zone are as follows:

- Regional access provided by the N4 Maputo Development Corridor needs to be exploited by focusing on strategically placed tourism developments as well as agri- and forestry industries. The mobility function of the N4 should however not be impeded.
- The Sudwala Caves, known to be the world's oldest dolomite caves needs to be promoted as a tourism attraction point, together with Kaapsehoop, Schoemanskloof and surrounding archaeological sites, heritage sites and nature reserves.
- The existing rural service centres of Kaapsehoop, Ngodwana, Elandshoek and Alkmaar should not be viewed as focus areas for future growth.
- High potential agricultural land along the Crocodile River catchment area needs to be protected and be used for commercial farming. Linkages should be improved to market areas.
- Small scale downstream beneficiation of agricultural products should be actively promoted, as these activities can contribute to the growth of the local economy.
- To optimise and further develop the agricultural, forestry and tourism potential of this area.

7.4.4.3 Development directives

The following development directives shall apply:
• The land uses shall be restricted to agricultural and tourism activities and uses ancillary and complementary thereto.
• Plantations occur on the higher lying areas providing the opportunity to establish complementary agri-processing industries.
• Intensive agriculture found along the Elands and Crocodile Rivers and their tributaries provide the opportunity to establish food processing factories.
• Agricultural and forestry land needs to be conserved and optimally utilised.
• Agri- and forestry villages need to be clustered in order to provide sustainable economic and social infrastructure.
• The provision of agri- and forestry villages shall be in accordance with the demand for local labour.
• The utilisation of tourism facilities for permanent or long-term residential use needs to be restricted.
• Subdivision of farm portions will only be allowed subject to the consent of the National Department of Agriculture, Forestry and Fisheries.
• Development of rivers, natural forests and wetlands is restricted and shall only be allowed after legal environmental procedures have been conformed with.
• Sand mining can only take place with the consent of the Department of Minerals and Energy.
• This zone should be protected from urban encroachment.

Note: Table_: illustrates that more detailed frameworks are prepared for Ngodwana, Elandshoek, Kaapsehoop and Alkmaar-Cairn-Burnside area. Refer to Chapter 8 for further detail.

Refer to Chapter 9 for land use management guidelines pertaining to tourism and agriculture.
7.4.5 Zone 5 - Central Agricultural Zone

7.4.5.1 Description

This triangular piece of land is centred between the N4, R40 and R538 surrounded by Nelspruit, White River, Plaston, KMIA and Karino.

Mountainous areas and high potential agricultural land constitutes the area and includes developments such as Wild Fig Country Estate and Likweti Private Game Reserve.

Prominent rivers traversing the area include White River in the east and the Crocodile River in the south including the Primkop and Friedenheim Dams. Minor district roads are located the northern part of this zone.

![Fertile agricultural land](image1)

7.4.5.2 Strategic objective

The strategic objectives of the Central Agricultural Zone are as follows:

- Regional access provided by the N4 Maputo Development Corridor, proximity of the KMIA, R538 and R40 roads needs to be exploited by focusing on strategically placed tourism developments as well as agri-industries.
- The mobility function of the N4, R538 and R40 should be protected by any development in this zone.
- High potential agricultural land needs to be protected and be used for commercial farming. Linkages should be improved to market areas.

![Wild Fig Country Estate](image2)

7.4.5.3 Development directives

A mix of conservation, eco-tourism and agricultural uses are supported within this zone including:

- Formal and informal Protected Areas managed for biodiversity, wildlife production and recreational or educational tourism.
- Eco-estates, lifestyle or investment type recreational ownership such as share block schemes, multi ownership reserves with limited development on extensive land portions similar to Wild Fig Country Estate.

- Land uses in this zone shall support the development envisaged around the Kruger Mpumalanga International Airport and IDZ along the Karino-KMIA-Plaston activity corridor.

- High potential agricultural land needs to be protected against unnecessary intrusion of unrelated activities.
- Subdivision of farm portions is subject to the consent of the National Department of Agriculture, Forestry and Fisheries.
• Protect environmental sensitive areas including the riverine vegetation and indigenous bush along watercourses.
• Development of rivers, natural forests and wetlands is restricted and shall only be allowed after legal environmental procedures have been conformed with.
• This zone should be protected from urban encroachment.

Refer to Chapter 9 for land use management guidelines pertaining to environmental conservation, tourism and agriculture.
8.1 Introduction

As indicated in Table: this chapter contains detailed plans for identified areas within the municipality, i.e.:

Level 2: Traditional Authority Strategic Frameworks - containing spatial development proposals for the 9 Traditional Authority Areas.

Level 3: Urban and Rural Strategic Frameworks - containing spatial development proposals for identified urban and rural nodes.

Level 4: For further detailed proposals reference should be made to the Precinct Plans developed for the municipality, which currently do not form part of the SDF.

Disclaimer:

1. Proposals made in this chapter are broad and indicative and do not follow cadastral boundaries. Demarcated areas follow existing settlement boundaries, existing and proposed roads, railway infrastructure, power lines or topographical features i.e.: rivers, mountains, ridges, valleys etc.

2. Land use proposals do not change or confer real rights on land.

3. All development proposals are subject to the availability of engineering services. The capacity and availability of engineering services dictate the viability and feasibility of any new development.

Spatial concepts

Spatial concepts implemented in the strategic frameworks for Mbombela are described in the table below.
Table: Spatial concepts

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
<th>Location</th>
<th>Why</th>
</tr>
</thead>
</table>
| Urban edge   | The urban growth boundary indicates the interface between urban and rural environments. It therefore indicated the area where urban growth should not be allowed.  
(Refer to guidelines in Phase 4) | See strategic frameworks           | A major spatial problem is uncontrolled, low-density sprawling of settlements into the surrounding rural area. This has a number of disadvantages: It results in a settlement pattern that has neither urban nor rural advantages. In terms of infrastructure investment it is impossibly expensive to serve. It could compromise valuable natural environments and high potential agricultural land |
| Densification| Densification is the process whereby densities, i.e. the number of dwelling units per hectare, increase in a planned and sustainable manner. It can take place by means of:  
Apartment buildings (flats)  
Cluster housing (group housing)  
Subdivision and second dwelling | See strategic frameworks           | Densification creates more compact environments that improve access to work, services. It also provides for more efficient use of infrastructure                                                                                                                   |
| Infill/Extension | Is the process whereby vacant land, within the urban edge, is used for infill development. It can take place by means of:  
development of vacant erven that are already surveyed;  
“Greenfields” development, being the natural extension of town. | See strategic frameworks           | Infill development creates more compact environments that improve access to work, services. It also provides for more efficient use of infrastructure                                                                                                                   |
<p>| Mixed use    | The mixing of different land uses within a specific location or precinct. Mixed uses can comprise a combination of residential (mostly higher density residential), businesses, offices and community facilities. Mixed uses can either comprise different land uses on different erven but within the same locality or mixed use in the same building | See strategic frameworks           | Nodes are important urban elements which can be used to restructure areas where activity is dispersed and where there is no sense of place legibility or special focus.                                                                                                                                  |</p>
<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
<th>Location</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formalisation</td>
<td>Formalisation means the proper planning and surveying of an informal settlement to provide for appropriate land uses and road hierarchy.</td>
<td></td>
<td>Formalisation is required to execute effective land use management, tenure upgrade that will lead to socio-economic development</td>
</tr>
</tbody>
</table>
8.2 Traditional Authority Frameworks

Strategic frameworks are prepared for:

1. Nkambeni Traditional Authority
2. Kgarudi Traditional Authority
3. Gutshwa Traditional Authority
4. Msogwaba Traditional Authority
5. Mbuanye Traditional Authority
6. Masoyi Traditional Authority
7. Mdluli Traditional Authority
8. Mpakeni Traditional Authority

For Lomshiyo Traditional Authority refer to the Matsulu Urban Framework.

8.2.1 Nkambeni Traditional Authority

8.2.1.1 Background

Nkambeni Traditional Authority is situated in the northern part of Mbombela and is bordered by Bushbuckridge Local Municipality to the north, the Kruger National Park to the east, Mdluli and Masoyi Traditional Authorities to the south and the North-Sand River to the west.

Nkambeni Traditional Authority constitutes the following settlements: Shabalala, Nyongane, Nkambeni, Mahushu, Bekiswayo, Numbi and Salubindza. The main access roads linking these settlements are the P17/6, P33/5 to Phabeni Gate and P113/1 to Numbi Gate.

The influx of people into the area is high. The settlements are growing rapidly especially along the main roads, mainly in an informal manner.

Nkambeni constitutes mainly low-density residential (informal) with scattered social services (schools, community halls, clinics etc.). Economic activities tend to locate along the main P17/6 road linking Hazyview with White River. Agriculture includes extensive livestock and cultivation.

8.2.1.2 Swot analysis

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity to established economic centre of Hazyview</td>
<td>Unplanned and informal settlement</td>
</tr>
<tr>
<td>Regional access provided by the P17/6</td>
<td>General poor road access and lack of road hierarchy</td>
</tr>
<tr>
<td>Availability of natural resources i.e.: Sabie and North-Sand Rivers</td>
<td>Poor north-south linkage</td>
</tr>
<tr>
<td>Proximity and access to KNP through Phabeni and Numbi Gates Available land for a regional cemetery site</td>
<td>Limited economic base</td>
</tr>
<tr>
<td>机会将资源用于 农业发展 Sabie and North-Sand Rivers 农业发展 along Sabie and North Sand Rivers</td>
<td>Lack of engineering services and social infrastructure</td>
</tr>
<tr>
<td>Tourism development along Sabie River and KNP Infill development on vacant land between villages Improve north-south road linkages</td>
<td>Lack of land use management</td>
</tr>
<tr>
<td>目标将资源用于 农业发展 Sabie and North-Sand Rivers 农业发展 along Sabie and North Sand Rivers</td>
<td>机会将资源用于 农业发展 Sabie and North-Sand Rivers 农业发展 along Sabie and North Sand Rivers</td>
</tr>
<tr>
<td>Tourism development along Sabie River and KNP Infill development on vacant land between villages Improve north-south road linkages</td>
<td>机会将资源用于 农业发展 Sabie and North-Sand Rivers 农业发展 along Sabie and North Sand Rivers</td>
</tr>
</tbody>
</table>

8.2.1.3 Strategic objectives

The strategic objectives adopted for Nkambeni Traditional Authority are listed in the table below (See Plan_: Strategic Framework: Nkambeni Traditional Authority)
### Symbol on Plan | Strategic Objectives
--- | ---
A | Direct development in the north towards the established economic centre of Hazyview.
B | Focus development to the west, along the Nsikazi corridor and around the nodes of Mahushu, the new sports facilities at Salubindza and Swalala.
C | Deliberately protect land along the KNP for open space, conservation, tourism and agricultural purposes.
D | Prevent settlements from extending in an easterly direction towards the KNP conservation zone.
E | Protect environmental sensitive areas through a dedicated open space system.
F | Exploit and conserve the agricultural and tourism potential provided by the Sabie and North-Sand Rivers.
G | Improve north-south road linkage.

#### 8.2.1.4 Development Directives

**Economic opportunity zones**

**Nodal development**

- Mixed use development is promoted at the Numbi Road (P113/1)-P17/6 intersection (Mahushu node) to include businesses, small office development, restaurants, curios shops, tourism facilities and retail.
- Emphasis should be on regenerating the node through urban design, landscaping, lighting, paving, pedestrian walkways and sufficient parking.
- Opportunities exist for tourism development at Phabeni and Numbi Gates with focus on game reserves, hotels, lodges and recreational or educational tourism.

**Corridor development**

- An increased intensity of development is encouraged along the P17/6 activity corridor, within the urban edge, with priority on the section between the Mahushu and Mshadza nodes.
- Create safe and secure environments along the P17/6 (Nsikazi corridor) through the reservation of dedicated areas for pedestrians, bicycle routes and street furniture.
- Agriculture and tourism development is supported along the Sabie River-R536 tourism spine to include recreational, eco-, adventure- and agri-tourism.
- High density residential developments are supported within and adjacent to the economic opportunity zones.

**New development areas**

- Three areas are reserved for residential development/demarcation of sites. These areas are located south of Bekiswayo, north of Nkambeni and east of Shabalala.
- Erven should be properly surveyed (Refer to Chapter 9 – Demarcation of sites in Traditional Authority Areas)
- Provision of the full range of community facilities such as schools, clinics, open spaces etc, should be taken into account in developing these areas.
- New developments should be restricted to areas falling outside environmentally sensitive areas.
- New residential developments should provide for smaller erven and higher densities.

**Incremental services upgrading**

- Service upgrade priority areas include the settlements of Numbi, Salubindza, Bhekiswayo, Mahushu, Nkambeni, Tshabalala and Nyongane. (Refer to Chapter 9 for the infrastructure policy).
- Upgrading initiatives should focus on, *inter alia*, the following:
  - Engineering services (sanitation, water supply, electricity and storm water);
  - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
- Upgrading of existing housing stock.
- Prevent further informal settlement on the perimeters of existing villages.
- Contain urban expansion/demarcation of sites within the proposed urban edge. Further expansion of villages should be towards each other along main roads.

**Sports and recreation**

- The new sports fields at Salubindza along the D2967 road should be promoted as an important facility for the Nkambeni Traditional Authority.
- Provision of recreational facilities including community swimming pool, courts, a multi-purpose sports centre, playgrounds etc. should be prioritised.

**Integrated open space system**

- The Sabie and North-Sand Rivers are regarded as important ecological corridors to be protected.
- Steep slopes and “koppies” to the north of Numbi, south of Shabalala and south of Nkambeni should remain undeveloped and reserved for grazing purposes and eco-tourism.
- Floodline areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the MOSS.
- The protection of public open space is priority and the area within the 1:100 year floodline needs to be cleared from any development/settlement.
- Refer to Chapter 9 for guidelines on the planning and design of open spaces.

**Agriculture**

- Prime agricultural land (cultivation) should be protected from urban extension, especially along the banks of the Sabie and North-Sand River.
- Grazing land must be protected from urban extension, overgrazing and invasion of alien plants.
- The grazing potential (measured in hectares necessary to sustain one large livestock unit) should be determined and maintained with assistance from the Department of Agriculture.
- Chiefs and headman must be held responsible for maintaining this grazing ratio to ensure that overgrazing and bad farming practices do not pursue.
- Land uses within this zone should be restricted to agricultural and tourism activities and uses ancillary and complementary thereto.
- An Environmental Impact Assessment will be required for the establishment of community kraals, depending on its size.
- Management plans must be developed for commonages.
- Refer to Chapter 9 – General guidelines for the development of agricultural land.

**Regional cemetery**

- A regional cemetery is proposed south of Nkambeni village, east of the P17/6 road.
- Refer to Chapter 9 – General guidelines for the development of cemeteries.

**KNP conservation belt**

- Land uses along the Kruger National Park should be restricted to tourism, conservation, agriculture and should be compatible with the Kruger National Park’s Zonation Plan (2006). Refer to Chapter 9 for land use guidelines for municipalities adjoining the park.
- Settlements within the belt should not be encouraged to extend any further.
- Every new development must be informed by an Environmental Management Plan, headed by an Environmental Impact Assessment.
- A site development plan must be approved by the municipality indicating the design and functional utilisation of the site.
Roads and transportation

- Upgrade the main roads within the settlements of Tshabalala, Nyongane, Nkambeni, Mahushu and Numbi. These road upgrades should serve as main collectors and feeders to the main arterials such as the P17/6, P33/5 and D2965 roads.
- Improve north-south linkage through a new road between Nyongane and Numbi.
- Reference must be made to the Stormwater Masterplan for Nsikazi for further road upgrade proposals.
- Provide an efficient and effective public transport system to improve linkages within Nkambeni and to other traditional areas.
- Implement a clear road hierarchy within the existing villages.
8.2.2 Kgarudi Traditional Authority

8.2.2.1 Background

Kgarudi Traditional Authority is located in the northernmost part of the municipality, north of Sabie River near Hazyview.

The part of Kgarudi that falls within Mbombela is predominantly undeveloped. Activities taking place in the area are limited to agriculture, tourism and a part of the Marite settlement, located in Bushbuckridge Local Municipality.

The Shangana Cultural Village is the main tourist attraction. The main access roads are the R40 to Bushbuckridge and R535 to Graskop.

8.2.2.2 Swot analysis

Table_ indicates the strengths, weaknesses, opportunities and threats of Kgarudi Traditional Authority.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity to the established economic centre of Hazyview</td>
<td>Lack of land suitable for human settlements due to topographical constraints</td>
</tr>
<tr>
<td>Regional access provided by the R40 and R535 road to Graskop</td>
<td>Traditional authority cross-cutting municipal boundaries</td>
</tr>
<tr>
<td>Established cultural heritage site</td>
<td>Limited economic base</td>
</tr>
<tr>
<td>Availability of natural resources i.e.: Sabie and Marite Rivers, adjoining Boschhoek Nature Reserve</td>
<td>Lack of engineering services and social infrastructure</td>
</tr>
<tr>
<td>Proximity and access to KNP through Phabeni Gate</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism development (eco- and cultural tourism)</td>
<td>Illegal land invasion</td>
</tr>
<tr>
<td>Agricultural development along Sabie and Marite Rivers</td>
<td>Encroachment onto environmental sensitive areas</td>
</tr>
<tr>
<td></td>
<td>Possible forfeiting high potential agricultural land</td>
</tr>
</tbody>
</table>

8.2.2.3 Strategic objectives

The strategic objectives adopted for Kgarudi Traditional Authority are listed in the table below (See Plan_: Strategic Framework: Kgarudi Traditional Authority)

<table>
<thead>
<tr>
<th>Symbol on Plan</th>
<th>Strategic Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Direct urban development/settlement towards the established economic centre of Hazyview.</td>
</tr>
<tr>
<td>B</td>
<td>Develop Kgarudi’s inherent tourism (R40 and R535) and agricultural potential along Sabie and Marite Rivers.</td>
</tr>
<tr>
<td>C</td>
<td>Align tourism and conservation initiatives with the adjoining Boschhoek Nature Reserve.</td>
</tr>
<tr>
<td>D</td>
<td>Prevent the further southern extension of Marite settlement</td>
</tr>
<tr>
<td>E</td>
<td>Protect environmental sensitive areas through a dedicated open space system</td>
</tr>
</tbody>
</table>
8.2.2.4 Development Directives

Economic opportunity zones

Nodal development

- Shangana Cultural Centre should be developed into a regional cultural tourism centre. Provision should be made for good access, signage, ablution facilities, proper maintenance and accommodation facilities at the centre.
- Promote Shangana Cultural Village as an important tourist destination for Kgbaru Traditional Authority.
- Economic activity and mixed use development should be directed towards the 1st order node of Hazyview

Corridor development

- The Sabie River-R536 route provides a potential corridor of both agriculture and tourism development, which must be exploited in an environmentally sustainable way.
- Agricultural and strategically located tourism initiatives are encouraged along the R40, in support of the Nelspruit-Phalaborwa SDI and the Mbombela Golden Triangle.

Incremental service upgrading

- The southern extension of Marite settlement into Mbombela Municipality should be regarded as service upgrading priority area.
- In cooperation with Bushbuckridge Local Municipality, upgrading initiatives should focus on, inter alia, the following:
  - Roads (internal vehicular access) and engineering services (sanitation, water supply, electricity & storm water);
  - Upgrading of existing housing stock; and
  - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
- Prevent further informal settlement on the perimeters of existing villages.

Tourism and accommodation

- Land uses should be restricted to agriculture, commercial nature based tourism, (share block schemes, multi ownership reserves) and conservation uses.
- The utilisation of tourism facilities for permanent or long-term residential use needs to be restricted.
- Every new development should be informed by an Environmental Management Plan, headed by an Environmental Impact Assessment.
- A site development plan must be approved by the municipality indicating the design and functional utilisation of the site.
- Refer to Chapter 9 for land use guidelines pertaining to holiday accommodation.

Integrated open space system

- The Sabie and Marite Rivers are regarded as environmental sensitive with conservation value.
- Mountainous areas to the north-west of Kgbaru should remain undeveloped and reserved for grazing purposes and eco-tourism.
- Floodline areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the MOSS.
- Refer to Chapter 9 for guidelines on the planning and design of open spaces.

Agriculture

- Prime agricultural land (cultivation) should be protected, especially along the banks of the Sabie and Marite Rivers.
- Grazing land must be protected from urban extension, overgrazing and invasion of alien plants.
- The grazing potential (measured in hectares necessary to sustain one large livestock unit) should be determined and maintained with assistance from the Department of Agriculture.
• Chiefs and headman must be held responsible for maintaining this grazing ratio to ensure that overgrazing and bad farming practices do not pursue.
• Land uses within this zone should be restricted to agricultural and tourism activities and uses ancillary and complementary thereto.
• Depending on the size of the kraal, an Environmental Impact Assessment will be required for the establishment of community kraals.
• Management plans must be developed for commonages.
• Refer to Chapter 9 – General guidelines for the development of agricultural land.

**Roads and transportation**

• Upgrade and maintain the R40 and R535 main roads on a regular basis to ensure efficient vehicular movement.
8.2.3 Gutshwa Traditional Authority

8.2.3.1 Background

Gutshwa Traditional Authority is situated in the central part of the Nsikazi area and is bordered by Mdluli and Masoyi Traditional Authorities to the north, Mbuyane Traditional Authority to the south, the Legogote area to west and the Kruger National Park to the east.

Gutshwa Traditional Authority constitutes the following settlements: Mgcobaneni, Chweni, Phathwa, Nkohlakalo, Gutshwakop, Khumbula, Malekutu, Mahukube, Makoko, Phameni and Mjejane. The main roads linking these settlements are:

- D2968 linking to Makoko to the east
- D2969 linking Chweni to Salubindza further north
- D2970 linking to Kabokweni to the south
- D2971 linking to Mjejane to the east
- D2975 linking to Buyelani to the east
- D1411 linking Chweni to Nkohlakalo to the south

Mjejane, Mahukube and Phameni are isolated villages to the east.

Gutshwa Traditional Authority has a limited economic base. Businesses tend to locate along the main D1411 road and around Nsikazi Stadium. Low-density residential dominates the area, supported by institutional uses, community and recreational facilities. Agriculture constitutes extensive livestock and cultivation.

The Gutshwa, Nsikazi and Ga-Tshwene Rivers provide livelihoods to the areas adjoining it in the form of crop farming, sand mining and brick-making.

8.2.3.2 Swot analysis

Table_: indicates the strengths, weaknesses, opportunities and threats of Gutshwa Traditional Authority.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good access to Kabokweni</td>
<td>Unplanned and informal settlement</td>
</tr>
<tr>
<td>Proximity of KNP and possibility of a new access gate at Makoko</td>
<td>Scattered settlements</td>
</tr>
<tr>
<td>Available land for a regional cemetery</td>
<td>General poor road conditions and lack of road hierarchy</td>
</tr>
<tr>
<td>Availability of natural resources i.e.: Gutshwa, Nsikazi and Ga-Tshwene</td>
<td>Limited economic base</td>
</tr>
<tr>
<td>Rivers</td>
<td>Lack of engineering and social infrastructure</td>
</tr>
<tr>
<td>Nsikazi Sports Stadium</td>
<td>Lack of land use management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nodal development at the D2970-D1411 intersection</td>
<td>Illegal land invasion</td>
</tr>
<tr>
<td>Services upgrade and formalisation</td>
<td>Encroachment onto environmental sensitive areas</td>
</tr>
<tr>
<td>Agricultural development along Gutshwa, Nsikazi and Ga-Tshwene Rivers</td>
<td>Pressure on municipal services</td>
</tr>
<tr>
<td>Infill development on vacant land between settlements</td>
<td>Diminishing land for agricultural purposes (grazing and cultivation)</td>
</tr>
<tr>
<td>Tourism development (eco- and cultural tourism)</td>
<td></td>
</tr>
</tbody>
</table>

8.2.3.3 Strategic objectives

The strategic objectives adopted for Gutshwa Traditional Authority are listed in the table below (See Plan_: Strategic Framework: Gutshwa Traditional Authority).

<table>
<thead>
<tr>
<th>Symbol on Plan</th>
<th>Strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Focus development to the west along the Nsikazi activity corridor.</td>
</tr>
<tr>
<td>B</td>
<td>Integrate settlements in the southern part with the economic node of Kabokweni and a new node at Nsikazi Stadium.</td>
</tr>
<tr>
<td>C</td>
<td>Integrate settlements in the northern part with the proposed Swalala node.</td>
</tr>
</tbody>
</table>
Establish a conservation belt along the KNP boundary for purposes of open space, conservation, tourism and agriculture.

Prevent settlements to extend in an easterly direction towards the KNP conservation zone

Protect environmental sensitive areas through a dedicated open space system (MOSS)

Optimally utilize agricultural land for cultivation and grazing purposes

8.2.3.4 Development directives

Economic opportunity zones

Nodal development
- Mixed use development is supported at the D1411/D2970 intersection to include businesses, office development, retail, high-density residential and uses related to the Nsikazi Stadium.
- Emphasis should be on regenerating the node through urban design, landscaping, lighting, paving, pedestrian walkways and sufficient parking.

Corridor development
- An increased intensity of development is encouraged along the Nsikazi activity corridor, within the urban edge, with focus on the section between the Nsikazi Stadium and Kabokweni nodes.
- Create safe and secure environments along the Nsikazi corridor through the reservation of dedicated areas for pedestrians, bicycle routes and street furniture.

New development areas
- Four areas are reserved for mainly residential development measuring approximately 500ha. These areas are located at Khumbula in the south and Mgcobaneni.

These areas should be properly surveyed (Refer to Chapter 9 – Demarcation of sites in Traditional Authority Areas)

Provision of the full range of community facilities such as community centres, schools, clinics, open spaces, cemeteries etc, should be taken into account in developing these areas.

New developments should be restricted to areas falling outside environmentally sensitive areas.

New residential developments should provide for smaller erven and higher densities, especially in and around the node at Nsikazi Stadium.

Incremental service upgrading

- Service upgrade areas include the settlements of Salubinza, Mgcobaneni, Chweni, Khumbula, Gutshwakop, Nkohlakalo, Phatwa, Malekutu, Mahukube, Mjejane and Phameni.
- Service upgrade priority areas are identified nodes and settlements along the Nsikazi corridor. (Refer to Chapter 9 - Infrastructure policy).
- Upgrading initiatives should focus on, *inter alia*, the following:
  - Engineering services (sanitation, water supply, electricity and storm water);
  - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
  - Upgrading of existing housing stock.
- Prevent further informal settlement on the perimeters of existing villages.
- Contain urban expansion/demarcation of sites within the proposed urban edge. Further expansion of villages should be towards each other along main roads.

Integrated open space system

- The Gutshwa, Nsikazi and Ga-Tshwene Rivers are regarded as important ecological corridors to be conserved.
• Gutshwakop, the mountainous areas south of Chweni and between Phameni and Mgcobaneni should be reserved for grazing purposes and eco-tourism.
• Floodline areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the MOSS.
• The protection of public open space is priority and the areas within the 1:100 year floodline need to be cleared from any development/settlement.
• Refer to Chapter 9 for guidelines on the planning and design of open spaces.

**KNP conservation belt**

• Land uses along the Kruger National Park should be restricted to tourism, conservation and agriculture and should be compatible with land use guidelines of the Kruger National Park’s Zonation Plan (2006). (Refer to Chapter 9 for land use guidelines for municipalities adjoining the KNP).
• Settlements within the belt should not be encouraged to extend any further.
• Every new development must be informed by an Environmental Management Plan, headed by an Environmental Impact Assessment.
• A site development plan must be approved by the municipality indicating the design and functional utilisation of the site.

**Agriculture**

• Land uses within this zone should be restricted to agricultural and tourism activities and uses ancillary and complementary thereto.
• Prime agricultural land (cultivation) should be protected from urban extension, especially along the banks of the Gutshwa, Nsikazi and Ga-Tshwene Rivers.
• Grazing land must be protected from urban extension, overgrazing and invasion of alien plants.

• Grazing potential (measured in hectares necessary to sustain one large livestock unit) should be determined and maintained with assistance from the Department of Agriculture.
• Chiefs and headman must be held responsible for maintaining this grazing ratio to ensure that overgrazing and bad farming practices do not pursue.
• Depending on the size of the kraal, an Environmental Impact Assessment will be required for the establishment of community kraals.
• Management plans must be developed for commonages.
• Refer to Chapter 9 – General guidelines for the development of agricultural land.

**Regional cemetery**

• A regional cemetery is proposed along the D1141 road between Chweni and Khumbula.
• Refer to Chapter 9 – General guidelines for the development of cemeteries.

**Roads and transportation**

• The following road upgrades are recommended:
  - The link between Kabokweni and Khumbula
  - The link between the D1411 and D2970
  - Refer to the Stormwater Masterplan for Nsikazi for further road upgrade proposals.
• Provide an efficient and effective public transport system to improve linkages within Gutshwa and to other traditional areas.
8.2.4 Msogwaba Traditional Authority

Also refer to proposals made for Kanyamanzane.

8.2.4.1 Background

Msogwaba Traditional Authority is situated in the southern part of the eastern Nsikazi area and is bordered by Mpakeni Traditional Authority to the north and east, the Crocodile River to the south, mountainous areas to the west. A small portion of Mbuyane Traditional Authority borders the area to the north.

Msogwaba Traditional Authority constitutes the following settlements: Msogwaba, Daantjie and Pienaar. The main roads linking these settlements are:

- D1723 northern Luphisi link
- Southern Luphisi link
- P258/1 linking Daantjie, Pienaar, Msogwaba to Kabokweni in the north and Kanyamazane in the south
- D2975 linking to Luphisi to the east

The area is relatively small in size and is densely populated. Residential dominates the area, supported by institutional uses, community and recreational facilities.

Businesses tend to locate along the P258/1 main road, clustering at the P258/1-D1723 intersection and at the confluence of roads D2975, P258/1 and southern Luphisi link.

Msogwaba is surrounded by mountainous areas restricting development into any direction. Numerous tributaries traverse the area that prevents good linkages and functional integration of neighbourhoods.

8.2.4.2 Swot analysis

Table_: indicates the strengths, weaknesses, opportunities and threats of Msogwaba Traditional Authority.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good access to Kabokweni and Kanyamazane</td>
<td>Lack of land available for development</td>
</tr>
<tr>
<td>Good access to R538 via the Luphisi links</td>
<td>Unplanned settlement separated by topographical constraints</td>
</tr>
<tr>
<td>Proximity of KNP and possibility of a new access gate at Luphisi</td>
<td>General poor road conditions</td>
</tr>
<tr>
<td>Msogwaba Sports Stadium</td>
<td>Limited economic base</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenfield development along planned Kanyamazane western bypass</td>
<td>Urban sprawl and illegal land invasion</td>
</tr>
<tr>
<td>Nodal development at the confluence of roads D2975, P258/1 and southern Luphisi link and the P258/1-D1723 intersection</td>
<td>Pressure on municipal services</td>
</tr>
<tr>
<td>Services upgrade and formalisation</td>
<td>Encroachment onto roads P258/1 and D2975</td>
</tr>
<tr>
<td>Densification and infill development on vacant and underutilised land</td>
<td>Encroachment onto environmental sensitive areas</td>
</tr>
</tbody>
</table>

8.2.4.3 Strategic objectives

The strategic objectives adopted for Msogwaba Traditional Authority are listed in the table below (See Plan_: Strategic Framework: Msogwaba Traditional Authority).

<table>
<thead>
<tr>
<th>Symbol on Plan</th>
<th>Strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Exploit development opportunities provided by the planned Kanyamazane Western Bypass and Luphisi links</td>
</tr>
<tr>
<td>B</td>
<td>Encourage nodal development at strategic places along the Nsikazi activity corridor</td>
</tr>
</tbody>
</table>
### Development directives

#### Economic opportunity zones

**Nodal development**

- Mixed use development is supported at the confluence of roads D2975 and P258/1, the P258/1-Msogwaba Stadium road intersection and the P258/1-D1723 intersection.
- Emphasis should be on revitalising these nodes through urban design, landscaping, lighting, paving, pedestrian feeder roads and sufficient parking.
- Developing Msogwaba Stadium into a recreational node of significance should include the upgrade of existing facilities, a multi-purpose sports centre, playgrounds, improved access and parking.

**Corridor development**

- An increased intensity of development is encouraged along the Nsikazi activity corridor, within the urban edge.
- Create safe and secure environments along the Nsikazi corridor through the reservation of dedicated areas for pedestrians, bicycle routes and street furniture.
- High density residential developments are supported within and adjacent to the economic opportunity zones.

### New development areas

- The areas located at Msogwaba and to the north of Daantjie are reserved for new development.
- A mix of office, retail and high-density residential is envisaged on the land located at Msogwaba, measuring approximately 180ha in extent.
- Residential development is encouraged on the land located north of Daantjie.
- In developing these areas a proper survey is required. (Refer to Chapter 9 – Demarcation of sites in Traditional Authority Areas)
- Provision of the full range of community facilities such as community centres, schools, clinics, open spaces, cemeteries etc, should be taken into account in developing these areas.
- New developments should be restricted to areas falling outside environmentally sensitive areas.

### Incremental service upgrading

- Service upgrade areas include the settlements of Daanjie, Pienaar and Msogwaba.
- Upgrade priority areas are identified nodes and settlements along the Nsikazi corridor. (Refer to Chapter 9 - Infrastructure policy).
- Upgrading initiatives should focus on, *inter alia*, the following:
  - Engineering services (sanitation, water supply, electricity and storm water);
  - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
  - Upgrading of existing housing stock.
  - Prevent further informal settlement on the perimeters of existing villages.
  - Contain urban expansion/demarcation of sites within the proposed urban edge. Further expansion of villages should be towards each other along main roads.
Integrated open space system

- Floodline areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the MOSS.
- Mountainous areas should be reserved for grazing purposes and eco-tourism.
- The protection of public open space is priority and areas located within the 1:100 year floodline need to be cleared from any development/settlement.
- Refer to Chapter 9 for guidelines on the planning and design of open spaces.

Roads and transportation

- The following road upgrades are proposed:
- The southern Luphisi link
- The northern Luphisi link, extending eastwards to the residential areas of Pienaar,
- The north-south Stadium road
- Refer to the Stormwater Masterplan for Nsikazi for further road upgrade proposals.
- The Kanyamzane Western Bypass is a proposed new road to provide region accessibility for the eastern residential areas.
- Provide a public transport rank at Lehawu.
- Provide an efficient and effective public transport system to improve linkages within Msogwaba and to other traditional areas.
8.2.5 Mbuyane Traditional Authority

Also refer to proposals made for Kabokweni.

8.2.5.1 Background

Mbuyane Traditional Authority is situated in the central part of the eastern Nsikazi area, bordered by Msogwaba and Mpakeni Traditional Authorities to the south, Kruger National Park to the east and Gutshwa Traditional Authority to the north.

The Nsikazi and Ngodini Rivers and their tributaries as well as the mountainous areas have a significant bearing on settlement in the traditional area. Flatter areas occur in the eastern part towards the Kruger National Park.

The following settlements are located in the area: Backdoor, Dwaleni, Newscom, Ngodini, Clau-Clau, TV Trust, Nkohlakalo, Sipelanyane and Buyelane. The main roads linking these settlements are:

- P258/1 linking to Ngodini to Msogwaba and Kanyamazane in the south
- D1411 linking Kabokweni with Khumbula in the north
- D2689 linking Kabokweni with Plaston in the west
- D2974 linking to Sipelanyane in the east
- D2975 linking Sipelanyane to Buyelane
- D2970 linking Kabokweni with Gutshwakop
- D2973 linking Nkohlakalo with the P258/1 in the south

Residential dominates the area. Economic opportunities are dispersed throughout the area, whilst commercial and industrial activities are mainly located in the 2nd order activity node of Kabokweni.

The Ngodini and Nsikazi Rivers provide livelihoods to the areas adjoining it in the form of crop farming, sand mining and brick making.

8.2.5.2 Swot analysis

Table: indicates the strengths, weaknesses, opportunities and threats of Msogwaba Traditional Authority.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established 2nd order activity centre of Kabokweni</td>
<td>Unplanned settlement separated by topographical constraints</td>
</tr>
<tr>
<td>Good north-south linkage</td>
<td>Settlements scattered to the east</td>
</tr>
<tr>
<td>Good access to road R538 via the D2689 and D1723 (northern Luphisi links)</td>
<td>General poor road conditions (mainly gravel)</td>
</tr>
<tr>
<td>Availability of land to the east</td>
<td>Limited economic base</td>
</tr>
<tr>
<td>Proximity of KNP</td>
<td>Lack of engineering and social infrastructure</td>
</tr>
<tr>
<td>Ngodini and Nsikazi Rivers</td>
<td>Lack of land use management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural development along main rivers</td>
<td>Urban sprawl and illegal land invasion</td>
</tr>
<tr>
<td>Services upgrade and formalisation</td>
<td>Pressure on municipal services</td>
</tr>
<tr>
<td>Densification and infill development on vacant and underutilised land</td>
<td>Encroachment onto road P258/1</td>
</tr>
<tr>
<td>Tourism development (eco- and cultural tourism)</td>
<td>Encroachment onto environmental sensitive areas</td>
</tr>
<tr>
<td></td>
<td>Diminishing agricultural land</td>
</tr>
</tbody>
</table>

8.2.5.3 Strategic objectives

The strategic objectives adopted for Mbuyane Traditional Authority are listed in the table below (See Plan: Strategic Framework: Mbuyane Traditional Authority).
<table>
<thead>
<tr>
<th>Symbol on Plan</th>
<th>Strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Focus development to the west along the Nsikazi activity corridor.</td>
</tr>
<tr>
<td>B</td>
<td>Integrate settlements with the economic node of Kabokweni</td>
</tr>
<tr>
<td>C</td>
<td>Deliberately protect land along the KNP for open space, conservation, tourism and agricultural purposes.</td>
</tr>
<tr>
<td>D</td>
<td>Prevent settlement to extend in an easterly direction towards the KNP conservation zone.</td>
</tr>
<tr>
<td>E</td>
<td>Protect environmental sensitive areas through a dedicated open space system (MOSS).</td>
</tr>
<tr>
<td>F</td>
<td>Optimaly utilize agricultural land for cultivation and grazing purposes</td>
</tr>
<tr>
<td>G</td>
<td>Maintain strong east-west linkages to the Karino-KMIA-Plaston corridor</td>
</tr>
</tbody>
</table>

Emphasis should be on urban renewal, upgrade and formalisation to ensure security of tenure whilst boosting investor confidence. Prevent further uncontrolled residential developments on the fringes of the main settlements. Conservation of the natural environment should be priority.

8.2.5.4 Development directives

Economic opportunity zones

Nodal development

- Nodal development is supported at Kabokweni (See Kabokweni Strategic Framework).

Corridor development

- An increased intensity of development is encouraged along the Nsikazi activity corridor, within the urban edge, with focus on the section between the nodes of Kabokweni and Nsikazi Stadium.

- Create safe and secure environments along the Nsikazi corridor through the reservation of dedicated areas for pedestrians, bicycle routes and street furniture.
- High density residential developments are supported within and adjacent to the economic opportunity zones.

Incremental service upgrade

- The settlements earmarked for incremental service upgrade include Backdoor, Dwaleni, Newscom, Ngodini, Clau-Clau, TV Trust, Nkohlakalo, Sipelanyane and Buyelane.
- Priority areas include the identified nodes and settlements located along the Nsikazi corridor. (Refer to Chapter 9 - Infrastructure policy).
- Upgrading initiatives should focus on, *inter alia*, the following:
  - Engineering services (sanitation, water supply, electricity and storm water):
    - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
    - Upgrading of existing housing stock.
    - Prevent further informal settlement on the perimeters of existing villages.
- Contain urban expansion/demarcation of sites within the proposed urban edge.
- Further expansion of villages should be towards each other along main roads.

Integrated open space

- The Nsikazi and Ngodini Rivers are regarded as important ecological corridors to be conserved. The natural vegetation along these rivers should be maintained, loss of natural habitat minimised, and restoration encouraged.
- Mountainous areas surrounding Kabokweni and towards the KNP should be reserved for purposes of grazing, eco-tourism and conservation.
• Floodline areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the MOSS.

• The protection of public open space is priority and the areas within the 1:100 year floodline need to be cleared from any development/settlement.
• Refer to Chapter 9 for guidelines on the planning and design of open spaces.

KNP conservation belt

• Land uses along the Kruger National Park should be restricted to tourism, conservation, agriculture and should be compatible with land use guidelines of the Kruger National Park’s Zonation Plan (2006). (Refer to Chapter 9 for land use guidelines for municipalities bordering the KNP).
• Settlements within the belt should not be encouraged to extend any further.
• Every new development must be informed by an Environmental Management Plan, headed by an Environmental Impact Assessment.
• A site development plan must be approved by the municipality indicating the design and functional utilisation of the site.

Agriculture

• Land uses within this zone should be restricted to agricultural and tourism activities and uses ancillary and complementary thereto.
• Prime agricultural land (cultivation) should be protected from urban extension, especially along the banks of the Ngodini and Gutshwa Rivers.
• Grazing land must be protected from urban extension, overgrazing and invasion of alien plants.
• Grazing potential (measured in hectares necessary to sustain one large livestock unit) should be determined and maintained with assistance from the Department of Agriculture.

• Chiefs and headman must be held responsible for maintaining this grazing ratio to ensure that overgrazing and bad farming practices do not pursue.
• Depending on the size of the kraal, an Environmental Impact Assessment will be required for the establishment of community kraals.
• Management plans must be developed for commonages.
• Refer to Chapter 9 – General guidelines for the development of agricultural land.

Roads and transportation

It is important to achieve functional integration of fragmented communities (villages) through pedestrian friendly links and road upgrades.

• The following road upgrades are proposed:
  The D2973 access loop
  The D2974 road to Sipelanyane in the east
  The D1723 and D2689 are important east-west linkages and should be maintained or upgraded on a regular basis.
  Refer to the Stormwater Masterplan for Nsikazi for further road upgrade proposals.
  Provide a public transport rank at Lehawu.
  Provide an efficient and effective public transport system to improve linkages within Mbuyane and to other traditional areas.
8.2.6 Masoyi Traditional Authority

Also refer to proposals made for Swalala.

8.2.6.1 Background

Masoyi Traditional Authority is situated in the northern part of the eastern Nsikazi area, bordered by Nkambeni Traditional Authority to the north, Kruger National Park to the east, Mdluli and Gutshwa Traditional Authorities to the south and forestry plantations and farming areas to the west.

Masoyi Traditional Authority constitutes the following settlements; Mshadza, Phola, Chochocho, Swalala, Jerusalem, Manzini, Lund i and Legogote. These settlements are linked by the following main roads:

- P17/6 linking Swalala with Hazyview in the north and White River in the south
- D2967 linking to Chweni in the south and the Numbi road in the north
- D2969 linking Manzini with the P17/6.

The area is dominated by residential that lacks sufficient social facilities and engineering infrastructure. Commercial and business activities tend to locate along the main P17/6, D2969 and D2967 roads.

Agriculture includes grazing and pockets of cultivation, mainly found along the North-Sand and Nsikazi Rivers and their tributaries.

8.2.6.2 Swot analysis

Table_ indicates the strengths, weaknesses, opportunities and threats of Masoyi Traditional Authority.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good regional access provided by the P17/6, D2969 and D2967 roads</td>
<td>Limited economic base</td>
</tr>
<tr>
<td>Proximity of Hazyview, White River and commercial agricultural areas to the west</td>
<td>Unplanned settlement separated by topographical constraints</td>
</tr>
<tr>
<td>Resources including Legogote Mountain, Nsikazi and North-Sand River</td>
<td>General poor road conditions (mainly gravel) and stormwater problems</td>
</tr>
<tr>
<td>Mshadza Stadium</td>
<td>Lack of land use management</td>
</tr>
<tr>
<td></td>
<td>Lack of engineering and social infrastructure</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned re-alignment of the P17/6</td>
<td>Urban sprawl and illegal land invasion</td>
</tr>
<tr>
<td>Nodal development at strategic places along the Nsikazi corridor</td>
<td>Pressure on municipal services</td>
</tr>
<tr>
<td>Development of Mshadza Stadium</td>
<td>Encroachment onto road P17/6</td>
</tr>
<tr>
<td>Tourism development (eco- and cultural tourism)</td>
<td>Encroachment onto environmental sensitive areas</td>
</tr>
<tr>
<td>Agricultural development along main rivers</td>
<td>Diminishing agricultural land</td>
</tr>
<tr>
<td>Densification and infill development on vacant and underutilised land</td>
<td></td>
</tr>
</tbody>
</table>

8.2.6.3 Strategic objectives

The strategic objectives adopted for Masoyi Traditional Authority are listed in the table below (See Plan_: Strategic Framework: Masoyi Traditional Authority).

<table>
<thead>
<tr>
<th>Symbol on Plan</th>
<th>Strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Focus development to the west along the P17/6 route.</td>
</tr>
<tr>
<td>B</td>
<td>Develop Swalala into a prominent economic node and facilitate integration with surrounding settlements.</td>
</tr>
<tr>
<td>C</td>
<td>Encourage nodal development at strategic places along the</td>
</tr>
</tbody>
</table>
Nsikazi activity corridor and P17/6.

D Protect environmental sensitive areas through a dedicated open space system (MOSS).

E Optimally utilize agricultural land for cultivation and grazing purposes.

F Maintain existing and establish new east-west road linkages.

8.2.6.4 Development directives

Economic opportunity zones

Nodal development

- Nodal development is supported at Swalala (See Masoyi Urban Framework).
- Mixed use development is encouraged at the confluence of the old and new P17/6 roads and proposed east-west link to include businesses, retail, high-density residential, a transport interchange and uses to serve to surrounding communities of Lundi and Legogote.

Corridor development

- An increased intensity of development is encouraged along the Nsikazi activity corridor, within the urban edge, with focus on the sections between the Swalala and Mahushu nodes.
- Create safe and secure environments along the Nsikazi corridor through the reservation of dedicated areas for pedestrians, bicycle routes and street furniture.
- High density residential developments are supported within and adjacent to the economic opportunity zones.

Incremental service upgrade

- The settlements earmarked for incremental service upgrade include Mshadza, Phola, Chochocho, Swalala, Jerusalem, Manzini, Lundi and Legogote.

- Priory areas include the identified nodes and settlements located along the Nsikazi corridor. (Refer to Chapter 9 - Infrastructure policy).
- Upgrading initiatives should focus on, *inter alia*, the following:
  - Engineering services (sanitation, water supply, electricity and storm water);
  - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
  - Upgrading of existing housing stock.
- Prevent further informal settlement on the perimeters of existing villages.
- Contain urban expansion/demarcation of sites within the proposed urban edge.
- Further expansion of villages should be towards each other along main roads.

Integrated open space

- The Nsikazi and North-Sand Rivers are considered as important ecological corridors to be conserved. The natural vegetation along these rivers should be maintained, loss of natural habitat minimised, and restoration encouraged.
- Mountainous areas in the centre and to the south (including Legogote Mountain) should be utilised for purposes of grazing, ecotourism and conservation.
- Floodline areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the MOSS.
- The protection of public open space is priority and the areas within the 1:100 year floodline need to be cleared from any development/settlement.
- Refer to Chapter 9 for guidelines on the planning and design of open spaces.

Agriculture

- Land uses within this zone should be restricted to agricultural and tourism activities and uses ancillary and complementary thereto.
Prime agricultural land (cultivation) should be protected from urban extension, especially along the banks of the North-Sand and Nsikazi Rivers.

Grazing potential (measured in hectares necessary to sustain one large livestock unit) should be determined and maintained with assistance from the Department of Agriculture.

Chiefs and headman must be held responsible for maintaining this grazing ratio to ensure that overgrazing and bad farming practices do not pursue.

An Environmental Impact Assessment will be required for the establishment of a community kraal, depending on its size.

Management plans must be developed for commonages.

Refer to Chapter 9 – General guidelines for the development of agricultural land.

Regional cemetery

A regional cemetery is proposed in the northern part, close to Salubindza settlement.

Refer to Chapter 9 – General guidelines for the development of cemeteries.

Roads and transportation

It is important to achieve functional integration of fragmented communities (villages) through pedestrian friendly links and road upgrades.

The following road upgrades are proposed:

- The D2967 between Mashadza and Chochocho
- The D2969 between Manzini and the P17/6
- The northern extension of the D2967 to Numbi road
- North-south link between Chochocho and Manzini
- Refer to the Stormwater Masterplan for Nsikazi for further road upgrade proposals.

The following new road links are proposed:

- The re-alignment of the P17/6 to increase mobility along the route
- The western extension of the D2967 to link with the new P17/6
- An east-west link between the P17/6 and D1411
- Provide an efficient and effective public transport system to improve linkages within Masoyi and to other traditional areas.
- Establish a clear road hierarchy within existing settlements.
8.2.7 Mdluli Traditional Authority

8.2.7.1 Background

Mdluli Traditional Authority comprises two detached areas, the southern area including Makoko settlement and the northern area including a part of Nyongane settlement. Both areas are bordered by the Kruger National Park to the east.

Main access roads include:

- D2965 linking to Nyongane
- D2968 linking Makoko to Numbi Gate in the north

The villages are mainly residential with limited economic activities providing day-to-day services. Potential for rural-tourism development exists, especially along the KNP boundary at Makoko and Nyongane.

8.2.7.2 Swot analysis

Table: indicates the strengths, weaknesses, opportunities and threats of Mdluli Traditional Authority.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of natural resources (i.e.: KNP, Nsikazi River)</td>
<td>Secluded settlements</td>
</tr>
<tr>
<td></td>
<td>No significant economic base</td>
</tr>
<tr>
<td></td>
<td>Lack of engineering and social infrastructure</td>
</tr>
<tr>
<td></td>
<td>Unplanned settlement</td>
</tr>
<tr>
<td></td>
<td>General poor road conditions (mainly gravel)</td>
</tr>
<tr>
<td></td>
<td>Lack of land use management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism opportunities provided by the KNP, proposed Makoko gate and railway line</td>
<td>Illegal invasion of land</td>
</tr>
<tr>
<td></td>
<td>Ad-hoc development spoiling the intention of the KNP Conservation</td>
</tr>
</tbody>
</table>

8.2.7.3 Strategic objectives

The strategic objectives adopted for Mdluli Traditional Authority are listed in the table below (See Plan: Strategic Framework: Mdluli Traditional Authority).

<table>
<thead>
<tr>
<th>Symbol on Plan</th>
<th>Strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Focus development within the urban edges of existing settlements</td>
</tr>
<tr>
<td>B</td>
<td>Deliberately protect land along the KNP for open space, conservation, tourism and agricultural purposes</td>
</tr>
<tr>
<td>C</td>
<td>Exploit the tourism potential provided by the KNP, railway line and envisaged Makoko access gate</td>
</tr>
<tr>
<td>D</td>
<td>Protect environmental sensitive areas through a dedicated open space system (MOSS).</td>
</tr>
<tr>
<td>E</td>
<td>Optimally utilize agricultural land for cultivation and grazing purposes.</td>
</tr>
<tr>
<td>F</td>
<td>Upgrade and maintain existing east-west road linkages.</td>
</tr>
</tbody>
</table>

Mdluli Traditional Authority’s strategic objective should primarily be to provide basic services to its residences (e.g. water, energy, sanitation, health and educational facilities). Conservation of the natural environment should be a priority in order to leverage on the tourism market provided by the Kruger National Park.
8.2.7.4 Development directives

Economic opportunity zones

Nodal development

- Opportunities exist for tourism development at the proposed Makoko Gate with focus on hotels, lodges and recreational or educational tourism.

Incremental service upgrade

- Nyongane and Makoko settlements are earmarked for incremental service upgrade
- Upgrading initiatives should focus on, inter alia, the following:
  - Engineering services (sanitation, water supply, electricity and storm water);
  - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
  - Upgrading of existing housing stock.
- Prevent further informal settlement on the perimeters of existing villages.

KNP conservation belt

- Land uses in the areas along the boundary of the Kruger National Park should comply and be compatible with the Kruger National Park’s Zonation Plan (2006).
- Associated land uses may include nature conservation, cattle ranching, game breeding, tourist facilities and hunting.
- Settlements within the belt should be contained within the urban edge and not be encouraged to extend any further.
- Every new development must be informed by an Environmental Management Plan, headed by an Environmental Impact Assessment.
- A site development plan must be approved by the municipality indicating the design and functional utilisation of the site.

Integrated open space

- The Nsikazi Rivers is an important ecological corridor to be conserved. The natural vegetation along this river should be maintained, loss of natural habitat minimised, and restoration encouraged.
- Mountainous areas to the south of Nyongane should be reserved for purposes of grazing, eco-tourism and conservation.
- Floodline areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the MOSS.
- The protection of public open space is priority and the areas within the 1:100 year floodline need to be cleared from any development/settlement.
- Refer to Chapter 9 for guidelines on the planning and design of open spaces.

Agriculture

- Land uses within this zone should be restricted to agricultural and tourism activities and uses ancillary and complementary thereto.
- Cultivated land should be protected from urban extension, especially along the banks of the Nsikazi River.
- Grazing potential (measured in hectares necessary to sustain one large livestock unit) should be determined and maintained with assistance from the Department of Agriculture.
- Chiefs and headman must be held responsible for maintaining this grazing ratio to ensure that overgrazing and bad farming practices do not pursue.
- Depending on the size of the kraal, an Environmental Impact Assessment will be required for the establishment of community kraals.
- Management plans must be developed for commonages.
- Refer to Chapter 9 – General guidelines for the development of agricultural land.
Roads and transportation

- The D2968 and D2965 should be maintained and upgraded on a regular basis to ensure good access to the west.
- Refer to the Stormwater Masterplan for Nsikazi for further road upgrade proposals.
8.2.8 Mpakeni Traditional Authority

8.2.8.1 Background

Mpakeni Traditional Authority is situated in the southern part of the Nsikazi area, bordered by Mbuyane Traditional Authority to the north, Msogwaba Traditional Authority to the west, the Kruger National Park to the east and Lomshiyo Traditional Authority to the south and south-east.

Mpakeni Traditional Authority comprises of the settlements of Daantjie (partially), Luphisi, Mpakeni, Zwelisha and Phakane. Mtethomusha Nature Reserve is situated in the southern part.

Main roads linking these settlements include the:

- D2976 linking to Mpakeni
- D2975 linking Luphisi with Sipelanyane
- P258/1 providing regional access to the broader area
- D2974 providing access to Sipelanyane situated to the north of the Traditional Authority

The Nsikazi, Clau-Clau and Luphisi Rivers and their tributaries as well as the mountainous areas have a significant bearing on settlement in the traditional area. Flatter areas occur in the eastern part towards the Kruger National Park.

Land uses are dominated by residential including supporting institutional uses, economic activities are found in Daantjie, along the main Luphisi road. Grazing land occurs on the outskirts of settlements and cultivated land along tributaries of the Nsikazi, Luphisi and Clau-Clau Rivers.

Mtethomusha Nature Reserve provides up-market tourism and accommodation facilities, which are envisaged for the entire area adjoining the Kruger National Park.

8.2.8.2 Swot analysis

Table 8.1: indicates the strengths, weaknesses, opportunities and threats of Mpakeni Traditional Authority.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of natural resources i.e.: Kruger National Park,</td>
<td>Unplanned settlements secluded by topographical constraints</td>
</tr>
<tr>
<td>Methethomusha Nature Reserve, Nsikazi, Luphisi and Clau-Clau Rivers</td>
<td>Distant settlements with little or no economic base</td>
</tr>
<tr>
<td>Vacant and/or underutilised land</td>
<td>Lack of engineering and social infrastructure</td>
</tr>
<tr>
<td>Proximity to the established economic centres of Kabokweni and KaNyamazane</td>
<td>General poor road conditions (mainly gravel) and stormwater problems</td>
</tr>
<tr>
<td></td>
<td>Lack of land use management and ownership</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eco-tourism development along the KNP and Methethomusha Nature Reserve</td>
<td>Urban sprawl and illegal land invasion</td>
</tr>
<tr>
<td>Possible entrance gate at Luphisi and opportunities provided by through-traffic</td>
<td>Pressure on municipal services</td>
</tr>
<tr>
<td>Agricultural development along main rivers</td>
<td>Encroachment onto main roads</td>
</tr>
<tr>
<td>Densification and infill development on vacant and underutilised land</td>
<td>Encroachment onto environmental sensitive areas</td>
</tr>
<tr>
<td></td>
<td>Diminishing agricultural land</td>
</tr>
</tbody>
</table>

8.2.8.3 Strategic objectives

The strategic objectives adopted for Mpakeni Traditional Authority are listed in the table below (See Plan 8.1: Strategic Framework: Mpakeni Traditional Authority).
<table>
<thead>
<tr>
<th>Symbol</th>
<th>Strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Focus urban development to the west, towards Daantjie and Phakane settlements.</td>
</tr>
<tr>
<td>B</td>
<td>Limit the extension of settlements in an easterly direction.</td>
</tr>
<tr>
<td>C</td>
<td>Deliberately protect land along the KNP for open space, conservation, tourism and agricultural purposes.</td>
</tr>
<tr>
<td>D</td>
<td>Exploit the tourism potential provided by the KNP, Methethomuwsha Nature Reserve, railway line and envisaged Luphisi gate.</td>
</tr>
<tr>
<td>E</td>
<td>Protect environmental sensitive areas through a dedicated open space system (MOSS).</td>
</tr>
<tr>
<td>F</td>
<td>Optimally utilize agricultural land for cultivation and grazing purposes.</td>
</tr>
<tr>
<td>G</td>
<td>Improve north-south linkage.</td>
</tr>
</tbody>
</table>

Conservation of the natural environment should be priority in order to leverage on the tourism market provided by the Kruger National Park.

8.2.8.4 Development directives

Economic opportunity zones

Nodal development

- Opportunities exist for tourism development at the proposed Luphisi Gate with focus on hotels, lodges and recreational or educational tourism.
- Ensure sufficient integration of settlements in Mpakeni Traditional Authority with the economic nodes of Kabokweni, Msogwaba and Kanyamazane.

New development areas

- The areas located to the north of Daantjie and east of Phakane are reserved for new development, mainly for residential purposes.

- In developing these areas a proper survey is required. (Refer to Chapter 9 – Demarcation of sites in Traditional Authority Areas)
- Provision of the full range of community facilities such as community centres, schools, clinics, open spaces, cemeteries etc, should be taken into account in developing these areas.
- New developments should be restricted to areas falling outside environmentally sensitive areas.

Incremental service upgrade

- The settlements earmarked for incremental service upgrade include Daantjie (partially), Pienaar (partially), Luphisi, Mpakeni, Zwelisha and Phakane
- Priory areas include the settlements located closer to the Nsikazi corridor. (Refer to Chapter 9 - Infrastructure policy).
- Upgrading initiatives should focus on, *inter alia*, the following:
  - Engineering services (sanitation, water supply, electricity and storm water);
  - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
  - Upgrading of existing housing stock.
- Prevent further informal settlement on the perimeters of existing villages.
- Contain urban expansion/demarcation of sites within the proposed urban edge.
- Further expansion of villages should be towards each other along main roads.

Integrated open space

- The Nsikazi, Luphisi and Clau-Clau Rivers are considered as important ecological corridors to be conserved. The natural vegetation along these rivers should be maintained, loss of natural habitat minimised, and restoration encouraged.
- Mountainous areas should be utilised for purposes of grazing, eco-tourism and conservation.
• Floodline areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the MOSS.
• The protection of public open space is priority and the areas within the 1:100 year floodline need to be cleared from any development/settlement.
• Refer to Chapter 9 for guidelines on the planning and design of open spaces.

**KNP conservation belt**

• Land uses in the area along the boundary of the Kruger National Park should be compatible with the Kruger National Park’s Zonation Plan (2006).
• Associated land uses may include nature conservation, cattle ranching, game breeding, tourist facilities and hunting.
• Mpakeni and Luphisi should be contained within the urban edge and not be encouraged to extend any further.
• Every new development must be informed by an Environmental Management Plan, headed by an Environmental Impact Assessment.
• A site development plan must be approved by the municipality indicating the design and functional utilisation of the site.

**Agriculture**

• Land uses within this zone should be restricted to agricultural and tourism activities and uses ancillary and complementary thereto.
• Cultivated land should be protected from urban extension, especially along the banks of the Nsikazi, Luphisi and Clau-Clau Rivers.
• Grazing potential (measured in hectares necessary to sustain one large livestock unit) should be determined and maintained with assistance from the Department of Agriculture.
• Chiefs and headman must be held responsible for maintaining this grazing ratio to ensure that overgrazing and bad farming practices do not pursue.
• An Environmental Impact Assessment will be required for the establishment of a community kraal, depending on its size.

• Management plans must be developed for commonages.
• Refer to Chapter 9 – General guidelines for the development of agricultural land.

**Regional cemetery**

• A regional cemetery is proposed in the north-eastern part, along the D2975 road.
• Refer to Chapter 9 – General guidelines for the development of cemeteries.

**Roads and transportation**

The following road upgrade is proposed:
- The D2976 to Mpakeni
- Refer to the Stormwater Masterplan for Nsikazi for further road upgrade proposals.
- The following new road link is proposed:
  - A north-south link between Luphisi and Matsulu that will improve access to the N4.
  - Provide an efficient and effective public transport system to improve linkages within Mpakeni and to other traditional areas.
  - Establish a clear road hierarchy within existing settlements.
8.3 Urban Frameworks

Strategic urban frameworks are prepared for:

1. Nelspruit
2. White River
3. Hazyview
4. Kanyamazane
5. Matsulu
6. Kabokweni
7. Swalala
8. Rocky Drift
9. Karino
10. Kruger Mpumalanga International Airport
11. Plaston

8.3.1 Nelspruit (±84 000 people in 2010)

8.3.1.1 Background

Nelspruit was established as a railhead of the first section of construction on the railway from Mozambique to Pretoria. A time lapse during the construction period and during this time Nelspruit became the focal point of the Lowveld – goods still had to be transported to the interior by ox-wagon from Nelspruit.

Over time Nelspruit attracted traders and farmers because of the natural richness of the soil, adequate water for irrigation and a level valley floor.

Today Nelspruit is a regional service centre and capital of Mpumalanga Province providing a variety of services and facilities to the broader Mpumalanga, Swaziland and southern Mozambique. Nelspruit is one of the main South African tourist destinations, due to its proximity to the world famous Kruger National Park.

Nelspruit includes the CBD, Nelspruit Industrial, Matafin Sport and Recreational Node, Riverside Industrial, Riverside Park (the Mall and Government Complex), residential areas and surrounding agricultural holdings.
8.3.1.2 Swot analysis

Table_: indicates the strengths, weaknesses, opportunities and threats of Nelspruit.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good road and rail access (N4, R40, R37 and planned P166) Anchor developments providing regional services Well-established settlement with good infrastructure and planned roads Spontaneous growth centre Crocodile River</td>
<td>Limited developable land (due to topography and agricultural land) Rivers, mountains, roads and railway line hinder functional integration Low-density urban sprawl</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>New P166 bypass and associated development Development associated with new N4 bypass Mataffin precinct development Nelspruit CBD upgrade and extension Riverside node development and extension New road linkages</td>
<td>Illegal land invasion (informal settlement) Insufficient bulk water supply Degradation of environmental sensitive areas Forfeiting high potential agricultural land Poor land use control on peripheral areas (Maggiesdal/Cromdale)</td>
</tr>
</tbody>
</table>

8.3.1.3 Strategic objectives

The strategic objectives adopted for Nelspruit are listed in the table below (See Plan_: Strategic Framework: Nelspruit).

<table>
<thead>
<tr>
<th>Symbol on Plan</th>
<th>Strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Upgrade Nelspruit CBD and improve vehicular and pedestrian movement</td>
</tr>
<tr>
<td>B</td>
<td>Encourage the future growth and densification of Riverside Node</td>
</tr>
<tr>
<td>C</td>
<td>Prioritise the future development of the Mataffin Node</td>
</tr>
<tr>
<td>D</td>
<td>Promote the functional integration of the Nelspruit, Riverside Park and Mataffin nodes.</td>
</tr>
<tr>
<td>E</td>
<td>Exploit opportunities provided by the Maputo Corridor, R40 and</td>
</tr>
</tbody>
</table>
proposed P166 alignments

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Achieve functional integration of neighbourhoods through new roads</td>
</tr>
<tr>
<td>G</td>
<td>Effectively integrate the Maggiesdal/Cromdale area with the rest of Nelspruit</td>
</tr>
<tr>
<td>H</td>
<td>Retain the rural character of the south-eastern residential areas</td>
</tr>
<tr>
<td>I</td>
<td>Exploit opportunities provided by the Crocodile River</td>
</tr>
<tr>
<td>J</td>
<td>Protect environmental sensitive areas through a dedicated open space system (MOSS).</td>
</tr>
<tr>
<td>K</td>
<td>Protect high potential agricultural land</td>
</tr>
</tbody>
</table>

8.3.1.4 Development directives

Strategic intervention area

A strategic intervention area is demarcated around Nelspruit CBD, which represents a walking distance of 20 minutes, approximately 1km. Within the greater Nelspruit area, the strategic intervention area should be the focus area to which development projects are directed including:

- Urban renewal initiatives and economic regeneration,
- Upgrading and restructuring of engineering and social infrastructure and
- Transportation infrastructure and road upgrades

Economic opportunity zones

Nelspruit CBD

- Nelspruit CBD and Nelspruit Industrial form the nucleus of economic development in Mbombela, this should remain lucrative to public and private sector investment through implementing incentive schemes. (Refer to Chapter 9 for incentive policies).
- Emphasis should be to upgrade Nelspruit CBD through urban design, landscaping (greening), lighting, paving, pedestrian walkways and sufficient parking, thus to create a vibrant, safe, clean, healthy and friendly city environment. (Refer to Chapter 9 for urban design guidelines).
- Mixed use development is encouraged in Nelspruit CBD, supported by multi-storey residential developments.
- A transitional zone is proposed between Nelspruit CBD and Nelspruit Industrial to allow a gradual change of land uses between the two areas.

Riverside node

- The existing regional activities of the Riverside Node will be complemented by the development of the areas to the west of the R40, adding to the regional role and function of this node.
- The future development of Riverside Node should be in a phased manner not to compete with Nelspruit CBD.
- Mixed use development is encouraged to the west and north of Riverside Park Node and to the west of Riverside Industrial to include land uses complementary to the existing developments.
- The intention is to attract land uses that will contribute to the aesthetic appearance envisaged along the R40 such as light industrial developments, value marts, wholesale retailers and motor related uses (vehicle sales).

Mataffin node

- Mataffin node should contribute to the overall growth and development of Mbombela and not form a competitive node to the Nelspruit CBD and Riverside Node. The future development of Mataffin node should be in a phased manner
- In support of the regional function of Nelspruit and Riverside and intended Matsafeni/N4 Gateway, the Mataffin Node should provide high-quality mixed use developments.
- A commercial strip will exploit the regional access and visual exposure provided by the N4 and P166 roads.
- Mbombela Sports Stadium should be developed into a strong multi-functional Sports Complex through securing potential anchors, ensuring that the investment into the public infrastructure
surrounding the Stadium is used to its full and also creates momentum for further growth and development.

- Ensure high quality social and educational facilities are available to the future residents of the Mataffin Precinct.
- Create a variety of housing opportunities within the precinct providing low income to upper income housing developments and providing densities that vary from low to high.
- Create a desirable and sustainable residential neighbourhood at the Matsafeni Village.

**Cromdale/Maggiesdal node**

- Mixed use development is promoted at the confluence of the R40, D2295 and P166 roads. This is to serve the residential developments envisaged on the surrounding Cromdale and Maggiesdal farms and existing industrial/commercial developments.
- The establishment of a focal point, combined with a clear road hierarchy will encourage the orderly development and integration of this area into the urban fabric of Nelspruit and prevent the ad hoc establishment of industrial and commercial uses.

**Intensification zones**

- An increased intensity of development is encouraged along the N4, from its intersection with Dr. Enos Mabuza Drive in the east to the P166 intersection in the west.
- The area along the R40, from the Maggiesdal/Cromdale node in the south to its intersection with the N4 in the north, is reserved for higher intensity uses, which typically include developments requiring good access and visual exposure.
- Developments facing onto the N4 and R40 should contribute to the aesthetic appearance envisaged along these routes through extensive landscaping and specific architectural design.
- Scrap yards, brick yards and motor spare part dealerships along these routes should be prohibited.

**Residential densification**

The following areas are earmarked for residential densification:

- Higher residential densities are supported within and around economic opportunity zones and close to public transport ranks.
- Multiple-storey residential buildings are encouraged within Nelspruit CBD.
- Residential densification of existing residential neighbourhoods, located within the strategic intervention area around Nelspruit CBD, is encouraged.
- Residential densification of existing residential neighbourhoods between Nelspruit CBD and Mataffin Node is promoted.
- Refer to Chapter 9 – Residential densification policy.

**New development areas**

The following areas are reserved for new development, mainly for residential purposes:

- Develop a sustainable and accessible residential node to the north of Riverside Node to accommodate a variety of residential densities and provide for different income categories.
- Residential development is supported west of Matsafeni Village, towards Cairn-Burnside and to the south of Mataffin Precinct, around the old Nelspruit airport.
- New development towards the airport and towards the west will promote the integration of the Mataffin Precinct with the Cromdale/Maggiesdal areas as well as Cairn-Burnside.
- Residential infill development is encouraged between Stonhenge and West Acres.
- Kamagugu could be expanded to the north, towards the D725 road, as well as to the west.
- The locality along the R40, south of Nelspruit in close proximity to the Tshwane University of Technology, hospital and employment areas render it suitable for integrated human settlements.
Residential infill development is supported between The Rest Eco Estate and Bateleur Estate.

The provision of the full range of community facilities i.e.: schools, clinics, open space, sports fields, cemeteries, neighbourhood retail centres etc. should be taken into account in developing these areas for residential purposes.

New developments should be restricted to areas falling outside environmentally sensitive areas

Tourism and accommodation

The area located between the N4 Northern Bypass and the Crocodile River, in proximity to the Botanical Gardens is reserved for purposes of tourism and holiday accommodation.

The intention is to establish a prominent tourism landmark within Mbombela and the wider Mpumalanga Province, including hotel, recreation and entertainment facilities.

Upgrade priority area

Matsafeni village is identified as an upgrade priority area in order to create a desirable and sustainable residential neighbourhood.

Upgrading initiatives should focus on, inter alia, the following:

- Formal township establishment and land tenure upgrade,
- Engineering services provision (sanitation, water supply, electricity and storm water);
- Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
- Integration with the broader Mataffin Precinct.
- Prevent further informal settlement on the perimeters of the existing Matsafeni village.

Integrated open space

- Crocodile, Blinkspruit, Gladdespruit and Nels Rivers are important ecological corridors traversing Nelspruit. The natural vegetation along these rivers should be maintained, loss of natural habitat minimised and restoration encouraged.

- The Greenbelt Initiative, which aim is to protect the Crocodile River and its adjacent riparian vegetation, should be extended to include the rivers mentioned above.

- Mountainous areas and nature reserves in and around Nelspruit should remain undeveloped and reserved for conservation and eco-tourism purposes.

- Floodline areas, steep slopes, rocky outcrops, river environments, wetlands, biodiversity sensitive areas, should remain undeveloped to form part of the MOSS, including active open spaces (i.e.: sports fields, golf courses etc.)

- Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.

- Refer to Chapter 9 for guidelines on the planning and design of open spaces

Agriculture

- Protect prime and unique agricultural land (Friedenheim, Kingtonvale, Reenboog and The Valley farms) in and around Nelspruit against the intrusion of non-agricultural land uses.

- Prevent the ad-hoc settlement of residential and industrial/commercial uses in the Blinkspruit Valley (Cromdale/Maggiesdal area).

- The agricultural research centre (ARC), situated south of the Botanical Gardens, will remain in the long term and could be used for research and educational purposes.

- Contain development within the urban boundary.

- The optimal utilization of agricultural land in synergy with eco-tourism and urban agriculture is supported, without resulting in the unavoidable loss of prime and unique agricultural land.
Landfill sites

- The closed landfill site near the old Nelspruit Airport and the closed landfill site in Sonpark, close to the Medi-clinic, need to be rehabilitated.

Roads and transportation

The following road proposals will reduce traffic congestion on the R40 and improve linkage in Riverside:

- The development of the P166 Western Bypass becomes more and more important as Nelspruit continues to develop. This will be an important link between the Mataffin and Riverside nodes.
- East-west links between the P166 and R40.
- A link off the P166/R37 to Boschrand Heights in the north.
- An east-west link between the R37 and D957 road to Schagen.

The following road proposals will improve the accessibility of the Maggiesdal/Cromdale areas:

- The development of the P166 Western Bypass will provide regional access to the Maggiesdal/Cromdale area
- The southern extension of Techno Street parallel east of the R40 and the southern extension of Bush Shrike Street parallel west of the R40 will open up the area for development.
- An access loop off the R40 via the D2293 bending northwards and back to the R40.
- Connecting the Uitkyk road with the R40 by extending the The Rest road in a westerly direction.

The following road proposals will improve the accessibility of the Mataffin Precinct by ensuring linkage to the CBD, Riverside, Illanga Mall and promote integration with residential suburbs located to the east.

- The development of the P166 Western Bypass will improve Mataffin’s sub-regional access significantly.

- The western extension of Figtree Street across the P166 and Kaapsehoop Road (D799), bending in a northerly direction to link with the N4.
- The western extension of Granite Street to link with the internal road network of Mataffin.
- East-west linkages between Kaapsehoop road and the Mataffin internal road network.
- The southern extension of Belladonna Road, intersecting with the extension of Figtree Street to link with Van Rooyen Street to the south.
- The following road proposals will improve access between the south-eastern areas and Nelspruit and facilitate east-west linkage between the D585 Uitkyk Road and the R40.
- Extending Johanna Drive in a southerly direction to link with the The Rest road.
- An access loop off Uitkyk road, linking with the The Rest road and back to the Uitkyk road.
- Connecting the Uitkyk road with the R40 Barberton road by extending the The Rest road in a westerly direction.
- Surfacing The Rest road has become imminent for the residents in the area.

The following road links will improve the accessibility of the eastern parts of Nelspruit:

- A link between the D725 and the N4, being the extension of Friedenheim Road in a northerly direction.
- The northern extension of Dr Enos Mabuza Drive to link with the N4 Northern Bypass.
- As part of the Bus Rapid Transit system, public transport ranks are proposed in Nelspruit CBD, Riverside Government Complex and Mataffin. These transport ranks should be provided with the necessary infrastructure i.e.: shelters, ablution facilities, trade space (vendors), security facilities etc.
8.3.2 White River (±33 000 people in 2010)

8.3.2.1 Background

White River is located on the Nelspruit-White River activity corridor, 20km north of Nelspruit, 45km south of Hazyview, 23km south of Swalala and 15km west of KMIA. White River includes the CBD, industrial and commercial area, residential areas, surrounding agricultural holdings and the Casterbridge node.

The town of White River, today an important farming and tourism centre, was founded around 1890. At the end of the Anglo Boer War the then government established an irrigation scheme for unemployed British soldiers returning from war. The scheme was not as successful as expected, though it paved the way for the development of Whiter River as it exists today.

Aerial view of White River

Agriculture in the area relies largely on the production of tropical fruit, flowers and timber. White River is also a favourite holiday destination for both locals and foreign tourists looking to enjoy the beauty of the area.

White River fulfils a sub-regional role with respect to the provision of services and retail facilities and performs a secondary role to Nelspruit as an employment centre and residential area.

Its locality on the R40, proximity of the Panorama and Lowveld Legogote Tourism Routes and the Kruger National Park bodes well for future tourism development. The Casterbridge tourism node plays an anchor role in this regard.

Casterbridge

Swot analysis

Table_: indicates the strengths, weaknesses, opportunities and threats of White River.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good road and rail access (R40, R538, planned P166)</td>
<td>Land pockets separated by rivers, roads and railway line</td>
</tr>
<tr>
<td>Close to KMIA (15km)</td>
<td>Agricultural holdings prevent normal urban extension to the south</td>
</tr>
<tr>
<td>Located at the confluence of the Nelspruit-White River and KMIA-Plaston</td>
<td>Poor road access to Plaston</td>
</tr>
<tr>
<td>corridors.</td>
<td>Bus and taxi ranks are far apart and removed from employment areas.</td>
</tr>
</tbody>
</table>
Well-established settlement with infrastructure

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrate Backdoor, Phatwa, Plaston and White River through Greenfields development</td>
<td>Forfeiting high potential agricultural land</td>
</tr>
<tr>
<td>Vacant land parcels suitable for densification and infill development</td>
<td>Informal settlement to the south-west</td>
</tr>
<tr>
<td>Surrounded by developable land</td>
<td>Lack of bulk water supply</td>
</tr>
<tr>
<td>P166 bypass road and new road links</td>
<td>Development compromising the mobility function of roads</td>
</tr>
<tr>
<td></td>
<td>Environmental degradation</td>
</tr>
</tbody>
</table>

8.3.2.2 Strategic objectives

The following strategic objectives are adopted in order to enhance the role of White River as a 1st order activity node. *(See Plan_: Strategic Framework: White River)*

<table>
<thead>
<tr>
<th>Symbol on Plan</th>
<th>Strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Exploit White River’s regional centrality to increase its role as economic development node and employment generator</td>
</tr>
<tr>
<td>B</td>
<td>Promote integration with Rocky Drift and encourage development towards Plaston.</td>
</tr>
<tr>
<td>C</td>
<td>Improve mobility and access within and around White River through proper road planning.</td>
</tr>
<tr>
<td>D</td>
<td>Protect the P166 road reserve from encroachment.</td>
</tr>
<tr>
<td>E</td>
<td>Protect environmental sensitive areas through a dedicated open space system (MOSS).</td>
</tr>
<tr>
<td>F</td>
<td>Protect unique and prime agricultural land in synergy with eco-tourism and urban agriculture.</td>
</tr>
<tr>
<td>G</td>
<td>Augment bulk water supply.</td>
</tr>
</tbody>
</table>

8.3.2.3 Development directives

Strategic intervention area

A strategic intervention area is demarcated along the R40, which represents a walking distance of 20 minutes, approximately 1km from the R40. The strategic intervention area is the focus area to which development projects are directed, including:

- Urban renewal initiatives and economic regeneration
- Upgrading and restructuring of engineering and social infrastructure
- Transportation infrastructure and road upgrades

Economic opportunity zones

Nodal development

- Promote mixed land uses, including high-density residential, at the R40-R537 intersection in support of existing businesses.
- Casterbridge node provides the nucleus for mixed use development with preferred land uses including restaurants, tourism facilities, retail and residential.

Industrial growth area

- Agri-industries are supported to the east, at the intersection of the Yaverland Road and Chief Mgijeni Khumalo Drive, where the existing sawmill is located.
- Industrial uses should focus on beneficiation (value adding) of agricultural products, extracting minerals, processing natural resources and servicing agriculture and mining.

Intensification zone

- The area along the R40, from its intersection with the R537 in the south to its intersection with the R538 road to Swalala in the north, is reserved for higher intensity uses, which typically include developments that require good access and visual exposure.
Developments facing onto the R40 should contribute to the aesthetic appearance envisaged along this corridor through extensive landscaping and specific architectural design.

CBD upgrade

- Emphasis should be on regenerating the eastern part of the CBD through urban design, landscaping, lighting, paving, public open space, pedestrian walkways and sufficient parking. (Refer to Chapter 9 for urban design guidelines).
- Establish dedicated areas for informal traders and pedestrians
- Encourage mixed land uses in the CBD by strengthening community and social services. Preferred land uses include office development, restaurants, entertainment, tourism facilities and retail supported by high density residential developments.
- Support office and high density residential development around the Tom Lawrence Park.
- A transitional zone is proposed between White River CBD and White River Industrial to allow a gradual change of land uses between the two areas.

Residential densification

The following areas are earmarked for residential densification:

- Higher residential densities are supported within and around economic opportunity zones and close to public transport stations.
- Residential densification of existing residential neighbourhoods, located within the strategic intervention areas, is encouraged.
- Refer to Chapter 9 – Residential densification policy.

New development area

The following areas are reserved for new development, mainly for residential purposes:

- The area between the R537 and Msholozi
- The areas south of White River Industrial and railway line

- The areas surrounding Casterbridge and Hillsview
- Residential extension is supported in a south-easterly direction towards Plaston and to the north, towards White River Country Estate.
- The provision of the full range of community facilities i.e.: schools, neighbourhood retail centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.
- A variety of residential densities and different income categories should be provided for in developing these areas (Refer to Chapter 9: Subsidised housing policy).
- New developments should be restricted to areas falling outside environmentally sensitive areas.

Rural residential

- Rural residential development is supported in the dedicated area to south of White River. This area is characterized by smaller farm portions and agricultural holdings, functioning as an interface to prime agricultural land located further south.
- The main land use should be residential in nature. Second dwellings can be allowed on rural residential properties.
- The following uses are not supported: Noxious factories, pig farming, poultry farming, scrap yards, panel beaters, spray painters, vehicle servicing, maintenance and repairs, warehouses and transportation companies.
- Proof of an adequate quantity of potable household water be provided for each subdivided portion with a minimum of 1 500 litres per day prior to transfer of the subdivision.
- Township establishment will be required to subdivide the land into more than five (5) portions.
- Refer to the Chapter 9 for land use guidelines pertaining to rural residential development.
**Integrated open space**

- White River and Boonstelooop are important ecological corridors to be protected.
- Floodline areas, steep slopes, rocky outcrops, river environments, wetlands, biodiversity sensitive areas, should remain undeveloped to form part of the MOSS, including active open spaces (i.e.: sports fields, golf courses, public open spaces etc.)
- Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.
- The protection of public open space is a priority and areas within the 1:100 year floodline shall remain undeveloped.
- Open spaces need to be functional and developments fronting onto parks should be sensitive to the character and functioning of the park.
- Refer to Chapter 9 for guidelines on the planning and design of open spaces

**Agriculture**

- Protect prime and unique agricultural land in and around White River against the intrusion of non-agricultural land uses.
- Contain development within the urban edge.
- The optimal utilization of agricultural land in synergy with eco-tourism and urban agriculture is supported, without resulting in the unavoidable loss of prime and unique agricultural land.

**Roads and transportation**

The following road proposals and upgrades will promote connectivity of the different areas within and around White River and facilitate linkage between the east and west.

- The P166 and northern extension of the R538 to link with the P17/6 will significantly improve White River’s regional access.
- Extending the P17/6 (R538) in a westerly direction to link with the R537 road to Sabie.
- A proposed road parallel south of Chief Mgiyeni Khumalo Drive to improve access to southern industrial and residential developments.
- Extending the Yaveland Road (D134) to link with the D812 to the south and the R537 road to the west.
- A north-south road connecting Chief Mgiyeni Khumalo Drive with the Yaverland Road (D134).
- An access loop linking the R40 with Chief Mgiyeni Khumalo Drive.
- As part of the Bus Rapid Transit system, a public transport rank is proposed in White River CBD. This transport rank should be provided with the necessary infrastructure i.e.: shelters, ablution facilities, trade space (vendors), security facilities etc.
8.3.3 Hazyview (2000 people in 2010)

8.3.3.1 Background

Hazyview is the northernmost town of Mbombela, located in the Nsikazi activity corridor, approximately 70km north of Nelspruit. Hazyview is situated ±45km north of White River and 15km north of Swalala.

The settlements of Shabalala, Nyongane and Nkambeni are located in close proximity.

Hazyview was established in 1959 when the post office was built. The town also has a history of gold mining. Today it provides a sub-regional business centre for the population of northern Mbombela, southern Bushbuckridge and surrounding farming areas.

The trade sector is supported by agriculture and a very strong eco-tourism sector provided by the natural environment with numerous outdoor activities to be found in and around Hazyview.

8.3.3.2 Swot analysis

Table_: indicates the strengths, weaknesses, opportunities and threats of Hazyview.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good regional access provided by the P17/6, R40 (Nelspruit Phalaborwa SDI), R536 roads</td>
<td>Land pockets separated by rivers, ridges, roads and irrigated agriculture</td>
</tr>
<tr>
<td>Proximity to KNP (Phabeni Gate)</td>
<td>Residential and business areas are far removed</td>
</tr>
<tr>
<td>Surrounded by a large labour force with buying power</td>
<td>Poor mobility and access off the R40</td>
</tr>
<tr>
<td>Close to Sabie River</td>
<td>Public transport facilities are located far apart</td>
</tr>
<tr>
<td>Surrounded by a strong agricultural sector</td>
<td>Conflict between pedestrian and vehicular movement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade CBD</td>
<td>Forfeiting high potential agricultural land</td>
</tr>
<tr>
<td>Various vacant land parcels suitable for densification and infill development</td>
<td>Development compromising the mobility function of roads</td>
</tr>
<tr>
<td>Possible bypass road and new road links</td>
<td>Environmental degradation</td>
</tr>
<tr>
<td></td>
<td>Lack of engineering services</td>
</tr>
</tbody>
</table>
8.3.3.3 Strategic objectives

The following strategic objectives are adopted in order to enhance the role of Hazyview as a 1st order activity node. (*See Plan_: Strategic Framework: Hazyview)

<table>
<thead>
<tr>
<th>Symbol on Plan</th>
<th>Strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Promote Hazyview as a sub-regional business centre, important tourism destination and agricultural service centre</td>
</tr>
<tr>
<td>B</td>
<td>Achieve functional integration of fragmented urban areas and integration with Shabalala and Nyongani</td>
</tr>
<tr>
<td>C</td>
<td>Direct development to the south, towards Swalala.</td>
</tr>
<tr>
<td>D</td>
<td>Improve mobility and access within and around Hazyview through proper road planning</td>
</tr>
<tr>
<td>E</td>
<td>Establish an integrated open space system and prevent settlement within the 1:100 year flood line</td>
</tr>
<tr>
<td>F</td>
<td>Exploit opportunities provided by the Sabie River-R536 tourism spine.</td>
</tr>
<tr>
<td>G</td>
<td>Protect high potential agricultural land</td>
</tr>
<tr>
<td>H</td>
<td>Augment bulk water supply and improve sanitation</td>
</tr>
</tbody>
</table>

8.3.3.4 Development directives

**Economic opportunity zone**

**Industrial growth area**
- Industrial development is supported to the east, along the P17/6 road.
- Industrial uses should focus on beneficiation (value adding) of agricultural products, processing natural resources and servicing agriculture and mining.
- The provision of interfaces, to protect the integrity of adjoining residential uses, are required.

**Nodal development**
- Nodal development is encouraged around Perry’s Bridge at the R536-R40 intersection and at the confluence of the R40 and P17/6 roads.
- A variety of land uses including retail, business, tourism, commercial, residential and/or services facilities are supported at these nodes.

**Intensification zone**
- The area along the R40, from its intersection with the P17/6 in the south to its intersection with the R536 road to Sabie in the north, is reserved for higher intensity uses, including developments that require good access and visual exposure.
- Developments facing onto the R40 should contribute to the aesthetic appearance envisaged along this route through extensive landscaping and specific architectural design.
- Scrap yards, brick yards and motor spare part dealerships along this route should be prohibited.

**R536-Sabie River Tourism spine**
- The Sabie River-R536 route provides a potential corridor of both agriculture and tourism development, which must be exploited in an environmentally sustainable way.
• Typical land uses that should be accommodated along this spine includes, hotels, lodges, holiday accommodation, recreational facilities etc.

CBD upgrade

• Emphasis should be on revitalising the CBD through urban design, landscaping, lighting, paving, pedestrian feeder roads and sufficient parking.
• Strengthen businesses within the existing CBD and provide dedicated areas for informal traders and pedestrians.
• A centralized taxi/bus rank should be provided in this zone.

Residential densification

The following areas are earmarked for residential densification:

• Higher residential densities are supported within and around economic opportunity zones and close to public transport stations.
• Increase densities of existing residential areas of Hazyview and Numbi Park to allow a gross density of 20 dwelling units per hectare.
• Refer to Chapter 9 – Residential densification policy.

New development area

• Encourage residential infill development between Numbi Park and the P17/6 road and between the P17/6 and Shabalala.
• Residential extension is encouraged to the east of the industrial zone up to the North-Sand River.
• The area to the east of Hazyview CBD is suitable for residential development and the area located between Sanbonani and Kruger Park Lodge.
• The provision of the full range of community facilities i.e.: schools, neighbourhood retail centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.

• New developments should be restricted to areas falling outside environmentally sensitive areas

Upgrade priority area

• Shabalala settlement is identified as an upgrade priority area.
• Upgrading initiatives should focus on, inter alia, the following:
• Formal township establishment and land tenure upgrade,
• Engineering services (sanitation, water supply, electricity and storm water);
• Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
• Integration with Hazyview town.
• Prevent further informal settlement on the perimeters of existing Shabalala.
• Contain urban expansion/demarcation of sites within the proposed urban edge.

Tourism and accommodation

• Land uses should be restricted to agriculture, tourism and conservation uses.
• The utilisation of tourism facilities for permanent or long-term residential use needs to be restricted.
• Every new development should be informed by an Environmental Management Plan, headed by an Environmental Impact Assessment.
• A site development plan must be approved by the municipality indicating the design and functional utilisation of the site.
• Refer to Chapter 9 for land use guidelines pertaining to the development of golf estates and holiday accommodation.

Integrated open space

• The banks of the Sabie and North-Sand Rivers are regarded as environmental sensitive with conservation value.
Steep slopes to the north and rocky outcrops should remain undeveloped and reserved for conservation, eco-tourism and agricultural purposes.

- The protection of public open space should be made a priority and the 1:100 floodline areas need to be cleared from settlement.

- Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.

### Agriculture

- Protect prime and unique agricultural land in and around Hazyview against the intrusion of non-agricultural land uses.
- Contain development within the urban edge.
- The optimal utilization of agricultural land in synergy with eco-tourism and urban agriculture is supported, without resulting in the unavoidable loss of prime and unique agricultural land.

### Roads and transportation

The following road proposals will promote the functional integration of different neighbourhoods, improve the accessibility of the CBD and promote a supportive transport system:

- Connecting the R40 with the R536 through a link road located to the east of the new shopping centre. This link will open up areas for development to the east of the P17/6.
- An east-west link providing direct access to Kruger Park Lodge from the P17/6 road.
- An access loop linking the P17/6 to the R536 leading to Phabeni Gate.
8.3.4 Kanyamazane (±72 000 people in 2010)

8.3.4.1 Background

Kanyamazane is the southernmost town in the Nsikazi activity corridor, located approximately 30km east of Nelspruit, 17km south of Kabokweni and forms almost a continuous built up area that links to Msogwaba in the north.

The oblong north-south configuration of Kanyamazane can be ascribed to the surrounding mountainous areas and a prominent tributary of the Crocodile River, separating the area in an eastern and western half.

The Crocodile River and N4 highway located to the south prevent natural extension in this direction.

Kanyamazane is a formal township providing a variety of social, retail, personal services as well as service industries scattered throughout the area. Prominent developments include the Kanyamazane Shopping Centre, Kanyamazane Sports Stadium, Ehlanzeni Regional Offices and FET College.

8.3.4.2 Swot analysis

Table_: indicates the strengths, weaknesses, opportunities and threats of Kanyamazane.
### Strengths

- Regional access provided by the N4
- A well-established CBD
- Anchor developments providing regional services
- Human resources, large labour force and buying power

### Weaknesses

- Lack of land for extension due to topography
- Settlements separated by rivers and ridges
- Poor linkage to the west (except for the N4 and Kanyamazane road)

### Opportunities

- Densification and infill development of vacant and underutilised land
- Upgrade the CBD
- Develop river corridors to facilitate pedestrian movement
- Improve linkages between communities and to CBD

### Threats

- Uncontrolled informal settlement in open spaces and flood line areas.
- Uncontrolled trade along main roads
- Uncontrolled and unsafe access off main roads
- Conflict between pedestrian and vehicular traffic

### 8.3.4.3 Strategic objectives

The key objective for Kanyamazane is to achieve functional integration of different neighbourhoods (communities), to improve access to business and social amenities and to optimise existing infrastructure and engineering services.

The following strategic objectives are adopted in order to develop Kanyamazane into a 1<sup>st</sup> order activity node. *(See Plan_: Strategic Framework: Kanyamazane)*

<table>
<thead>
<tr>
<th>Symbol on Plan</th>
<th>Strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Develop a link road to the planned Kanyamazane Western Bypass</td>
</tr>
<tr>
<td>B</td>
<td>Focus development in Kanyamazane CBD and along the Chris Hani Street</td>
</tr>
<tr>
<td>C</td>
<td>Develop Kanyamazane Stadium into an significant sports and recreational node</td>
</tr>
<tr>
<td>D</td>
<td>Promote vehicular and pedestrian connectivity between neighbourhoods</td>
</tr>
<tr>
<td>E</td>
<td>Support residential densification in dedicated areas</td>
</tr>
<tr>
<td>F</td>
<td>Establish a well defined open space system and remove settlement within the 1:100 year flood line</td>
</tr>
<tr>
<td>G</td>
<td>Augment bulk water supply</td>
</tr>
</tbody>
</table>

### 8.3.4.4 Development directives

#### Economic opportunity zone

**Nodal development**

- Nodal development is encouraged at the intersection of Chris Hani and Dr E.J. Mabuza Umgwaco Streets in the north and the intersection of Chris Hani Street with the Kanyamazane Road in the south.
- A variety of land uses including retail, business, commercial, institutional and residential and/or services facilities are supported at these nodes.

**Intensification zone**

- Higher intensity uses, including developments that require good access and visual exposure, are promoted along the main street (Chris Hani Street).
- A road parallel to Chris Hani Street should provide access to these developments in order to retain the mobility function of the main street.
- Create safe and secure environments along Chris Hani Street through reserving dedicated areas for pedestrians, bicycle routes and street furniture.

**CBD upgrade**

The aim is to attract and protect formal and informal economic development and to:
• Cluster a mix of land uses including businesses, offices, residential, community facilities and social services including Thusong Service Centres;
• Provide dedicated areas for informal traders and
• Support facilities that attract expenditure from the traffic flow on the main road.

Kanyamazane CBD and its extension should be accessible and functional to ensure optimal convenience to local residents. This involves proper and safe linkages for pedestrian and vehicular movement, sufficient parking areas, lighting, landscaping etc.

Residential densification

The following areas are earmarked for residential densification:

• Higher residential densities are supported within and around economic opportunity zones and close to public transport ranks.
• Support and promote residential densification (group housing and flats) in identified residential areas.
• Refer to Chapter 9 – Residential densification policy.

Upgrade priority area

• Informal settlements located to the west of Dr E.J. Mabuza Street, east of the CBD and west of the Ehlanzeni regional office are identified as upgrade priority areas.
• Upgrading initiatives should focus on, *inter alia*, the following:
  • Formal township establishment and land tenure upgrade,
  • Relocation of settlements in environmental sensitive areas (steep slopes, 1:100 year flood line etc)
  • Engineering services provision (sanitation, water supply, electricity and storm water);
  • Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.

• Prevent further informal settlement on the perimeters of Kanyamazane.
• Contain urban expansion/demarcation of sites within the proposed urban edge.

Integrated open space

• Steep slopes and “koppies” surrounding Kanyamazane should remain undeveloped and reserved for conservation/grazing purposes.
• Rivers, wetlands and natural forests should be protected against any form of development. Development should only be allowed after formal procedures have been conformed with, as specified in environmental legislation.
• The banks of the Crocodile River are regarded as environmental sensitive with conservation value.
• The protection of public open space is a priority and the 1:100 floodline areas need to be protected.

Roads and transportation

The following road proposals will promote the functional integration of different neighbourhoods, improve the accessibility/legibility of the CBD and alleviate traffic congestion on the main access road:

• An access loop linking Chris Hani Street with Red Barron Street and back to Christ Hani Street, across the tributary between the new retail centre and sports fields.
• A road between the shopping centre and the sports fields linking Chris Hani Street with the proposed road mentioned above.
• An extension linking Wasp Street with Pharaphara Umgwaco Street extending further to Chris Hani Street.
• Upgrade Inhlanzi Street.
• Investigate the possibility of a service road parallel to Chris Hani Street to avoid direct access off Chris Hani Street.
8.3.5 Matsulu (±60 000 people in 2010)

8.3.5.1 Background

Matsulu town is fairly secluded, situated in the easternmost part of the municipality, approximately 45km east of Nelspruit. Matsulu is wedged between the Kruger National Park, Mthethomusha Nature Reserve and the N4 highway and is bisected by the railway line to Phalaborwa.

Matsulu consists of the formal townships of Matsulu A, B, C and Matsulu West. Proximity to the N4 makes it a rapid growing area with a high influx of people leading to informal settlement.

Matsulu is predominantly residential and provides the necessary community and social facilities. Businesses opt to settle along the main roads providing good access and visual exposure.

Other significant landmarks in Matsulu include the Matsulu Soccer Stadium, Nkululeko Circuit Office and Matsulu Cultural Centre.

Swot analysis

Table_: indicates the strengths, weaknesses, opportunities and threats of Matsulu.
### Strengths

| Planned settlements and road hierarchy to some degree
| Developments with regional significance (Cultural Centre, Sports Stadium, District Offices)
| Buscor depot and public transport facilities
| Proximity to water resource (Crocodile River) |

### Weaknesses

| Limited land available for future extension
| Illegal land invasion (informal settlement)
| Encroachment onto environmental sensitive areas and parks
| Communities separated by railway line, rivers and mountains
| Lack of focus point and secluded shopping facilities
| Uncontrolled development along main access road |

### Opportunities

| Regional access provided by the N4
| Proximity to the KNP and Methethomusha Nature Reserves
| Vacant and underutilised erven suitable for densification and infill development |

### Threats

| Distance to other economic centres
| Unsafe and only one access point off the N4 |

### Strategic objectives

The following strategic objectives are adopted in order to enhance the role of Matsulu as a 2nd order activity node. *(See Plan: Strategic Framework: Matsulu)*

<table>
<thead>
<tr>
<th>Symbol on Plan</th>
<th>Strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Develop economic focal points or a CBD in Matsulu</td>
</tr>
<tr>
<td>B</td>
<td>Exploit Matsulu’s proximity to the Kruger National Park and N4 highway</td>
</tr>
<tr>
<td>C</td>
<td>Accommodate growth through strategic densification and infill development</td>
</tr>
<tr>
<td>D</td>
<td>Establish a well defined open space system and remove settlement within the 1:100 year flood line</td>
</tr>
</tbody>
</table>

### Development directives

#### Economic opportunity zone

**Nodal development**

- Upgrade the existing shopping centre node in the eastern part of Matsulu to ensure the integration of social and business facilities and optimal convenience to local residents.
- Promote the development of Silulu Cultural Centre into a regional cultural-tourism centre. Provision should be made for good access, signage, ablution and accommodation facilities, supported by commercial uses to provide convenience goods to residents and travellers passing through.
- Encourage nodal development at the D2977-railway line intersection to include a mix of land uses i.e.: retail, business, tourism, commercial, residential and/or services facilities.

**Intensification zone**

- Higher intensity uses, including developments that require good access and visual exposure, are promoted within a strip along the D2977 main access road to Matsulu.
- Create safe and secure environments along this road through reserving dedicated areas for pedestrians, bicycle routes and street furniture.
• Developments facing onto the D2977 road should contribute to the aesthetic appearance envisaged along this route through extensive landscaping and specific architectural design.

• Scrap yards, brick yards and motor spare part dealerships along these routes should be prohibited

New development area

• Residential extension is supported to the north of the Silulu Cultural Centre and north of the cemetery along the D2977 road measuring approximately 70ha in extent.

• New developments should be restricted to areas falling outside environmentally sensitive areas.

• The provision of the full range of community facilities i.e.: schools, neighbourhood retail centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.

Upgrade priority area

• Settlements located to the west and south of Matsulu B and north of the D2977 road are identified as upgrade priority areas.

• Upgrading initiatives should focus on, inter alia, the following:

  • Formal township establishment and land tenure upgrade,
  • Relocation of settlements located in environmental sensitive areas (steep slopes, 1:100 year flood line etc)
  • Provision of engineering services (sanitation, water supply, electricity and storm water);
  • Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.

  • Prevent further informal settlement on the perimeters of Matsulu.

  • Contain urban expansion/demarcation of sites within the proposed urban edge.

Residential densification

The following areas are earmarked for residential densification:

• Higher residential densities are supported within and around economic opportunity zones and close to public transport stations.

• Support and promote residential densification (group housing and flats) in existing residential areas of Matsulu A, B and C

• Refer to Chapter 9 – Residential densification policy.

Tourism and accommodation

• The natural beauty of the surrounding mountains provides eco-tourism opportunities that should be exploited in an environmental sustainable way, similar to the Bongani Mountain Lodge development.

• The farms Makawuzi, Siganbule and the state land west thereof as part of the Methetomusha Game Reserve and Crocodile Gorge conservation areas should be use for conservation and eco-tourism uses.

• To exploit eco-tourism opportunities provided by the Kruger National Park, Mthethomusha Nature Reserve and Crocodile Ridge Mountain Reserve.

Integrated open space

• The banks of the Crocodile and Nsikazi Rivers are regarded as environmental sensitive with conservation value.

• The Methetomusha and Crocodile Ridge Mountain Reserves require protection against human settlement.

• The consolidation of Methetomusha Game Reserve the Makawusi and Siganbule farms and parts of the Crocodile Ridge Mountain Reserve provide an ideal opportunity to create a larger biosphere where conservation and eco-tourism facilities should be encouraged.

• Steep slopes to the west and north should remain undeveloped and reserved for eco-tourism and grazing purposes.

• The protection of public open space should be made a priority and the 1:100 floodline areas need to be cleared from settlement.
Roads and transportation

The rivers, railway infrastructure and alignment of the N4 make Matsulu rather inaccessible to the N4. The following road linkages are proposed:

- The existing D2977 connecting Matsulu with the N4 does not provide direct linkage but takes a detour to the west before reaching the N4. A direct link to the N4 is proposed, being the extension of Masakhane Street across the Crocodile River.
- Connecting Matsulu B and C with link across the railway line, being the extension of Fleet Street to Ligibholi Street.
- A new road is proposed between Matsulu and Luphisi, being the northern extension of Ligibholi Street. This will only be a priority if the new gate at Luphisi realises.

The following road upgrades are proposed:

- The gravel road linking Silulu Cultural Centre with the new cemetery and Matsulu B in the north.
- The road linking D2977 to the district offices.
- The access collector in Matsulu B.
8.3.6 Kabokweni (22 171 people in 2010)

8.3.6.1 Background

Kabokweni is centrally located in the Nsikazi activity corridor, approximately 40km south of Swalala, 17km north of Kanyamazane and 18km east of White River. Nearby settlements include Ngodini, Gutshwakop, Backdoor, Dwaleni, Teka Takho and Nkohlakalo.

Kabokweni is a formal township that evolved around the D2689-P258/1 intersection. Settlement is influenced by the surrounding mountainous areas (i.e. Gutshwakop), alignment of Ngodini River and its tributaries and alignment of main access roads (i.e.: D1411, P258/1, D2689)

Kabokweni provides a variety of residential, business, industrial and community facilities. Prominent developments include the Kabokweni Shopping Centre, Themba Hospital and Nursing College, Kabokweni Sports Stadium, Kabokweni Industrial and Elijah Mango College.

8.3.6.2 Swot analysis

Table_: indicates the strengths, weaknesses, opportunities and threats of Kabokweni.
### Strengths

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional access provided by the P258/1, D2689 Anchor developments providing a regional service (Hospital, College, Sports Stadium, Factories etc.) Human resources, large labour force and buying power</td>
<td>Lack of land Settlements separated by topographical constraints (rivers and mountains) Traffic congestion and narrow main roads Uncontrolled access off main roads</td>
</tr>
</tbody>
</table>

### Opportunities

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade CBD</td>
<td>Illegal land invasion (informal settlement) Encroachment onto main roads and environmental sensitive areas Conflict between pedestrian and vehicular traffic</td>
</tr>
<tr>
<td>Dedicate areas for pedestrians and informal traders</td>
<td></td>
</tr>
<tr>
<td>Densification and formalisation</td>
<td></td>
</tr>
</tbody>
</table>

#### 8.3.6.3 Strategic objectives

The following strategic objectives are adopted in order to enhance the role of Kabokweni as a 2nd order activity node. *(See Plan: Strategic Framework: Kabokweni)*

<table>
<thead>
<tr>
<th>Symbol on Plan</th>
<th>Strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Focus development between Kabokweni CBD and Themba Hospital</td>
</tr>
<tr>
<td>B</td>
<td>Revitalise Kabokweni Industrial</td>
</tr>
<tr>
<td>C</td>
<td>Develop Kabokweni Stadium into an significant sports and recreational node</td>
</tr>
<tr>
<td>D</td>
<td>Promote vehicular and pedestrian connectivity between neighbourhoods</td>
</tr>
<tr>
<td>E</td>
<td>Accommodate growth through strategic densification and infill development</td>
</tr>
<tr>
<td>F</td>
<td>Establish a well defined open space system and remove settlement within the 1:100 year flood line</td>
</tr>
</tbody>
</table>

### G Augment bulk water supply

#### Development directives

#### Strategic intervention area

A strategic intervention area is demarcated along the Kabokweni activity areas, which represents a walking distance of 20 minutes, approximately 1km from Kabokweni CBD and road D2689.

Within the broader Mbuyane Traditional Authority, the strategic intervention area should be the focus area to which development projects are directed including:

- Urban renewal initiatives and economic regeneration
- Upgrading and restructuring of engineering and social infrastructure
- Transportation infrastructure and road upgrades

#### Economic opportunity zone

**Industrial growth area**

- Emphasis should be on regenerating Kabokweni Industrial, through providing sufficient parking and manoeuvring space for heavy vehicles, improved security, lighting, paving and relocation of informal settlements.

**Intensification zone**

- The area located between Themba Hospital and Kabokweni CBD is earmarked for higher intensity developments requiring good access and visual exposure from road D2689.
- Create safe and secure environments along the D2689 road through reserving dedicated areas for pedestrians, bicycle routes and street furniture.
- Higher intensity uses along the D2689 road should not jeopardise its mobility function.
CBD upgrade

Focus should be on urban renewal initiatives and urban regeneration. The aim is to attract and protect formal and informal economic development and to:

- Cluster a mix of land uses including businesses, offices, residential, community facilities and social services including Thusong Service Centres;
- Provide dedicated areas for informal traders and
- Support facilities that attract expenditure from the increased traffic flow on the main road.
- Kabokweni CBD should be accessible and functional to ensure optimal convenience to local residents. This involves proper and safe linkages for pedestrian and vehicular movement, sufficient parking areas, lighting, security, landscaping etc.

Residential densification

The following areas are earmarked for residential densification:

- Higher residential densities are supported within and around economic opportunity zones and close to public transport ranks.
- Residential densification (group housing and flats) is supported in existing residential neighbourhoods located to the north of Kabokweni and around Entokozweni Primary School
- Refer to Chapter 9 – Residential densification policy.

New development area

- A new development area is identified along the P258/1 road, between the Vulinlela Primary School and Kabokweni CBD.
- New developments should be restricted to areas falling outside environmentally sensitive areas, such as the Ngodini River.
- The provision of the full range of community facilities i.e.: schools, neighbourhood retail centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.

Upgrade priority area

- Settlements located to the west of Ngodini River, around Elijah Mango School are identified as upgrade priority areas.
- Upgrading initiatives should focus on, inter alia, the following:
  - Formal township establishment and land tenure upgrade,
  - Relocation of settlements located in environmental sensitive areas (steep slopes, 1:100 year flood line etc)
  - Upgrade of engineering services (sanitation, water supply, electricity and storm water);
  - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
  - Informal settlement on the fringes of Kabokweni and in public open spaces, steep slopes should be avoided.
  - Contain urban expansion/demarcation of sites within the proposed urban edge.

Integrated open space

- Steep slopes, open spaces, tributaries (water bodies and river banks) of the Ngodini River and the Gutshwa River are regarded as environmental sensitive with conservation value.
- Development should only be allowed after formal procedures as specified in the town planning and environmental legislation have been conformed with.
- Mountainous areas to the north (Gutshwakop), south and east should remain undeveloped and preserved for grazing and eco-tourism.
- The protection of public open space should be made a priority and the 1:100 floodline areas need to be cleared from settlement.
- Sand mining within the Ngodini and Gutshwa Rivers, can only take place after the consent of the Department of Mineral Resources had been obtained first.
Roads and transportation

The following road proposals will promote the functional integration of Kabokweni to surrounding areas and improve the accessibility/legibility of the area itself:

The following new roads are proposed:

- The southern extension of road D2970 to Mgweyane Primary School
- A north-south road, linking Vulindlela Secondary School to the CBD
- A link across Ngodini River, linking the P258/1 road to Elijah Mango School.

It is further proposed that the gravel road linking the P258/1 with the D2689, through the industrial area, be upgraded.
8.3.7 Swalala (±14 079 people in 2010)

8.3.7.1 Background

Swalala is located 15km south of Hazyview and 25km north of White River on the main P17/6 route linking White River with Hazyview. Swalala is central to the greater Masoyi area and falls within the Masoyi Traditional Authority.

Swalala has a relatively low economic base providing basic services to the surrounding predominantly residential areas of Manzini, Jerusalem, Phola, Mshadza and Lundi. Commercial and business activities are located along the main P17/6, D2969 and D2967 routes.

8.3.7.2 Swot analysis

Table: indicates the strengths, weaknesses, opportunities and threats of Swalala.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional access provided by the P17/6</td>
<td>Lack of focal point</td>
</tr>
<tr>
<td>Local access provided by the D2969 and P1131/1</td>
<td>Settlement fragmented by topographical constraints</td>
</tr>
<tr>
<td>Human resources, large labour force and buying power</td>
<td>Poor internal road access and stormwater problems</td>
</tr>
<tr>
<td></td>
<td>Lack of engineering services and social infrastructure</td>
</tr>
<tr>
<td></td>
<td>Conflict between pedestrian and vehicular traffic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nodal development</td>
<td>Illegal land invasion</td>
</tr>
<tr>
<td>Re-alignment of P17/6 to the west</td>
<td>Encroachment onto P17/6 road and environmental sensitive areas</td>
</tr>
<tr>
<td>Through traffic to Numbi Gate</td>
<td></td>
</tr>
<tr>
<td>Develop Mshadza Stadium into a regional recreational node</td>
<td></td>
</tr>
<tr>
<td>Upgrade and formalisation</td>
<td></td>
</tr>
</tbody>
</table>

8.3.7.3 Strategic objectives

The following strategic objectives are adopted in order to develop Swalala into a 2nd order activity node. (See Plan: Strategic Framework: Swalala)

<table>
<thead>
<tr>
<th>Symbol on Plan</th>
<th>Strategic objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Focus development within nodes along the P17/6</td>
</tr>
<tr>
<td>B</td>
<td>Develop Mshadza Stadium into an important recreational node</td>
</tr>
<tr>
<td>C</td>
<td>Achieve functional integration of fragmented communities (villages)</td>
</tr>
<tr>
<td>D</td>
<td>Establish a clear road hierarchy to increase Swalala's legibility</td>
</tr>
<tr>
<td>E</td>
<td>Prevent encroachment onto the P17/6 road reserve</td>
</tr>
</tbody>
</table>
8.3.7.4 Development directives

See Plan_: Strategic Framework: Swalala

Strategic intervention area

A strategic intervention area is demarcated for Swalala based on walking distance as the primary measure of access. A walking distance of 20 minutes, approximately 1km either side of the P17/6 road, defines the strategic intervention area.

Within the greater Masoyi area, the strategic intervention area should be the focus area to which development projects are directed including:

- Urban renewal initiatives and economic regeneration
- Upgrading and restructuring of engineering and social infrastructure
- Land tenure reform and land use management
- Transportation infrastructure and road upgrades

The following interventions have been identified for this area.

Economic opportunity zones

It is suggested that the first phase of intervention should take place in the following economic opportunity zones.

Nodes

- Economic activity and mixed use development should be concentrated in the selected nodes at the intersections of the P17/6 road with the D2969 and D2967 roads, respectively.

- Community and social services, shopping and public transport facilities (bus/taxi ranks) should be located within these nodes.
- Developing Mshadza Stadium into a recreational node of significance should include the upgrade of existing facilities and improving access (pedestrian and vehicular) off the P17/6 road.

P17/6-D2967 intersection  Mshadza Stadium

Corridor development

Create safe and secure environments along the P17/6 route by reserving dedicated areas for pedestrian walkways, bicycle routes, street furniture, landscaping etc.

Sufficient space along P17/6 for pedestrianisation

- Intensification of development along the P17/6 road is promoted. Depending on the intensity of activity, the width of the strip could range from half a street block to two or more street blocks.
- Protect road reserve from developments encroaching onto it.
Residential support zone

Densification, infill, upgrading and pedestrianisation are proposed within this zone. Opportunities therefore would seek to improve and upgrade rather than to identify major new developments.

- Residential densification is promoted within this zone to ensure viable thresholds to provide sufficient support to public transport services, businesses and community facilities.
- Higher residential densities are supported within and adjacent to the economic opportunity zones with lower densities situated further away.
- Provision of the full range of social and community facilities such as schools, clinics, open space, sports fields, cemeteries etc. should be taken into account in formalizing these areas.

Integrated open space

- Steep slopes and “koppies” surrounding Swalala should remain undeveloped and reserved for conservation/grazing purposes.
- Rivers, wetlands and natural forests should be protected against any form of development. Development should only be allowed after formal procedures have been conformed with, as specified in environmental legislation.
- The protection of public open space is a priority and the 1:100 floodline areas need to be determined and protected.

Road proposals

The following road proposals will promote the functional integration of different villages and ensure safe access off the P17/6 route:

- Develop parallel connecting side roads to avoid direct access to developments off the P17/6 road.
- Develop pedestrian friendly feeder roads linking to the P17/6 road.
- Develop a link road to the planned P17/6 realignment located to the west.

- Develop north-south link roads parallel to the proposed connecting side roads such that a grid network of roads is formed.
- General upgrade of gravel roads and storm water management is priority. Refer to Stormwater Masterplan for Nsikazi for further road upgrade proposals.

Service upgrading priority areas

Priority 1 – the first priority is the Mahushu/Phola node in the north where the D2967 road links with the P17/6, due to existing public services and cluster of businesses.

Priority 2 – the second priority is the Manzini/Jerusalem node in the south where the D2969 road links with the P17/6, due to existing educational facilities and cluster of businesses.

Priority 3 – the corridor development along P17/6 road at Swalala is third priority due the business opportunities offered by the road.

Priority 4 – the fourth priority is the residential support zone forming the threshold for supporting the economic opportunity zones.

Service upgrading priority areas within the strategic intervention area are indicated on Plan_: Strategic Framework: Swalala.
8.3.8 Rocky Drift

8.3.8.1 Background

Rocky Drift currently performs the function of a regional industrial centre and forms an integral part of the Nelspruit–White River activity corridor as well as the Nelspruit-Phalaborwa sub-corridor. Rocky Drift is situated 13km north of Nelspruit, 7km south of White River and 10km west of KMIA.

Rocky Drift has good access via road (i.e.: R40, D812 KMIA road and Heidelberg road) and railway line, hence ideally located for future growth and extension. It has good access to the KMIA and the low income areas to the east via the D812 road.

Rocky Drift accommodates a variety of industrial and commercial developments, bisected by the R40. The western part is dominated by noxious industries, whilst the eastern part is characterised by light industrial uses.

Other land uses include rural residential to the north and south-east, Msholozi informal settlement to the north-west, a regional cemetery to the west and farmland.

8.3.8.2 Swot analysis

Table 1: indicates the strengths, weaknesses, opportunities and threats of Rocky Drift.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good road and rail access</td>
<td>Limited available land for extension due to topographical constraints</td>
</tr>
<tr>
<td>Close to KMIA (10km)</td>
<td>Land pockets separated by rivers, roads and railway line</td>
</tr>
<tr>
<td>Well-established industrial area</td>
<td>Too many direct accesses off the R40</td>
</tr>
<tr>
<td></td>
<td>Insufficient bulk water supply and sewer capacity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited extension along R40 and Heidelberg</td>
<td>Informal settlement in open spaces and in the P166 road reserve</td>
</tr>
<tr>
<td>roads</td>
<td>Pollution zone along the Heidelberg road</td>
</tr>
<tr>
<td>Housing developments north and south</td>
<td>Environmental degradation</td>
</tr>
<tr>
<td>Improved road network</td>
<td>Poor visual impact of uses locating along the R40</td>
</tr>
</tbody>
</table>

8.3.8.3 Strategic objectives

The following strategic objectives are adopted for Rocky Drift to enhance its role as primary industrial node.

1. Exploit Rocky Drift’s accessibility via road and rail
2. Encourage industrial extension along the R40 and Heidelberg Roads
3. Develop and integrate a sustainable and accessible residential node close to Rocky Drift employment node
4. Establish interfaces between industrial and low-density residential areas through open spaces
5. Establish a well-defined and integrated open space system and prevent settlement within the 1:100 year flood line
6. Protect prime and unique agricultural land in synergy with eco-tourism
8.3.8.4 Development directives

Economic opportunity zone

Nodal development

- A mixed land use node is promoted at the intersection of the R40 with Heidelberg Road/Wilkens Road, this is to accommodate convenience shopping, banking, postal services, multi-purpose community centre, emergency services, firefighter, satellite police station etc.
- It is proposed that a bus terminal/taxi rank be established at this intersection. This will also be en-route to the Phumulani residential area. Paved walkways will ensure safe pedestrian movement.

Intensification zone

- The area along the R40, from its intersection with the Heidelberg road in the south to its intersection with Phumlani access road in the north, is reserved for higher intensity uses, which typically include developments that require good access and visual exposure.
- Higher intensity development is encouraged on a section along the D812 road.
- Value marts, wholesale retailers and motor related uses (vehicle sales) should be accommodated along the R40 and the D812 Roads.
- Scrap yards, brick yards and motor spare part dealerships along the R40 should be prohibited on stands directly facing the road.

Industrial growth areas

- The intention is to locate light industrial developments along both sides of the R40 Road, preferably 1 erf depth away from the R40. The reason is that light industrial developments do not necessarily contribute to the aesthetic appearance that is envisaged along the R40.
- Typical land uses that should be accommodated include warehouses, transport depots, factory shops, engineering works, motor workshops, storage yards, courier services etc. similar to the land uses that occur in Rocky Drift situated to the south of the R40.
- The intention is to accommodate heavy industrial uses further away from the R40 to the west, thereby minimizing the visual impact thereof on passing tourists and business travellers. Also to locate such uses within the existing pollution belt along the Heidelberg Road, which are not suitable for any other land uses.

Upgrade priority area

- Msholozi is identified as an upgrade priority area.
- Upgrading initiatives should focus on, *inter alia*, the following:
  - Formal township establishment and land tenure upgrade,
  - Engineering services (sanitation, water supply, electricity and storm water);
  - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
  - Integration with Rocky Drift town.
  - Prevent further informal settlement on the perimeters of existing Msholozi.
  - Contain urban expansion/demarcation of sites within the proposed urban edge.

Residential densification

The following areas are earmarked for residential densification:

- Higher residential densities are supported within and around economic opportunity zones and close to public transport stations.
- Residential densification of existing White River Agricultural Holdings, located to the north, is encouraged.
- Refer to Chapter 9 – Residential densification policy.
Rural residential

- Rural residential development is supported in the dedicated area to the west of Wild Fig Country Estate.
- The main land use should be residential in nature. Second dwellings can be allowed on rural residential properties.
- The following uses are not supported: Noxious factories, pig farming, poultry farming, scrap yards, panel beaters, spray painters, vehicle servicing, maintenance and repairs, warehouses and transportation companies.
- Proof of an adequate quantity of potable household water be provided for each subdivided portion with a minimum of 1 500 litres per day prior to transfer of the subdivision.
- Township establishment will be required to subdivide the land into more than five (5) portions.
- Refer to the Chapter 9 for land use guidelines pertaining to rural residential development.

Integrated open space

- Natural forests and areas with a high biodiversity should be protected and remain undeveloped.
- Steep slopes and rocky outcrops to the north, should remain undeveloped and reserved for conservation and buffering purposes.
- Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.
- The protection of public open space is a priority and areas within the 1:100 year floodline.
- Flood line areas of the tributaries (non-perennial streams) in the area should be calculated by specialists to determine the affected areas and counteractive actions.

Roads and transportation

The following road proposals will reduce traffic congestion on the R40 and improve linkage between White River, Rocky Drift and Nelspruit.

The following new road links are proposed:

- The development of the proposed P166 Western Bypass to the west becomes more and more important as Rocky Drift continues to develop and positions itself a sub-regional industrial area. The P166 western Bypass will function as a high mobility route with limited access points.
- A collector link road is proposed parallel west of the R40, this is to provide easy access to developments facing onto the R40.
- A collector link road is proposed parallel east of the R40, this is to provide easy access to developments facing onto the R40.
- A north-south link is proposed west of Dingwell Industrial Estate running parallel the P166, linking the Phumlani entrance road in the north with Boschrand Heights further south.

The following road upgrades are proposed:

- The existing provincial roads D812 (Rocky/KMIA) and D1903 (Heidelberg road linking to the P166) should be upgraded.
- The D1473 (Rocky Drift/Curlews gravel road) should be upgraded/tarred.
8.3.9 Karino

8.3.9.1 Background

Karino is located at the N4-R538-D2296 intersection, approximately 13km east of Nelspruit, ±9km south of KMIA, and in close proximity to Msogwaba (±10km) and Kanyamazane areas (8km).

Little development is currently taking place at Karino other than a few industrial and commercial activities, mainly agricultural based, that evolved around the Karino railway station.

Other activities include tourism facilities, market stalls, a filling station and local shops that serve the nearby farming communities and motorists travelling on the N4.

Karino Lifestyle Estate is a recently developed residential township and provides for future extension to include additional houses as well as commercial and industrial uses.

8.3.9.2 Swot analysis

Table_: indicates the strengths, weaknesses, opportunities and threats of Karino.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good road and rail access</td>
<td>Pockets of land fragmented by road, rail and river</td>
</tr>
<tr>
<td>Close to large labour force (±10km)</td>
<td>Currently no engineering services and social infrastructure exist</td>
</tr>
<tr>
<td>Adjacent to N4 Maputo Development Corridor</td>
<td>Crocodile River</td>
</tr>
<tr>
<td>Suitable for developments requiring good rail and road access</td>
<td>Development compromising the mobility function of the R538 and N4</td>
</tr>
<tr>
<td></td>
<td>Possible forfeiting high potential agricultural land</td>
</tr>
</tbody>
</table>
8.3.9.3 Strategic objectives

The strategic objectives adopted to develop Karino into a speciality node are listed in the table below.

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exploit Karino’s proximity to the N4 Maputo Corridor, KMIA and access to the Maputo railway line</td>
</tr>
<tr>
<td>2</td>
<td>Create employment opportunities close to the mainly dormitory eastern areas</td>
</tr>
<tr>
<td>3</td>
<td>Improve road access to the eastern areas</td>
</tr>
<tr>
<td>4</td>
<td>Exploit business opportunities provided by the nearby Tekwane Disposal Site (i.e. recycling, composting, energy generation)</td>
</tr>
<tr>
<td>5</td>
<td>Protect the mobility function of the R538 and N4 highway</td>
</tr>
<tr>
<td>6</td>
<td>Protect environmental sensitive areas from human intervention through a dedicated open space system</td>
</tr>
<tr>
<td>7</td>
<td>Protect prime and unique agricultural land</td>
</tr>
</tbody>
</table>

8.3.9.4 Development directives

Economic opportunity zone

Industrial growth areas

- Industrial development is promoted to the east, towards the Central Waste Disposal site, along the D2296, N4 and Maputo railway line alignments.
- The intention is to create a significant industrial hub that will exploit the regional access provided by the N4 and railway line and that will provide employment opportunities to the nearby eastern residential areas.
- Business opportunities (i.e.: recycling, composting, energy generation) provided by the Tekwane Waste Disposal Site should be exploited.
- Prime agricultural land surrounding these areas provides the opportunity to establish agri-industries.

Nodal development

- Mixed use development is supported at the R538 intersection with the D2296 road (Kanyamazane road) and N4 highway.
- A mix of businesses, tourism facilities, commercial, retail, social and community facilities etc. are promoted to serve future developments and motorists travelling on the N4.

New development areas

The following areas are reserved for new development, mainly for residential purposes:

- Areas to the north of Tekwane South and east of Entokozweni
- The area to the south of Tekwane North.
- Areas between the northern and southern Luphisi links.
• The areas located west and east of the R538, north of the D2966 road.
• New developments should be restricted to areas falling outside environmentally sensitive areas, such as the White River, Crocodile River and Rietbokloop Rivers.
• Future residential developments should be sustainable and accessible and should provide for a variety of residential densities including low, medium and high residential uses.
• The provision of the full range of community facilities i.e.: schools, neighbourhood centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.

Integrated open space

• Natural forests and areas with a high biodiversity should be protected and remain undeveloped.
• Steep slopes and rocky outcrops to the north, should remain undeveloped and reserved for conservation and buffering purposes.
• Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.
• The protection of public open space is a priority and areas within the 1:100 year floodline.
• Flood line areas of the tributaries (non-perennial streams) in the area should be calculated by specialists to determine the affected areas and counteractive actions.
• Wetland areas should be delineated to indicate which areas are developable and which areas should be protected.

Agriculture

• Protect prime and unique agricultural land around Karino and Plaston.
• Contain development within the urban boundary.
• The land uses should be restricted to agricultural and tourism activities and uses ancillary and complementary thereto.

Roads and transportation

A hierarchy of roads provides different grades of accessibility and exposure and forms the framework to which different land uses attach.

The following road proposals will reduce traffic congestion at the intersection of the major roads at Karino by:

- Extension of the D1723 road westward to link up with the Kanyamazane road (D2296) and upgrading of the Luphis southern link as well as the re-aligning of the D1723. The aim should be to alleviate congestion on road D2296 and ease congestion at the busy Karino four-way stop (D2296-R538 intersection).
- To provide the Kanyamazane Western Bypass (P258/1 road) to link with the N4 in order to improve regional accessibility for the eastern residential areas.
- The R538 will require upgrading to at least four lanes in future as it forms the secondary north-south route for the eastern residential areas and provides direct access to the KMIA.
- Upgrading the two main interchanges at Karino; the N4/R538 interchange located south of the Crocodile River and the R538/D2296 located north of the Crocodile River.
8.3.10 Kruger Mpumalanga International Airport (KMIA)

8.3.10.1 Background

KMIA is the official port of entry of Mpumalanga Province, situated approximately 23km north-east of Nelspruit and 14 km south-east of White River, in the middle of the Plaston-KMIA-Karino Corridor.

The KMIA has good access to the N4 highway via road R538, good access to the R40 via the D812 Rocky Drift road and relatively good access to the Kruger National Park (Numbi Gate) via the P17/6.

Mountainous areas and high potential agricultural land surround the KMIA, which explains the agricultural and tourism related uses to be found in its vicinity. Dwaleni is a residential township bordering the KMIA to the north.

8.3.10.2 Swot analysis

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing air access to national and international markets</td>
<td>Limited space to extend the runway due to topography</td>
</tr>
<tr>
<td>Good linkage to existing industries (Rocky Drift) and proposed industries (Karino and Plaston)</td>
<td>Difficult landing and take-off conditions</td>
</tr>
<tr>
<td>Good access to N4 Maputo Development Corridor (10km)</td>
<td>No engineering services</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surrounded by developable land ideal for developments that can take advantage of an airport location</td>
<td>Development compromising the mobility function of the R538</td>
</tr>
<tr>
<td>Improve linkage to Kruger National Park</td>
<td>Development jeopardising the Lowveld experience of the airport</td>
</tr>
<tr>
<td></td>
<td>Uncontrolled development creeping towards the airport</td>
</tr>
</tbody>
</table>
8.3.10.3 Strategic objectives

The strategic objectives adopted to develop the KMIA into a speciality node, without compromising its Lowveld feel, are listed in the table below.

<table>
<thead>
<tr>
<th></th>
<th>Development objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Develop the surrounding market and intensify it over the medium to long term to reach its full economic potential</td>
</tr>
<tr>
<td>2</td>
<td>Focus on development that requires a airport location</td>
</tr>
<tr>
<td>3</td>
<td>Development of KMIA shall not compromise the mobility function of the R538 road and the character of the airport</td>
</tr>
<tr>
<td>4</td>
<td>Improve the KMIA’s accessibility to the Kruger National Park through Msogwaba via the possible new gate at Luphisi</td>
</tr>
<tr>
<td>5</td>
<td>Establish a rail link between Plaston in the north and Karino in the south connecting the KMIA</td>
</tr>
<tr>
<td>6</td>
<td>Protect environmental sensitive areas from human intervention through a dedicated open space system</td>
</tr>
<tr>
<td>7</td>
<td>Protect prime and unique agricultural land surrounding the airport</td>
</tr>
</tbody>
</table>

8.3.10.4 Development directives

Economic opportunity zone

Industrial growth area

- Activities that could gain a comparative advantage from an airport location should be encouraged to include economic activities with high volume or seasonal and low weight or high value properties.
- The KMIA’s prime location with good access to the N4 via the R538, close proximity of the labour force, good linkages to Rocky Drift (existing industrial), surrounded by high potential agricultural land lends the area suitable for the following activities:
  - **High-tech industries** as they have low-weight/high value properties and are proven to be successful in increasing linkages between the airport and industries.
  - Encourage the **processing of perishable goods** to locate near the airport.
- **Headquarter offices** should be encouraged to locate near the airport to take advantage of the airport location.
- Currently the surrounding market is still relatively underdeveloped and needs to develop and intensify over the medium to long term to reach its full economic potential. The proposed **Industrial Development Zone** could play a leading role in this regard.

New development areas

The following areas are reserved for new development, mainly for residential purposes:
- Areas between the northern and southern Luphisi links.
- New developments should be restricted to areas falling outside environmentally sensitive areas.
- The provision of the full range of community facilities i.e.: schools, neighbourhood centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.

Integrated open space

The White River is regarded as important ecological corridors to be protected.
- Steep slopes and “koppies” to the east of the airport should remain undeveloped and reserved for grazing purposes and eco-tourism.
- Floodline areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the MOSS.
- The protection of public open space is priority and the area within the 1:100 year floodline needs to be cleared from any development/settlement.
- Refer to Chapter 9 for guidelines on the planning and design of open spaces.
Agriculture

- Protect prime and unique agricultural land around KMIA.
- Land uses within this zone should be restricted to agricultural and tourism activities and uses ancillary and complementary thereto.
- Refer to Chapter 9 – General guidelines for the development of agricultural land.

Roads and transportation

The following road upgrades are proposed:

- The R538 will require upgrading to at least four lanes in future as it forms the secondary north-south route for the eastern residential areas and provides direct access to the KMIA.
- The upgrade of the southern Luphisi link and extension thereof to link with the D2296 Kanyamazane road

The following new roads are proposed:

- The realignment of the D1723 northern Luphisi link
- The Kanyamazane Western Bypass (P258/1 road) to link with the N4 in order to improve regional accessibility for the eastern residential areas.
- A link road is proposed between the airport access road and Dwaleni.

A railway link and station is proposed at KMIA as part of the proposed Commuter Rail System, extending from Plaston to Karino.
8.3.11 Plaston

8.3.11.1 Background

Plaston is the northernmost node on the Karino-KMIA-Plaston corridor, located at the R538/D812/D2689 intersection, approximately 8km south of White River, 5km east of Kabokweni, 8km west of Rocky Drift and 3km north of KMIA.

Dwaleni and Backdoor are residential settlements located nearby.

Development around the Plaston intersection is limited to a filling station, local shops, agricultural uses and market stalls. Technicrete manufactures, funeral offices, brick manufactures and commercial activities are located along the link road to Kabokweni.

Prominent tourism developments occur towards White River, towards KMIA and Rocky Drift.

8.3.11.2 Swot analysis

Table_: indicates the strengths, weaknesses, opportunities and threats of Plaston.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good road access</td>
<td>Currently no engineering services and social infrastructure exist</td>
</tr>
<tr>
<td>Close to large labour force (±5km)</td>
<td></td>
</tr>
<tr>
<td>Proximity of established economic centres</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Surrounded by developable land
Catalyst for integration between eastern and western corridor
Revitalise existing railway link to Plaston and further extension to Karino

Possible forfeiting high potential agricultural land
Development compromising the mobility function of the R538

Strategic objectives

The strategic objectives adopted to develop Plaston into a speciality node are listed in the table below.

<table>
<thead>
<tr>
<th></th>
<th>Exploit Plaston’s location at the convergence of a number of roads</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Create employment opportunities to facilitate integration between the eastern and western corridors</td>
</tr>
<tr>
<td>3</td>
<td>Protect the mobility function of the R538 road and improve linkage to the north</td>
</tr>
<tr>
<td>4</td>
<td>Protect environmental sensitive areas through a dedicated open space system</td>
</tr>
<tr>
<td>5</td>
<td>Protect prime and unique agricultural land</td>
</tr>
</tbody>
</table>

8.3.11.3 Development directives

Economic opportunity zones

Nodal development

- Mixed use development is supported at the R538 intersection with the D2689 to Kabokweni.
- The future development of Plaston node should focus on the development of industrial, commercial and business uses, supported by medium density residential development.

Industrial growth area

- Industrial development is promoted to the east, along the D2689 towards Kabokweni, including developments such as Technicrete manufactures, funeral offices, brick manufactures and commercial activities
- The intention is to create an Industrial Development Zone, to exploit the central location between White River, Rocky Drift and Kabokweni, in close proximity to KMIA.
- Provision of interfaces to protect the integrity of adjoining land uses.
- Prime agricultural land surrounding these areas provides the opportunity to establish agri-industries.

New development area

The following areas are reserved for new development, mainly for residential purposes:

- The area located between Phatwa and Backdoor settlements to the east, White River to the west, Boonsteloop River to the north and the IDZ to the south.
- An area to the south-east of the Plaston node.
- New developments should be restricted to areas falling outside environmentally sensitive areas.
- Future residential developments should be sustainable and accessible and should provide for a variety of residential densities including low, medium and high residential uses.
• The provision of the full range of community facilities i.e.: schools, neighbourhood centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.

Integrated open space

• Natural forests and areas with a high biodiversity should be protected and remain undeveloped.
• Steep slopes and rocky outcrops to the north, should remain undeveloped and reserved for conservation and buffering purposes.
• Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.
• The protection of public open space is a priority and areas within the 1:100 year floodline.
• Flood line areas of the tributaries (non-perennial streams) in the area should be calculated by specialists to determine the affected areas and counteractive actions.
• Wetland areas should be delineated to indicate which areas are developable and which areas should be protected.

Agriculture

• Protect prime and unique agricultural land around Plaston.
• Land uses within this zone should be restricted to agricultural and tourism activities and uses ancillary and complementary thereto.
• Refer to Chapter 9 – General guidelines for the development of agricultural land.

Roads and transportation

The following road upgrades are proposed:

• The R538 will require upgrading to at least four lanes in future as it forms the secondary north-south route for the eastern residential areas and provides direct access to the KMIA.

The following new roads are proposed:

• The upgrade and further extension of the D1994 road to link with the Backdoor-Phatwa road.

The southern extension of the railway line and upgrade of existing station at Plaston as part of the Commuter Rail System
8.4 Rural Frameworks

Strategic frameworks are prepared for:

1. Elandshoek
2. Kaapsehoop
3. Ngodwana
4. Longmere
5. Cairn-Burnside-Alkmaar area

8.4.1 Elandshoek

8.4.1.1 Background

Elandshoek is nestled in the mountainous areas, approximately 10km north of Sappi Ngodwana. Settlement occurs mainly informally on pieces of land fragmented by the alignments of the railway line, Elands River, Eskom powerlines and the N4 highway.

Elandshoek accommodates a school, local shop and houses for people associated with the forestry industry, including employees and contractors of Sappi.

Seedless lemon projects are located both sides of the N4 highway, these projects were allocated to the Sebonello Trust. Due to the rapid pace of informal settlement and maintenance of existing infrastructure housing for these people and supply of water are a concern.

8.4.1.2 Swot analysis

Table_: indicates the strengths, weaknesses, opportunities and threats of Elandshoek
Strengths | Weaknesses
--- | ---
Bisected by N4 highway | Land fragmented by roads, railway, river, ridges and power lines
Railway siding | Uncontrolled access off the N4
Proximity to water resource (Elands River) | Poor local road access
Established orchards | Distance to main economic centres
Proximity of Starvation Creek Nature Reserve | 

Opportunities | Threats
--- | ---
Regional access provided by the N4 | No economic base
Tourism ventures linking with Starvation Creek | Illegal land invasion (informal settlement)
Upgrade and formalisation Agricultural projects | Limited land available for extension
Agricultural projects | Poor or no engineering infrastructure
 | Encroachment onto environmental sensitive areas

8.4.1.3 Strategic objectives

The following strategic objectives are adopted to improve Elandshoek’s role as a rural service centre.

A Elandshoek should not be viewed as a focus area for future growth
B Establish environmental linkages with Starvation Creek
C Reduce accesses off the N4
D Formalise and contain development to existing informal areas
E Prevent informal settlement of environmental sensitive areas
F Optimally utilize agricultural land for cultivation and grazing purposes

8.4.1.4 Development directives

- Establish agri-industries in support of the seedless lemon projects.
- Engineering infrastructure needs to be upgraded and properly maintained before any further settlement is considered.
- Accesses onto the N4 should be reduced to retain its mobility function.
- Promote eco-tourism initiatives similar to Elandsvalley lodge and encourage environmental linkages with Starvation Creek Nature Reserve situated to the south-east.
- Agricultural land and the natural environment should be protected against informal settlement.
- Development of rivers, wetlands and natural forests should be regarded as restricted. Development affecting these areas should only be allowed after formal environmental procedures have been conformed with.

Economic opportunity zones

- Economic opportunity zones should serve as logical investment locations, given their higher thresholds associated with higher densities and concentrated flows of people, convenience and accessibility. It is suggested that the first phase of intervention should take place in the following economic opportunity zones.

Nodal development

- A community service node needs to be developed to cater for local retail and social needs.
- Community and social services, shopping and public transport facilities (bus/taxi ranks) should be located within the node.

Open Space

- Steep slopes and “koppies” surrounding Elandshoek should remain undeveloped and reserved for conservation/grazing purposes.
- Rivers, wetlands and natural forests should be protected against any form of development. Development should only be allowed after...
formal procedures have been conformed with, as specified in environmental legislation.

- The protection of public open space is a priority and the 1:100 floodline areas need to be determined and protected.

Agriculture

- Protect prime and unique agricultural land in and around Elandshoek.
- Contain development within the urban boundary.

Incremental Upgrade Areas

- The settlements earmarked for Incremental Upgrade should be regarded as service upgrading priority areas. These areas include the informal settlements around Elandshoek.
- Prevent further informal settlement growth.
- Upgrading initiatives should focus on, *inter alia*, the following sectors:
  - Roads (internal vehicular access) and engineering services (sanitation, water supply, electricity & storm water);
  - Promotion of development of spines and corridors linking these areas to areas of economic activity, and economic development opportunities within these areas;
  - Upgrading of existing housing stock; and
  - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.

New Development Area

- Residential extension is encouraged in the strategically located vacant land between the N4 and the main residential settlement.
- Medium-high density type developments are encouraged, subject to strict land use guidelines as to the development controls.
- New developments will be support subject to the availability of engineering services and capacity thereof.
- The provision of the full range of community facilities i.e.: schools, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas for residential purposes.

Transport/Road Linkages and Upgrades

The following road proposals and upgrades will promote connectivity of the different areas within and around Elandshoek to facilitate linkages to the N4 as well as east-west linkages.

- Develop a ‘Roads Master Plan’ for Elandshoek which will be a community planning tool which provides a guide to attaining the safe and orderly movement of people and goods throughout the community in the near and long term. The Roads Master Plan provides a road map to the future improvements and development of the community’s transport infrastructure.
- Upgrade the internal road network and provide a well-defined hierarchy of roads.
8.4.2 Kaapsehoop (private town)

8.4.2.1 Background

Kaapsehoop is a private town situated on the highveld escarpment, about 25 km south-west of Nelspruit. The name of the town derived from the hope that was created for the early inhabitants of the geographically nearby De Kaap Valley, when gold was discovered in the town in 1882.

The town has been "re-discovered" in recent times and has become a popular weekend retreat with its period housing including accommodation establishments.

This is an area of scenic beauty that harbours wild horses and the endangered Blue Swallow. Kaapsehoop has 3 restaurants and a small country chapel. There are nature walks, a waterfall, pipe car and mountain bike trails within walking distance, and a horse trail facility approximately 8km from the village.

8.4.2.2 Swot analysis

Table: indicates the strengths, weaknesses, opportunities and threats of Kaapsehoop.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural assets (escarpment location, waterfall, nature reserve, scenic beauty) Established tourism destination Easy access to Nelspruit (25km) and N4 (15km)</td>
<td>Poor social infrastructure and engineering services (water and sanitation) Limited land available for extension</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism ventures Enlarge Blue Swallow Nature Reserve</td>
<td>Limited economic base Uncontrolled access off the main road Encroachment onto environmental sensitive areas</td>
</tr>
</tbody>
</table>

8.4.2.3 Strategic objectives

The following strategic objectives are adopted to improve the role of Kaapsehoop as a rural service centre.

1. Kaapsehoop should not be viewed as a focus area for future growth
2. Retain the rural character of town and protect its surrounding valuable natural assets
3. Focus on tourism related ventures

8.4.2.4 Development directives

Existing Residential

- Restrict further residential extension within the urban boundary.
MBOMBELA SPATIAL DEVELOPMENT FRAMEWORK – 2011/2012

- Upgrade existing water and sanitation services before any further settlement is considered.
- Maintain the existing rural character of Kaapsehoop and promote the town as a tourist destination.

Open Space

- Steep slopes and “koppies” surrounding Kaapsehoop should remain undeveloped and reserved for conservation/grazing purposes.
- Rivers, wetlands and natural forests should be protected against any form of development. Development should only be allowed after formal procedures have been conformed with, as specified in environmental legislation.
- The protection of public open space is a priority and the 1:100 floodline areas need to be determined and protected.

Agriculture

- Agricultural land and the natural environment should be protected against settlement.
- Contain development within the urban boundary.
8.4.3 Ngodwana (private town)

8.4.3.1 Background

Ngodwana is situated along the N4 highway, within the Elands River valley, approximately 40km west of Nelspruit. The pulp factory is the main industrial activity in Mbombela and provides approximately 1200 employment opportunities.

The following residential settlements established because of the industry:

- Ngodwana Settlement
- Mbokodo Village
- Old Jabulani Village
- New Jabulani Village

A mixed use node is situated opposite the N4/Kaapsehoop Road intersection, which includes a shopping centre, filling station and truck stop. The shopping centre has various vacant shops and therefore not regarded as successful.

Sports facilities include golf, power-boating, horseback riding, rugby, cricket and hockey. All engineering and social infrastructure is provided by Sappi. Water is abstracted from the Ngodwana Dam.

8.4.3.2 Swot analysis

Table_: indicates the strengths, weaknesses, opportunities and threats of Ngodwana.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good rail and road access (N4 and D227)</td>
<td>Limited land available for extension</td>
</tr>
<tr>
<td>Proximity of water resource (Elands River and Ngodwana Dam)</td>
<td>Fragmented residential villages</td>
</tr>
<tr>
<td>Centrally located within forestry area (resource)</td>
<td>Development separated by road, rail and river</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formalisation and upgrade</td>
<td>Limited economic base</td>
</tr>
<tr>
<td>Improved access across N4 highway</td>
<td>Uncontrolled access off the N4 highway</td>
</tr>
<tr>
<td>Regional access provided by the N4</td>
<td>Pollution zone along the Heidelberg road</td>
</tr>
<tr>
<td>Tourism ventures linking with Coetzeestroom Nature Reserve</td>
<td>Encroachment onto environmental sensitive areas</td>
</tr>
<tr>
<td>Agricultural projects</td>
<td></td>
</tr>
</tbody>
</table>
8.4.3.3 Strategic objective

The following strategic objectives are adopted to improve the role of Ngodwana as a rural service centre.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ngodwana should not be viewed as a future growth area</td>
</tr>
<tr>
<td>2</td>
<td>Avoid encroachment onto environmental sensitive areas</td>
</tr>
<tr>
<td>3</td>
<td>Protect unique and prime agricultural land</td>
</tr>
</tbody>
</table>

8.4.3.4 Development directives

- Engineering infrastructure needs to be upgraded should any extension to existing settlements and/or the industry be considered.
- Re-established in the nearest formal town. The informal settlement at Bhamjee needs to be either upgraded or re-established. A limited number of mixed uses should be allowed to cater for the day-to-day needs of the settlement, to reduce the burden of travelling to established nodes, preferably.
- The settlement of people not directly involved with the pulp factory or forestry industry should not be allowed.
- Accesses onto the N4 should be limited in order to retain its mobility function.
- The future development of Ngodwana will be subject to environmental management plans.
- Agricultural land and the natural environment should be protected against the intrusion of industrial and commercial activities.
- Development of rivers, wetlands and natural forests should be regarded as restricted. Development affecting these areas should only be allowed after formal environmental procedures have been conformed with.
- Establish environmental linkages to Coetzeestroom Nature Reserve situated to the south-east.
- Restrict urban development beyond 900m buffer of the landfill site.

Economic opportunity zones

- Economic opportunity zones should serve as logical investment locations, given their higher thresholds associated with higher densities and concentrated flows of people, convenience and accessibility. It is suggested that the first phase of intervention should take place in the following economic opportunity zones.

Nodal development

- Economic activity and mixed use development should be concentrated in the selected node at the existing shopping centre and filling station situated north of the N4.
- Community and social services, shopping and public transport facilities (bus/taxi ranks) should be located within this node.

Industrial growth area

- Provide for the existing noxious industrial uses within this area.
- Allow for ancillary and supplementary uses to the main use.

Open Space

- Steep slopes (>20%) and rocky outcrops shall remain undeveloped and reserved for conservation purposes or open space.
- Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.
- The protection of public open space is a priority and areas within the 1:100 year floodline shall remain undeveloped.

Agriculture

- Protect prime and unique agricultural land in and around Ngodwana.
- Contain development within the urban boundary.
Incremental Upgrade Areas

- The settlements earmarked for Incremental Upgrade should be regarded as service upgrading priority areas. These areas include the informal settlement along the N4 near the pulp and paper mill in Ngodwana.
- Prevent further informal settlement growth.
- Upgrading initiatives should focus on, inter alia, the following sectors:
  - Roads (internal vehicular access) and engineering services (sanitation, water supply, electricity & storm water);
  - Upgrading of existing housing stock; and
  - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.

Road Linkages and Upgrades

The following road proposals and upgrades will improve access to and within the areas surrounding Ngodwana.

- Protect the function of the N4 as a mobility route by limiting access points.
- Avoid encroachments onto the N4.
- Upgrade and maintain the internal road network between the different villages in Ngodwana.
- Provide public transport within the villages of Ngodwana i.e. sheltered taxi/bus stops, paved sidewalks, ablution facilities, security etc.
8.4.4 Longmere

8.4.4.1 Background

Longmere Dam is situated approximately 8km north of White River and is host to a variety of leisure, recreational and sport facilities linked with resort, hotel and guest houses.

The area includes the White River Country Estate which boasts an 18-hole golf course, Pine Lake Inn with a 9-hole marshy golf course, restaurant, lodge and numerous low-density residential estate developments.

The area is a well-renowned tourism destination and provides the nucleus for further expansion of tourism and recreational facilities.

8.4.4.2 Swot analysis

Table 1: indicates the strengths, weaknesses, opportunities and threats of Longmere

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good road access (R40 and Drakensberg St)</td>
<td>Low-density urban sprawl</td>
</tr>
<tr>
<td>Longmere Dam and 18-hole golf course</td>
<td>Fragmented residential pockets</td>
</tr>
<tr>
<td>Close proximity to White River</td>
<td></td>
</tr>
<tr>
<td>Established tourism destination</td>
<td></td>
</tr>
<tr>
<td>Rural character and rural development</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthen tourism node</td>
<td>Loss of rural character through permitting conventional housing</td>
</tr>
<tr>
<td>Tourism belt linking the three dams (Longmere, Klipkopje and Da Gama)</td>
<td>Pressure on municipal services and groundwater resources (boreholes)</td>
</tr>
<tr>
<td></td>
<td>Encroachment onto environmental sensitive areas</td>
</tr>
<tr>
<td></td>
<td>Possible forfeiting high potential agricultural land</td>
</tr>
</tbody>
</table>

8.4.4.3 Strategic objective

The following strategic objectives are adopted to improve the role of Longmere as a rural service centre that focuses on tourism.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enhance the role of Longmere as a tourism node</td>
</tr>
<tr>
<td>2</td>
<td>Protect the existing rural character</td>
</tr>
<tr>
<td>3</td>
<td>Improve linkages to the R40 and R537 as well as Drakensberg Street</td>
</tr>
<tr>
<td>4</td>
<td>Protect unique and prime agricultural land</td>
</tr>
<tr>
<td>5</td>
<td>Protect the natural environmental in synergy with tourism development.</td>
</tr>
</tbody>
</table>
8.4.4.4 Development directives

Rural Residential

- Rural residential development is supported in the dedicated area between White River, the R537 and R40. This area is characterized by smaller farm portions and rural residential developments.
- The main land use should be residential in nature. Second dwellings can be allowed on rural residential properties.
- The following uses are not supported: Noxious factories, pig farming, poultry farming, scrap yards, panel beaters, spray painters, vehicle servicing, maintenance and repairs, warehouses and transportation companies.
- Proof of an adequate quantity of potable household water be provided for each subdivided portion with a minimum of 1 500 litres per day prior to transfer of the subdivision.
- Township establishment will be required to subdivide the land into more than five (5) portions.
- Refer to the Chapter 9 for land use guidelines pertaining to rural residential development.

Tourism and Accommodation

- Land uses in this zone should be restricted to agricultural, tourism and conservation uses. Eco-residential estates are permissible within this zone, providing lower residential densities.
- Guest houses and tourist related facilities will be allowed in existing residential areas subject to a compatibility analysis of the land uses with the consent of the municipality.
- Every new development should be informed by an Environmental Management Plan, headed by an Environmental Impact Assessment.
- A site development plan must be approved by the municipality indicating the design and functional utilisation of the site.

Open Space

- Steep slopes (>20%) and rocky outcrops shall remain undeveloped and reserved for conservation purposes or open space.
- Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.
- The protection of public open space is a priority and areas within the 1:100 year floodline shall remain undeveloped.

Road Linkages and Upgrades

The following road proposals and upgrades will improve access to and within the areas surrounding Longmere.

- Two (2) proposed roads parallel to each other linking the R40 and R537 main roads to improve access to east-west linkages.
- Upgrade and maintain Drakensberg Street linking Longmere to White River.
- Provide public transport within the Longmere and White River i.e. sheltered taxi/bus stops, paved sidewalks, ablution facilities, security etc.
8.4.5 Cairn/Burnside

8.4.5.1 Background

The area is situated just off the N4 about 9km west of Nelspruit CBD, wedged between the Mataffin Precinct and planned residential estate development at Broham. Access is obtained from the Cairn and Burnside roads, respectively.

Over the years the farm Cairn 306 JT has been subdivided into small uneconomical agricultural units with an average size of 10 ha each. With the exception of the Cairn Lemon Project, these properties are not primarily used for agricultural cultivation but rather for residential and business purposes.

Non-residential uses, especially commercial and extensive industrial uses, increasingly opted to settle in this area due to the distinct requirements which these types of activities have, like good access off the N4 highway, proximity of Nelspruit, low service levels required and relative affordable land.

The area comprises residential, limited agricultural activities, tourist related facilities and extensive industrial and commercial land uses.

8.4.5.2 Swot analysis

Table 1 indicates the strengths, weaknesses, opportunities and threats of Cairn/Burnside

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional access provided by the N4</td>
<td>Poor internal road access</td>
</tr>
<tr>
<td>Peripheral location adjacent to Mataffin</td>
<td>No engineering services</td>
</tr>
<tr>
<td></td>
<td>Mountainous areas, tributaries, koppies etc. hampers effective integration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
<th>Integration with Mataffin Precinct</th>
<th>Separation of conflicting land uses</th>
<th>Exposure and access provided by the N4</th>
<th>Lack of land use control with conflicting land uses</th>
<th>Pressure on municipal services and groundwater resources (boreholes)</th>
<th>Encroachment onto environmental sensitive areas</th>
<th>Possible forfeiting high potential agricultural land</th>
</tr>
</thead>
</table>

8.4.5.3 Strategic objectives

The following strategic objectives are adopted to improve the role of the Cairn/Burnside area as a rural service centre.

1. Improve access off the N4 and establish linkages to the Mataffin Precinct
2. Reserve land to the north for settlement of rural industries/agri industries
3. Reserve land to the south for rural residential, agriculture and tourism
4. Conserve environmental sensitive areas and optimally utilise the natural resources for tourism
5. Protect unique and prime agricultural land

8.4.5.4 Development directives

Rural Residential

- Rural residential development is supported in the dedicated area between Burnside road and Cairn road, south of the N4. This area is characterized by smaller farm portions and rural residential developments.
- The main land use should be residential in nature. Second dwellings can be allowed on rural residential properties.
- The following uses are not supported: Noxious factories, pig farming, poultry farming, scrap yards, panel beaters, spray painters, vehicle servicing, maintenance and repairs, warehouses and transportation companies.
• Proof of an adequate quantity of potable household water be provided for each subdivided portion with a minimum of 1 500 litres per day prior to transfer of the subdivision.
• Township establishment will be required to subdivide the land into more than five (5) portions.
• Refer to the Chapter 9 for land use guidelines pertaining to rural residential development.

Tourism and Accommodation

• Land uses in this zone should be restricted to agricultural, tourism and conservation uses. Eco-residential estates are permissible within this zone, providing lower residential densities.
• Guest houses and tourist related facilities will be allowed in existing residential areas subject to a compatibility analysis of the land uses with the consent of the municipality
• Every new development should be informed by an Environmental Management Plan, headed by an Environmental Impact Assessment.
• A site development plan must be approved by the municipality indicating the design and functional utilisation of the site.

Economic opportunity zones

Agri/rural industrial area/Mixed use

• Contain mixed land uses including extensive industries in the demarcated agric/rural industrial zone along the N4 Transport Corridor.
• Supporting community and social services, shopping and public transport facilities (bus/taxi ranks) should be located within this zone.

Open Space

• Steep slopes (>20%) and rocky outcrops shall remain undeveloped and reserved for conservation purposes or open space.

• Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.
• The protection of public open space is a priority and areas within the 1:100 year floodline shall remain undeveloped.

New Development Areas

• Contain urban expansion/demarcation of sites within the proposed urban development boundaries (urban edge).
• Prevent informal settlement development on the perimeters of existing residential areas.
• Provision of the full range of community facilities such as schools, clinics, open spaces, cemeteries etc, should be taken into account in the formalisation of these settlements.
• Protection of environmentally sensitive area and open spaces should be prioritised. New developments should be restricted to areas falling outside of the environmentally sensitive areas and the 1 in 100 year floodline needs to be clear from any development.
• New residential developments should provide for smaller erven and higher densities.

Agriculture

• Protect prime and unique agricultural land in and around Cairn/Burnside.
• Contain development within the urban boundary.

Road Linkages and Upgrades

The following road proposals and upgrades will improve access to and within the areas surrounding Cairn/Burnside.

• Protect the mobility function of the N4 by limiting access points.
• Upgrade the D28 (Burnside road), D2213 (Cairn road) and D2125 roads to improve access within the area.
• Provide two (2) roads parallel to each other linking the D28 (Burnside road), D2213 (Cairn road) and one road south of the area to improve access to east-west linkages.
• Provide public transport within the Cairn and Burnside i.e. sheltered taxi/bus stops, paved sidewalks, ablution facilities, security etc.
• Develop a ‘Roads Master Plan’ for Cairn/Burnside and Alkmaar which will be a community planning tool which provides a guide to attaining the safe and orderly movement of people and goods throughout the community in the near and long term. The Roads Master Plan provides a road map to the future improvements and development of the community’s transport infrastructure.
8.4.6 Alkmaar

8.4.6.1 Background

Alkmaar is situated along the N4 highway, about 15km west of Nelspruit CBD and 7km west of the Cairn/Burnside area. Alkmaar is traversed by the N4 and bordered by the Crocodile and railway line to the north.

Business activities are located along the N4 and at the Alkmaar railway station including warehousing, agri-industries, motor workshops a transport depot as well as small scale businesses i.e.: filling station, general dealer, liquor store etc.

Due to high accessibility and visual exposure provided by the N4, the area is experiencing development pressure from opportunistic developments that may not be in support of existing rural character of the area.

8.4.6.2 Swot analysis

Table: indicates the strengths, weaknesses, opportunities and threats of Alkmaar

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional access provided by the N4</td>
<td>Distance to main economic centre</td>
</tr>
<tr>
<td>Railway access</td>
<td>Separated by N4</td>
</tr>
<tr>
<td>Access to Schagen road (D1175)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure and access provided by the N4</td>
<td>Lack of land use control with conflicting land uses</td>
</tr>
<tr>
<td>Agri-processing and tourism initiatives</td>
<td>Pressure on groundwater resources (boreholes)</td>
</tr>
<tr>
<td></td>
<td>Encroachment onto environmental sensitive areas</td>
</tr>
<tr>
<td></td>
<td>Possible forfeiting high potential</td>
</tr>
</tbody>
</table>

8.4.6.3 Strategic objectives

The following strategic objectives are adopted to improve the role of Alkmaar as a rural service centre.

A  Improve access off the N4 whilst protecting its mobility function.
B  Conserve environmental sensitive areas and optimally utilise the natural resource for tourism.
C  Protect unique and prime agricultural land.

8.4.6.4 Development directives

Agriculture

- Protect and manage optimally prime and unique agricultural land in and around Alkmaar.
- Land uses should be restricted to agricultural and tourism activities and uses ancillary and complementary thereto.
- An environmental management plan, headed by an Environmental Impact Assessment, which includes control measures and development directives should be provided with every new development or change in land use.
- A site development plan approved by the municipality involving the design and functional utilisation of the site is required.
- Subdivision of farm portions will be allowed subject to a Agricultural Land Subdivision Policy of the municipality and consent has been granted by the National Department of Agriculture.
- Discourage urban development outside the urban development boundary.
• Sand mining or any other mining related activity can only take place after the necessary consents (authorisation and licensing) of the Department of Water Affairs and had been obtained.

Tourism and Accommodation

• Land uses in this zone should be restricted to agricultural, tourism and conservation uses. Eco-residential estates are permissible within this zone, providing lower residential densities.
• Guest houses and tourist related facilities will be allowed in existing residential areas subject to a compatibility analysis of the land uses with the consent of the municipality
• Every new development should be informed by an Environmental Management Plan, headed by an Environmental Impact Assessment.
• A site development plan must be approved by the municipality indicating the design and functional utilisation of the site.

Open Space/Environmental Sensitive/Conservation

• Steep slopes (>20%) and rocky outcrops shall remain undeveloped and reserved for conservation purposes or open space.
• Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.
• The protection of public open space is a priority and areas within the 1:100 year floodline shall remain undeveloped.

Economic opportunity zones

Nodal development

• The Alkmaar station provides the nucleus for mixed use development with preferred land uses including restaurants,
• tourism facilities, fuel station, retail and residential and low impact transport and logistics uses.

• Economic activity and mixed use development should be concentrated at the demarcated node.
• Community and social services, shopping and public transport facilities (bus/taxi ranks) should be located within this node.

Agri/rural industrial area

• Contain mixed land uses including extensive industries in the demarcated agric/rural industrial zone along the N4 Transport Corridor.
• Supporting community and social services, shopping and public transport facilities (bus/taxi ranks) should be located within this zone.

Economic resource area

• Provide for the existing quarry land use within this area.
• Allow for ancillary and supplementary uses to the main use.

Transport/Road Linkages and Upgrades

The following road proposals and upgrades will promote connectivity of the different areas within and around Alkmaar to facilitate linkages to the N4.

• Develop a ‘Roads Master Plan’ for Alkmaar which will be a community planning tool which provides a guide to attaining the safe and orderly movement of people and goods throughout the community in the near and long term. The Roads Master Plan provides a road map to the future improvements and development of the community's transport infrastructure.
9 CHAPTER 9: IMPLEMENTATION PLAN

9.1 Introduction

This section considers how best to implement the spatial plan, strategies and projects; how to package and market the areas and towns, and the ways in which the impact of the interventions can be measured and evaluated to ensure that the desired outcomes are achieved. This chapter is packaged as follows:

1. Capital Expenditure Framework
2. Implementation policies and guidelines
3. Land Use Management System guidelines
4. Sector plan alignment
5. Monitoring and evaluation framework

The Implementation Plan’s strategies and projects are linked to the municipal spatial priorities which guide investment and development spending in the municipality as described below:
9.2 Capital Expenditure Framework

The Capital Expenditure Framework (See Annexure 1: Priority Matrix) and (See Annexure 2: Capital Expenditure Framework) is a tool to be used by the Municipality to realise all the ideas as conceptualised in the spatial development concept.

The main purpose of this framework is to:

- Identify projects transpiring from the spatial objectives and strategies;
- To allocate a cost and timing to identified projects; and
- To identify a source of funding and implementation agent.
9.3 Implementation policies and guidelines

The following spatial and non-spatial policies will enable Mbombela to achieve its desired spatial form, as reflected in Chapters _ and _.

Private sector investors should therefore take these strategies and policies into account when submitting development applications and public sector decision-makers should be guided by them when considering such applications.

These will assure the effective implementation of the Spatial Development Framework and it is fundamental that the Land Use Management System incorporates these guidelines to ensure effective land use management in Mbombela.

The following policies are developed for Mbombela:

- Urban edge policy
- Residential densification policy
- Infrastructure policy
- Subsidised housing policy
- Sustainability policy
- Demarcation of sites in Traditional Authority areas
- Incentives policy

9.3.1 Urban edge policy

The disregard for the urban edge in Mbombela resulted in uncontrolled urban development and urban sprawl. This can be attributed to the ignorance and lack of knowledge by local communities, illegal land settlement based on the desire to live close to places of work. Uncontrolled urban development in Mbombela results in pressure on the municipal infrastructure delivery.

9.3.1.1 Description

An urban edge is a demarcated line and interrelated policy that serves to manage direct and limit urban expansion.

The urban edge for Mbombela Municipality is a conceptual line that is defined by a road, contour, natural physical elements (rivers, mountains etc.), built-up areas, cadastral line etc and set the limit for urban development for a 20 year period of time.

9.3.1.2 Purpose

The main goal of an urban edge is to contain urban sprawl and to protect natural and rural assets, which will then ensure:

- Optimal utilisation of engineering services
- Optimisation of public transport
- Prevention of urban decay and promotion of urban integration
- Promotion of opportunities for redevelopment
- Conservation of environmentally sensitive areas and scenic resources
- The protection of high potential agricultural land
- The creation of urban corridors along public transportation routes

9.3.1.3 Amending the urban edge

Amendments to the urban edge line should be initiated by Mbombela and be based on guiding principles (see table below), future planning and an edge review process, which takes place at least every 10 years.

<table>
<thead>
<tr>
<th>Principles for amending the urban edge line</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Adjustment to the urban edge must be informed by Mbombela’s future planning directives, development trends, as well as the take-up of land within the edge</td>
</tr>
<tr>
<td>- The urban edge should not be compromised whilst development opportunities still exists within surrounding urban areas.</td>
</tr>
<tr>
<td>- Decision making must be consistent with achieving a more compact urban form.</td>
</tr>
<tr>
<td>- Mbombela’s ability to provide and/or maintain additional bulk infrastructure, either within or beyond the edge, should be taken into consideration when determining the delineation of the edge, as</td>
</tr>
</tbody>
</table>
the upgrade of bulk infrastructure on periphery areas to accommodate new developments should not be prioritised in the short to medium term.

- Critical and significant elements of the MOSS, as well as unique and prime potential agricultural land must be protected. As a general principle, urban edge lines delineated to protect these resources should not be amended.
- Given the scale and demand for government-subsidised housing, and the potential shortage of land available for this type of housing, Mbombela recognises that, in exceptional circumstances, a proactive amendment of the line may be required to accommodate the needs of this market.

The success of the urban edge is dependent on the implementation of other key supporting planning mechanisms, such as the densification strategy and policies managing the rural environment.

9.3.1.4 Assessment of development applications on either side of the urban edge

Land uses should be carefully managed to ensure a positive interface between urban and rural areas.

Rural areas and rural development are typically characterised by:

- Primary economic activities i.e.: agriculture, agri-processing, agri-villages, road related purposes including accommodation and vehicle related services, regional services i.e.: cemeteries, waste sites, reservoirs, electricity lines), tourism and other uses such as quarries and mining.
- Population density less than 150 people/km²
- Dwelling densities less than 1du/10 hectares

Urban areas and urban development are typically characterised by:

- Mainly secondary and tertiary economic activity with some primary i.e.: urban agriculture, building materials, resource extraction.
- Population density less than 150 people/km²
- Dwelling unit densities greater than 1du/hectare
- Engineering services provided on a grid reticulation system
- Settlement contained within an urban edge

Land uses which can be allowed in the rural areas outside the urban edge will include, *inter alia*, the following:

- Extensive and intensive agriculture;
- Conservation areas and nature reserves, tourism and related activities, i.e., accommodation establishments, guest houses, conference centres, tea gardens, craft markets, etc.;
- Recreational facilities and venues, e.g., hiking, hunting, adventure sports, horse riding schools and stables, etc.;
- Farm stalls, home industries and small-scale agri-industries, e.g., cheese making, meat processing, etc.;
- Rural residential/agricultural holdings in specific areas;
- Agri-villages or agricultural communities;
- Community facilities and business uses clustered in rural service centres/rural settlements.

Refer to land use guidelines for Rural Residential and Agriculture.

9.3.2 Residential densification policy

Densification is the process whereby densities, i.e., the number of dwelling units per hectare, increase in a planned and sustainable manner.

A residential densification policy is required because of the availability of developable land in Mbombela for residential purposes in the next twenty years. Within the local context of Mbombela land available for residential development are limited and suitable land are influenced by topography, agricultural land and the biodiversity of the area. Existing urban areas are fairly built up with limited land available for residential purposes. Within the Nelspruit-White River corridor only 665ha of land is considered developable with 1480ha of land developable in the Nsikazi corridor. This necessitates measures for densification of land in residential and non-residential areas to accommodate development in the next twenty years.
9.3.2.1 Why densification

Mbombela’s settlements generally have very inefficient thresholds due to their low densities. Densification will lead to more compact settlements which will improve efficiency and sustainability by:

- Helping to protect the environmentally sensitive land by reducing demand for this land
- Making better use of the municipality’s limited resources for infrastructure investments and maintenance
- Supporting more transport options, as higher densities will provide the required thresholds to make public transport viable and
- Offering a better, more convenient lifestyle for people who cannot drive, such as elderly, very young and disable people, as a greater number of facilities and opportunities will be accessible by foot, bicycle or public transport.

How to achieve densification

- Constructing second dwellings
- Increasing the existing bulk and number of units through the expansion of the building area, or by adding additional floors
- Consolidating vacant or developed erven, and then redeveloping them at higher densities
- Subdivision of land
- Higher density infill on vacant and underutilised land.

9.3.2.2 Middle path strategy

Adopt a middle path strategy that sets a gross base density (average density) of 25 dwelling units per hectare.

The middle path strategy accepts that higher levels of densification will be encouraged at specified spatial locations, and incremental densification will be permitted across the city where appropriate and feasible.

Gross base density norm

A gross base density of 25u/ha is the internationally accepted minimum density necessary to operate and efficient, sustainable public transport system

9.3.2.3 Densification versus resource limitations and infrastructure availability

- Responsible densification is encouraged aligned with concentrations of economic activity, public transport, infrastructure and amenities.
- Densification of existing residential areas should take place without compromising the quality of living principle.

9.3.2.4 General guidelines

The following areas should be targeted for higher residential densities:

Mixed use areas:
- Largely within nodes, CBD’s, business complexes, certain retail and industrial areas and on public transport routes.

Major access routes:
- At public transport stops or stations
- Route intersections
- Mixed use areas

Specific residential areas:
- Within areas of focussed public sector investment e.g. subsidised housing areas.
Economic opportunity zone:

- Generally within and abutting defined economic opportunity zones

Densities should increase towards major access routes and strategic centres or cross roads as indicated in the table below:

Density factors and their application

<table>
<thead>
<tr>
<th>Density category</th>
<th>Density range</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower</td>
<td>&gt;1du/ha – 15du/ha</td>
<td>Towards urban edge/urban periphery</td>
</tr>
<tr>
<td>Medium</td>
<td>&gt;15du/ha – 50du/ha</td>
<td>Within 1km of major transport route</td>
</tr>
<tr>
<td>High</td>
<td>50du/ha – 250 du/ha</td>
<td>Within: 100m of a major route</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In the urban core and CBD’s</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mixed use areas</td>
</tr>
</tbody>
</table>

Further, the following matters shall be taken into account when considering an application for a non-residential or higher-density residential land use within a residential area:

- Residential amenity should in general be protected, specifically, but not exclusively, from:
  - significant changes to traffic conditions in local streets including an increase in car parking demand;
  - noise, light or odours emitted from the site; and
  - disturbance associated with the hours of operation.
- Low scale, non intrusive, non-residential uses should be permitted in residential areas, i.e., shopping facilities, home offices, home industries, etc.
- Higher residential densities along main roads and around major nodes and employment areas should be promoted and actively supported taking into consideration the availability of infrastructure.
- The density of proposed and existing built-up areas should correlate with the availability of productive open spaces and public amenities in close proximity thereto, the higher the density/intensity of residential developments, the more productive open space and public amenities are warranted.
- Areas designated for public use should be incorporated within high-density developments and larger public open spaces should be provided in close vicinity of these developments.
- High-density residential development, which promotes high-rise development, is preferable rather than smaller single residential stands.
- Medium-density residential development should promote a mixture of cluster housing.

Examples of erven that were redeveloped at higher densities:

- Costa Esmeralda (165 units/ha)
- Sonheuwel Township (44 units/ha)
Sonheuwel Heights (179 units/ha)
9.3.3 Infrastructure policy
9.3.3.1 Legislative requirement

In terms of the Constitution of South Africa everyone has the right to sufficient water and basic sanitation (healthy environment).

The Constitution requires that a municipality must structure and manage its administration, budgeting and planning processes to:

a) Give priority to basic needs
b) Promote the social and economic development of the community.

In terms of the Municipal Systems Act (Act 32 of 2000), the Mbombela Local Municipality (MLM) must give effect to the Constitution and provide residents within its area of jurisdiction with at least a minimum level of service, but also ensure that planning and provision of services is done for social and economic development.

It is further a legislative requirement that the services provided must be **Efficient, Affordable, Sustainable and Economical (EASE)**.

In terms of the policy frameworks of the MLM (vision and direction) and the legislative framework (enabler), MLM have got an obligation to provide services to customers or potential customers in its area of jurisdiction.

In terms of legislation (Water services Act, Act 108 of 1997) this duty of the MLM is however subject to:

a) Availability of resources (water source, infrastructure)
b) Equitable allocation of resources to all customers
c) Regulation of access to services in an equitable way
d) Consumers to pay reasonable charges for services delivery
e) The LM’s duty to conserve natural resources (like water)
f) The nature, topography, zoning and situation of the land earmarked for service delivery (benefit of scale, efficiency etc.)

In keeping with its obligation in terms of the Constitution and legislation (to provide /implement sustainable services), the MLM will ensure that the following building blocks towards the provision of sustainable engineering service are in place:

9.3.3.3 Planning

MLM to ensure that adequate updated integrated planning is in place to ensure the provision of at least a basic level of services to all consumers within its area of jurisdiction. The planning will further allow for:

a) Economic and social development and growth (new development and densification)
b) The progressive increasing of service levels where it is economical, viable and sustainable

In order to ensure that the provision of services is rendered in the manner as described above, the objectives of the MLM will be to:

a) **Direct and guide planning and development for growth and expansion of the MLM area (new developments)** towards the **identified activity nodes** as this will ensure efficiency, benefit of scale, affordability, equity, and will allow the MLM to provide “EASE” services in terms of its mandate. In doing this the MLM will also consider the hierarchy and ranking of the activity nodes in terms of its potential to ensure sustainable local / regional economic development.
b) **Plan for the demand on services due to changes in town planning (densification or infill development).**
c) **Plan for the systematic eradication of backlogs** (provision of basic levels of services) to all consumers within its area of jurisdiction, but specifically to the lower order identified settlements.
d) **Plan for the demand in terms of increased service levels (climbing ladder).** The planning will exclusively be based on the sustainability of the higher level of service (must be economically viable).
e) **Ensure that planning is in place for the conservation and preservation of the natural resources** required to provide sustainable services.
f) Ensure that informed technology choices specifically with regards to sanitation are made to ensure that the services provided are affordable and sustainable.

In order to be able to deliver services to new developments in terms of its constitutional and legislative obligations the MLM will evaluate all applications for development against set criteria. Apart from the general “EASE” criteria MLM will specifically focus on:

1. Availability of water sources (since it is a current challenge).
2. Availability and capacity of existing infrastructure (to make development more economical, sustainable and affordable).
3. Ability of service contributions to fund capital requirements of service provision (not basic level).
4. Ability of MLM to Operate and Maintain services provided.
5. Integration of proposed development into existing planning taking cognisance of urban fringes to avoid “leap frog” development.

9.3.3.4 Institutional arrangements

MLM will ensure that adequate institutional arrangements are in place to give effect to its mandate of delivering quality services to consumers within its area.

- Bulk service provider agreements
- Local service provider agreements
- Consumer charter
- Consumer contracts/agreements
- Policies and tariffs (bylaws)
- Intermediary agreements
- Adequate skilled staff
- Monitoring mechanisms
- Comprehensive forward planning – services & funding
- Project coordination – internal & external
- Accountability of staff
- Adequate systems and processes
- Avoid political interference that are not based on sound technical inputs

As part of this the MLM undertake to continuously investigate and pursue changes to existing arrangements in order to provide “EASE” services.

9.3.3.5 Financial arrangements

- Ensure adequate sustainable investment in infrastructure to ensure access to services. Ensure adequate financial administration of funds used for capital development of services. Where possible ring fence funds (e.g. service contributions) to ensure investment into new infrastructure.
- Adequate financial resources for operation and maintenance of services.
- Ensure financially viable water services provision arrangements, to ensure ongoing operation, maintenance and rehabilitation of assets (use of equitable share, tariff policy, and water service provider contract details). This must also be for the internal service provision function.
- Ensure mechanisms are in place to provide financial assistance to intermediaries.
- Appropriate financing mechanisms to provide higher levels of services where it is sustainable and economically valuable.
- Adequate credit control
- Adequate pricing and tariffs

9.3.3.6 Guidelines for the provision of engineering services to private land

Although the provision of services to private land is part of MLMs universal services obligation as a Water Services Authority, MLM currently do not provide services to private land owners. Processes will be put in place by MLM to address this obligation.

Typical issues to consider are:

- Ensure institutional arrangements are in place (bylaws, etc).
- Agreement on provision of services.
• Provision of services to private land owners to be **part of the Integrated Development Plan (IDP)**.
• Conduct **municipal survey** on private land owners, draw profile and assess current service levels with **identification of the intermediary**
• **Registration of intermediaries**
• **Financial planning** and arrangements (grant funding, cost recovery)
• Agree on **standards of service delivery**
• Ensure adequate **monitoring, regulation and reporting**
• Deal with intermediaries who **fail to meet obligation**
9.3.4 Subsidised housing policy

**Definition**
Subsidised housing includes households earning **below R3500** per month.

**9.3.4.1 Objective**
The objective of such policy would be to identify land for subsidised and gap housing according to criteria that support the development of an integrated settlement pattern.

**9.3.4.2 Identification of land**
Over the long term, it is critical that the placement of subsidised housing be undertaken in a very sound manner. Criteria to be used to guide the identification of land for subsidised and gap housing are indicated in the table below:

<table>
<thead>
<tr>
<th>Principle</th>
<th>Subcomponents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contain urban sprawl and protect the urban edge</td>
<td>The land identified should: Contribute to the development of more compact urban areas. Maximise the use of existing infrastructure and service capacity, and Not be located adjacent to the urban edge (where possible)</td>
</tr>
<tr>
<td>Facilitate urban integration, and promote the establishment of viable communities</td>
<td>The land identified should: Be in close proximity to existing economic, social and public transport opportunities. Support a mutually beneficial mix of social, residential, recreational, commercial and employment opportunities</td>
</tr>
<tr>
<td>Facilitate a range of housing</td>
<td>The land identified should: Be suited to the development of new settlements, the upgrading and de-densification of existing informal settlements, high-density housing, rental accommodation, and the release of land to the homeless and Note that the size of the housing project, and type of delivery agent influence its economic viability.</td>
</tr>
</tbody>
</table>

**Options and delivery approaches**

<table>
<thead>
<tr>
<th>Principle</th>
<th>Subcomponents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Be suited to housing development</td>
<td>The land identified should: Encourage environmentally sustainable land development practices and processes. Not lead to loss/have a damaging impact on natural and built assets that merit longer-term protection and Ensure healthy, safe living conditions</td>
</tr>
<tr>
<td>Take the beneficiaries’ economic and social well-being into account</td>
<td>When identifying land, and providing infrastructure and shelter for the unhoused and poorly housed, it is important to take their livelihood strategies and social support networks into account</td>
</tr>
</tbody>
</table>

**9.3.4.3 General guidelines**

- The development of new subsidised housing should conform to guidelines and parameters set-out by National and Provincial Government's.
- Diversification of housing projects and housing types should be promoted.
- Optimal infrastructure must be developed in order to allow for the long-term development of such areas.
- Pre-paid services must be standard in all new projects to ensure a minimum effect on the financial sustainability of the municipality.
- All developments (i.e. industrial and mining developments) requiring a large work force must address the issue of housing close to the
place of work. This is to ensure that informal settlements do not pursue.

- The development of social housing schemes is a specific priority and a number of focus areas/sites for such developments need to be identified.
9.3.5 Sustainability policy

Definition

“Sustainable development is the capacity to meet the needs of the present without compromising the ability of future generations to meet their own needs”.

Sustainable development should ensure the sustainable utilisation and management of renewable and non-renewable natural resources and ensure that the impacts of development on the environment are minimised.

The Mbombela SDF places considerable emphasis on the need for approaches and interventions that contribute to the realisation of ‘ecological sustainability’ through energy efficiency and renewable energy.

9.3.5.1 Energy efficiency

All new developments shall demonstrate their commitment to energy efficiency by introducing measures such as:

- **Water heating:** Each residential unit provides for solar heated hot water cylinders, or the development as a whole could consider a heat-pump driven water heating system.

- **Cooking:** Each residential unit makes provision for use of gas for cooking purposes, and should comply with the required legislation for piping and gas cylinder storage.

- **Air conditioning:** The installation of air conditioners to be limited to a maximum of two 1.5kW units per residential unit. If possible, green building designs should be done to limit the need for heating in winter and cooling in summer through electricity.

- **Under floor heating:** Under floor heating with electricity should not be allowed.

- **Washing machines tumble dryers and dishwashers:** Washing machines tumble dryers and dishwashers should preferably be operated in Eskom’s standard and off-peak time slots and not in peak time-slots.

- **Lighting:** Lighting could contain power factor corrected energy efficient lamps. A building management system could be installed to switch of lights automatically when shops or offices are closed.

- **Street lighting:** Street lighting could be done by means of energy efficient lighting.

- **Renewable energy:** Each connection to the conventional electrical grid should be supplemented with alternative energy sources *inter alia*, solar thermal, gas, wind, biomass and domestic hydro-electricity. The installation of solar water heaters results in substantial electricity savings.

  ![Solar and wind power](image)

The consumption of water, fuel, building materials, mineral resources and electricity must be reduced on a per capita basis so as to prolong the supply of these resources.

The following strategies will achieve this:
9.3.5.2 Water conservation

- Water conservation and demand management should be encouraged through regulation where appropriate.
- Rainwater harvesting, grey water recycling and similar technical enhancements such as low flow shower heads, dual flush toilets and water-wise gardens should be encouraged in respect of new residential, commercial and community projects.
- There should be implementation of water demand management techniques such as minimising leaks by reducing water pressure and a stepped tariff system that effective addresses excessive water consumption.
- An invasive alien species control plan should be developed, with particular focus on stressed catchments and previously cleared catchments for water production.
- All new urban development projects should be fitted with water-saving technology and be approved subject to appropriate water saving conditions.

Figure_: Water saving technologies.

9.3.5.3 Waste water treatment

- Existing waste water treatment works (WWTWs) should be progressively improved, monitored and maintained so that the water quality of the rivers and water-bodies with which they are associated achieve minimum potable (drinking), contact, and phosphate, nitrate and e-coli standards. This requires that they comply with the effluent quality requirement set out in their approved licences.
- All wetland ecosystems should be protected such that their ecological and stormwater purification function is maintained. Water abstraction from and effluent discharge into wetlands should be prohibited.
- Where urban development proposals will exceed infrastructure capacity, applications should be refused until provision is made to deal with the additional loads.
- Urban development (including roads) or intensive agriculture within a wetland or river, or within 30m of a wetland or river, measured from the wetland boundary, should be discouraged (note that a wetland boundary must be delineated by a specialist).
- Alternative forms of sewage disposal and treatment for new developments should be investigated with a view to minimise the source of waste water and minimising the pollution of surface and ground water.
- Examples of alternative sewerage systems include: small bore with settling tanks, Enviro-loos, urine diversion toilets, conservancy tanks, artificial wetlands, ventilated pit latrines, septic tanks and trench drains.
- Methods of sanitation which promote water resource protection (ground and surface water) should be implemented in all areas.
9.3.5.4 Sustainable building guidelines/techniques

The following guidelines put forward technology options for building design, construction and maintenance, all directed at achieving sustainability of the built form.

Building/architectural style

- Developments built in sensitive environmental and cultural areas should blend in with the natural and cultural environment as part of their planning.

Materials

- There should be an assessment of the demand and its locations, and supply and its locations, of all non-renewable building materials e.g. stone, cement, lime, and sand, available in the Municipality.
- The use of local material should be encouraged as far as possible: local materials, knowledge and skills will save transport overall costs, are often matched to local climatic conditions, and help develop/sustain local economies.
- The use of renewable resources should be mandatory and the re-use of material should be promoted in new building projects and incentives should be provided where appropriate.
- Consider using standard building material sizes where feasible to avoid waste and extra transport to remove waste from the building site.
- Use materials and finishes that ensure healthy, comfortable buildings which can be economically cleaned and maintained. Avoid toxic materials and those with high levels of embodied energy (i.e. those that require large amounts of energy to manufacture, transport and construct).

Energy efficiency

- Use as much as possible passive solar design to reduce energy consumption and thus the need for extra equipment such as air conditioning, and to ensure comfortable living.
- Make sure that the proposed buildings and spaces (rooms) are ‘right-sized’ (avoiding wasted accommodation and energy consumption).
- Investigation of energy efficient, non-toxic insulation materials is important, such as treated organic fibre (waste timber) chip, recycled paper and possibly polyester.
- North orientation to ensure that as many well-used spaces face north as possible. Sun control is more difficult on east and west facing windows. South facing windows can capture good reflected light from the sky and elsewhere, but very little solar energy.
- Good insulation in the roof and walls to keep the inside temperature warm in winter or cool in summer.
- Suitable roof overhangs to let in the lower winter sun but shade from the hot summer sun.
- Sensible penetration (windows) to allow in the light and catch the winter sun, but not too much window area so that warmth or coolness cannot be retained inside when needed. Windows can be combined with shading and reflecting devices such as overhangs, screens, shutters, awnings, trees, planting, different glass types to control the amount, quality and time of daylight entering the building.
- Suitable ventilation for fresh air and cool breezes in order that rooms can be ventilated using airbricks, opening windows or forced ventilation.
- Natural lighting through windows and light wells.
- Indigenous vegetation and planting is best suited to the local soil and climate. Deciduous trees can help shade buildings in summer and allow sunlight to warm spaces in winter, reducing the need for heating and cooling.

9.3.5.5 Waste recycling

- All municipalities should follow an integrated hierarchical approach to waste management in respect of avoidance, reduction, reuse, recycling, composting, treatment and final disposal. The Waste Management System should consist of a collection service from the source (domestic, office or factory), transfer stations and waste disposal sites.
- Waste separation at source should be encouraged. Initially only organic (vegetable and plant matter) and inorganic (usually dry,
cardboard, glass, plastic, paper, builders’) waste should be separated.

- Material recovery facilities should be established at all transfer stations

- Every urban settlement should have a transfer station within a maximum of 5km from the town centre, inside the urban edge. These transfer stations should be properly managed according to best practices so as to minimise nuisance to surrounding neighbours.
- Transfer stations can include facilities like drop-offs, recycling centres, treatment facilities and waste disposal facilities.
9.3.6 Demarcation of sites in Traditional Authority Areas

The objective of the demarcation of sites policy in the Mbombela Traditional Authority areas is intended to assist the Chiefs and their Headmen (Tindvuna) to allocate stands that have been properly surveyed and are suitable for human settlement. This process will ensure the following:

- Efficient utilisation of land for human settlement development;
- Efficient provision and access to basic services in respect of water, sanitation, refuse removal and electricity;
- Creation of planned, consistent and sustainable layouts with proper road hierarchy and improved access to communities, social and economic opportunities;
- Conservation of environmentally sensitive areas;
- Protection of agricultural land.

9.3.6.1 Description

The demarcation of sites policy guides the process to be followed in the demarcation of stands. The process involves the transformation of undeveloped vacant or derelict land to land that can be used for residential, mixed, retail, commercial, industrial or institutional use. The process does not involve land tenure upgrading, it is only a township establishment process and finishes upon the approval of a General Plan.

9.3.6.2 Locality

The policy applies in the Traditional Authority areas.

9.3.6.3 Objectives

The objectives are to:

- Limit unplanned and uncontrolled informal settlement and to ensure more efficient use of resources and land within Traditional Authority Areas;
- To create sustainable and orderly human settlements.

9.3.6.4 Guidelines

The process to be followed in the demarcation of sites will be as follows:

1. The Traditional Authority shall request assistance from the municipality in the demarcation of sites:
   a) The demarcation of sites should be guided by the proposals contained in the respective Traditional Authority Framework.
   b) The Traditional Authority shall request assistance from the Municipality in the process of demarcating sites.

2. The Municipality shall facilitate the process of township establishment:
   c) The Municipality shall engage with the relevant departments to solicit support of the project, be it financial or otherwise i.e. from the Department of Human Settlement or Department of Agriculture, Rural Development and Land Affairs.
   d) Where capacity is an issue, the Municipality shall procure the services of experienced and capable service providers for the demarcation of sites i.e. Town & Regional Planners.

3. Preparation of the application

A Township Establishment Process shall commence which will include an application consisting of the following:

- Locality and Layout Plan with contour lines and a motivational memorandum which will include:
  - Land Claims investigation
  - Mineral Rights investigation
  - Land ownership and land rights investigation
  - Investigation of servitudes
  - Conditions of title
  - Community participation information
  - Availability of bulk services (water, electricity, etc)
4. Lodging of a township establishment application:
   a) Before lodging the application, the layout plan shall be approved (i.e. stamped) by the Traditional Authority and a Community Resolution shall be obtained.
   b) The relevant legislation shall be used to lodge an application with the Mpumalanga Department of Agriculture, Rural Development and Land Administration (DARDLA) for its decision.
   c) A copy of the application shall be forwarded to the Municipality and other relevant departments for comments.
   d) The Department (DARDLA) shall provide its written decision (approval or disapproval) of the proposed township.
   e) Upon approval the Land Surveyor shall draft the General Plan of the study area and prepare the necessary technical documentation to be lodged with the Office of the Surveyor-General for approval.

5. Submission and presentation of approved layout plan to Traditional Authority:
   a) Upon receiving all necessary approvals the Municipality shall handover the Layout Plan to the Traditional Authority.
   b) A copy the approved General Plan shall also be handed over the Traditional Authority.
   c) The Traditional Authority shall use the Layout Plan to allocate stands to residents.
   d) The Traditional Authority together with the Municipality shall monitor the unlawful occupation of land and illegal land uses.

9.3.7 Incentives Policy

The policy aims to attract investments to Mbombela. The objective is to align existing investment incentives with the SDF’s Desired Spatial Pattern.

9.3.7.1 Description

An incentive represents a financial inducement or subsidy or benefit offered by national, provincial, or local government to private, for-profit company, to be paid for with public funds, in exchange for the company’s beginning new business activities within the jurisdiction, expanding existing activities, or agreeing not to move or close existing activities. Evidently it is a supply side mechanism which aims to attract, retain and expand existing business and investment activities within a specific area.

9.3.7.2 Types of incentives offered by local authorities

- Rebate on town planning approvals i.e. rezoning, building plans etc
- Discount on property rates and taxes
- Discount on municipal land and buildings
- Discount on municipal services i.e. water, sewerage, electricity charges.

9.3.7.3 Principles underlining the provision of incentives

- Incentives should focus on attracting new investment to the area, with the focus on businesses or industries that would otherwise not locate in the area
- The incentive should be provided in a key node that has the capacity to accelerate economic growth
- The incentive should be provided in a key node that brings about a more efficient urban structure
- The incentive should be provided in an area where there is a catalytic force or competitive advantage, which improves an area’s overall location potential, e.g. an airport
- No speculation should be allowed
• The incentive should augment economic linkage and agglomeration potential in the precinct, i.e. not merely create a new township, but ignite a multiplier effect
• Incentives should target export-orientated businesses, due to high levels of income into the local economy
• Incentives should also focus on business retention, help maintain existing employment and tax base
• Incentives should be based on the performance of the company, producing the economic development results not just on up-front investment
• Incentives should have ‘clawback provisions’ to hold the company responsible for promised returns, minimising risk
• Incentives should provide job growth, increase employment and average wage levels
• Incentives should encourage local hiring for new job growth
• Cost-benefit analysis should be done to compare the cost of the incentive to the direct benefits that it will generate
• Target firms for greater incentives, based on provision of social benefits at lower incentive costs
• The incentive must have a positive impact on social upliftment in the area
• The incentive should encourage economic empowerment of HDIs
• Incentives should attract investment to the area that would contribute to an increase in municipal income.

9.3.7.4 Existing Incentive Packages

The following incentives packages are in place in Mbombela:

1. Mbombela Economic Investment Incentive Promotion Policy (2011)

Purpose of policy:

• To provide a framework for uniform development of incentives in Mbombela that will assist to:
  o Attract major international and national investors to the municipality.
  o Retain and expanding existing investment in the municipality.
  o Stimulate and create new job opportunities for the communities of Mbombela.
  o Support investment into projects identified in the IDP and the Mbombela EDS (Economic Development Strategy).

2. The Urban Development Zone Tax Incentive

Purpose of policy:

• To respond to the problem of dereliction and dilapidation in South Africa’s larger cities.
• To promote urban renewal and development through private sector investment in the construction and improvement of buildings.
• To encourage investment in specific Urban Development Zones (UDZ) that includes:
  o Areas with high population carrying capacity,
  o Central business districts (CBD) or Inner city environments, and
Areas with development urban transport infrastructure.
9.4 Land Use Management System Guidelines

Section 26(e) of the Municipal Systems Act, (Act 32 of 2000) stipulates that the Local Municipality should prepare a SDF which must include basic guidelines for a Land Use Management System (LUMS) as part of the IDP.

The purpose of this section is twofold:

1. To identify basic guidelines for land development with respect to:
   - Residential
   - Rural residential
   - Agriculture
   - Tourism and accommodation
   - Golf Course and Golf Estates
   - Cemeteries
   - Industrial
   - Open space
   - Urban nodes

2. To stipulate the land use directives applicable to the different biodiversity categories as identified in the 2006 Mpumalanga Biodiversity Conservation Plan as well as the Kruger Park Zoning Plan guidelines.

These guidelines are fundamental to consider when adjudicating land use applications and shall form an integral part of a Land Use Management System. The adherence to these guidelines shall be the combined responsibility of the municipality and relevant sector departments.

9.4.1 Residential

Within the residential category guidelines are established hereunder for the location of affordable housing projects and upgrading of informal settlement projects:

9.4.1.1 Affordable housing

**Definition**
Affordable housing includes households earning **between R3500 and R15 000 per month**.

The following guidelines are presented for the location of affordable housing projects:

a) **Availability of bulk services**
   As a rule, bulk municipal services are available in or next to existing urban areas. This favours infill development and opposes urban sprawl as a form of urban development.

b) **Ownership of land**
   Land already owned by the municipality avoids the tedious and expensive purchase and transfer of private owned land for affordable housing development.

c) **Environmental requirements**
   Environmental sensitive areas should be avoided and all environmental requirements must be met in the location of affordable housing projects.

d) **Access to social amenities and economic opportunities**
   Affordable housing projects should be located close to existing social and economic nodes or close to planned socio-economic nodes.

e) **Access to public transportation**
   Affordable housing projects should have easy access to public transport.
e) **Integration of Urban Structure**
Affordable housing should contribute to the establishment of integrated, economically viable and sustainable human settlements.

f) **Located within urban edge**
Affordable housing projects must be developed inside the urban edge.

### 9.4.1.2 Informal Settlement

**Definition**

Informal settlement means a settlement situated either on private, tribal or state land. The settlement is not planned or surveyed and therefore no General Plan exists. A communal property association or tribal authority or local municipality does management.

With the exception of land ownership, the same criteria for developing affordable housing projects apply to selecting informal settlement upgrading projects.

If an existing informal settlement does not adhere to most of the criteria set out above, it is suggested that consideration be given to relocate such a settlement.
### 9.4.2 Rural residential

**Definition**

Rural residential development creates the opportunity for people to avail them of a semi-rural style of living yet be in proximity to the full range of physical and social services which are available in the adjacent urban areas. Rural residential allows for a maximum density of 1 dwelling unit/ha of developable land and a minimum erf size of 2500m².

The criteria below provides for the establishment of rural residential developments for principle residence where individual ownership is mostly envisaged and do not intend to regulate recreational uses such as resorts and tourist uses, or residential uses related to farm labourers.

- a) Rural residential developments must be sustainable and complimentary to the current and likely future urban structure.
- b) The development must not impede on the proper, long term growth of an urban area at normal densities and municipal service provision.
- c) The development must not place additional demand on a service provider with regard to the provision of or maintenance of the public roads network.
- d) Rural residential must be provided with sufficient and sustainable engineering services (potable water, sewerage, stormwater control, access, electricity and solid waste disposal) to a standard acceptable to the municipality,
- e) Land intended for rural residential should have good and quick access to a tarred road that is maintained on a regular basis.
- f) The geo-technical and geo-hydrological conditions are such that septic tanks and french drains can be used, alternatively, other systems must be used that would remove any risks.
- g) The Department of Water Affairs has issued a licence for the use of ground or surface water for household purposes.
- h) The development must be compatible with the existing or likely future surrounding land uses.
- i) The impact on the environment and natural resources must be minimal or must be mitigated through design or environmental management.
- j) The land parcel must not be prime and unique agricultural land and National Department of Agriculture, Forestry and Fisheries must consent to the proposed development.
9.4.3 Agriculture

The following are general guidelines to ensure the sustainable use of agricultural land:

- Restrict the fragmentation of agricultural landscapes and promote their consolidation. Subdivision of farm land, especially moderate to high potential agricultural land, should be discouraged.
- Subdivisions of farm land will be allowed provided that the consent of the National Department of Agriculture, Forestry and Fisheries has been obtained first.
- Promote sustainable farming practices e.g.
  - retain natural corridors and buffers,
  - avoid areas containing endangered species,
  - restore and conserve natural vegetation,
  - use organic fertilizers and eco-friendly pesticides,
  - reduce and comply to stock rates and adopt rotational grazing,
  - plough along contours,
  - mitigate against fire risks
- Land uses should be restricted to agricultural and tourism activities. A Site Development Plan approved by the municipality, involving the design and functional utilisation of the site should be provided.
- Provide for small scale farming and emerging farmer establishments in close proximity to towns and along rural movement routes.
- Accommodate nuisance and space extensive agricultural enterprises (e.g. feedlots, poultry batter houses, landfill sites, etc.) close to regional routes, including rail.
- Enforce applicable EIA regulations for listed activities on agricultural land.

9.4.3.1 Agri-village

**Definition**

Agri-village is a sustainable private settlement of restricted size, including an agricultural component, established and managed as a legal entity, that is situated within an agricultural or rural area and where residence is restricted to bona fide rural workers and their dependants, of the farms, forestry or conservation enterprises situated in the area.

- The size (number of households) of agri-villages need to be balanced with the agricultural potential of the land and also the sustainability of the settlement in terms of the provision of minimum standard of social and engineering infrastructure.
- Adopt sustainable service provision technologies which require minimal operational support i.e. solar power, rain water harvesting, boreholes and VIP’s for service provision to dwelling units.
- Accessibility to viable transportation options and main roads is a determining factor in the location of agri-villages.
- The settlement of people not directly involved with the use of the resource should not be allowed.
- The provision of resorts or lodges on farms to provide for the housing needs of mine personnel should not be allowed.
- Farm worker’s dwelling units should be clustered and located in close proximity to rural movement routes and on the farm’s access road.
- The outcome of an EIA is also a key consideration in the establishment of agri-villages.
9.4.3.2 Rural-industry

**Definition**

Rural industrial activity includes processing local and regional farm products, extracting minerals (mines & quarries) and processing natural resources, servicing agriculture, mining, conservation and rural tourism.

The Municipality may grant its consent for a rural industry provided that:

- a) It is satisfied that the agricultural industry on the land unit in question is desirable.
- b) The agricultural industry is subservient and ancillary to the dominant agricultural use of the property.
- c) The agricultural industry does not adversely affect the agricultural potential of the property.
- d) Extractive industry (quarrying and mining) takes place at the mineral or material source.
- e) Non place bound industries or agricultural industries should be located within the urban edge of settlements.
- f) All place-bound agricultural industries related to the processing of locally sourced (i.e. surrounding farms) products, should be located within the agricultural area.
- g) Extractive industries need to conform to the provisions of the Mineral and Petroleum Resources Development Act (Act 28 of 2000), the Mine, Health and Safety Act and NEMA.
- h) Both agricultural industries and extractive industries should exclude any permanent on site accommodation. Workers should be accommodated within the nearest existing urban areas/towns where social and economic infrastructure exists.
- i) The area allocated for purposes of an agricultural industry shall be clearly identified on a plan prepared by a suitably qualified person to the municipality’s satisfaction.
- j) Enforce applicable EIA regulations for listed activities on agricultural land.

9.4.4 Holiday accommodation

Holiday accommodation in rural areas should be informed by the following basic guidelines:

- a) Availability of a resource (natural feature, i.e., hotwater spring, lake, river, or a feature with cultural historic value) and environmental opportunities and constraints are the most important criteria for the location of tourism development.
- b) Such a resource must make the property favourable above any other property in the area, be worthwhile for holidaymakers to travel from afar and spend more than one day and the resource must be protected through proper management and mitigating measures.
- c) A resort and its resource must be inseparable and access thereto must be guaranteed.
- d) High risk areas e.g. fire, flooding, topography and conflict with productive farming processes should be avoided.
- e) The land uses should be restricted to tourism activities and uses ancillary and complementary thereto.
- f) A Site Development Plan approved by the Municipality involving the design and functional utilisation of the site.
- g) Current EIA regulations (in terms of NEMA listed activities) and flood line restriction should be enforced.

Recommended sizes and densities of holiday accommodation facilities:

- B&B’s should be limited to 1 per farm, and the dominant use of the building should remain a dwelling, with accommodation limited to 2 rooms and 5 lodgers. Guest rooms should be attached to the dwelling and should not be converted into separate dwelling units.
- Backpacker hostels should be limited to 1 per farm with the building used for letting of individual or communal rooms. Provision for communal food preparation by lodgers should be made.
- Guesthouses should be limited to 1 per farm with accommodation limited to 5 guest bedroom suites at a ratio of 1 suite/10ha, up to a maximum of 15 lodgers. Building footprint of up to 350m², and height of 2 storeys (8m).
- Boutique hotels should be limited to 1 per farm, accommodating up to 10 guest bedroom suites at a ratio of 1suite/10ha. A building footprint of up to 350m² and height of 2 storeys (8m). Conference and entertainment facilities, in scale with a boutique hotel can be
provided at a rate of 10m² floor space per guest suite up to a maximum of 150m² for the conference facility, whether within the boutique hotel or as a separate building.

- Farm rental units should include 1 additional dwelling unit per 10ha, to a maximum of 5 units, 175m² maximum floor areas of a rental unit including garage, building height of 1 storey (6.5m).
- Resort development should be subject to a positive EIA with a maximum of up to 50 resort units. Building height is restricted to single storey (6.5m) and units may be up to 120m² including garages. Resorts can include B&B’s, guesthouses, lodges or boutique hotels and camping sites.

9.4.5 Golf Courses and Golf Estates

In terms of the report: “Guidelines for Golf Courses, Golf Estates, Polo Fields and Polo Estates in the Western Cape” prepared for the Department of Environmental Affairs and Development Planning, the following locational guidelines are adopted:

9.4.5.1 Urban Areas

Category Description:
An urban area is all land designated for urban development purposes within a demarcated urban edge, including open space systems, and in the absence of a demarcated urban edge, it refers to the current outer extent of urban development.

Criteria:
Developments that include golf courses and golf estates could be more appropriate in the following instances:

a) In or immediately adjacent to the urban area, where it assist in defining an urban edge.
b) Where it forms part of the municipal open space system (to be read in conjunction with (ii) hereunder), and
c) Where residential components are added to existing amenities in urban areas, as a form of general densification, on condition that the recreational and open space function of such amenities is not compromised and provided that:

i. The site does not fall within an area that has been identified by the relevant Municipality concerned for urban densification;

ii. If the site is located within the open space system/network, access to public amenities and open spaces is not disrupted;

iii. The site has not been designated as being of sufficient cultural significance by heritage authorities to warrant it a “no-go” area for development;

iv. The site does not fall within an area that has been identified as being of conservation significance, within the urban context;

v. The site does not negatively affect the role, function, public enjoyment and status of open space systems/networks, designated sites of cultural significance and/or sites identified as being of conservation significance;

vi. The development or part thereof will not be located within the 30m development restriction area measured from the bank of a river, stream, wetland or any other natural surface water feature determined as sensitive by the Department of Water (DWA) and other relevant authorities, or within the following flood lines, whichever is the most restrictive:

- 1:20 year floodline: Preferably no artificially landscaped areas (e.g. golf course or polo field) within the 1:20 year floodline (in order to protect the river system), as this area is the most prone and vulnerable to disturbance (e.g. erosion) and flooding in heavy (above normal) rain events.
- 1:100 year floodline: No development (i.e. residential units, club houses) below the 1:100 year floodline. No walls are to be constructed across this area.

vii. The water demand for the development is in accordance with the municipality’s water services plan (should such a plan have been prepared and be available) and that there is no risk of stress being placed on the municipal water supply;

viii. Where water resources (surface and groundwater) are required to supply the development, that these are not considered as being stressed by DWA and other authorities;

ix. The development will not result in the removal of traditional access used by local communities, particularly where they are dependent on such access for their livelihood or recreation (e.g. fishing, rivers, mountains, commonage for grazing and other natural or man-made features), unless agreed to by all interested and affected parties.
9.4.5.2 Core Areas

**Category description:**
Core areas include officially proclaimed nature reserves (national, provincial, municipal), ecological corridors, critically endangered habitats in accordance with the National, Provincial and Municipal Biodiversity Assessments or Plans and/or applicable fine-scale biodiversity plans) and river corridors.

**Criteria:**
No golf courses and golf estates should be located in core areas.

Where a golf course and golf estate are located adjacent to a core area, the green areas of the development should front on the core area in the case of estate developments, and an appropriately determined restricted area, containing indigenous vegetation, should be established between the golfing fairways/polo field and the boundary of the core area. There must be no loss of critically endangered habitats and the functioning of ecological corridors, open space systems or heritage areas must not be significantly compromised.

9.4.5.3 Buffer Areas

**Category description:**
Buffer areas include remaining natural habitat in endangered and vulnerable ecosystems, including remnants (determined in accordance with the National, Provincial or Municipal Spatial Biodiversity Assessments and/or Plans and/or applicable fine-scale biodiversity plans), natural habitat in less threatened ecosystems and extensive agricultural areas. These buffer areas do not include intensive agricultural areas. No golf courses, golf estates, polo fields and polo estates should be allowed in intensive agricultural areas.

**Criteria:**
Development that includes a golf course or polo field component may be located on the border between buffer areas and urban areas under any one or combination of the following circumstances, nevertheless accepting that such consideration will be more stringent than within the urban area:

- The development will result in achieving long term Biodiversity Offsets and/or heritage goals, i.e. the development takes place on degraded or disturbed land, which is not deemed as being of conservation or heritage significance and will result in the rehabilitation and ongoing maintenance of a significant land parcel/habitat/natural resource; and/or
- The development will result in securing the viability of a significant agricultural unit or contribute significantly to land reform objectives.

In addition, such development will only be considered in these areas, provided that:

i. The number of units is limited to the extent that it will not promote secondary development (e.g. service stations, shopping centres, retail activities, social services such as schools, etc) on or around the site such that a new, unplanned development node is created;

ii. The area has not been designated as being of sufficient cultural significance by heritage authorities to warrant the protection of these areas;

iii. The development does not contribute to urban sprawl and/or result in “leapfrogging”;

iv. The area is not of high or medium value agricultural land as defined by the Department of Agriculture, Forestry and Fisheries;

v. The area has not been designated as being appropriate for the establishment of emerging farming enterprises;

vi. The water resources (surface and groundwater) required to supply the development have been shown not to be stressed by DWA and other relevant authorities, and furthermore:

- That the development does not cause any pollution of the natural water sources as a result of fertilization, and
- Provided that treated effluent does not cause any pollution of the natural water resource;

vii. The site does not negatively affect the role, function, public enjoyment and status of open space systems/networks, designated sites of cultural significance and/or sites identified as being of conservation significance;

viii. The development will not impact on habitats or ecosystems that are defined as being of critically endangered status in terms of the National, Provincial and Municipal Biodiversity Assessments or Plans and/or applicable fine-scale biodiversity plans;
ix. The development will not disrupt ecological corridors,

x. The site does not fall within the 30m development restriction area measured from the bank of a river, stream, wetland or other natural surface water feature, or as determined by DWA and other relevant authorities, or where the development restriction area has not been determined, within the 1:100 year floodline,

xi. The development will not negatively affect a river, natural spring or the catchment of a dam;

xii. The development will not desire its water supply from a river system that has been determined as being pristine or near-pristine or stressed by DWA and other relevant authorities, or in terms of the National, Provincial and Municipal Biodiversity Assessments or Plans and/or applicable fine-scale biodiversity plans;

xiii. The applicant identifies existing traditional access routes or commonages used by local communities and the public (e.g. access to rivers, mountains, fishing, commonage for grazing and other man-made features) and the development not resulting in the removal of these, unless agreed to by the interested and affected parties;

xiv. The development will not result in inappropriate alteration of the landscape form.

Upon identification of preferred sites, detailed studies need to be undertaken to confirm the suitability of the sites in terms of the topography, geology and environmental restrictions.

9.4.7 Industrial

As far as industrial development is concerned the following general guidelines should be complied with:

- For commercial and industrial land, ideally, a slope of 1:200 or less is suitable. The alternative is an expensive cut and fills exercise for each commercial or industrial building.
- Industrial/commercial developments generally require fairly large areas, with gentle slopes.
- Easy access to road and/or rail transport is imperative when new areas are planned for industrial development.
- Service industries and light industries may develop in close proximity to residential areas.
- Existing industrial/commercial zoned land should be substantially filled up before new industrial/commercial areas are developed.
- Noxious industries should not be developed in close proximity to residential areas. Specific areas should be delineated for this kind of land use in order to isolate the impact it might have on its surroundings with specific reference to the direction of prevailing winds, natural resources downstream, accessibility, infrastructure provision and handling of waste.
- All industries must comply with environmental and health standard regulations.

9.4.8 Open Space

9.4.8.1 Primary open space network

A primary open space network will function on a regional scale and includes all significant natural/ecological assets of the Municipality, i.e., mountain ranges, proclaimed nature reserves, river environments, wetlands and biodiversity corridors. By protecting such areas, urban areas are prohibited to sprawl freely and are therefore forced into denser urban agglomerations.
9.4.8.2 Secondary open space network

A secondary open space network has a neighbourhood function and scale, and includes all open space, parks and sports facilities within neighbourhoods.

Guidelines for planning and design of open spaces:

- Smaller and fewer active open spaces that are reasonably developed and maintained are far more useful than a large number of active open spaces that are not.
- Larger parks should be located in areas with no or limited access to natural amenities, i.e., mountains or coastlines. It should be evenly distributed and where possible, connected by parkways (±500m walking distance or 10 min).
- Larger parks can be juxtaposed to, and incorporate urban agriculture, fuel wood planting, solid waste disposal and nature conservation sites.
- Smaller parks can be located within easy walking distance (i.e. ±300m) of workers situated within busy commercial and industrial centres in order to create contrasting space of relief, within predominantly residential areas to create easy surveillance of child-play spaces, and within school clusters, which create safe, shared playtime space (300m to 700m or 10min).
- Larger sports fields should be located within clusters of schools and close to private sports clubs, in order to facilitate the sharing of amenities between different user groups and to avoid under utilisation. Schools can have allocated times of use during the day, while sports clubs can use the amenities mainly during the evening (±300m of school buildings and 500m to 1500m of other user groups).
- Sports fields should be located close to public transport services, in order to facilitate the access of visiting teams.
- Sports fields can be located on low-lying land adjacent to water courses and incorporated into parkways, in order to act as part of the major stormwater management system in the event of storms.

9.4.9 Urban design guidelines

Guidelines to be implemented within urban centres:

- **Legibility** - A place that has a clear image and is easy to understand
  
  - New developments should be distinctive, welcoming and memorable emphasising a “sense of arrival” and assisting people to find their way easily.
  
  - The need to respect or add new local landmarks.

Illustration of a landmark within a town centre

- **Adaptability** – A place that can change easily
  
  - New developments should incorporate adaptable buildings with flexible layouts which can sustain a variety of uses and help buildings to change over time.
  
  - Residential developments should provide lifetime homes that can adapt to people’s changing circumstances. The opportunity to extend and create additional bedrooms should be considered as an integral part of the initial design.
  
  - Private space to the rear of properties should demonstrate that it is usable for a number of activities, particularly for traditional family houses.
• **Diversity of uses** – A town centre offering a variety and choice
  - All new developments should encourage a mix of uses that contribute to the economy and social health of the area. Complementary uses can be mixed horizontally (side by side) or vertically (on different floors of the same building).

• **Continuity and enclosure** – A town centre where public and private spaces are clearly distinguished.
  - Developments should be in the form of secure perimeter blocks which clearly distinguish between public fronts and private backs and follow a coherent building line.
  - Projections and occasional set-backs from the building line can be used to add emphasis but the function of any space created must be clearly defined.

• **Attractiveness** – Hard urban spaces and all streetscape elements within them must be aesthetically pleasing.
  - All streetscape and streetscape elements must conform to specific urban design, landscaping and graphic design standards.

• **Comfort and safety** – Each hard urban space must be functional.
  - Hard urban spaces must be responsive to the needs and expectations of all its users, vehicles and pedestrians alike.
  - Hard urban spaces must be designed and equipped (furnished) for comfort and safety of all users such as drivers, street vendors, joggers, strollers, pedestrians, shoppers etc.

• **Liveliness** - Urban spaces must be designed as lively spaces where people can meet and interact freely.
  - Social life must be encouraged outside of formal institutions and venues such as churches, sports arenas, clubs and theatres.
  - Street life must be promoted not only during the day but also during the night.
  - Wider sidewalks to cater for a broad range of activities i.e. vendors, coffee shops, taxi-drop off points etc.
o Provide sidewalks at schools, local businesses, recreational facilities and industrial nodes that result in pedestrian concentrations;

o Provide sidewalks whenever the roadside and land development conditions are such that pedestrians move along a main or high-speed freeway;

o Incorporate sidewalks in rural areas with higher speeds and general absence of lighting; and

o Construct sidewalks along any street or freeway without shoulders, even if there is light pedestrian traffic.

o Consider the needs of people with disabilities in the planning, designing, operating, and construction of pedestrian facilities.

o Provide quality sidewalks or a sidewalk setback that separate the pedestrian from the motorist with the following details: (See Figure below: Illustration of wide sidewalks with pedestrian detail.

- Attractive building facades (e.g., pedestrian scale, street orientated window and building entrances);
- Street trees and landscaping;
- Benches;
- Street lighting;
- Pedestrian oriented signs and traffic control devices; and
- Public art.

Illustration of a typical wide street

9.4.10 Environmental conservation

The conservation categories indentified in the Mpumalanga Biodiversity Conservation Plan are described below, together with broad land use guidelines applicable to each category (Source: Mpumalanga Biodiversity Conservation Plan).

The MBCP plan contains three regulatory components, firstly the biodiversity categories, secondly the land uses best suited to each category and thirdly a description of the land uses as used within the plan. These components are reflected below:

9.4.10.1 Protected Areas (PAs)

Protected areas are managed primarily for sustaining biodiversity and to a lesser extent, ecological processes. PAs should represent the fullest possible range of species and habitats known.

Of the 15 categories of land uses listed in the table below (Land Use Types) only the first three are acceptable in PAs. In the case of the first,
Conservation Management, the emphasis is on the maintenance of biodiversity and on its non-consumptive use by visitors. In some nature reserves, production-orientated management is permitted, including the sustainable harvesting of veld products, game and occasionally even livestock. The other two land-use types, Extensive Game Farming and Livestock Production, are only conditionally acceptable in PAs. They will both require strict limitations of control before being implemented.

9.4.10.2 Irreplaceable

This category is the highest biodiversity status of land outside the PA network. Some of it may already be managed carefully and sustainably by well informed owners with appropriate resources but there is no compelling legal or public pressure for this to be so.

All irreplaceable areas should fall within the land-use category, Conservation Management, although extensive Game Farming and Livestock Production, if well-managed, will also be positive for biodiversity. The most important short-term priority is that the land should be managed in ways that at least have no further negative impact on biodiversity. The basic land use rules for Irreplaceable land are therefore the same as those for Protected Areas.

9.4.10.3 Highly Significant

Land in this category is also of high biodiversity status and should be maintained as natural vegetation cover. Permissible land uses should be limited to those that are least harmful to biodiversity, e.g. types 1-4. All intensive livestock production (type 7), cultivation-based agriculture and all urban/industrial development (types 10-15) should not be permitted.

- If development is unavoidable, such land uses must be made sufficiently dispersed (or some circumstances clustered) and of the right scale, to be as biodiversity friendly as possible.

9.4.10.4 Important and Necessary

These areas are significant important areas of natural vegetation that play an important role in meeting biodiversity targets. No significant increase in the occurrence of land use types 7-9 should be permitted. Every opportunity to revert to economic options using natural land cover should be taken. All other agricultural land uses may be permitted but with best-practice guidelines made conditional and aimed at benefiting site-specific biodiversity.

9.4.10.5 Ecological Corridors

The purpose of ecological corridors is to provide intact mega-pathways for long-term biological movement. They are selected primarily along river lines and altitudinal gradients to provide for the natural retreat and advance of plants and animals in response to environmental change. They are also selected to follow the lines of least transformation (maximum remaining natural habitat) between the province’s most valuable ecological assets. No area estimate is provided for corridors as their width is variable and serves a mainly indicative purpose on the map.

No significant increase in the occurrence of land-use types 7-9 should be permitted. Alternative agricultural production systems that exert less impact on biodiversity should be selected.

9.4.10.6 Least Concern

It is in these areas where development options are widest. At the broad scale these areas and those where natural habitat has been totally lost serve as preferred sites for all forms of development (land use types 5-15). Although biodiversity issues are of little concern in these areas, land-use planners are still required to consider other environmental factors such as socio-economic efficiency, aesthetics and the sense-of-place in making decisions about development.

Land-use and administrative options for positive biodiversity outcomes include:

- These areas, together with the transformed landscapes with no natural habitat remaining, serve as the preferred sites for all forms of urban and industrial development (land use types 10-15).
- Where this category of land occurs close to areas of high biodiversity value, it may provide useful ecological connectivity or ecosystem services functions, e.g. corridors or water production. In these
situations encouragement needs to be given to biodiversity friendly forms of management and even restoration options if appropriate.

- Develop incentives to reverse lost biodiversity for selected parcels of land where buffer zones and connectivity are potentially important.
- Normal application of EIA and other planning procedures will provide the main land-use planning tool at the fine scale.

9.4.10.7 No Natural Habitat Remaining

This category has already lost most of its biodiversity assets and much of its ecological functioning too. The most widespread cause for terrestrial biodiversity loss is crop and timber cultivation.

Areas with no natural habitat remaining are preferred sites for development, even more so than for 6, above. However, the selection of sites for urban and industrial development needs to pay particular attention to also avoiding areas of high agricultural potential. Prime agricultural land is coming under the same pressures as land with high biodiversity values and needs to be protected for its ability to produce food and fiber sustainably.

Land-use and administrative options for positive biodiversity outcomes include:

- Where the category of land occurs close to areas of high biodiversity value, and located to potentially serve useful ecological connectivity functions, consider encouraging restoration and re-vegetation options.
- For individual parcels of land identified as having specific biodiversity values, actual or potential, incentive to restore lost biodiversity should be investigated.
- Consider the negative impacts of land uses on these areas, e.g. controlling use of pesticides, on neighbouring areas of natural habitat, especially if they are of high biodiversity value.

Land use types best suited to each Biodiversity Conservation Category

<table>
<thead>
<tr>
<th>No</th>
<th>Type of Land Use</th>
<th>PAs</th>
<th>Irreplace</th>
<th>Hi Sig</th>
<th>Imp &amp; Nec</th>
<th>Ecol Corr</th>
<th>Least Conc</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conservation</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No</th>
<th>Type of Land Use</th>
<th>PAs</th>
<th>Irreplace</th>
<th>Hi Sig</th>
<th>Imp &amp; Nec</th>
<th>Ecol Corr</th>
<th>Least Conc</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Extensive Game Farming</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>3</td>
<td>Extensive Livestock Production</td>
<td>R</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>4</td>
<td>Rural Recreational Development</td>
<td>N</td>
<td>N</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>Y</td>
</tr>
</tbody>
</table>

High Impact Rural Land Uses Types 5-9

<table>
<thead>
<tr>
<th>No</th>
<th>Type of Land Use</th>
<th>PAs</th>
<th>Irreplace</th>
<th>Hi Sig</th>
<th>Imp &amp; Nec</th>
<th>Ecol Corr</th>
<th>Least Conc</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Rural (Communal) Settlement</td>
<td>N</td>
<td>N</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>6</td>
<td>Dryland Crop Cultivation</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>R</td>
<td>Y</td>
</tr>
<tr>
<td>7</td>
<td>Intensive Animal Farming (incl. dairy)</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>R</td>
<td>Y</td>
</tr>
<tr>
<td>8</td>
<td>Irrigated Crop Cultivation</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>R</td>
<td>Y</td>
</tr>
<tr>
<td>9</td>
<td>Timber Production</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>R</td>
</tr>
</tbody>
</table>

Urban Industrial Land Uses Types 10-15

<table>
<thead>
<tr>
<th>No</th>
<th>Type of Land Use</th>
<th>PAs</th>
<th>Irreplace</th>
<th>Hi Sig</th>
<th>Imp &amp; Nec</th>
<th>Ecol Corr</th>
<th>Least Conc</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Urban &amp; Business Development</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>R</td>
</tr>
<tr>
<td>11</td>
<td>Major Development Projects</td>
<td>N</td>
<td>N</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>12</td>
<td>Linear Engineering Structures</td>
<td>N</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>13</td>
<td>Water Projects and Transfers</td>
<td>N</td>
<td>N</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>14</td>
<td>Underground Mining</td>
<td>N</td>
<td>N</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>Y</td>
</tr>
<tr>
<td>15</td>
<td>Surface Mining, Dumping &amp; Dredging</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>R</td>
<td>R</td>
</tr>
</tbody>
</table>

Legend – Guidelines apply only to untransformed land with natural vegetation cover

Y – Yes, permitted and actively encouraged activity
R – Restricted to compulsory, site-specific conditions & controls when unavoidable, not usually permitted
N – No, not permitted, actively discouraged activity

Land use definitions (as per the table above)

Conservation Management - Includes formal and informal Protected Areas managed for biodiversity, wildlife production and recreational/educational tourism conducted in natural habitats on extensively managed landscapes on public or private land.
**Game Farming** - includes game production and tourism-orientated forms of use on extensive land portions of natural land cover, including commercial hunting along with other consumptive and non-consumptive use of wild natural resources.

**Extensive Livestock Production** - includes mainly cattle and sheep production off extensive areas of natural (unimproved) veld; includes mixed livestock/wildlife options, with or without tourism.

**Rural Recreational Development** - includes development for ‘lifestyle’ or investment-type recreational ownership such as share-block schemes, multi-ownership reserves and eco-estates, but only for extensive land portions with limited development (excludes golf estates).

**Rural Communal Settlement** - includes all communal land used for residential, cultivation and grazing activities.

**Dryland Crop Cultivation** - includes all tillage cultivation of non-irrigated crops, mostly single-season annuals, but including perennial and orchard-type tree crops, if cultivated with an indigenous grass layer.

**Intensive Animal Farming** - includes all intensive animal production systems, of domestic or ‘wild’ species, that are dependent primarily on imported foodstuffs and confinement; includes dairy farming and all areas in production for dairy, including pastures, fodder and grain crops, much of which is irrigated.

**Irrigated Crop Cultivation** - includes all irrigated crops and irrigated tree crops (orchards).

**Timber Production** - includes all timber plantation, mainly Pinus, Eucalyptus and Acacia spp.

**Urban and Business Development** - includes all physical, residential, industrial and business development – these are the urban or built landscapes.

**Major Development Projects** - includes all non-urban infrastructure development, industrial processing, construction etc. that are not included in any other category.

**Linear Engineering Structures** - includes all hardened roads, railways, canals, pipelines. It does not necessarily include power and telephone lines, although these can have measurable impact on particular species.

**Water Projects and Transfers** - includes all substantial impoundments, dams and weirs, pipelines, canals and bulk water transfer schemes, including those associated with power generation.

**Underground Mining** - includes all underground mineral extraction and the surrounding ‘footprint’ of related development which may include small areas for residential and industrial uses.

**Surface Mining, Dumping and Dredging** - includes all strip and opencast mining excavations or quarrying, plus the consequent visual, physical and chemical impact of these activities, particularly on ground water reserves; all mine waste and refuse dumps, urban waste sites and land-fill sites for whatever purposes.

### 9.4.11 The KNP Zoning Plan

The zoning plan contains three regulatory components; firstly the six (6) Use Zones, secondly Type of Access and thirdly the Facilities suited to each use zone.

**Table 9.4.1: KNP zoning plan components**

<table>
<thead>
<tr>
<th>Nr</th>
<th>Use Zone</th>
<th>Type of Access</th>
<th>Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wilderness 35%</td>
<td>Only pedestrian. By booking only.</td>
<td>No facilities. Portable camps at designated points. <em>Pack in Pack it out</em> principle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>One group at a time</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Remote (with investigation of potential wilderness) 8%</td>
<td>Only pedestrian. By booking only. One group at a time</td>
<td>Only pedestrian. By booking only. One group at a time</td>
</tr>
<tr>
<td>3</td>
<td>Primitive 23%</td>
<td>Controlled Access. Self drive (mostly by 4x4) or on foot. Access routes restricted to visitors with</td>
<td>Small bush camp type facilities or controlled access concession sites</td>
</tr>
<tr>
<td>#</td>
<td>Intensity</td>
<td>Leisure</td>
<td>Facilities</td>
</tr>
<tr>
<td>---</td>
<td>----------</td>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>4</td>
<td>Low</td>
<td>Leisure 7%</td>
<td>Self drive. Roads mostly accessible to sedan vehicles. Some parks may exclude safari vehicles and busses from this zone</td>
</tr>
<tr>
<td>5</td>
<td>High</td>
<td>Leisure 2%</td>
<td>Self drive. Accessible to busses and safari vehicles</td>
</tr>
<tr>
<td>6</td>
<td>Zone of Disturbance 25%</td>
<td>Tourist tar and tourist gravel roads – self drive</td>
<td>This zone represents all the impacts associated with existing tourist roads, incl. visual, audible, “unnatural” vegetation encroachment as well as the distribution of gravel pits along these roads. No further development should take place in these areas unless an accompanying primitive zone is present within this zone.</td>
</tr>
</tbody>
</table>

See Plan below:

The Management Plan also proposes land use guidelines to municipalities adjoining the KNP.

Table: KNP zoning plan land use guidelines

<table>
<thead>
<tr>
<th>Use Zone</th>
<th>Requirements in Zones</th>
<th>Beyond Boundary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilderness</td>
<td>No light, noise, air, aesthetics, water, waste, land impacts</td>
<td>Nature reserve activities e.g. walking, bicycling trails, hiking trails etc.</td>
</tr>
<tr>
<td>Remote Zone</td>
<td>Conservation or resort development (very low density) with significantly reduced environmental impacts (light, noise, air, aesthetics, water, waste and land impacts)</td>
<td>Nature reserve activities e.g. walking, bicycling trails, hiking trails etc.</td>
</tr>
<tr>
<td>Primitive Concession Zone</td>
<td>Low-density tented safari product type developments ('touch-the-earth lightly' lodge type developments)</td>
<td>Resorts and adventure tourism (rock climbing, spelunking, cultural tours, environmental education placed, picnic sites, swimming pools, small sports facilities)</td>
</tr>
<tr>
<td>Primitive Zone</td>
<td>Low-density tented safari product type developments ('touch-the-earth lightly' lodge type developments)</td>
<td>Resorts and adventure tourism (rock climbing, spelunking, cultural tours, environmental education placed, picnic sites, swimming pools, small sports facilities)</td>
</tr>
<tr>
<td>Low &amp; medium intensity Zone</td>
<td>Leisure (small and medium size camps)</td>
<td>Nature reserve activities, e.g. walking, bicycling trails, hiking trails etc.</td>
</tr>
<tr>
<td>High-Intensity Leisure Zone</td>
<td>Recycling centres (along corridor but not visible from the road), edutainment (e.g. Maropeng – interactive museum with coffee shops, curio shops, environmental education centre), high-density lodges, services industry – workshops, smme’s, bakeries, laundries, local products, toilet facilities, park-and-ride tourism smme’s). Beyond 10km from the gate &amp; not visible from the road or border of the park.</td>
<td></td>
</tr>
</tbody>
</table>

Other requirements

- Access roads to park
- Tourism supporting development e.g. small B&B, curio stands, cultural-activity areas, service industry.
- 5km from gate must be open space.
- Airport:
  - No fly zone over the park in terms of the National Environmental Management Act and Protected Areas Act.
  - Access to landing strip cannot be over the park.
  - No air balloons and micro-light are allowed.
  - Riparian areas – define ecological zone (beyond 100 year flood line) for ecological corridors.
  - Ridges – define ecological zone (5 degree slope) for ecological corridors.
  - Wetlands – no go.
  - No cell phone towers, weather blimps, space satellite dishes, wind turbines/wind farms, golf courses or eco-estates, high speed roads, high mobility route – within boundary.
  - Properties within boundary – limit to subdivision size to ensure low-densities.
9.5 Sector plan alignment

The Spatial Development Framework integrates all actions and interests that manifests in the physical environment.

The SDF must, together with the municipal development priorities and objectives, inform the operational strategies and plans of the different departments in the Municipality (such as infrastructure master plans, housing delivery plans, public transport plans and plans for the delivery of social and community services such as health and educational facilities). These sector plans then become implementation mechanisms for the Spatial Development Framework.

The following sector plans are considered relevant implementation mechanisms for the Spatial Development Framework:

Table 2: Status of sector plans

<table>
<thead>
<tr>
<th>Plan or strategy</th>
<th>In place/absent</th>
<th>Status/date</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Services Development Plan</td>
<td>In place</td>
<td>2009</td>
<td>To plan for the proposals in the SDF</td>
</tr>
<tr>
<td>Local Economic Development Strategy</td>
<td>In place</td>
<td>2007</td>
<td>To be reviewed to consider the proposals in the SDF</td>
</tr>
<tr>
<td>Comprehensive Infrastructure Plan (CIP)</td>
<td>Absent</td>
<td></td>
<td>To consider the proposals in the SDF</td>
</tr>
<tr>
<td>Integrated Transport Plan</td>
<td>In place</td>
<td>2007</td>
<td>To be reviewed to consider the proposals in the SDF</td>
</tr>
<tr>
<td>Housing Plan</td>
<td>Draft</td>
<td>Draft</td>
<td>To consider the proposals in the SDF</td>
</tr>
<tr>
<td>Energy Master Plan</td>
<td>Absent</td>
<td></td>
<td>To consider the proposals in the SDF</td>
</tr>
<tr>
<td>Disaster Management Plan</td>
<td>In place</td>
<td>As part of the IDP 2010-2011, draft</td>
<td>To consider the proposals in the SDF</td>
</tr>
<tr>
<td>Tourism</td>
<td>In place</td>
<td>2006</td>
<td>To be reviewed to consider the proposals in the SDF</td>
</tr>
</tbody>
</table>

Sector plans that have not been prepared for Mbombela have to consider the proposals and projects listed in the Spatial Development Framework. Existing sector plans have to be reviewed to make provision for the SDF proposals.
9.6 Monitoring and evaluation framework

Municipalities should be committed to evaluating and monitoring the impact of their activities, services and results. Assessment of these activities and outcomes can then be communicated back to its stakeholders and into the organisation in order for them to continue to grow and adapt in ways that best suit its beneficiaries.

Mbombela Municipality should develop a Results Based Management (RBM) framework, upon which its monitoring and evaluation can be based. This will also assist it in planning, implementing and assessing its interventions in terms of the extent to which they achieve their projected results. Progress therefore can be tracked in terms of the types of results that can be generated by its interventions.

The proposed RBM model will seek to achieve the ultimate outcome of achieving its mission “to create a safe, healthy, friendly and economically sustainable environment where all residents of the Mbombela Municipality will benefit from effective and efficient service delivery.” Intermediate outcomes will then focus on:

- Exploiting economic opportunities
- Creating sustainable urban and rural settlements
- Protecting the natural and built environment

The Municipality should monitor and evaluate the impact of its activities on intermediate outcomes through regular assessments of its interventions using interim surveys linked to its financial cycles. This will use measurement indicators, such as:

- Number of jobs created
- Number of new businesses
- Increase in turnover of existing businesses
- Number of new or improved roads
- Number of tourists visiting the area, decreasing/increasing

- Quality of the natural and built environment

Immediate outcomes will be evaluated in terms of why these outcomes are changing, what steps or actions were taken to achieve them and whether the desired output was achieved. This might include looking more closely at such things as:

- Number of development incentives provided and taken up by residents
- Number of tourist events held in the region
- Number of people involved in improving roads

**Quantitative Monitoring**

The Municipality should engage an independent auditor to assess its performance based on agreed indicators. The performance audit will focus on measurable performance indicators relating to progress on a bi-yearly basis. Where possible, data will be disaggregated by gender, age, race and income group.

**Qualitative Monitoring**

Qualitative feedback will be a continuous process. The Municipality should hold focus groups and community feedback sessions, prepare regular case studies relating its projects, its results and community perceptions.

**Reporting**

The Municipality should report on its progress made towards the benchmarks set for each of its outputs and outcomes as described above either on a monthly or quarterly basis. It should provide the community with quarterly reports and one annual summary report per year.
Annexure 1: Priority Matrix
Annexure 2: Capital Expenditure Framework