CHAPTER 1: INTRODUCTION

1. INTRODUCTION

The SDF is an integral part of the Integrated Development Plan (IDP) of the Polokwane Municipality. The SDF is a tool that manages and guides growth and development in the Municipal area. The guidelines provided in the SDF should guide and inform investors about development opportunities in the short, medium and longer term. It should not only provide spatial guidelines with regard to development projects, but also assist the Local Municipalities to prioritize between projects.

The SDF must provide sufficient clarity to guide decision-makers in respect of development applications, which means that it needs to be quite specific and precise in cases where it is needed to enforce or prevent certain types of land use.

1.1 BACKGROUND

The Polokwane Municipality has identified the need for the review of their Spatial Development framework (2007) based on increasing pressure on land, natural resources and the environment within the Municipality’s area of jurisdiction. The need exist also to update the SDF in terms of new theoretical background, urban design principles, local economic development theory and spatial development principles that includes approaches by the Department of Land Affairs and the Land Claims Commission as well as the Breaking of new ground policy and the Restructuring Zones and Housing Policies of the National Department of Housing. The revised SDF should also be aligned with the National Spatial Development Perspective (2006) and the Limpopo SDF.

The compilation of a Spatial Development Framework (SDF) is a requirement as set out in terms of Section 2(4) of the Local Government: Municipal Planning and Performance Management Regulations 2001 (Government Notice R796).

Municipal Spatial Development Framework should also give effect to the relevant sections of the Land Use Bill 2006 (6a - d). The inclusion of this information is a prerequisite for the adoption of a municipalities land use management scheme. In terms of section 26(e) of the Municipal Systems Act (Act 32 of 2000, the SDF will become a statutory plan when approved by Council).

Polokwane Municipality has the provincial growth point which functions as a first order settlement. However, the geographical area of Polokwane Municipality is predominantly rural including considerable land under traditional authority. Polokwane has a large portion of the population lives in a rural or peri-urban environment, which for most part is unplanned and poorly serviced. The role of rural nodes (villages) in business development and municipality service delivery needs to be clarified. All spatial planning must take cognizance of the population and contribute to the improvement of their living conditions.

1.2 STUDY AREA

The study area comprises a total area of +/- 377578.99 ha and is located in the central parts of the Limpopo Province. The municipality is located within the Capricorn District Municipality and borders the municipalities of Molemole, Greater Tzaneen, Lepelle-Nkumpi, Mogalakwena and Aganang. Map 1 indicates the study area (Polokwane Municipal Area).

Polokwane City, the vibrant capital of Limpopo, situated on the Great North road to Zimbabwe, is the largest metropolitan complex in the north and a major economic centre. Its proximity to the neighbouring countries of Botswana, Zimbabwe, Mozambique and Swaziland, as well as its convenient distance from the Kruger National Park and Magoebaskloof, makes it a perfect gateway to Africa and attractive tourist destination in itself.

1.3 SDF OBJECTIVES

The purpose of the spatial development framework is threefold:
• The SDF should spatially reflect the development visions contained in the IDP.
• The SDF should reflect prioritized IDP projected needs and
• It should integrate sector strategies, whenever available.

The SDF should provide the spatial incidence for all sectoral, economic as well as community development programs. As such, the SDF will not only deal with land uses per se, but will deal with critical issues in an integrated manner. It is therefore important that the SDF not only deal with where what should happen, but also with the how, and to provide guidelines for prioritization within a specific timeframe that informs the IDP.
CHAPTER 2: INSTITUTIONAL ANALYSIS

2.1 INTRODUCTION

During the compilation of the SDF it was important to align the local municipal spatial initiative with development thinking on a national and provincial level and to ensure that the SDF addresses the needs that were identified as part of the Integrated Development Planning Process.

2.2 LOCAL GOVERNMENT MUNICIPAL SYSTEMS ACT 32 OF 2000

The Local Government: Municipal Systems Act, 2000 (Act no. 32 of 2000) provides in Chapter 5 thereof that a municipality must undertake integrated development planning and for this purpose Section 25 of the act (supra) stipulates that each municipal council must adopt an Integrated Development Plan (IDP).

Section 26 on its turn makes provision for the core components of which the IDP must consist of, which inter alia for purposes of this document are the following namely:

- Subsection (a): Vision for long term development;
- Subsection (c): Development priorities and objectives;
- Subsection (d): Development strategies must be aligned with national of provincial sectoral plans and planning requirements; and
- Subsection (e): Spatial Development Framework.


Regulation 2(4) of the said regulations stipulates that a Spatial Development Framework reflected in a municipality's integrated development plan must inter alia:

- Give effect to the principles contained in Chapter 1 of the Development Facilitation Act, 1995 (Act No. 67 of 1995);
- Set out objectives that reflect the desired spatial form of the municipality;
- Contain strategies and policies regarding the manner in which to achieve the objectives referred to above which must indicate –
  - desired patterns of land use;
  - spatial reconstruction; and
  - strategic guidance i.r.o. location and nature of development;

- Set out basic guidelines for the land use management system;
- Be aligned with the spatial development frameworks reflected in the integrated development plans of neighbouring municipalities;
- Provide a visual representation of the desired spatial form which representation –
  - Must indicate where public and private land development and infrastructure investment should take place;
  - Must indicate desired or undesired utilization of space in particular areas;
  - May delineate the urban edge;
  - Must identify areas where strategic intervention is required; and
  - Must indicate areas where priority spending is required.
2.3 NATIONAL SPATIAL DEVELOPMENT PERSPECTIVE (NSDP, 2006)

The NSDP (2006) guidelines proceed from the premises that the reconstruction and development of South African society should include the reconfiguration of apartheid spatial relations. It was further motivated by the fact that all national departments consulted expressed concern regarding the lack of a clear set of spatial priorities in government.

NSDP OBJECTIVES

Bringing about coordinated government action and alignment to meet social economic and environmental objectives. Maximizing the overall social and economic impact of government development spending by interpreting the strategic direction, promoting policy coordination and fitting government actions into a coherent spatial terms of reference. Reconfigure apartheid spatial relations and to implement spatial priorities that meet the constitutional imperative of providing basic services to all.

NSDP VALUE FOR GOVERNMENT:

Confronting three fundamental planning questions:
- Where should government direct its investment?
- What kinds of spatial forms and arrangements are most conducive to the achievement of objectives?
- How can government as a whole capitalize on complementarities and facilitate consistent decision making.

NSDP: PRINCIPLES

The NSDP puts forward a set of five normative principles:
- Principle 1: Rapid economic growth that is sustained and inclusive is a prerequisite for the achievement of other policy objectives, among which poverty alleviation is key.
- Principle 2: Government has a constitutional obligation to provide basic services to all citizens wherever they reside.
- Principle 3: Government spending on fixed investment should be focused on localities of economic growth and/or economic activities and to create long-term employment opportunities.
- Principle 4: Efforts to address past and current social inequalities should focus on people, not places. In localities where there are both high levels of poverty and demonstrated economic potential, this could include fixed capital investment beyond basic services to exploit the potential of those localities. In localities with low demonstrated economic potential, government should, beyond the provision of basic services, concentrate primarily on human capital development by providing education and training, social transfers such as grant and poverty relief.
- Principle 5: In order to overcome the spatial distortions of apartheid, future settlement and economic development opportunities should be channeled into activity corridors and nodes that are adjacent to or that link the main growth centers. Infrastructure investment should primarily support localities that will become major growth nodes in South Africa and the SADC region to create regional gateways to the global economy.

THE HARMONISATION AND ALIGNMENT PROPOSALS

- To ensure the maintenance and exploration of innovative ways of growing the areas of existing economic development potential together with the general management of these areas.
- To develop creative and appropriate responses to deal with economies in decline together with the two other spheres of government.
- To decisively deal with poverty, social and economic exclusions, and spatial fragmentation.
- To explore and address the implication of natural-resource potential and use for growing the economy and addressing poverty.
- To seek out new areas of comparative advantage, and identify and develop clusters of specialization in collaboration with especially the provincial and national departments of trade and industry, labour and economic affairs.
2.4 ASGISA

The accelerated and shared growth initiative for South Africa (ASGISA) is derived from the objective of achieving a 6% growth rate for the national economy, which will create the platform for halving unemployment and meeting social development targets. The initiative required the following specific actions:

- Strengthening the macro-economy,
- Creating essential infrastructure,
- Formulating and implementing sector and industrial strategies,
- Promoting skills and education,
- Supporting the second economy,
- Improving public administration.

2.5 MILLENNIUM DEVELOPMENT GOALS (MDG)

The millennium development goals cover a range of life quality indicators and targets that have been set for 2015 and to which South Africa has subscribed.

The main objectives of the National Programme of Action, Vision 2014 are set to:

- Meet basic needs,
- Develop human resources,
- Build the economy
- Democratize the state of society.

Particular relevance for the SDF is to achieve the goal to ensure environmental sustainability with one of the targets to eradicate informal settlements by 2014.

2.6 NATIONAL FRAMEWORK FOR LOCAL ECONOMIC DEVELOPMENT

The National Framework for LED in South Africa aims to support the development of sustainable local economies through integrated government action. This government action is developmental and stimulates the heart of the economy which comprises those enterprises that operate in local municipal spaces.

The two major policy thrusts of the national framework for LED are:

- Public Sector Leadership and Governance,
- Sustainable Community Investment Programs.

Four key strategies emanate from these policy thrusts with accompanying main actions, implementation and funding approaches, which are:

- Improving good governance, service delivery, public and market confidence in municipalities;
- Spatial development planning and exploiting the comparative advantage and competitiveness of Districts and Metros;
- Enterprise support and business infrastructure development; and
- Sustainable community investment programs, focusing on organizing communities for development and maximizing circulation of public spend in local economies.

2.7 BREAKING NEW GROUNDS (BNG) POLICY

Most housing projects are not guided by the new principles for development Breaking New Grounds Strategy (BNG). This results in almost all low-income housing projects being located on the periphery of urban areas. This contributes to urban sprawl and fails to address the legacies of apartheid. Most current housing projects are targeted to Greenfield developments and little attention is paid to urban renewal or infill planning projects.
Almost all the housing developments are concentrated in urban areas while the rural villages have been neglected. While market forces also dictate middle and high income developments, low-income developments are mostly driven by the proliferation of informal settlements and the availability of housing subsidies. There is little private sector investment in low income areas.

**POLICY OBJECTIVES**

- To ensure that sustainable housing development takes place.
- To integrate housing with other municipal services in order to establish sustainable human settlement.
- To coordinate municipal departments to work together in planning and implementing housing projects.
- To promote middle and high income housing which will in turn generate resources to improve low income areas.
- To give equal preference to urban and rural development projects.
- To promote environmental and energy efficient housing.

Pro-active approach: New Human Settlements/Housing Development

- It is recognized that sustainable human settlements can only be achieved through a co-ordinated and integrated approach to development. The Integrated Development Planning (IDP) of the City Council is one such tool to ensure co-ordination and integration at a strategic level. Therefore all new human settlement/housing development needs shall be adequately addressed in the IDP of the municipality in line with the BNG Strategy.

- Furthermore, the spatial relationship of proposed new development with that of the existing settlement shall be considered in the Spatial Development Framework (SDF) of the City Council. It is thus important that these town administrative and planning tools be used to plan timeously for human settlements/new housing developments.

- To enable successful co-ordination of newly planned human settlement developments the Department Housing and Planning shall establish an Interdepartmental Committee that comprises the different Departments.

- The interdepartmental Committee shall identify during the annual review of the IDP of the City Council both private and public land suitable for new human settlement / housing developments according to the needs identified in the Housing Sector Plan and aimed the SDF of the City Council accordingly. A distinction shall be made between Greenfield development, infill planning, urban renewal and in-situ upgrading projects to allow for population growth whilst accommodating existing needs.

- A priority ranking order shall also be allocated to the different areas based on criteria such as feasibility, sustainability, serviceability, etc. This will be used to inform the budgeting process of council as well as the channelling of public investment for future housing developments. Proposed housing developments shall make provision of a selection of low-middle and middle-high income residential development whilst combining single residential development with cluster housing.

- Consideration shall be taken to provide supporting infrastructure to the proposed housing development in particular the road network, bulk infrastructure services including economic and social amenities. The financial implications of the supporting infrastructure shall be considered together with the financial implications of the proposed development. The Interdepartmental Committee shall also lodge applications for grant funding to various organisations to ensure that money will be made available for new housing developments as well as the supporting infrastructure services and social amenities like clinics, schools, etc.

- Besides planning in an integrated manner at strategic level, the same is required at an administrative level. It is thus necessary that clear administrative procedures be developed to ensure an integrated approach to new human settlement / housing development at implementation level. It is thus necessary
that clear administrative procedures be developed to ensure an integrated approach to new human settlement / housing development at implementation level. A distinction needs to be made between that various stages involved in the creation of sustainable human settlements / housing development on public versus private land.

2.8 LIMPOPO EMPLOYMENT, GROWTH AND DEVELOPMENT PLAN

The Province has excellent agricultural potential, mineral reserves, and tourism resources. The mining sector has grown in importance in the provincial economy. The growth in mining between 1995 and 2002 has been remarkable as compared to agriculture and manufacturing.

Limpopo’s strategic priorities have been articulated in broad terms in the Premier’s State of the Province Address on 11 June 2009; and they are:

**In ensuring more inclusive economic growth, decent work and sustainable Livelihoods**: the main objective with regard to this priority is to respond appropriately, promptly and effectively so that growth in decent employment and improvements in income security are reinforced, and investment sustained to build up provincial economic capability and improve industrial competitiveness. This has to be conducted in an environment of a stable macro-economy which provides conditions for higher rates of investment and creation of decent jobs.

Building on the economic achievements of the last 15 years, the province will use various measures to build and accelerate a sustainable, equitable and inclusive economic growth path to address the strategic priorities as encapsulated in the MTSF.

The province’s economic and social programmes will work together to ensure they support each other. The developmental state will play a central and strategic role in the economy. The province will ensure a more effective government and improved coordination and planning to ensure faster change. A review of the structure of government will be undertaken, to ensure effective service delivery. The most pressing problem facing Limpopo Province today is the absence of sustained economic growth and job creation, which are essential to reduce poverty and improve living conditions.

The transition to a multi-racial democracy posed difficult political, social and economic challenges and South Africa’s noteworthy achievements in surmounting these challenges have been widely recognised. What lies ahead is the daunting task of ensuring that Limpopo Province rich natural and human resources are employed for the benefit of all, promoting sustainable livelihood, green economy, improving social conditions and alleviating poverty. The policy perseverance exhibited over the last fifteen years has yielded tangible macro stabilization successes and enhanced policy legitimacy. However, the growth-and employment challenges facing Limpopo Province is daunting one. In the past, investments were low, FDI inflows disappointing and the unfinished agenda of structural reforms leaves the province at a disadvantage within an increasingly competitive global environment.

The legacy of apartheid is evident in the pervasive distortions in all factor markets: for labour, as evident in the scale and persistence of unemployment and inadequate investment in human capital; for capital, in the low savings/investments rates and limited FDI; and for land, where land reform and rural development efforts must reverse policies that over decades have virtually eliminated the small farming sector.

Given the country’s success in macro stabilization, the current Provincial Employment Growth and Development Plan confront the problem areas of growth, decent jobs and poverty reduction within a broad economic wide framework. This plan synthesizes findings from recent analysis of different sectors and features of the Limpopo political economy. While its focus is broad, it does not try to present all the components of a comprehensive growth plan – in some areas, it points instead to issues where further investigation is called for. The main objective of this plan is to contribute to the economic debate in the province and in the country by highlighting for policy imperatives that should be addressed to promote growth and employment in a complex international and domestic economic environment.
The government has identified five priority areas for the next five years:

- Creation of decent work and sustainable livelihoods
- Education
- Health
- Rural development, food security and land reform
- The fight against crime and corruption.

The following programmes have been identified to address the provinces’ challenges:

- Industrial Development Programme: Priority Growth Sectors
- Mining and Minerals Beneficiation Industries
- Enterprise Development: SMMES and Cooperatives Development Programme
- Regional Economic Development and Integration Programme
- Public Infrastructure Investment Programme
- Water Resource Development and Demand Management
- Agriculture and Rural Development Programme
- Education and Skills Development Programme
- Health Care Development Programme
- Safety and Security
- Environmental and Natural Resources Development Programme
- The Green Economy and Creation of Green Jobs
- Corporate Governance
- ICT and Innovation Enabled Industries

2.9 LIMPOPO SPATIAL RATIONALE

The Limpopo Spatial Rationale identified a hierarchy of settlements from provincial growth point to scattered settlements. Development interventions are proposed in terms of infrastructure provision and government services in such a manner that the natural economic potential of growth points is further stimulated. Interventions at scattered settlements are such that basic services are provided to ensure that the quality of life objective in the Growth and Development Strategy is achieved, but that prevents over investment in places that are depopulating.

The hierarchy of settlements according to the Limpopo Spatial Rationale is indicated in Table 1

The Limpopo Spatial Rationale proposed certain planning norms and standards that must be applied to the specific settlements in the hierarchy of settlements within municipal boundaries. This norms and standards as indicated in the following table relates to average site sizes, physical infrastructure, social facilities and government functions. (Table 2)
### TABLE 1: SETTLEMENT HIERARCHY

#### 1st ORDER SETTLEMENTS (GROWTH POINTS)

<table>
<thead>
<tr>
<th>Cluster Polokwane 01</th>
<th>PGP (Provincial)</th>
<th>DGP (Local District)</th>
<th>MGP (Municipal)</th>
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<td>Cluster Polokwane 02</td>
<td>Polokwane</td>
<td>Seshego</td>
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<td>Cluster Polokwane 03</td>
<td>Polokwane</td>
<td>Kgohlwane</td>
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<td>Cluster Polokwane 04</td>
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#### 2nd ORDER SETTLEMENTS (POPULATION CONCENTRATION POINTS) (PCP)

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<th>Cluster Polokwane 01</th>
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<th>Kgohlwane</th>
<th>Mabotsa</th>
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<td>Cluster Polokwane 02</td>
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<td>Cluster Polokwane 05</td>
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- Ga-Ramogale
- Ga-Silwane
- Viking
- Zian City Maria
- Komaneg
- Makgwareng
- Matshele-Porta
- Mountain Views
- Phomolong
- Rivier View
- Dibibe
- Dikgale 1
- Dikgale 2
- Dikgale 3
- Ga-Makgoba
- Makgoba 1
- Mantheding
- Hlahla
- Makibelo
- Ramongwane 1
- Ramongwane 2
- Semenya
- Koloti
- Komape 2
- Komape 3
- Mabukelele
- Madikote
- Moshate
## 3rd ORDER SETTLEMENTS (LOCAL SERVICES POINTS) (LSP)

|---------------------|---------|----------|---------|----------|-------------------|--------------|------------|--------------|-------------|-------------|---------|---------|----------------|------------|-----------|-------------|-------------|-----------|-----------|-------------|-------------|---------|-----------|-------------|-------------|---------|-------------|

Source: POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK 2010
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<th>5th ORDER SETTLEMENTS (REMAINING SMALL SETTLEMENTS) (SS)</th>
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The following principles should be taken into consideration with the implementation of the norms and standards.

**Table 2: Implementation of the norms and standards principles**

| Site sizes: | The ability of community to pay for service must be recognized
|            | Smaller site sizes must be considered in order to provide more cost effective services
|            | Appropriate minimum levels of services must be provided to all communities (Government Policy) |

| Physical Infrastructure: | Preferred level of service, apart from the minimum supply of water of 25L/c/d
|                         | Rural areas – 60 L/c/d
|                         | Formal rural areas – 150 L/c/d
|                         | Settlements (Villages) – 30-150 L/c/d
|                         | Settlements in the proposed hierarchy – differentiated level of water service
|                         | Services provision higher than RDP level to be provided on an economic base (“users pay”)
|                         | Higher priority to maintenance and upgrading of existing link roads between 1st and 2nd order settlements
|                         | New roads to be considered to improve access to large communities (clusters)
|                         | Upgrading and maintenance of bus routes (collector streets)
|                         | Prioritize electricity supply to 1st and 2nd order settlements
|                         | Prioritize telecommunications to 1st and 2nd order settlements

The settlement hierarchy is also further sub categorized into four settlement types, viz:

- Urban towns
- Rural towns
- Large towns (5000 + people)
- Small villages (less than 5000 people)

(According to Departmental norms)

- Police stations – urban, rural towns and large villages
- Magistrate Courts – adjacent to police stations
- National / Provincial Government – 1st and 2nd order settlements
- Provincial offices – urban / rural towns large villages (clusters)
- Tribal offices – Large villages
CHAPTER 3: CONTEXTUAL SPATIAL ANALYSIS

3.1 REGIONAL CONTEXT

Polokwane Municipality is located at the heart of Limpopo Province within Capricorn District Municipality. In view of the city’s central location in the Province, a number of main arterial routes converge in Polokwane, its altitude is shown on Map 4C. Polokwane City inter-connects and interrelates horizontally with the adjacent municipal areas. Municipalities that falls within the district Municipality include the following:

Mogalakwena Municipality

The N1 National Road forms the main carriage way from the south to the north, along which goods and people are transported. The main connection between Polokwane Municipality and Mogalakwena Municipality is the Makapan’s Gat Heritage site in the north eastern part of the Mogalakwena Municipal Area.

Aganang Municipality

Agriculture forms the main economic base of Aganang Municipal area. Agricultural produce is transported to Polokwane City. Road D544 and Road D19 form the main links between Aganang Municipality and Polokwane Municipality. Goods and services are mostly purchased in Polokwane.

Molemole Municipality

Agriculture forms the main economic base of Molemole Municipal area. Agricultural produce is transported to Polokwane City. Road P94/1 and the N1-North form the main links between Molemole Municipality and Polokwane Municipality. Goods and services are mostly purchased in Polokwane.

Greater Tzaneen Municipality

Road P17/1 (R71 east)) forms an important link between Polokwane Municipality and Greater Tzaneen Municipality. Various tourism attractions exist in the western part of the Greater Tzaneen Municipal Area, e.g. Magoeba’s Kloof, the Wolkberg Conservancy Area and various overnight accommodation facilities. Apart from tourism, the R71 is used as a transport corridor for agriculture and mining.

Lepele Nkumpi Municipality

Lebowakgomo, which is the capital of Lepelle Nkumpi Municipality, is located approximately 40km South of Polokwane City. The legislature and other government related functions are located in Lebowakgomo. On a daily basis people and goods are transferred between Polokwane City and Lebowakgomo. Road P33/1 forms the main link between Lebowakgomo and Polokwane City. Lepelle Nkumpi Municipality has a strong mining base. Mining related goods and services are transported along Road P33/1 (Map 2).

3.2 ENVIRONMENTAL FEATURES

3.2.1 INTRODUCTION

This chapter is an extract of the Polokwane Environmental Management Framework (EMF – 2004). A Sensitivity Map was compiled for each of the four clusters within the Municipal Area. There are a number of environmentally sensitive areas that require management or protection within the Polokwane Municipal Area. They can be summarized as follows:

• Sensitive Mammals, Birds, Amphibians, Reptiles and Vegetation occur in all the Veld Types of the area;
• The only natural Wetland in the Polokwane area;
• The major rivers and dams of the area;
• The Polokwane Nature Reserve and surrounding Protected Natural Areas;
• The 85 mapped heritage sites in the area, and other sites that have not been recorded;
• The Polokwane Frog reserve;
• The Polokwane Botanical Reserve in Sterpark – one of two known populations of Euphorbia clivicola worldwide;
• The Population of Euphorbia groenewaldii along the R71 to Tzaneen;
• The Flapark Wetland hosting a population of Haemanthus montanus;
• The degraded and overgrazed bushveld in the Polokwane area.

3.2.2 CLIMATE AND ATMOSPHERIC CONDITIONS OF THE STUDY AREA

The study area lies in the summer rainfall region and has a warm climate. Frost is rare. The highest temperatures occur during December and January. The daily average high is 28.1 degrees Celsius in January and the highest recorded temperature is 36.8 degrees Celsius. The average minimum winter temperature is 4.4 degrees Celsius in July with a record low of -3.5 degrees Celsius in 1964. The mean annual daily variation is 15 degrees Celsius.

The mean annual precipitation for the region is 478mm. Most precipitation falls between October and March with the peak period being December/January. Rainfall between the months of May and September is generally low with the average precipitation rate for the period June to August being 4.6mm.

There are a number of air pollution risks in the Municipal area that must be recognized:
• Polokwane Smelter (SOx, solid particulates, NOx)
• Municipal Landfill (odours, carbon monoxide, methane, particulates)
• Industrial Activities (coal burning and related processes)
• Readymix Materials quarry (dust)
• Motocross track (dust, noise, carbon monoxide)
• Old Asbestos dump/factory, Industria (Asbestos fibres, dust)

3.2.3 TOPOGRAPHY OF THE STUDY AREA

The study area is divided into two rough topographical units in the provincial Environmental Management Framework, namely ‘Moderately Undulating Plains’ (mainly the eastern half of the municipal area) and ‘Strongly Undulating Plains’ in the west. The Polokwane Municipal area is situated on the so-called ‘Pietersburg Plateau’, which is bordered in the south by the Strydpoort Mountains, in the west and north by the Waterberg Mountains and in the east by the Great Escarpment. The highest part of the Plateau lies in the south near the Strydpoort Mountains, which forms the watershed between the Olifants and Sand River systems.

3.2.4 SOILS AND GEOLOGY OF THE STUDY AREA

The Polokwane Municipal Area can be divided up into a number of Land-type units, based on their slope, soil type and -depth and underlying geology (Dept. Agriculture and Water Supply, 1988). Characteristics such as erodability, suitability for agriculture and suitability for development can be derived from this information. The morphological units indicated on the land type map (Map 3) are listed and described below:

• RED-YELLOW APEDAL, FREELY DRAINED SOILS

The land Types map refers to yellow and red soils without water tables and belonging in one or more of the following soil forms: Inanda, Kranskop, Magwa, Hutton, Griffin, Cloverly. Abovementioned map refer to land which does not qualify as a plinthic catena (soil with a hard-pan or concretions) and in which one or more of the above soil forms occupy at least 40% of the area. Soils are generally deep and well-drained (between 800mm and 1000mm deep) and sloping less than 12%, which makes them suitable for cultivation, grazing and development. The clay content of the soil varies between 15% and 35%, giving enough clay minerals for nutrient retention without giving rise to puddling or shrinking and swelling.

• PLINTHIC CATENA: UPLAND DUPLEX AND MARGALITIC SOILS RARE

A very large area of the South African interior is occupied by a catena which in its perfect form is represented by (in order from highest to lowest altitude in the upland landscape) Hut-ton, Bainsvlei, Avalon and Longlands forms. The valley bottom is occupied by one or other gley soil (e.g. Rensburg, Willowbrook, Katspruit, Champagne forms). In addition to these, Glencoe,
Wasbank, Westleigh, Kroonstad, Pinedene and Tambankulu (rare) forms, and Klipfontein and (occasionally) Hillside soil series, are found.

Soils with hard plinthite (concretions or hard banks) are particularly common over sandstones in the moist climate zones in the eastern parts of the country. Depending on the extent to which water tables have been operative over a landscape, Longlands and Avalon and related grey and yellow soils may predominate, even to the exclusion of red soils. Where water tables have not extended far beyond the valley bottoms, red soils may predominate with plinthic soils restricted to narrow strips of land around valley bottoms or pans.

The soils are generally suitable for grazing, depending on the combination of grasses they support. The possibility also exists for commercial cultivation, although care must be taken in the choice of crops, as some may be unsuited to the particular soil type (especially those with high clay contents, which tend to be highly nutritious, but swell and shrink, breaking the roots of most plants).

- **PRISMACUTANIC AND/OR PEDOCUTANIC DIAGNOSTIC HORIZONS DOMINANT**

  Abovementioned occupy land where duplex soils are dominant. Through an oversight the gleycutanic diagnostic horizon was omitted from the title. Upland soils that display duplex character include Eastcourt, Sterkspruit, Swartland, Valsrivier and Kroonstad forms. After subtracting exposed rock, stones or boulders, more than half of the remaining land must consist of duplex soils.

  The soils are generally unsuitable for commercial cultivation due to their shallowness and rockiness, as well as the possibility of suspended water-tables. Commercial grazing would be successful due to the sweet grasses that would occur on all the soil types. Development would also be possible, except in the case of high clay content.

- **GLENROSA AND/OR MISPAHFORMS (OTHER SOILS MAY OCCUR)(MAP 3)**

  This group of map units is intended to accommodate pedologically young landscapes that are not predominantly rock and not predominantly alluvial or aeolian (wind-blown) and in which the dominant soil forming processes have been rock weathering, the formation of orthic topsoil horizons and, commonly, clay illuviation, giving rise typically to lithocutanic horizons.

  The soil forms which epitomise these processes are Glenrosa and Mispah. However, exposed rock and soils belonging in almost any of the other 39 soil forms may be found in these land types, provided these other soils do not qualify the land for inclusion in another map unit. Shallow and deep soils of the Oakleaf form (usually on upland sites) developed by rock weathering (e.g. gneiss, aeolianite etc.) are accommodated here. The above geological formations are all inherently stable, suitable for building although individual developments should therefore have a geotechnical assessment done to determine the depth of the bedrock.

- **MISCELLANEOUS LAND CLASSES**

  Miscellaneous land classes refers to land types with a soil pattern difficult to accommodate elsewhere, at least 60% of which comprises pedologically youthful, deep (more than 1 000 mm to underlying rock) unconsolidated deposits. Common soil forms are Dundee and Oakleaf. The soils of unit Ia135 are mostly (65%) more than 900 mm deep, with class 0 rockiness. The remaining 30% of the soils are between 700mm and 900mm deep, also with very low rockiness. The remaining 5% of the surface is solid rock. The soils are highly erodible and should not be cleared of vegetation for periods longer than 1 month. The remaining 70% of the land unit is rock with less than 100mm soil cover. Also alluvium and calcrite of the Quaternary System. The soils are also very rocky (Class 3 – use of all but very light hand machinery impracticable; grazing and forestry possible). The soils are erodible. Cultivation and development on them is therefore not recommended. The slopes on this
land unit are very steep and agriculture is only possible in valley floors / floodplains.

It is extremely important to note that the geology of this unit is potentially unstable and produces sinkholes. Projects planned for these areas must therefore be assessed in terms of the risk of sinkholes occurring.

3.2.5 HYDROLOGY AND DRAINAGE IN THE STUDY AREA

There are 19 catchment areas represented in the municipal area (Map 4A). This includes 9 small portions of larger catchments outside the Municipal boundaries. The remaining 10 catchment areas are described below, in descending order of size:

The Sand River catchment is drained by the Sand- and Bloed Rivers. These are indicated as perennial streams but are often dry in the winter. The Bloed River has its origin in the west of the Municipal Area, and flows eastward between Bloedriver and Seshego. It is impounded in the Seshego Dam, after which it joins the Sand River just North of Polokwane City. The city of Polokwane has a number of stormwater retention dams and stormwater channels that eventually discharge into the Sand River via the Sterkloop Spruit and open stormwater channels. There are a number of important wetland areas in the catchment. These areas support rare or endangered frog species and plant and red data bird species. The utilisation of water in the catchment is mainly underground water abstraction via boreholes.

There are a multitude of boreholes pumping into a number of reservoirs and tanks of various sizes in the Municipal area. This aquifer is under threat from a two major pollution sources, namely the Polokwane Cemetary and the Seshego Sewerage Works. The Municipality’s biggest water users are SAB-Miller, Granor Passi, Coca-Cola Fortune, Silicon Smelters (Samancor) and the Platinum Smelter (Anglo Platinum) (T. Muller, pers.comm.). This water is obtained from two sources, namely the Ebenezer/Dap Naude Scheme and the Olifants-Sand transfer scheme operated by Lepelle Northern Water. The Urban area’s ecological footprint is therefore considerably bigger than its physical area, and Polokwane’s water is supplied by rivers outside its catchment area, feeding into the Dap Naude and Ebenezer dams.

The Diep River drains this catchment, which is densely populated. There are over 100 boreholes and a large number of small dams in this catchment. The impoundments and wetlands are likely to be a habitat for the Red data bird, plant and amphibian species in the veld-types discussed in the next section. Due to the high population density and the lack of services, the water-quality in the boreholes is likely to be affected by pit-latrines and the streams are polluted by effluent from washing and silt from erosion. The annual runoff from this catchment is also low, although it may be as a result of the high water usage. The municipality is currently implementing a prepaid standpipe scheme in a number of the villages in this catchment.

There is no large river draining this catchment, although there are a considerable number of smaller impoundments and boreholes supplying water to local communities. The impoundments and wetlands are likely to be a habitat for the Red data bird, plant and amphibian species in the veld-types discussed previously. The boreholes are all located within less than 500m of a pit latrine, which affects the water quality. There are also two larger impoundments in this catchment. Water-quality in these dams is likely to be affected by a high silt load caused by overgrazing.

The Brak River, a non-perennial river drains this catchment, which yields a low annual runoff. The catchment contains one large impoundment and a large number of boreholes that supply water to local communities. The impoundments and wetlands are likely to be a habitat for the Red data bird, plant and amphibian species in the veld-types discussed previously. The boreholes are all located within less than 500m of a pit latrine, which affects the water quality.

The Nkumpi River drains this catchment, and is indicated as a perennial stream. This river is also often dry in the winter months. The Nkumpi River is impounded in the Gompies dam near Zebediela just outside the Municipal Area. The Marsfontein and Eersteling Mines are located in this catchment which has possible implications for the water-quality in the streams that flow into the
Nkumpi river. There are approximately 50 small dams and two larger ones in the non-perennial streams in the catchment. The dams and wetlands are likely to be a habitat for the Red data bird, plant and amphibian species in the veld-types discussed below.

The Chuene River drains this catchment, and is also indicated as a perennial stream, although it is also dry in the winter. The Chuene river is also impounded, namely by the Chuene Dam just north of Chuenespoort. The high Silt-load in the Chuene dam bears testimony to the overgrazing and bush-clearing activities in the area (Map 4). There are only about 20 small farm dams in this catchment, which means they are important habitats for the Red data bird, plant and amphibian species that occur in the catchment. Their water quality is also assumed to be affected by the erosion caused by overgrazing and bush-clearing, and it is not clear how they are managed or what their water quality is.

A low-yield catchment drained by a number of non-perennial streams. The catchment supports a number of boreholes supplying water to local communities. The streams do not feed any major rivers, and there are only two small impoundments in two of the non-perennial streams. These impoundments are likely to be important habitats for various red data species if amphibians, birds and insects. Their water quality and species composition should therefore be surveyed and monitored.

This catchment is drained by the Mphogodiba River and yields a high annual runoff. The large areas of bush-clearing and overgrazing in this catchment cause a high silt load due to erosion, which lowers the quality of the water in the Mphogodiba River. There are not many impoundments in this catchment although a number of sensitive species occur here. This is reason enough to investigate the condition of the impoundments and monitor their quality. The catchment also has many boreholes that supply local communities with water. Most of these boreholes are less than 500m from a pit latrine, which adversely affects the water quality.

### 3.2.6 VEGETATION, FAUNA AND BIRDLIFE

According to J.P.H. Acocks (1988) there are 6 Veld-Types that occur in the Polokwane Municipal Area (See Map 4D). The three largest Veld-Types are (in descending order) Pietersburg Plateau False Grassveld (67), Sourish Mixed Bushveld (19), Sour Bushveld (20), Mixed Bushveld (49), North-Eastern Mountain Sourveld (8) and a relatively small area of Lowveld Sour Bushveld (9).

In terms of the clusters, Polokwane Cluster is almost entirely occupied by the Pietersburg False Grassveld with two small areas of Sourish Mixed Bushveld and Sour Bushveld respectively. The area is therefore very homogeneous in character. Pietersburg False grassveld is a unique ecosystem with several rare, endemic or endangered species occurring only in the Polokwane area. This Veld-type also occurs in smaller areas in the other three clusters of the Municipal area. It must be protected as the only examples of this veld type under formal protection are in the Pietersburg Nature reserve, the Kuschke Conservancy and the Hollandsdrift Conservancy.

In terms of other biota, Pietersburg Plateau False grassland also harbours a multitude of rare, endemic and endangered birds (e.g. short-clawed lark), mammals (e.g. anteater), butterflies (e.g. Charaxes castor), and scarabs (e.g. Pachlomerus opaca) (NPEMF, 1998).

The Sourish Mixed Bushveld and Sourish Bushveld Veld-Types are under severe pressure at present as a result of overgrazing and bush-clearing, especially along the Strydpoort Mountains. It appears that the sites that are under institutional protection (Turfloop dam, Seshego Dam, etc.) are not being managed to maintain their ecological integrity, as there is no-one specifically charged with their management. This was not confirmed with the Municipality. With regard to other Biota, this veld-type potentially harbours 11 sensitive bird species, 18 sensitive mammals, 9 sensitive reptiles and 40 sensitive insects.

The veld is currently badly degraded and overgrazed, which requires intervention from Government. North Eastern Mountain grassveld occurs in the southern parts of Molepo-Maja-Chuene cluster and in the eastern part of the Mankweng
3.2.7 HERITAGE RESOURCES / ARCHAEOLOGICAL SITES

The heritage information on record at the Polokwane Municipality is sparse at best. This is due to the fact that the Municipality has not yet undertaken a comprehensive heritage survey of the entire municipal area. The Bakone Malapa site on the Chuenespoort Road has been developed as a Museum, and receives fairly good support from the public. The only other potential museum site is the one in Mankweng, commonly referred to as the Mankweng Rock Art Site. The site can be linked to Turfloop Dam, which provides other recreation activities such as hiking, picnicking and water sports. The other sites are mainly of academic interest, and although they provide good research material, they are not likely to be of public interest (F. Roodt, pers. comm). It is therefore recommended that the Polokwane Municipality perform a full Heritage Survey of the entire Municipal area. This will help to set up a comprehensive Heritage Database and prevent accidental destruction of sites that have not been recorded. See Map 4D.

3.2.8 EXISTING ENVIRONMENTAL PROBLEMS

A) WASTE MANAGEMENT AND VISUAL QUALITY

Waste Management – The management of solid waste in the municipal area requires attention, particularly in terms of disposal of domestic, medical and hazardous waste. At present, Municipal Refuse collection is only being done at Seshego, Polokwane, Mankweng and Sebayeng.

Littering is a citywide problem, which is particularly obvious in the Mankweng cluster (Kutu WMS, 2002), which becoming more urbanized without the services required in an urban area being offered there.

In the more rural clusters (Molepo-Maja-Chuene, Moletje), waste volumes area considerably less due to the attenuated consumption patterns of rural dwellers. There are however, some points of concern:

- The majority of combustible solid waste (paper, cardboard, plastics) is being burned, which simply transfers the waste to the atmosphere in gaseous form. This requires attention in the form of recycling drives and awareness campaigns. Once again, the LED office should be involved in this to look at the possibility of clustering recycling plants with other manufacturing process that require packaging material that can be made from recycled plastics and paper products.
- Metal and some glass products is being buried in mini-landfills in household stands. This can also be addressed by means of recycling. The rural poor may be brought into the economy in this manner as well.

The disposal of medical waste requires attention according to the Polokwane Waste Management Plan (Kutu WMS, 2002). At present there are no clear indications of where and how Medical medical waste is disposed of and permitting requirements of the Department of Water Affairs and Forestry for waste Disposal Sites must be adhered to.

The Municipality is potentially not able to provide refuse removal at all villages and settlements in all the clusters. It may therefore be necessary to explore other forms of...
community driven refuse removal that removes the burden of household collections from the Municipality.

Visual degradation – There is a lack of recognition of the potential positive role of basic landscaping around industrial and office sites in Polokwane, leading to the industrial area having a very stark and sometimes run-down appearance. The abundance of Cellular telephone masts has led to the promulgation of by-laws with regard to their position, form, base station and other criteria. These by-laws must be applied across the Municipal area.

B) SOILS, GEOLOGY AND TOPOGRAPHY

Mine and Industrial site rehabilitation – There are large scars in the landscape due to un-rehabilitated brick fields, industrial sites and mines. This causes serious soil erosion and air- and water pollution problems due to dust and suspended particulates. Examples are the Lafarge Quarry, the Silicon Smelters and the Hillary construction premix plant. Dumping of ash and slag in the southern portion of the Silicon smelter site is causing a nuisance and a health hazard.

Sink-holes – There are sink-holes occurring in the Southwestern corner of the Molepo-Maja-Chuene cluster, which poses a threat to development and livestock. This requires a response and intervention from the Municipality.

Depletion of Soil nutrients – Lack of crop rotation by commercial and subsistence farmers are depleting the soil nutrient base, rendering the soil unsuitable for agriculture or grazing, eventually causing erosion by water and wind. The Municipality should be encouraging subsistence farmers to apply sustainable farming practices such as crop rotation and organic farming to their land in order to preserve or improve the production capacity of the land. A comprehensive farming assistance strategy must be developed by the LED office in co-operation with the Department of Agriculture to address this.

Soil pollution by chemicals and organic wastes – Chemicals leach into soils at bulk storage facilities through leaking tanks and pipelines and contaminate the soil and eventually the groundwater. Over-use of chemical fertilizers also pollutes and salinates the soil. The manufacture of compost from high nitrate compounds such as chicken guano or cattle dung may poison the soil due to the high concentration of nitrates and salts to which the soil is exposed over time.

Soil erosion – This occurs at a variety of scales, from sidewalks and individual stands in the settlements (urban and rural) to large erosion gullies forming due to past and present unsustainable agricultural practices like overgrazing and incorrect ploughing, as well as denudation of vegetation through firewood harvesting. Un-rehabilitated mines, borrow-pits and quarries contribute to this problem.

Reduction in scenic value – The reduction in the scenic value of ridges and hills is caused by development on the crest of these features. Some of the granite domes around Polokwane have been defaced by graffiti and buildings, and the Sterpark hill is in danger of being built up above the crest, spoiling the skyline and destroying a highly diverse area with numerous unique geological and biological features.

C) HYDROLOGY

Unprotected Habitats – Wetlands and impoundments that host red data species or other fauna and plants not usually observed in urban areas must be protected by Municipal by-laws.

Ground- and surface water pollution – This is taking place as a result of runoff of fertilizer from cultivated fields and orchards, and dissolved animal wastes from feedlots, abattoirs and tanneries. Groundwater pollution takes places by seepage from gravesites, pit latrines and VIP latrines in the rural areas, raw sewerage from sewerage plants and leaking underground chemical and bulk fuel tanks. Drinking water is potentially being polluted by the old asbestos cement pipes used in the Municipal area. Asbestos cement ceilings are also still in use.

It is considered impractical to serve the entire Municipal area with waterborne sewerage, as the cost of the infrastructure would be prohibitive. The Pit Latrine and VIP systems also present a risk to the groundwater, so it is proposed that a self-contained dry sanitation system (e.g. Enviroloo or similar) be used in all cases where...
POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK 2010

RDP housing is built. The added benefit of this system is that the effluent is dried to a powder which is a very good fertilizer for crops.

**Increased silt loads** – This is taking place due to eroded soil being carried into rivers and dams. This turns around the whole ecology of the water body, causing the original species to die out and be replaced by others.

**Overuse of water** – The mining of Polokwane’s water resources is taking place due to insufficient regulation by the Municipality. Ceiling values and stratified tariffs should be imposed on all users of this scarce resource to prevent it being wasted.

**D) VEGETATION**

**Denudation of vegetation** – Vegetation especially trees and shrubs are being chopped out for firewood and herbs which are being used directly in homes or sold at the roadside. This requires regulation and management by the Local authority. The resource base must also be renewed by planting additional trees and shrubs to replace the ones harvested.

**Overgrazing** – is taking place by rural farming on mostly communal land or municipal land in excess of the recommended carrying capacity of the land.

**Invasive aliens** – these plants are taking over fallow land and stream beds as a result of seeds and fruits being washed into the stormwater system.

**Unprotected Sensitive plant communities** – The endemic plant communities (e.g. *Euphorbia clivicola* and *Euphorbia groenewaldii*) and other sensitive communities of high biodiversity around wetlands and ridges in the Polokwane area are not protected in any way and are therefore under threat from development, removal, habitat destruction, etc.

**E) FAUNA & BIRDLIFE**

**Unprotected Sensitive communities** – These communities and habitats (Florapark Wetland, Frog Reserve, Polokwane Nature Reserve, Protected Natural Areas and Sterkloop Wetland) must be protected as an asset for future generations. The habitats should be ‘Red Flagged’ and an Environmental Impact Assessment should be done on any proposed development in the area.

**Poaching** – This activity must be prevented by offering alternative livelihoods for the rural poor.

**Poorly managed protected areas** – These areas in the Municipal area must be required to produce a management plan and report on an annual basis.

**F) ARCHAEOLOGICAL SITES**

**Lack of Records** – The lack of records of all archaeological sites in the Municipal area needs to be addressed in terms of a comprehensive baseline survey.

**Destruction of Sites** – This is taking place as a result of inadequate Environmental Scoping Reports being done by organs of State and Private concerns before commencement of development or infrastructure projects.

**G) ATMOSPHERE / NOISE**

**Noise sources** – These must be identified and regulated as part of a reporting and monitoring system in the Municipal by-laws. The main sources of noise at present are:

- The noise from Lafarge Crusher plant and the Silicon Smelter;
- Traffic noise in Thabo Mbeki St, Grobler St, Market St, Landdros Mare St, Munnik Ave and the Dendron Road, with specific reference to residential areas.

**Air pollution** – Sources of dust and other pollution must be addressed as part of reporting and Monitoring system in terms of the new Act. The following are known pollution sources, but are not monitored:

- Polokwane Platinum Smelter
- Silicon Smelters
- Lafarge Crushers
POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK 2010

- Old Asbestos stores, Industria street near the railway bridge.
- Hospital Incinerators
- Saffas Funeral Services
- Hillary construction Premix Plant

The strategic response to each of the above aspects is addressed in **Phase 2: Local Strategic Guidelines**. This section is broken down as follows:

- Summarize the results of interviews with Ward Councillors
- Development of environmental principles for types of resource utilization for specific physical locations;
- List endangered or degraded resources;
- List locations which may require restrictions on utilization;
- List economic activities, which require special attention;
- Address the risk of environmental disasters’ physical locations.

### 3.2.9 AGRICULTURE

The Limpopo Provincial Department of Agriculture commissioned a land capability study from EnviroGis, which was released in March 2007. Land capability was defined as the extent to which land can meet the needs of one or more uses, under defined conditions of management, without permanent damage. It includes the effect of physical factors: soils, climate and terrain, on the total suitability and potential for use for crops that require regular tillage, for grazing, for forestry, and for wildlife without damage. A spatial modelling approach was used to model land capability. Due to its analytical capability, GIS and remote sensing was used to build a parametric model. The modelling approach applied can be best described as a combination of deductive-knowledge and inductive-empirical methods.

Land capability was modelled as a percentage of maximum possible capability when compared to conditions at a national level. Results for the Province were summarized at a local municipality level. The provincial results indicated that 45% of Limpopo is suitable for dry-land agriculture. However, only 1.5% is considered to be of moderate potential. The main constraint with regard to dry-land cultivation at a Provincial level is considered to be land cover and water availability.

Most of the land in Polokwane Municipality (63%) was found to have a low capability as reflected in the table below. There is no land with a high capability for crops.

#### Table 3: Land Capability in Polokwane Municipality

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>AREA (HA)</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low</td>
<td>18,079.06</td>
<td>4.80</td>
</tr>
<tr>
<td>Very low – Low</td>
<td>51,965.30</td>
<td>13.80</td>
</tr>
<tr>
<td>Low</td>
<td>237,293.49</td>
<td>63.01</td>
</tr>
<tr>
<td>Low – Moderate</td>
<td>69,227.95</td>
<td>18.38</td>
</tr>
<tr>
<td>Moderate</td>
<td>57.35</td>
<td>0.02</td>
</tr>
<tr>
<td>Moderate – High</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>High</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>High- Very high</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Very high</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>367,623.24</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Source: Polokwane LED Strategy*

The departmental study indicates (see table below) that more than 10% of provincial land is not available for farming, mostly due to settlement development. Another 14% of the land is cultivated, mostly on soil with a low capability.
The conclusion that can be drawn from the departmental study is that Polokwane Municipality is more suited for the promotion of the meat cluster than the horticulture cluster. A proposal for a livestock farmer support programme is provided below. A brief summary of the work that has been done to date on horticulture promotion is also provided.

### Table 4: Agricultural Land Use in Polokwane Municipality

<table>
<thead>
<tr>
<th>Availability</th>
<th>Very Low</th>
<th>Very Low – Low</th>
<th>Low</th>
<th>Low – Moderate</th>
<th>Moderate</th>
<th>Medium</th>
<th>High</th>
<th>High – Very</th>
<th>Total (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not available</td>
<td>2118.8</td>
<td>1907</td>
<td>30196</td>
<td>7175.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>41398.13</td>
</tr>
<tr>
<td>Cultivated</td>
<td>808.77</td>
<td>2744</td>
<td>38879</td>
<td>8668.36</td>
<td>16.19</td>
<td></td>
<td></td>
<td></td>
<td>51117.39</td>
</tr>
<tr>
<td>Vegetated</td>
<td>1508.3</td>
<td>46012</td>
<td>166588</td>
<td>53045</td>
<td>41.16</td>
<td></td>
<td></td>
<td></td>
<td>280771.36</td>
</tr>
<tr>
<td>Available – Degraded</td>
<td>1280</td>
<td>1629.13</td>
<td>338.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3248.44</td>
</tr>
<tr>
<td>Available</td>
<td>67.84</td>
<td>20.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>87.98</td>
</tr>
</tbody>
</table>

*Source: Polokwane LED Strategy*

### 3.2.10 URGENT ENVIRONMENTAL ISSUES

#### 3.2.11 CLIMATE AND ATMOSPHERIC QUALITY

The release of gaseous pollutants into the atmosphere by vehicles, industries, domestic consumption of wood and coal and veld-fires is lowering the atmospheric quality to such an extent in certain areas that the Municipality will be facing a major problem in this regard if steps are not taken to address the deterioration in air quality.

- **Dust and solid particles**
  
The Municipal monitoring stations in Polokwane City show relatively low concentrations of solid particulates and dust in the atmosphere. This may be due to the air Movements in Polokwane, as well as the fact that the streets in Polokwane are tarred. There is, however, concern about the amount of dust that may be generated in the rural areas surrounding Polokwane City due to the number of gravel roads in these areas and the reliance of rural dwellers on wood and coal and fuels for domestic heating and cooking.

- **Noise**
  
  Noise is causing high nuisance levels in residential areas within Polokwane city due to increasing traffic volumes and increased use of suburban streets by through traffic and heavy vehicles.

- **Greenhouse Gases**
  
The release of various gases contributing to the greenhouse effect is taking place in the Municipal area. The sources of these gases must be investigated and clarified to enable the Municipality to enforce air quality standards over the long term. As a signatory to the Kyoto Protocol of the United Nations Framework Convention on Climate Change, (UNFCCC) South Africa is subject to its directives, which aim to commit signatories to reduce their production of greenhouse gases to a minimum of 5% lower levels than the 1990 baseline levels for individual countries (UNFCCC, 1997). The major contributors of greenhouse gases are the energy sector, the industrial sector, the agricultural sector and the transport sector.
3.2.12 **TOPOGRAPHY / LANDSCAPES**

- **Illegal Sand Mining**
  
  Mining is regulated by chapter 44 of the Mineral and Petroleum Resources Development Act (Act 28 of 2002). There are a number of Sand mines operating in the Sand-, Hout- and Bloed River basins that are not registered and licensed by the Department of Minerals and Energy. It is a criminal offence to prospect or mine without the necessary authorization from the Department.

- **Protection of Scenic Sites and Ridges**
  
  The sites of high scenic importance and visual prominence within the Polokwane Municipal area are currently not afforded any protection.

- **Mine Rehabilitation**
  
  A number of un-rehabilitated mines and borrow pits exist within the Polokwane Municipal Area. The ones that are still operational must repair the environmental damage they have done to the satisfaction of the Department and those that have been closed must produce their closure certificate stating that environmental concerns have been addressed to the satisfaction of the Department.

- **Industrial Site Rehabilitation / Maintenance**
  
  A number of industrial stands, particularly in Polokwane and Seshego are in a degraded state, contributing to a lack of environmental quality in the industrial areas.

3.2.13 **SOILS AND GEOLOGY**

- **Sinkholes and Dolomite**
  
  A large area on the Southern side of the Molepo-Maja-Chuene cluster is underlain by dolomites, which are unsafe for development.

- **Soil Erosion**
  
  Soil erosion has resulted in large erosion gullies forming in all the clusters of the municipality. These require rehabilitation and re-vegetation.

- **Soil Pollution**
  
  Soil pollution is occurring from leaking chemical storage tanks and pipelines, dumping of toxic chemicals on untreated soil, dumping of organic wastes, and storage of coal and other hazardous materials on bare ground.

3.2.14 **HYDROLOGY AND DRAINAGE** (SEE MAP 4A)

- **Mining of the Water Resource**
  
  Polokwane’s urban areas and industrial users are mining the water resources of the city, resulting in lowered water tables and inability to tolerate periods of low rainfall.

- **Lack of access to portable water**
  
  Some rural villages do not have access to potable water and have to rely on water sources like old farm dams or cattle troughs for drinking water while infrastructure is being installed.

- **Unprotected Red Data habitats**
  
  The red data habitats in Polokwane like the Polokwane Springs and wetland, Flora Park wetland and Polokwane Frog Reserve do not have protected status, placing the species that inhabit them under threat.
Pollutions of the Ground- and Surface Water

The groundwater of the Polokwane Municipal area is being polluted due to the majority of rural dwellers not having access to safe sanitation. Pit latrines abound and the majority of boreholes are within 200m from a pit latrine (AGES, 2004). Seepage from cemeteries poses a serious threat to the quality of Polokwane’s underground water as the majority of cemeteries are located in the floodplain of rivers or streams. Surface water is being polluted by runoff from agricultural land and orchards, landfills, industrial sites and old asbestos stores. The drinking water in the older parts of Polokwane is being supplied via asbestos pipes.

High silt loads in surface water

Increased soil erosion is causing high silt loads in all the streams and rivers in the municipal area. This is particularly evident in the Sand River, Blood River and the Chuene dam, where the water is coloured by its silt content.

3.2.15 VEGETATION

Unprotected sensitive plant communities

Red-data species (Euphorbia groenewaldii, Euphorbia clivicola, Haemanthus sp., etc.) are under threat from urban sprawl and quarrying operations due to the unprotected habitats on which they occur.

Uncontrolled spread of Alien invaders

Alien invaders (Jacaranda mimosifolia, Melia azedarach, Lantana camara, etc.) are spreading in the watercourses of the Municipal area due to their density in urban areas. This causes large quantities of seeds and fruits to be washed into the stormwater system.

Denudation of the natural vegetation

The reliance of rural communities on wood harvested from the veld surrounding villages is causing a large-scale and uncontrolled denudation of the natural vegetation around villages. This situation will lead to eventual desertification of the Veld-Types within the Municipal Area (Acoks, 1988).

Overgrazing

Overgrazing by goats, cattle and other domestic livestock is causing large-scale loss of biomass and biodiversity in Polokwane’s rural areas, including Red Data grasses.

3.2.16 FAUNA & BIRDLIFE

Unprotected sensitive habitats

The Southern Bald Ibis and other Red Data Bird species are being threatened by urban sprawl and future urban development as indicated by the IDP document. The Red Data invertebrates mentioned in the Northern Province (sic) Environmental Management Framework are poorly known and in danger of becoming locally extinct.

Poaching

Widespread poaching on a daily basis with the aid of dogs is causing uncontrolled and un-quantified loss of biodiversity in the Municipal area.

Lack of management information on protected areas

There are few protected areas within the Municipal boundaries, and the management plans or information for the majority of these areas is not clearly defined or readily available. This leads to their management taking place in isolation without consideration of the benefits of joint strategies and information sharing.

Ignorance about sensitive invertebrates in the Municipal area
There appears to be widespread ignorance about the number of sensitive invertebrates that occur in each of the clusters.

3.2.17 WASTE MANAGEMENT AND VISUAL QUALITY

- **Waste transfer Stations contribute to Pollution**

  The waste-transfer stations on the Municipal area require upgrading to contain wind-borne waste and littering by delivery vehicles. They are contributing to the problem of waste management and lower the tone of the areas in which they are situated. They should also be managed differently to encourage recycling and deriving benefit from waste.

- **Refuse disposal methods**

  A number of waste disposal methods currently used in the areas not services by refuse removal contribute to the degradation of the environment and the wasting of potential resources found in waste. These include burning and burial in the back yard.

- **Medical Waste**

  Medical waste is not currently being managed or regulated by the Polokwane Municipality. This leads to potential for institutions to take short cuts in the disposal of the waste and exposing residents to health risks. This has been noted at the Mankweng Landfill and is possible wherever a medical facility exists.

- **Visual degradation**

  The current visual character of Polokwane could be improved upon by enforcing stricter building codes for commercial and industrial developments and regulating the erection of cellular masts. The scenic areas around Polokwane must be identified and protected from residential or other development.

3.2.18 HERITAGE RESOURCES

- **Lack of comprehensive Heritage Database**

  The lack of comprehensive heritage data for the Municipal Area necessitates a comprehensive heritage survey of the entire Municipal Area to enable the Municipality to draw up a comprehensive Heritage Management Strategy.

3.2.19 ‘TOP TWELVE’ ENVIRONMENTAL ISSUES FOR ACTION

The following environmental issues were identified as the top twelve issues for action by the Polokwane Municipality. The priorities were based on the following criteria:

- Biggest positive impact on the environment in the short term;
- Most necessary action required to address social issues arising from unmanaged environmental issues;
- Most necessary action to put initial steps in place to address issues in the medium to long term;
- Most necessary actions to prevent and eventually reverse increasing or ongoing environmental degradation;
- Most necessary action to promote sustainable use of resources;
- Most urgent environmental issues.

The twelve most urgent issues were arranged in a suggested order of priority, although this order of priority is open to revision based on circumstances, budgetary allowances, etc. What is non-negotiable, however, is the fact that these issues must be addressed urgently to prevent further degradation and potentially greater expenditure of resources to rehabilitate the environment. A basic strategy for dealing with each of these issues is detailed under each heading.

3.2.19.1 UPGRADING OF WASTE TRANSFER STATIONS

A waste transfer station must:
Be large enough to handle the expected volume of waste passing through it on a weekly basis;

- Be properly screened to reduce the negative visual impact of waste stockpiles and litter (e.g. walled, fenced or screened with dense planting);
- Have an entrance gate which must be manned;
- Levy a charge to persons dumping waste for transport to a landfill;
- Be landscaped to mitigate the negative visual impact of the activities taking place at the transfer station;
- Be planted with windbreaks to limit the amount of waste being transported by wind;
- Be equipped with waste compactors to facilitate ease of transport and efficiency in handling and temporary storage of waste.

**Affected Wards:** All

### 3.2.19.2 PROTECTION OF SENSITIVE HABITATS AND CULTURAL SITES

The following sensitive habitats owned or managed by the Polokwane Municipality must be identified as Protected Natural Environments in terms of Section 21(1) (a) of the Limpopo Environmental Management Act (LEMA, Act No 7 of 2003), due to the need to “promote or preserve specific ecological processes, natural systems, natural beauty or species of indigenous wildlife/flora or preserve biotic diversity in general; allow and support sustainable economic activities in the area and develop and manage the area in the interest of conservation, education and sustained resource utilization”:

- As large as possible an area of the Sterpark Ridge to the East of Polokwane;
- The grazing camps currently leased to the public;
- The Polokwane Frog reserve;
- The Flora Park wetland;
- The protected natural areas identified around the Polokwane Nature Reserve;
- The 100m buffer zones around the all streams, rivers and drainage channels in the Municipal area;
- After a Municipal Heritage assessment has been done, those heritage sites considered to be of sufficient value must be identified as potential Provincial Heritage Sites and an application must be made by the Museums SBU of the Directorate: Community Services to the Limpopo Heritage Authority for declaration of the Sites as Provincial Heritage Sites.

**Affected Wards:**
- Heritage Survey: All

### 3.2.19.3 ACCESS TO PORTABLE WATER

The Directorate: Technical Services must urgently perform a survey among the ward councillors of the Polokwane Municipality to determine the number of villages who do not have access to potable water. Following this survey the Directorate: Technical Services must put into practice a plan to provide all the affected villages with temporary access to potable water from a central point or points, based on the positions of reservoirs in the villages.

**Affected Wards:** All

### 3.2.19.4 ILLEGAL SAND AND MINING

An aerial survey of the illegal sand mines operating in the Polokwane Municipality must be done and a swoop must be performed on these operators by the Environmental Protection Unit with the aim of prosecuting the operator thereof in terms of Section 5(4) of the Mineral and Petroleum Resources Development Act, Act No 28 of 2002.

**Affected Wards:** All

### 3.2.19.5 DEFORESTATION

The areas where large-scale deforestation is taking place are identified on the Polokwane Veld-Type Map. These areas must be re-habilitated as part of an organized project providing jobs and sustainable benefits for community members. These could include the provision of small business opportunities (harvesting of seed, propagation and establishment maintenance) and provision of resources lacking in the community.
(establishment of nurseries providing indigenous stock and fruit trees). It would be essential to put the following in place for the project to be successful:

- A planning team that includes horticulture, landscape architecture, agronomy, soil science, agroforestry, botany, agricultural engineering, social facilitation, geo-hydrology and ecology in its ranks;
- A pilot project(s) that can provide the team with the experience necessary to solve problems expected during the roll-out process;
- A monitoring system to evaluate the success and ongoing management of the project.

**Affected Wards**: All

### 3.2.19.6 EROSION CONTROL

The erosion gullies indicated on the various Environmental Sensitivity Maps must be re-habilitated as part of the expanded National Public Works Program. Funding may be obtained from the Department of Environment Affairs and Tourism under the allocation for this Program. It is proposed that waste rock from mines be used to pack in the gullies, with cut-off drains at the top of the gully and gabions at the end of the gully to slow down the water velocity and encourage the retention of silt.

**Affected Wards**: Ward 1; Ward 2; Ward 5; Ward 6; Ward 7; Ward 8; Ward 9; Ward 15; Ward 18; Ward 24.

### 3.2.19.7 GROUNDWATER POLLUTION

The Directorate: Technical Services must urgently perform a survey through the ward councillors of the Polokwane Municipality to determine the number of villages who are making use of pit latrines. Following this survey the Directorate Technical Services must put into practice a plan to provide all the affected villages with subsidized self-contained toilets (e.g. Enviroloo) or similar systems by 2009. Existing pit latrines must be drained and filled as part of the same project and all public buildings (schools, community centres, post offices and other public buildings) using pit latrines must be equipped with self-contained toilets under new by-laws implemented by the Municipality.

### 3.2.19.8 LOSS OF PORTABLE WATER

The Directorate Technical Services: Water and Sanitation SBU must urgently perform a reconciliation (or appoint a consultant to perform the calculations and submit a report to highlight the discrepancy) between water purchased from the relevant Water Board and water sold on stands in Polokwane and other urban centres in the Municipality. This loss in potential revenue must be used as motivation to install meters at distribution points in the system to determine where losses occur and repairs need to be made. As part of this project, asbestos cement pipes must be replaced with UPVC, HDPE or other safe pipes.

**Affected Wards**: All

### 3.2.19.9 WASTE MANAGEMENT

In areas not covered by the Refuse removal programme, the Municipality must facilitate other means of refuse removal. This must encompass a multi-pronged approach: Putting domestic refuse removal out to tender by private contractors, including recycling of waste as separated at the source, which could make rates per household more competitive. The pilot scheme may eventually be practical to extend to Polokwane City, Seshego and Mankweng.

Locating recycling centres for rural villages run by private concerns in two or three central points for each cluster and providing at least one Waste Transfer Station per administrative cluster; The Municipality should look into the prohibition of littering and the requirements contained in Chapter 13 (Section 89 to 91) of LEMA (Act no 7 of 2003) for the management of litter in public places. The Municipality should also prepare itself to comply with the provisions on waste management contained in LEMA (Act no 7 of 2003):

- the submission of statistics on the quantity and types of waste produced;
- the classification of different types of waste and the handling, storage, transport and disposal of waste;
- the location, planning and design of waste disposal sites;
- control over the management of waste disposal sites, installations and equipment;
- the administration arrangements for the effective disposal of waste;
- the dissemination of information to the public on effective waste disposal;
• Any other matter that may be necessary or expedient for the effective disposal of waste for the protection of the environment.

**Affected Wards:** All

### 3.2.19.10 ERADICATION OF ALIEN INVADERS

The Directorate of Environmental and Resource Management is to ensure that the declared weeds identified in the regulations promulgated under the Conservation of Agricultural Resources Act (Act 43 of 1983) be actively eradicated from the watercourses within the Municipality. By-laws for the removal of these plants from residential stands should also be promulgated, in which the Municipality subsidizes the planting of a number of indigenous trees in return for the removal of these plants (e.g. *Acacia galpinii*, *Acacia polyacantha*, *Acacia rehmanniana*, *Acacia sieberiana* var. ‘Woodii’, *Bolusanthus* sp., *Peltophorum africanum*, *Combretum* spp., etc.). Examples of these are:

- *Acacia melanoxylon* – Black wattle
- *Jacaranda mimosifolia* – Jacaranda
- *Lantana camara* – Lantana
- *Melia azedarach* – Syringa berry
- *Solanum mauritianum* – Bugweed **Affected Wards:** Ward 6; Ward 10; Ward 11; Ward 14; Ward 19; Ward 20; Ward 21; Ward 23.

### 3.2.19.11 MINING OF THE MUNICIPAL WATER RESOURCES

The Directorate Technical Services, Water and Sanitation SBU must investigate the tariff structure of potable water in the Municipality. A stratified tariff system should be implemented, based on basic household needs being met, after which the cost per kilolitre goes up on a sliding scale. Industrial users should be consulted on their basic needs, after which the same system would apply. This is intended to encourage people not to waste water and to correct market failures in reflecting the actual cost of water.

**Affected Wards:** All

### 3.2.19.12 DUST AND SUSPENDED PARTICULATES IN THE ATMOSPHERE

The redefined Municipal boundaries and the new Air Quality Legislation necessitate that the Directorate Community Services: Community Health Services SBU installs additional air quality monitoring stations to monitor the ambient air quality in the Municipality. It is recommended that a minimum of three additional monitoring stations be installed per administrative cluster bringing the total to fifteen. The quantity of dust and particulates in the atmosphere will guide the priorities for road tarring and pollution monitoring. **Affected Wards:** Potentially all, but requires detailed investigation.
Table 5: Guidelines for Environmental Implementation Plans

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Environmental Resource Management Policy</th>
<th>Environmental Management System</th>
<th>Effective and co-ordinated environmental management</th>
<th>Effective and functional waste transfer stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeframe</td>
<td>6 months</td>
<td>6 months</td>
<td>12 months</td>
<td>36 months</td>
</tr>
<tr>
<td>Estimated Budget</td>
<td>R30,000.00 excl VAT</td>
<td>R100,000.00 excl VAT</td>
<td>R1.2 million per annum (salaries) R5 million per annum (projects)</td>
<td>R 1 million per transfer stn = R6 m</td>
</tr>
<tr>
<td>SBU Responsible</td>
<td>1. Legal Services 2. Environment &amp; Resource Management 3. All SBU’s to review</td>
<td>1. All SBU’s: 1 Staff Member for liaison 2. Environment: All</td>
<td>1. Planning &amp; Development: Create posts for the following: - Manager - Assistant Manager - Environmental Officers (2) - Ecologist - Archaeologist - Administrative Assistants</td>
<td>Waste Management: 1 (Project Management)</td>
</tr>
<tr>
<td>Action by Municipality</td>
<td>Write Municipal Environmental Policy in compliance with all relevant legislation to achieve goals specified</td>
<td>Appoint a specialist consultant to create an Environmental Management System for Polokwane</td>
<td>Restructure the Municipality to create a directorate for more effective Environmental Management</td>
<td>Upgrade existing Waste transfer stations and build new ones</td>
</tr>
</tbody>
</table>

1. Legal Protection for the sensitive Habitats identified in Section 2.9.2 of this report; 2. Legal protection of the Heritage Sites of importance within the Municipal area.

1. 2 months 2. 6 months

1. R10,000.00 2. R10,000.00 3. R200,000.00 (excl. VAT)
<table>
<thead>
<tr>
<th>Description</th>
<th>Set out a comprehensive Environmental Policy for Polokwane, including by-laws</th>
<th>Compile an EMS for Polokwane based on the Environmental Policy</th>
<th>Creation of an Environment &amp; Resource Management Strategic Business Unit</th>
<th>Installation and upgrading of Waste Transfer Stations</th>
<th>Protection of Sensitive Habitats and Cultural Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Outcome</td>
<td>Potable water supply to all villages that do not yet have access.</td>
<td>Closure of illegal sand mines and subsequent environmental rehabilitation</td>
<td>Long-term rehabilitation of denuded areas in the municipality, as well as an education programme to prevent recurrences in the future.</td>
<td>Erosion prevention and rehabilitation of erosion gullies. Education of farmers on soil conservation practices.</td>
<td>Eventual replacement of all pit latrines and VIP latrines with self contained systems</td>
</tr>
<tr>
<td>Timeframe</td>
<td>12 months</td>
<td>1. 6 months 2. 12 months</td>
<td>1. 3 years 2. Ongoing</td>
<td>1. 6 months 2. Ongoing</td>
<td>5 years</td>
</tr>
<tr>
<td>Estimated Budget</td>
<td>1. Nil 2. R20,000,000 excl VAT</td>
<td>1. R20,000.00 2. R100,000.00</td>
<td>1. R5-million 2. R130,000.00 per annum</td>
<td>1. R5-million; 2. Nil</td>
<td>R1 million per annum</td>
</tr>
<tr>
<td>Action by Municipality</td>
<td>Description</td>
<td>Outcome</td>
<td>Timeframe</td>
<td>Budget</td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
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</tr>
<tr>
<td>1. Meet with all Ward Councillors and establish the situation in the villages/suburbs within their ward with regard to the</td>
<td>Establish the status of the Municipal Wards w.r.t. access to potable water</td>
<td>Motivation to improve distribution system and cost recovery should this prove necessary.</td>
<td>1. 12 months</td>
<td>1. Nil: time only (water meters?)</td>
<td></td>
</tr>
<tr>
<td>2. Prosecute these persons.</td>
<td>Prosecution of operators of illegal Sand mines and closure of these mines</td>
<td>Waste removal from central points in each cluster, with the added benefit of recycling</td>
<td>1. 6 months</td>
<td>1. R500,000.00 (R125,000.00 x 4)</td>
<td></td>
</tr>
<tr>
<td>1. Establish the identity of operators of illegal sand mines;</td>
<td>Reversal of widespread deforestation in rural areas</td>
<td>Removal of invasive aliens from the rivers in the Municipality, allowing greater quantities of water for other uses.</td>
<td>2. 12 months</td>
<td>2. 12 months</td>
<td></td>
</tr>
<tr>
<td>2. Prosecute these operators.</td>
<td>Re-habilitation of erosion channels</td>
<td>Waste prevention and recovery of costs of water supply.</td>
<td>1. 2 years</td>
<td>1. R500,000.00</td>
<td></td>
</tr>
<tr>
<td>1. Launch and manage co-operative project to re-vegetate denuded areas;</td>
<td></td>
<td></td>
<td>2. Ongoing</td>
<td>2. R300,000 per annum</td>
<td></td>
</tr>
<tr>
<td>2. Educate the residents of the municipal area on sustainable use of timber and indigenous trees, as well as the ecological services offered by trees (soil improvement, stabilization, oxygen production, fodder, carbonsequestration etc)</td>
<td></td>
<td></td>
<td>1. 6 months</td>
<td>1. R25,000.00;</td>
<td></td>
</tr>
<tr>
<td>1. Apply for funding from National Government to launch erosion rehabilitation programmes;</td>
<td></td>
<td></td>
<td>6 months</td>
<td>2. R 70,000.00 per annum (salary)</td>
<td></td>
</tr>
<tr>
<td>2. Launch an Agricultural extension programme to educate farmers on sustainable pasture management and soil conservation practices</td>
<td></td>
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</tr>
</tbody>
</table>
## Staff Allocation

<table>
<thead>
<tr>
<th>Action by Municipality</th>
<th>Description &amp; Relevant Lilti</th>
<th>Item N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perform a reconciliation between the quantities of water purchased from water boards and the quantities sold to determine the distribution loss</td>
<td>Prevention or limiting of water losses through inefficient distribution systems</td>
<td>11.</td>
</tr>
<tr>
<td>1. Commission a study into the various tariff systems in the country and a recommendation on which system is best for Polokwane with the aim of limiting wastage and over-consumption, but giving people access to basic services;</td>
<td>Stratified Water tariffs</td>
<td>14.</td>
</tr>
<tr>
<td>1. Increase the number of monitoring stations for air pollution to three per cluster, bring the total quantity to 15.</td>
<td>Air pollution monitoring</td>
<td>15.</td>
</tr>
</tbody>
</table>
3.3 DEMOGRAPHICS & SOCIO-ECONOMIC PROFILE

This section provides an analysis of the socio-economic characteristics of the Polokwane local municipality in the Limpopo Province of South Africa.

Polokwane local municipality comprises of the following main places: Bjasradiba, Discolwe, Dikgale, Ditlou, Maha, Maphosa, Manke, Mankweng, Mixed TA, Mopano, Molepo, Molejo, Moloto, Soweto, Mokhola, Mokgoba, Mokgabo, Molepo, Molejjo, Molejo, Moloto, Solomon Kgabo, Mothiba, Pietersburg Part 1, Polokwane, Seshego Part 1, Thabamoopo, Tholongwe, Turfloop, Pietersburg Part 2 and Seshego Part 2. This section focuses on Polokwane local municipality, but also reports on information in main places within the Polokwane local municipality and in South Africa. The current municipal area demarcation applied in this study is based on pre-2005 changes. Map 2 indicates the municipal district boundaries for the Capricorn district municipality in which the Polokwane local municipality falls.

3.3.1 DEMOGRAPHIC PROFILE

3.3.1.1 POPULATION SIZE

The population size within the Polokwane local municipality increased from 458,120 in 1996 to an estimated 557,404 in 2008. Therefore, the number of people residing in the Polokwane local municipality increased by 99,284 people from 1996 to 2008, representing an average annual increase of 1.65%, which was below the estimated 2% growth in South Africa for the same period. The growth in population size in terms of "main place"

Even though the population size of Molejjo (98,454 by 2008) is still the largest within the Polokwane local municipality (98,454 by 2008), these figures show a gradual decline from its peak in 2002 (103,010). The other two large areas (in terms of population size) are Pietersburg Part 1 (86,412 by 2008) and Seshego Part 1 (78,001 by 2008). The population of Pietersburg Part 1 grew at an average of 5.03% per year since 1996 whilst Seshego Part 1 grew at an average of 1.81% per year.
## Table 6: Population size by "Main Place" within the Polokwane Local Municipality (Source of data: Quantec’s Regional Dataset, 2008)

<table>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>41,154,91</td>
<td>41,952,18</td>
<td>42,707,46</td>
<td>43,414,92</td>
<td>44,071,12</td>
<td>44,682,62</td>
<td>45,245,60</td>
<td>45,801,30</td>
<td>46,347,49</td>
<td>46,892,40</td>
<td>47,391,00</td>
<td>47,850,03</td>
<td>48,332,64</td>
</tr>
<tr>
<td>Capricorn District municipality</td>
<td>1,079,779</td>
<td>1,096,838</td>
<td>1,112,575</td>
<td>1,126,865</td>
<td>1,139,656</td>
<td>1,151,167</td>
<td>1,161,129</td>
<td>1,170,377</td>
<td>1,178,852</td>
<td>1,186,767</td>
<td>1,193,004</td>
<td>1,197,773</td>
<td>1,203,200</td>
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<td>585</td>
<td>590</td>
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</tr>
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</table>
Figure 2 below depicts changes in the population size in the Polokwane local municipality since 1996. It can be seen that the population size increased from 458,120 in 1996 to an estimated 557,404 in 2008. Therefore, the number of people residing in the Polokwane Local Municipality increased by 99,284 people from 1996 to 2008, representing an average annual increase of 1.65%, which was below the estimated 2% growth in South Africa for the same period. Although the rate of population growth slowed over this period, the decrease in population growth is in line with that of the country as a whole.

Figure 3 below illustrates the population distribution of the different main places within the Polokwane local municipality (2008).

It can be seen that the Moletji houses the largest percentage of people (18%), followed by Pietersburg Part 1 with 15%, the Seshego Part 1 with 14%, and finally Bjaladibja Dikolobe with 8%.

Figure 4 below depicts changes in the population size in Polokwane “Main Place” since 1996. It can be seen that the population size increased from 14,383 in 1996 to an estimated 35,394 in 2008. In terms of main place population size, the number of people residing in Polokwane thus increased by 21,011 people from 1996 to 2008, representing an average annual increase of 7.79%, which was far above the estimated 2% growth in South Africa for the same period.
3.3.1.2 POPULATION GROWTH

The population growth rate in the Polokwane local municipality shows a steady decline from 2.35% in 1997 to 1.15% in 2007. The continuation of the decline in the population growth rate from 2002 to 2008 can possibly be attributed to the increase in the HIV incidence rate in this area. Figure 6 below shows the decline in the population growth rate from 1997 to 2008 with the exception of 2008. The average annual population growth rate in the Polokwane local municipality from 1997 to 2008 was 1.65% as indicated by the final bar on the far right-hand side of figure 6.4

*Please note that the figures for 2008 were derived by making use of estimated growth rates.*
3.3.1.3 POPULATION DENSITY

Figure 7 below depicts changes in the population density of the Polokwane local municipality since 1996. It can be seen that the number of people per km² increased from 121.10 in 1996 to 147.32 in 2008. In all, the number of people per km² residing in the Polokwane local municipality increased by 26.22 people per km² from 1996 to 2008. The average number of people per km² in the Polokwane local municipality over the period was 135.34.5

Although a graph is not included for the changes in the population density of Polokwane main place since 1996, it is interesting to note that the number of people per km² residing in this area increased by 10 people per km² from 1996 to 2008.

5 Please note that the figures for 2008 were derived by making use of estimated growth rates.

3.3.1.4 NUMBER OF HOUSEHOLDS

Figure 8 below depicts changes in the number of households in the Polokwane local municipality since 1996. It can be seen that the number of households increased from 99 493 in 1996 to 156 458 in 2008. The number of households in the Polokwane local municipal area thus increased by 56 965 households from 1996 to 2006, while the average number of households in the Polokwane local municipality over the period was 130 251.

When comparing the growth in the number of people in this area, with the growth in the number of households, it is clear the number of households grew at a rate faster than that
of the amount of people. The reason for this apparent faster growth rate in amount of households can be ascribed to the decrease in the size of some households, rather than a decrease in the amount of households. The average household size shrank from 4.6 to 3.56 people per household between 1996 and 2008.

Figure 8: The number of households in the Polokwane local municipality

Although there are less Black people living in urban areas than White, Coloured or Asian people, the majority of Black South Africans have lived in urban areas since 2001. The amount of Black people living in urban areas has increased substantially since 2000 (increasing from 46.8% in 2000 to 71.8% in 2001). By 2006, 82% of Black people lived in urban areas. The amount of White people living in urban areas has shown a more consistent growth between 1996 and 2006. In contrast, the amount of Coloured people living in urban areas has declined from 94.39% in 1996 to 54.80% in 2006.

Figure 9 below depicts changes in the urbanisation rate in the Polokwane local municipality since 1996 for all races. It can be seen that the percentage of people living in urban areas increased steadily from 57.75% in 1996 to 87.90% in 2006. As in many other magisterial districts, the urbanisation rate shot up between 2000 and 2001, after which a more steady growth rate followed. In all, the percentage of people living in urban areas in the Polokwane municipal area increased by 30.16% over the period. The average urbanisation rate in the Polokwane municipal area over the period was 73.92%.

3.3.1.5 URBANIZATION RATE

The urbanisation rate is the proportion of people living in urban areas.

<table>
<thead>
<tr>
<th>Year</th>
<th>Urbanisation Rate (%)</th>
</tr>
</thead>
<tbody>
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<td>1999</td>
<td>33.00</td>
</tr>
<tr>
<td>2000</td>
<td>34.00</td>
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<tr>
<td>2001</td>
<td>35.00</td>
</tr>
<tr>
<td>2002</td>
<td>36.00</td>
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<tr>
<td>2003</td>
<td>37.00</td>
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<tr>
<td>2005</td>
<td>39.00</td>
</tr>
<tr>
<td>2006</td>
<td>40.00</td>
</tr>
</tbody>
</table>

(Source of data: Quantec’s Regional Dataset, 2008)

(Source of data: Global Insight Southern Africa’s ReX Dataset, 2007)
3.3.1.6 LABOUR PROFILE

A) UNEMPLOYMENT: NUMBER AND RATE

Limpopo has a population of about 5.27 million people of which approximately 870 000 people are employed. This amount to 6.2% of the country’s employed population. Under the strict definition, approximately 4.05 million people are not economically active, which implies that 353 628 people are unemployed.

This translates to an unemployment rate of 28.9% which is higher than the national rate of 21.9% for the fourth quarter of 2008.

The unemployment rate for the Capricorn district municipality is much higher than the national average. However, in comparison with the other district municipalities the Capricorn district municipality’s unemployment rate exceeds that of the province as well as the national average. However, the unemployment rate for the Polokwane local municipality was 7.75% below that of the Capricorn district municipality, 6.05% below the province’s average, and 4.96% above the national average.

Figure 11 below depicts changes in the number of unemployed people in the Polokwane local municipality since 1996. It can be seen that the number of unemployed people increased from 38.67% in 1996 to 40.91% in 2001, after which it dropped to a low of 37.17% by 2007.

9 Statistics South Africa uses the following definition of unemployment as its strict (official) definition. The unemployed are those people within the economically active population who: (a) did not work during the seven days prior to the interview, (b) want to work and are available to start work within a week of the interview, and (c) have taken active steps to look for work or to start some form of self-employment in the four weeks prior to the interview. The expanded unemployment rate excludes criterion (c).
B) INFORMAL SECTOR EMPLOYMENT

Figure 12 below depicts changes in the total number of people employed in the informal sector within the Polokwane local municipality since 1996. It can be seen that the number of people employed in the informal sector increased from 13 828 in 1996 to 17 592 in 2001. However, in the number of employed people in the informal sector fell by 1 448, after which it increased to 19 660 in 2008 (an increase of 3 516 from 2002). The total number of people employed in the informal sector in the Polokwane local municipality increased by 36.61% over the past 12 years from 1996. The average amount of people employed in the informal sector over the last 5 years (2004 to 2008) were 18 577.

C) FORMAL SECTOR EMPLOYMENT

Figure 13 below depicts changes in the formal sector employment in the Polokwane local municipality since 1996. It can be seen that total employment in this sector increased from 55 736 in 1996 to 81 434 in 2008. Unlike employment in the informal sector, total employment in the formal sector increased at a fairly consistent rate. It is clear that total unemployment did not change much over this period. The average formal sector employment over the past 5 years (2004 to 2008) was 77 599.
Figure 13: Formal sector employment in the Polokwane Local Municipality

The pie chart in figure 14 below depicts the percentage of people employed in each of the formal sectors in 2008 in the Polokwane local municipality. It can be seen from figure 15 below that the largest employer in the formal sector is community services (36%), followed by 24% in trade. The third largest employer in the formal sector is finance (19%), followed by manufacturing (9%), agriculture, (4%), and construction (4%).

The largest of the three formal sectors, community services, trade, and finance, employed 79% of the economically active people in 2006. Although it is not possible to see from this graph, it is interesting to note that the finance sector grew the fastest between 1996 and 2008 (126.84%), followed by Pietersburg Part 1 (20.33%) and Moletji (16.63%). The main place employing the least amount of people in the Polokwane local municipality was Makgoba (0.01% of the Polokwane local municipality’s employed population).

Table 7 shows that the amount of employed people in the Polokwane local municipality increased to 95,011 in 2001, representing an increase of 37.15% from the 1996’s figures. It is interesting to note that the amount of people working in Pietersburg Part 1 increased by 11,876 from 1996 to 2001, passing Seshego Part 1 as the main place employing the most amount of people. By 2001, only 27.32% of the Polokwane local municipality’s
working population was active in Pietersburg Part 1, followed by Seshego (19.32%), Moletji (13.32%) and Polokwane (12.60%).
### Table 7: Employment for both formal and informal sectors by industry for Polokwane local municipality main-places for 1996

<table>
<thead>
<tr>
<th>Polokwane local municipality divided into main-places (1996)</th>
<th>Total</th>
<th>Agriculture, hunting, forestry and fishing</th>
<th>Mining and quarrying</th>
<th>Manufacturing</th>
<th>Electricity, gas and water supply</th>
<th>Construction</th>
<th>Wholesale and retail trade</th>
<th>Transport, storage and communication</th>
<th>Financial, insurance, real estate and business service</th>
<th>Community, social and personal services</th>
<th>Other</th>
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<tbody>
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<td>8.91%</td>
<td>1.34%</td>
<td>9.88%</td>
<td>16.38%</td>
<td>7.26%</td>
<td>4.46%</td>
<td>12.90%</td>
<td>35.44%</td>
</tr>
<tr>
<td>Moloto Solomon Kgabo</td>
<td>76</td>
<td>3.95%</td>
<td>2.63%</td>
<td>17.11%</td>
<td>0.00%</td>
<td>11.84%</td>
<td>13.16%</td>
<td>0.00%</td>
<td>5.26%</td>
<td>11.84%</td>
<td>34.21%</td>
</tr>
<tr>
<td>Mohiba</td>
<td>2,098</td>
<td>2.05%</td>
<td>0.24%</td>
<td>6.34%</td>
<td>1.33%</td>
<td>10.53%</td>
<td>14.49%</td>
<td>7.44%</td>
<td>3.10%</td>
<td>12.20%</td>
<td>42.28%</td>
</tr>
<tr>
<td>Pietersburg Part 1</td>
<td>14,080</td>
<td>1.54%</td>
<td>0.48%</td>
<td>4.05%</td>
<td>1.56%</td>
<td>4.27%</td>
<td>16.47%</td>
<td>4.91%</td>
<td>11.18%</td>
<td>30.09%</td>
<td>25.46%</td>
</tr>
<tr>
<td>Polokwane</td>
<td>4,933</td>
<td>31.44%</td>
<td>0.61%</td>
<td>3.71%</td>
<td>1.01%</td>
<td>3.10%</td>
<td>11.19%</td>
<td>3.77%</td>
<td>3.81%</td>
<td>12.33%</td>
<td>29.03%</td>
</tr>
<tr>
<td>Seshego Part 1</td>
<td>14,367</td>
<td>0.74%</td>
<td>0.29%</td>
<td>7.04%</td>
<td>1.06%</td>
<td>5.37%</td>
<td>16.27%</td>
<td>6.49%</td>
<td>5.89%</td>
<td>29.94%</td>
<td>26.92%</td>
</tr>
<tr>
<td>Thabamoopo</td>
<td>634</td>
<td>17.67%</td>
<td>3.15%</td>
<td>17.19%</td>
<td>0.16%</td>
<td>9.94%</td>
<td>8.36%</td>
<td>4.89%</td>
<td>2.05%</td>
<td>12.15%</td>
<td>24.45%</td>
</tr>
<tr>
<td>Tholongwe</td>
<td>3,035</td>
<td>3.59%</td>
<td>0.53%</td>
<td>5.93%</td>
<td>1.25%</td>
<td>13.48%</td>
<td>12.62%</td>
<td>6.26%</td>
<td>3.66%</td>
<td>12.62%</td>
<td>40.07%</td>
</tr>
<tr>
<td>Turfloop</td>
<td>13</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>7.69%</td>
<td>7.69%</td>
<td>7.69%</td>
<td>61.54%</td>
<td>15.38%</td>
</tr>
<tr>
<td>Pietersburg Part 2</td>
<td>594</td>
<td>3.03%</td>
<td>0.34%</td>
<td>6.23%</td>
<td>0.17%</td>
<td>12.12%</td>
<td>10.77%</td>
<td>3.54%</td>
<td>2.53%</td>
<td>28.62%</td>
<td>32.66%</td>
</tr>
<tr>
<td>Seshego Part 2</td>
<td>15</td>
<td>6.67%</td>
<td>0.00%</td>
<td>6.67%</td>
<td>0.00%</td>
<td>20.00%</td>
<td>13.33%</td>
<td>6.67%</td>
<td>6.67%</td>
<td>13.33%</td>
<td>26.67%</td>
</tr>
</tbody>
</table>

(Source of data: Quantec’s Regional Dataset, 2008)
Table 8: Employment for both formal and informal sectors by industry for Polokwane local municipality main-places for 2001

<table>
<thead>
<tr>
<th>Polokwane local municipality divided into main-places (2001)</th>
<th>Total</th>
<th>Agriculture, hunting, forestry and fishing</th>
<th>Mining and quarrying</th>
<th>Manufacturing</th>
<th>Electricity, gas and water supply</th>
<th>Construction</th>
<th>Wholesale and retail trade</th>
<th>Transport, storage and communication</th>
<th>Financial, insurance, real estate and business service</th>
<th>Community, social and personal services</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bjatladibja Dikolobe</td>
<td>5,112</td>
<td>2.60%</td>
<td>0.29%</td>
<td>3.97%</td>
<td>0.86%</td>
<td>8.10%</td>
<td>13.73%</td>
<td>5.50%</td>
<td>9.31%</td>
<td>42.63%</td>
<td>13.01%</td>
</tr>
<tr>
<td>Dikgale</td>
<td>4,191</td>
<td>6.94%</td>
<td>0.14%</td>
<td>8.52%</td>
<td>0.50%</td>
<td>7.28%</td>
<td>19.45%</td>
<td>4.29%</td>
<td>5.15%</td>
<td>31.33%</td>
<td>16.39%</td>
</tr>
<tr>
<td>Ditlou Machidi</td>
<td>1,029</td>
<td>4.28%</td>
<td>1.26%</td>
<td>8.94%</td>
<td>2.14%</td>
<td>10.11%</td>
<td>17.78%</td>
<td>4.08%</td>
<td>5.44%</td>
<td>33.92%</td>
<td>12.05%</td>
</tr>
<tr>
<td>Ga-Mashashane</td>
<td>268</td>
<td>1.49%</td>
<td>0.00%</td>
<td>2.99%</td>
<td>0.00%</td>
<td>8.96%</td>
<td>22.39%</td>
<td>6.34%</td>
<td>4.48%</td>
<td>36.19%</td>
<td>17.16%</td>
</tr>
<tr>
<td>Maja</td>
<td>702</td>
<td>3.42%</td>
<td>1.42%</td>
<td>7.83%</td>
<td>0.43%</td>
<td>5.84%</td>
<td>18.23%</td>
<td>2.71%</td>
<td>6.41%</td>
<td>28.35%</td>
<td>25.36%</td>
</tr>
<tr>
<td>Makgoba</td>
<td>68</td>
<td>16.18%</td>
<td>0.00%</td>
<td>5.88%</td>
<td>0.00%</td>
<td>5.88%</td>
<td>22.06%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>23.53%</td>
<td>26.47%</td>
</tr>
<tr>
<td>Mankweeng</td>
<td>2,650</td>
<td>1.51%</td>
<td>0.38%</td>
<td>2.68%</td>
<td>0.45%</td>
<td>6.19%</td>
<td>16.19%</td>
<td>4.00%</td>
<td>7.89%</td>
<td>52.72%</td>
<td>8.00%</td>
</tr>
<tr>
<td>Mixed TA</td>
<td>0</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Mojabelo</td>
<td>229</td>
<td>7.86%</td>
<td>0.00%</td>
<td>7.42%</td>
<td>1.31%</td>
<td>4.37%</td>
<td>22.27%</td>
<td>8.73%</td>
<td>8.30%</td>
<td>17.03%</td>
<td>22.71%</td>
</tr>
<tr>
<td>Molepo</td>
<td>1,900</td>
<td>3.47%</td>
<td>1.05%</td>
<td>7.89%</td>
<td>1.32%</td>
<td>6.63%</td>
<td>18.53%</td>
<td>4.58%</td>
<td>3.95%</td>
<td>33.79%</td>
<td>18.79%</td>
</tr>
<tr>
<td>Moletji</td>
<td>12,654</td>
<td>3.08%</td>
<td>0.21%</td>
<td>10.76%</td>
<td>0.91%</td>
<td>6.13%</td>
<td>26.48%</td>
<td>5.07%</td>
<td>6.22%</td>
<td>24.39%</td>
<td>16.76%</td>
</tr>
<tr>
<td>Moloto Solomon Kgabo</td>
<td>96</td>
<td>3.13%</td>
<td>0.00%</td>
<td>20.83%</td>
<td>0.00%</td>
<td>23.96%</td>
<td>13.54%</td>
<td>0.00%</td>
<td>3.13%</td>
<td>18.75%</td>
<td>16.67%</td>
</tr>
<tr>
<td>Mothiba</td>
<td>2,226</td>
<td>3.77%</td>
<td>0.49%</td>
<td>10.96%</td>
<td>1.98%</td>
<td>6.20%</td>
<td>21.70%</td>
<td>6.51%</td>
<td>4.40%</td>
<td>25.61%</td>
<td>18.37%</td>
</tr>
<tr>
<td>Pietersburg Part 1</td>
<td>25,956</td>
<td>1.43%</td>
<td>0.54%</td>
<td>7.22%</td>
<td>1.66%</td>
<td>6.34%</td>
<td>18.79%</td>
<td>4.01%</td>
<td>14.96%</td>
<td>36.10%</td>
<td>8.95%</td>
</tr>
<tr>
<td>Polokwane</td>
<td>11,972</td>
<td>25.26%</td>
<td>0.28%</td>
<td>11.03%</td>
<td>0.48%</td>
<td>6.50%</td>
<td>9.36%</td>
<td>3.70%</td>
<td>4.84%</td>
<td>22.96%</td>
<td>15.59%</td>
</tr>
<tr>
<td>Seshego Part 1</td>
<td>18,357</td>
<td>1.23%</td>
<td>0.55%</td>
<td>9.08%</td>
<td>1.09%</td>
<td>4.82%</td>
<td>22.56%</td>
<td>5.62%</td>
<td>9.80%</td>
<td>37.32%</td>
<td>7.93%</td>
</tr>
<tr>
<td>Thabamoopo</td>
<td>631</td>
<td>20.13%</td>
<td>0.00%</td>
<td>43.26%</td>
<td>0.63%</td>
<td>9.88%</td>
<td>21.67%</td>
<td>4.33%</td>
<td>6.36%</td>
<td>25.83%</td>
<td>22.27%</td>
</tr>
<tr>
<td>Tholongwe</td>
<td>2,815</td>
<td>2.74%</td>
<td>0.39%</td>
<td>5.79%</td>
<td>0.75%</td>
<td>9.88%</td>
<td>21.67%</td>
<td>4.33%</td>
<td>6.36%</td>
<td>25.83%</td>
<td>22.27%</td>
</tr>
<tr>
<td>Turfloop</td>
<td>153</td>
<td>1.96%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>6.54%</td>
<td>0.00%</td>
<td>3.92%</td>
<td>83.66%</td>
<td>3.92%</td>
</tr>
<tr>
<td>Pietersburg Part 2</td>
<td>407</td>
<td>2.95%</td>
<td>0.74%</td>
<td>1.72%</td>
<td>0.00%</td>
<td>2.21%</td>
<td>18.67%</td>
<td>6.14%</td>
<td>7.37%</td>
<td>32.92%</td>
<td>27.27%</td>
</tr>
<tr>
<td>Seshego Part 2</td>
<td>75</td>
<td>12.00%</td>
<td>0.00%</td>
<td>4.00%</td>
<td>0.00%</td>
<td>21.33%</td>
<td>5.33%</td>
<td>0.00%</td>
<td>10.67%</td>
<td>22.67%</td>
<td>24.00%</td>
</tr>
</tbody>
</table>

(Source of data: Quantec’s Regional Dataset, 2008)
3.3.2 EDUCATIONAL PROFILE

The information depicted in figure 15 indicates that the overall literacy levels of the population of the Polokwane local municipality was still fairly low by 2001. The proportion of the adult population (older than 20 years of age) with no schooling was at 1640. Those with some primary schooling stood at 1223, while adults with some secondary education were on 2116. Only 907 adults completed Grade 12 while a mere 277 people completed a higher education. The overall skills level of the area remains very low with less than 5% of the total adult population who completed some form of tertiary qualification.

Figure 15: Education profile of the Polokwane Local Municipality

Table 9: Education grouped (2008)

<table>
<thead>
<tr>
<th>Description</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>No schooling</td>
<td>75,240</td>
</tr>
<tr>
<td>Grade 1 - 3</td>
<td>70,176</td>
</tr>
<tr>
<td>Grade 4 - 7</td>
<td>105,894</td>
</tr>
<tr>
<td>Grade 8 - 10</td>
<td>104,184</td>
</tr>
<tr>
<td>Grade 10 - 12</td>
<td>109,632</td>
</tr>
<tr>
<td>No matric</td>
<td>2,654</td>
</tr>
<tr>
<td>Certificate with Gr. 12</td>
<td>5,724</td>
</tr>
<tr>
<td>Diploma with Gr. 12</td>
<td>16,045</td>
</tr>
<tr>
<td>Bachelor's Degree</td>
<td>6,838</td>
</tr>
<tr>
<td>Bachelor's Degree &amp; Diploma</td>
<td>2,283</td>
</tr>
<tr>
<td>Honours degree</td>
<td>2,200</td>
</tr>
<tr>
<td>Masters, Ph.D</td>
<td>1,785</td>
</tr>
</tbody>
</table>

(Source of data: Quantec’s Regional Dataset, 2008)

The pie chart in figure 16 below provides an aggregated picture of education in the Polokwane local municipality. It can be seen from table 4 above and figure 16 below that, in 2008, 12% of the population in the Polokwane local municipality have received no formal education, 32% have some primary schooling, 39% have some secondary schooling and 14% have completed Grade 12.
3.3.3 ECONOMIC PROFILE

3.3.3.1 SIZE OF THE ECONOMY IN TERMS OF GROSS GEOGRAPHIC PRODUCT (GGP)

The GGP of the Polokwane local municipality as measured in current prices is depicted in figure 17 below. This information indicates that the total value of all products and services produced within the boundaries of the Polokwane local municipality increased from around R4 871 052 000 in 1996 to R20 201 488 000 in 2008. It is evident from these figures that the Polokwane local municipality has been growing strongly between 1996 and 2008, adding 314.73% in value over this period. This growth seems to have excelled after the year 2000. In all, the GGP in the Polokwane local municipality increased by R15 330 436 000 over the period.

Figure 18 below depicts the annual growth rates in GGP in the Polokwane local municipality since 1999. It can be seen that strong positive growth was experienced in 2000, with annual growth rate reaching 19.69% in this year. Over the last three years growth did increase to 7.3% per annum, which is in line with the national trend. The growth figure over the short-term is even higher at 8.7%.

(Source of data: Quantec’s Regional Dataset, 2008)
Figure 18: Growth in GVA at current prices in the Polokwane local municipality

Table 9 below shows the contribution to GGP per sector in the Polokwane local municipality (current prices), while table 2.6 indicates the percentage contribution of each sector to the local municipality’s GGP. From these two tables it is clear that the finance and business sector (30.23% by 2008), the community, social and other services sector (26.04% by 2008), as well as the wholesale and retail trade sector contributes more than 70% of the Polokwane local municipality’s GGP. These sectors have remained fairly consistent over the past 12 years, with only the community, social and other services sector showing some growth over this period. A table 10 and 11 depicts the same information in terms of base year (2000) prices.

(Source of data: Quantec’s Regional Dataset, 2008)
Table 10: Contribution to GGP per sector within the Polokwane local municipality (Current prices)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>4,871,052</td>
<td>5,793,297</td>
<td>6,455,453</td>
<td>7,183,631</td>
<td>7,933,623</td>
<td>9,051,299</td>
<td>10,255,746</td>
<td>11,296,292</td>
<td>12,552,290</td>
<td>13,927,534</td>
<td>15,888,438</td>
<td>17,915,638</td>
<td>20,201,488</td>
</tr>
<tr>
<td>Agriculture, forestry &amp; fishing</td>
<td>35,843</td>
<td>38,530</td>
<td>58,393</td>
<td>57,783</td>
<td>78,250</td>
<td>111,746</td>
<td>107,899</td>
<td>105,861</td>
<td>101,752</td>
<td>115,671</td>
<td>146,625</td>
<td>185,541</td>
<td></td>
</tr>
<tr>
<td>Mining</td>
<td>65,119</td>
<td>71,048</td>
<td>84,348</td>
<td>98,139</td>
<td>118,395</td>
<td>207,943</td>
<td>184,765</td>
<td>192,271</td>
<td>220,106</td>
<td>254,663</td>
<td>289,231</td>
<td>328,491</td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>228,418</td>
<td>256,060</td>
<td>271,455</td>
<td>293,112</td>
<td>336,376</td>
<td>455,461</td>
<td>500,504</td>
<td>556,262</td>
<td>592,964</td>
<td>684,533</td>
<td>768,470</td>
<td>862,698</td>
<td></td>
</tr>
<tr>
<td>Electricity &amp; water</td>
<td>210,330</td>
<td>226,386</td>
<td>253,738</td>
<td>254,833</td>
<td>279,900</td>
<td>316,021</td>
<td>390,939</td>
<td>406,616</td>
<td>440,852</td>
<td>512,691</td>
<td>608,690</td>
<td>722,665</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>114,672</td>
<td>123,075</td>
<td>123,145</td>
<td>117,936</td>
<td>135,725</td>
<td>135,116</td>
<td>153,067</td>
<td>143,575</td>
<td>156,841</td>
<td>179,647</td>
<td>207,281</td>
<td>239,166</td>
<td></td>
</tr>
<tr>
<td>Wholesale &amp; retail trade;</td>
<td>1,054,379</td>
<td>1,178,068</td>
<td>1,273,534</td>
<td>1,438,687</td>
<td>1,722,721</td>
<td>1,955,592</td>
<td>2,138,467</td>
<td>2,272,849</td>
<td>2,562,248</td>
<td>2,842,233</td>
<td>3,271,423</td>
<td>3,665,882</td>
<td>4,107,903</td>
</tr>
<tr>
<td>Transport &amp; communication</td>
<td>474,421</td>
<td>560,281</td>
<td>647,216</td>
<td>762,762</td>
<td>870,423</td>
<td>1,111,551</td>
<td>1,340,627</td>
<td>1,455,017</td>
<td>1,579,553</td>
<td>1,740,512</td>
<td>1,911,923</td>
<td>2,141,195</td>
<td>2,397,959</td>
</tr>
<tr>
<td>Finance and business services</td>
<td>1,543,940</td>
<td>1,815,830</td>
<td>1,988,677</td>
<td>2,194,753</td>
<td>2,254,974</td>
<td>2,595,768</td>
<td>2,897,860</td>
<td>3,315,375</td>
<td>3,768,885</td>
<td>4,272,621</td>
<td>5,011,305</td>
<td>5,532,376</td>
<td>6,107,627</td>
</tr>
<tr>
<td>Community, social, other services</td>
<td>1,143,929</td>
<td>1,524,020</td>
<td>1,790,044</td>
<td>1,965,016</td>
<td>2,157,327</td>
<td>2,351,159</td>
<td>2,634,554</td>
<td>2,933,285</td>
<td>3,237,018</td>
<td>3,559,653</td>
<td>3,946,381</td>
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<td>5,259,534</td>
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</table>
### Table 11: Percentage contribution to GGP per sector within the Polokwane local municipality (Current prices)

<table>
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<td>0.74%</td>
<td>0.67%</td>
<td>0.84%</td>
<td>0.81%</td>
<td>0.73%</td>
<td>0.86%</td>
<td>1.09%</td>
<td>0.96%</td>
<td>0.84%</td>
<td>0.73%</td>
<td>0.73%</td>
<td>0.82%</td>
<td>0.92%</td>
</tr>
<tr>
<td>Mining</td>
<td>1.34%</td>
<td>1.23%</td>
<td>1.31%</td>
<td>1.37%</td>
<td>1.49%</td>
<td>1.81%</td>
<td>2.03%</td>
<td>1.64%</td>
<td>1.53%</td>
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</tr>
<tr>
<td>Manufacturing</td>
<td>4.69%</td>
<td>4.42%</td>
<td>4.21%</td>
<td>4.08%</td>
<td>4.24%</td>
<td>4.20%</td>
<td>4.44%</td>
<td>4.43%</td>
<td>4.43%</td>
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<td>4.31%</td>
<td>4.29%</td>
<td>4.27%</td>
</tr>
<tr>
<td>Electricity &amp; water</td>
<td>4.32%</td>
<td>3.91%</td>
<td>3.93%</td>
<td>3.55%</td>
<td>3.53%</td>
<td>3.09%</td>
<td>3.08%</td>
<td>3.24%</td>
<td>3.37%</td>
<td>3.17%</td>
<td>3.12%</td>
<td>3.22%</td>
<td>3.58%</td>
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<tr>
<td>Construction</td>
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<td>2.12%</td>
<td>1.91%</td>
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<td>1.20%</td>
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<td>1.18%</td>
</tr>
<tr>
<td>Wholesale &amp; retail trade; business services</td>
<td>21.65%</td>
<td>20.34%</td>
<td>19.73%</td>
<td>20.03%</td>
<td>21.71%</td>
<td>21.61%</td>
<td>20.85%</td>
<td>20.12%</td>
<td>20.41%</td>
<td>20.41%</td>
<td>20.59%</td>
<td>20.46%</td>
<td>20.33%</td>
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<tr>
<td>Transport &amp; communication</td>
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<td>9.67%</td>
<td>10.03%</td>
<td>10.62%</td>
<td>10.97%</td>
<td>12.28%</td>
<td>13.07%</td>
<td>12.88%</td>
<td>12.58%</td>
<td>12.50%</td>
<td>12.03%</td>
<td>11.95%</td>
<td>11.87%</td>
</tr>
<tr>
<td>Finance and business services</td>
<td>31.70%</td>
<td>31.34%</td>
<td>30.81%</td>
<td>30.55%</td>
<td>28.42%</td>
<td>28.68%</td>
<td>29.35%</td>
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<td>31.54%</td>
<td>30.88%</td>
<td>30.23%</td>
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<tr>
<td>Community, social, other services</td>
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<td>27.25%</td>
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<td>27.19%</td>
<td>25.98%</td>
<td>25.69%</td>
<td>25.97%</td>
<td>25.79%</td>
<td>25.56%</td>
<td>24.94%</td>
<td>25.43%</td>
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### Table 12: Contribution to GGP per sector within the Polokwane local municipality (2000 prices)

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>6,606,896</td>
<td>7,191,537</td>
<td>7,487,188</td>
<td>7,776,118</td>
<td>7,933,623</td>
<td>8,542,895</td>
<td>8,951,623</td>
<td>9,312,709</td>
<td>9,815,215</td>
<td>10,389,054</td>
<td>11,199,925</td>
<td>11,692,430</td>
<td>12,206,592</td>
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<td>73,445</td>
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<td>147,035</td>
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<td>145,777</td>
<td>144,940</td>
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<td>407,479</td>
<td>432,630</td>
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<td>332,170</td>
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<td>135,725</td>
<td>133,533</td>
<td>148,763</td>
<td>126,113</td>
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<td>145,350</td>
<td>158,582</td>
<td>169,430</td>
<td>181,020</td>
</tr>
<tr>
<td>Wholesale &amp; retail trade; business services</td>
<td>1,375,215</td>
<td>1,429,238</td>
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<td>2,280,953</td>
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<td>2,599,854</td>
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<td>2,889,801</td>
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Table 13: Percentage contribution to GGP per sector within the Polokwane local municipality (2000 prices)

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>6,606,896</td>
<td>7,191,537</td>
<td>7,487,188</td>
<td>7,776,118</td>
<td>7,933,623</td>
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<td>8,951,623</td>
<td>9,312,709</td>
<td>9,815,215</td>
<td>10,389,054</td>
<td>11,199,925</td>
<td>11,692,430</td>
<td>12,206,592</td>
</tr>
<tr>
<td>Agriculture, forestry &amp; fishing</td>
<td>0.59%</td>
<td>0.56%</td>
<td>0.70%</td>
<td>0.75%</td>
<td>0.75%</td>
<td>0.80%</td>
<td>0.78%</td>
<td>0.77%</td>
<td>0.78%</td>
<td>0.66%</td>
<td>0.61%</td>
<td>0.56%</td>
<td></td>
</tr>
<tr>
<td>Mining</td>
<td>1.63%</td>
<td>1.59%</td>
<td>1.60%</td>
<td>1.55%</td>
<td>1.49%</td>
<td>1.57%</td>
<td>1.61%</td>
<td>1.57%</td>
<td>1.48%</td>
<td>1.42%</td>
<td>1.31%</td>
<td>1.25%</td>
<td>1.19%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>4.39%</td>
<td>4.23%</td>
<td>4.07%</td>
<td>4.03%</td>
<td>4.24%</td>
<td>4.15%</td>
<td>4.09%</td>
<td>3.95%</td>
<td>3.99%</td>
<td>3.92%</td>
<td>3.86%</td>
<td>3.84%</td>
<td>3.82%</td>
</tr>
<tr>
<td>Electricity &amp; water</td>
<td>3.94%</td>
<td>3.77%</td>
<td>3.69%</td>
<td>3.42%</td>
<td>3.53%</td>
<td>3.12%</td>
<td>3.07%</td>
<td>3.43%</td>
<td>3.33%</td>
<td>3.20%</td>
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</tr>
<tr>
<td>Construction</td>
<td>2.05%</td>
<td>1.86%</td>
<td>1.67%</td>
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<td>1.71%</td>
<td>1.56%</td>
<td>1.66%</td>
<td>1.35%</td>
<td>1.36%</td>
<td>1.40%</td>
<td>1.42%</td>
<td>1.45%</td>
<td>1.48%</td>
</tr>
<tr>
<td>Wholesale &amp; retail trade:</td>
<td>20.81%</td>
<td>19.87%</td>
<td>19.75%</td>
<td>20.38%</td>
<td>21.71%</td>
<td>21.95%</td>
<td>21.36%</td>
<td>21.09%</td>
<td>21.41%</td>
<td>21.96%</td>
<td>22.09%</td>
<td>22.24%</td>
<td>22.38%</td>
</tr>
<tr>
<td>Transport &amp; communication</td>
<td>8.71%</td>
<td>9.10%</td>
<td>9.67%</td>
<td>10.47%</td>
<td>10.97%</td>
<td>12.43%</td>
<td>14.03%</td>
<td>14.03%</td>
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<td>13.62%</td>
<td>13.40%</td>
<td>13.82%</td>
<td>14.27%</td>
</tr>
<tr>
<td>Finance and business services</td>
<td>33.39%</td>
<td>32.18%</td>
<td>31.31%</td>
<td>30.38%</td>
<td>28.42%</td>
<td>28.93%</td>
<td>28.41%</td>
<td>29.09%</td>
<td>29.79%</td>
<td>29.78%</td>
<td>30.92%</td>
<td>30.24%</td>
<td>29.56%</td>
</tr>
<tr>
<td>Community, social, other services</td>
<td>24.48%</td>
<td>26.85%</td>
<td>27.55%</td>
<td>27.52%</td>
<td>27.19%</td>
<td>25.54%</td>
<td>24.95%</td>
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<td>24.24%</td>
<td>23.93%</td>
<td>23.29%</td>
<td>23.48%</td>
<td>23.67%</td>
</tr>
</tbody>
</table>
Figure 19: Percentage contribution to GGP within the Polokwane local municipality in 2008 (Current prices)

**CONTRIBUTION TO GGP PER SECTOR IN 2008 (CURRENT PRICES)**

- Transport & communication: 12%
- Wholesale & retail trade; catering and accommodation: 20%
- Construction: 1%
- Electricity & water: 4%
- Manufacturing: 4%
- Agriculture, forestry and fishing: 1%
- Mining: 2%
- Community, social and other personal services: 28%
- Finance and business services: 30%

Source of data: Quantec’s Regional Dataset, 2008
### 3.3.3.2 LOCATION QUOTIENTS

Table 14: Location quotient in the Polokwane local municipality vs Limpopo province

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</thead>
<tbody>
<tr>
<td>Total</td>
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<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
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<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Agriculture, forestry &amp; fishing</td>
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<td>0.24</td>
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<td>0.26</td>
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</tr>
<tr>
<td>Mining</td>
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<td>0.06</td>
<td>0.07</td>
<td>0.07</td>
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<td>Manufacturing</td>
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<td>0.95</td>
<td>0.95</td>
<td>0.97</td>
<td>0.98</td>
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<td>1.05</td>
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<td>1.07</td>
<td>1.06</td>
<td>1.07</td>
<td>1.08</td>
<td>1.09</td>
</tr>
<tr>
<td>Electricity &amp; water</td>
<td>1.21</td>
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<td>1.13</td>
<td>1.14</td>
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<td>1.09</td>
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<td>1.04</td>
<td>1.03</td>
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<tr>
<td>Construction</td>
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<td>1.60</td>
<td>1.61</td>
<td>1.62</td>
<td>1.64</td>
</tr>
<tr>
<td>Transport &amp; communication</td>
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<td>1.24</td>
<td>1.27</td>
<td>1.27</td>
<td>1.29</td>
<td>1.37</td>
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<td>1.31</td>
<td>1.30</td>
<td>1.30</td>
<td>1.30</td>
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<tr>
<td>Finance &amp; business services</td>
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<td>1.72</td>
<td>1.75</td>
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<td>1.07</td>
<td>1.07</td>
<td>1.08</td>
</tr>
</tbody>
</table>

Table 13 above depicts the location quotient in 2006 for the Polokwane local municipality. The location quotient is an indication of the comparative advantage of an economy (or economic area). A provincial or magisterial economy has a location quotient larger (smaller) than one, or a comparative advantage (disadvantage) in a particular sector when the share of that sector in the provincial economy is greater (less) than the share of the same sector in the national economy. Table 13 above that the sectors with the largest comparative advantage (compared with the country as a whole) in the Polokwane local municipality are wholesale and trade (1.48), finance and business services (1.39) and electricity and water (1.38). When compared with the province (Table 2.10 below), the sectors with a sizable comparative advantage are finance and business services (1.89), wholesale and trade (1.64) and transport and communication (1.30).
Table 15: Location quotient in the Polokwane local municipality vs South Africa

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
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</tr>
</tbody>
</table>

(Source of data: Quantec’s Regional Dataset, 2008)

3.3.3.3 POVERTY AND INCOME PROFILE

The purpose of this section is to analyse key trends in the various poverty and income characteristics in the Polokwane local municipality. For this municipal area trends in the following will be analysed:

- Poverty rate (see Appendix C for definition)
- Per capita incomes (see Appendix C for definition)

A) POVERTY RATE

Poverty rates in the Capricorn district municipality varies greatly between racial groups. While there are virtually no poverty among White and Asian people, 3.6% and 5.7% respectively, 16.5% of Coloured people and 60.2% of black people were considered to be living in poverty in 2006. An estimated 55.7% of all South Africans in the Capricorn district municipality lived in poverty in 1996, a figure that rose to 58.5% by 2006.
In terms of poverty rates per main-place as defined by Quantec, tables 2.11 and 2.12 below indicate that the percentage of people in poverty increased from 1996 to 2001. According to table 15 it is clear that only 46.2% of Polokwane local municipality’s population were under the Minimum Living Level (MLL) in 1996. The main-places having the most people below the MLL were Molepo (68.5%), followed by Mojapelo (64.4%) and Maja (62.3%).

By 2001, 60.5% of the people in the Polokwane local municipality lived below the MLL of R 885 per month, an increase of 14.2%. The main-places experiencing the most dramatic increase in percentage of people living below the MLL were Turfloop (94.3%), Makgoba (84.8%) and Mankoeng (78.1%). It is interesting to note that Pietersburg Part 1 remained the main place with the lowest percentage of people below the MML by 2001.

(Source of data: Quantec’s Regional Dataset, 2008)
### Table 16: Percentage of people in the Polokwane Local Municipality living under the Minimum Living Levels (MLL) as defined by Quantec (1996)

<table>
<thead>
<tr>
<th>Poverty rate as indicated per main-place (1996)</th>
<th>Percentage of households living under the MML</th>
<th>None</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>38.6%</td>
<td>2,118</td>
<td>9,024,208</td>
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<tr>
<td>Limpopo</td>
<td>55.8%</td>
<td>1,109</td>
<td>900,864</td>
</tr>
<tr>
<td>Capricorn DM</td>
<td>54.3%</td>
<td>1,246</td>
<td>206,824</td>
</tr>
<tr>
<td>Polokwane LM</td>
<td>46.2%</td>
<td>1,710</td>
<td>84,566</td>
</tr>
<tr>
<td>Bjaladibja Dikolobe</td>
<td>52.4%</td>
<td>972</td>
<td>6,296</td>
</tr>
<tr>
<td>Dikgale</td>
<td>56.3%</td>
<td>958</td>
<td>7,544</td>
</tr>
<tr>
<td>Ditlo Machidi</td>
<td>55.4%</td>
<td>1,174</td>
<td>2,636</td>
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<tr>
<td>Ga-Mashashane</td>
<td>40.5%</td>
<td>701</td>
<td>349</td>
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<tr>
<td>Maja</td>
<td>62.3%</td>
<td>821</td>
<td>1,757</td>
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<tr>
<td>Magkoba</td>
<td>44.1%</td>
<td>97</td>
<td>46</td>
</tr>
<tr>
<td>Mankoeing</td>
<td>59.2%</td>
<td>813</td>
<td>6,238</td>
</tr>
<tr>
<td>Mankweng</td>
<td>27.1%</td>
<td>1,841</td>
<td>1,269</td>
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<tr>
<td>Mixed TA</td>
<td>57.3%</td>
<td>828</td>
<td>114</td>
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<tr>
<td>Mojapelo</td>
<td>64.4%</td>
<td>625</td>
<td>439</td>
</tr>
<tr>
<td>Molepo</td>
<td>68.5%</td>
<td>728</td>
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<tr>
<td>Moletej</td>
<td>55.1%</td>
<td>864</td>
<td>17,108</td>
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</tbody>
</table>

- **R1 - R200, monthly**: 607,133
- **R201 - R500, monthly**: 1,392,252
- **R501 - R1,000, monthly**: 1,141,996
- **R1,001 - R1,500, monthly**: 866,668
- **R1,501 - R2,000, monthly**: 809,611
- **R2,001 - R3,000, monthly**: 453,272
- **R3,001 - R4,000, monthly**: 344,138
- **R4,001 - R6,000, monthly**: 365,810
- **R6,001 - R8,000, monthly**: 252,547
- **R8,001 - R11,000, monthly**: 280,902
- **R11,001 - R16,000, monthly**: 165,235
- **R16,001 - R30,000, monthly**: 34,893
- **R30,001 or more, monthly**: 14,847
- **Unspecified**: 57

Note that the MLL was on R 650 per month in 1996.
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<th>Location</th>
<th>Percentage</th>
<th>Number of Houses</th>
<th>Number of Units</th>
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</tr>
</tbody>
</table>

(Source of data: Quantec’s Regional Dataset, 2008)
### Table 17: Percentage of people in the Polokwane local municipality living under the Minimum Living Levels (MLL) as defined by Quantec (2001) 11

| Per HH R | Total     | None    | R 1 - R 400, monthly | R401 - R600, monthly | R801 - R1600, monthly | R1 601 - R3200, monthly | R3 201 - R6400, monthly | R6 401 - R12800, monthly | R12 801 - R256000, monthly | R25 601 - R512000, monthly | R51 201 - R1024000, monthly | R102 401 - R2048000, monthly | R204 801 or more, monthly | Unspecified |
|----------|-----------|---------|-----------------------|-----------------------|------------------------|-------------------------|--------------------------|---------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------|
| South Africa | 52.8% | 3,916 | 11,778,959 | 2,731,418 | 982,544 | 2,095,055 | 1,911,224 | 1,553,800 | 1,062,127 | 748,137 | 435,926 | 156,851 | 43,664 | 29,800 | 16,202 | 12,209 |
| Limpopo   | 69.5% | 1,870 | 1,193,650 | 322,940 | 181,391 | 289,173 | 171,516 | 106,568 | 64,591 | 35,981 | 14,186 | 3,571 | 1,315 | 1,444 | 714 | 859 |
| Capricorn DM | 67.7% | 2,138 | 285,217 | 74,021 | 39,392 | 70,445 | 43,082 | 24,742 | 16,360 | 9,951 | 4,709 | 1,282 | 414 | 390 | 173 | 256 |
| Polokwane LM | 60.5% | 2,996 | 135,635 | 30,555 | 17,300 | 29,613 | 21,412 | 14,491 | 9,509 | 6,937 | 3,822 | 1,089 | 331 | 249 | 134 | 191 |
| Bjatladibja Dikolobe | 63.3% | 1,715 | 9,021 | 2,569 | 998 | 1,852 | 1,381 | 1,143 | 691 | 273 | 88 | 11 | 7 | 6 | 1 | 1 |
| Dikgale | 71.2% | 1,258 | 8,807 | 2,852 | 762 | 2,338 | 1,480 | 850 | 363 | 109 | 31 | 5 | 4 | 7 | 3 | - |
| Dintlo Machidi | 73.3% | 971 | 2,909 | 920 | 330 | 774 | 506 | 249 | 85 | 29 | 5 | 4 | - | 1 | 6 | - |
| Ga-Mashashane | 56.4% | 2,842 | 365 | 55 | 47 | 91 | 61 | 59 | 32 | 15 | - | - | - | 3 | 1 | - |
| Maja | 74.1% | 1,120 | 2,168 | 700 | 197 | 638 | 335 | 188 | 74 | 27 | 2 | 1 | 2 | 2 | - | - |
| Makgoba | 84.8% | 1,206 | 206 | 93 | 12 | 64 | 27 | 7 | 1 | - | - | - | 1 | - | - | - |
| Mankeng | 78.1% | 920 | 8,997 | 3,731 | 815 | 2,232 | 1,165 | 696 | 250 | 77 | 14 | 11 | - | 7 | - | - |
| Mankweng | 59.3% | 2,548 | 4,374 | 1,530 | 491 | 483 | 428 | 559 | 450 | 226 | 109 | 24 | 7 | 5 | 1 | 62 |
| Mixed TA | 0.0% | - | 1 | 1 | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Mopapelo | 75.4% | 907 | 505 | 191 | 46 | 128 | 83 | 38 | 14 | 6 | 1 | 1 | - | - | - | - |
| Molepo | 76.1% | 1,098 | 7,569 | 1,212 | 1,855 | 2,418 | 1,279 | 431 | 227 | 87 | 30 | 17 | 2 | 4 | - | 6 |
| Molejti | 66.8% | 1,385 | 22,791 | 5,184 | 3,174 | 5,863 | 4,678 | 2,538 | 914 | 306 | 64 | 34 | 3 | 22 | 9 | 2 |
| Moloto Solomon Kgabo | 72.7% | 1,177 | 217 | 69 | 26 | 53 | 46 | 12 | 6 | 3 | - | - | 1 | - | - | - |
| Mothiba | 62.3% | 1,944 | 3,451 | 943 | 320 | 747 | 651 | 472 | 198 | 83 | 18 | 8 | 3 | 1 | 6 | - |
| Pietersburg Part 1 | 35.0% | 9,540 | 20,961 | 2,787 | 1,390 | 2,763 | 1,882 | 1,835 | 2,706 | 3,559 | 2,692 | 826 | 238 | 132 | 89 | 63 |
| Polokwane | 58.6% | 3,097 | 9,353 | 444 | 1,540 | 3,102 | 1,840 | 901 | 618 | 523 | 240 | 66 | 27 | 21 | 8 | 24 |
| Seshgo Part 1 | 48.7% | 2,888 | 22,370 | 4,028 | 2,641 | 3,397 | 3,947 | 3,700 | 2,562 | 1,454 | 490 | 63 | 29 | 30 | 14 | 15 |

11 Note that the MLL was on R 885 per month in 2001
POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK 2010

<table>
<thead>
<tr>
<th>Area</th>
<th>Percentage</th>
<th>Households</th>
<th>Families</th>
<th>Total Persons</th>
<th>Residential Suites</th>
<th>Non-Residential Suites</th>
<th>Vacant Lands</th>
<th>Vacant Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thabamoopo</td>
<td>75.7%</td>
<td>1,104</td>
<td>1,274</td>
<td>492</td>
<td>113</td>
<td>310</td>
<td>82</td>
<td>33</td>
</tr>
<tr>
<td>Tholongwe</td>
<td>71.0%</td>
<td>1,177</td>
<td>6,426</td>
<td>1,713</td>
<td>833</td>
<td>1,763</td>
<td>1,195</td>
<td>614</td>
</tr>
<tr>
<td>Turfloop</td>
<td>94.3%</td>
<td>920</td>
<td>2,888</td>
<td>753</td>
<td>1,597</td>
<td>367</td>
<td>27</td>
<td>22</td>
</tr>
<tr>
<td>Pietersburg Part 2</td>
<td>68.5%</td>
<td>1,172</td>
<td>853</td>
<td>268</td>
<td>85</td>
<td>202</td>
<td>138</td>
<td>84</td>
</tr>
<tr>
<td>Seshego Part 2</td>
<td>64.9%</td>
<td>1,147</td>
<td>128</td>
<td>20</td>
<td>26</td>
<td>30</td>
<td>33</td>
<td>11</td>
</tr>
</tbody>
</table>

(Source of data: Quantec’s Regional Dataset, 2008)
3.3.3.4 PER CAPITA INCOME

In terms of income levels on main-place level, it is clear that the majority of the population in the Polokwane local municipality lives on less than R 1000 per month. Table 17 below indicates how many people earned a specific amount of money between two specified income brackets. Table 18 illustrates the same data, but indicates what percentage of the population in each sub-place falls within these brackets. In 1996, 268 062 people in the Polokwane local municipality did not earn any income, and 335 595 people earned less than R 1 000 per month. Since Moletji houses the largest amount of people, it is only logical that the bulk of the people in the Polokwane local municipality with an income of R 1 000 and less reside here (78 046). It is thus also not surprising that main-place with the largest percentage of people earning no income in 1996 was Moletji (81.02%).

In 2001 Moletji remains the main-place with the highest amount of people earning no income (76 496), with 99 926 of the people earning R 1 600 and less per month. Curiously Turfloop had the smallest percentage of people earning no income (29.95)% over the same period, followed by Polokwane (35.04%) and Pietersburg Part 1 (51.02%).
<table>
<thead>
<tr>
<th>Polokwane local municipality divided into main-places (1996)</th>
<th>Per Capita Income</th>
<th>Total</th>
<th>None</th>
<th>R1-R200 monthly</th>
<th>R201-R500 monthly</th>
<th>R501-R1 000 monthly</th>
<th>R1 001-R2 500 monthly</th>
<th>R2 501-R5 000 monthly</th>
<th>R5 001-R10 000 monthly</th>
<th>R10 001-R15 000 monthly</th>
<th>R15 001-R20 000 monthly</th>
<th>R20 001-R25 000 monthly</th>
<th>R25 001-R30 000 monthly</th>
<th>R30 001-R35 000 monthly</th>
<th>R35 001-R40 000 monthly</th>
<th>N/A Institution</th>
<th>Unspecified</th>
</tr>
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<td>23,644,36</td>
<td>1,077,84</td>
<td>3,343,26</td>
<td>1,986,92</td>
<td>5,702,95</td>
<td>1,387,65</td>
<td>399,39</td>
<td>525,67</td>
<td>484,52</td>
<td>251,54</td>
<td>170,25</td>
<td>101,43</td>
<td>61,30</td>
<td>24,39</td>
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<tr>
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<td>4,514,676</td>
<td>30,144,96</td>
<td>163,766</td>
<td>415,176</td>
<td>108,307</td>
<td>82,922</td>
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<td>44,496</td>
<td>26,519</td>
<td>29,302</td>
<td>8,523</td>
<td>5,142</td>
<td>2,934</td>
<td>1,837</td>
<td>840</td>
<td>69,510</td>
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<td>35,206</td>
<td>98,596</td>
<td>26,672</td>
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<td>15,800</td>
<td>11,080</td>
<td>6,839</td>
<td>6,982</td>
<td>2,417</td>
<td>1,497</td>
<td>843</td>
<td>543</td>
<td>252</td>
<td>24,717</td>
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<td>13,262</td>
<td>38,758</td>
<td>15,513</td>
<td>10,610</td>
<td>9,422</td>
<td>6,554</td>
<td>4,115</td>
<td>4,096</td>
<td>1,795</td>
<td>1,113</td>
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<td>177</td>
<td>12,441</td>
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<td>660</td>
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<tr>
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<td>294</td>
<td>75</td>
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<td>3</td>
<td>4</td>
<td>3</td>
<td>1</td>
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<td>-</td>
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<td>25,402</td>
<td>1,117</td>
<td>3,627</td>
<td>539</td>
<td>279</td>
<td>244</td>
<td>183</td>
<td>75</td>
<td>95</td>
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<td>14</td>
<td>13</td>
<td>9</td>
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<td>76</td>
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<td>3,583</td>
<td>1,992</td>
<td>1,139</td>
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<td>263</td>
<td>224</td>
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<td>10</td>
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<td>22</td>
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<td>6</td>
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<td>2</td>
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<td>1</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
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<td>7,741</td>
<td>1,071</td>
<td>1,462</td>
<td>740</td>
<td>351</td>
<td>233</td>
<td>117</td>
<td>43</td>
<td>21</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
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<td>37,285</td>
<td>11,867</td>
<td>537</td>
<td>1,882</td>
<td>1,154</td>
<td>1,421</td>
<td>2,324</td>
<td>2,155</td>
<td>1,814</td>
<td>1,821</td>
<td>1,173</td>
<td>781</td>
<td>424</td>
<td>235</td>
<td>108</td>
<td>4,810</td>
</tr>
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<td>688</td>
<td>349</td>
<td>430</td>
<td>306</td>
<td>224</td>
<td>288</td>
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<td>76</td>
<td>43</td>
<td>45</td>
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<td>693</td>
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<td>3,134</td>
<td>3,006</td>
<td>2,573</td>
<td>1,799</td>
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<td>115</td>
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<td>764</td>
<td>155</td>
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<td>17</td>
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<td>1</td>
<td>1</td>
<td>3</td>
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<td>1,788</td>
</tr>
</tbody>
</table>
### Table 19: Percentage of people per income bracket in the Polokwane local municipality (1996)

<table>
<thead>
<tr>
<th>Polokwane local municipality divided into main-places (1996)</th>
<th>Per Capita income</th>
<th>Total</th>
<th>None</th>
<th>R1-R200 monthly</th>
<th>R201-R500 monthly</th>
<th>R501-R1,000 monthly</th>
<th>R1,001-R1,500 monthly</th>
<th>R1,501-R2,500 monthly</th>
<th>R2,501-R3,500 monthly</th>
<th>R3,501-R4,500 monthly</th>
<th>R4,501-R6,000 monthly</th>
<th>R6,001-R8,000 monthly</th>
<th>R8,001-R11,000 monthly</th>
<th>R11,001-R16,000 monthly</th>
<th>R16,001-R30,000 monthly</th>
<th>R30,001 or more monthly</th>
<th>N/A: Institution</th>
<th>Unspecified</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>542</td>
<td>40,327,120</td>
<td>58.63</td>
<td>2.67%</td>
<td>8.29%</td>
<td>4.93%</td>
<td>4.22%</td>
<td>3.44%</td>
<td>1.98%</td>
<td>1.30%</td>
<td>1.20%</td>
<td>0.62%</td>
<td>0.42%</td>
<td>0.25%</td>
<td>0.15%</td>
<td>0.06%</td>
<td>1.90%</td>
<td>9.91%</td>
</tr>
<tr>
<td>Limpopo</td>
<td>245</td>
<td>4,514,676</td>
<td>66.78</td>
<td>3.63%</td>
<td>9.20%</td>
<td>2.40%</td>
<td>1.84%</td>
<td>1.57%</td>
<td>0.99%</td>
<td>0.59%</td>
<td>0.65%</td>
<td>0.19%</td>
<td>0.11%</td>
<td>0.06%</td>
<td>0.04%</td>
<td>0.02%</td>
<td>1.54%</td>
<td>10.40%</td>
</tr>
<tr>
<td>Capricorn DM</td>
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<td>1,055,016</td>
<td>67.66</td>
<td>3.34%</td>
<td>9.35%</td>
<td>2.53%</td>
<td>1.70%</td>
<td>1.50%</td>
<td>1.05%</td>
<td>0.65%</td>
<td>0.66%</td>
<td>0.23%</td>
<td>0.14%</td>
<td>0.08%</td>
<td>0.05%</td>
<td>0.02%</td>
<td>2.34%</td>
<td>8.70%</td>
</tr>
<tr>
<td>Polokwane LM</td>
<td>390</td>
<td>421,277</td>
<td>63.63</td>
<td>3.15%</td>
<td>9.20%</td>
<td>3.68%</td>
<td>2.52%</td>
<td>2.24%</td>
<td>1.56%</td>
<td>0.98%</td>
<td>0.97%</td>
<td>0.43%</td>
<td>0.26%</td>
<td>0.15%</td>
<td>0.10%</td>
<td>0.04%</td>
<td>2.95%</td>
<td>8.15%</td>
</tr>
<tr>
<td>Bjaladibja Dikolobe</td>
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<td>31,314</td>
<td>69.36</td>
<td>2.89%</td>
<td>8.44%</td>
<td>3.23%</td>
<td>2.58%</td>
<td>1.99%</td>
<td>1.27%</td>
<td>0.51%</td>
<td>0.33%</td>
<td>0.06%</td>
<td>0.03%</td>
<td>0.03%</td>
<td>0.04%</td>
<td>0.00%</td>
<td>0.88%</td>
<td>8.36%</td>
</tr>
<tr>
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<td>73.67</td>
<td>2.27%</td>
<td>10.37%</td>
<td>3.39%</td>
<td>1.68%</td>
<td>1.48%</td>
<td>0.61%</td>
<td>0.32%</td>
<td>0.22%</td>
<td>0.09%</td>
<td>0.04%</td>
<td>0.03%</td>
<td>0.02%</td>
<td>0.02%</td>
<td>0.00%</td>
<td>5.80%</td>
</tr>
<tr>
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<td>193</td>
<td>14,502</td>
<td>76.04</td>
<td>2.49%</td>
<td>11.14%</td>
<td>3.51%</td>
<td>1.29%</td>
<td>1.00%</td>
<td>0.61%</td>
<td>0.47%</td>
<td>0.38%</td>
<td>0.15%</td>
<td>0.12%</td>
<td>0.06%</td>
<td>0.01%</td>
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<td>7.05%</td>
<td>2.24%</td>
<td>1.87%</td>
<td>1.03%</td>
<td>0.15%</td>
<td>0.07%</td>
<td>0.04%</td>
<td>0.00%</td>
<td>0.04%</td>
<td>0.00%</td>
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<tr>
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<td>81.02</td>
<td>2.01%</td>
<td>10.16%</td>
<td>2.50%</td>
<td>1.36%</td>
<td>1.21%</td>
<td>0.53%</td>
<td>0.14%</td>
<td>0.09%</td>
<td>0.01%</td>
<td>0.04%</td>
<td>0.02%</td>
<td>0.02%</td>
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<td>0.00%</td>
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<td>235</td>
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<td>7.23%</td>
<td>0.85%</td>
<td>0.43%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
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<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>54.89%</td>
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(Source of data: Quantec’s Regional Dataset, 2008)
### POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK 2010

<table>
<thead>
<tr>
<th>Location</th>
<th>Population</th>
<th>Employment</th>
<th>Education</th>
<th>Health</th>
<th>Housing</th>
<th>Infrastructure</th>
<th>Safety</th>
<th>Environment</th>
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<tbody>
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<td>0.79%</td>
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</tr>
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<td>0.74%</td>
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<td>0.29%</td>
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<td>0.97%</td>
<td>0.32%</td>
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<td>Mothiba</td>
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<td>5.64%</td>
<td>2.68%</td>
<td>1.78%</td>
<td>0.89%</td>
<td>0.33%</td>
<td>0.16%</td>
</tr>
<tr>
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<td>1.44%</td>
<td>3.10%</td>
<td>3.81%</td>
<td>6.23%</td>
<td>5.78%</td>
<td>4.87%</td>
</tr>
<tr>
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<td>8.97%</td>
<td>14.19%</td>
<td>6.39%</td>
<td>3.24%</td>
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<td>2.84%</td>
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<td>5.74%</td>
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<td>4.71%</td>
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<td>0.16%</td>
<td>0.17%</td>
<td>0.05%</td>
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<td>2.53%</td>
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<td>0.35%</td>
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<tr>
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<td>1.14%</td>
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<td>0.00%</td>
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(Source of data: Quantec’s Regional Dataset, 2008)
## Table 20: Amount of people per income bracket in the Polokwane local municipality (2001)

<table>
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<tr>
<th>Polokwane local municipality divided into main-places (2001)</th>
<th>Per Capita</th>
<th>Total</th>
<th>None</th>
<th>R1 - R400 monthly</th>
<th>R401 - R800</th>
<th>R801 - R1600 monthly</th>
<th>R1601 - R3200 monthly</th>
<th>R3201 - R6400 monthly</th>
<th>R6401 - R12,000 monthly</th>
<th>R12,001 - R25,000 monthly</th>
<th>R25,001 - R51,000 monthly</th>
<th>R51,001 - R120,000 monthly</th>
<th>R120,001 - R240,000 monthly</th>
<th>R240,001 or more monthly</th>
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<td>44,819,751</td>
<td>30,568,022</td>
<td>2,583,664</td>
<td>4,353,742</td>
<td>2,414,698</td>
<td>2,071,079</td>
<td>1,509,044</td>
<td>811,558</td>
<td>310,889</td>
<td>106,399</td>
<td>44,128</td>
<td>34,511</td>
<td>12,017</td>
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<td>3,709,138</td>
<td>404,707</td>
<td>510,045</td>
<td>120,005</td>
<td>115,162</td>
<td>87,467</td>
<td>33,440</td>
<td>7,770</td>
<td>3,155</td>
<td>2,349</td>
<td>1,818</td>
<td>474</td>
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<td>124,962</td>
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<td>4,248</td>
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<td>314</td>
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<td>22</td>
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<td>7</td>
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</tr>
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<td>8,243</td>
<td>11,299</td>
<td>3,888</td>
<td>2,041</td>
<td>773</td>
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</tr>
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<td>1,605</td>
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<td>3,538</td>
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<td>346</td>
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<td>74</td>
<td>10</td>
<td>15</td>
<td>-</td>
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<td>-</td>
</tr>
</tbody>
</table>
Table 21: Percentage of people per income bracket in the Polokwane local municipality (2001) (Source of data: Quantec’s Regional Dataset, 2008)

<p>| Polokwane local municipality divided into main-places (2001) | Per Capita R | Total | None | R1 - R400 monthly | R401 - R800 monthly | R801 - R1600 monthly | R1601 - R3000 monthly | R3001 - R6000 monthly | R6001 - R12000 monthly | R12001 - R25000 monthly | R25001 - R50000 monthly | R50001 - R100000 monthly | R100001 - R200000 monthly | R200001 - R400000 monthly | R400001 - more monthly |
|------------------------------------------------------------|-------------|-------|------|------------------|--------------------|----------------------|-----------------------|------------------------|-----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| South Africa                                               | 1,066       | 44,819,751 | 68.20% | 5.76% | 9.71% | 5.39% | 4.62% | 3.37% | 1.81% | 0.69% | 0.24% | 0.10% | 0.08% | 0.03% |
| Limpopo                                                    | 480         | 4,995,530 | 74.25% | 8.10% | 10.21% | 2.40% | 2.31% | 1.75% | 0.67% | 0.16% | 0.06% | 0.05% | 0.04% | 0.01% |
| Capricorn DM                                               | 556         | 1,154,693 | 73.18% | 7.61% | 10.82% | 2.65% | 2.38% | 2.06% | 0.89% | 0.22% | 0.09% | 0.05% | 0.04% | 0.01% |
| Polokwane LM                                               | 859         | 508,276 | 69.06% | 7.52% | 10.53% | 4.01% | 3.54% | 3.04% | 1.54% | 0.43% | 0.16% | 0.09% | 0.06% | 0.02% |
| Bjatladiiba Dikolobe                                       | 405         | 38,472 | 75.42% | 6.55% | 9.37% | 2.90% | 3.08% | 2.05% | 0.50% | 0.05% | 0.01% | 0.05% | 0.02% | 0.00% |
| Dikale                                                     | 289         | 39,962 | 76.81% | 4.79% | 11.69% | 2.76% | 1.53% | 0.97% | 0.16% | 0.04% | 0.00% | 0.02% | 0.03% | 0.01% |
| Ditlou Machidi                                             | 193         | 13,347 | 77.50% | 7.34% | 10.29% | 2.60% | 1.54% | 0.55% | 0.11% | 0.06% | 0.00% | 0.00% | 0.00% | 0.00% |
| Ga-Mashashane                                              | 986         | 1,669 | 64.89% | 8.39% | 16.36% | 3.77% | 3.12% | 1.86% | 1.14% | 0.00% | 0.00% | 0.24% | 0.24% | 0.00% |
| Maja                                                       | 225         | 10,801 | 80.59% | 4.54% | 10.60% | 2.07% | 1.54% | 0.44% | 0.17% | 0.00% | 0.03% | 0.00% | 0.03% | 0.00% |
| Makgoba                                                    | 97          | 909    | 82.84% | 4.84% | 10.78% | 1.21% | 0.33% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Mankoolo                                                   | 238         | 37,997 | 80.87% | 4.64% | 9.75% | 2.22% | 1.62% | 0.67% | 0.12% | 0.03% | 0.04% | 0.01% | 0.02% | 0.00% |
| Mankweng                                                   | 835         | 11,595 | 67.79% | 6.61% | 8.25% | 3.54% | 6.40% | 4.84% | 1.94% | 0.58% | 0.00% | 0.06% | 0.00% | 0.00% |
| Mixed TA                                                   | -           | -      | -     | -     | -     | -     | -     | -     | -    | -     | -     | -     | -     | -     | -     |
| Mojaselo                                                   | 181         | 2,338 | 80.50% | 3.68% | 11.38% | 2.44% | 1.11% | 0.77% | 0.13% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Molepo                                                     | 279         | 32,706 | 71.35% | 12.34% | 12.99% | 1.26% | 0.96% | 0.74% | 0.20% | 0.05% | 0.07% | 0.02% | 0.02% | 0.00% |
| Moletji                                                    | 339         | 103,087 | 74.21% | 8.00% | 10.96% | 3.77% | 1.98% | 0.75% | 0.23% | 0.02% | 0.03% | 0.04% | 0.02% | 0.01% |
| Moloto Solomon Kgabo                                       | 177         | 1,020 | 76.47% | 6.08% | 13.33% | 1.96% | 1.76% | 0.39% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Mothiba                                                    | 387         | 15,277 | 74.09% | 7.00% | 10.51% | 4.06% | 2.31% | 1.32% | 0.62% | 0.02% | 0.03% | 0.03% | 0.00% | 0.02% |</p>
<table>
<thead>
<tr>
<th>Location</th>
<th>Population</th>
<th>Area (ha)</th>
<th>Urbanisation</th>
<th>Employment</th>
<th>Services</th>
<th>Industry</th>
<th>Agriculture</th>
<th>Retail</th>
<th>Leisure</th>
<th>Military</th>
<th>Energy</th>
<th>Communication</th>
<th>Housing</th>
<th>Transport</th>
<th>Tourism</th>
<th>Others</th>
<th>Other Public Services</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pietersburg Part 1</td>
<td>3,542</td>
<td>62,089</td>
<td>51.02%</td>
<td>4.27%</td>
<td>7.04%</td>
<td>5.52%</td>
<td>8.00%</td>
<td>11.73%</td>
<td>7.87%</td>
<td>2.78%</td>
<td>0.96%</td>
<td>0.43%</td>
<td>0.27%</td>
<td>0.11%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polokwane</td>
<td>1,835</td>
<td>20,355</td>
<td>35.04%</td>
<td>14.64%</td>
<td>20.32%</td>
<td>9.70%</td>
<td>8.82%</td>
<td>6.63%</td>
<td>3.45%</td>
<td>0.73%</td>
<td>0.32%</td>
<td>0.17%</td>
<td>0.10%</td>
<td>0.06%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seshgo Part 1</td>
<td>860</td>
<td>71,286</td>
<td>64.41%</td>
<td>7.24%</td>
<td>9.11%</td>
<td>6.71%</td>
<td>6.21%</td>
<td>4.36%</td>
<td>1.53%</td>
<td>0.22%</td>
<td>0.07%</td>
<td>0.11%</td>
<td>0.03%</td>
<td>0.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thabamooop</td>
<td>261</td>
<td>5,805</td>
<td>77.66%</td>
<td>6.94%</td>
<td>13.01%</td>
<td>1.36%</td>
<td>0.22%</td>
<td>0.62%</td>
<td>0.12%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.07%</td>
<td>0.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tholongwe</td>
<td>253</td>
<td>31,694</td>
<td>74.89%</td>
<td>9.34%</td>
<td>11.16%</td>
<td>2.56%</td>
<td>1.09%</td>
<td>0.62%</td>
<td>0.23%</td>
<td>0.03%</td>
<td>0.05%</td>
<td>0.00%</td>
<td>0.02%</td>
<td>0.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turfloop</td>
<td>1,266</td>
<td>3,185</td>
<td>29.95%</td>
<td>52.75%</td>
<td>11.11%</td>
<td>0.88%</td>
<td>0.57%</td>
<td>1.73%</td>
<td>2.35%</td>
<td>0.31%</td>
<td>0.00%</td>
<td>0.09%</td>
<td>0.00%</td>
<td>0.25%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pietersburg Part 2</td>
<td>274</td>
<td>2,846</td>
<td>78.44%</td>
<td>4.79%</td>
<td>10.45%</td>
<td>3.07%</td>
<td>1.86%</td>
<td>1.23%</td>
<td>0.15%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seshgo Part 2</td>
<td>319</td>
<td>550</td>
<td>71.09%</td>
<td>8.36%</td>
<td>12.55%</td>
<td>5.09%</td>
<td>1.09%</td>
<td>0.73%</td>
<td>1.09%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.3.3.5 CONCLUSIONS

From the information above, one can see that the Polokwane Local Municipality is a major contributor to the Capricorn district municipal economy. Unlike most other local municipalities in South Africa, the Polokwane Local Municipality is not plagued by high poverty rates, and this Local Municipality is the most affluent in the Capricorn district municipality. However, there are still considerable inequalities in the distribution of income between various population subgroups, and unemployment. As far as inequalities are concerned, the preceding discussion suggests that much of the overall inequality is still driven by inequalities between racial groups.
3.4 MOVEMENT AND LINKAGES

3.4.1 INTRODUCTION

Polokwane Municipality had to prepare an Integrated Transport Plan (ITP) for the Municipal area, as must every other Municipality, as determined in terms of section 27(1) of the National Land Transport Act (Act 5 of 2009). This ITP will serve as input into the Polokwane Integrated Development Plan (IDP), since it is a sector plan of the IDP. The ITP is informed by legislation e.g.; The White Paper on National Transport Policy, and the National Land Transport Transition Act, Act 22 of 2000, as well as various policy frameworks (National and Provincial) e.g. the Moving South Africa – status quo of the public transport system, Limpopo Province Land Transport Framework and the Municipal Structures Act (117/1998) – powers and functions of municipalities.

The Spatial Development Framework Plan is also included in the Integrated Development Plan as a sector plan. The current Spatial Development Framework Plan for Polokwane, 2007 identifies a number of transport corridors and functional development area, which form part of Strategic Development Areas. They are adopted in such a way that land use planning supports the interaction with economic opportunities on main arterial routes that crosses throughout the municipal area, without jeopardizing other development initiatives and land use management policies which apply within the municipal area.

Aspects pertaining to these Functional Development Areas and Development Corridors, within the context of the Spatial Development Framework, are captured in a Local Framework and/or land use policy plans of each of the areas. Certain studies and development plans have been approved as part of Land Development Objectives (e.g. Public Transport Integration Corridor (F1) – Pietersburg/Polokwane LDO’s). The following Development Corridors (DC’s) and Functional Development Areas (F’s) can be identified according to the analysis of existing information, namely:

- Development Corridor (DC) 1: The Pretoria/Gauteng - Pietersburg – Mankweng – Tzaneen Development Corridor (N1- south road/ R71 road)
- Development Corridor (DC) 2: The Burgersfort/Chuenespoort - Polokwane - Louis Trichardt Development Corridor (R33- N1 north road)
- Public Transport Integration Corridor F1: Due to the proposed re-alignment of N1 toll road bypass, it is necessary to revise a study conducted in 1999, namely the Development Plan for the Public Transport Integration Corridor alongside Nelson Mandela Drive.
- Southern Gateway Development Corridor (F2): This corridor (N1 South, along the western entrance to Polokwane City) is an excellent example of positive spin-offs from this kind of forward planning of a development corridor, in view of recent development. The continued consideration of appropriate land-uses is essential for the long-term sustainability of this corridor and also with a view to not jeopardising the other initiative in the SDF plan.
- Eastern Gateway Development Corridor (F3): The functional development area was previously called the Eastern Corridor or Private Transport Corridor, and involved the Thabo Mbeki and Grobler Streets one-way pair, stretching from Biccard Street to the Savannah Centre. The study conducted in July 1999, titled Eastern Corridor Development Plan and investigation to formulate policy on the Biccard Street Transitional Area, is being reviewed).

12 The Integrated Urban Realm and Movement Plan for Polokwane Municipality (IURMP) dated February 2009, was also examined for purpose of compiling the Spatial Development Framework Plan. The proposals in the IURMP were analysed, especially with regard to the transport precinct. However, the information in respect of movement patterns as contained in the IURMP is very detailed and focussed at specific flow patterns (pedestrian and public transport) within localized areas. The level of detail of the IURMP proposals is not applicable in the formulation of proposals for the Spatial Development Framework on a regional level. It is proposed that the finer detail of the IURMP be incorporated in the development of the “Polokwane Urban Development Plan".
POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK 2010

- Northern Gateway Development Corridor F4: The corridor starts at Landdros Maré Street extension on the northern border of the CBD and traverses the industrial area ( Extensions 3 and 12), running past the International Airport, and also includes part of Annedale.
- Outer Eastern Link (F5): This is a completely new development area and was proposed because of the amalgamation of the different TLC areas. It is part of the Tshwane / Gauteng – Polokwane – Mankweng – Tzaneen Development Corridor (DC1) which would play a major role in integrating the Polokwane and Mankweng clusters with one another. This integration should be regarded as a long-term vision. The development area starts where the Eastern Gateway Development Corridor (F4) ends. From this point it runs to the area in the vicinity of the Boyne and Ga-Mokwane villages, on the eastern border of the Polokwane Municipality Area.

It is evident that the Spatial Development Framework should acknowledge the Integrated Transport Plan (ITP), and make certain connections with the ITP, in order to ensure that a holistic approach is taken with regard to integrated development planning.

3.4.2 PURPOSE OF INTEGRATED TRANSPORT PLANNING

The purpose of the Integrated Transport Development Plan is to set development guidelines and priorities with regard to road and transport infrastructure development within the Municipal area. Current trends include the development of proper public transport facilities, integration of various transportation typologies into the public network system, and stimulation of economic development through integration of various nodal points by providing proper access to resources.

Polokwane Municipality has identified a number of general objectives in the ITP, which include:
- To improve access to District roads by re-gravelling 50 km by 2007
- To reach 50% of road users with safety awareness programmes per year
- To improve access to public transport to 55% of the population by 2007
- To manage the conservation and protection of the environment so as to ensure sustainable socio-economic development by 2007
- To ensure compliance with environmental legislation
- To improve accessibility to sports and recreational facilities by establishing sports grounds and renovating the existing arts, culture and community facilities.
- The PM should become attractive to investors from a transport point of view.
- The system should complement the 2010 Soccer World Cup.
- The system should leave a legacy for posterity.
- All facilities should be designed so that persons with disabilities could use them effectively.
- By-laws should be passed as soon as possible to ensure law and order
- Safety of passengers.
- Disability awareness programmes.
- Transport of learners.
- Ensuring mutual benefits for all role players in the Polokwane Municipality area.
- Providing safe, reliable and accessible transport.
- Stimulating job creation.
- Facilitating Black Economic Empowerment.

The aim of integrated transport planning and spatial planning is to identify existing resources and apply relevant measures and guidelines in order to promote access to resources and infrastructure to all spheres of the community in order to establish an integrated environment. Resources such as public transport facilities, road infrastructure, and ports of economic activity should be upgraded and made accessible to the benefit of the larger community in order to stimulate economic growth and economic development. Interaction between various nodal points (centres of economic activity) should be promoted in order to exchange knowledge and resources in order to promote local economic development and
small medium and macro enterprise development throughout the municipal area. Various principles are applied in order to promote transport integration in order to achieve the goals and objectives of Local Economic Development the spatial context. Some of the principles to be included in the Integrated Transport Plan (ITP) are that:

- The plans must pay due attention to the development of rural areas; transport for special categories of passengers must receive special attention;
- The development of the ITP must take cognisance of the fact that rail is currently a national competency until devolved in terms of section 28 of the Act, and subsidised bus services are a provincial competency until devolved to transport authorities in terms of section 10(13)(f) of the Act;
- The ITP must be synchronised with other planning initiatives and it must indicate how it is integrated into the municipal integrated development plans, the development objective process and the municipal budgeting process;
- The preparation of the ITP must include the consultation and participation of interested and affected parties required for the preparation of the IDP in terms of Chapter 4 and section 29(1)(b) of the Local Government: Municipal Systems Act, 2000 (Act No 32 of 2000).

### 3.4.2.1 CATEGORIES OF ROADS IN POLOKWANE AREA

The aim of the plan is to promote the development of an integrated transport road network.

The most prominent main arterial routes that transverse Polokwane City, are under the jurisdiction of the South African Roads Agency (SANRAL). The table hereunder represents the roads that are under the jurisdiction of SANRAL.

These roads forms the backbone of economic interaction between various towns and cities within Limpopo Province, nationally and also creates international links. Road transport has become the main form of transport of goods and services between different economic activity nodes. Products and services are transported by road to other ports of entry to the province (border posts) and airports.

### TABLE 22: VEHICLE DISTRIBUTION ALONG R101 BETWEEN POLOKWANE AND MOKOPANE

<table>
<thead>
<tr>
<th>Vehicle group</th>
<th>East</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDV</td>
<td>47.0%</td>
<td>45.5%</td>
</tr>
<tr>
<td>Rigid truck</td>
<td>7.5%</td>
<td>5.8%</td>
</tr>
<tr>
<td>4X2 Trucktractor combination</td>
<td>2.0%</td>
<td>2.7%</td>
</tr>
<tr>
<td>6X4 Trucktractor _ 5 axle</td>
<td>4.7%</td>
<td>7.4%</td>
</tr>
<tr>
<td>6X4 Trucktractor _ 6 axle</td>
<td>14.9%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Interlink or rigid and drawbar</td>
<td>29.2%</td>
<td>25.3%</td>
</tr>
<tr>
<td>Bus</td>
<td>0.7%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
TABLE 23: THE ROADS IN POLOKWANE MUNICIPAL AREA THAT ARE UNDER THE JURISDICTION OF SANRAL.

<table>
<thead>
<tr>
<th>Road Number</th>
<th>Description</th>
<th>Approximate length (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>From Pretoria to Polokwane</td>
<td>265</td>
</tr>
<tr>
<td>N1</td>
<td>From Polokwane to Beit Bridge</td>
<td>220</td>
</tr>
<tr>
<td>N1-Bypass</td>
<td>From the N1 south of Polokwane to the Mojadjieskloof Road (Road R81)</td>
<td>5</td>
</tr>
<tr>
<td>R101</td>
<td>From Pretoria to Polokwane</td>
<td>285</td>
</tr>
<tr>
<td>R521/S23</td>
<td>R521 from Polokwane to intersection with R523, north of Vivo, there from on R523 up to the intersection with N1 at Masekwaspoot</td>
<td>178</td>
</tr>
<tr>
<td>R81</td>
<td>R81 from Polokwane up to Giyane</td>
<td>149</td>
</tr>
<tr>
<td>R71</td>
<td>R71 from Polokwane up to Tzaneen</td>
<td>89</td>
</tr>
<tr>
<td>R37</td>
<td>R37 from Burgersfort at Mpumalanga border up to Polokwane</td>
<td>160</td>
</tr>
<tr>
<td>R567</td>
<td>Polokwane to N11 Gilead</td>
<td>69</td>
</tr>
</tbody>
</table>

(Road to be transferred to SANRAL)
The statistics with regard to commercial vehicle counts between Polokwane and other nodal points elsewhere in the Province are effected in the tables here under.

**TABLE 24: VEHICLE DISTRIBUTION ALONG N1 (SOUTH) BETWEEN POLOKWANE AND MOKOPANE**

<table>
<thead>
<tr>
<th>Vehicle group</th>
<th>East</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDV</td>
<td>30.0%</td>
<td>36.5%</td>
</tr>
<tr>
<td>Rigid truck</td>
<td>5.8%</td>
<td>6.0%</td>
</tr>
<tr>
<td>4X2 Trucktractor combination</td>
<td>6.2%</td>
<td>5.4%</td>
</tr>
<tr>
<td>6X4 Trucktractor _ 5 axle</td>
<td>3.7%</td>
<td>3.8%</td>
</tr>
<tr>
<td>6X4 Trucktractor _ 6 axle</td>
<td>16.1%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Interlink or rigid and drawbar</td>
<td>30.2%</td>
<td>26.6%</td>
</tr>
<tr>
<td>Bus</td>
<td>7.9%</td>
<td>8.9%</td>
</tr>
<tr>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**TABLE 25: VEHICLE DISTRIBUTION ALONG N1 (NORTH) BETWEEN POLOKWANE AND LOUIS TRICHARDT**

<table>
<thead>
<tr>
<th>Vehicle group</th>
<th>North</th>
<th>South</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDV</td>
<td>39.7%</td>
<td>41.0%</td>
</tr>
<tr>
<td>Rigid truck</td>
<td>4.6%</td>
<td>3.8%</td>
</tr>
<tr>
<td>4X2 Trucktractor combination</td>
<td>3.2%</td>
<td>3.1%</td>
</tr>
<tr>
<td>6X4 Trucktractor _ 5 axle</td>
<td>5.6%</td>
<td>3.1%</td>
</tr>
<tr>
<td>6X4 Trucktractor _ 6 axle</td>
<td>11.7%</td>
<td>12.0%</td>
</tr>
<tr>
<td>Interlink or rigid and drawbar</td>
<td>25.4%</td>
<td>23.0%</td>
</tr>
<tr>
<td>Bus</td>
<td>9.7%</td>
<td>13.9%</td>
</tr>
<tr>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**TABLE 26: VEHICLE DISTRIBUTION ALONG R81 BETWEEN POLOKWANE AND MOOKESTI**

<table>
<thead>
<tr>
<th>Vehicle group</th>
<th>East</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDV</td>
<td>43.0%</td>
<td>38.8%</td>
</tr>
<tr>
<td>Rigid truck</td>
<td>5.6%</td>
<td>5.1%</td>
</tr>
<tr>
<td>4X2 Trucktractor combination</td>
<td>3.2%</td>
<td>1.6%</td>
</tr>
<tr>
<td>6X4 Trucktractor _ 5 axle</td>
<td>5.4%</td>
<td>3.7%</td>
</tr>
<tr>
<td>6X4 Trucktractor _ 6 axle</td>
<td>9.9%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Interlink or rigid and drawbar</td>
<td>22.0%</td>
<td>27.3%</td>
</tr>
<tr>
<td>Bus</td>
<td>10.8%</td>
<td>11.1%</td>
</tr>
<tr>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

- From the above information it is evident that Light Delivery Vehicles are the most common use of transport of goods between Polokwane and...
POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK 2010

other nodal points/ commercial nodes elsewhere in the province, along
important provincial roads.
• Commodities (resources and agricultural produce) are mainly transported
with large interlink trucks between Polokwane to/ from Mokopane, Louis
Trichardt and Mooketsi.
• Bus transport is the 3rd largest volume of commercial vehicles that travel
between Louis Trichardt and Polokwane and between Polokwane and
Mooketsi.

Three different categories of roads are identified in the transport plan.

The first category of roads is the roads provided as part of the Central Business
Districts (CBDs) of the three respective commercial nodes in the Polokwane
Municipality. The CBD is the main commercial node, and also the main node
where passengers and vehicle movement are concentrated in the Polokwane
Local Municipal area. The respective commercial nodes of the Polokwane
Municipality are –

• Polokwane
• Seshego
• Mankweng

The second category of roads in terms of the provision of public transport is the
corridor routes that link the respective main commercial nodes with one another
as well as with the residential nodes, including villages. These roads fulfil an
important role in terms of the transfer of people, resources and skills between
nodal points within the municipal area, which contributes to stimulate economic
activity between various nodal points / points of activity within the municipal
area.

The main arterial roads between important nodal points (commercial nodes)
within the Polokwane Municipal area are mainly under the jurisdiction of Roads
Agency Limpopo (RAL), or the South African Roads Agency (Ltd) (SANRAL). Commercial vehicle distribution between nodal points (2006 statistics) within the municipal area is reflected in the table hereunder.

TABLE 27: VEHICLE DISTRIBUTION ALONG R71 BETWEEN
POLOKWANE VIA MANKWENG TO TZANEEN

<table>
<thead>
<tr>
<th>Vehicle group</th>
<th>East</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDV</td>
<td>54.9%</td>
<td>53.5%</td>
</tr>
<tr>
<td>Rigid truck</td>
<td>9.1%</td>
<td>5.7%</td>
</tr>
<tr>
<td>4X2 Trucktractor combination</td>
<td>1.8%</td>
<td>2.2%</td>
</tr>
<tr>
<td>6X4 Trucktractor _ 5 axle</td>
<td>4.2%</td>
<td>2.9%</td>
</tr>
<tr>
<td>6X4 Trucktractor _ 6 axle</td>
<td>5.5%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Interlink or rigid and drawbar</td>
<td>7.1%</td>
<td>9.4%</td>
</tr>
<tr>
<td>Bus</td>
<td>17.5%</td>
<td>21.3%</td>
</tr>
</tbody>
</table>

From the above information it is evident that the largest number of
commercial vehicles that travel between Polokwane and Mankweng, both
in a eastern and western direction, comprise of Light Delivery Vans/
Vehicles.
• Passenger busses are the second largest commercial vehicle group that
travel between Polokwane and Mankweng.

The graph hereunder provides a visual presentation of the main radial road
network (public transport routes) within the Polokwane Municipal area.
The third category of roads is the routes for private as well as public transport and related activities in the residential areas, including the villages. Currently there are only minimal public transport facilities to cater for all the above-mentioned public transport requirements. Based on these considerations it is clear that three areas should be developed as part of a future multi-modal integrated transport system:

- Main nodes in terms of commercial activities
- Major corridor routes

Transport routes in residential areas, including the villages.

ROADS UNDER THE JURISDICTION OF THE LIMPOPO ROADS AGENCY (RAL)

The map hereunder gives a visual presentation of the National-, Provincial and District road network system in the Polokwane Municipal Area.

The classification of the most important National, Provincial and District Roads in the Polokwane Municipality are reflected in the table hereunder.
### TABLE 28: CLASSIFICATION OF ROADS

<table>
<thead>
<tr>
<th>ROAD NUMBER / NAME</th>
<th>CLASSIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1 (N1/26-28)</td>
<td>National Road</td>
</tr>
<tr>
<td>P33-1 (Burgersfort Road)</td>
<td>National Road</td>
</tr>
<tr>
<td>PP17-1 (Tzaneen Road)</td>
<td>National Road</td>
</tr>
<tr>
<td>P43-1 (Modjadjiiskloof Road)</td>
<td>National Road</td>
</tr>
<tr>
<td>P94-1 (Dendron / Molemole Road)</td>
<td>National Road</td>
</tr>
<tr>
<td>D3390 (Giliad Road)</td>
<td>National Road</td>
</tr>
<tr>
<td>D19-1 (Matlala Road)</td>
<td>Provincial Road</td>
</tr>
<tr>
<td>D2629 (Nelson Mandela Drive)</td>
<td>Provincial Road</td>
</tr>
<tr>
<td>D453 (Soetdorings Road)</td>
<td>Provincial Road</td>
</tr>
<tr>
<td>D844 (Mankweng/ Sebayeng Road)</td>
<td>Provincial Road</td>
</tr>
<tr>
<td>D617 (Mankweng/ Houtbosdorp Road)</td>
<td>Provincial Road</td>
</tr>
<tr>
<td>D4000 (Ga Mothapo/ Boyne Road)</td>
<td>Provincial / District Road</td>
</tr>
<tr>
<td>D4028 / D4005 (Nobody/ Ga-Mothapo)</td>
<td>Provincial Road</td>
</tr>
<tr>
<td>D4018 / D4040 (Marapatelo/ Ga-Mothapo Road)</td>
<td>Provincial Road</td>
</tr>
<tr>
<td>D4018 (Tokgoaneng / Matobole Road)</td>
<td>Provincial Road</td>
</tr>
<tr>
<td>D3338/ 1481/ D977 (Dorpstreet Extension-Matobole)</td>
<td>Provincial Road</td>
</tr>
<tr>
<td>D1257 (Zebetiela / Tokgoaneng link)</td>
<td>Provincial Road</td>
</tr>
<tr>
<td>P18/2 (Kusche / Zebetiela Road)</td>
<td>Provincial Road</td>
</tr>
<tr>
<td>P1-6 (Polokwane / Mokopane Alternative)</td>
<td>Provincial Road</td>
</tr>
<tr>
<td>D544 (Percy Fyfe Road)</td>
<td>District Road</td>
</tr>
<tr>
<td>D2612 (Polokwane Drive)</td>
<td>District Road</td>
</tr>
<tr>
<td>P1-7 (Landdros Mare Extension to Soetdorings Road)</td>
<td>District Road</td>
</tr>
<tr>
<td>D1106 (Veldspaat Street from Railway to SAB)</td>
<td>District Road</td>
</tr>
<tr>
<td>D2226 (Onverwacht Road)</td>
<td>District Road</td>
</tr>
<tr>
<td>D3339/ D3985 (Nobody – Makotopong Road)</td>
<td>District Road</td>
</tr>
<tr>
<td>D3989 (Makotopong- Madige Road)</td>
<td>District Road</td>
</tr>
<tr>
<td>D1534 (Roodepoort Road)</td>
<td>District Road</td>
</tr>
</tbody>
</table>

The schematic diagram hereunder provides a visual presentation of the average traffic volume distribution on the main roads over a 24 hour period.

### FIGURE 23: AVERAGE TRAFFIC VOLUME DISTRIBUTION
The following information is presented in terms of the public transport facilities that are currently available in Polokwane: The facility surveys conducted indicated the following:

- The Polokwane Local Municipality has a total of 44 taxi facilities of which more than 86% are informal.
- There are two bus termini in the Polokwane Municipality (PM) with the main facility at the Polokwane Bus Terminal.
- The findings of the route surveys conducted were that there were 149 taxi routes in the Polokwane Local Municipality (PLM).
- Of the subsidised bus routes in the Capricorn District Municipality, 60% are in Polokwane Municipality (108).
- The main result obtained from the route utilisation analysis is that there is a vast oversupply of taxis on most routes in the PLM.
- No route utilisation survey was done for the bus services. The results of waiting-time surveys only make sense if they are examined for the individual routes. The information about waiting times should be considered from the point of view of seeing whether passengers are waiting for taxis or whether the vehicles are waiting for more passengers before they can depart.
- There were 195 buses in operation on the subsidised routes in the PM area.
- Metered-taxi activities were also observed in the PM area.

It is evident that most of the inhabitants of the Polokwane Municipal area make use of non-motorized means of transport, and secondly of public transport as means to travel between home, work and school. The table hereunder provides the information in respect of the percentage of people that make use of various forms of transport typologies. It is thus evident that it is important to develop public transport, and make it more accessible to a larger spectrum of the inhabitants of Polokwane Municipality.

**TABLE 29: MODE OF TRAVEL**

<table>
<thead>
<tr>
<th>Mode of Travel to School or Work</th>
<th>Population</th>
<th>% Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Transport (Bus, Taxi, Train etc.)</td>
<td>46,794</td>
<td>16.63%</td>
</tr>
<tr>
<td>Private Modes (Car, Motorcycle etc.)</td>
<td>42,451</td>
<td>15.09%</td>
</tr>
<tr>
<td>Non Motorized (Bicycle, Walking etc.)</td>
<td>192,084</td>
<td>68.28%</td>
</tr>
<tr>
<td>Total</td>
<td>281,329</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
3.4.3.1 MODAL INTEGRATION

Modal integration is defined as the integration of some or all of the different public transport modes (mainly the minibus-taxi, bus and train modes) into the public transport system. These modes should be integrated in a way that would allow them to operate as a seamlessly co-ordinated public transport system, while providing an effective, efficient and affordable service to the user. The integration of public transport modes with other modes, such as the private motorcar, bicycle, metered taxi, tourist services or walking are some of the transport typologies that need to be integrated with each other.

Generally, it is evident that there is a lack of public transport facilities in the area and the existing public transport facilities are in an extremely poor condition. There are currently two main modes of public transport in the Polokwane Municipal area, namely buses and taxis. Learners in the rural areas generally walk to reach a destination, and so do many of the people in the villages close to major commercial nodes.

The Polokwane Municipal area is geographically well served by bus and taxi routes but these public transport routes are not necessarily well managed and maintained. The existing socio-economic circumstances of the local people calls into question their ability to pay for transport, which is a far more important issue than the availability of public transport in the area.

Furthermore, public transport vehicles tend to be in poor condition, making them unsafe and unreliable to the general public. The lack of law enforcement means that a large percentage of public transport operators operate illegally without the required operating licences. The primary elements considered for the modal integration process include the following:

- Integrated network of routes
- Integrated schedules (timetables)
- Integrated transfer facilities
- Integrated ticketing
- Integrated tariff structures
- Integrated information systems.

Furthermore, it is important to ensure that other transport typologies be integrated in the holistic transportation network. Such integration could only be achieved if the modal integration strategy is supported by the following:

- Legislation (including provincial legislation and / or regulations or by-laws)
- Funding (including preference for providing financial assistance to modal integrated services and facilities, the involvement of the private sector and financial incentives)
- Proper planning processes at provincial as well as local government level (including the Public Transport Programme and planning guidelines)
- Institutional structures that are in place (including modal integration committees)
- The necessary implementation and monitoring (including pilot projects, a phased approach where preference is given to high-impact and low-cost projects)
- Regulation and control (including the formalisation of the taxi industry and the regulation of all modes of public transport, with suitable law enforcement)
- Consultation, marketing and training (including a marketing strategy and ensuring that all role players are suitably informed and supportive)
- Guidelines, norms and standards (including conforming with certain standards and provincial guidelines)
- The necessary implementation, monitoring and evaluation (including pilot projects, a phased approach where preference is given to high-impact and low-cost projects).

3.4.4 REGIONAL AND NATIONAL TRANSPORT INTEGRATION

Intermodal Transport (Container transport)

Polokwane has a container terminal, which is currently unutilised. The intermodal container terminal has the potential of being revived and utilized as an interface between road freight transport and railway transport.

Currently, most agricultural produce and mineral resources are transported via road freights.
Once railway transport has improved, the Polokwane intermodal container terminal can be utilised as distribution centre wherefrom agricultural produce can be distributed from.

**Railways**

Polokwane City is the conversion point of various railway lines. The main railway line from Gauteng to Zimbabwe, pass through Polokwane, via Morebeng to Musina. A secondary branch line from Mokopane to Musina, pass through Polokwane via Louis Trichardt. The map hereunder indicates the main railway line and branch lines within Limpopo Province.

![FIGURE 24: RAILWAY LINES IN LIMPOPO PROVINCE](image)

Railway transport is currently undeveloped, and disposes of the potential to serve as an alternative transport mode to road freight transport.

**Cross Border Transport**

Polokwane serves as a distribution centre/transition station for road freight transport. Cross border transport occur predominantly via road freight transport. The most important ports of entry/exist in Limpopo are Martins Drift (Groblerburg) to Botswana and Beit Bridge to Zimbabwe and the rest of Northern Africa. Freight is transported from the south western parts of the province, travel via the R37 (Burgersfort Road) and the R567 (Giliad Road) to the N11 towards Groblersburg/Botswana. The R37 and the R567 roads converge at Polokwane. Freight is transported to Zimbabwe and other parts of Northern Africa via the R521 (Dendron Road) and the N1 North towards Musina/Beit Bridge. The R521 and the N1 North converge at Polokwane.

It is thus evident that Polokwane, as the capital of Limpopo, plays an important role in terms of road freight distribution from Limpopo province to other parts of Africa.

**Airports**

Two airports are located in Polokwane. The municipal airport, which is mainly used by light aircraft operators, is located on the south eastern outskirts of Polokwane.

The Gateway International Airport is located approximately 4km north of Polokwane CBD. The airport is located on a 945ha portion of land, and is situated approximately 200km south/east of the Zimbabwe/Botswana borders. A Well developed sideline facility is developed at the terminal building, but is currently unutilized.

The airport was originally established to provide food logistics to the mining-, agricultural-, tourism- and forestry sectors. However, the airport is currently under developed.

The runways have been upgraded to accommodate large aircrafts, and it is intended that both runways be upgraded to a length of over 4000m each. Currently, the airport is mainly utilized for the export of agricultural produce, and as passenger terminals for domestic flights to and from Oliver Thambo International Airport at Johannesburg. SA Airlink operates between OR Thambo Airport and Gateway International Airport on a daily
During 2004, 20 428 domestic passengers passed through Gateway International Airport (GIA). Currently, no cargo facilities exist at GIA. However, 4 hanger-blocks of 540m² each exist, which could be converted into cargo facilities.

The table hereunder provides estimated figures for annual cargo transport throughput for a 20 year period, 2004 to 2024. At present, the actual throughput is much less than what was originally projected.

### Projected annual cargo throughput at Gateway International Airport

<table>
<thead>
<tr>
<th>Year</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonnage</td>
<td>-</td>
<td>7,254</td>
<td>12,627</td>
<td>15,045</td>
<td>16,254</td>
<td>17,463</td>
<td>18,000</td>
</tr>
</tbody>
</table>

Intended development at Gateway International Airport:

With the 2010 Tournament just around the corner, Limpopo and Polokwane have put in a massive effort to ensure that all is in place when the world makes its visit. Emphasis has been put on the upgrading of the Polokwane International Airport, known as the Gateway into Africa.

A state-of-the-art terminal building is approaching completion, improvements have been made to navigational services, and a facelift of all amenities will ensure that the Airport is recognized as a world class facility. Capable of handling 400 passengers an hour the new terminal will facilitate FIFA 2010 visitors quickly and efficiently.

The intended upgrade of the airport to meet international standards, will include the following amenities:

- Domestic terminals of 2000m²
- International terminals of 2000m²
- Covered and uncovered parking areas
- Health and wellness centre
- Trade Fair/ free zone
- Aviation academy block
- 3 X office complexes
- Hotel
- Commercial bank
- Maintenance centre
- Service centre
- Aero-commercial zone, and
- Aero light industrial zone

The airport disposes of the potential to become an interactive transport- and commercial node.

### 3.4.5 CONCLUSION

The following issues regarding integrated transport planning should be addressed in terms of the compilation of a spatial development framework, to ensure that spatial development would:

- Address the needs of persons with disabilities
- Put measures in place to promote public transport, and the incorporation of other forms of transport modes into the spatial development framework system, e.g. donkey carts, bicycles etc
- Address the needs of learners
- Encourage modal integration in order to stimulate and promote economic development.
- Introduce a fare system for public transport.

Transportation infrastructure forms the backbone for spatial integration. The radial road network system in the Polokwane Municipal area should be upgraded and further developed in order to promote and ensure sufficient integration of different hierarchies of settlements in order to promote social and economic interaction between various nodal points in the municipal area. Inhabitants of the municipal area should enjoy proper
and equal access to facilities and opportunities. Integration of people, economic activity and facilities/resources should be promoted through the development of a proper road and transport network.

3.5 INFRASTRUCTURE/ENGINEERING SERVICES

Engineering services will concentrate on the provision of water and sewage whilst social services are discussed with regard to the provision of health, education, safety and security and housing.

3.5.1 ENGINEERING SERVICES

3.5.1.1 WATER

To assist with water resource development Polokwane Local Municipality was divided into 15 water scheme areas. Surface water is transferred from outside the municipal boundaries to the Polokwane Municipal area through three water transfer water mains, namely Ebenezer, Dup Naude and Olifants – Sand transfer mains. The future demand from users on the Ebenezer pipeline route would require upgrading to meet the demand growth. Groundwater sources are the only source for the single distant rural communities but have, in general low potential. High production aquifers occur in the Polokwane/Seshego area as well as the Sebageng and Molepo areas. Due to the fact that major surface water scheme 5, provide water to these areas, the undeveloped groundwater constitutes an important reserve.

A) WATER RESOURCE PROFILE (SEE MAP 4A)

Surface water Source

I Dup Naude Dam

The Dup Naude Dam is located within the upper catchment of Broederstroom tributary of Groot Letaba River. This dam is owned by the Polokwane Municipality. Water from the dam is used for supply to urban Polokwane only. Compensation water is received in accordance with the Water Court Ruling. The storage capacity of the dam is 2.1M m³.
Pipeline: Raw water is conveyed over a distance of 60 km through a 572 and 419 mm OD steel pipeline to a 18 ML/day treatment works and a service reservoir located at Polokwane. The pipeline design flow is 18 ml/day.

II Ebenezer Dam Pipeline: Pietersburg Government RWS

This scheme is located within the dam supply of Broederstroom, Groot Letaba upper catchment area. This scheme is operated by Lepelle Northern Water and delivers water to Polokwane City (Pietersburg), Seshogo, Haenertsburg, Dalmada Plots, Mankweng and numerous villages in the Mankweng area. The storage capacity is 70 M m³. Water is also allocated for irrigation along the Groot Letaba River downstream of the dam and for Tzaneen. The initial allocation of the Pietersburg Government Regional Water Scheme was 18,53 M m³/a (50.8ml/day). Due to serve draught conditions the allowable abstincton from Ebenezer Dam was revised and fixed at 12 M m³/A(32,88Ml/day). Further only 30,9 ML/day is available as potable water consisting a current shortfall of 18 ML/day.

III Dams

Five medium size dams occur within the PLM area of which one, the Seshego dam, contributes to the water supply of Seshego ie. Augments the water supply of the major utilizing area from the Olifants – Sand. Aerial photo views together with the general features of these dams are as follows:

Polokwane City / Seshego Aquifers and Effluent Production:

Quaternary catchment A 71 A drains the upper sand and Bloed Rivers. These upper sub catchments conflue north of Polokwane City. It has the following groundwater characteristics:

- Low groundwater potential lithologies occur in the south of the quaternary
- The remainder has good groundwater potential and a number of well fields occur
in and around Polokwane City / Seshego.

- One potential well field has been identified south west of Seshego on the Bloed River.

- Artificial recharge of the Sand River North and Pelgrimshoop well fields occur respectively below the present Polokwane and Seshego sewerage treatment plants. These can be extended to a future well field along the Sand River below the future regional sewerage works. The artificial recharge need to be utilized in order to use the full underground storage potential.

All the groundwater quality is on acceptance class II except that of Seshego being an unacceptable class IV.

**Artificial Groundwater Recharge:**

Polokwane also has an elaborate groundwater abstraction infrastructure that has the ability to supply domestic water in times of surface water shortages and during period of peak demand. The reliability of this source is largely due to the infiltration of treated municipal waste water into Polokwane’s alluvial and gneissic aquifers.

Treated waste water is discharged into the ephemeral Sand River, which flows over a 20 m thick by 300m wide layer of alluvium. Underlying the alluvium are granite gneiss rocks that are weathered and fractured to depths of 60 m. The production boreholes penetrate this deeper, hard rock aquifer.

Water handled at Polokwane’s waste water treatment works, goes through primary and secondary treatment prior to retention for two to three weeks in a series of maturation ponds. The quality of the wastewater discharge is maintained within the national effluent quality standards.

About 67% of the water released from the waste water treatment works recharges the aquifer and the recycling process is made possible. When recycled after abstraction from the deep production boreholes, the water is treated and blended with surface water prior to the distribution into the supply network.

**Groundwater Sources:**

**Polokwane City Area**

The most significant factor in groundwater yield in this area, is the recharge of the Sand River North aquifer from treated sewerage effluent. The growing effluent volume constitutes a good water reserve which includes a possible future planned abstraction of 14 MI/day by the PPL Mine near Makopane.

**Sebayeng Area**

Sewage effluent from Mankweng is discharged into the Pou River which results in an artificial recharge of the aquifer at Sebayeng, estimated at present to be 1500 Kl/day with an expected growth to 2500 Kl/day by 2025.

**Remaining Rural Areas**

National groundwater occurrences contribute to rural supply in all the remaining areas.

**Sand and Blood River Upper**

Farming operations, particularly irrigation presently abstracts 4,95 M m³/a. None of this is available for municipal use.

**External sources:**

Water is also being purchased from Lepelle Northern Water Board with regard to Ebenezer (18530 volume). Oliphants / Sand (7600 volume) and Sephapudi (15 volume)

**Water returned to resources (MI/a)**
By way of sewage treatment plants, water is being released in Pou River (550 ML/a – 1,5 MI/day); Sand River North (8650 ML/a – 23,7 MI/day) and Pilgrimshoop (1750 ML/a). This effluent directly recharges good aquifers of between 31 – 68%.
However this water is abstracted from surcharges aquifers or sold to mines in the future. The rest is used downstream by farmers on the Sand River.
It is however proposed that all sewage effluent from all waste water treatment works at rural hospitals, should rather than being disposed of into surface water sources.
The Water Services Profile are being discussed in detail with regard to the settlement name that is being provided, the number of households, standpipes in operation, erf connections, water storage by way of a tank (kl) or Reservoir and EVN2006 Borehole production. An infrastructure inventory is also provided indicating the location with regard to the settlements (see Annexure E).

**Water Surface Water Infrastructure Profile:**

The following table provide a summary with regard to dams providing water in the Polokwane Local Municipal Area.
### TABLE 30: SURFACE WATER

<table>
<thead>
<tr>
<th>COMPACT NAME</th>
<th>SCHEME NAME</th>
<th>%_ALLOCATED FOR DOMESTIC CONSUMPTION</th>
<th>% OF DOMESTIC USED</th>
<th>PHYSICAL CONDITION</th>
<th>CURRENT OWNER</th>
<th>DATE CONSTRUCTED</th>
<th>EXPECTED LIFESPAN</th>
<th>CATCHMENT AREA (Km²)</th>
<th>FULL STORAGE SUPPLY CAPACITY</th>
<th>TYPE OF STRUCTURE</th>
<th>TOTAL ANNUAL YIELD (M³/A)</th>
<th>SPILLWAY CAPACITY (M³/SEC)</th>
<th>CAN THE DAM CAPACITY BE INCREASED</th>
<th>HOW MUCH CAPACITY IS STILL AVAILABLE FOR DEVELOPMENT (M³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dap Naude Dam</td>
<td>Polokwane City supply</td>
<td>100%</td>
<td>100%</td>
<td>Good</td>
<td>PLM</td>
<td>1958</td>
<td>100 years</td>
<td>14,2</td>
<td>15480000</td>
<td>Dam</td>
<td>3800000</td>
<td>67</td>
<td>No</td>
<td>0%</td>
</tr>
<tr>
<td>Molepe Dam</td>
<td>Molepo RWS</td>
<td>100%</td>
<td>20%</td>
<td>In operation</td>
<td>DWAF</td>
<td>1987</td>
<td>100 years</td>
<td>Unknown</td>
<td>4100000</td>
<td>Dam</td>
<td>2260000</td>
<td>Unknown</td>
<td>Yes</td>
<td>80%</td>
</tr>
<tr>
<td>Seshego Dam</td>
<td>Olifants-Sand RW</td>
<td>100%</td>
<td>68%</td>
<td>In operation</td>
<td>PLM</td>
<td>1960</td>
<td>100 years</td>
<td>Unknown</td>
<td>2400000</td>
<td>Dam</td>
<td>1100000</td>
<td>Unknown</td>
<td>No</td>
<td>0%</td>
</tr>
<tr>
<td>Chuenespoort Dam</td>
<td>Chuene Marja</td>
<td>100%</td>
<td>50%</td>
<td>In operation</td>
<td>DWAF</td>
<td>1971</td>
<td>100 years</td>
<td>191</td>
<td>3100000</td>
<td>Dam</td>
<td>1000000</td>
<td>Unknown</td>
<td>No</td>
<td>50%</td>
</tr>
<tr>
<td>Houtrivier Dam</td>
<td>Houtrivier RWS</td>
<td>100%</td>
<td>100%</td>
<td>Poor</td>
<td>DWAF</td>
<td>Unknown</td>
<td>100 years</td>
<td>144</td>
<td>2350000</td>
<td>Dam</td>
<td>600000</td>
<td>Unknown</td>
<td>No</td>
<td>0%</td>
</tr>
<tr>
<td>Turfloop Dam</td>
<td>Badimong RWS</td>
<td>0%</td>
<td>0%</td>
<td>-</td>
<td>DWAF</td>
<td>Unknown</td>
<td>100 years</td>
<td>3200000</td>
<td>3400000</td>
<td>Dam</td>
<td>3400000</td>
<td>Unknown</td>
<td>No</td>
<td>100%</td>
</tr>
</tbody>
</table>

Water schemes to be transferred:

The transfer of DWAF schemes to municipalities is currently a major issue facing municipalities in terms of water services. These schemes need to be transferred to the WSA’s within whose area of jurisdiction the schemes has major operation and maintenance implications for the local municipalities with regard to the planning process. 18 DWAF schemes are to be transferred in the Polokwane Local Municipality. See table below providing the scheme names.
<table>
<thead>
<tr>
<th>NAMES</th>
<th>SETTLEMENT TYPE</th>
<th>TRANSFERRING FROM</th>
<th>TRANSFERRING TO</th>
<th>PROPOSED DATE FOR TRANSFER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Badimong</td>
<td>Dense/Scattered/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Bergnek</td>
<td>Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Boyne</td>
<td>Scattered/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Chuene Maja</td>
<td>Dense/Scattered/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Groothoek</td>
<td>Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Houtriver</td>
<td>Dense/Scattered/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Laaste Hoop</td>
<td>Scattered/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Mankweng (rural)</td>
<td>Dense/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Molepo</td>
<td>Scattered/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Moletje East</td>
<td>Dense/Scattered/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Moletje North</td>
<td>Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Moletje South</td>
<td>Scattered/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
</tbody>
</table>

(See Map 16)

### 3.5.1.2 WATER BALANCE

A full water balance outside the urban areas is not possible as detailed information on bigger schemes in the rural areas need to be gathered and consolidated. The water use summary (KL/day) indicates to us whether there is a shortage of water or not: See table below providing a summary on the certain service areas:
### TABLE 32: WATER USE SUMMARY (KL/DAY) AND RATIONALIZATION: REVISED

<table>
<thead>
<tr>
<th>SERVICE AREA</th>
<th>SERVICE LEVEL</th>
<th>Normal / high</th>
<th>Standard /restricted</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1A Polokwane City Alt. A</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Demand</td>
<td>54,900</td>
<td>87,150</td>
<td>132,500</td>
</tr>
<tr>
<td>(b) Source</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Groundwater</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PPL – Not supplied</td>
<td>4,500</td>
<td>30,800</td>
<td>36,600</td>
</tr>
<tr>
<td>- PPL - Supplied</td>
<td>22,600</td>
<td>26,200</td>
<td>26,200</td>
</tr>
<tr>
<td>(ii) Ebenezer</td>
<td>5,000</td>
<td>12,000</td>
<td>12,000</td>
</tr>
<tr>
<td>(iii) Dap Naude</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-total (b)</td>
<td>35,700</td>
<td>69,000</td>
<td>74,800</td>
</tr>
<tr>
<td>(c) Balance (b – a)</td>
<td>-19,200</td>
<td>-18,150</td>
<td>-57,700</td>
</tr>
<tr>
<td><strong>1B Polokwane City Alt. B</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Demand</td>
<td>54,900</td>
<td>87,150</td>
<td>132,500</td>
</tr>
<tr>
<td>(e) Source</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iv) Groundwater</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PPL – Not supplied</td>
<td>4,500</td>
<td>16,800</td>
<td>22,600</td>
</tr>
<tr>
<td>- PPL - Supplied</td>
<td>26,200</td>
<td>26,200</td>
<td>16,200</td>
</tr>
<tr>
<td>(v) Ebenezer</td>
<td>5,000</td>
<td>12,000</td>
<td>12,000</td>
</tr>
<tr>
<td>(vi) Dap Naude</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-total (b)</td>
<td>35,700</td>
<td>55,000</td>
<td>60,800</td>
</tr>
<tr>
<td>(f) Balance (b – a)</td>
<td>-19,200</td>
<td>-32,150</td>
<td>-17,700</td>
</tr>
<tr>
<td><strong>2. Moletje East/North</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Demand</td>
<td>4,771</td>
<td>5,559</td>
<td>6,255</td>
</tr>
<tr>
<td>(b) Source</td>
<td>2,450</td>
<td>2,900</td>
<td>3,360</td>
</tr>
<tr>
<td>(c) Balance (b – a)</td>
<td>-2,321</td>
<td>-2,659</td>
<td>-2,895</td>
</tr>
<tr>
<td><strong>3. Chuene-Maja, Thokgwaneng/Molepo &amp; Laaste Hoop</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Demand</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

*Note: PPL = Protected Public Land*
With regard to sub scheme areas, the following are concluded:

**Chuene Marja RWS:**

- The assured Balance is 4.10 Ml/day.
- The conclusion is that Chuenespoort dam can service the command area for a design horizon 2025 and beyond.
- The scheme can be augmented from the Olifants – Sand Transfer Scheme.

- The Chuenespoort dam can serve as emergency augmentation to Lebowakgomo if failure from the Olifantspoort abstraction weir should occur.
- Should groundwater be properly developed a good reserve is possible beyond 2022.

### Table: POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK 2010

<table>
<thead>
<tr>
<th>Area</th>
<th>Sub Area</th>
<th>(b) Source</th>
<th>(c) Balance (b – a)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Polokwane Eastern</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1 Boyne/Segwasi</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Demand</td>
<td>1,720</td>
<td>1,360</td>
<td>-360</td>
</tr>
<tr>
<td>(b) Source</td>
<td>2,041</td>
<td>1,850</td>
<td>-441</td>
</tr>
<tr>
<td>(c) Balance (b – a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2 Badimong/Mankweng</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Demand</td>
<td>13,024</td>
<td>12,980</td>
<td>-44</td>
</tr>
<tr>
<td>(b) Source</td>
<td>15,457</td>
<td>15,500</td>
<td>43</td>
</tr>
<tr>
<td>(c) Balance (b – a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3 Sebayeng-Dikgatle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Demand</td>
<td>6,487</td>
<td>5,900</td>
<td>-587</td>
</tr>
<tr>
<td>(b) Source</td>
<td>8,429</td>
<td>8,550</td>
<td>121</td>
</tr>
<tr>
<td>(c) Balance (b – a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.4 Mothapo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Demand</td>
<td>3,111</td>
<td>3,100</td>
<td>-11</td>
</tr>
<tr>
<td>(b) Source</td>
<td>3,453</td>
<td>3,100</td>
<td>-353</td>
</tr>
<tr>
<td>(c) Balance (b – a)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Chuene Marja RWS:**

- The assured Balance is 4.10 Ml/day.
- The conclusion is that Chuenespoort dam can service the command area for a design horizon 2025 and beyond.
- The scheme can be augmented from the Olifants – Sand Transfer Scheme.

With regard to sub scheme areas, the following are concluded:

**Chuene Marja RWS:**

- The assured Balance is 4.10 Ml/day.
- The conclusion is that Chuenespoort dam can service the command area for a design horizon 2025 and beyond.
- The scheme can be augmented from the Olifants – Sand Transfer Scheme.

With regard to sub scheme areas, the following are concluded:

**Chuene Marja RWS:**

- The assured Balance is 4.10 Ml/day.
- The conclusion is that Chuenespoort dam can service the command area for a design horizon 2025 and beyond.
- The scheme can be augmented from the Olifants – Sand Transfer Scheme.
Polokwane City

Polokwane City /Seshego urban and the Perskebult semi-urban complexes are served from the following water sources:
Dap Naude Dam, Ebenezer Dam, Olifants – Sand, Seshego Dam as well as Sand River.
The conclusion is that:

- The extension of bulk supply system by (NW as the water services provider, should comply with the proposed growth in demands;
- The following bulk supply installations are to be upgraded:
  Dap Naude Pipeline, Krugerburg/Palmietfontein Bypass pipeline, Doornkraal Reservoir and the sewer system Perskebult.
- The Dalmada Water Co-operative presently receives water for the following small holdings:
  Myngenoegen, Geluk, Dalmada, Baskoppe, Palmietfontein as well as surrounding areas. The average abstraction is 450 Kl/day and a nominal growth is expected. Dalmada Water co-Operative indicated that their service area may be extended to include Palmietfontein plots south of Silicon as well as plots surrounding Dalmada and Tweefontein.
- Although Ramathlodi park has 1000 fully serviced erven, no allocation up to date took place. The abstraction of the Ebenezer Pipeline may increase from Nil to 1100Kl/day for the year 2025.
- Major township developments taken place but water and sanitation services provision lays far behind and a crisis situation may develop in the short term.

Molepo RWS

The assured water supply is 8,30ML/day. To conclude is that the Molepo Scheme has adequate sources beyond 2026 and the potential exists to export water to neighbouring schemes.

Laaste Hoop RWS

The present water demand from Ebenezer Pipeline is a “low” scenario. However for the year 2026, the water demand can change to a “high” scenario. The water supply situation is critical and in order to meet the growing demand, the following urgently needs attention:

- Extension of Ebenezer supply
- Groundwater development in identified target areas
- That the water supply infrastructure be properly maintained and managed
- That water consumption remains within the stipulated norms
- That cost recovery and subsidization of free water portion be properly managed.

Mankweng RWS

The present water demand scenario is between “low” and “high” without future reserve, and augmentation is therefore required.
For the water demand “high” scenario up to the year 2026 the extension of the Ebenezer supply (4620 KI/day) and groundwater development (500KI/day) should be implemented. Untapped groundwater reserve was estimated at an average of 800KI/day.
To conclude is that the water supply situation is critical due to urbanization.

Boyne RWS

The water demand is currently a “low” scenario. For the year 2026, it will change to a “high” scenario and the following process could be implemented:
Extension of Ebenezer supply to Makgaile, Subiacio, Magopeng and Magokubung to 250KI/day.
Groundwater development as an alternative as the untapped potential groundwater reserve was estimated at an average of 740KI/day.

Segwasi RWS

Presently the water demand is a “low” scenario up to the year 2010. However for the year 2026 it will change to a “high” scenario. If the extension of Ebenezer is increased to 110KI/day, the groundwater development is an alternative of 100KI/day, and the untapped groundwater reserve is at an average of 560KI/day – the water supply situation is then stable up to the year 2025.
Badimong RWS

Presently the water demand is a “low” scenario beyond 2012. Up to the year 2026, the water demand will then change to a “high” scenario. If the Extension of Ebenezer supply is increased to 1300KL/day, the groundwater development increased to 500KL/day, untapped groundwater reserves is at an average of 880KL/day, then the water supply situation is stable up to the year 2025.

Sebayeng–Dikgale RWS

The summer peak groundwater production is 5100KL/day. The untapped groundwater reserve was estimated at an average of 370KL/day. Past experience indicated that this reserve cannot readily be tapped in the area of low groundwater potential. (MP Mamabolo Sub Scheme area). Limited extensions of the groundwater development cannot be done at the Dikgale Sub Scheme area groundwater utilization can only be expected from existing boreholes in the Sebayeng aquifer. Augmentation of Ebenezer Pipeline is imminent and is estimated as a “high” scenario for the year 2026, serving Dikgala. However there is no existing connection to Ebenezer Pipeline and it remains impossible to serve Dikgale prior to MP Mamabolo’s connection to Ebenezer. The water supply situation for the year 2026 is only stable in the Sebayeng Sub Scheme but is critical for the other two sub schemes as shortages already occur.

Mothapo RWS

The water demand is a “low” scenario up to the year 2012, but will change to a “high” scenario for the year 2026. The extension of Ebenezer supply is to be increased to 400KL/day, the groundwater development reserve is as artificially recharge from the Mankweng Sewage Works, estimated by 1000 – 1500KL/day growing to 3000KL/day by the year 2026. The supply from relevant aquifers will have to be shared with Sebayeng and Dikgale areas. In general it can be stated that the water supply situation is stable up to the year 2025.

Moleteje East Regional GWS

The water demand is currently a “low” scenario but for only two years, thereafter it will change to a “high” scenario. If the extension of surface water from Seshego is increased to 600KL/day, the groundwater development is 1000KL/day and the untapped groundwater reserve is an average of 1500KL/day – then the water supply situation is stable for the year 2025.

Moleteje North Individual GWS

As the summer peak equivalent is 490KL/day and the total average equivalent @ SPF = 1,4 is 350KL/day, it indicates a “low” water demand scenario up to the year 2012. For the year 2026 it will change to a “high” scenario. It can be stated that the water supply situation is stable for the year 2025.

Moleteje South Individual GWS

Presently the water demand is a “low” scenario till the year 2012. The water demand will change to a “high” scenario up to the year 2026, and the groundwater development could be extended to 550KL/day. If the untapped groundwater reserve is estimated at an average of 3250KL/day, then it can be concluded that the water supply situation is stable beyond the year 2025.

Houtrivier RWS (Moleteje Central)

The assured water supply is estimated at 2750KL/day and it is to be concluded that the scheme is in balance to the year 2025, but water sources need to be developed after the year 2025.

3.5.1.3 SUMMARY

To conclude:

- Urbanization in the “rural areas” surrounding Polokwane /Seshego and Mankweng have a major impact on future water balances;
- The utilization of groundwater into the bulk supply and distribution systems is necessary. Some areas such as Moleteje may only rely solely on groundwater.
• The groundwater reservoirs at Polokwane City and Mankweng are ideally located for the ready utilization of sewage effluent as water resource.
• With the exception of the Polokwane City area, Seshego and Mankweng as well as Sebayeng Township, most of the settlement do not have adequate access to potable drinking water and sanitary facilities. The levels of services in those areas are either in terms of the RDP standards or below.
• The water supply to Polokwane is provided from Ebenezer and Dap Naude Dams (Letaba), a number of small dams (Molepo, Chuene, Houtrivier and Seshego) groundwater in natural, groundwater aquifers at Polokwane City /Seshego and Mankweng recharged from treated sewage effluent and lastly Olifants Rivier.
• The current abstraction allocation at Olifantspoort need to be extended
• Other sources in the Olifantspoort South Service areas need to sought
• The service area of Mogalakwena needs to be rationalized or reduced.
• The medium to long term provision of treated sewage effluent from Polokwane City Complex to the PPL Mine need to be reduced
• Re-allocation of water such as reduction of irrigation along Olifant Rivier / Letaba Rivier.
• No significant change in the requirements of water is foreseen with respect to the rural parts, which corresponds to the expectations of low population growth and lack of economic stimulants.
• The water resources which occur within the water management area are nearly fully developed, with all the available water being highly utilized. Limited options for further resource development exists which is attributable to the arid climate, un-favorable topography, sandy rivers as well as important conservation areas
• Whereas the resources and requirements are approximately in balance at present, implementation of the reserve is expected to result in serious deficits in some of the main river catchments in the water management area.
• Planning has been done for large new mining developments in the Mokopane-Mogoto area, for which additional water will be required
• Urban and industrial growth will mainly be concentrated in the Polokwane area where local water resources already are in short supply and need to be augmented by transfers from other water management areas.
• The Olifants River Water Resource Development Program comprising raising of the flag Boshielo Dam and New De Hoop Dam that would ensure long term water availability, albeit at costs for water much higher than the present.

### 3.5.1.2 SEWERAGE

#### TABLE 33: POLOKWANE, SESHEGO SEWAGE WORKS

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>POTENTIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005</td>
</tr>
<tr>
<td>Sand river north wellfield</td>
<td></td>
</tr>
<tr>
<td>- Sewage effluent production</td>
<td></td>
</tr>
<tr>
<td>- Polokwane City</td>
<td>23.7</td>
</tr>
<tr>
<td>- Seshego</td>
<td>4.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>28.5</td>
</tr>
</tbody>
</table>

**Mankweng Sewage Works:**

**LEVEL OF SERVICE**
Mankweng Sewage Works serving UNIN and Mankweng ABC & D

- Design capacity (WWF) 10 000 k/day
- Effluent production
- Present (2006) : 45% of water use in service area. 2 300 kl/day

The outflow is presently discharged in the Pouriver and therefore feeds the aquifer between Sebayeng and Makotopong (the water is being used by the Badimong Cluster). This constitutes a present potential groundwater recharge of between 1000 – 1500kl/day. Future provision of reticulated sewage systems at Ga Thoka and Ga Makanye, bordering Mankweng, would increase the effluence by 50%.
The existing sanitation infrastructure is being divided into "Level of Service", and % of households that is being serviced.

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Households (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIP toilets – other dry sanitation toilets</td>
<td>8700 (7%)</td>
</tr>
<tr>
<td>Septic tanks – Bulk sewer</td>
<td>31800 (32%)</td>
</tr>
<tr>
<td>New wastewater treatment works to be upgraded</td>
<td>2</td>
</tr>
<tr>
<td>Infrastructure for de-sludging and pit emptying</td>
<td>unknown</td>
</tr>
</tbody>
</table>

Six existing sewage treatment works were developed and a summary in table 34 below as follows:
<table>
<thead>
<tr>
<th>Component name</th>
<th>STW1</th>
<th>STW2</th>
<th>STW3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seshego STP</td>
<td>Mankweng STP</td>
<td>Polokwane STP</td>
<td></td>
</tr>
<tr>
<td>Component ID</td>
<td>Pasveer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scheme name</td>
<td>Olifants/Sand RWS</td>
<td>Mangweng RWS</td>
<td>Olifants/Sand RWS</td>
</tr>
<tr>
<td>Institutional status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current owner</td>
<td>DWAF</td>
<td>DWAF</td>
<td></td>
</tr>
<tr>
<td>Current operator</td>
<td>Polokwane LM</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Future owner/WSA(If applicable)</td>
<td>Polokwane LM</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Future operator/WSP (If applicable)</td>
<td>Polokwane LM</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Date constructed</td>
<td></td>
<td></td>
<td>1978</td>
</tr>
<tr>
<td>Expected total lifespan</td>
<td>100 years</td>
<td>100 years/ponds 5 years</td>
<td>25 years</td>
</tr>
<tr>
<td>Estimated replacement value</td>
<td>R50 000 000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual operating cost</td>
<td>R 3 000 000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual maintenance cost</td>
<td>R100 000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type (process) &amp; capacity</td>
<td>Bio-filter</td>
<td>Bio-filter</td>
<td>Activated sludge</td>
</tr>
<tr>
<td>Design capacity – Hydraulic load (ML/day)</td>
<td>11.7 ML/d</td>
<td>8 ML/d</td>
<td>19400 kl/d</td>
</tr>
<tr>
<td>How much capacity is still available for development? (%)</td>
<td>40%</td>
<td>50%</td>
<td>0%</td>
</tr>
<tr>
<td>Design capacity – Organic load (COD kg/day)</td>
<td>7200</td>
<td>5600</td>
<td>8627</td>
</tr>
<tr>
<td>How much capacity is still available for development? (%)</td>
<td>40%</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Inlet meter (type)</td>
<td>Mobrey Ultrasonic Open Channel</td>
<td>Mobrey Ultrasonic Open Channel (not working)</td>
<td></td>
</tr>
<tr>
<td>Operation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total volume of water received and treated per year (ML)</strong></td>
<td>2 555 000</td>
<td>?</td>
<td>6 665 892</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>----------</td>
<td>---</td>
<td>-----------</td>
</tr>
<tr>
<td><strong>Operating hours per day</strong></td>
<td>24</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td><strong>Discharge into (description of source)</strong></td>
<td>Blood river</td>
<td>Ponds</td>
<td></td>
</tr>
<tr>
<td><strong>Discharge volume (ML/annum)</strong></td>
<td>2 555 000</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Volume of effluent recycled (ML/annum)</strong></td>
<td>0</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Applications of recycled effluent (i.e irrigation, mining, etc)</strong></td>
<td>N/A</td>
<td>Irrigation</td>
<td></td>
</tr>
<tr>
<td><strong>Effluent control (by whom)</strong></td>
<td>Polokwane LM</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td><strong>Permitted effluent (ML/annum)</strong></td>
<td>No permit</td>
<td>No permit</td>
<td></td>
</tr>
<tr>
<td><strong>Solid waste disposal (m²/annum)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sludge produced (m²/annum)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>How often is water quality monitored? (daily weekly, monthly, annual, never)</strong></td>
<td>Weekly</td>
<td>Weekly</td>
<td></td>
</tr>
<tr>
<td><strong>What laboratory is used?</strong></td>
<td>Polokwane LM</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td><strong>% Of the time that effluent is chlorinated</strong></td>
<td>95%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td><strong>Functionality</strong></td>
<td>Good</td>
<td>Average</td>
<td></td>
</tr>
<tr>
<td><strong>Describe the physical condition (in operation, poor, good)</strong></td>
<td>Good</td>
<td>Average</td>
<td></td>
</tr>
<tr>
<td><strong>How well is the infrastructure maintained? (none, infrequent, demand, planned)</strong></td>
<td>Demand &amp; planned</td>
<td>Demand</td>
<td></td>
</tr>
<tr>
<td><strong>Are spare parts readily available (Yes/No)</strong></td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td><strong>Number of breakages / failure per year</strong></td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td><strong>What needs to be refurbished? (cost)</strong></td>
<td>R200 000</td>
<td>R1 000 000</td>
<td></td>
</tr>
<tr>
<td><strong>What needs to be replaced? (cost)</strong></td>
<td>R35 000</td>
<td>R1 000 000</td>
<td></td>
</tr>
</tbody>
</table>
Certain schemes are also to be transferred from DWAF to PLM. Following is a list with regard to these schemes. Note that no schemes have been transferred.

**TABLE 35: SCHEMES TO BE TRANSFERRED**

<table>
<thead>
<tr>
<th>NAMES</th>
<th>SETTLEMENT TYPE</th>
<th>TRANSFERRING FROM</th>
<th>TRANSFERRING TO</th>
<th>PROPOSED DATE FOR TRANSFER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Badimong</td>
<td>Dense/Scattered/ Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Bergnek</td>
<td>Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Boyne</td>
<td>Scattered/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Chuene Maja</td>
<td>Dense/Scattered/ Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Groothoek</td>
<td>Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Houtriver</td>
<td>Dense/Scattered/ Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Laaste Hoop</td>
<td>Scattered/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Mankweng (rural)</td>
<td>Dense/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Molepo</td>
<td>Scattered/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Moletje East</td>
<td>Dense/Scattered/ Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Moltje North</td>
<td>Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Moletje South</td>
<td>Scattered/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Mothapo</td>
<td>Dense/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Olifants-Sand(Rural)</td>
<td>Dense/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Dikgale Sub</td>
<td>Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Sebayeng Sub</td>
<td>Dense/Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>MP Mamabolo</td>
<td>Scattered / Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
<tr>
<td>Segwasi</td>
<td>Dense/Scattered/ Villages</td>
<td>DWAF</td>
<td>Polokwane LM</td>
<td></td>
</tr>
</tbody>
</table>
Future bulk sanitation infrastructure

With regard to the process of dealing with sanitation infrastructure, the organic loads need to be dealt with as well as the flows. The treatment works capacity needs to be measured and reference needs to be made regarding the arrangements made for pit/tank emptying and treatment of sludge removed from pits or septic tanks.

**TABLE 36: SANITATION INFRASTRUCTURE**

<table>
<thead>
<tr>
<th>TYPE OF SCHEME</th>
<th>COMPONENT</th>
<th>SHORT DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polokwane City / Seshego</td>
<td>Sewage Treatment Main Sewer</td>
<td>Upgrading</td>
</tr>
<tr>
<td>Polokwane City / Seshego</td>
<td>Sewage Works</td>
<td>New</td>
</tr>
<tr>
<td>Regional Sewage Works</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mankweng / Sebayeng</td>
<td>General</td>
<td>Upgrading</td>
</tr>
</tbody>
</table>

Residential Consumer Units of Sanitation

According to the historical data it is clear that 36% of the population is being serviced by way of waterborne VIP and chemical system which is above the RDP standards. 64% of the population is below the RDP standard which is being served by way of pit latrines bucket and no services are provided.
# TABLE 37: POPULATION USED

<table>
<thead>
<tr>
<th>DWAF PLANNING POPULATION 2005</th>
<th>ATTRIBUTES</th>
<th>DATA SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSA 2001</td>
<td>No of households (%)</td>
<td>DWAF REF FRAMEWORK (08/2005)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IDP 2005/06 EX (UNIN BASELINE STUDY 2003)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Molep/Maja/Chene cluster</td>
</tr>
<tr>
<td>Rural 402 503 urban 151 480 Farming 125 852 Total 566 835</td>
<td>RDP + Waterborne VIP &amp; Chemical RDP – Pit latrines Bucket None</td>
<td>RDP</td>
</tr>
<tr>
<td>Indigent pop: SSA 2001(%) 69%</td>
<td>40%</td>
<td>36%</td>
</tr>
<tr>
<td></td>
<td>9 949</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>57 228</td>
<td>46%</td>
</tr>
<tr>
<td></td>
<td>1 055</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>16 807</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>124 977</td>
<td>100%</td>
</tr>
</tbody>
</table>
Further according to the backlog estimated by DWAF for July 2008, the following:

### TABLE 38: SANITATION BACKLOG

<table>
<thead>
<tr>
<th>BACKLOG</th>
<th>HOUSEHOLDS</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>None (no facilities)</td>
<td>17 178</td>
<td></td>
</tr>
<tr>
<td>Pit below RDP standards</td>
<td>40 081</td>
<td></td>
</tr>
<tr>
<td>Basic (RDP standard but not appropriate)</td>
<td>2 625</td>
<td></td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>59 884</strong></td>
<td><strong>53</strong></td>
</tr>
<tr>
<td>Backlog related to housing</td>
<td>6 503</td>
<td>6</td>
</tr>
<tr>
<td>Adequate (VIP, waterborne)</td>
<td>46 863</td>
<td>41</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>113 250</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Grey Water Management

As 50 formal arrangements exists, the management will become problematic in densely populated areas where waterborne systems have not been established such as the urban fringes of Polokwane City, Seshego and Mankweng.

Pit emptying and sludge disposal

As no formal arrangements exists, this aspect will in future become relevant as septic tank and small bore waterborne sewage systems come into place especially in densely populated urban fringes where full waterborne sewage systems have not been established.

Types of sanitation technology options:

All options are considered but references are:
- Full waterborne where adequate water supply occurs
- Septic tanks where soak away is possible
- Small borne waterborne system with storage tank
- VIP systems provided geotechnical conditions are suitable and where population concentration is low.

For 2012 sanitation basic target:

The target was revised and depends on the availability of funds. DWAF estimated in July 2008 that, to address the backlog, will cost R250m (excluding the housing solution). In order to achieve this, the present 2008 allocation of R40m must be increased for 4 years in order to attain zero backlogs for 2012.

To conclude:
- Full waterborne sanitation only exists in urbanized areas in Polokwane City, Seshego and Mankweng.
- In rural areas affluent residents have constructed septic tank systems. The latter is estimated at less than 2% of the sites.
- A plan needs to be drawn up to extend full sanitation services to densely populated areas, particularly at urban fringes.
- Dense rural villages need to have waterborne sanitation whilst the other areas need to remain on basic sanitation and dry systems mainly due to the shortage of water supply.

### 3.6 SOCIAL SERVICE

#### 3.6.1 SOCIAL HEALTH

With regard to the health facilities in the Polokwane Local Municipality area, it can be indicated as follows:

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td>3</td>
</tr>
<tr>
<td>Public clinics</td>
<td>29</td>
</tr>
</tbody>
</table>

All the communities have access to health infrastructure such as public clinic and hospitals. The nearest government hospital or clinic to most of the household or clinic to most of the households is situated within 0 – 8 km.
Access to health services: PLM
Total number of communities: 170

<table>
<thead>
<tr>
<th>Total no of clinics</th>
<th>29</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communities with access</td>
<td>133</td>
</tr>
<tr>
<td>Within 5 km of clinic</td>
<td>80%</td>
</tr>
<tr>
<td>Total no of health centres</td>
<td>0</td>
</tr>
<tr>
<td>Communities with access</td>
<td>167</td>
</tr>
<tr>
<td>Within 10 km from health centres</td>
<td>100%</td>
</tr>
<tr>
<td>Total no of hospitals</td>
<td>4</td>
</tr>
<tr>
<td>Communities with access</td>
<td>153</td>
</tr>
<tr>
<td>Within 20 km of hospital</td>
<td>92%</td>
</tr>
</tbody>
</table>

To conclude, people in the rural areas travel long distances to access clinic facilities. Twenty nine clinics are located within the municipal area of which one clinic is administrated by the council, whilst the rest is administrated by the provincial government. A need was identified for at least one more clinic in the Moletje area A5. In some areas the nearest hospital and clinic is 20 km and 5 km respectively. In addition a ratio of one clinic to 20 000 people, is below the Limpopo Province average of one clinic to 13400 people. Mobile clinics visit rural areas once every two weeks.

A list indicating the locality of the health facilities are as follows:

**TABLE 39: HEALTH PROFILE**

<table>
<thead>
<tr>
<th>MED NAME</th>
<th>TYPE</th>
<th>XCOORD</th>
<th>YCOORD</th>
<th>WATER SOURCE</th>
<th>SANITATION SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spitskop Clinic</td>
<td>Clinic</td>
<td>29.87444</td>
<td>-23.88833</td>
<td>Rain water tank</td>
<td>Pit latrine</td>
</tr>
<tr>
<td>Matamanyana Clinic</td>
<td>Clinic</td>
<td>29.34658</td>
<td>-23.66635</td>
<td>None</td>
<td>Pit latrine</td>
</tr>
<tr>
<td>Semenya Clinic</td>
<td>Clinic</td>
<td>29.40672</td>
<td>-23.69681</td>
<td>None</td>
<td>none</td>
</tr>
<tr>
<td>Maja Clinic</td>
<td>Clinic</td>
<td>29.53692</td>
<td>-24.18281</td>
<td>Borehole</td>
<td>Pit latrine</td>
</tr>
<tr>
<td>Makotopong Clinic</td>
<td>Clinic</td>
<td>29.64375</td>
<td>-2381811</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Mamushi Clinic</td>
<td>Clinic</td>
<td>29.69547</td>
<td>-24.05961</td>
<td>Borehole</td>
<td>Piped</td>
</tr>
<tr>
<td>Mankweng Clinic</td>
<td>Clinic</td>
<td>29.72625</td>
<td>-23.88158</td>
<td>Piped water</td>
<td>Piped</td>
</tr>
<tr>
<td>Mothiba Clinic</td>
<td>Clinic</td>
<td>29.63583</td>
<td>-23.85806</td>
<td>Piped water</td>
<td>Pit latrine</td>
</tr>
<tr>
<td>Perskebult Clinic</td>
<td>Clinic</td>
<td>29.35833</td>
<td>-23.80111</td>
<td>Borehole</td>
<td>Piped</td>
</tr>
<tr>
<td>Phuti Clinic</td>
<td>Clinic</td>
<td>29.70694</td>
<td>-23.95586</td>
<td>Piped water</td>
<td>Piped</td>
</tr>
<tr>
<td>Sebayeng Clinic</td>
<td>Clinic</td>
<td>29.69433</td>
<td>-23.77683</td>
<td>Piped water</td>
<td>Pit latrine</td>
</tr>
<tr>
<td>Sehlale Clinic</td>
<td>Clinic</td>
<td>29.80628</td>
<td>-23.99836</td>
<td>Borehole</td>
<td>Pit latrine</td>
</tr>
<tr>
<td>Seoabi Dikgale Clinic</td>
<td>Clinic</td>
<td>29.75083</td>
<td>-23.80139</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Seshego I Clinic</td>
<td>Clinic</td>
<td>29.38942</td>
<td>-23.85997</td>
<td>Piped water</td>
<td>Piped</td>
</tr>
<tr>
<td>Seshego II Clinic</td>
<td>Clinic</td>
<td>29.39128</td>
<td>-23.84617</td>
<td>Piped water</td>
<td>Piped</td>
</tr>
<tr>
<td>Seshego III Clinic</td>
<td>Clinic</td>
<td>29.38614</td>
<td>-23.84131</td>
<td>Piped water</td>
<td>Piped</td>
</tr>
<tr>
<td>Chuene Clinic</td>
<td>Clinic</td>
<td>29.49444</td>
<td>-24.20861</td>
<td>Piped water</td>
<td>Pit latrine</td>
</tr>
<tr>
<td>Seshego Mobile</td>
<td>Mobile</td>
<td></td>
<td></td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Soefontein Clinic</td>
<td>Clinic</td>
<td>29.59781</td>
<td>-24.08694</td>
<td>Borehole</td>
<td>Pit latrine</td>
</tr>
<tr>
<td>Dikgale Clinic</td>
<td>Clinic</td>
<td>29.78536</td>
<td>-23.72064</td>
<td>Piped water</td>
<td>Pit latrine</td>
</tr>
<tr>
<td>Persie Clinic</td>
<td>Clinic</td>
<td>29.44193</td>
<td>-23.90238</td>
<td>Piped water</td>
<td>Septic tank</td>
</tr>
<tr>
<td>Buite</td>
<td>Clinic</td>
<td>29.46306</td>
<td>-23.89111</td>
<td>Piped water</td>
<td>Septic tank</td>
</tr>
<tr>
<td>Diaz</td>
<td>Clinic</td>
<td>29.79861</td>
<td>-23.94722</td>
<td>Piped water</td>
<td>Septic tank</td>
</tr>
</tbody>
</table>
**POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK 2010**

<table>
<thead>
<tr>
<th>Clinic</th>
<th>Cluster</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Source of Water</th>
<th>Sanitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makanye</td>
<td></td>
<td>29.72392</td>
<td>-23.89819</td>
<td>Piped water</td>
<td>Septic tank</td>
</tr>
<tr>
<td>Mamabolo A</td>
<td></td>
<td>29.82042</td>
<td>-23.87953</td>
<td>Piped water</td>
<td>Septic tank</td>
</tr>
<tr>
<td>Mamabolo J</td>
<td></td>
<td>29.79961</td>
<td>-23.80583</td>
<td>Piped water</td>
<td>Septic tank</td>
</tr>
<tr>
<td>Mamotshwa</td>
<td></td>
<td>29.80589</td>
<td>-23.852</td>
<td>Own borehole</td>
<td>VIP</td>
</tr>
<tr>
<td>Mankgale</td>
<td></td>
<td>29.78578</td>
<td>-23.98867</td>
<td>Tanker</td>
<td>Septic tank</td>
</tr>
<tr>
<td>Molepo</td>
<td></td>
<td>29.73333</td>
<td>-24.03608</td>
<td>Tanker</td>
<td>Septic tank</td>
</tr>
<tr>
<td>Nobody</td>
<td></td>
<td>29.66753</td>
<td>-23.89003</td>
<td>Own borehole</td>
<td>VIP</td>
</tr>
<tr>
<td>Pietersburg LA</td>
<td></td>
<td>29.46528</td>
<td>-23.85833</td>
<td>Piped water</td>
<td>Waterborne</td>
</tr>
<tr>
<td>Moletje HC</td>
<td>Health</td>
<td>29.30247</td>
<td>-23.73747</td>
<td>Own borehole</td>
<td>VIP</td>
</tr>
<tr>
<td>Mankwe</td>
<td>Hospital</td>
<td>29.725</td>
<td>-23.87944</td>
<td>Own</td>
<td>Waterborne</td>
</tr>
<tr>
<td>Pietersburg</td>
<td>Hospital</td>
<td>29.46028</td>
<td>-23.89472</td>
<td>Own</td>
<td>Public</td>
</tr>
<tr>
<td>Seshego</td>
<td>Hospital</td>
<td>29.39583</td>
<td>-23.85667</td>
<td>Piped water</td>
<td>Public</td>
</tr>
<tr>
<td>St Joseph</td>
<td>Hospital</td>
<td>29.21444</td>
<td>-23.85778</td>
<td>Piped water</td>
<td></td>
</tr>
</tbody>
</table>

Table 40: Educational Facilities PLM

<table>
<thead>
<tr>
<th>Type of Facility</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary schools</td>
<td>189</td>
</tr>
<tr>
<td>No of learners</td>
<td>84 000</td>
</tr>
<tr>
<td>No of classrooms</td>
<td>2169</td>
</tr>
<tr>
<td>No of educators</td>
<td>2 339</td>
</tr>
<tr>
<td>Secondary schools</td>
<td>107</td>
</tr>
<tr>
<td>No of learners</td>
<td>52 997</td>
</tr>
<tr>
<td>No of educators</td>
<td>1 855</td>
</tr>
<tr>
<td>Combined schools</td>
<td>13</td>
</tr>
<tr>
<td>No of learners</td>
<td>5 926</td>
</tr>
<tr>
<td>No of educators</td>
<td>259</td>
</tr>
<tr>
<td>Other schools</td>
<td>1</td>
</tr>
<tr>
<td>No of learners</td>
<td>0</td>
</tr>
<tr>
<td>No of educators</td>
<td>0</td>
</tr>
</tbody>
</table>

The Polokwane Local Municipality has an advanced educational infrastructure and specialized educational institutions such as the University of the North and two Colleges.

Safety and Security:

The following safety and security facilities are located within the PLM area.

Table 41: Safety and Security

<table>
<thead>
<tr>
<th>Type of Facility</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police Station</td>
<td>3</td>
</tr>
<tr>
<td>Mobile Centre</td>
<td>2</td>
</tr>
<tr>
<td>Trauma Centre</td>
<td>2</td>
</tr>
<tr>
<td>Victim Support Centre</td>
<td>2</td>
</tr>
<tr>
<td>Magistrates Court</td>
<td>3</td>
</tr>
<tr>
<td>Regional Prison</td>
<td>1</td>
</tr>
</tbody>
</table>

A need was identified to restructure the security services of the council for a more effective service. The Local Municipality has entered into discussions with security pertaining to the feasibility of establishing municipal police and municipal court.

A recent socio-economic survey indicated that the majority of the residents are located further than a 15 minute walking distance from any police stations and this need to be addressed as quickly as possible.

Map 5 indicates the locality of all the health services with regard to Polokwane and its rural areas.

### 3.6.2 Education

There are educational facilities in all the clusters. Approximately 87.1% of the income groups indicated that they have access to a public primary school within walking distance from home.
3.6.3 HOUSING

Overview:

Polokwane Municipality is located within the Capricorn District in the Limpopo Province and is one of five municipalities in this area. It covers a surface area of 3775 km² and accounts for 3% of the province’s total surface area of 124 000 km².

Polokwane Local Municipality is 23% urbanized and 71% still rural. The remaining 6% comprises of small holdings, institutional, industrial and recreational land.

It holds an estimated population of 561 770 an increase of 53 500 people since 2001 (1,7% growth p.a).

Polokwane is strategically located to be the administrative and economic capital of the Limpopo Province. It is situated at the cross roads of important national and provincial roads which radiate out into the hinterland providing good access and is in close proximity to the neighbouring countries of Botswana, Zimbabwe, Mozambique and Swaziland.

The municipal spatial pattern reflects that of a historic apartheid city model characterised by segregated settlement. At the centre of the area is the Polokwane economic hub, which comprises the CBD, industrial area, range of social services and well established formal urban areas.

Situated on the outskirts is several clusters that are less formal settlement areas which are experiencing enormous influx from rural urban migration trends. These areas are in dire need of upgraded services and infrastructure and are struggling to cope with the informal influx of more and more people.

The main clusters are:

Seshego – City Cluster

This cluster is located west of the CBD and railway line. It is the nearest to the economic core of all the settlement areas and thus has the best access to the formal economy of Polokwane.

Mankweng / Dikgale / Sebayeng cluster

This cluster is located 10km to the east of the city. It constitutes a large area and is mixed formal and rural. It accommodates the University of the North and is a long established settlement area.

Maja / Chuene Cluster

This cluster is located 20 km to the south and comprises an rural settlement area, with purely rural village limited services and infrastructure. The settlement area consists on the fringe of the rural hinterland and is hence surrounded by a vast clustering of rural/semi-rural areas.

Moletje Cluster

Is a purely rural cluster and comprising of Moletje settlements that is scattered into the periphery with limited to no services and infrastructure.

Critical housing related issues:

The housing challenges facing Polokwane Municipality can be summarized as follows:

- Rapid urban growth and the uneconomical utilization of land resulting from 450m² individual erven with 40m² residential units on these. The resultant residential yield per hectare of land developed is way too low, which leads to excessive urban sprawl. The municipality needs to introduce higher density RDP typologies like row housing and 2 and 3 storey walk-ups to increase the residential yield on developable land.

- Land ownership in the traditional authority areas like Mankweng is problematic as there is virtually no state owned land on which launch Bigger Project Linked RDP projects to effectively deal with the housing backlog in these areas. Even the portions or state owned land which exist in these areas are occupied by Traditional Authorities which then allocate this land to the community. This matter requires urgent attention from the Department of Local Government and Housing.

- Growing informal settlement households (internal and external growth).

- Land invasion
• Hostel redevelopment.
• Informal dwelling/backyard shacks.
• Unoccupied/missing beneficiaries
• Social housing/Rental housing is produced at a very low rate and the capacity of the PHA is still below what it should be.
• Illegal occupation of completed low-cost houses.
• Scarcity of land for low-income housing development

To complete its current contractual obligation in terms of its present projects.

To achieve the overall sustainability PHA by having 2000 units under management.

To achieve development sustainability by acquiring land and property for development.

To achieve financial sustainability by securing subsidies and development finance for viable projects which would include supplying appropriate housing products and standards and entering into medium and long term agreements with government and private sector institutions.

To achieve institutional sustainability by having documented agreements with the principle shareholder: the Polokwane Municipality and the Province. It also requires a governance, recruitment and retention strategy.

To achieve its development mandates by working with and co-operation with social housing and urban development organizations.

To make land available for the low middle income group

The following “blocked projects” need to be re-activated and completed
TABLE 42: BLOCKED HOUSING PROJECTS

<table>
<thead>
<tr>
<th>ITEM NO</th>
<th>TYPE OF PROJECT</th>
<th>VILLAGE</th>
<th>ORIGINAL CONTRACTOR</th>
<th>CONTRACT NO</th>
<th>FINANCIAL YEAR</th>
<th>UNITS ORIGINALY PLANNED</th>
<th>HOUSES COMPLETED</th>
<th>OUTSTANDING UNITS</th>
<th>COMMENTS/INTERVENTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Upgrading (urban)</td>
<td>Seshgo Proper</td>
<td>HDS</td>
<td>N94010008</td>
<td>1994/1995</td>
<td>2378</td>
<td>1158</td>
<td>1220</td>
<td>In progress (addressing 500 units this financial year 2008/2009)</td>
</tr>
<tr>
<td>2</td>
<td>Upgrading (urban)</td>
<td>Seshgo 9c,9g,9i</td>
<td>HDS</td>
<td>N94010009</td>
<td>1994/1995</td>
<td>800</td>
<td>0</td>
<td>800</td>
<td>Prioritised for 2009/10 financial year</td>
</tr>
<tr>
<td>3</td>
<td>Upgrading (urban)</td>
<td>Seshgo 9a,9f,9h</td>
<td>HDS</td>
<td>N95010006</td>
<td>1996/1997</td>
<td>1500</td>
<td>0</td>
<td>1500</td>
<td>Prioritised for 2009/10 financial year</td>
</tr>
<tr>
<td>4</td>
<td>Upgrading (urban)</td>
<td>Mankweng Unit F</td>
<td>HDS</td>
<td>N00030001</td>
<td>1994/1995</td>
<td>500</td>
<td>0</td>
<td>500</td>
<td>In progress</td>
</tr>
<tr>
<td>5</td>
<td>Upgrading (urban)</td>
<td>Mankweng Unit E</td>
<td>Selamo</td>
<td>N02120001</td>
<td>1999/2000</td>
<td>600</td>
<td>40</td>
<td>560</td>
<td>Prioritised for 2009/10 financial year</td>
</tr>
<tr>
<td>6</td>
<td>Upgrading (urban)</td>
<td>Mankweng Unit D</td>
<td>HJC</td>
<td>N97110006</td>
<td>1996/1997</td>
<td>586</td>
<td>0</td>
<td>586</td>
<td>Prioritised for 2009/10 financial year</td>
</tr>
<tr>
<td>8</td>
<td>Project linked (rural)</td>
<td>Mabitsela</td>
<td>VBL</td>
<td>N95010006</td>
<td>1995/1996</td>
<td>325</td>
<td>185</td>
<td>140</td>
<td>Prioritised for 2009/10 financial year</td>
</tr>
<tr>
<td>10</td>
<td>Project linked (rural)</td>
<td>Sengatane</td>
<td>VBL</td>
<td>N94010002</td>
<td>1995/1996</td>
<td>243</td>
<td>242</td>
<td>1</td>
<td>Project to be closed at 242 units</td>
</tr>
<tr>
<td>13</td>
<td>Project linked (rural)</td>
<td>Bergneck</td>
<td>FMS</td>
<td>N01090008</td>
<td>1999/2000</td>
<td>761</td>
<td>311</td>
<td>450</td>
<td>Prioritised for 2009/10 financial year</td>
</tr>
<tr>
<td>14</td>
<td>Project linked (rural)</td>
<td>Makgofe</td>
<td>Matome Maponya</td>
<td>N02030002</td>
<td>2002/2003</td>
<td>250</td>
<td>201</td>
<td>49</td>
<td>Prioritised for 2009/10 financial year</td>
</tr>
<tr>
<td>15</td>
<td>Individual (rural)</td>
<td>Seshgo</td>
<td>Molokys</td>
<td>N02020001</td>
<td>2002/2003</td>
<td>24</td>
<td>18</td>
<td>6</td>
<td>Project to be closed at 18 units</td>
</tr>
<tr>
<td>16</td>
<td>Rural</td>
<td>Rampheila</td>
<td>Try Developers</td>
<td>N02060008</td>
<td>2002/2003</td>
<td>300</td>
<td>299</td>
<td>1</td>
<td>Project to be closed at 299 units</td>
</tr>
</tbody>
</table>

TOTAL POLOKWANE: 10882 3870 7012

Estimated housing backlog:

The housing problem in Polokwane is not confined to Seshgo and surrounding areas only. The rapidly growing area of Mankweng is another area where the need for housing development has reached crisis proportions.
The housing backlog is summarised as follows:

**TABLE 43: HOUSING BACKLOG**

<table>
<thead>
<tr>
<th>No</th>
<th>SETTLEMENT NAME</th>
<th>NUMBER AND TYPE OF HOUSING UNITS</th>
<th>Cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>*Informal  Backyard  Hostel  Waiting list  Blocked Projects</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Seshgo City</td>
<td>22693</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sebayeng/Mankweng</td>
<td>2331</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Rural</td>
<td>5555</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>New Pietersburg (Diteneng) Section C/D</td>
<td>4500</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Seshgo Zone B (Lepakeng)</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Seshgo Zone E</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Seshgo Zone F</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Seshgo Zone F (Mohlakaneng)</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Pietersburg X 44 (Greenside) in process</td>
<td>509</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Pietersburg X 32 (Rainbowpark) In process</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Mankweng (Between Unit E and F)</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Mankweng Unit G</td>
<td>500</td>
<td></td>
</tr>
</tbody>
</table>

Subtotal Seshgo City Cluster: 675

Maja/Chuene Cluster

Subtotal Maja / Chuene Cluster: 640

Mankweng/Dikgale/Sebayeng Cluster

Subtotal Mankweng/Dikgale/Sebayeng Cluster: 2053

Moletje Cluster

Subtotal Moletje Cluster: 306

TOTAL: 6959 0 0 30579 3674
POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK 2010

- Informal structures add up to ± 6959 units – all of which are located in the Seshego City Cluster.
- The official waiting list of the municipality holds about 30 500 applicants of which 22 693 are within the Seshego City, 2331 in the Sebayeng/Mangkweng and 5 555 in the rural areas of the municipality. The waiting list also include the informal units and also comprise some residents falling into the “gap market” category. This implicates people earning between R4000 and R10 000 per month.
- The blocked projects account for about 3674 units with the majority of these being located in the Mankweng / Dikgale / Sebayeng cluster.
- Further according to the type of dwelling for 2007, it evidences that housing is a problem throughout the municipal area. All areas are affected by a lack increasing need not only for housing but for all associated services to ensure sustainable delivery.
- About 118 households, working in and around Polokwane are living in the public hostel located in Seshego, with about 118 single beds. Although a survey indicates that current residents do not perceive themselves as permanent hostel residents, the need to upgrade the existing habitation is inevitable.
- It is further estimated that approximately 70 248 households are living in rural areas. While these are a mix of both formal and informal houses, what all rural households share in common, is the lack of tenure security, lack of access to potable water supply, adequate sanitation and domestic energy supply. Currently the rural housing demand is 5 555 units.
- It is estimated that 50% of the urbanized households are in rental accommodation. It is further estimated that about one quarter of households in informal settlements are accommodated on rental basis. The most common type of rental accommodation that is available for new and particularly low income urban lodgers, is backyard rooms and/or shacks.
- To deal with social/rental housing need, the municipality established the Polokwane Housing Association.
- This entity was established with a mandate of developing 1000 units as their first project. However up to date only 508 units have been completed and 492 are outstanding. The tenure option of this unit is rental, with an option to buy after four years of uninterrupted occupation. Currently the people who enlisted their names on the waiting list, is over five thousand (5 000).

Housing Projects underway
Seshego City Cluster

Subsidized housing and low- middle income bonded housing.
As indicated the majority of the current housing demand is located in the Seshego City Cluster (22 693 families).

Development capacity, strategic development area
The spatial structure in this area has been mainly characterized by low and middle income housing developments by the private as well as public sector. Madiba Park is located next to the existing Seshego and South of Nelson Mandela Drive and consists of middle income housing development, whilst Lethuli Park is situated north of the Old Seshego Road and consists of low income/subsidized houses.

Pockets of other private townships are spread throughout the area. These townships mainly comprise middle income housing development and are located at Pietersburg Extension 29, 61 and 65.

New Pietersburg (Proposed Pietersburg X 78) is currently occupied by an informal settlement and not lodged.

In the past 2 – 3 years, the Polokwane Municipality has been playing a greater role in ensuring provision/establishment of residential townships by comprising a mixture of low and middle income development. The township Polokwane Ext 71, 73, 75 and 76 was proclaimed recently. The industrial township (Pietersburg X 40) has also been converted into a residential township and functionally complements Ext 44, which is a success full low-income subsidy housing development.

Pietersburg Ext 72, 79 and 82 are also approved.
TABLE 44: APPROVED TOWNSHIPS IN SDA 1 ARE

<table>
<thead>
<tr>
<th>TOWN</th>
<th>TOTAL</th>
<th>POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pietersburg X 71</td>
<td>1800</td>
<td>5532</td>
</tr>
<tr>
<td>Pietersburg X 72</td>
<td>800</td>
<td>2459</td>
</tr>
<tr>
<td>Pietersburg X 73</td>
<td>790</td>
<td>2428</td>
</tr>
<tr>
<td>Pietersburg X 75</td>
<td>494</td>
<td>1518</td>
</tr>
<tr>
<td>Pietersburg X 76</td>
<td>1030</td>
<td>3166</td>
</tr>
<tr>
<td>Pietersburg X 79</td>
<td>500</td>
<td>1537</td>
</tr>
<tr>
<td>Pietersburg X 82</td>
<td>2100</td>
<td>6454</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>7514</strong></td>
<td><strong>23094</strong></td>
</tr>
</tbody>
</table>

It is evident from the table that the current planned and approved townships will cater for about 10 500 residential units.

The remainder part of the study area will comprise of four distinct precincts.

TABLE 45: POTENTIAL NUMBER OF ERVEN ON VACANT LAND

<table>
<thead>
<tr>
<th>AREA</th>
<th>RES. 1</th>
<th>RES 2 &amp; RES 3</th>
<th>TOTAL</th>
<th>POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern portion of the SDA 1 (Area 1)</td>
<td>3051</td>
<td>1678</td>
<td>4729</td>
<td>14534</td>
</tr>
<tr>
<td>Southern portion of the SDA 1 (Area 2)</td>
<td>2434</td>
<td>1339</td>
<td>3773</td>
<td>11598</td>
</tr>
<tr>
<td>North of Nelson Mandela Drive (Area 3)</td>
<td>2570</td>
<td>1414</td>
<td>3984</td>
<td>12244</td>
</tr>
<tr>
<td>Northern part of the SDA 1 (Area 4)</td>
<td>3218</td>
<td>1770</td>
<td>4984</td>
<td>15330</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>11273</strong></td>
<td><strong>6200</strong></td>
<td><strong>17474</strong></td>
<td><strong>53706</strong></td>
</tr>
</tbody>
</table>

At a ratio of 80% of developable land developing at 20 units / hectare (Res 1), and 20% of developable land at 44 units per hectare (Res 2 and 3), the vacant areas can accommodate about 11237 single residential units and 6200 medium and higher density units, which brings the total additional units in the area to about 17474 with an estimated population of about 53706 people.

The total development capacity of this area is 27988 residential units with a potential population of 80021 people (exclude the existing townships in the area).

Land tenure:
- The land tenure comprises either privately owned land or land owned by the municipality.
- South of the Matlala Road, approximately 200 ha of land is registered in the name of Polokwane Local Municipality.

Bulk services:
- No major constraints pertaining to the availability of bulk engineering services were reported.
- Water is provided from a fairly extensive bulk network serving the southern, central and northern part. A new 30 Ml reservoir which is under construction in the south-western part of the study area, will add significant capacity to meet the expected increased future demand.
- SDA, is served by the sewer treatment works located at the bird sanctuary. A concern was expressed that the development of the SDA1 may necessitate the construction of a Regional Sewer Treatment Works further downstream in the Sand River sooner than initially anticipated. For the time being, there is sufficient capacity to deal with the projected short term demand.
- Electricity is to be provided by the PLM. There are four substations (2 to the east in Seshego (Hospital and Sigma) and two to the east of Westernbury and Pietersburg X 9 (Absalom and Laboria).
- The Alpha substation is located in the southern part of the SDA 1 and receives the main electricity feed from Eskom from where electricity is distributed locally to the four substations.
3.7 CONCLUSION

Although the SDA 1 has sufficient capacity to accommodate the current low income housing demand in Polokwane, it should be kept in mind that it will only be sufficient for the next 5 – 10 years.

Affordable housing programme: Pietersburg Ext 109 was identified as one of the areas for development, comprising of 1331 sites with an additional 13 sites for multiple residential sites for Res 3, with a capacity to carry 888 units. The land in question is located between the Dendron Road and Old Seshego road.

**Mankweng Cluster and Polokwane Rural**

As far as Mankweng Cluster (2331 units) and the Polokwane Rural waiting list (5555) are concerned, no detail plans are available.

The main problem in the Mankweng area is the fact that virtually all the land is under Tribunal Authority which complicates the provision of a variety of housing typologies. Urgent attention should be given to the area around the existing proclaimed township of Mankweng which belongs to the state and should be utilized for large RDP projects to address the need of 2331 units. Other priority areas are Sebayeng, Dikgale and Thokganeng that also need to be prioritized with regard to the provision of housing. The waiting list in Mankweng, in all probability include informal settlement, low – medium income and low income groups.

**Polokwane Rural Housing**

In the remainder rural parts, housing is provided on an ad hoc basis based on annual Rural Housing Allocation made by the municipality.

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**Conclusive summary:**

All the informal settlements (8762 units) can be accommodated within the projects currently underway in the SDA 1. These projects have a total estimated of 11706 units. However, this is by far not sufficient to deal with the local demand in terms of the waiting list which is 22 693 units but the four areas for development identified have an added capacity of about 18 000 units which brings the total capacity of SDA 1 to about 30000.

- In the Mankweng Cluster it is not yet clear where the demand of 2331 subsidized units will be catered for.

The following critical housing related issues were identified:

- The scheduling of development in SDA 1 and linking it to the eradication of the existing list for the Seshego – City cluster.
- The Mankweng waiting list is not spatially addressed at present (2331 units)
- The rural waiting list is not spatially addressed at present (555 units).

The demand for social housing (5000 units) is not spatially addressed at present.
CHAPTER 4: ANALYSIS OF THE SPATIAL PROFILE

4.1 SPATIAL DEVELOPMENT FRAMEWORK PLAN FOR POLOKWANE (2007)

A Spatial development framework was compiled as part of the IDP in 2007. The Spatial Development Framework (SDF) is captured in the following levels of plans, namely:

- Level 1: Macro Spatial Development Framework;
- Level 2: Local Spatial Development Framework and;
- Level 3: Local Framework Plans and/or specific policies which guide spatial planning and land use management.

**Macro Level**

- The most important aspect of the plan is the hierarchy of settlements. The hierarchy of settlements in the Polokwane Municipal area is schematically indicated hereunder.

- The proposed spatial framework at macro level (Level 1) is illustrated in the next figure: Polokwane Macro Spatial Development Framework.
- The plan mainly comprises:
  - Hierarchy of settlements;
  - Open Space system and nature conservation areas;
  - Macro Land uses and areas of significant importance, including the proposed Industrial Development Zone (IDZ);
  - Radial road network;
  - Future spatial form & major directions of desired growth;
  - National and Provincial corridors routes and strategic development initiatives.
**1st Order Settlements (Growth Points)**

Growth points form the major areas where future growth should be stimulated. In general it can be described, as areas where the largest spectrum of specialized land uses and services in an area must be accommodated according to the subsequent ranking/classification.

**Provincial Growth Points**
The highest order in the hierarchy and therefore also the most important type of growth point. All the PGP’s have a sizable economic sector providing jobs to many local residents. They have a regional and some a provincial service delivery function, and usually also a large number of social facilities (e.g. hospitals, tertiary educational institutions). All of them have institutional facilities such as government offices as well as local and/or district municipal offices. The majority of these provincial growth points also have a large number of people. Provincial Growth points include settlements such as Polokwane (Pietersburg)/Seshego (which can also be classified as a national growth point).

**District Growth Points**
Those growth points which already have a meaningful economic sector with some job creation, various higher order social facilities such as hospitals and/or health centres, and some accommodate tertiary educational institutions. Most of these district growth points also have regional government offices and in many instances also district and/or local municipal offices. Most of the district growth points have a large number of people grouped together. District Growth Points include settlements such as Mankweng.

**Municipal Growth Points**
have a relatively small economic sector compared to the district, but more specifically the provincial growth points. Municipal growth points serving mainly farming areas often have a sizable business sector providing a meaningful number of job opportunities. These growth points usually also have a few higher order social and institutional activities. In most instances these growth points also have a reasonable number of people. With a MGP such as Northam for example, the emphasis is on the economic sector (e.g. business and mining activities in the area) with a relative small number of people, and a large farming community which is served by the growth point. In traditional rural areas with villages the economic sector is relatively small with only a few local businesses, but a substantial number of people. They usually exhibit a natural growth potential if positively stimulated.

**2nd Order Settlements (Population Concentration Points)**
The 2nd order settlements or so called population concentrations points consist of towns/villages or a group of villages located close to each other, which have virtually no economic base, but a substantial number of people located at these villages.

**3rd Order Settlements (Local Service Points)**
Third order settlements exhibit some development potential based on population growth and/or servicing function potential, although they have a very limited or even no economic base. Most of these settlements are located in the traditional rural areas and have 5000 people or more. However, they don’t form part of any settlement cluster.

**4th Order Settlements (Village Service Areas)**
Fourth order settlements of Village Service Areas are settlements in mainly traditional rural areas where three or more settlements are located in such a way that they are interdependent or linked together by means of specific social infrastructure (e.g. clinic, secondary school). These groups of settlements are usually mutually dependent on these facilities. These settlements are small and have usually less than 1000 people per village.

**5th Order Settlements (Small Settlements)**
The potential for future self-sustainable development of these settlements is therefore extremely limited or non-existent.
The Table hereunder contains information in respect of 1st – 3rd Order Settlements, as found in Polokwane Municipal Area (SDF, 2007)

### TABLE 46: SETTLEMENT HIERARCHY FOR 1st TO 3rd ORDER SETTLEMENT IN POLOKWANE MUNICIPALITY.

<table>
<thead>
<tr>
<th>Name and order in hierarchy</th>
<th>Community/Settlement name(s)</th>
<th>Demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name Order</td>
<td>Estimated Population No. of HLDS</td>
<td></td>
</tr>
<tr>
<td><strong>1ST ORDER SETTLEMENTS:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polokwane 1 PGP</td>
<td>Polokwane (Pietersburg, Bendor, Welgelegen, Penina Park, Ivy Park etc.)</td>
<td>+130599 +24567</td>
</tr>
<tr>
<td>Sub-total:</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2ND ORDER SETTLEMENTS:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dikgale 2 PCP Ga-Mokgopo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dikgale 2 PCP Mantheding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dikgale 2 PCP Tibebe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-total:</td>
<td>+67067 +11773</td>
<td></td>
</tr>
<tr>
<td>Mabukele 2 PCP Komape 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mabukele 2 PCP Komape 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mabukele 2 PCP Mabukelele</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mabukele 2 PCP Madikote</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-total:</td>
<td>+12625 +1862</td>
<td></td>
</tr>
<tr>
<td>Perskebult 2 PCP Bloedrivier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perskebult 2 PCP Kgohlwane</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perskebult 2 PCP Mokgokong</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perskebult 2 PCP Perskebult</td>
<td></td>
<td>+36240 +6337</td>
</tr>
<tr>
<td>Badimong 2 PCP Badimong</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Badimong 2 PCP Boyne</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Badimong 2 PCP Ga-Magowa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Badimong 2 PCP Ga-Mojapel</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sebayeng Municipal Growth Point</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sebayeng</strong> 1 MGP Sebayeng A</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sebayeng</strong> 1 MGP Sebayeng B</td>
<td></td>
<td>+13019 +2286</td>
</tr>
<tr>
<td><strong>Sub-total:</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Open Space System

The proposed Open Space system for the Polokwane Municipal area as well as the areas significant to nature conservation, are also illustrated and captured in Figure 1 of the Existing SDF, 2007. Further detail within specific or smaller areas, should be captured in Local Framework Plans/Land use policies in of each of the areas.

The current Environmental Management Framework identifies the various environmental sensitive areas, open space corridors, water resources etc. These elements will be captured in a separate map, to present a holistic view of the current environmental framework for the municipal area. See Map 10.

The hierarchy of settlements needs to be revisited, and it is important to redefine the criteria in respect of determination of settlement hierarchy.
Macro Land Uses and areas of Importance

The macro land uses of significant importance, as indicated on the macro spatial development plan, are:

- Areas of agricultural importance and production;
- Nature conservation areas (see Open Space System);
- Industrial Development Zone (IDZ) [proposed] including the Airport [International]
- Areas with mineral occurrences

The following Marco Land Uses should be specifically addressed:

- Areas with tourism potential (e.g. Bakone Malapa);
- Areas for manufacturing and trade development; and
- Land uses which plays a major importance in the provincial and local economy (e.g. ZCC Moria).

Other macro land uses that need discussion:

- Industrial development zone (IDZ). 2002 IDP indicated that this sector/land use needs more investigation. Airport/potential IDZ forms part of Northern Gateway
- Agriculture also needed investigation/promotion. Areas indicated as high potential agricultural land with potential for development e.g. game farming. (LED projects)
- Nature conservation areas: Makapansgat in Mogalakwena Municipal Area should be linked with conservation areas in the southern part of Polokwane Municipal area.
- Radial road network should be enhanced
- Sports and recreation facilities: Should be provided within each community. Polokwane City forms the main sport node wherein international sporting events can be hosted.

Future spatial form and major directions of desired growth: Points that inform future spatial form and directions of growth are: Reconstructing the existing distorted spatial pattern; Successful integrating land development and settlements; Existing spatial form and land uses; Provision of infrastructure and engineering services; Major movement patterns and higher order routes; Geographical and physical aspects/restrictions; and existing development trends. These factors are used to determine future growth directions, expansion of urban edges etc. Although certain Strategic Development Areas (SDA’s) and Potential Development Areas (PDA’s) have been identified and major directions of expansion are indicated in the spatial development framework, the first priority is to successfully promote “infill” development within existing clusters. Infill development will also include aspects in relation to densification within existing townships and not only new township between existing ones

- National and Provincial corridors and routes and strategic development initiatives. These strategies and initiatives are also recognized in the macro spatial development framework, and in most instances interface with some of the municipality’s identified Development Corridors and Functional Development Areas
The above aspects have specific reference to land use management. It is submitted that land use management control measures contained in the various land use management systems and policies should be aligned with each other, and should inform each other on a macro level.

**Urban edges:**

The “urban edges”, applicable to the 5 settlement clusters have been identified/delineated in terms of Figure 2, as contained in the 2007 SDF. The urban edge is defined as: “the linear elements not used or considered as paths by the observer. They are the boundaries between two phases, linear breaks in continuity: shores, railroad cuts, edges of development, walls. They are lateral references rather than coordinate axes”.

It is submitted that in view of the changing urban environment and expansion of various areas, that the “urban edge” should be redefined and re-delineated.

The 5 Clusters settlements as identified in terms of the 2007 SDF are as follows:

**TABLE 47: THE 5 CLUSTERS FOR POLOKWANE MUNICIPALITY.**

<table>
<thead>
<tr>
<th>Clusters - Name and order in hierarchy</th>
<th>Town/Area Name</th>
<th>Order</th>
<th>Demographics</th>
<th>Community/ Settlement name(s) within cluster</th>
<th>Population</th>
<th>Number of house holds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polokwane/Perskebult Cluster</td>
<td>Polokwane</td>
<td>1</td>
<td>PGP</td>
<td>Polokwane (Pietersburg); Seshego.</td>
<td>166 839</td>
<td>30 904</td>
</tr>
<tr>
<td></td>
<td>Perskebult</td>
<td>2</td>
<td>PCP</td>
<td>Bloedrivier; Kgoihwane; Mokgokong; Perskebult</td>
<td>80 086</td>
<td>14 059</td>
</tr>
<tr>
<td>Mankweng/Badimong Cluster</td>
<td>Mankweng</td>
<td>1</td>
<td>DGP</td>
<td>Ga-Thoka;</td>
<td>115 098</td>
<td>20 171</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Town/Area Name</th>
<th>Order</th>
<th>Demographics</th>
<th>Community/ Settlement name(s) within cluster</th>
<th>Population</th>
<th>Number of house holds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Badimong</td>
<td>2</td>
<td>PCP</td>
<td>Badimong; Boyne; Ga-Magowa; Ga-Mojapelo; Ga-Mokwane; Ga-Mothapo 2; Ga-Silwane; Matshela-Pata; Mountain View; Viking.</td>
<td>80 086</td>
<td>14 059</td>
</tr>
<tr>
<td>Sebayeng</td>
<td>1</td>
<td>MGP</td>
<td>Sebayeng A; Sebayeng B.</td>
<td>80 086</td>
<td>14 059</td>
</tr>
</tbody>
</table>
### Location and nature of development, including public and private land development

The focus area for any new land development should therefore be concentrated in the clusters and especially in the growth points in hierarchic order of importance. The municipality should compile an urbanization strategy/land use policy to determine the most suitable land for public land development and subsidized housing schemes of all sorts. This is however a very difficult task, and a scientific approach should be taken.

According to the 2007 SDF, the following areas should receive priority in the development of subsidized housing (refer to housing chapter):

- **SDA 1** – Areas between Pietersburg and Seshego as part of the Polokwane PGP;
- **SDA 2** – Ivydale area as part of the Polokwane PGP;
- **SDA4** – Mankweng/Badimong cluster; and
- **SDA 6 and 7** – Sebayeng/Dikgale cluster.

### Table of Distribution of Population

<table>
<thead>
<tr>
<th>Cluster</th>
<th>PCP</th>
<th>Area(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dikgale</td>
<td>2</td>
<td>Dikgale 1; Dikgale 2; Dikgale 3; Ga-Mokgopo; Mantheding; Tibebe.</td>
</tr>
<tr>
<td>Mabukelele Cluster</td>
<td></td>
<td>Koloti; Komape 2; Komape 3; Mabukelele; Madikote.</td>
</tr>
<tr>
<td>Ramongwane Cluster</td>
<td></td>
<td>Hlahla; Makibel; Ramongwane 1; Ramongwane 2; Semenya 1; Setati.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>TOTAL FOR CLUSTERS: (77%)</th>
<th>393 145</th>
<th>70 231</th>
</tr>
</thead>
<tbody>
<tr>
<td>GND TOTAL POLOKWANE (100%)</td>
<td>Population</td>
<td>508 967</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The following Strategic development areas are identified throughout the municipal area:

### Strategic Development Areas (Mainly identified in the various clusters)

The SDA’s should be the main focus areas for the future development/expansion of townships and especially residential areas.

In the Strategic Development Areas located within the identified urban edge, the municipality must actively support, promote and facilitate development through:

- the provision of bulk infrastructure;
- the provision of incentive schemes like requiring no bulk service contributions from prospective developers;
- the provision of administrative support to developers through the streamlining of application procedures;
- the compilation of detailed local framework or land use plans and implementation programmes for each of these areas;
- the active marketing of these areas.

- **SDA 1**: Area between Polokwane (Pietersburg) & Seshego
- **SDA 2**: Iydale agricultural holdings
- **SDA 3**: Eastern suburbs of Polokwane (Pietersburg) and adjacent area to the east
- **SDA 4**: Mankweng / Badimong Cluster
- **SDA 5**: Area abutting Mankweng to the south-west. The Laaste Hoop ward 7 area, currently a LSP
- **SDA 6**: Sebayeng MGP and area directly abutting
- **SDA 7**: Rest of Sebayeng/Dlgbale Cluster
- **SDA 6**: Southern part of Municipal area / Chuene

It is submitted that the priority development areas should be re-evaluated, and the boundaries of the Strategic Development Areas, re-delineated.
Desired patterns of Land Use

The Polokwane Spatial Development Framework, 2007 provides a framework which contains some guidelines in general under Table 3 and 4 in order to guide the desired patterns of land use in the municipal area and the desired spatial form thereof. “It should therefore provide guidelines in respect of detail issues/land uses, areas not addressed in other parts of this section of the IDP, and what spatial form and patterns of land uses are not preferred” (SDF 2007). Apart from the desired land use pattern guidelines, the municipality may have other local framework plans and/or policies that apply within certain areas.

Care should be taken that the definitions that are contained in Table 4.5 correlates with the land use definitions as contained in the Polokwane / Perskebult Town Planning Scheme, 2007.

A reference is made in the Polokwane 2007 SDF that, incremental Land Use Management Schemes should be adopted for the various SDA’s/ cluster areas. The submission is that a uniform land use management system/set should apply throughout the Polokwane Municipal Area.

Hierarchy of Shopping Centres

The hierarchy of shopping centres throughout the municipal area is defined and classified as follows in the 2007 SDF:

- CBD/Inner City (Primary Activity Node – P1)
  - The Polokwane Central Business District (CBD) or inner city is acknowledged to be of regional importance and is therefore properly planned and should be managed by the municipality and the private sector in order to retain that status.
  - Seshego and Mankweng, as previous distorted areas, should be functionally integrated with the rest of the city of Polokwane. The areas between the CBD and Seshego (below referred to as SDA 1) as well as the CBD and Mankweng (referred to below as SDA 4) is a very important element and with some development corridors, can contribute to correct this distorted spatial pattern.

- Secondary Activity nodes (S) – Suburban shopping facilities.

There are several other initiatives, projects, incentive schemes and events which will impact directly or indirectly on the long term sustainability of the CBD. These projects include:

- Urban Development Zone (UDZ);
- African Market;
- Transport Hub;
- Itsoseng Entrepreneurial Centre; and
- The 2010 World Cup Soccer event.

According to the 2007 SDF, all development in Polokwane should only be allowed if the municipality is, in its opinion, convinced that such development will not jeopardize the sustainability and viability of the CBD/Inner city.

The Urban Development Zones (UDZ’s) are redevelopment/CBD revitalization initiatives by National Treasury, and should be promoted in the CBD of Polokwane.

This will not only encourage development in the CBD/Inner City, but also discourage development outside the CBD’s borders, since it would probably be more costly to develop outside the CBD since full services contributions are charged.

Secondary Activity nodes (S) – Suburban shopping facilities.
The CBD is the primary activity node especially for providing specialized and expensive goods and services i.r.o. retail and personal/professional services. Secondary activity nodes be allowed in the different areas in Polokwane, which provides more in convenience goods to residents.

A hierarchic system with respect of the provision of shopping facilities, as indicated in the table hereunder, should be considered and implemented as a guideline where necessary to suit all the areas forming the new municipality. “However these secondary activity nodes’ main function is focused on services for the suburban residents (e.g. convenience goods) rather than to serve as a substitute, which duplicate services and goods (e.g. specialized, expensive goods), which is normally associated with the CBD as primary activity node and the region.”

**Table 48** should be read in conjunction with the “Hierargie van Sakesentra” policy of the former Provincial Administration, and other applicable policy. In this instance, the hierarchy of shopping facilities, as contained in the 2007 SDF, should be regarded as “Polokwane specific”.

The hierarchic framework/system is basically based on the following, namely:

- Hierarchic levels;
- Criteria;
- Service population, densities and thresholds;
- Service radius;
- Location i.r.o. access routes;
- Gross leasable floor areas; and
- Compilation and function. (note: “specialized centres” such as value centres or theme centres should not be treated separately and it forms part of the hierarchy set out in **Table 48**).
<table>
<thead>
<tr>
<th>Type of Centre</th>
<th>Size of centre (m²)</th>
<th>Trade area</th>
<th>Access Requirements</th>
<th>No. of households (500 – 1 000)</th>
<th>Population (500 – 1 500)</th>
<th>Socio-economic groups (500 – 1 500)</th>
<th>Average Radius (km)</th>
<th>Median Travel time (minutes)</th>
<th>Main tenants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CORE CLASSIFICATIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small free-standing centre</td>
<td>500 – 1 000</td>
<td>Serves part of a suburbs</td>
<td>Suburban street</td>
<td>&lt;2 000</td>
<td>&lt;7 000</td>
<td>Mainly middle, middle low and low LSM 4-7</td>
<td>1</td>
<td>&lt;2</td>
<td>• Café/Superette&lt;br&gt;• few convenience stores&lt;br&gt;• less than 10 stores</td>
</tr>
<tr>
<td>Local convenience centre</td>
<td>±1 000 - ±5 000</td>
<td>One suburb or parts of suburb(s)</td>
<td>Minor collector road</td>
<td>700 - 3 600</td>
<td>2 500 - 12 520</td>
<td>All LSM 4-10</td>
<td>1,5</td>
<td>3</td>
<td>• supermarket&lt;br&gt;• few convenience stores&lt;br&gt;• 5 – 25 stores</td>
</tr>
<tr>
<td>Neighbourhood centre</td>
<td>±5 000-±12 000</td>
<td>Strategically located for a group of suburbs</td>
<td>Major collector roads</td>
<td>2 400 – 5 700</td>
<td>8 300 – 20 000</td>
<td>All LSM 4-10</td>
<td>2,0</td>
<td>4-9</td>
<td>• supermarket&lt;br&gt;• convenience&lt;br&gt;• some small specialised stores</td>
</tr>
<tr>
<td>Community Centre</td>
<td>±12 000-±25 000</td>
<td>Strategically located to serve a suburban community.</td>
<td>Major arterial road</td>
<td>8 500 - 17 800</td>
<td>30 000 – 62 500</td>
<td>All LSM 4-10</td>
<td>3,0</td>
<td>6-14</td>
<td>• large supermarket&lt;br&gt;• convenience&lt;br&gt;• small national clothing&lt;br&gt;• restaurants &amp; takeaways&lt;br&gt;• services</td>
</tr>
<tr>
<td>Small regional</td>
<td>±25 000-±50 000</td>
<td>Specific sub-region of city (can be large self contained community (i.e. Chatsworth)</td>
<td>Major suburban arterial road linking to a provincial highway</td>
<td>17 800-35 700</td>
<td>62 500-125 000</td>
<td>All LSM 4-10</td>
<td>5,0</td>
<td>10-16</td>
<td>• large supermarket&lt;br&gt;• 1 or 2 large clothing anchors&lt;br&gt;• Strong national tenant comparison goods component&lt;br&gt;• boutiques&lt;br&gt;• restaurants&lt;br&gt;• entertainment&lt;br&gt;• services</td>
</tr>
<tr>
<td>Regional centre</td>
<td>±50 000-±100 000</td>
<td>Large region of city/or whole city</td>
<td>Major arterial road usually a Provincial</td>
<td>28 600 – 57 150</td>
<td>100 000-200 000</td>
<td>All LSM 4-10</td>
<td>8,0</td>
<td>14-20</td>
<td>• large supermarket/hyper&lt;br&gt;• 2 or more large clothing</td>
</tr>
<tr>
<td>Super regional centre</td>
<td>&gt;100 000 More than 250 stores</td>
<td>Large region in city and surrounding areas/Tourists</td>
<td>Major arterial road usually a Provincial main road, linking to a National road.</td>
<td>57 150-114 300</td>
<td>200 000-400 000</td>
<td>Above average LSM 5-10</td>
<td>10+</td>
<td>16-28</td>
<td>• small clothing and boutiques • entertainment restaurants • services • convenience</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------------------</td>
<td>--------------------------------------------------</td>
<td>-----------------------------------------------------------------</td>
<td>----------------</td>
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</tr>
</tbody>
</table>

- stores
- main road linking to a National road.
- • small clothing and boutiques
- • entertainment restaurants
- • services
- • convenience
- Super regional centre
- >100 000 More than 250 stores
- Large region in city and surrounding areas/Tourists
- Major arterial road usually a Provincial main road, linking to a National road.
- 57 150-114 300
- 200 000-400 000
- Above average LSM 5-10
- 10+
- 16-28
- • as at regional but more emphasis on entertainment and variety
Other points of departure i.r.o suburban shopping facilities:

Some of the critique may be true in a certain sense; however, the following is accepted in favour of the controlled or planned approach, namely:

- The controlled or planned approach is aimed towards the interests of the total community of Polokwane (issues of urban decay, underutilized resources are some issues of concern);
- Not only the aspects of need (demand) are considered, but also desirability i.t.o aspects such as parking, aesthetics etc. The private market approach is mostly aimed at economical opportunities over a shorter period and sometimes neglects to consider the well-being of the total community;
- The hierarchic approach is indeed based on a well founded system which developed over time and which is a result of spontaneous development and addressing the needs of the consumer. Drastic deviation from this system may result in prejudice to consumers;
- This approach also provides for healthy competition.
- The controlled and hierarchic approach implies sustainable and co-ordinated development and should not be seen as an obstruction for development.

According to the 2007 SDF, the points of departure which can be argued in favour of the hierarchic approach are:

- Control or a planned approach is necessary;
- Control must also be flexible, but if deviation on accepted norms and standards are applied, it must be substantiated;
- Control must contribute towards healthy competition;
- Focus should not only be placed on the need, but also include the desirability aspects thereof;
- Changes in community needs and consumer patterns must also be recognized as aspects which may contribute towards a continuing process of amending this policy and standards;
- The compilation and function of a center is also determined by economical factors which changes over time [Nieuwoudt, A (Prof.); 1993: 19]

In the light of the above mentioned and considering the criteria set out in Table 3 of the SDF, the following Secondary Activity nodes (S) have been identified, namely:

**Regional Shopping Centres**

Currently (2007), there is one suburban shopping centre, which could be classified as a regional shopping centre. Savannah centre/mall (S4) have an approval to expand to over 30 000m², which will push it into the Small Regional category.

This centre mainly serves the suburbs of Polokwane as well as Seshgo in terms of the current population in this area, the service area as captured in Table 5 of the SDF etc. Any expansion into or proposal for such a regional centre, should be accompanied by the necessary traffic impact strategy contained in this SDF or policy issues of the municipality. The regional importance and role of Polokwane’s CBD/Inner city should be recognised at all times.

In the mean time, a regional shopping facility (75 000m2) has been approved in SDA 3, on the south western corner of the intersection of the N1 eastern By-pass and the R81.

**Community Shopping Centres**

According to the 2007 SDF, Community Shopping Centres should only be allowed in the growth points (1st order clusters). Considering the current population, the Polokwane Provincial Growth Point (PGP) with a population exceeding 100 000 people, could only accommodate 1 or 2 such centres.

The Mankweng District Growth Point (DGP), which is accepted also provides services to the Sebayeng/Dikgale area, has a population above 100 000 people, which justifies another such centre. (The so-called Twin City development of + 15 000m² was approved in this area (S6).)

This node can definitely play a major role in the spatial development of this District Growth Point. It may also contribute towards the integration of Polokwane and Mankweng. It may also ensure that residents of the Mankweng area receives similar shopping facilities as which can be found in Polokwane. Thus, the development of this node should be encouraged.
The expansion of the existing activity node at S5 (Savannah centre) will impact directly on the viability and sustainability of this activity node and should therefore be done carefully.

**S2: The proposed future activity node in Strategic Development Area 1.**

Although this centre is currently classified as a Neighbourhood Shopping Centre, it holds the potential for a Community shopping Centre due to its favourable location between the inner city and Seshgo as well as in respect of the proposed N1 Toll road linking Zimbabwe with Gauteng.

The exact location of such centre should be established once the final planning of the new alignment of the N1 toll road is finalized because this may play a major role in the sustainability of such a centre. The N1 western by-pass will not be developed within the short to medium term.

**Neighbourhood Shopping Centres**

- **S1:** The existing activity node (currently under-utilised) in Seshgo, Zone G.
- **S2:** The proposed future activity node in Strategic Development Area 1.
- **S3:** The existing business strip in Annadale, north of the CBD of Pietersburg/Seshgo.
- **S5:** Such a centre is proposed for Sebayeng due to the fact that it is classified as a Municipal Growth Point (MGP) and because it already has a population of 80 000 people in the Sebayeng/Dikgale cluster without such proper service.
- **S7:** The existing shopping centre located in De Wet Drive, Bendor known as Bendor Multi Save. It was previously classified as local shopping centre but due to its current floor area, function etc. it can be classified as a neighbourhood centre. However, if any extension to this centre is considered it should be done in terms of the hierarchic policy, but it should never exceed the limitations of a neighbourhood centre.
- **S8:** The existing shopping centre located in Marshall Street, Pietersburg Extension 11, was previously classified as local shopping centre but due to its current floor area (≈3100m²), function, types and number of shops etc. it can be classified as a neighbourhood centre. However, if any extension to this centre is considered, it should be done in terms of the hierarchic policy, but it should never exceed the limitations of a neighbourhood centre. Great care should also be taken not to prejudice the residential character of the adjacent area and entrances and egress to the property should rather be focused on Marshall and Boshoff Streets.

The Cycad Shopping Centre on the corner of Outspan Drive and General Maritz Street qualifies as a neighborhood centre. Also, it is important to note that the immediate surround can develop into a strong secondary node, and should be approached as such.

**Local Shopping Centres and corner shops**

As the name suggests local centres and corner shops serve a very localised market in the immediate vicinity thereof.

Examples of local shopping centres are the smaller shopping centres such as Welgelegen, Bendor Extension 69, Eduan Park, Westenburg, Nirvana, Pietersburg Extensions 4 and 6, etc.

Although these centres can be developed to a maximum of 2000m² GLFA according to Table 5, they range between 400m² and 2000m² depending the population they intend to serve and considering the criteria such as area per capita (e.g. 0.4m²/capita).

There are currently vacant zoned erven which the municipality owns in Ster Park and Flora Park, should also be considered now since these areas are becoming build-up. These are Erven 2543 and 5389 Pietersburg Extension 11.

Corner shops include the “convenient store” concept at filling stations, which should not exceed 200m² GLFA, as well as kiosks and/or traditional spaza shops found in the more informal towns.

For the lowest order corner shops such as spazas and/or kiosks within residential areas, a policy (Revised Policy on Spazas and Taverns 2000) were already developed for the former Pietersburg/Polokwane TLC. If need be, the policy will need to be adapted to suit circumstances surrounding the diverse Polokwane environment. The conditions for, and application procedure in respect of Spazas and Taverns are set out in the Polokwane/Perskebult Town Planning Scheme, 2007.
The summary of the Policy on Taverns and Spazas is: “Spaza shops are rather single shops, which are operated as part of a household enterprise and where the residential use of the property remains the primary use. The shop normally doesn’t exceed 30m². 

Whilst on the other hand, a kiosk is a separate entity and can be part of and supplementary to other land uses/use zones such as offices, office complexes or larger apartment buildings and are normally found in more formal townships. They should also not exceed 30m² in normal circumstances”.

Local Shopping Centres and corner shops develop spontaneously based on market forces and the municipality should manage the development thereof according to the hierarchic system and in such a way that the entire municipal area is served well. Local centres are smaller than 2 000m² GLFA in size and normally should not be less than 400m² to be able to provide sufficient service to the community.

Corner shops are not larger than 200m², but if uses/shops exist in the municipal area, which is larger than 200m² but not larger than 400m², it should also be regarded as a corner shop. The municipality may in future investigate this and amend the provisions of the hierarchic system as set out in the paragraphs above to address the gap between local centres and corner shops.

It is further important to note that in terms of the municipality’s adoption of the hierarchic policy to local circumstances, it may occur that a local shopping centre is located directly adjacent or in close proximity to a filling station, in which instance the filling station will still have the right to accommodate the convenience store not exceeding 200m² and vice versa, it is considered that the shopping centre can still utilize its full potential set out in the hierarchic policy. One of the reasons being that the convenience store is normally open 24hours a day to mainly serve the public with essential convenience goods whilst a normal shopping centre are open during normal business hours

The hierarchic classification of shopping facilities, as contained in the SDF, should be brought in line with national criteria and standards.

The N1, western by-pass will not be constructed within the next 15 years, which will have a definite impact on development within SDA 1, especially with regard to retail development.

Office function

In terms of the 2007 SDF, the following apply to offices.

“The office function should be centralized and located within the CBD/Inner city of Polokwane as far as possible, as this is the primary support base of the CBD and income of Polokwane.

Lower order local office functions can, however, be provided throughout the 1st order settlements (growth points), but at a limited scale. However, it should not be allowed if the municipality is not convinced that this will not have a detrimental effect on the CBD/inner city area (Primary Activity Node).

Some low-density office parks/nodes (low density office in park) already exist in Polokwane (e.g. Hampton Court/Propark) and similar office parks could be considered in the growth points of Mankweng and Sebayeng.

Lower order offices like office parks and dwelling offices should not be allowed if the municipality is convinced that it would not prejudice other initiatives and strategies contained in this spatial development framework. It is not foreseen that any similar office park should be erected in Polokwane/Perskebult cluster in the near future.

A policy with regard to dwelling offices (conversion of existing dwelling house into low density office) south of the CBD was adopted in 2004. The specific policy deals with relevant policy issues and conditions in this regard. However, it should be noted that the Polokwane CBD Development plan was adopted in 2005, which included most of this area (the area between Marshall- and Suid Streets but west of mid-block Biccard and Voortrekker Streets) into the CBD. However, the newly opened area was identified as suitable for low-density office use only (“Business 4” zone).
The expansion addresses the demand for low-density offices.

Offices, excluding offices for municipal facilities/uses, should under normal circumstances, not be allowed in 3rd to 5th order settlements. In very exceptional circumstances, the municipality may consider low density office uses in 3rd order settlements – Local Service Points.”

The municipality has recently supported a large suburban office development (42 000m²) in SDA 3, on the south eastern corner of the intersection of the N1 eastern by pass and the R81.

The “dwelling office policy” is superseded by the Policy on the establishment of “Business” zonings south of Marshall Street and the expansion of the eastern border of the CBD.

Medical facilities and medical consulting rooms

It is proposed, that the provision of medical facilities including medical consulting rooms should also be implemented through a hierarchic system, which further supports the hierarchic approach in this development framework.

A land use policy in this regard (Policy Review Pertaining to the Provision of Medical and Related Land Uses within the Polokwane Regional Medical Node) was accepted in September 2006, and specific criteria are set out in the afore mentioned document

However, although the policy’s criteria and principles are adopted as part of this development framework, it may be necessary to re-arrange some proposed nodes in the said policy, because this IDP and provincial spatial planning initiatives may require it. It is proposed that the growth points, population concentration points and local service points receive preference over other lower order settlements i.r.o. nodes

The Policy pertaining the distribution of Medical and related land uses, identifies the Regional Medical Node and expansion thereof, as well as the distribution of medical related land uses throughout Polokwane City.

It is submitted that the principles of the Policy be adapted and applied throughout the municipal area.

The Polokwane/ Perskebult Town Planning Scheme, 2007

Polokwane Municipality started with the drafting and adoption of a Land Use Management Scheme for the largest clusters / growth point (Polokwane/Perskebult Provincial Growth Point (PGP)).

The process of preparation of this draft scheme for the Polokwane/Perskebult cluster already started in 2006 and on 22 May 2008 the Council resolved to accept the prepared draft town-planning scheme known as the Polokwane/Perskebult Town Planning Scheme, 2007 and give notice i.t.o. provisions of Section 28 of the Town Planning and Townships Ordinance, 1986 (Ordinance 15 of 1986) that such a draft scheme and amendment scheme has been prepared.

This scheme is an amendment scheme and/or extension of the scheme, substituting the Pietersburg/Seshego Town Planning Scheme, 1999. It contains inter alia the following proposals:

A revised set of land use control stipulations and definitions is contained in the scheme clauses; All properties and existing land use rights within the current 1999-scheme area remain part of the scheme, but additional areas, which mainly consist of farms and agricultural holdings surrounding the city and which falls within the jurisdiction area of the municipality, have now been included and the scheme being expanded to these areas. Thus, a new set of scheme maps for these areas are included;

Existing approved land use rights have been taken into account and have been incorporated into the scheme. In most cases of the new areas, the zoning of “Agriculture” are proposed, with provision for an annexure in those instances where land use rights other than agriculture and/or a dwelling unit, has been approved by controlling authorities. In other instances permitted rights will be acknowledged as special or written consents (consent uses) in terms of the scheme and noted in an appropriate register.

Town Planning Schemes represents statutory administration or day-to-day and site specific management of land uses, whilst other policies and planning documents (e.g. SDF,
CBD Development Plan; Framework Plans) represents forward or strategic planning on a broader scale. The latter guides all decisions pertaining to land use management. Polokwane Municipality had to prepare an Integrated Transport Plan (ITP) for the Municipal area, as must every other Municipality, as determined in terms of section 27(1) of the National Land Transport Act (Act 5 of 2009).

The current scheme area: All land/property/erven currently under control of the Pietersburg/Seshego Town Planning Scheme, 1999; Area where scheme is being extended: All land/property in the following areas and/or part of the following farms/agricultural holdings, namely:

<table>
<thead>
<tr>
<th>Area/Farm name/Agricultural Holding complex name</th>
<th>Farm no. &amp; Registration Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baskoppies</td>
<td>997 LS</td>
</tr>
<tr>
<td>Dalmada Agricultural Holdings</td>
<td>998 LS</td>
</tr>
<tr>
<td>(Geluk 998 LS)</td>
<td>624 LS</td>
</tr>
<tr>
<td>Doornbult</td>
<td>698 LS</td>
</tr>
<tr>
<td>Duvenhageskraal</td>
<td>1001 LS</td>
</tr>
<tr>
<td>Elmadal Agricultural Holdings</td>
<td>740LS</td>
</tr>
<tr>
<td>(Zandrivier 742 LS)</td>
<td>742 LS</td>
</tr>
<tr>
<td>Geluk</td>
<td>996 LS</td>
</tr>
<tr>
<td>Jansenpark</td>
<td>1136 LS</td>
</tr>
<tr>
<td>Kalkfontein</td>
<td>1001 LS</td>
</tr>
<tr>
<td>Langdale</td>
<td>740LS</td>
</tr>
<tr>
<td>Langenoeg</td>
<td>745LS</td>
</tr>
<tr>
<td>Leeuwkuil</td>
<td>692LS</td>
</tr>
<tr>
<td>Mijngenoenen</td>
<td>1000LS</td>
</tr>
<tr>
<td>Mijngenoenen</td>
<td>1048LS</td>
</tr>
<tr>
<td>Palm</td>
<td>681LS</td>
</tr>
<tr>
<td>Palmiet</td>
<td>910LS</td>
</tr>
<tr>
<td>Palmietfontein</td>
<td>684LS</td>
</tr>
<tr>
<td>Palmietfontein</td>
<td>25 KS</td>
</tr>
</tbody>
</table>

20 Palmietfontein 1049LS
21 Palmietfontein 743 LS
22 Roodepoort 744 LS
23 Tweefontein 915 LS
24 Perskebult/Blood River area/ settlement: (Eerstegeluk 626 LS, Vaalwater 629 LS and Locatie van Malietjie 606LS) 626 LS; 629 LS; 606 LS.

The 2007 Land Use Management Scheme is a more comprehensive and practical Land Use Scheme than the 1999 Town Planning Scheme. Various new definitions are contained in the 2007 LUMS. However, the definitions (e.g. Residential 4) contained in the 2007 SDF do not necessarily correlate with the definitions contained in the 2007 Polokwane / Perskebult LUS. Other aspects, such as densities (minimum densities and erf sizes) as described in the 2007 SDF, do not correlate with the density provisions and definitions as contained under Columns 8-10 in the 2007 LUS.

It is submitted that uniform Land Use Schemes/ Land Use Management System for the whole municipal area be implemented.

Service Upgrading Priority Areas, Service Provision priority areas and areas where infrastructure development should take preference.

Service delivery / alleviation of backlog and development (engineering and social) should be focussed in the Strategic Development.

In view of the fact that the Bloodriver/ Perskebult area forms an integral part of Seshego, priority should be given to the upgrade of services in this area. The Mankweng DGP and Sebayeng MGP should also receive the status as a service upgrade priority node.

It is also acknowledged that the Mankweng DGP be declared such an area and further propose that Sebayeng MGP also receive such status. The focus should also be to upgrade other facilities such as shopping facilities, etc.
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“The lower order settlements (3rd to 5th order) as existing when compiling this IDP, should be declared as Service Provision priority areas in respect of provision of the most essential engineering services to alleviate poverty and addressing the basic needs of our people in water, sanitation, roads, electricity, etc. However, it should be understood that the Service Provision Priority area is different from a Service Upgrading Priority area.”

Strategic Development Areas (SDA’s) and Potential Development Areas (PDA’s)

The Strategic Development Areas (SDA’s) are mainly identified in the clusters of the Polokwane area.

“The SDA’s should be the main focus areas for the future development/expansion of townships and especially residential areas. In the Strategic Development Areas located within the identified urban edge, the municipality must actively support, promote and facilitate development through:

- the provision of bulk infrastructure;
- the provision of incentive schemes like requiring no bulk service contributions from prospective developers;
- the provision of administrative support to developers through the streamlining of application procedures;
- the compilation of detailed local framework or land use plans and implementation programmes for each of these areas;
- the active marketing of these areas”

The municipality should further provide a detailed urbanization strategy to manage the process of housing need and to determine the role each of the mentioned SDA’s should play in future development.

The second level of development areas are Potential Development Areas (PDA’s). These areas hold the potential for future development and are earmarked for future development. The urban edges can be expanded into these areas in future.

The Municipality has recently approved the expansion of the SDA 1 boundary, to include PDA 3. The following farms forms part of the expansion of SDA 1:

- Klipfontein 670LS
- Vogelstruisfontein 667LS
- Engelsschedoornboom 668LS
- Middelpunt 676LS
- Vergunning 667LS
- Remainder of Stoefontein 678LS
- Morgenon 690LS
- Portions of the Farm Duvenhageskraal 689LS
- Portions of the Farm Leeuwkuil 691LS
- Portions of the Farm Sterkloop 688LS
- Strydomhoek 695LS
- Jansenspark 1136LS
The boundaries of the PDA’s might have shifted in view of the fact that some of the areas have been taken up in some of the SDA’s. In view of the fact that the “urban edge” has to re-defined, it is possible that the PDA’s have to be re-delineated.

Development Corridors (DC) and Functional Development Areas (F) (indicated on Map 2, in the 2007 SDF)

The 2007 SDF indicates that the opportunity that prominent routes create, should be utilized and be linked with land use planning to ensure optimal utilization of resources and infrastructure along these routes and/or routes which links nodes/clusters. By integrating land use planning and movement patterns of people, will therefore not only contribute to the optimal use of resources and infrastructure (e.g. roads), but explore economic opportunities at the same time.

Strategic development corridor routes or SDI’s of which two runs through Polokwane’s municipal area, has been identified on a national level.

The FDA’s should be adopted in such a way that land use planning supports interaction with economic opportunities, without jeopardizing other development initiatives and land use management policies. It is proposed that specific policies should be adopted to address development along the FDA’s. Apart from the SDA’s, certain Functional Development Areas should be developed according to a specific time frame.

According to the 2007 SDF, the major links with highest opportunity for integration are therefore identified as Development Corridors and also compliments national identified SDI’s. The Development Corridors itself stretch beyond the areas involved in the Functional Development Areas (F) at this stage.

Therefore it may happen that the area of certain SDF’s be extended/revised from time to time and after detail investigations were done, to address the needs in this regard. It is also noticeable that although the SDI’s may include larger or along a route stretching through the municipal area the strategies in this framework plan only utilize or focus on specific portions or nodes along these SDI corridors.
Development Corridors

(DC’s)
No development in DC’s should be, in the opinion of the municipality, detrimental to other strategies in this plan or prejudice the viability of other already identified nodes, industrial areas and functional development areas.

DC 1
The Pretoria/Gauteng – Polokwane City – Mankweng – Tzaneen Development Corridor
This corridor involves 3 F’s as proposed at this stage, namely the Southern Gateway, Eastern Gateway and the Outer Eastern Link

Functional Development Areas
The FDA’s should be adopted in such a way that land use planning supports interaction with economic opportunities, without jeopardizing other development initiatives and land use management policies

Eastern Corridor Development Corridor (F3)
Previously, this functional development area has been called the Eastern Corridor or Private Transport Corridor and involves the Thabo Mbeki and Grobler street one-way pair and stretched from Biccard Street up to the Savannah Centre (originates at the regional medical node)

Northern Gateway Development Corridor (F4)
It starts at Landros Maré Street extension on the northern border of the CBD and runs through the industrial areas (Extensions 3 and 12) and past the International Airport, and also includes parts of Annadale.

The international airport and area in the vicinity thereof, holds the potential to become an IDZ as indicated earlier in this document. The emphasis of future development in this area should be placed on the processing of goods to be exported to Southern Africa via the airport

DC 2
Burgersfort/Chuenepeort - Polokwane – Makhado Development Corridor
The most important strategy in this plan only involves one SDA, namely the Northern Gateway. New N1 alignment and IDZ forms part of the development area/gateway.
The southern entrance from Lebowakgomo is in the 2007 SDF considered to be of less importance than the eastern and northern corridors.
The municipality may consider certain limited development along this road towards the smelter complex (Supportive to the smelter)

Integrated Public Transport Corridor (F1)
"Development Plan for the Public Transport Integration Corridor alongside Nelson Mandela Drive, August 1999. [Council resolution: Item 94 of 5 September 2000]. Due to the re-alignment of the N1 Toll road by-pass, the revision of this plan is necessary

Southern Gateway Development Corridor (F2)
This corridor is an excellent example of positive spin-offs from this type of forward planning of a development corridor if recent development is considered. However, the continued consideration of appropriate land uses is essential for the long term sustainability of this corridor as well as not to jeopardize other initiatives in this SDF plan (ivydale area)

Outer Eastern Link (F5)
This Functional Development Area (F) is part of the Tswana(Pretoria)/Gauteng – Polokwane – Mankweng – Tzaneen Development Corridor (DC1) which will play a major role in integrating the Polokwane and Mankweng clusters with another. This functional development area (F5) starts where the Eastern Gateway Development Corridor (F4) ends. From here it runs up to the area in the vicinity of the Boyne and Ga-Mokwane villages, on the eastern border of Polokwane. Development should at this stage be focussed at major intersections along the route
The development corridors and functional development areas play an important role in terms of integrated land development and land uses establishing in support of each other in order to promote economic development.

In certain instances, e.g. F1 scenario, the fact that the N1 western by-pass will not be constructed in the near vicinity, it has a direct impact on the proposals contained in the integrated transport corridor.

The fact that the N1 eastern by-pass has been proclaimed and is currently functional, it will in future (i.e. 2020 onwards) open new development opportunities at main intersection points along the route.

Areas for future industrial development

Apart from the existing and vacant industrial areas within the Polokwane PGP, some other opportunities for development (e.g. Polokwane Extension 108). Each potential new development should be evaluated on its own merits throughout the municipal area. (e.g. the platinum smelter). However, each case should be evaluated extensively and the necessary procedure of proper township establishment must be followed read in conjunction with Municipal policies that support such development through phasing, availability of infrastructure etc.

Industrial development holds great economic potential and benefits for Polokwane. Thus the municipality should endeavor to promote industrial development.

- Emphasis is placed on the potential for an IDZ development in the vicinity of Pietersburg X 12.
- Large new industrial developments are taking place towards the north east of Pietersburg X 12.

This area is transforming into a large industrial node, which can develop into an Industrial Development Zone once a detail study is conducted taking in to consideration of the infrastructure capacity and development phasing, with the Gateway airport as one of the economic anchors.

It will be important to delineate the industrial zone/ include it in Urban Built-up area where development is prioritised.

Densities

The SDF has an objective of promoting higher density for residential areas in order to achieve a more compact “urban” structure, which will ensure optimum utilization of services, infrastructure etc. densification patterns w.r.t. Polokwane PGP.

The municipality further believes that these areas are indeed areas which should be marketed and developed extensively. The areas/nodes and/or types of development are:

- CBD/Inner city;
- SDA 1, 2 and 3;
- Higher density dwelling unit development in the upper town of Pietersburg;
- Medical and related uses in the Regional Medical Node;
- All residential development (including urban renewal) within clusters and consistent with other land use policies;
- Industrial areas/development.” (SDF, 2007: 16)

Land uses is currently administered by means of the Pietersburg/Seshego Town Planning Scheme, 1999. This scheme is in the process of being updated to the Polokwane/Perskebult Town Planning Scheme, 2007. Cognisance should be taken that although the scheme will makes provision for certain densities, any land use right or subdivision permitted, should comply with the guidelines set out in this part of the SDF. Similar initiatives should be introduced once land use/zoning schemes have been introduced in other areas within Polokwane Municipality’s area of jurisdiction where land use is currently not administered by means of a town planning scheme. This is not necessarily the case presently.

However, in areas where no zoning/land use scheme is in operation, densification is discouraged. This is specifically the case with agricultural earmarked land where ad-hoc subdivisions may lead to improper spatial patterns and improper utilization of services” (SDF 2007: 86).
“a) Densification per area/ neighbourhood (SDF 2007: 86)

The next figures provides maps of densification allowed for existing townships and new townships i.r.o. “Residential 1”, “Residential 2” and “Residential 3” zoned erven in specific areas within Polokwane PGP.

In general Table 50 below provides a general reflection of:
- The permitted maximum densities in different areas/neighbourhoods;
- The permitted minimum erf sizes, should subdivision occur i.r.o. detachable units. [Also see par. (d) below]

### TABLE 50: TABLE OF PERMITTED DENSITIES AND MINIMUM ERF SIZES OF ERVEN IN TOWNSHIPS/AREAS UNDER CONTROL OF THE PIETERSBURG/SESHEGO TOWN PLANNING SCHEME, 1999.

<table>
<thead>
<tr>
<th>Neighbourhood/Area</th>
<th>“Residential 1”</th>
<th>“Residential 2 &amp; 3”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max. densities permitted</td>
<td>Max. densities permitted</td>
</tr>
<tr>
<td></td>
<td>*Min. erf size i.r.o. subdivided portion/s (detachable units)</td>
<td>*Min. erf size i.r.o. subdivided portion/s (detachable units)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Neighbourhood/Area</th>
<th>Max. densities permitted</th>
<th>Min. erf size i.r.o. subdivided portion/s (detachable units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polokwane “bo-dorp”, (between Burger &amp; Oost Streets)</td>
<td>20 units/ha</td>
<td>64 units/ha</td>
</tr>
<tr>
<td></td>
<td>500m²</td>
<td>500m²</td>
</tr>
<tr>
<td>Polokwane CBD and Bo-Dorp up to and including Burger Street</td>
<td>30 units/ha</td>
<td>&gt;64 units/ha</td>
</tr>
<tr>
<td></td>
<td>300m²</td>
<td>300m²</td>
</tr>
<tr>
<td>Seshego all zones, Pietersburg x 65, (SDA 1)</td>
<td>30 units/ha</td>
<td>64 units/ha</td>
</tr>
<tr>
<td></td>
<td>300m²</td>
<td>300m²</td>
</tr>
<tr>
<td>Pietersburg x 40</td>
<td>30 units/ha</td>
<td>64 units/ha</td>
</tr>
<tr>
<td></td>
<td>300m²</td>
<td>300m²</td>
</tr>
<tr>
<td>Pietersburg x 44, New Pietersburg</td>
<td>30 units/ha</td>
<td>64 units/ha</td>
</tr>
<tr>
<td></td>
<td>300m²</td>
<td>300m²</td>
</tr>
</tbody>
</table>

Notes: Refer to relevant Densification Maps for exact location and boundaries of areas/density zones identified in table.
- Minimum erf sizes of subdivided portions is applicable should erven be subdivided.

The table above REPRESENTS THE FORMAL TOWNSHIPS IN POLOKWANE/PERSKEBULT CLUSTER ONLY

“b) Criteria i.r.o. densification: “Residential 1” zoned erven
In terms of the Pietersburg/Seshego Town Planning Scheme, 1999 the maximum densification possible under “Residential 1” zoned erven by means of consent use i.t.o. clauses 21 and 20 of the scheme, is 30 units per hectare, or 1 dwelling unit per 300m². However, it is obvious from sub-paragraph (a) above that the maximum densities permitted should be consistent with Table 6 and the densification map as contained in Figure 3. This means that although the town planning scheme provides for a maximum density of 30 units/ha, it should not be permitted should such density exceeds the densities as set out in the municipality’s policy, i.e. Table 6 and Figure 3.

In terms of the criteria, clause 19.1 of the town planning scheme stipulates that the proposed use (densification) if a consent use application is lodged, should be considered by means of the following, namely:

- The amenities of the area;
- Health and safety of the area;
- The character of other uses in the area;
- The need and desirability of the use concerned;
- IDP and for that matter, this SDF as well as any other policy guideline contained herein.

### Criteria i.r.o. densification: “Residential 2 & 3” zoned erven

In terms of the Pietersburg/Seshego Town Planning Scheme, 1999 the following densification is possible under the higher density uses, namely:

- “Residential 2” zoned erven the existing right (primary right) is 30 units per hectare and by means of consent use i.t.o. clause 20 of the scheme, a maximum density of 44 units per hectare is possible. However, it is obvious from sub-paragraph (a) above that the maximum densities permitted should be consistent with Table 6 and the densification map as contained in Figure 4;
- “Residential 3” zoned erven the existing right (primary right) is 44 units per hectare and by means of consent use i.t.o. clause 20 of the scheme, a maximum density of more than 64 units per hectare is possible. However, it is obvious from sub-paragraph (a) above, that the maximum densities permitted should be consistent with Table 6 and the densification map as contained in Figure 4.

- In terms of the criteria, clause 19.1 of the town planning scheme stipulates that the proposed use (densification) if a consent use application is lodged, should be considered by means of the following, namely:
  - The *amenities of the area;
  - Health and safety of the area;
  - The character of other uses in the area;
  - The need and *desirability of the use concerned;
  - IDP and for that matter, this SDF as well as any other policy guideline contained herein.

- Apart from these criteria the following *additional criteria should be applied/motivated which forms part of consideration i.r.o. the desirability and amenities of the area.
  - Proximity of the proposed development i.r.o. Open Spaces (parks) and recreational facilities;
  - Proximity of the proposed use i.r.o. schools;
  - Proximity of the proposed use i.r.o. shopping facilities for convenience goods;
  - Proximity of proposed use i.r.o. other community facilities and services such as medical facilities, community libraries, places of public worship etc.
  - Proximity of the proposed use i.r.o. high order routes/bus routes and public transport facilities;
  - The suitability of the property i.r.o access to individual units as well as access to and from the adjoining public street system. Panhandle erven/entrances are not desirable with any density exceeding 44 units per hectare;
  - The suitability of the property i.r.o. the shape of the property, taking site layout of individual units into consideration as well taking possible negative impacts on adjacent property into consideration, with reference to the following:
    - Orientation;
    - Privacy; and
    - Convenience.
  - [Also see paragraph (d) below];
  - The suitability of the property i.r.o. the size and street frontage.
  - Densification from 45 units/ha and higher will not be permitted on property with an area smaller than 1400m² and with a street front less than 18meters;
  - Densification from 30 units/ha up to 44 units/ha will not be permitted on property with an area smaller than 700m² and a street front less than 12meters;
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- Densification of higher than 64 units per hectare, specifically in the area between the CBD (Biccard Street) and Burger Street, will not be permitted on erven smaller than 2855m², and
- The suitability of the property and individual dwelling units i.r.o. parking, including parking for visitors on the property.

d) Criteria & standards i.r.o. subdivision and erf sizes during township establishment

Although Table 6 provides for specific densities, it does not necessarily mean that the property will be subdivided. However, should the erf be subdivided into further portions, the table also provides for minimum erf sizes, both for the categories of “Residential 1” and “Residential 2 and 3”. These minimum erf sizes are also applicable i.r.o. any new township establishment application in the affected area.

For subdivision or layout of erven, the following criteria applies, namely:

- Orientation:
  - Affording most sunlight to erven/units (north facing);
- Privacy:
  - As density increases, the importance of design for privacy increases. With development or subdivision of any erf smaller than 500m² privacy should be clearly addressed;
  - Privacy can be created by barriers and design/style;
  - Balconies on double storey dwelling units erected/to be erected on smaller erven should not prejudice privacy of adjacent erven and vice-versa.
- “Convenience:
  - The degree of physical ease or lack of difficulty in progressing through daily activity and movement;

Slopes:

- Maximum gradient/slope to be allowed is 1:4;
- Erven with steeper slopes, the erf size should be increased;
- Slopes of panhandle erven shall not exceed 1:8;
- Borders and corners:
  - It is preferred that erven with 2 or more street fronts should be 20% larger than the ruling erf size in the area;
  - Erven with sharp corners should be avoided.

Erf front:

- The erf front of rectangular erven should not be less than 10m in the case of detached dwelling units and 5m in the case of semi-detached dwelling units;
- The erf front for irregular shaped erven should not be less than 3m;
- Erf shape & proportion:
  - Erven should be properly shaped, especially if the erf is smaller than 500m².
  - The ideal proportion is: a=0,64b [where a=street front; b=depth]. Irregular shaped erven should normally be 20% larger than the ruling erf size
  - Irregular shaped erven should under no circumstances be smaller than 400m²;

Erf size:

- Minimum erf sizes of erven to be subdivided shall be in accordance with Table 6;
- Apart from the above mentioned minimum erf sizes, the municipality may permit a 10% deviation of the minimum erf size in the case where semi-detachable dwelling units will be provided. (The necessary Site Development Plan should be submitted and conditions should be laid down in order to guarantee the development outcome);

Panhandle erven:

- Panhandles shall not be less than 3m wide in the case of a density of one dwelling unit per erf.

In order to accommodate 2-way traffic, panhandles shall not be less than 6m wide in the case of any density from 45 dwelling units per hectare and higher. These requirements may be relaxed in exceptional circumstances if a proper traffic impact study is submitted to proof the desirability thereof.

Area Specific Spatial Framework Plans and/or policies which guide spatial planning and land use management.

The purpose of these area specific framework plans, development plans and/or land use management policies, forms the 3rd level of plans pertains to the Spatial Development Framework.

These plans and policies contain more detail and specific guidelines in order to:
• Provide guidelines for future development in a specific area and according to specific needs;
• Facilitate and promote development;
• Initiate land development;
• Management of land development and land use;
• Co-ordinate development of land i.r.o. engineering services and infrastructure in order to be consistent with level 1 and 2 plans;
• Co-ordinate land development with private sector, developers and other role players as well as public in general;
• Address development needs in the form of policy guidelines as well as standards;
• Provide policy on incentive schemes;
• Identify suitable land for development;
• Etc.

These plans should strengthen 1st and 2nd level plans indicated above.

These framework plans and/or land use management policies are:

• Framework Plan for Mankweng/Badimong SDA4
• Policy pertaining to Regional Medical Node (revised) 2006;
• Public Transport Integration Corridor (F1) Development Plan alongside Nelson Mandela Drive, August 1999 (to be superseded by the Nelson Mandela Corridor Framework Plan);
• Southern Gateway Development Plan and Framework Plan for Ivylade Agricultural Holdings, June 1999; (SDA 2 Framework Plan, currently under revision)
• Eastern Corridor Development Plan and investigation to formulate policy on the Biccard Street Transitional area, July 1999. (Superseded by CBD development / expansion investigations, 2007-2008)

• Framework Plan for the Seshego central business area – in process (Notes:1. Some plans mentioned above may be reviewed from time to time. 2. Some dates reflected above don’t necessarily reflect the date of approval by Council, but date when the plan was compiled.)

4.2.1 SPATIAL DEVELOPMENT FRAMEWORK PLAN FOR STRATEGIC DEVELOPMENT AREA 1 (SDA 1)

4.2.1.1 SDA 1
4.2.1.2 OBJECTIVES / PRINCIPLES

• To optimize the development capacity of the area.
• Promote integrated internal movement network and optimize available linkages.
• Promote proper access to road based private and public transport. Develop Nelson Mandela Corridor.
• Promote public transport and land use activities within walking distance from residential areas.
• Promote residential densification in and around nodes and along major arterials in support of public transport.
• Support sustainable development through the deliverance of basic environmental-, social- and economic services without creating any threats.
• Include environmental features in development in order to optimize the use of resources.
• Provision of easy access to surrounding communities and provide local facilities at multipurpose community centres (MPCC)
• Sufficient provision of rental stock and full-ownership housing.
• Promote the protection private and public investment in the area.
4.2.1.3 CONTENT OF SDA 1 FRAMEWORK PLAN

The purpose of development in this Strategic Area should be to integrate Polokwane City and Seshego. The land within this Development Area is highly suitable for development.

- Priority should be given towards development adjacent to Nelson Mandela Drive and Polokwane Drive, as well as the redevelopment of the New Pietersburg area, and the land directly south of New Pietersburg, and possible industrial development adjacent to the north and west of the existing industrial development (Pietersburg X 9, Pietersburg X 16 and Pietersburg X 17).
- SDA 1 is well located in terms of the CBD of Polokwane and the industrial areas on the northern and western side of Polokwane City. These resources should be optimised.
- The main roads in SDA 1 include the Matlala – Percy Fyfe road, Nelson Mandela Drive and the Dendron Road, and development of community orientated facilities such as retail development and Multi Purpose Community Centres should be focused along the main road intersection points with third order radial roads.
- The main focus is on residential development (low- medium income housing / institutional and government finance investment).
- There is a housing backlog of 22 000 residential units, and 28 000 residential units can be provided in SDA 1.
- There is an uneven distribution of RDP housing in relation to medium income housing development (75:25), which need to be rectified. Therefore, the area towards the south west of the Matlala road (PDA 3) has been included in SDA 1.
- Four functional areas have been identified within PDA 3, wherein development projects should be prioritised.
- The proposed expansion area into PDA 3 include an area of 3800ha, wherein 76 000 new residential erven can be established. It is estimated that the area can accommodate development for the next 38 years, with the current take up rate of 2000 erven per year.
- The aims identified for development within SDA 1 include:
  - Compilation of a detailed framework plan to promote development along Nelson Mandela Drive
  - Identify future land use in SDA 1
  - Identify and include future needs in development proposals, especially with regard to alternative development scenarios, transport and the introduction of mixed land use areas (which should be located at and adjacent to nodal development points).
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- Transport development should be focused on development of public transport, pedestrian movement, optimal integration of land use and transportation and the promotion of pedestrian movement along main arterial roads and development nodes.

- The proposed N1 –western bypass can play a significant role in Local Economic Development and job creation in the area. It should be established whether the road will realise in future.

- Opportunities in respect SMME development close to the existing Malt Factory can be explored. The development of light industries at nodal points, as part of SMME development, should be promoted.

- Development should not be in competition with the CBD of Polokwane City.

- Development of educational facilities in the area should be spatially linked with EduPark, south of Polokwane City.

- The development of a regional fire station should be explored.

- Commercial development should be focussed at important road intersections, especially at intersections with the proposed N1-western by-pass.

Important environmental aspects have been identified, these include:

- The fact that large parts of the development area are affected by the 1:50 and the 1:100 year flood line, may have a detrimental impact on development.

- main environmental sensitive areas have been identified, which need to be conserved, namely: the area next to the sand river (including the bird sanctuary), the river system north of Madiba Park (which should link up with Blood river) and the central drainage area, which should connect to the Sand River.

Priority development should include development of:

- Nelson Mandela Drive/ proposed N1 interchange for non-residential development.

- Development of retail nodes at a ratio of 1: 0.4ha or 1:1087 residents throughout the area.

- Phased development along Nelson Mandela Drive and Polokwane Drive, from Seshego southwards and from Polokwane City northwards

- Residential and commercial development should take place on a free market basis.

- Development in the area is private and institutionally driven.

- Approved retail development at Seshego Circle should be promoted to become a Multi Purpose Community Development Centre (MPCC). The development of other MPCC’s throughout the area should be promoted in order to bring services close to the communities they serve.

- Main infrastructure e.g. waterlines/ bulk storage, electricity and sewer lines are available in the area, and should be optimised.

- Other land uses include the Polokwane Place of Safety, the Malt factory and various industries and commercial uses. The development of ancillary land uses at these nodes should be promoted.

- Convenience to all users of the area should be promoted in the sense that accessibility to transport and commercial facilities should be promoted, and public transport facilities be upgraded.

- Inhabitants should have a choice to various housing typologies and activities, and equality of access to facilities should be promoted.

- The area adjacent and north of the existing industrial areas hold the potential of development of commercial/ industrial related development.

- Area close to the bird-sanctuary holds the potential for recreational/ tourism related development.

- Attention should be given to the development of a diverse community, discouraging homogeneous low-cost housing development in SDA 1.

- The large number of informal settlements in the area needs to be formalised.

4.2.2 SPATIAL DEVELOPMENT FRAMEWORK PLAN FOR STRATEGIC DEVELOPMENT AREA (SDA) 2
4.2.2.1 OBJECTIVES / PRINCIPLES

- Develop a plan which guides development of main roads, street networks and major land uses as well as land uses in the specific demarcated area.
- To create a positive first impression of the city, especially as the N1 forms the main entrance to the City along the N1.
- N1 should be developed as a gateway, along which a mixture of land uses can be permitted.

The following development principles are proposed:

- The N1 entrance to the city should be promoted as a development corridor to promote the city and create a positive first impression of the city.
- The types of development which should be promoted along the N1 “southern gateway corridor” should give road users a glimpse of the major characteristics of the city. A combination of local office, retail, commercial, residential, recreational, conference, accommodation and tourism facilities should be promoted.
- Development should not be detrimental to the aesthetical quality envisaged.
- Development should not negatively impact on the CBD of Polokwane.
- Development should emphasize urban design, and aesthetical quality matters in order to promote the city.
- No specific or detailed guidelines/parameters are laid down in respect of development. Broad principles and ideas should be implemented to create a meaningful urban environment.

4.2.2.2 CONTENT OF SDA 2 FRAMEWORK PLAN

- It is envisaged that most of the land in the Iyvydale area will be developed as a residential area (mainly in the middle income housing segment).
- Other non-residential land uses e.g. retail facilities should be permitted at convenient nodes throughout the development area.
- The establishment of Multi Purpose Community Centres at nodal points should be promoted.
- Development in SDA 2 should not negatively impact on the CBD of Polokwane.

- Development along the N1 (Southern Gateway) should include local offices, retail, residential, accommodation and tourism and conference facilities.
- No specific design patterns and guidelines are laid down to control development. Development should rather be guided by broad principles and ideas.
- Important landmarks/land uses in the area include the Meropa Casino, arts and crafts market, commercial uses (e.g. Builders Warehouse), motor retail facilities, new neighbourhood centre along Church Street extension and the approved Convention Centre along the N1-southern gateway entrance.
- Various residential densities have been identified, up to 64 dwelling units per ha.
- The existing plots on Iyvydale can be divided into smaller plots of up to 1ha each.
- Special attention need to be given to the development of a road master plan for the Iyvydale/Ivypark development.

4.2.2.3 RELEVANCE/ISSUES TO BE CONSIDERED.

- The N1-south plays an important role in the development of the area south west of Polokwane City, since it creates a positive first impression of the city for road users entering the city from Gauteng.
- The upgrade of the N1 eastern by-pass opens new development potential at the intersection of the N1 by-pass and the Burgersfort Road (P33-1).
- Integration of the SDA 1 and SDA 2 should take place along the Gauteng/Polokwane railway line, adjacent and to the north of SDA 2 (Ivydale agricultural holdings area).
4.2.3 SPATIAL DEVELOPMENT FRAMEWORK PLAN FOR STRATEGIC DEVELOPMENT AREA 3 (SDA 3)

The following development principles are proposed:
- Control must also be flexible, but if deviation on accepted norms and standards are applied, it must be substantiated;
- Control must contribute towards healthy competition;
- Focus should not only be placed on the need, but also include the desirability aspects of an application;
- Changes in community needs and consumer patterns must also be recognized as aspects which may contribute towards a continuing process of amending this policy and standards;
- The composition and function of a centre are also determined by economic factors which change over time.

4.2.3.1 OBJECTIVES / PRINCIPLES

- Natural environment and establish a functional regional open space system.
- To strengthen the spatial structure and legibility by clearly defining the regional road network system and hierarchy of activity nodes and within the constraints defined by the regional open space system.
- To establish a proper, functional road network serving local and regional movement needs.
- To identify areas for the growth and expansion of residential uses as well as social and economic activities based on existing and projected development needs.
- To determine appropriate residential densities and viable development options.

- To provide development principles and guidelines for land use management and urban design.
- To formulate proposals regarding a phased Implementation Programme in accordance with the capacity of engineering infrastructure and the road network in the area, as well as the financial capacity of the Polokwane municipality.

The main focus of development is residential (middle–higher income) of nature. Supportive land uses e.g. retail and commercial developments are permitted within convenient distance from residents.

- Rural residential occupation (low density residential development) has established at Broadlands, southwest of the intersection of the N1 eastern bypass and the Modjadji’s Kloof Road (R81).
- The development of Multi Purpose Community Centres at nodal points should be promoted.
- The large number of security villages (enclosed townships) in the area may lead to the fragmentation of the urban form and negatively impact on the local road network system, if through fares are limited/restricted.
- Various non-residential land uses have been promoted in the area, e.g. the super regional shopping centre, at the north western intersection of the N1 eastern bypass and the Modjadji’s Kloof Road, and a corporate office development on the
south eastern corner of the N1 eastern by pass and the Modjadji’s Kloof Road. Recreational and tourism orientated facilitates are located along the R81 (Modjadji’s Kloof road).

- Environmental aspects
  - The northern rocky outcrops of the Sterkpark Koppie (Farm Krugersburg) have been identified as an environmental sensitive zone. Euphorbia Chivicola, which has been declared a red-data species, is found in this area. It is proposed that a botanical garden be established in this area.
  - A few drainage corridors have been identified, which links nature conservation areas with each other. e.g. Kuschke Nature Reserve, Polokwane Nature Reserve and the Bird Sanctuary.
  - The African Bull frog, which is identified as an endangered species, is found in most of the drainage areas of natural streams and wetlands in SDA 3. Development along streams and wetlands should include mitigating measures to preserve the natural areas.
  - The three drainage systems in the area are form giving elements which influences the urban form.

- Development in the north eastern townships is predominantly residential of nature and privately driven.
- Care should be taken not to create uncontrolled development of enclosed townships, which may lead to unsustainable townships.
- Institutional influence (e.g. Bendor Integrated Housing Development Scheme) in terms of the “Breaking of New Ground Policy” of National Government can influence the development and introduction of a fine middle-income development in the area.
- Equitable access to various forms of housing development, for all income segments in the market, should be promoted.
- There are 3 Major Radial Road networks in the area which may have an influence on spatial development, namely the Molepo Road (south east of the study area), the Tzaneen Road (east of the study area) and the Modjadji’s Kloof road (north east of the study area). The upgrade of the N1 eastern by-pass introduces various new development opportunities at road intersections.

- Most of the retail development in the area can be accommodated at important intersections of the N1 eastern by-pass and secondary roads.
- 3rd order roads include De Wet Drive and Veldspaat Street. Other important roads include Die Meer Street and Outspan Drive.
- The Civil Airport, and various tourism/ recreational facilities (e.g. 4X4 tracks, moto cross track and the Polokwane Game Reserve) in the southern part of the study area hold development opportunities.
- The Peter Mokaba Sport Stadium/ Edu Park tertiary educational node in the south western part of the area, holds creates a strong link between the airport and other recreational facilities in the area.
- Retail development should take place at nodal points, as identified in the Framework Plan for SDA 3. 8 nodes exist; 1 regional node (Savannah Centre), 3 neigbourhood nodes (Cycad, Flora Park and Bendor), 4 local centres (Ancharlene, Webster/ Marshall street intersection, Welgelegen and Eduan Park, and the Dalmada local shopping facility).
- One regional shopping facility has been approved at the intersection of the N1 by pass and the Modjadi’s Kloof road, 1 neighbourhood centre exist at Bendor X 87 and 3 local centres have been approved in the area (Sterkpark, Pietersburg X 28 and Flora Park).
- suburban office nodes exists, some of which are undeveloped: Hampton Court, Pro-Park, (Platinum Park 1 & 2, Ismini Office Park), Pro Limpopo and Eduan Park.
- The high property prices of farmland in the Koppiefontein area have resulted in development taking place on alternative land, further to the north east of the existing urban development area.
- Factors such as environmental sensitivity and the development of civil services infrastructure in the far north eastern parts of SDA 3 are constraints that influence development.
- Development in the area take place at a rate of 2000 residential stands per annum.
- Aim is to integrate development by the introduction of multi-functional streets, and to establish a combination of various community orientated land uses at important nodal points.

Important issues that need to be addressed:
- The configuration of the N1-by pass (final alignments)
Clarify the detail design of the R81 and R71 off-ramps, which will have a direct impact on the non-residential land uses that can be introduced at the intersections.

The municipality has identified the need for the extension of the electricity network into the north eastern part of SDA 3. Planning in this regard has commenced. ESKOM need to be involved.

A need was identified to develop a storm water master plan for the entire SDA 3 area.

Detail planning for the proposed 6 Multi Purpose Community Centres should proceed.

In view of the fact that various private township developments take place in the area, it is important to establish a sound policy which regulates the collective contributions of private developers towards future provision of community facilities.

4.2.3.3 RELEVANCE/ ISSUES TO BE CONSIDERED.

- The development of enclosed, security townships should not negatively impact on the spatial form of the city.
- Clarification is needed regarding the final alignment of the N1 eastern by pass and the design of the off-ramps at the R71 and R81 intersections, since it may impact on future developments that can take place at these intersections.
- Environmental sensitive area should be protected and incorporated into future developments.
- Features such as the Municipal Airport, sport stadium, nature conservation areas and the recreational facilities should be optimized and the potential to influence / promote future development (e.g. SMME) should be investigated.

Other relevant Land Use Management Policies applicable to the Polokwane Municipality’s area of jurisdiction include:

- Policy of Wildlife Estates (currently under consideration at the Council)
- Revised Policy on Outdoor Advertisement Control, 2009
- Telecommunication Infrastructure Development Policy, 2008, and the
- Revised Policy on Spazas and Taverns, 2000

Definitions/procedures for application in respect of the last mentioned policies are addressed/contained in the Town Planning Scheme, 2007. In terms of the 2007 SDF, there are plans/policies which will be necessary to compile or be reviewed in the near future, these are:

- Framework Plan for the Chuenespoort-Makhado (Louis Trichardt) Development Corridor (DC2) which includes the Northern Gateway (F4) and the area south of the city on the road to Chuenespoort/Lebowakgomo/ Burgersfort up to the Polokwane Metallurgical Complex (platinum smelter);

Specific attention need to be given to the formulation of important new policies. The municipality has to re-evaluate the current policies in terms of existing trends and national policy guidelines and adapt policies where applicable.

Service Administration Areas – administrative clustering

- Apart from the above mentioned spatial framework, four areas which serve purely as administrative clusters in respect of administrative or institutional arrangements are identified in terms of the 2007 SDF. They are Service Administration Areas (SAA’s) in this section and include the following areas:
  - Polokwane Service Administration Area (SAA);
  - Mankweng Service Administration Area (SAA);
  - Chuenes-Maja Service Administration Area (SAA); and
  - Moletji Service Administration Area (SAA)

4.2.3.4 LAND USE MANAGEMENT

The concepts: Land Use Management v.s. Land Use/Zoning Schemes

The following statements/submissions are made in the 2007 SDF in respect of Land Use Management Schemes:

“The Land Use Management Bill, March 2001 defined:
“Land use management” to mean “… establishing or implementing any statutory or non-statutory mechanism in terms of which the unencumbered use of land is or may be restricted or in any other way regulated.”

Whilst, “Land use scheme” to mean “… a scheme which - regulates the use of land in the area; records the permissible use of each piece of land in the area.

Therefore the concept of a Land Use Management System (LUMS) will refer to the mechanism in terms of which imaginative use of land is regulated in one way or another, which may include the adoption of a Land Use Scheme which will have the binding effect to land. It is furthermore accepted that any spatial development framework, policy, structure planning and other guidelines accepted by the municipality, forms part of the regulation of land by guiding and informing the LUMS and legally effecting decisions to be taken to amend the Land Use Scheme.

The LUMS is therefore interpreted to be a much broader term which incorporates different aspect affecting land, land use and development from policy making level (strategies, principles in the IDP) up to final development control measures (conditions in land use scheme/use zones).

The basis of the LUMS and basic principles derive from policy and strategic based decision from the IDP and more specifically the Spatial Development Framework thereof.

A Land Use Scheme on the other hand, is interpreted to be a scheme, which subsequently regulates and records the permissible use and/or restrictions applicable to each property within the area of the municipality. It is therefore the “mechanism” or legislative document which provides the final management/control over land use over each piece of land, on a more administrative and technical level in accordance with the LUMS in general. A simple schematic diagram is explain it as follows:

Guidelines governing land use management

Primary guidelines governing land use management

- A Land Use Management Systems (LUMS) is acknowledged as the mechanism used for administration and execution of the spatial development framework in order to obtain/secure the municipality’s desired spatial form through addressing property/land use rights at a level of each property/erf. It is thus the day-to-day administration.
The LUMS must be policy-led within the parameters set by the spatial development framework, land use policies, other policies and strategies of the municipality. To be able to effectively apply LUM based on the needs of the community, development trends, legislation etc. a continuous re-alignment of policies will be necessary.

The LUMS must be based on:
- Sustainability;
- Equality;
- Efficiency and smart governance;
- Integration; and
- Fair and good governance.

In order to address developmental needs, contribute to sustainable development and a healthy environment etc., the LUMS should provide effective procedures and policies to ensure that zonings (land use) can:
- be amended;
- give resistance to unwanted practices, changes and land uses; and
- be enforced.

The LUMS may also provide for measures i.r.o. infrastructure development issues in cases where new land development occur.

The LUMS must take the fiscal issues, institutional and administrative capacity of role players, needs of communities and the environment into account.

Although the principle of participatory governance is supported, the current situation in the province and especially in the area of jurisdiction of the Polokwane Municipality which is based on a “dual planning system” in terms of land use management (LUM), embodied in the current planning legislation and delegation of the function itself, needs to be addressed and corrected as a matter of urgency in order to:
- give the municipality complete autonomy over LUM and development and town planning matters;
- address unwanted spatial forms and undesired uses which are currently being created/continued;
- standardise land use management throughout the municipal area and ensures a uniform LUMS which will benefit the community, residents and developers.

Secondary guidelines governing land use management

The LUMS will be done by addressing the use of land through a system:
- to regulate the use of land in an area;
- which record the permissible use of each piece of land/each erf;
- zonings and zoning schemes and development control measures;
- of land use policies or framework plans.

Two facets are therefore necessary to ensure effective land use management, namely:
- Zoning and/or zoning schemes; and
- Land Use Policies or framework plans.

An incremental approach for the introduction of zoning schemes will be followed. It is accepted that the perfect land use management and planning system can’t be developed over night, but can only be developed over time into a more elaborate system/zoning scheme. Therefore, the introduction of zonings schemes must start at higher order settlements (growth points and population concentration points) as well as some other problem areas and moving downwards in the hierarchy to even include farm land areas.

The principle of minimalism must further apply. The different zoning schemes must be directed towards only achieving/controlling necessary aspects in a certain area and towards directing resources to achieve key actions that produce high impact.

Within the areas (e.g. growth points) where the most development pressure exists and where the largest spectrum of activities and specialized land uses must be entertained, a specialized zoning scheme and set of land use regulations are necessary. The opposite will therefore apply to villages and small settlements where a rudimentary zoning scheme will suffice;

Current legislation will be utilized to introduce zonings or town planning schemes, until such time that new legislation will provide for such systems. However, it is accepted that...
the municipality can’t wait until new legislation is promulgated before stating to address appropriate LUMS in all his areas.

The total area of the municipality must be covered with zoning schemes, which will constitute a uniform LUMS.

Uniform procedures, measures and evaluation procedure must apply to all LUMS aspects and application to change land use rights. However, the LUMS must recognize the differences that occur in different areas;

The following matters must form the major components of the LUMS, namely:

Township establishment;
  - Change in primary land use rights (rezoning);
  - Change in secondary land use rights (consents);
  - Subdivision and consolidation of land and erven;
  - Character of the built form and development control measures;
  - Submission of Site Development Plans;
  - Land development regulatory procedure;
  - Patterns of land use;
  - Location and nature of development;
  - Private and public land development and infrastructure investment; and
  - Desired or undesired utilization of space/property/land/erven.

The major components of a zoning/town planning scheme must consist of:

A set of maps indicating the use zones and/or zonings applicable to each property/erf;

Scheme clauses which set out land use rights and development control measures, whereby such clauses may include:

  - Definitions of terms used in the scheme which should be consistent with terms used in schemes throughout the area of Polokwane
  - General and directive principles as well as criteria for the consideration of all types of applications and land use changes;
  - General conditions applicable to all properties (e.g. protection of land and the environment; handling of storm water; maintenance of buildings etc);
  - Specific conditions applicable to use zones (e.g. densities and occupation to residential use zones and dwelling units; conditions applicable to filling stations);
  - Determine the purpose for which each piece of land may be used. This may take the form of use zones and uses permitted under each use zone;
  - Set out conditions applicable to each purpose/use and/or use zone;
  - The conditions should at least include
    - Densities and intensities of use;
    - Type, extent and scale of buildings and structures that may be erected;
    - The coverage, height, and Floor Area Ratio (FAR) and other restrictions;
    - Conditions applicable to boundaries, building lines and building restriction areas;
    - Parking ratio’s and loading zones to be provided;
    - Submission of Site Development Plans;
    - Conditions applicable to consents and permissions granted under use zones/uses
  - Set out and provide procedure in respect of applications to be lodged in terms of the scheme, especially in respect of consents and permissions to be granted;
  - Provide for regulation in respect of signs and outdoor advertising on property and buildings; and
  - Provide and stipulate the powers of the municipality and make provision to introduce further by-laws in this regard.
  - A system of delegation of powers may also be introduced to ensure effective and smart governance.

Care should be taken that a uniform set of Land Use Management Conditions/ systems apply throughout the municipal area.

Definitions and terminology used in the Land Use Management System should correlate with terminology and trends used in other Policy Frameworks, e.g. densification policies.

The Land Use Management System for Polokwane – Polokwane Municipality’s approach to the development of a Land Use Management System is clearly outlined in P101 – 104 of the 2007 SDF.

This approach has been taken with the compilation and adoption of the Polokwane/Perskebult Town Planning Scheme, 2007.
Communal Land Rights Bill

The spatial relevance of this Bill is discussed in detail in the 2007 SDF (P105-P108).

The aim of the Bill is shortly described as:

- Give legal recognition to land tenure rights held by a community
- Confer legal status of tenure
- Provide legally secured tenure
- Provide for suitable comparable redress for people whose tenure were insecure
- Regulate decision making
- Protect fundamental human rights (equality, democracy pertaining to land tenure, democracy pertaining to decision making)
- One of the most important aims of the Bill/Act is to give Legal security to land.

The juristic personality of a community is:

- After registration of rules a person/community becomes a juristic person’
- May then deal with land... (acquire/dispose, encumber such immovable property or real right by mortgage, servitude or lease...)

The transfer of Communal land can occur as follows:

- The Minister can cause land/parts thereof to be transferred to certain interested parties
- A conveyancer (attorney) will perform registrations etc.;
- The process will include all forms of land tenure;
- An Administrative structure shall request Minister’s approval for the opening of a communal land register. This applies to all land registered in an interested parties name;
- Registered owner of a land tenure rights may apply for the conversion of his/her land tenure right to full ownership.

Analysis

- From the abovementioned, it is clear that the intention of the Bill is to give ownership to people who lived in former tribal authority areas. This will enable inhabitants of such areas to legally deal with land. Transfer of land can take place from one person to another; land can be mortgaged, etc.
- Furthermore, a community may adopt rules etc., which will guide development and administration of such areas which are to be converted. These rules should be democratically compiled and be to the benefit of the whole community.
- It seems as if the Minister of Land Affairs will allocate the necessary funds needed in the process of transformation from converting the land from tribal land to individual ownership. (i.e. transfer costs, registration, surveying).
- The last statement is of very importance for the municipality and will impact on the IDP.
- Possible impact on the Municipality
  - Most of the villages, which fall within tribal authority areas, and are controlled in terms of Regulation 188 of 1967, are located either in 3rd or 4 and 5th order settlements (local service points/village service points or smaller villages).
  - Thus, should the villages be formalized, surveying of the towns should take place. As mentioned, it seems as if the Minister of Land Affairs will fund the registration and surveying, etc. of these villages/settlements.
  - The surveying and formalization of townships may, in future, put pressure on the municipality to provide higher level of services in low-priority nodes, i.e. 4th and 5th order settlements.

Property owned by the municipality

- The municipality owns a large number of property of which some are strategically located.
- Since the municipality must nowadays play a developmental role in the new municipal dispensation, the proper development municipal owned land will not only contribute towards positive image thus attracting other development, or increase the revenue base of the municipality once developed, but will also contribute towards LED
- The municipality should focus its resources in respect of servicing land that is strategically located, and which will have positive spin-offs in respect of Local Economic Development.
INCENTIVE SCHEMES TO ATTRACT INVESTMENT & PROMOTE DEVELOPMENT

The current incentive schemes to attract investment and promote development are contained in Pages 110-113 in the 2007 SDF.

4.2.4 POLICY ON LIFESTYLE ESTATES

4.2.4.1 INTRODUCTION

- The development of various types of Lifestyle Estates has increased significantly over the past few years, not only in Polokwane but also in the Limpopo Province and all over South Africa.
- The development of lifestyle estates is reliant on use of natural resource in the context of the pressing social and economic needs in the Polokwane Municipality. It is therefore important to ensure that natural resources (natural resources and the environment) be preserved and optimised in favor of the larger community they are located in. The development of lifestyle estates should promote economic development and job creation, since the last mentioned aspects forms part of the priorities of the Municipality and are critical objectives in context of sustainable development.
- The development of Lifestyle Estates is further informed by the framework of various Planning- and Environmental legislation. Economic development principles, where to all new and existing development within the Polokwane Municipal area should adhere, are addressed in the Integrated Development Plan for Polokwane Municipality. The development of the Lifestyle Policy bear on the principles contained in the Policy on Gated Communities, as contained in the Spatial Development Framework Plan, 2007.
- In view of the fact that the development of lifestyle estates are not only confined to urban areas or land within the urban edge, it is important to have a sound policy in place which guides and inform spatial planning and the development of various forms of private, enclosed townships and lifestyle estates within the Polokwane Municipal area.

4.2.4.2 DEFINITIONS

The following definitions are clarified in order to have an understanding of the various concepts contained in the policy.

“An estate (housing) is a group of buildings built together as a single development. The exact form may vary from country to country. Such estates are usually designed to minimize through-traffic flows, and to provide recreational space in the form of parks and greens.

A village is a clustered human settlement or community, larger than a hamlet, but smaller than a town or city. Villages are normally permanent, with fixed dwellings; however, transient villages can occur. Further, the dwellings of a village are fairly close to one another, not scattered broadly over the landscape (‘dispersed settlement’). Although the town terms are defined differently both refer to a type of human settlement. The argument can also be made that the term “village” can refer to the part of the “Lifestyle Estate” where the houses/dwelling units are grouped. The “village” would then form part of the “Lifestyle Estate” development. The term “Eco-Village” as described in the terms of reference received from the Polokwane Municipality will therefore be replaced with “Eco-Estate”. In the terms of reference a Lifestyle Estate was described as a developed area designed for the purpose of fulfilling the particular way of life of a group of people. At the same time, the similar concept of an Eco-village was described as a group of houses and associated buildings designed to enhance the relationship between the residents and the natural environment. An Eco-Estate will in this study be regarded as a type of Lifestyle Estate as the need to enhance the relationship between the residents of a certain area and the natural environment can also be seen as a certain way of life of a group of people. Lifestyle Estate can therefore be defined and classified as follows:
- A low density rural residential development within the peripheral area of towns or settlements and in some instances in the rural areas of the Municipality with the emphasis on preserving the natural habitat and establishing self sustainable communities specifically regarding the provision of municipal services, as far as possible. These developments provide a lifestyle, a specific standard of living and other communal facilities / benefits to residents.
Lifestyle Estates, inter alia, include the following:

(a) Eco-Estates
Developments which focus on incorporating ecologically sound principles as well as sustainability into the design and management of the development. It is important to note that any development can incorporate principles contributing to the conservation of the environment but it might not be the main focus of the development. A development can only be classified as an Eco-Estate if the main focus of the development is ecologically orientated.

(b) Wildlife Estates
The incorporation of wildlife forms an integrated part of the development and management of these types of estates.

(c) Heritage Estates
These estates will be situated in an archaeologically or historically sensitive area. The aim is to give the residents the opportunity to actively participate in preserving and managing heritage sites in South-Africa.

(d) Recreational Estates
It will incorporate recreational activities (e.g. golf, equestrian, extreme sports, etc.) with environmental management principles, ensuring that the impact on the natural environment is kept to the minimum, e.g. Golf Estates, Polo-Estates, Equestrian Estates, etc.

(e) Agricultural Estates
These estates will be best situated where the natural vegetation of the site has been partially or wholly altered by agricultural activities (e.g. arable or irrigated crops). The soils of the site should have a medium to high agricultural potential. Easy access to local workforce and major roads will impact on the placement of these types of estates.

(f) Mine Estates
These estates can be incorporated into the layout of certain existing and planned mining activities (e.g. pebble mining). It should be ensured that the mining activities will not adversely impact on the health of the residents or the build structures (e.g. residential and associated infrastructures). This estate can also form part of the rehabilitation plan of certain mining activities, after completion (e.g. borrow pits, quarries etc.)

(g) Aeropark Business Estates
Where the residents are mostly pilots/own their own aircraft, and the estate includes runways and aircraft hangars.”

4.2.4.3 LIFESTYLE ESTATES IN POLOKWANE MUNICIPALITY

Polokwane Municipality does not have many existing residential developments which can be classified as Lifestyle Estates. The municipality may receive a number of “lifestyle estates” applications in the near future. Currently, the most prominent example of a “lifestyle estate” within Polokwane Municipality is Broadlands Estate, which can be classified as a “recreational estate”. Other forms of “lifestyle estates” that may be expected in Polokwane Municipal area includes:

- Golf Estates and Polo Field Estates. Wherein it is important to implement sustainable development through the optimization of social economic opportunities in relation to the protection and optimization of the environmental resources. These developments should each be evaluated on its own merits in respect of locality, and desirability, they should not only be restricted to be located within the “urban edge”.

- Wildlife Estates and Private Resorts. Areas which are characterized as natural scenic areas and vistas, next to maintains, dams or rivers, are popular areas wherein these developments tend to locate. Each of these developments should be evaluated on its own merits.

- Country Estates: Country Estates according to this document are dwelling houses (non-permanent as well as permanent occupation) for full title or sectional title development – nature orientated – on agricultural land, state land or municipal land. These developments should each be evaluated on its own merits in respect of locality, and desirability, they should not only be restricted to be located within the “urban edge”. Aspects such as residential densities, availability of engineering services and the impact on the natural environment should be taken into consideration in the evaluation of such developments.
DEVELOPMENT CRITERIA

- Some of the aspects that need to be considered in evaluating “lifestyle estates” include:
- Development should be supported by a proper land use formalization application, and environmental impact assessment.
- Density considerations, including the “nodal werf” concept (that which have positive spin-offs) and nodal cluster (key element include the rural landscape-the spaces between buildings and settlements or sense of place).
- Agricultural consolidation: (combination of a number of smaller agricultural units).
- Agricultural viability: (continued agricultural activity)
- Locality (development should be compacted, at existing development on the land)
- Zoning, coverage and density (as per applicable Town Planning- Land Use Schemes)
- Services and access: (should be maintainable, and normally provided and maintained by the developer)
- Ownership and management (Home Owners Association should be put in place)

4.2.4.4 POTENTIAL DEVELOPMENT ZONES FOR THE ESTABLISHMENT OF LIFESTYLE ESTATES IN POLOKWANE

Non—suitable areas:
- Environmentally/ ecologically sensitive areas.
- Degrades areas

Areas Suitable for Lifestyle Estates:
- Natural woodland areas that are still considered to contribute to the ecosystem on a local basis.
- Thicket & Bushland (ENPAT, 2000);
- Natural Woodland (ENPAT, 2000); and
- Land used for grazing purposes.
- Agricultural / cultivated land can be used for the development of agricultural estates.

The development zones available for Lifestyle Estates were divided into three specific zones according to the distances from the important routes in the Polokwane Municipal area.
- 5km development zone— These areas are the most suitable for the development of estates with a higher density due to the close proximity to the major routes
- 10km development zone – These areas are suitable for the development of Lifestyle Estates, although the niche market will be both for permanent residents and for weekenders. Wildlife and adventure activity estates would be the most suitable estate type in these areas.
- 15km development zone – Suitable for the development of Lifestyle Estates although the distance from the major routes makes the area more suitable for investors that visit over weekends / holidays.

Private lifestyle estate developments have positive and negative impacts. It is therefore necessary to have a proper environmental management plan in place. Lifestyle Estates should therefore each be considered on its own merits, bearing in mind the, conformity to applicable legislation, the impact on the natural- and socio-economy, and considering the availability of services and the suitability of the land for the intended use.

4.3 LOCAL ECONOMIC DEVELOPMENT (LED) DRAFT STRATEGY FOR POLOKWANE LOCAL MUNICIPALITY

4.3.1 OVERVIEW

The Polokwane economy is essentially built on its function as a service centre for Limpopo Province and to a lesser extent for residents from Zimbabwe and Botswana and its northern and western borders.

At current 2006 prices, Polokwane Municipality had an estimated gross geographical product of R18.4 billion (Estimated by Global Insights, 2008). This represented more than 65% of the GGP for Capricorn District, which was R28.3 billion for 200, also at current
prices. Polokwane is the dominant municipal economy in the Capricorn district. It is also the largest municipal economy within Limpopo Province, contributing 16% to the provincial economy during 2006.

The municipal economy has grown on average by 4.6% per year over the past twelve years (2005-2006), which is higher than both the district average of 4.5% and the provincial average of 3.9%. The economic dominance of Polokwane, both within the district and within the province, has therefore increased during this period.

The major contributor to the municipal economy is the finance and business services sector, which is responsible for 30% of the value of production. It incorporates a wide range of activities from banking and consulting services to real estate transactions; and is a reflection of Polokwane as the higher level service centre for most of the municipalities in Limpopo. The second largest contributor (27.4%) is community services. All the head offices of provincial government and the provincial offices of national government are in Polokwane. Wholesale and retail trade, which includes catering and accommodation, is the third largest sector with a contribution of 15.3%. This confirms the municipality’s and the city’s position as a service provider for the entire province. It is also consistent that transport and communication is the fourth largest sector (14.2%), which reflects the distribution of wholesale stock from Polokwane to retailers throughout the Province.

Financial and business services, as well as transport and communication have been increasing their sector contributions steadily over the past ten years. However, the contributions from community services (mainly government) and trade have been gradually declining, because their growth rates are below the provincial growth rate.

4.3.2 KEY STRATEGIC THRUSTS

The Polokwane municipal space includes a secondary city with a relatively highly developed formal economy and scattered settlements in the rural periphery, where economic activity is mostly informal and transaction values are low. The municipal space also includes a range of economic activity levels along this continuum, such as at the densely-populated town of Seshego and at the high-income but smaller town of Mankweng. There are settlements on the fringes of the city and the town that sustain a mix of formal (mostly retail) and informal (retail, services and construction) economic activities. Even within Polokwane city, where economic activities are mostly formal, there are pockets and ribbons of informal activities in between.

Investment and growth in the formal economy provides job opportunities for people from the periphery and often from the informal sector. However, it is recognized that a significant proportion of the labour force do not have access to formal sector job opportunities. This could be because their areas of residence are not of interest to investors, or because they do not have the mobility to access jobs, or because they do not have skills to qualify for the jobs that are created.

The key strategic thrusts that are proposed below, have therefore been designed to increase the competitiveness of the formal part of the local economy to attract investment for job creation and to create opportunities for improvement livelihoods from the informal economy, both in the urban parts of the municipality and in the periphery.

Key strategic thrusts:

- Service Level Improvement for increased local area competitiveness
- Competitive cluster promotion (logistics, agriculture, tourism and mining supply)
- Skills development and innovation
- Maximizing the 2010 Soccer World Cup impact and study
- Informal economy support.

The five programmes listed above include both projects and processes.
The Five Proposed Strategic Thrusts for LED (Draft) in Polokwane

Service Level Improvement
- Management of water and sanitation constraints effectively, efficiently and competitively (Local water resources are almost fully utilized and options for augmentation are limited)
- Implementation of an effective water management system
- Communication with Eskom in order to standardize service delivery throughout municipal area
- Implementation of a transport hub with public transport and pedestrian facility improvements that could become a very effective 2010 legacy project
- Construction programme for rural roads
- Road maintenance
- Obtain for improved utilization of railway line
- Greening plan for the city (2010 project) should be extended to include Seshgo and the rest of the municipality
- Improve coverage levels for a telecommunication services, implementation of an integrated waste management strategy (waste recycling compost making etc.)
- This is a very crucial programme due to the fact that proper maintenance and provision of infrastructure should be seen as the main catalyst for economic development.

Social Services
- Addresses backlog infrastructure and facilities at rural schools
- Implementation of academic hospital in Polokwane
- Implement crime prevention strategy
- Compilation of a Housing Sector Plan

Local Economic Development Services
- Improve local business environment or climate
- Strategic planning and proper land use management
- Expedite the land reform process
- Zoning of areas for informal trading including the classification and densification of sites for different informal sector activities within each zone.

Competitive Cluster Promotion
- Promote Polokwane as the logistics cluster as a destination for people and cargo and the gateway to Africa.

Intermodal transportation hub (International Airport / rail station / Truck inn)
- International convention centre
- Football stadium
- Regional shopping centre
- Fresh produce market

Agriculture
- (Most of the land in Polokwane Municipality (63%) was found to have a low capacity (no land is available for high capability for crops)
- Municipality is more suited for the promotion of a meat cluster
POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK 2010

**Tourism**
- Promotion of eco-tourism that includes living cultural villages (Bakone Malapa was identified as a pilot project)
- Tourism information centre
- Maintenance and development of cultural heritage sites
- Tourism route development and events

**Mining Supply**
- Mining inputs supply cluster including a mining supply part
- Jewellery manufacturing facility.

**Skills Development Area and Innovation**

**Maximising the 2010 Soccer World Cup Impact and Legacy**
- One of the host cities during 2010 World Cup
- Local business opportunities
- Construction
- Accommodation
- Stimulation of formal and informal sector

**Legacy Projects**
- Football support and development
- Venues:
  - Seshego Training Venue
  - Fan Park Polokwane
  - Peter Mokaba Venue
  - Mankweng Training Venue

**Environment and Tourism**

**Informal Economy Support**
- Markets for informal traders
- African market
- Western side of Polokwane Centre
- Pick ‘n Pay Centre
- Southern CBD
- Kerbside Trading

4.4 ADJACENT LOCAL MUNICIPAL SPATIAL ISSUES AND PLANNING (see map 2)

4.4.1 MOLOMOLE LOCAL MUNICIPALITY

**Locality:**
- Molomole Local Municipality falls within the Capricorn District Municipality and is situated on the Northern side of Polokwane Local Municipality.

**Demographic Summary:**
- A large percentage of persons is unemployed which had the implication that economic opportunities need to be promoted.
- The economic sector is dominated by agricultural activities
- Poverty levels are high which will necessitate improved educational facilities and skills empowerment programmes; and
- The low densities within the extensive rural area have a negative impact on accessibility and the provision of cost effective infrastructure

**Corridors:**
- Very limited higher order facilities exist in the areas as most of the residents conduct shopping in Polokwane.
- There is no large industrial activities within the area.
- Primary Corridor:
  - The N1 north-south linkage between Polokwane and Musina – referred to as the Machaka Corridor.
- Secondary Corridor:
  - RS21 between Polokwane via Mogwadi to Alldays
Residential development

- The central area of the municipal area is sparsely populated with no major settlements.
- The eastern sector of the municipal area is characterized by two major settlement areas, namely the Botlokwa area, which is located along the N1 between Polokwane and Makhadol and the Morebeng node which is located along the R36, between the N1 and Tzaneen.

Mining Activities

- There are some mining activities (granite) which is located in close proximity to Botlokwa.

Tourism

- N1 Corridor, where tourism related activities have been established (Motumo Trading Post);
- Game Farms in the area;
- Morebeng settlement for it’s historical significance;
- Various road stalls and off-road activities along the N1 and along the Polokwane/Mogwadi Road; and
- The Turfloop Conservation area.

4.4.2 MOGALAKWENA LOCAL MUNICIPALITY

Locality:

- Mogalakwena Local Municipality falls within the Waterberg District Municipality and is situated on the south-westerly side of Polokwane Local Municipality (refer to Map 2).

Nodes:

- The Mokopane urban core is strongly orientated towards regional centre functions.
- The physical size of the urban core is however of such an extent that it does not warrant the development of extensive sub-centres beyond the central business district (CBD). However, distance factors linked to the general immobility of people in Mahwelereng might warrant a low level neighbourhood centre in Mahwelereng.
- The CBD is well developed and is spreading along the main arterials. The extent to which it is growing along the N11 towards Mahwelereng is a response to the needs and demand of the lower income areas.

Corridors

- The N1 links the municipal area to key axis through the province linking all centres north and south of Mokopane. The fact that the N1 bypasses the main urban centre excludes the municipal areas from benefitting from passing traffic although it remains the key national and regional link to Mokopane.
- The N11 run through the urban core and provides an important link with the north western part of the province and Botswana. The route carries a substantial number of heavy vehicles. This causes problems in Mokopane and is dangerous to the high level modal mix on the N11 between Mokopane to the point where the R518 turns off from the R11.
- ON request of the mining companies, SANRAL is considering rerouting the N11 to by-pass Mokopane. The most important benefit is that it will alleviate the traffic flow through the CBD and especially reducing the number of heavy vehicles passing through the town.

Environmental

- There is a negative impact on urban and rural development and the result is the consequences of the weathering of geological formations for the developing of buildings and top structures on land. These negative conditions can usually be mitigated at a cost.
The impact on crop-farming is mainly due to the soil conditions as a result of the weathering of the underlying geological formations.

There is a variety of flora which is classified as endangered and listed on the red data list in the south-eastern part of the municipal area.

Wonderkop Proclaimed nature reserve bordering Polokwane Local Municipality

Residential development

The urban core is situated in the southern part of the municipal area.

The availability of water is generally recognised as a major constraint for development.

Mogalakwena consists of 38 proclaimed townships and 109 villages. With about three to four exceptions, all the townships are located in Mokopane / Mahwelereng area.

The mining areas are fixed and clearly defined. It overlaps with a number of densely populated settlements.

There is a large area to the south-eastern side of the municipal area that land claims have been issued on.

Residential development is particularly problematic. There is very low demand for new high income development and that will remain so over the long term. The demand for low income housing is relatively high and a substantial number of units will be required over the long term.

There is a very strong tribal component that lies directly adjacent to Polokwane.

4.4.3 LEPELLE-NKUMPI LOCAL MUNICIPALITY SDF SUMMARY RELATING TO

Locality:

Lepelle-Nkumpi Local Municipality falls within the Capricorn District Municipality and is situated on the southern side of Polokwane Local Municipality (refer to Map 2)

Environment

Topography: a large percentage of land area within the municipality cannot be considered for development due to both the mountainous nature of the terrain and the riverine area, although this situation has other advantages in respect of water catchment areas and tourism.

Environmental Sensitive Areas: the mountainous area and hydraulically pattern to the north and northeast of the municipal area can be considered as development constraint and can also influence the design of a future spatial pattern, in that their position is fixed.

Nodes:

Lebowakgomo is classified as a District Growth Point and the direction of growth is north-westerly.

Currently, there are no suburban shopping centres in the municipal area, which could be classified as a regional shopping centre due to Polokwane’s influence.

Corridors;

The Main Road R37 forms the direct linkage with Polokwane Local Municipality.

Development Issues – the problems being experienced in terms of roads int he Lepelle- Nkumpi Municipal area are two-fold. The first relate to the poor state of the primary roads, which is due to the poor maintenance of these roads. This poor state of the roads is having a detrimental effect on the distribution of goods, services and people in the municipal area. Causes of this situation are lack of funds and lack of capacity. The second problem relates to the poor state of the internal circulation roads in Lebowakgomo and the rural areas. The causes can be attributed to lack of road maintenance.

Spatial Challenges

Dispersed Settlements – the urban and rural form of the Lepelle-Nkumpi Municipal area is comprised of various dispersed settlements, characterized by a low-density settlement pattern, no economic base and separate long distances.

Topography – a large percentage of land area within the municipality cannot be considered for development due to both the mountainous nature of the terrain.
and the riverine areas, although this situation has other advantages in respect of water catchment areas and tourism
- Environmental Sensitive Areas – the mountainous area and hydrological pattern to the north and northeast of the municipal area can be considered as development constraint and can also influence the design of a future spatial pattern in that their position is fixed.

Environment

The larger part of the Lepelle-Nkumpi Municipality area can be classified as arid to semi-arid, which minimises the potential for intensive crop production.

A number of Environmental Projects is identified in the Lepelle-Nkumpi Municipality which include:
- Land Degradation
- Deforestation
- Control of alien Invasive
- River Conservation and Water Pollution
- Water Disposal
- Veld Fires
- IDP Projects supporting the SDF: (Only projects in the vicinity of Lebowakgomo and Zebediela were considered reason being, they are the nearest to Polokwane and might have an effect on Polokwane)
- Mining – Zebediela Cement
- Agri-business – Lebowakgomo hydroponics
- Agri-business – Zebediela Citrus Juice
- Tourism – Hospitality Facilities – Lebowakgomo
- Manufacturing – Textile industry – Lebowakgomo
- Manufacturing – Moletlane sweets cooperative – Zxebediela
- Retail and Trade – Hawkers Facilities – Lebowakgomo

4.4.4 GREATER TZANEEN MUNICIPALITY SDF SUMMARY RELATING TO

Locality:

- Greater Tzaneen Local Municipality falls within the Mopani District Municipality and is situated on the eastern side of Polokwane Local Municipality (refer to Map 2)
- Haenertsburg is situated the closest to Polokwane, therefore it was mentioned and taken into consideration more that the rest of the towns and villages.
- The municipality is comprised of the proclaimed townships of Tzaneen, Nkowankowa, Lenyente, Letsitele and Haenertsburg with several residential townships surrounding the Ebenezer Dam in the south. In addition there are 125 rural villages, concentrated mainly in the southeast, and northeast of the study area.

Nodes:

Haenertsburg is classified as a Municipal Growth Point with a business and tourism function as well as a First Order Growth Point, and function as the main area to concentrate growth and future new development, creating of job opportunities and economic growth.

The Development focus of Haenertsburg is:
- Third priority for residential, infrastructural, social and economic development.
- First priority for Conservation and Tourism development
- Acquisition of land for creation of integrated settlement (transfer of state land or acquisition of private land).
- Provision for serviced industrial sites
- Declaration of grasslands as site of Ecological importance and ensure maintenance thereof.

Corridors:

- The main access road in the study area is the P43/2 the Polokwane – Gravelotte Road. Another road serving as main access is the Provincial Road P17/1 from Polokwane, which enters the municipal area at Haenertsburg and forks to become P71/2 through Magoebaskloof, and the D548 through Georges Valley.
- National Road R71 (former P43/3) passes along the northern part of Tzaneen.
Environment

- The Haenertsburg Grasslands are a biological rarity as well as being a highly marketable asset. The Haenertsburg grassland, one of the last remaining Woodbush Granite Grasslands, has a very high conservation value and in recent scientific review it is listed as a Critically Endangered vegetation type and described as totally irreplaceable. There are plants and animals here which occur nowhere else in the world:
  - Red data species:
  - Red data bird species
  - Red data reptile species
  - Red data plant species
  - Red data amphibian species
  - Arthropod red data species

Agricultural Land

- Greater Tzaneen Municipality falls within both the lowveld and escarpment regions. The climate of the Greater Tzaneen Municipality area allows for the production of a wide variety of agricultural produce. The area at Haenertsburg is mostly covered by high and moderate soil conditions suitable for agricultural purposes.

Tourism

- Development of De Marrilac and Avondhoek Peninsulae as the Tzaneen Dam Provincial Flagship Project.
- Marketing and conserving Haenertsburg town and commonage (Haenertsburg Town and Townlands) as a tourism and facilitating the development of land adjacent to the provincial road for tourism purposes though a strategic partnership.

4.4.5 AGANANG LOCAL MUNICIPALITY SDF SUMMARY RELATING TO

Locality:

- Aganang Local Municipality falls within the Capricorn District Municipality and is situated on the north-eastern side of Polokwane Local Municipality (refer to Map 2).

Nodes:

- There is one Municipal Growth Point at Ga-Rampuru town.
- There are three Population Concentration Points situated at Ga-Ngwetsana, Madietane and Ga-Mashahane towns.
- There are two Local Service Points at Tibane and Kalkspruit towns.

Corridors;

Major Transport Corridors;

- The east-west transport corridor. The tarred District Road D3390. This corridor traverses the municipal area from west to east linking the municipal area with Polokwane to the east (±45km). The corridor forms part of the East-West SDI that was identified by the Limpopo Department of Economic Development, Environment and Tourism and link important development growth points with each other.
- The Kalkspruit / Tibane transport corridor. The tarred District Road D19 linking several villages, i.e. Tibane, Kalkspruit, Ga-Ramakara, etc. With Polokwane (±33km). This corridor also links the Madietane Population Concentration Point with Polokwane.

Minor Transport Corridors:

- The Ga-Rampuru / Kanana transport corridor. The gravel road from Ga-Rampuru to Senwabarwana (±50km), via the Knobel hospital and Kanana.
o Ga-Mashashane / Polokwane transport corridor. The tar road from Polokwane up to the boundary to Ga-Mashashane via Sebora. This corridor links the Ga-Mashashane PCP with a population of ± 16 000 people to Polokwane (±35km) via District Road D544 (tarred Percy Fyfe road).

o Bakone / N11 transport corridor. The gravel road linking the tarred District Road D19 to National Road N11 (Mokopane / Groblersburg). This corridor links the Madietane cluster with a population of ±21 000 with Polokwane (±55km via D19) and Mokopane (±60km via N11).

o Ga-Mashashane / Madietane transport corridor. The gravel road linking the two Population concentration points via District Roads D3370 and D3355 over a distance of ±28km.

The abovementioned corridors play an important role in linking local communities with job opportunities and services in the urban area of Polokwane and Mokopane and the surrounding commercial farming areas.

Residential development

The majority of new residential sites allocated in the Aganang municipal area are in the settlements Bergzicht, Kalkspruit, Ga-Magongoa and Washbank. These settlements are located on the eastern boundary of the municipal area that is linked to the urban area of Polokwane via the tarred District Road D19. It is evident that this area experienced some sort of in-migration due to its favourable location with respect to Polokwane. No other township or settlement in the Aganang municipal area could be identified that experience that same form of in-migration.

The municipal area is located closely to the urban areas of Polokwane and Mokopane and significant future urban development in Aganang is therefore very unlikely.

4.5 LAND COVER

o Land cover as indicated on Map 4B. Provides an indication of the land uses within the municipal area in terms of the natural phenomena (plant cover), agricultural uses of land as well as the urban development patterns.

The municipal area covers and area of 3775.78 km² and consist of the following broad land use categories as indicated in the following table:

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<th>LAND USE</th>
<th>HA</th>
<th>Area (km²)</th>
<th>%</th>
</tr>
</thead>
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<tr>
<td>Cultivated: permanent - commercial dryland</td>
<td>108.5818715</td>
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<td>0.24</td>
</tr>
<tr>
<td>Urban / built-up land: commercial</td>
<td>5.66280145</td>
<td>5.66280145</td>
<td>0.15</td>
</tr>
<tr>
<td>Urban / built-up land: industrial / transport</td>
<td>8.196327939</td>
<td>8.196327939</td>
<td>0.22</td>
</tr>
<tr>
<td>Urban / built-up land: residential</td>
<td>172.8847546</td>
<td>172.8847546</td>
<td>4.58</td>
</tr>
<tr>
<td>Urban / built-up land:</td>
<td>62.21899159</td>
<td>62.21899159</td>
<td>1.65</td>
</tr>
</tbody>
</table>
Only 8.58% of the land is covered by cultivated land of which 3.16% is semi-commercial / subsistence dry-land farming. This is an indication that dry-land cultivation potential in the municipal area is very low which can be attributed to the lack of the availability of water as well as soil conditions.

The south western area of the municipal area is mostly covered by forest and woodland (47.8% of land cover) of which 13.66% consists of degraded forest and woodland. Only 0.12% consists of plantations.

Most of the villages are situated in the north-western, eastern and south-eastern parts of the municipal area. The land cover their areas mostly consists of thicker bush-land of which most are degraded that can be attributed to land and veld degradation due to overgrazing.

4.6 LAND REFORM

- The national government envisages that at least 30% of land should be transferred to previously disadvantaged people. A number of land claims have been filled with government within the Polokwane area of jurisdiction. However, none of these claims are proclaimed in order to take into account their possible influence and spatial development. The general concern is that through land claims even more rural settlements might be established that might not be sustainable. Specific provision should therefore be made in the SDF to guide future land reform projects in the area.
- Map 7 indicates the spatial distribution of the existing land claims.
CHAPTER 5: SYNTHESIS/SWOT ANALYSIS

5.1 STRATEGIC DEVELOPMENT ISSUES

Various strategic development issues were identified during the analysis phase and during workshops. Although all strategic development issues are crucial, some may only be addressed by i.e. the environmental management plan or other specific sectoral strategies. The spatial development framework will, however, provide spatial guidelines that will inform these sectoral strategies.

Map 2, 3A and 3B indicate all major land uses and other existing issues that have an impact on the development of the area and on proposals for the future. This section therefore serves as a synthesis of all relevant issues that have influenced the development proposals as outlined in section 3.

Strategic issues were identified and classified as strengths, weaknesses, opportunities and threats (SWOT – analysis). The implication of these issues will be highlighted in this section. The rational is to capitalize on the strengths, unlock possible opportunities while addressing weaknesses and reducing threats.

The economic strength and foundation for future development relates primarily to Polokwane’s role as capital of the Limpopo and its strategic location.

The opportunities represent building blocks towards a better future. This includes capitalization on existing nodes and corridors, the provision of infrastructure and services and the reconstruction of distorted spatial patterns.

The weaknesses are those issues that should be addressed such as the development of human resources, improvement of level and quality of infrastructure and the proper management of the environment.

Threats are those serious issues that do have the potential to erode the foundation of all future potential development in the area if not addressed as a matter of priority.

Specific spatial issues to be addressed include:

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**Opportunities**
- Alignment of Spatial Plans
- Re-construction of distorted Spatial Patterns
- Integration of settlements
- Provision of infrastructure and services (improve competitiveness)
- Development along corridor and nodes
- Skills Development and Innovation
- 2010 Soccer impact and thereafter
- Informal economy support
- Land reform and sustainability
- Economic development through integration of various nodal points and proper access to resources
- Airport as interactive transport and commercial node
- Modal integrations

**Strengths**
- Location on Great North Road
- Gateway to Africa
- Capital of Limpopo
- Relative high economic growth rate

**Weaknesses**
- Low densities in rural areas
- High unemployment
- Relative low level of skills
- High number of people in poverty
- Low agriculture potential
- Un-rehabitable mining areas
- Existing sewer works in PLM
- No plan to protect sensitive environmental areas
- Land Use Management scheme only covers certain areas

**Threats**
- HIV/AIDS
- Waste management
- Air pollution
- Sink holes and dolomite
- Soil erosion
- Ground and surface water pollution
- Overgrazing
- Access to potable water
- Sensitive natural habitats and cultural sites
- Illegal sand mining
- Deforestation
- Loss of potable water
- Alien species
- Availability of water (water volume negative)

**Figure 26: SWOT Analysis**

**Diagram:**
- Maxim Planning Solutions
- Rian Beukers (own & Regional Planners and Property)
5.1.1 DISTRIBUTION AND SIZE OF THE POPULATION IN COMPARISON WITH THE OCCURRENCE OF JOB OPPORTUNITIES AND ECONOMIC POTENTIAL

The existing spatial distribution of the population, the rate at which urbanization is taking place, the occurrence of poverty but also the areas with the highest incidence of growth and the comparative advantages the area has to offer, all provide some clear indicators for future sustainable development focus. The main indicators are:

- Approximately 35% of the population is concentrated in Polokwane (including Seshego and extensions). The rest of the population is distributed in smaller concentrations of villages found in the northwest (Moletji area) – 18% and towards the east (Mankweng and adjacent areas) ±30%.
- The highest concentration of job opportunities occurs also in Polokwane/Seshego and surrounding areas- ±55%.
- The sectors with the largest comparative advantage (compared with the country) are wholesale and trade (1.48%), finance and business services (1.39%) and electricity and water (1.3%). On a provincial level transport and communication has a strategic advantage (1.3%).
- The poverty rate decreased by 23.1% over last decade to a level of 37.3% in 2007. 28.9% of the population is unemployed (national rate is 21.9%).
- The urbanization rate increased between 2000 and 2001 after which a more steady growth rate followed. The average urbanization rate in the Polokwane municipal area over the period 1996 – 2008 was 73.92%.
- The population growth rate shows a steady decline from 2.35% in 1997 to 1.15% in 2007. The continuation of the decline in the population growth rate from 2002 to 2008 can possibly be attributed to the increase in the HIV incidence rate in the area. (Quantec’s Regional Data Set, 2008).

5.1.2 CAPITALIZE ON AREAS WITH ECONOMIC GROWTH AND DEVELOPMENT OPPORTUNITIES

One of the main outcomes of a spatial development framework is to identify areas with the highest economic development opportunities to steer development into those directions. In this regard the NSDP’s focus on the development of corridors and nodes are of the utmost importance for local spatial planning. The urban form and morphodology of Polokwane are influenced to a large extent by the radial road network or corridors (which links Polokwane as capital of the Limpopo province with smaller and intermediate cities in the region) as well as the central business district centripetal forces (Map 19). The outcome of centripetal forces is a circle shaped or concentric growth around a nodal point while the radial road network induces a star shaped city. Central growth normally extends first along the main thoroughfares radiating from the centre, and later filling in the parts lying in-between.

The dynamics of corridors are determined by the following:

- The formation of development corridors is the result of interaction between two core areas along a communication channel. The bigger the core areas, the higher the level of interaction between them. The closer the core areas are to each other, the stronger will the forces be that results in the formation of a development corridor. It is important to note that the development corridors emanate from the core areas, and not the core areas from the corridors.
- The highest economic potential exists in the core areas and reduces further away as indicated by the iso-geometric lines of economic probability
Polokwane should capitalize on the development potential of intra-urban and inter-urban development corridors which connects Polokwane with other urban settlements. The implication of the above is that priority should be to develop and stimulate the existing core areas such as Polokwane/Seshego/Perskebult, Mankweng and the Sebayeng/Dikgale clusters.

The enhancement of corridors and nodes should be integrated with proper transport planning as envisaged in the Integrated Transport Plan (ITP)\(^{13}\).

The aim of integrated transport planning and spatial planning is to identify existing resources and apply relevant measures and guidelines in order to promote access to resources and infrastructure to all spheres of the community in order to establish an integrated environment. Resources such as public transport facilities, road infrastructure, and ports of economic activity should be upgraded and made accessible to the benefit of the larger community in order to stimulate economic growth and economic development. Interaction between various nodal points (centres of economic activity) should be promoted in order to exchange knowledge and resources in order to promote local economic development and small medium and macro enterprise development throughout the municipal area. Various principles are applied in order to promote transport integration in order to achieve the goals and objectives of Local Economic Development the spatial context. Some of the principles to be included in the Integrated Transport Plan (ITP) are that:

A) The plans must pay due attention to the development of rural areas; transport for special categories of passengers must receive special attention;

B) The development of the ITP must take cognisance of the fact that rail is currently a national competency until devolved in terms of section 28 of the Act, and subsidised bus services are a provincial competency until devolved to transport authorities in terms of section 10(13)(f) of the Act;

C) The ITP must be synchronised with other planning initiatives and it must indicate how it is integrated into the municipal integrated development plans, the development objective process and the municipal budgeting process;

D) The preparation of the ITP must include the consultation and participation of interested and affected parties required for the preparation of the IDP in terms of Chapter 4 and section 29(1)(b) of the Local Government: Municipal Systems Act, 2000 (Act No 32 of 2000).

Transportation infrastructure forms the backbone for spatial integration. The radial road network system in the Polokwane Municipal area should be upgraded and further developed in order to promote and ensure sufficient integration of different hierarchies of settlements in order to promote social and economic interaction between various
nodal points in the municipal area. Inhabitants of the municipal area should enjoy proper and equal access to facilities and opportunities. Integration of people, economic activity and facilities/resources should be promoted through the development of a proper road and transport network.

5.2 ENVIRONMENTAL SENSITIVE AREAS

The following urgent environmental priorities and issues were identified in the Polokwane Environmental Management Framework (EMF, 2004).

- Biggest positive impact on the environment in the short term;
- Most necessary action required to address social issues arising from unmanaged environmental issues;
- Most necessary action to put initial steps in place to address issues in the medium to long term;
- Most necessary actions to prevent and eventually reverse increasing or ongoing environmental degradation;
- Most necessary action to promote sustainable use of resources;
- Addressing the most urgent environmental issues.

The twelve most urgent issues were arranged in a suggested order of priority, although this order of priority is open to revision based on circumstances, budgetary allowances, etc. What is non-negotiable, however, is the fact that these issues must be addressed urgently to prevent further degradation and potentially greater expenditure of resources to rehabilitate the environment. A basic strategy for dealing with each of these issues is detailed under each heading.

The issues are:

1.) Upgrading of Waste transfer stations
2.) Protection of sensitive habitats and cultural sites
3.) Access to portable water
4.) Illegal sand mining
5.) Deforestation
6.) Erosion control
7.) Groundwater pollution
8.) Loss of portable water
9.) Waste management
10.) Eradication of alien invaders
11.) Mining of municipal water resources
12.) Dust and suspended particulates in the atmosphere

There are a number of environmental features that can be negatively affected during future development. They are important natural features and have to be taken into consideration at all times:

- Environmental Sensitive areas
  - There are a number of areas that falls under this category that lies near the Mankweng area and the north-easterly side of Polokwane (parts of Tweefontein 915LS). These areas are classified as sensitive areas because of the occurrence of protective fauna and flora and the Bullfrog that are found in certain parts (Please refer to Map 10).

- Dolomite Areas
  - The areas that are underlain by dolomite is situated on the southern border of the municipal area under the mountains. Please refer to Map 10.

- Mineral potential areas
  - Please refer to Map 10.

- Protected areas
  - The most prominent protected areas is the game reserve south of Polokwane, east of Mankweng, and on the south western border.

- Hills and ridges.
  - The terrain of the municipal area of Polokwane is mostly under 5°, except for the border on the south and eastern side where the slopes is more than 5°. Please refer to where the hills and ridges is indicated.

- Dams and pans. Please refer to Map 10.
  - The most prominent dam in Polokwane is near Cheniespoort.

- Rivers and streams.
  - Please refer to Map 10 for the rivers and streams.

- Agricultural land.
No high potential agricultural land is identified within development areas/urban settlements. Only land with "moderate soil potential" is identified (Refer to Map 10).

5.3 SUSTAINABLE DEVELOPMENT

Spatial planning is related to space and directly related to the key issues of sustainable development due to the cross-sectional and integrated approach needed. The most widely sighted definition of sustainable development was given in the 1987 report "Our Common Future" by the World Commission on Development and Environment:

"Humanity has the ability to make development sustainable – to ensure that it meets the needs of the present generation without compromising the ability of future generations to meet their own needs" (WCDE,1987).

This definition is characterised by being expressed in broad philosophical terms defining a general political goal for future development. It should obviously also include the issue of global warming (the hot house effect) that should be addressed by all levels of the society. The combination of the terms development and sustainable reflects the desire to ensure human welfare, prosperity and well-being (development) without destroying the environmental foundation (sustainability) for this development. Hence, spatial planning for sustainable development should promote economic and social development while simultaneously ensuring the protection and conservation of the natural environment and cultural heritage. (European Community, Planning Systems for sustainable development, NERI, Technical Report no. 351)

5.4 ECONOMIC SUSTAINABILITY

Development initiatives should capitalize on the locality of Polokwane on the Great North road and gateway of Africa. The same principles should apply for rural settlements located on national, provincial or regional corridors. Other important factors to ensure sustainable future development are:

- Creation of job-opportunities in close proximity to where people stay in order to address poverty and low levels of income.
- Capitalization on comparative advantages which include wholesale and trade, finance and business services, community services and transport and communication.
- Maximizing potential for agricultural development (food security).
- Ensure that land reform projects do not create new unsustainable rural nodes.

5.5 SOCIAL / CULTURAL SUSTAINABILITY

The low densities in rural areas, high unemployment, relative low level of skills and the high incidence of poverty all relates to unsustainable social and cultural development. Following the guidelines provided in the NSDP (2006) focus should be on the reconstruction of distorted spatial patterns to prevent the enhancement of “poverty traps” in rural areas.

The focus should be on:

- Prioritize skills development and education
- Improve access to higher level of social, health, economic and civil infrastructure.

5.6 AVAILABILITY OF WATER RESOURCES

Sustainable development closely related to the availability of resources such as water. Map 3B indicated the areas with a negative water balance and the settlements effected by this situation. This information was compiled from the Water Service Development Plan.

The following issues were identified as critical for future development:

- Urbanization in the “rural areas” surrounding Polokwane /Seshego and Mankweng have a major impact on future water balances;
- The utilization of groundwater into the bulk supply and distribution systems is necessary. Some areas such as Moletje may only rely solely on groundwater.
• The groundwater reservoirs at Polokwane City and Mankweng are ideally located for the ready utilization of sewage effluent as water resource.
• With the exception of the Polokwane City area, Seshego and Mankweng as well as Sebayeng Township, most of the settlement do not have adequate access to potable drinking water and sanitary facilities. The level of services in those areas is either in terms of the RDP standards or below.
• The water supply to Polokwane is provided from Ebenezer and Dap Naude Dams (Letaba), a number of small dams (Molepo, Chuene, Houtrivier and Seshego) groundwater in natural, groundwater aquifers at Polokwane City /Seshego and Mankweng recharged from treated sewage effluent and lastly Olifants Rivier.
• The current abstraction allocation at Olifantspoort need to be extended
• Other sources in the Olifantspoort South Service areas need to sought
• The service area of Mogalakwena needs to be rationalized or reduced.
• The medium to long term provision of treated sewage effluent from Polokwane City Complex to the PPL Mine need to be reduced
• Re-allocation of water such as reduction of irrigation along Olifant Rivier / Letaba Rivier
• No significant change in the requirements of water is foreseen with respect to the rural parts, which corresponds to the expectations of low population growth and lack of economic stimulants.
• The water resources which occur within the water management area are nearly fully developed, with all the available water being highly utilized. Limited options for further resource development exists which is attributable to the arid climate, un-favourable topography, sandy rivers as well as important conservation areas
• Whereas the resources and requirements are approximately in balance at present, implementation of the reserve is expected to result in serious deficits in some of the main river catchments in the water management area.
• Planning has been done for large new mining developments in the Mokopane-Mogoto area, for which additional water will be required
• Urban and industrial growth will mainly be concentrated in the Polokwane area where local water resources already are in short supply and need to be augmented by transfers from other water management areas.
• The Olifants River Water Resource Development Program involving the increase of the capacities of the Boshielo and New De Hoop - Dam that would ensure long-term water availability, albeit at costs for water much higher than the present.
6.1 SPATIAL DEVELOPMENT VISION

The spatial development vision is aligned with the municipal’s general vision and mission statement. The vision was formulated against the background that approximately 37% of the population still lives in poverty and have access only to relatively low levels of services and facilities. Funds to address immediately all needs in the local municipality’s area of jurisdiction do not exist. The spatial development vision is also aligned with the national spatial vision that states that economic growth and employment creation should focus in areas where this is most effective and sustainable, supporting re-structuring (addressing the mismatch where people have to live and work) and by fostering development on the basis of local potential. Polokwane Local Municipality spatial development vision therefore is:

6.2 SPATIAL DEVELOPMENT OBJECTIVES

- To guide development growth in a sustainable in line with development principles.
- To promote economic Growth and address unemployment
- To promote investment opportunities through industrial development.
- To promote sustainable human settlements by integrating through improved public transportation and roads networks (BRT) in a spatial manner.
- To promote infrastructure investment in priority areas.
- To avail/open strategic land for economic development in order to attract investors in Polokwane.

6.3 CONCEPTUAL APPROACH: DEVELOPMENT ALTERNATIVES

Planning and development decisions are frequently made without understanding the socio-economic rationale and the impact of decisions over the short, medium or long term. In order to clarify the implications of the decision making process, three alternative development scenarios will be discussed.

The identified scenarios all deal with the question of sustainable rural development, since the study area is characterized by the occurrence of informal traditional villages. The point of departure, however, differ for each of the scenario’s and was influenced by the spatial guidelines provided by the NSDP (2006), the Limpopo Spatial Development Framework (2008) and the directive principles as described in the Land Use Management Bill (2006). Some of the main debates informing the selection of alternative scenario’s are:

- Concentrated development versus dispersed development
- Balanced versus unbalanced growth
- Rural versus urban development
- The growth orientated approach versus a basic needs approach
- The Bringing work to the “people” or “people” to the work debate.

The following three possible development approach was formulated to guide future spatial development in the Polokwane area of jurisdiction:

- Approach I: Spatial concentration model
- Approach II: Spatial concentration model combined with a selective cluster approach in rural areas
- Approach III: Dispersion model or “blanket approach”

14 The directive principles are: equality, efficiency, integration, sustainability and fair and good governance.
6.3.1 APPROACH 1: SPATIAL CONCENTRATION

The spatial concentration alternative is normally associated with an economic growth orientated approach based on the urban-industrial model. From a provincial point of view it could be linked to an intermediate city development approach focusing on the enhancement of primary regional nodes serving the outstretched rural areas. The urban-industrial model could be adapted to suit the needs of Third World development by combining a basic needs approach with this model.

The point of departure is in line with the national spatial development vision as contained in the NSDP (2006), which states that economic growth and employment creation should focus in areas where this is most effective and sustainable; supporting restructuring (of the Apartheid related mismatch between where people live and work) and by fostering development on the basis of local potential. Against the background of globalization, this alternative offers, through concentrated capital expenditure programmes, the possibility to compete with other centres in the national and international arena. The economic rational is that return on capital investment will be higher if concentrated in areas with growth potential.

In terms of the principle of equity, it implies that social and economic upliftment programmes in rural areas and villages should focus primarily on human resource development, labour market intelligence and social transfers, so as to give people in these areas better information and opportunities to gravitate towards areas with greater economic potential from the localities in which they currently reside.

The model implies that in the case of PLM, the development focus should be on Polokwane as a growth centre situated on the N1 National. The focus will be to enhance the “gateway to Africa” potential of Polokwane and to capitalize on the status as Capital of the Limpopo Province.

6.3.2 APPROACH 2: SPATIAL CONCENTRATION MODEL COMBINED WITH A SELECTIVE CLUSTER APPROACH IN RURAL AREAS

The scenario also accepts the importance of spatial concentration. However, it further realizes the importance of rural villages in the provision of basic needs. Many examples in Third World countries showed that the urban-industrial model (even adapted to suite the Third World circumstances) should be complemented by a rural development strategy. In the realm of the occurrence of many dispersed rural villages in the study area, an approach could be adopted which is inline with the spatial guidelines contained in the Integrated Sustainable Rural Strategy (2000), the Limpopo Provincial Spatial Development Framework and the NSDP (2006). This model combines the spatial concentration model (scenario 1) with a selective cluster approach in rural areas. The selective cluster approach is also founded on the principle of “concentrated development” in areas that can support sustainable development.

Selection of rural nodes should take into account:

- The immobility of poverty stricken people: -migration will take place in a stepwise fashion (implying that people will move from small rural villages to larger ones in close proximity in their search for better living conditions).
- The prospects of sustainable development (availability of resources such as water, the prospect of creating job opportunities, accessibility, prospects for integration with the formal urban system and serving as a service delivering point for the rural remainder). Villages in close proximity to each other should be clustered and integrated through development plans to become places of significance.

The next phase in the selective approach will be the formalization of selected villages with the aim to densify the villages in order to provide a higher level of services in a cost effective manner. A differential level of service (LOS) approach should be applied with regard to the provision of engineering services and social facilities in various orders of centres. The provision of
higher level of services should stimulate migration towards selected nodes. This is in line with the proposal set forward in the Limpopo SDF. The rural reminder will receive the same approach as spelled out under Scenario I implying less capital expenditure programmes in these areas except for providing basic services (that is a constitutional right of all people).

6.3.3 APPROACH 3: DISPERSION MODEL OR “BLANKET APPROACH”

The dispersion model or “blanket approach” is based on the fact that “selectivity” is in general unacceptable from an “equity” point of view. Municipalities will be under pressure to provide in all the needs of all inhabitants simultaneously. This approach could be associated with the “balanced approach” towards development. Although “balance” is the ultimate goal of all spatial strategies, this might not be realistic as an initial development approach, simply because of the lack of financial resources to address all needs of the population in all places simultaneously. An even distribution of the municipal budget over all wards (“blanket approach”) might mean that resources being spread so thinly that nobody gets “warm” or experience the effect of dispersed development efforts.

FIGURE 8.1: DEVELOPMENT SCENARIO’S

6.3.4 PREFERRED OPTION

The second scenario which is a spatial concentration model combined with a selective cluster approach was chosen as a conceptual development approach for Polokwane Local Municipality. The model attempts to combine the advantages of the spatial concentration model with the advantages of the dispersion model: it tries to retain the advantages of spatial concentration while also speeding up the process of dispersion (“the trickling down effect towards the most sustainable rural localities).
The second scenario was also chosen as the preferred option based on the following:

- The principles in this scenario are in line with development thinking as described in the Integrated Sustainable Rural Development Strategy, the Limpopo SDF as well as the NSDP (2006).
- It will guide decision-making to the point where development decisions will be more rational with the implication that services could be provided more cost effectively and jobs could be provided closer to home based on capitalization on the occurrence comparative advantages in the area.
- The return on capital spend will be the highest in terms of urban as well as rural development.
- Sustainable development is more obtainable.
- Optimise the prospects of economic growth in urban as well as rural areas.

The financial rational and implication of this conceptual approach is that:

- Capital expenditure programmes will focus to a large extent on Polokwane as primary regional node in the municipal area of jurisdiction.
- A concentrated decentralized capital expenditure approach or “selective rural cluster development approach” with regard to rural settlements will be promoted. Selectively will be based on inter alia the prospects of obtaining sustainable development. A hierarchy of rural clusters should be determined by making use of sustainable parameters.
- Socio-economic upliftment programmes and capital spending in rural areas and villages should focus primarily on human resource development, labour market intelligence and social transfers, so as to give people in these areas better information and opportunities to gravitate towards areas with greater economic potential.

- Based on the Spatial Development vision and the development principles informing the preferred conceptual approach, the following principle led intervention zones could be identified for Polokwane Local Municipality

### Figure 27: Principle Led Intervention Zones

**Principle 1**
Focus on sustainable development through the protection of natural and cultural resources (Environmental Management) and an urban form that supports greater efficiencies in land use and service provision.

**Strategic Intervention Zone:** Macro Spatial Framework for Greater PLM area.

**Principle 2**
Concentration of investment in people rather than places in areas spatially fragmented and with a low development potential.

**Strategic Intervention Zone:** Rural areas and fragmented settlements.

**Principle 3**
Stimulate emerging and poverty concentrations with the potential of economic development in their spatial and socio-economic content.

**Strategic Intervention Zone:** Mankweng / Badimong and Sebayeng / Dikgale cluster.

**Principle 4**
Concentration of investment opportunities in existing spatial concentration of economic activity which do have the potential for expansion of the economic activity.

**Strategic Intervention Zone:** Polokwane / Seshego / Perskebult urban area.

With this as point of departure, the spatial development will logically be outlined under the following headings:

- A Macro Municipal Spatial Development Framework covering the total area of jurisdiction. (see section 6.4)
- Conceptual Local Spatial Development Framework Plan for Polokwane city. (see section 7.1)
- Concept Local Spatial Development Framework Plan for Mankweng / Badimong and Sebayeng / Dikgale clusters. (see section 7.2 & 7.3)
- Development of rural areas and the remaining villages. (see section 7.4)
6.4 MACRO SPATIAL DEVELOPMENT FRAMEWORK FOR GREATER POLOKWANE MUNICIPAL AREA

**SPATIAL DEVELOPMENT PRINCIPLES**

The macro spatial development principles that are informing the conceptual approach are the following:

- Capitalizing on the location of Polokwane on one of the important corridors of national and provincial government. It is envisaged to unlock the inherent development potential along the corridors to enhance exports to neighboring countries.
- Enhance Polokwane as capital city of the Limpopo Province and regional centre of importance.
- Enhancement of sustainable development which involves:
  - The protection, sustainable use and management of the environment;
  - Proper land use management;
  - The cost-effective provision of services and;
  - The creation of job-opportunities in close proximity to natural resources and urban settlement.
- Providing spatial and development guidelines that could assist in spatial reconstruction and reducing the imbalances of the past through concentrating employment opportunities in areas with development potential (imbalance here specifically refer to the mismatch of where people have to live and work).
- Provision of basic guidelines for a land use management system in the municipality.
- Give effect to the principles contained in Chapter 1 of the Development Facilitation Act, 1995 (Act no 67 of 1995) which include equality, efficiency, integration sustainable development and fair and good governance.
- Provision of spatial and development guidelines that will inform and help to prioritize capital expenditure programmes within the local municipal area of jurisdiction.
- Taking into account and integrate local development with adjacent local municipalities land development proposals.

The Greater Polokwane Municipal area should be the focus for sustainable development through the protection of natural resources and cultural heritage (effective environmental management) and to promote an urban form that supports greater efficiencies in land use and service provision.

The following major issues should be addressed on a municipal wide level:

- Sustainable development and distorted spatial patterns.
- Development of a hierarchy of towns and villages.
- The fragmentation of the municipal area based on the identification of “strategic development areas” and “potential development areas”.
- The importance of development corridors and nodes for future growth and development.
- The management and protection of the environment.
- Tourism development.
- Land use management guidelines.

**6.4.1 SUSTAINABLE DEVELOPMENT AND DISTORTED SPATIAL PATTERNS**

It is well accepted that regional and social inequalities in South Africa are essentially the outcome of misplaced state interference in the economic and spatial system. Racial state policies implemented over three decades i.e. influx and pass control, the creation of Bantustans and South Africa’s industrialization policy were identified as “… the root cause of unemployment, poverty and inequality” (Hindson 1987:588). The abolishment of apartheid and allowing market forces and individual choice were viewed as the solutions to solve these major economic problems. The role of the state should have been “…limited to the planning of residential and industrial sites and the correction of market failures where urbanization leads to a divergence between private and social cost”. Deregulated urbanization would have automatically stimulated growth. It was argued that regional and other inequalities will gradually disappear as the barriers to movement are dismantled and labour and other resources move to the cities where productively, incomes and employment are highest (Hindson, 1987: 588 – 589).

After 15 years of liberating the country, it is clear that the reconstruction of the spatial disparities and distortions that molded the settlement patterns during
the apartheid era remains perhaps one of the main challenges still to be addressed. Experience learned that regional changes due to government intervention could take some time. However, the lack of commitment to address rural spatial distortions on a local level (due to the political sensitivity thereof) and the prevailing situation in especially former Bantustans regarding landownership and management, might hamper and delay this process even further.

The provision of spatial guidelines for the rural intervention and development of rural villages should be viewed as an important tool that can assist Local Municipalities with their financial management of capital programmes and to help set development priorities. The restructuring of rural development within the municipal framework might be a political sensitive issue, but if government (including local government) is serious about addressing imbalances created by past policies (which led to the mismatch of where people live and work, poverty traps and unsustainable development), the spatial guidelines to address that, should receive more attention. A spatial rural intervention program in order to achieve the objectives of the selective cluster approach, include the following activities:

- The determination of hierarchy of rural clusters and settlements (based on sustainable parameters)
- The formalization of village clusters or settlements based on the rural settlement hierarchy and priorities.
- The integration of rural settlements into the urban system and formal economy of the area.

Perhaps the key principle in a selective approach is the principle of sustainability, which is in itself a multi-faceted concept. In rural development terms it could incorporate a number of aspects such as:

- Development to sustain rural economy, which is compatible with the protection of the environment in the countryside for its landscape, wildlife, agriculture, recreational and natural resource value.
- The need to reduce the need to travel. Owen (1996:38) argues that this is not only relevant from a distance point of view, but also to reduce CO² emissions and other pollution particles produced by current forms of road traffic.
- The availability of natural resources supporting job-creation in close proximity where people concentrate.
- The availability of water and other infrastructures such as electricity, housing, social amenities etc.

Dewar (1994:9) in “Planning, for the rural-urban interface”: a case study of Transkei, argues that an appropriate approach to the spatial organisation of settlements and services should focus primarily on routes as the basic organising element of rural space. The objection is to reduce conditions of spatial marginalisation – the inaccessibility and immobility of communities that contribute to their material impoverishment. Routes should be seen as ‘investment lines’ and the issue of structure becomes the “articulation of rhythms public transport and of those elements which generate interaction in rural areas”. (Dewar, 1994:9). He stressed, however, that the emphasis on roads should include the creation of new routes where necessary in order to “...shrink space and to free those settlements which are trapped in space”.

The proximity to main roads and the enhancement of accessibility seem to be the strongest and most consistent indicator of sustainable growth (Robinson, 2003:416; Barrios, 2008:37). Crooke (2006:284) emphasizes also the importance of roadside locations for business and commercial development in Nigeria and found that “...villages and small towns showing most evidence of rapid growth are market centres on main roads and that the rate of their growth appears to reflect directly the importance of the road concerned as a traffic artery.

Selection of rural nodes should take into account:

- The immobility of poverty stricken people-migration will take place in a stepwise fashion (implying that people will move from small rural villages to larger ones in close proximity in their search for better living conditions).
• The prospects of sustainable development (availability of resources such as water, the prospect of creating job opportunities, accessibility and the prospects of integration with the formal urban system serving as a service delivering point for the rural remainder). Villages in close proximity to each other should be clustered and integrated through development plans to become places of significance.

• That a differential level of service (LOS) approach should be applied with regard to the provision of engineering services and social facilities. The provision of higher level of services should stimulate migration towards these selected nodes and imply to some extend “concentrated development efforts”.

6.4.2 HIERARCHY OF TOWNS AND SETTLEMENTS

The conceptual approach that was formulated for development on a regional level provided the point of departure for a spatial concentration model combined with a selective cluster approach. In order to classify the existing settlements as basis for the selective approach, an assessment was made based on the hierarchy of settlements as proposed in the Limpopo SDF (review). The proposed nodal hierarchy of settlements in Polokwane municipal area is indicated on Map 9.

Although the Limpopo Spatial Development Framework identified a large number of clusters within the municipal area, it was also found that the Provincial, District and Municipal growth points also forms a functional unit or cluster with adjacent Population Concentration and Local Service Points as well as certain smaller villages. These Provincial, District and Municipal growth points or clusters was demarcated by means of an urban edge (proclaimed scheme area) and boundaries (R293 area and rural area) as indicated on Maps 6, 20 and 21.

Based on above-mentioned the following nodal hierarchy in comparison with the Provincial hierarchy is proposed for the municipal area -:

<table>
<thead>
<tr>
<th>Provincial Settlement Hierarchy</th>
<th>Growth Points</th>
<th>Order</th>
<th>Proposed Municipal Nodal Hierarchy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth Points</td>
<td>Order</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provincial Growth Point (PGP)</td>
<td>1\textsuperscript{st} Order Settlements</td>
<td>1\textsuperscript{st} Order</td>
<td></td>
</tr>
<tr>
<td>District Growth Point (DGP)</td>
<td>2\textsuperscript{nd} Order Settlements</td>
<td>2\textsuperscript{nd} Order</td>
<td></td>
</tr>
<tr>
<td>Municipal Growth Point (MGP)</td>
<td>3\textsuperscript{rd} Order Settlements</td>
<td>3\textsuperscript{rd} Order</td>
<td></td>
</tr>
<tr>
<td>Population Concentration Point (PCP)</td>
<td>2\textsuperscript{nd} Order Settlements</td>
<td>4\textsuperscript{th} Order</td>
<td></td>
</tr>
<tr>
<td>Local Service Point (LSP)</td>
<td>3\textsuperscript{rd} Order Settlements</td>
<td>5\textsuperscript{th} Order</td>
<td></td>
</tr>
<tr>
<td>Small isolated Villages</td>
<td>4\textsuperscript{th} and 5\textsuperscript{th} Order Settlements</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.4.2.1 FIRST ORDER NODE

PROVINCIAL GROWTH POINT (PGP) (1\textsuperscript{ST} ORDER NODE) GREATER POLOKWANE CITY

The provincial growth point includes all the areas within the proposed urban edge namely:

Polokwane
Seshego
Bloodriver
Kgohlwane
Mabotja
Makgofe
Mokgokong

The growth point is also classified as a national growth point in terms of the national wide classification and is situated on 3 provincial corridors nl. Trans Limpopo (N1), East West Corridor and Dilokong Corridor. This node is the most important economic driver and service provider in the province, providing higher order industrial, commercial, business, social, as well as institutional (National, Provincial and District), facilities.
6.4.2.2 SECOND ORDER NODE

DISTRICT GROWTH POINT (DGP) (MANKWENG / BADIMONG CLUSTER)

The District Growth Point includes the Mankweng area and surrounding villages within the proposed urban edge.

<table>
<thead>
<tr>
<th>Village Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nobody – Mothiba</td>
<td>DGP</td>
</tr>
<tr>
<td>Nobody – Mothapo</td>
<td>DGP</td>
</tr>
<tr>
<td>Ntshichane</td>
<td>DGP</td>
</tr>
<tr>
<td>Mankweng Town ship &amp;Extensions</td>
<td>DGP</td>
</tr>
<tr>
<td>Ga-Thoka</td>
<td>DGP</td>
</tr>
<tr>
<td>Ga-Makanye</td>
<td>DGP</td>
</tr>
<tr>
<td>Badimong</td>
<td>PCP</td>
</tr>
<tr>
<td>Ga-Silwane</td>
<td>PCP</td>
</tr>
<tr>
<td>Komaneng</td>
<td>PCP</td>
</tr>
<tr>
<td>Ga-Mahlanthe</td>
<td>PCP</td>
</tr>
<tr>
<td>Viking</td>
<td>PCP</td>
</tr>
<tr>
<td>Matsheka-Pata</td>
<td>PCP</td>
</tr>
<tr>
<td>Boyne</td>
<td>PCP</td>
</tr>
<tr>
<td>River View</td>
<td>PCP</td>
</tr>
<tr>
<td>Mountain View</td>
<td>PCP</td>
</tr>
<tr>
<td>Ga-Magowa</td>
<td>PCP</td>
</tr>
<tr>
<td>Ga-Ramogale</td>
<td>PCP</td>
</tr>
<tr>
<td>Makgwareng</td>
<td>PCP</td>
</tr>
<tr>
<td>Phomolong</td>
<td>PCP</td>
</tr>
<tr>
<td>Laaste Hoop</td>
<td>LSP</td>
</tr>
</tbody>
</table>

This growth point is mainly situated on the R71 (east-west Corridor) or activity corridor and have a meaningful economic sector with higher order (regional) social facilities such as the University of the North and Regional Hospital.

6.4.2.3 THIRD ORDER NODE

MUNICIPAL GROWTH POINT (SEBAYENG / DIKGALE CLUSTER)

The municipal growth Point is mainly situated on the R81 (activity corridor) and include the following villages within the proposed urban edge:

<table>
<thead>
<tr>
<th>Village Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sebayeng Village</td>
<td>MGP</td>
</tr>
<tr>
<td>Sebayeng Township</td>
<td>MGP</td>
</tr>
<tr>
<td>Mantheding</td>
<td>PCP</td>
</tr>
<tr>
<td>Ga-Mokgopo</td>
<td>PCP</td>
</tr>
<tr>
<td>Dikgale</td>
<td>PCP</td>
</tr>
<tr>
<td>Makgoba</td>
<td>PCP</td>
</tr>
<tr>
<td>Titibe</td>
<td>PCP</td>
</tr>
</tbody>
</table>

This order node with a limited business sector and social facilities mainly function as a service centre for the surrounding farming areas.
6.4.2.4 FOURTH ORDER NODE

POPULATION CONCENTRATION POINTS (PCP)

These nodes have a very small economical base with limited social and institutional facilities but with a relative substantial population.

<table>
<thead>
<tr>
<th>CLUSTER SITUATED ADJACENT TO ROAD P94-1</th>
<th>CLUSTER SITUATED ADJACENT TO GILEAD ROAD (D3390)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hlahla</td>
<td>Moletsi/Moshate</td>
</tr>
<tr>
<td>Mokibelo</td>
<td>Komape</td>
</tr>
<tr>
<td>Semena</td>
<td>Madikoti</td>
</tr>
<tr>
<td>Ramongwano (1 and 2)</td>
<td>Mabokelele</td>
</tr>
</tbody>
</table>

6.4.2.5 FIFTH ORDER NODES

LOCAL SERVICE POINTS (LSP)

This Local Service Points or fifth order nodes forms the lowest level of service points in the municipal area. These nodes have no economical base and mainly function as residential areas. Three clusters exist in the southern part of the municipal area on the intersection of P33/1 and D4000 as well as in the near vicinity of road D4000.

<table>
<thead>
<tr>
<th>WESTERN NODE</th>
<th>CENTRAL NODE</th>
<th>EASTERN NODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thokgwaneng</td>
<td>Kpermyn</td>
<td>Ga-Molepo</td>
</tr>
<tr>
<td>Leshikishiki</td>
<td>Mmoto-wa-bogobe</td>
<td></td>
</tr>
<tr>
<td>Maratapelo</td>
<td>Ga-Phiri</td>
<td></td>
</tr>
</tbody>
</table>

6.4.2.6 ISOLATED VILLAGES

A number of small isolated rural villages exist in the north-western, eastern and south-eastern parts of the municipal area. The villages only functions as residential settlements with a very limited or non-existent potential for future self sustainable development.

6.4.3 FRAGMENTATION OF THE MUNICIPAL AREA (SDA’S AND PDA)

The 2007 spatial development framework’s approach of identifying “strategic development areas” and “potential development areas” leads to the fragmentation of the planning area with related problems for land use management and development. The identification of strategic development areas and potential development areas, their shortfalls / limitations and a proposed new approach are discussed in the following section.

6.4.3.1 PREVIOUSLY IDENTIFIED STRATEGIC DEVELOPMENT AREAS

Strategic Development Areas (SDA’s) can be defined as the main focus areas for future development/ expansion of townships and especially residential areas (SDF,2007). The following Strategic Development Areas (which partly covers urban clusters) have been identified (SDF,2007):

- SDA 1: the area between Polokwane City and Seshego
- SDA 2: the area known as the Iydale Agricultural Holdings Area
- SDA 3: Eastern Suburbs of Polokwane City and adjacent area to the east
- SDA 4: Mankweng / Badimong Cluster
- SDA 5: Area abutting Mankweng to the south-west. The Laaste Hoop area (currently local service point)
- SDA 6: Sebayeng Municipal Growth Point and the area directly surrounding it
- SDA 7: The area which forms the remainder of the Sebayeng / Dikgale Cluster which is not part of SDA 6.
- SDA 8: The area or settlements which are located in the southern parts of the municipal area, known as Chuene, currently a local service point.

The approach in respect of development within in the SDA’s which are located within the identified “urban edge” is that the municipality should actively support, promote and facilitate development through:
The provision of bulk infrastructure,
The provision of incentive schemes like requiring no bulk service contributions from prospective developers,
The provision of administrative support to developers through the streamlining of application procedures,
The compilation of detailed local framework or land use plans and implementation programmes for each of these areas,
The active marketing of these areas.

Although the focus on “strategic development areas” have merits, the existing implementation thereof do have certain gaps/shortfalls and limitations with regard to the planning and restructuring of the area.

- The “urban edge” is not clearly delineated (taking into account existing cadastral information) which results in confusion in respect of where development should take place within clusters.
- The areas which delineate “future spatial form” include vast open spaces between urban clusters.
- There is a need for the proper delineation of urban edges for all major urban clusters.
- There is a lack of a comprehensive and inclusive spatial plan for the greater urban cluster of Polokwane/ Perskebult / Seshego (SDA 1, 2 and 3 do not cover the greater urban area). The current fragmented approach which could result in distorted spatial patterns lacks a general development vision and spatial guidelines. The current SDA 1-3 is therefore included / contained in the revised SDF proposals within the Polokwane Urban Concept Framework.

It is important to note that the current SDA 1-3 framework plans and guidelines, as contained in the 2007 SDF, remains as guiding documents until a detailed Urban Concept Framework Plan has been compiled, as proposed in this document.

- No development guidelines also exist for the areas of Mankweng / Badimong and Sebayeng / Dikgale. The previous SDA 4-5 (for which no plans / guidelines existed) are now contained in the Urban Concept Framework for the Mankweng / Badimong area (Refer to Map 8).

- The previous SDA 6-7 (for which no plans / guidelines existed) are now contained in the Urban Concept Framework for the Sebayeng / Dikgale area (Refer to Map 21).
- The area identified as SDA 8 in the 2007 SDF document, refers to the Chuene area, which was classified as a Local Service Point. The recommendation in this document is that a Multi Purpose Community Facility be provided in the southern part of the Municipal Area in order to provide basic socio- economic services to the inhabitants of this area.
- Reference is made in the current SDF with regard to an urbanization plan and the possible important thereof to guide development. However, no guidelines are provided in respect of the development of such a plan.

NEW APPROACH

The following proposals are made to address the existing shortcomings of the “Strategic Development Areas” approach:

- The approach should be to develop a “Local Spatial Development Framework Plan” (LSDFP) for the Polokwane/ Perskebult area, which clearly indicate the “urban edges” and “urban fringe”, which will include all components of the urban environment, and addresses spatial development and integration in a holistic manner.
- “Local Spatial Development Framework Plans” within urban edge should be developed for the other formal areas (Mankweng / Badimong Cluster and Sebayeng/ Dikgale Cluster).
- Reference should be given based on areas position in the urban hierarchy in respect of development, public funds expenditure and subsidised housing, in order to alleviate existing backlogs and provide engineering-, social and economic services in these areas.
- The development of clusters within the urban edge should focus on integration, (especially along major routes) which will contribute to efficiency, sustainability, viable communities over the long term and also stimulates economic activity within a free market system.
The “Local Spatial Development Framework Plans” should direct the future spatial form, and indicate the direction of future development. Important points to be considered are:

- Reconstruction of existing distorted spatial patterns,
- Successful integration of land developments and settlements,
- Existing spatial form and land uses,
- The provision of infrastructure and engineering services,
- Major movement patterns and higher order routes,
- Geographical and physical aspects/ restrictions, and
- Existing development trends.

6.4.3.2 PREVIOUSLY IDENTIFIED POTENTIAL DEVELOPMENT AREAS

According to the 2007 Spatial Development Framework, a Potential Development Area (PDA) can be defined as areas that hold potential for future development which are not yet earmarked for any development or as a Strategic Development Area. The following PDAs have been identified in the 2007 SDF:

- PDA 1: The area alongside DC 1 (the R71 towards Mankweng) and between Polokwane Provincial Growth Point and Mankweng District Growth Point, which includes Dalmada Agricultural Holdings, Baskoppies Myngenoeugen- and Kalkfontein farm portions.
- PDA 2: The area alongside DC2 (N1 north) and north of Polokwane Provincial Growth Point (PGP) which includes the Tweefontein-, Palm-, and Palmietfontein farm portions.
- PDA 3: The area adjacent to and directly west of SDA 1 and south of Seshego. This area has since been included into the boundaries of Strategic Development Area 1.
- PDA 4: The area towards the south of Polokwane PGP towards the Metallurgical Complex (Polokwane Smelter)

NEW APPROACH

The PDAs were viewed as “…areas for the future expansion of “urban edges” and wherein future township development should take place”. The current approach and reference to PDA’s however, contribute further to the existing fragmentation of development areas. The following proposals are made with regard to Potential Development Areas/future expansion areas:

- The abandonment of PDA’s in principle and the incorporation thereof, were desirable, into Local Spatial Development Framework Plans.
- The approach should be to develop “Local Spatial Development Framework Plans” for the Polokwane/ Seshego/ Perskebult area, the Mankweng / Badimong cluster and Sebayeng/Dikgale cluster. The plans should clearly indicate the “urban edges”, which will include all components of the urban environment, and addresses spatial development and integration in a holistic manner. Future development should be prioritised within the “urban edge” (Refer to Maps 6, 14 and 17, 20 and 21 in this document).

6.4.4. THE ROLE OF CORRIDORS AND NODES IN SPATIAL AND ECONOMIC RESTRUCTURING

One of the normative principles of the National Spatial Development Perspective (NSDP, 2006) is that, in order to overcome the spatial distortions of apartheid, future settlements and economic development opportunities should be channelled into ‘activity corridors and nodes’ that are adjacent to or link the main growth centres. Infrastructure investment should primarily support localities that will become major growth nodes in South Africa and the SAPC region to create regional gateways to the global economy.

The NSDP principles are specifically aimed at focussing government action and investment, avoiding the so-called ‘watering-can-approach’ and at enabling the developmental State to achieve maximum social and economic impact within the content of limited resources. The focus on corridors and nodes is therefore to optimise economic

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15 The ‘watering-can-approach/principle is a term that has been used to describe and critique the approach of indiscriminate, uncoordinated and inefficient investment in infrastructure under the ambit of ‘spatial equity’, by those favouring greater spatial and sectoral concentration in infrastructure investment to strengthen economic clusters and to accelerate economic growth and job creation. As they have it, ‘(i)t makes no sense to distribute the money indiscriminately with a watering-can’. Instead, they suggest, as argued by Dr Gerhard Heimpold of the Halle Institute for Economic Research, that it would be better “...to concentrate the resources granted on those locations with the best potential for growth” (NSDP, 2006).
6.4.4.1 DEVELOPMENT CORRIDORS

A development corridor is a linear zone of development flanking a public transport or main route. Public transport facilities, mixed land uses and people are all focused here, hence a strong relationship exists between the transportation route and surrounding land uses. A corridor cannot exist and operate in the absence of nodes. The corridor not only forms the link between nodes, but also relies on nodes along its length to generate movement and activity. Nodes form the logical points at which to focus economic and social investment.

FIGURE 28: CORRIDOR DEVELOPMENT

Development Corridors can be classified as:

A. ACTIVITY CORRIDOR

This forms the main development corridor where a variety of social and employment opportunities are integrated with high-density mixed land use developments.

B. ACTIVITY SPINE

The activity spines are major routes on which most of the roads based public transport services run and on which most of the activities are focused. Activity spines also connect the prominent development nodes and support access to most of the mixed land use developments and community activities within the corridor.

C. ACTIVITY STREET

Activity streets form the major linkages between the different sections of the urban area as well as the activity corridors and spines. These roads normally attract sufficient passing trade and provide important opportunities for the stimulation of business development and community facilities within neighbouring nodes.

D. NATIONAL / PROVINCIAL CORRIDORS

The main or primary development corridor is formed by the N1 Trans Limpopo Corridor of National and Provincial importance. This corridor also serves as a gateway to the rest of Africa within the urban context of Polokwane.

The Dilokong Provincial Corridor to Burgersfort can also be classified as a municipal activity corridor.

The R71 forms part of the Provincial East-West Corridor with the N1. On a municipal level this corridor forms the main link between Polokwane City and Mankweng Area and can also be classified as a municipal activity corridor.
6.4.4.2 NODAL DEVELOPMENT

A. ACTIVITY NODES

The development and stimulation of activity nodes should complement the development corridors. Activity nodes can include a variety of intensive land uses such as businesses, offices, social amenities, and recreation / sport as well as tourism nodes.

Within urban and build-up areas a hierarchy of Shopping Centres / Malls are normally associated with activity nodes. In the rural areas activity nodes can be in the form of social service or multi-purpose nodes where services can be rendered for the surrounding farming communities.

B. HIERARCHY OF SHOPPING CENTRES

Polokwane Municipality adopted a hierarchical approach to the development of business / shopping facilities in the Municipal area. This approach is based on the principle that two forms of nodes are identified: i.e. the primary node (e.g. Polokwane CBD) wherein a variety and wide combination of specialized goods and services i.r.o. retail and personal/ professional goods, services and activities are concentrated together. The primary node serves a regional function in that it serves the wider region and province. The aim should be not to promote development elsewhere in Polokwane, should the municipality be of the opinion that such development should jeopardize the sustainability and viability of the CBD.

The second order of nodes is identified as Secondary Activity Nodes, which is identified as nodes wherein more convenient goods are provided to residents. In terms of the 2007, the hierarchic classification of businesses as derived from the “Classification Standards for South African Council of Shopping Centres” is used as the primary resource to define the various categories of business facilities: The table hereunder represents the current classification of suburban shopping centres, as adopted by Polokwane Municipality.

In terms of the 2007 SDF, the points of departure in favour of the hierarchic approach are:

- Control must also be flexible, but if deviation on accepted norms and standards are applied, it must be substantiated;
- Control must contribute towards healthy competition;
- Focus should not only be placed on the need, but also include the desirability aspects thereof;
- Changes in community needs and consumer patterns must also be recognized as aspects which may contribute towards a continuing process of amending this policy and standards;
- The compilation and function of a centre is also determined by economical factors which changes over time.

The approach should be based on a well-founded system, where the municipality should be convinced of the need and desirability of proposed developments; Development should be aimed at the whole community and provide healthy competition throughout the municipal area.

In view of the above mentioned, shopping facilities in Polokwane have been classified in terms of the following hierarchy: Super regional shopping centres, regional shopping centres, small regional shopping centres, community centres, neighbourhood centres, local convenience centres and small free- standing centres (Table 8.1).

The classification presented by Urban Econ Market Research Specialists should be viewed as a secondary resource to clarify and motivate new business nodes or the expansion of existing ones.
TABLE 52: PRIMARY CLASSIFICATION OF THE HIERARCHIC SYSTEM IN RESPECT OF PROVISION OF SUBURBAN SHOPPING FACILITIES IN POLOKWANE (Sources: Derived from:-
CLASSIFICATION STANDARDS FOR SOUTH AFRICAN COUNCIL OF SHOPPING CENTRES; 2006)

<table>
<thead>
<tr>
<th>Type of Centre</th>
<th>Size of centre (m²)</th>
<th>Trade area</th>
<th>Access Requirements</th>
<th>No. of households</th>
<th>Population</th>
<th>Socio-economic groups</th>
<th>Average Radius (km)</th>
<th>Median Travel time (minutes)</th>
<th>Main tenants</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE CLASSIFICATIONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Small free-standing centre | 500 – 1 000        | Serves part of a suburbs          | Suburban street     | <2 000            | <7 000     | Mainly middle, middle low and low LSM 4-7 | 1                   | <2                      | • Cafe/Superette
• few convenience stores
• less than 10 stores |
| Local convenience centre | ±1 000 - ±5 000     | One suburb or parts of suburb(s)  | Minor collector road| 700 – 3 600      | 2 500 - 12 520| All LSM 4-10          | 1,5                 | 3                       | • supermarket
• few convenience stores
• 5 – 25 stores |
| Neighbourhood centre     | ±5 000-±12 000      | Strategically located for a group of suburbs | Major collector roads | 2 400 – 5 700    | 8 300 – 20 000| All LSM 4-10          | 2,0                 | 4-9                     | • supermarket
• convenience
• some small specialised stores |
| Community Centre         | ±12 000-±25 000     | Strategically located to serve a suburban community. | Major arterial road | 8 500 – 17 800   | 30 000 – 62 500| All LSM 4-10          | 3,0                 | 6-14                    | • large supermarket
• convenience
• small national clothing
• restaurants & takeaways
• services |
| Small regional           | ±25 000-±50 000     | Specific sub-region of city (can be large self contained community (i.e. Chatsworth) | Major suburban arterial road linking to a provincial highway | 17 800 – 35 700 | 62 500-125 000 | All LSM 4-10          | 5,0                 | 10-16                   | • large supermarket
• 1 or 2 large clothing anchors
• Strong national tenant comparison goods component
• boutiques
• restaurants
• entertainment
• services |
The classification hereunder has been developed by *Urban Econ 2005*.

### TABLE 53: SHOPPING CENTRE CLASSIFICATION GUIDELINES

<table>
<thead>
<tr>
<th>Regional</th>
<th>Community</th>
<th>Neighbourhood</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides durable and specialized goods. Have one or more supermarkets.</td>
<td>Provides convenience goods, personal services, clothing and appliances. Anchor stores are normally a departmental store and large supermarket</td>
<td>Primarily convenience shopping and numerous personal service orientated shops. Anchor store usually a small supermarket.</td>
<td>Convenience and limited specialty shops. Usually contains a national franchise supermarket or regional supermarket.</td>
</tr>
<tr>
<td>Multi-tenant mix including specialized retailers providing products at competitive prices. Centre usually has basic finishes in order to deliver lower prices to the consumer. Usually contains a national franchise supermarket or regional supermarket chain.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Area Population</th>
<th>Total Area Population</th>
<th>Total Area Population</th>
<th>Total Area Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 000-20 000</td>
<td>30 000-60 000</td>
<td>10 000-30 000</td>
<td>4 000-20 000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gross Leasable Area</th>
<th>Gross Leasable Area</th>
<th>Gross Leasable Area</th>
<th>Gross Leasable Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 000-75 000</td>
<td>15 000-23 000</td>
<td>5 000-15 000</td>
<td>2 000-10 000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service Radius</th>
<th>Service Radius</th>
<th>Service Radius</th>
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<td>0.5km</td>
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<tbody>
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<td>75+</td>
<td>50-75</td>
<td>25-50</td>
<td>10-25</td>
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<tbody>
<tr>
<td>20 Ha+</td>
<td>6-12 Ha+</td>
<td>2-6 Ha</td>
<td>1-4 Ha</td>
</tr>
</tbody>
</table>

*Source: Urban Econ, 2005*
i. PROPOSED ACTIVITY NODE OUTSIDE POLOKWANE CITY

As far as the District Growth Point (DGP) – Mankweng / Badimong Area and the Municipal Growth Point (MMGP) – Sebayeng / Dikgale area are concerned, certain potential activity nodes were identified that can accommodate business, social- and institutional activities (Refer to Maps 20 and 21). More detail planning is necessary for these areas in order to classify these potential activity nodes as community, neighbourhood and local centres, as well as specialised nodes. The Mankweng CBD and Sebayeng “CBD’s” can develop in community centres.

In order to improve the living standards to marginalized communities in the rural areas more emphasis must be placed on the improvement of social facilities and services on strategic localities within the Population Concentration Points (PCP) and Local Service Points (LSP). This implies the identification of focal points or nodes adjacent to dominant regional routes or intersection of regional routes in order to increase accessibility to social facilities effective public transport system within the rural areas.

The core function of these nodes should be in the form of multipurpose community development centres that is based on the concept of a “one stop” centre providing for a full range of social services (pension pay point, municipal pay points, clinic, school, Telkom, Post Office, and Police Station etc). These facilities could be provided in the form of temporary buildings.

Proper maintenance of especially the rural roads is crucial for the proper functioning of these nodes and to enhance public transport.

These nodes can also serve the isolated smaller villages in the vicinity.

6.4.5 ENVIRONMENTAL MANAGEMENT (EMP and NEMA)

The Environmental Management Framework (2004) is applicable for all environmental management in the municipal area of jurisdiction.

In terms of the rural remainder (all areas outside the urban edge (urban area), the following management issues are applicable:

- Protection of environmental sensitive areas
- Agricultural development and the protection of high potential agricultural land

Environmental and other applicable legislation must be properly integrated in the land use management scheme -:

- Biodiversity Act
- National Environmental Management Act
- Environmental Conservation Act
- National Heritage Resources Act
- Mineral and petroleum Resources Development Act
- Water Services Act
- Business Act
- Subdivision of Agricultural Land Act

6.4.5.1 PROTECTION OF ENVIRONMENTAL SENSITIVE AREAS

Environmental protected areas include all existing protected areas as well as potential protected areas such as sensitive ecological areas with a rich biodiversity or other natural features.

Sensitive ecological areas in protected and potential areas that need to be protected include:

- Rivers, streams and wetland areas
- Hills and ridges
- Areas identified with a high biodiversity
- Unspoilt forest and woodland areas
- Dolomite areas
- Cultural heritage sites

Due to the negative human related impacts of these areas, it will be important to introduce rehabilitation and restoration environmental management principles in these areas (see Map 10).
6.4.5.2 PROTECTION OF AGRICULTURAL LAND

Agricultural development in the municipal area holds some promise for expansion due to its favourable location with regard to local as well as national markets. Proximity to these markets makes economies of scale in farm production a reality that should be capitalized on. In order to protect the agricultural potential of the area the following principles should be applicable:

- Protect agricultural land with potential. (refer Map 4B)
- Maintain sustainable farming units

A) LAND REFORM

The national government envisages that at least 30% of land should be transferred to previously disadvantaged people.

Land reform encompasses three distinct components, namely the restitution, tenure reform, and the redistribution programmes. The redistribution programme, in turn, has different components, or ‘sub-programmes’:

- Agricultural Development – to make land available to people for agricultural purposes
- Settlement – to provide people with land for settlement purposes, and
- Non-agricultural enterprises – to provide people with land for non-agricultural enterprises, for example, eco-tourism projects.

A number of land claims have been lodged with government within the Polokwane area of jurisdiction. However, none of these claims are finalized. It is currently not possible to determine their likely impact on spatial development. There is concern from some quarters that more unsustainable rural settlements might be established as a result of restitution of land rights. As a cautionary measure, specific provision should therefore be made in the SDF to guide future land reform projects in the area. (Refer Map 7 for complete area under land claims).

From a spatial development point of view, land claims do not necessarily impact on the type of land use. It, however, do have an impact in delaying development processes. Prospective developers are obliged to seek consent of the respective Land Claims Commissioner prior to undertaking any form of development, that is, either for township establishments or change in land use. Although consultations do not hinder development, they do derail the speed at which development moves.

- A sequential approach must be used to determine the optimal location of agri-villages as part of a land reform approach – i.e. it must be demonstrated why farm worker housing cannot be provided in an urban area before an agri-village can be established outside the urban edge. Application or development of Agri-villages should in line with the policy guidelines of lifestyle estate policy.

As far as existing villages are concerned a settlement improvement programme must be implemented that include proper settlement planning, infrastructure and housing delivery. The village must also be integrated in the land use management scheme of the municipality in order to manage growth and development.

The department of rural development and land reform introduced a comprehensive rural development programme (CRDP) through which it envisages to achieve “land reform that is not only measured through equity but through productivity leading to enhanced food security for all, job creation and skills development amongst beneficiaries.” CRDP would achieve its mission by:

- Categorisation of land needs – implement stringent criteria to meet the different land needs of beneficiaries;
- Recapitalisation and development – prioritise the recapitalisation and development of all distressed land reform projects implemented since 1994;
- Strategic partnerships, co-management, share equity and mentorship – undertake a massive campaign to mobilise all social partners and forge strategic partnerships to ensure that all available capacity in the sector is galvanised to contribute to the success of the project; and
- Strengthening the security of tenure of farm dwellers and labour tenants – provide professional legal support to defend their rights and prioritise land needs of farm dwellers and labour tenants through land reform programmes.
The success of CRDP, true for any other multi-stakeholder program, would be determined by a close collaboration of stakeholders and the synergy effect of forging ties.

6.4.5.3 ENVIRONMENTAL MANAGEMENT PROPOSALS

A. DEVELOPMENT OF MUNICIPAL OPEN SPACE SYSTEM (MOSS)

The MOSS is a rationalized network of interconnected open space aimed at:
- Completing the built fabric by providing the urban environment with a variety character, a sense of visual relief, open space enjoyment, recreation and general amenity, and
- Protection of biodiversity in the urban and rural areas, providing animal and plant species with habitats.

Degradation of natural systems or open spaces must not be permitted as a motivation for urban development. These areas should be rehabilitated, thereby raising the quality and amenity value of the open space and contributing to the functioning of the system as a whole.

The Municipal Open Space System is intended to function as a series of interconnected parks, open spaces and natural areas which collectively serve as recreation, environmental, functional and historical corridors and areas.

The open space system serves as the breathing “lung” for the urban area, as well as corridors along where animals can move. The African Bullfrog, which is endangered specie, habitat is within the Municipal Wide Open Space System.

The environmental areas including environmental sensitive areas, protected areas, agricultural land etc. are indicated on Map 10. These areas should be protected and well managed. The following management proposals should be implemented to address environmental aspects as proposed by the EMP:

- **Promotion of Environmental Education:**
  - Environmental awareness campaign;
  - Environmental education;
  - Environmental responsibility promotion;
  - Availability of environmental information; and
  - Preserving heritage and Cultural sites.

- **Promotion of Environmental Rehabilitation:**
  - Improvement and rehabilitation of mining areas and related mining activities;
  - Sensitive existing mining activities close to residential areas;
  - Preserving heritage and cultural sites;
  - Promoting maintenance of parks and natural areas.

- **Promotion of Environmental Sustainability:**
  - Reducing all levels of air, water, underground water, dust, etc. pollution;
  - Implementing an effective waste management system;
  - Integrated environmental conservation, protection and development;
  - Access to the natural environment;
  - Environmental tourism throughout the district;
  - Sensitive and sustainability land use planning;
  - Regulations to protect the environment;
    - Protection of valuable agricultural land.

The following strategies and policies could be introduced to protect sensitive environments.\(^\text{16}\)

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\(^{16}\) Sighted in Aganang Municipality Spatial Development Framework, compiled by Pieterse, Du Toit & Associates.
<table>
<thead>
<tr>
<th>SENSITIVE ENVIRONMENT / ELEMENTS</th>
<th>POLICIES</th>
<th>STRATEGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Topography</td>
<td>• To preserve mountainous and other rocky areas in view of their environmental sensitivity, ecological importance and as major contributors to local and regional open space systems.</td>
<td>• Do not allow development, including buildings and other structures, mining or any form of modification of landscapes in these areas; • If residential developments are permitted in these areas, special mitigation measures should be implemented; • An EIA will be required for any development in such areas.</td>
</tr>
<tr>
<td>2. Geological Unsuitable Areas</td>
<td>• Prevent development from taking place on geological unstable formations.</td>
<td>• Geological unstable formations susceptible to collapsing, erosion and/or movement should be avoided; • Development should where required, be subjected to a geotechnical assessment. • An EIA be required for any development in such areas.</td>
</tr>
<tr>
<td>3. Visual Sensitive Areas</td>
<td>• Protect the natural and heritage qualities / features contributing towards aesthetic quality, identity and sense of place from indiscriminate development.</td>
<td>• No development should be allowed within visual sensitive areas; • In general, development should not be permitted on ridgelines; • An EIA will be required for any development in such areas.</td>
</tr>
<tr>
<td>4. Vegetation</td>
<td>• Protect sensitive vegetation habitats; • Promote the prevention of deforestation of municipal area.</td>
<td>• Development should not be permitted in sensitive vegetation habits, except with enforceable mitigation measures; • Remove invasive alien vegetation in a controlled manner; • An EIA will be required for any development in such areas; • Facilitate education of local communities by means of Environmental Education Programmes to prevent deforestation.</td>
</tr>
<tr>
<td>5. River Systems</td>
<td>• Protect sensitive river systems and catchment areas; • Preserve the banks of rivers; tributaries and watercourses as open space systems and also safeguard them against unsound land-use practices.</td>
<td>• Determine the capacity of the water surfaces to accommodate pressures of recreational developments; • Development should be restricted to one river bank to enhance the aesthetic appeal and to protect the estuarine environment; • Retain floodline areas as open space, irrespective of private or public ownership; • With the exclusion of informal recreational facilities (hiking, horse, trails), restrict any other development within floodline or similar areas; • An EIA will be required for any development in such areas.</td>
</tr>
<tr>
<td>6. Heritage Sites</td>
<td>• Preserve cultural, historical and other heritage sites where it is conservation worthy and / or practical to do so.</td>
<td>• Facilitate compilation of a database regarding cultural-historical and other heritage sites;</td>
</tr>
</tbody>
</table>
### POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK 2010

#### 7. Archaeological sites
- Preserve and exploit archaeological sites for tourism purposes.
- Facilitate a survey of the municipal area for archaeological sites with tourism value – SAHRA.

#### 8. Land degradation
- Address overgrazing and land erosion that threatens agricultural land in the municipal area.
- Facilitate education of local farmers about the risk and causes of overgrazing and appropriate methods of farming;
- Control mining of sand for building purposes in river systems and within settlements.

#### 9. Water Pollution
- Educate communities on safe water consumption;
- Prevent pollution of ground water in municipal areas.
- Promote programmes and information sessions (DHSW) to local communities on the risks of disease like cholera and the disposal of hazardous substances in water;
- Ensure that appropriate sewerage facilities be installed in existing and new residential developments;
- A geo-technical investigation that prescribes suitable sewerage facilities should be done for all new urban developments.

#### 10. Veld Fires
- Prevent occurrence of veld fires.
- Facilitate the drafting of an Ecological Management Plan that includes a burning programme and strategy to address the prevention of veld fires;
- Educate local communities wrt. The danger of veld fires and the safety precautions to take during the making of fires at dwellings and residences.

(Source: EMP 2004)

### 6.4.6 TOURISM DEVELOPMENT

Tourism holds potential for both local and national economic development and job creation. Because tourism is cross cutting other economic sectors such as business, transport, manufacturing, etc. it could actually serve as a springboard for development in many spheres.

Polokwane have a wide variety of cultural heritage, museums, feature attractions, natural scenery and nature reserves that attract tourist all over the world. Polokwane is also one of the host cities for the 2010 Soccer World Cup. Some of the main tourism attractions include:

- The **Polokwane Game Reserve**, one of the biggest municipal owned reserves, is an ecological jewel on the city’s doorstep. Here you can go on a self-drive adventure or a guided tour to see game like antelope, rhino and tsessebe. It is only a few hours’ drive to the Kruger National Park and situated on the N1. ([http://www.sa-venues.com/game-reserves/np_polokwane-game-reserve.htm](http://www.sa-venues.com/game-reserves/np_polokwane-game-reserve.htm))
• Polokwane Art Museum in the Library Gardens Complex. The museum has an extensive indoor and outdoor collection, reflecting some of the country’s best artists. Nearby;

• The Hugh Exton Photographic Museum has some 20 000 black-and-white photographs from the 1890s showing life as it was back then – from bodices to ox wagons and acacia trees;

• One of the most famous attractions in Polokwane is Irish House, a late-Victorian shop building that is currently undergoing renovations for 2010. The new and dynamic exhibition will show the different cultures of the province.

• Bakone Malapa living museum is a reconstructed village in the style used by the northern Sotho about 250 years ago, designed to demonstrate the daily life of the Bakone, a highly sophisticated subgroup of the northern Sotho tribe.

• The cultural village includes two homesteads or lapas that display and explain fire making, maize grinding and beer brewing as they would have been carried out years ago. There are also handcraft demonstrations that include pottery, basketry and bead work and most of these locally-made crafts are then sold from the local craft shop. But the museum is more than a cultural village alone. There is a bird sanctuary, a game reserve, hiking trails and outdoor recreation areas (http://www.sa-venues.com/attractions/limpopo/bakone-malapa.htm).

• Polokwane Golf Course, Voortrekker Street, Polokwane, Limpopo / 18 holes, par-72, rating 72, 6 253 metres. The Polokwane Golf Course has bent grass greens, Kikuyu fairways and 14 water hazards. Founded in 1863, the Polokwane Golf Club was virtually a desert. However, as the years progressed, so did the course, and it is now rated one of the best with 700 members and bent grass greens (http://www.sa-venues.com/golf/np_pietersburg.htm).

• Although Zion City is not a tourist attraction, it causes large number of people to travel here for Easter and again for the September festivals. The Zion Christian Church’s headquarters are at Zion City Moria. Moria, about 25 kilometres east of Polokwane, is the seat of the Zion Christian church - an entirely black denomination with over four million members formed in 1910 by Engenas Lekganyane - an indigenous church to Africa that is one of the only churches not established by evangelists from abroad.

• Peter Mokaba Stadium in Polokwane. The 45 000-seater stadium, which has been built to reflect the landscape of South Africa's Limpopo province, is more modest than some of its big city rivals, but will certainly leave World Cup visitors in no doubts as to where they are. The four corners are designed to resemble the province's signature baobab trees, while the coloured chairs paint a picture of
rolling mountains and a warm African sun. A 172-metre roof covers the eastern stand, while the rest of the spectators will be able to stare up at the big African sky.

There are also other tourism attractions in the surrounding areas such as:

- The **mountainous areas around Polokwane** are popular amongst mountain bikers and you can arrange to go on a guided mountain bike trail through the Kruger National Park. The northern Drakensberg mountains and Magoebaskloof areas also offer excellent hiking, along with outdoor activities such as mountain biking, horse-riding and - for the more adventurous - abseiling, quad-biking and white water tubing (http://www.southafrica.net/sat/content/en/us/full-article?oid=16867&sn=Detail&pid=129).

- The **Makapansgat Valley** is a basin rich in magnificence and biodiversity. Not only is it of interest to paleontologists - numerous caves in the Makapansgat valley hold fossils that date back to 3.3 million years before the present, linking directly to the history at the Cradle of Humankind, when the valley was a tropical paradise - but it also displays an incredible diversity of life. This series of caves together form a national monument and intentions are that it should soon become a World Heritage Site. **Map 10**, indicates the Makapansgat valley which is adjacent to the mountains.

### 6.4.7 LAND USE MANAGEMENT

"There is no difference between land use planning and sustainable development land use, because good land use planning will ensure sustainable development“ (Sairinen,2003:12).

A new Land Use Management Scheme should be compiled to address some of the main shortcomings of the existing scheme.

The existing Land Use Management scheme of Polokwane Local Municipality is currently only limited to the urban area of Polokwane City as well as the adjacent small holdings / farm portions (Urban Fringe Area). The commercial farming area, rural villages and Tribal areas are excluded from the current land use scheme.

Capacity building on land use planning and management are among the core strategic mandates of the Provincial Department. In terms of the Intergovernmental Relations Act 13:2005 the department is mandated to build the system’s capacity in the province – especially Traditional Authorities for land use planning management and control.

Tribal Authority have mixed challenges relating to land use planning, control, management and integrity systems: linking to planning, legal rights, ownership, control records, conflict and environmental management failure.

The Limpopo Province is now in a process of implementing a capacity building programme with the assistance of the Development Bank of South Africa.

Land Use Management means the establishing or implementing of any measure to manage, restrict or regulate land within a municipal area. A land use management system of the municipality consists of various mechanisms of which the Spatial Development Framework (SDF), official municipal land use policies as well as the Land Use Management Scheme (LUMS) form the main or core components of a land use management system.
Land Management has two key goals:

- It must provide effective protection to both the natural environment and member of the public from negative impacts of land development and land use change.
- It must provide effective protection to both the natural environmental and members of the public and all spheres of government so that there is shared and consisting understanding of the scale, extent and nature of permissible land development.

6.4.7.1 LAND USE MANAGEMENT PRINCIPLES

Although the Spatial Development Framework (SDF) will provide guidelines as well as land policy for the municipal area, a Land Use Management Scheme (LUMS) is crucial to regulate land development and land use change applications within the urban as well as rural areas. The land use management systems of the municipality (SDF, Policies and LUMS) should be based on the following national principles:

- **Equality**
  - Be treated equally by law
  - Equal protection and benefit from the law
  - No unfair discrimination

- **Good Governance**
  - Lawful, reasonable and procedurally fair
  - Just administrative action
  - Promote understanding of affected persons
  - Promote efficient administration (adequate notices, invitations, decision time, etc)

- **Sustainable**
  - Land used only in accordance to law
  - Account for disaster management
  - Synergy between economic, social, environmental and political concerns
  - Protect natural, environmental and cultural resources
  - Preserve prime agricultural

- **Efficiency**
  - Ensure best use of available resources
  - Promote compact towns
  - Secure proximity between residence and work places

- **Integrated**
  - Promote efficient, functional and integrated settlements
  - Be functionally, co-ordinated, aligned with account to be related policies
  - Promote integration of communities from diverse backgrounds
  - Facilitate appropriate mixed land use development

These Directive Principles that is also compatible with the DFA Principles should form the basis for any land development decisions as well as land use change applications within the municipal area.

The national government envisages that at least 30% of land should be transferred to previously disadvantaged people. A number of land claims have been filled with government within the Polokwane area of jurisdiction. However, none of these claims are proclaimed in order to take into account their possible influence and spatial development. The general concern is that through land claims even more rural settlements might be established that might not be sustainable. Specific provision should therefore be made in the SDF to guide future land reform projects in the area.

6.4.7.2 FUNCTION AND ALIGNMENT OF THE SDF

The role and function of the Polokwane SDF as part of the land use management system is indicated in the following diagram (figure 8.4). As an integrated part of the Polokwane IDP, the SDF must on the one hand be aligned with National, Provincial and District Policies / Plans and on the other hand also be aligned with the municipal sector plans. It must also be informed and also provide inputs in the municipal land use policies as well as the land use scheme. The SDF can also include detail land use guidelines / plans for certain precincts which require more detail spatial proposal.

A Spatial Development Framework, reflecting the spatial policy of the municipality cannot allocate land use rights on land, but should be employed during decision making process.
as a spatial guideline. Applicants applying for land use rights must motivate the need and desirability (merits) for a particular land use and provide the following supporting studies:

- Environmental Impact Assessment (R.O.D)
- Social Impact Assessment
- Traffic Impact Assessment
- Provision of bulk and internal services report
- Heritage Impact Assessment

The SDF must be seen as a working document that can and will be subject to changes as new policies, projects and sector plans are formulated.

**FIGURE 29: ROLE OF THE SDF IN LAND USE MANAGEMENT**

6.4.7.3 **GUIDING PRINCIPLES**

- Land use management scheme or system must benefit the entire community.
- Members of the community must be able to use the land use management scheme in order to protect their properties.
- Land use management scheme is based on existing land use rights. A new land use management scheme cannot take away land use rights that were granted.
- When owners or occupants of buildings or land wish to change the land use of a property, decision makers should assess the change in terms of the priorities and policies as reflected in the, Spatial Development Framework, Municipal Policy, relevant Planning Policies and DFA Directive Principles etc.
- All changes of land use whether within formal or informal areas should be subject to application procedures.
- Owners, occupants of properties or any other members of the public should be able to provide inputs and /object to decision-making bodies or applicants about land development that infringe unfairly on their rights.

As far as Tribal Authorities are concerned, the decision-making process is still subject to National Legislation providing the role of Traditional Authorities in Local affairs (Refer to white paper). Tribal Authorities must however participate in:

- Drafting and adopting of the Land Use Management Scheme
- Proceedings when considering land use change applications
- Capacity building with all major role players such as Tribal Authorities, Councillors and Officials plays a crucial role in the development of a land use management scheme.

The Land Use Management Scheme must cover the total Municipal area with proper land use parameters for:-

- Agricultural areas
- Environmental protection / conservation areas
- Urban areas
Zoning categories must be user friendly and must accommodate all types of land uses. Proposed categories:

- Agricultural (High potential and other types of agricultural land)
- Business purposes
- Commercial purposes
- Conservation purposes
- Education purposes
- Government purposes
- Industrial purposes
- Institutional purposes
- Mining purposes
- Public open spaces
- Recreational purposes
- Residential purposes (Low-, Medium- and High density)
- Transport purposes

Applicable application procedures for land use change applications must be developed for Tribal villages in cooperation with Tribal Authorities (Refer to typical flow chart – see figure 30)

Environmental and other applicable legislation must be properly integrated in the land use management scheme:

- Biodiversity Act
- National Environmental Management Act
- Environmental Conservation Act
- National Heritage Resources Act
- Mineral and petroleum Resources Development Act
- Water Services Act

- Business Act
- Subdivision of Agricultural Land Act

The Land Use Management Scheme must be based on existing land use rights consisting of:

- Zonings in terms of the existing town planning scheme (only applicable in a certain areas of Polokwane)
- Land Use rights allocated in Tribal villages (PTO’s etc)
- Land use rights on commercial farming areas (business, commercial etc)

(The determination of land use rights must be preceded by a proper land use survey of all the land uses in the municipal area).

From a practical point of view, this process can also be combined within the formalization process of the tribal / rural villages.

6.4.7.4 DESIRED PATTERNS OF LAND USE

The desired patterns of land use and classification of land use types - tables are derived from the 2007 SDF, and is included in this document in a revised form.

The purpose of these tables is to provide guidance with regard to the nature and extent of land uses that are permitted within the Polokwane Municipality's area of jurisdiction. Table 55 and Table 56 should be read in conjunction with each other. Table 3.4 provide a general classification of hierarchic settlement definitions and the permitted land use types within the various hierarchic settlements. Table 56 provides the broader definitions / classification of the various land uses that are permitted.

These tables serves as an interim measure until such time that a proper uniform land use management scheme is developed for the Polokwane Municipal area / conceptual framework plans are developed for the various settlement clusters (e.g. Polokwane/Perksebult, Mankweng / Badimong and Sebayeng / Dikgale), as proposed in this document.
**TABLE 55: DESIRED PATTERNS OF LAND USE AND LAND USE TYPES ALLOWED IN DIFFERENT AREAS OF POLOKWANE MUNICIPALITY.**

<table>
<thead>
<tr>
<th>AREA I.R.O. HIERARCHY OF SETTLEMENT</th>
<th>DESCRIPTION OF AREAS</th>
<th>LAND USES/TYPES BY *CLASS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Classes allowed</td>
<td>Classes allowed with special merits</td>
</tr>
<tr>
<td><strong>1ST ORDER NODE</strong></td>
<td><strong>Primary Activity Node (CBD + Regional)</strong></td>
<td>1; 2c; 3; 4a; 4b; 4d-f; 5b; 9</td>
</tr>
<tr>
<td></td>
<td><strong>Industrial townships</strong></td>
<td>1d; 2b; 2c</td>
</tr>
<tr>
<td></td>
<td><strong>Industrial areas within township</strong></td>
<td>1d; 2b; 2c</td>
</tr>
<tr>
<td></td>
<td><strong>Activity nodes</strong></td>
<td>1b; 4b; 4d-f; 5b</td>
</tr>
<tr>
<td></td>
<td><strong>Residential neighbor-hoods (township)</strong></td>
<td>1d; 3a; 3c; 4c; 5a; 5b.</td>
</tr>
<tr>
<td></td>
<td><strong>Medical node</strong></td>
<td>3(b); 10a</td>
</tr>
<tr>
<td></td>
<td><strong>General – Within urban fringe</strong></td>
<td>7a-</td>
</tr>
<tr>
<td>Mankweng DGP</td>
<td><strong>Activity nodes</strong></td>
<td>1b; 1c; 2c; 3; 4b; 4d-f; 5b.</td>
</tr>
<tr>
<td></td>
<td><strong>Industrial areas within urban edge</strong></td>
<td>1d; 2b; 2c</td>
</tr>
<tr>
<td></td>
<td><strong>Residential neighbor-hoods (township)</strong></td>
<td>1d; 3a + c; 4c; 5a; 5b.</td>
</tr>
<tr>
<td></td>
<td><strong>General within urban edge</strong></td>
<td>8a-c</td>
</tr>
<tr>
<td>Sebayeng MGP</td>
<td><strong>Activity nodes</strong></td>
<td>1b; 1c; 2c; 3; 4b; 4d-f; 5b.</td>
</tr>
<tr>
<td></td>
<td><strong>Industrial areas within urban edge</strong></td>
<td>1d; 2b; 2c</td>
</tr>
<tr>
<td></td>
<td><strong>Residential neighbor-hoods (township)</strong></td>
<td>1d; 3a; 3c; 4c; 5a; 5b.</td>
</tr>
<tr>
<td></td>
<td><strong>General within urban edge</strong></td>
<td>8a-c</td>
</tr>
<tr>
<td>Other areas within clusters (in general)</td>
<td><strong>Activity nodes</strong></td>
<td>1c; 1d; 4d; f;</td>
</tr>
<tr>
<td></td>
<td><strong>Residential areas</strong></td>
<td>1d; 3; 4c; 5a-c</td>
</tr>
<tr>
<td></td>
<td><strong>General</strong></td>
<td>8a-c</td>
</tr>
<tr>
<td>LSP’s</td>
<td><strong>Agricultural holdings</strong></td>
<td>1d; 3; 4c; 4f; 5a-d; 6d; 8a</td>
</tr>
<tr>
<td></td>
<td><strong>Small farms (less than 4ha)</strong></td>
<td>5d; 6a; 6d; 7a</td>
</tr>
<tr>
<td></td>
<td><strong>Farms &amp; and rural areas</strong></td>
<td>5d; 6a; 6d; 7a</td>
</tr>
<tr>
<td></td>
<td><strong>Nature Conservation Areas</strong></td>
<td>1a-c; 2; 3b; 3c; 5, 6</td>
</tr>
</tbody>
</table>

**NOTES:**
1. See Table 56 below for classification & description
2. “Industrial township” refer to townships which is mainly established with the main objective to create an industrial area, e.g. Pietersburg Extension 12 (Magna Via), whilst “Industrial areas within townships” rather refer to specific areas which forms part of a township but also consist of other land uses and where the main objective was not to primarily create an industrial area (e.g Seshego zone F, Mankweng)
3. All classes allowed and land uses contained in table are subject to provisions of zoning (town planning) scheme in operation as well as specific land use policies or local framework plans. This is merely a guide to desired patterns in general, especially in areas without such land use management systems.
4. Classes allowed with special merits: Special merits means documentary proof and submission over and above the normal studies required (e.g. retail studies, environmental impact studies, traffic impact studies, etc.). The applicant should provide unique information and motivation (that makes it different from others in a way that it contemplates something special and worthy of note) in support of the proposed use, as may be required by the municipality.

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**POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK, 2010**
### TABLE 56: GENERAL CLASSIFICATION AND DESCRIPTION OF LAND USES/LAND USE TYPES

<table>
<thead>
<tr>
<th>CLASSIFICATION</th>
<th>PURPOSE</th>
<th>LAND USES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Main purpose of land use &amp; classification &amp; preferred location</td>
<td>Definition</td>
</tr>
<tr>
<td>1: Business &amp; retail</td>
<td><strong>1a:</strong> Specialized businesses, retail, offices &amp; other specialized uses</td>
<td>To provide the highest spectrum of specialized services/uses to the residents as well as the province. Mainly located at higher order nodes, (e.g. CBD)</td>
</tr>
<tr>
<td></td>
<td><strong>1b:</strong> General business, retail &amp; office</td>
<td>To provide a higher spectrum of services/uses to residents, generally found in residential areas, but not in the similar manner as Class 1a. Mainly located sub-urban activity nodes.</td>
</tr>
<tr>
<td></td>
<td><strong>1c:</strong> Service related business</td>
<td>Only to provide in services incidental to the needs of community and/or specific market, which may include passing public. Location dependent on target market.</td>
</tr>
<tr>
<td></td>
<td><strong>1d:</strong> Local business</td>
<td>Only to provide in consumer products to serve local area/market or neighbourhood</td>
</tr>
<tr>
<td>2: Industrial</td>
<td><strong>2a:</strong> Noxious industry</td>
<td>To accommodate industries with a health hazard and/or any nuisance which can affect the environment or lives of people or animals. Areas and/or townships for heavy industrial uses and noxious industries. Location criteria are critical.</td>
</tr>
<tr>
<td></td>
<td><strong>2b:</strong> Light industrial, manufacturing, commercial &amp; warehousing</td>
<td>To mainly accommodate factory oriented uses where manufacturing, processing, packing, installing, mounting and repair of goods and products occur, focused on a greater market and not only the local community. General industrial areas or other suitable property.</td>
</tr>
<tr>
<td></td>
<td><strong>2c:</strong> Service industry</td>
<td>Only to provide in services incidental to the needs of community and/or specific market, which may include passing public. Location dependent on target market.</td>
</tr>
</tbody>
</table>
## POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK, 2010

<table>
<thead>
<tr>
<th>2d: Resource orientated (Mining)</th>
<th>To enable the processing and excavation of the raw material found in the direct area or on the property. Location dependant on material.</th>
<th>Industries tending to locate in close proximity to their source of localized raw material, and may include noxious industries.</th>
<th>Noxious industry; Industrial; Offices; Business.</th>
<th>Brickyard, crushers, quarry, mines, paper mills.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3: Community Services</td>
<td>3a: Educational facilities</td>
<td>To make provision for educational facilities for the community.</td>
<td>Schools, colleges, technical college, lecture hall or other educational facility and include a crèche, convent, public library, art school as well as a place of public worship.</td>
<td>Education; Institutional.</td>
</tr>
<tr>
<td>3b: Institutional</td>
<td>To make provision for health care facilities for the community.</td>
<td>Public or charitable institutions, hospital, nursing home, sanatorium, and clinics whether public or private including ancillary and subservient medical consulting rooms and offices and place of public worship.</td>
<td>Institutional; Medical consulting rooms</td>
<td>Hospital, clinic, nursing home, medical consulting rooms, church.</td>
</tr>
<tr>
<td>3c: Place of public worship.</td>
<td>To make provision for places for religious activities for communities</td>
<td>Places used for religious purposes, religious instruction and activities.</td>
<td>Church, Educational.</td>
<td>Churches, convents.</td>
</tr>
<tr>
<td>4: Recreation &amp; Tourism</td>
<td>4a: Recreation and entertainment nodes</td>
<td>To provide in high level of recreational and entertainment facilities on municipal and regional level</td>
<td>Land used for recreational and entertainment purposes, which include private or public sport fields, play grounds and places of refreshment as well as places of amusement.</td>
<td>Sport stadiums, Parks, Sport fields, Places of amusement; Places of refreshment.</td>
</tr>
<tr>
<td>4b: General recreation &amp; entertainment</td>
<td>To provide in general recreational and entertainment facilities on urban level</td>
<td>Land used for recreational and entertainment purposes, which include private or public sport fields, play grounds, parks, squares, gardens and places of refreshment.</td>
<td>Parks, Sport fields, Places of refreshment;</td>
<td>Parks, dams squares, restaurants, tea gardens.</td>
</tr>
<tr>
<td>4c: Local recreational facilities</td>
<td>Only to provide most essential local recreational facilities in a specific area/neighbourhood/village</td>
<td>Land used for private or public sport fields, play grounds, parks, squares and gardens</td>
<td>Parks, Sport fields.</td>
<td>Parks and play grounds</td>
</tr>
<tr>
<td>4d: Hotels, guest houses &amp; overnight accommodation facilities</td>
<td>To provide for overnight accommodation for visitors and tourists to any area. (excl. category 8c)</td>
<td>Overnight accommodation and guest houses means residential units and/or rooms with or without kitchens, used for</td>
<td>Hotel; Business; Residential building; Overnight accommodation</td>
<td>Hotel, guest house, etc</td>
</tr>
</tbody>
</table>
**4e: Tourism retail**
- To provide for tourism retail to attract tourists, visitors and provide for recreation for the community.
- Tourism retail is the retail trade in tourism related products such as art, crafts and curios which are not labour intensive and/or service industries.
- Curio shops, flea markets, Craft centres

**4f: Tourism attractions and museums**
- To provide for museums and to attract tourists, visitors and provide for recreation for the community.
- Tourism Attractions include places such as museums, historical places etc.
- Museums

**5: Residential**

- **5a: Urban Residential (Single)**
  - To provide for residential areas within a specialized urban area and/or settlement cluster and is mostly part of a proclaimed township.
  - Residential areas which are planned/designed/lay-out, mostly surveyed and which comprises primarily of residential erven/stands which may accommodates single and/or multi-residential erven for purposes of erecting dwelling units (houses, town houses), and secondary to provide for the necessary local businesses and community services necessary for such community. (e.g. local offices, professional practices)
  - Single Residential ( Dwelling house/s according to density specification, normally 1/erf); Community facilities; Businesses; Specialized uses.
  - Mostly sub-urban residential areas/ neighbourhoods within a township/settlement of a cluster. (e.g. Bendor, Flora Park, Madiba Park, Mankweng, Sebayeng + other)
  - See map 11

- **5b: Urban Residential (Multiple/High density)**
  - Multi-residential/High density (Town houses, Flats) according to density specification; Community facilities; Businesses;
  - Suburban as well as inner-city and older residential neighborhoods (Bo-dorp) within a township. (e.g. Pietersburg, Bendor X17) (at nodes and along corridors)
  - See densification map 12

- **5c: Rural Residential (Special for extended families)**
  - To identify residential areas within a settlement in a rural area, but which is mostly not part of a settlement cluster or proclaimed township, but was established as part of specific legislation (e.g. Proclamation R188).
  - Special Residential ( Dwelling house/s including secondary but ancillary units/rooms for extended family); Local business uses and community services.
  - Rural villages (e.g. Ga-Mothapo 1; Thema; Madiga)

- **5d: Rural Occupation**
  - To identify and allow limited residential
  - Smaller farm portions and agricultural
  - Agricultural; Agricultural holdings and small
<table>
<thead>
<tr>
<th>5e: Lifestyle Estates</th>
<th>occupation of smaller farm portions and agricultural holdings on those land which is not used as a productive farms, but which uses doesn’t constitute a township per definition, but may be constituted as part of specific legislation (e.g. Agricultural Holdings Act)</th>
<th>holdings which can neither be classified as a productive farming unit nor as a settlement, but which are primarily used for (rural) residential purposes. However small scale crop growing and farming may take place</th>
<th>Dwelling unit/s and necessary outbuildings; Local business and community facilities</th>
<th>Farm portions</th>
</tr>
</thead>
<tbody>
<tr>
<td>6: Agricultural &amp; agro-orientated uses</td>
<td>Identify, on merits, and allow “lifestyle estates” to develop in a rural setting / on farmland. Development can form part of conservancies, should promote economic development and job creation in the areas where it is developed.</td>
<td>“rural residential development within the peripheral area of towns or settlements and in some instances in the rural areas of the Municipality with the emphasis on preserving the natural habitat and establishing self sustainable communities</td>
<td>Residential development that provides a lifestyle with a specific standard of living and other community facilities/ and certain benefits to residents.</td>
<td>Eco-estates, Wildlife estates, heritage estates, recreational estates (e.g. Golf estates), Agricultu-ral estates, mine estates, aeropark business estates. (Refer to Life estate policy guidelines)</td>
</tr>
<tr>
<td>6a: Productive farming unit</td>
<td>To allow productive agricultural units/farms and/or allow for single residential occupation/land use on a farm.</td>
<td>Productive farming units in crop growing, stock and game farming.</td>
<td>Agricultural; Necessary farm dwelling(s) &amp; outbuildings/uses ancillary to farming activity (e.g. Game Lodge)</td>
<td>Farms and productive agricultural units/portions (NB. with the consent from relevant Department in support of the rights through application of applicable legislations and policies)</td>
</tr>
<tr>
<td>6b: Agro-business</td>
<td>To allow agro-business and agro-industrial uses directly associated with farming products on a productive farm possible.</td>
<td>Retail trade in only fresh products produced on the farm (or farms in the immediate vicinity)</td>
<td>Agricultural / Business.</td>
<td>Farm stall; Butchery; Nursery; Fresh produce market; Dairy; Chicken hatchery.</td>
</tr>
<tr>
<td>6c: Agro-industrial</td>
<td>To allow agro-business and agro-industrial uses directly associated with farming products on a productive farm</td>
<td>Processing and packing of agricultural products produced on the farm (Or farms in the immediate vicinity) and/or other agro-industrial purposes.</td>
<td>Agricultural / Industrial/ Business.</td>
<td>Packers, sawmill, canners, processing plants for agricultural products/ abattoir (NB. with the consent from relevant Department in support of the rights through application of applicable legislations and policies)</td>
</tr>
</tbody>
</table>
### 6d: Small scale crop growing and farming

<table>
<thead>
<tr>
<th>Description</th>
<th>Uses</th>
<th>Zoning</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>To make small scale crop and vegetable growing possible on agricultural holdings and generally in residential areas/residential property.</td>
<td>To allow small scale crop growing and vegetable gardens possible as secondary use in order to provide owner with fresh produce and/or to allow small enterprises.</td>
<td>Single residential; Agricultural;</td>
<td>Vegetable gardens;</td>
</tr>
</tbody>
</table>

### 6e: Agro-related

<table>
<thead>
<tr>
<th>Description</th>
<th>Uses</th>
<th>Zoning</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>To allow uses normally/also associated with farming products and/or farming activities.</td>
<td>Agro related services, education and administrative uses.</td>
<td>Agricultural</td>
<td>Forestry offices; Equestrian schools; kennels; Veterinary surgeon (NB. with the consent from relevant Department in support of the rights through application of applicable legislations and policies)</td>
</tr>
</tbody>
</table>

### 7: Nature Conservation areas & outdoor recreation

#### 7a: Proclaimed Nature Conservation area

<table>
<thead>
<tr>
<th>Description</th>
<th>Uses</th>
<th>Zoning</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primarily to protect natural resources (fauna &amp; flora) and secondly to attract tourists, visitors and provide for recreation for the community</td>
<td>Proclaimed Nature Conservation Areas</td>
<td>Public Open Space; Municipal; Agricultural.</td>
<td>Polokwane Game Reserve</td>
</tr>
</tbody>
</table>

#### 7b: Nature recreational areas & places for outdoor adventures

<table>
<thead>
<tr>
<th>Description</th>
<th>Uses</th>
<th>Zoning</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>To utilise natural resources (fauna &amp; flora) and to attract tourists, visitors and provide for recreation for the community</td>
<td>Other natural areas used for recreational purposes and nature conservation, outdoor adventure etc.</td>
<td>Agricultural; Municipal; Private Open Space; Public Open Space.</td>
<td>Private game reserve; Hiking trails &amp; bush camps; 4x4 routes (NB. with the consent from relevant Department in support of the rights through application of applicable legislations and policies)</td>
</tr>
</tbody>
</table>

#### 7c: Nature/Game reserve lodges associated accommodation facilities

<table>
<thead>
<tr>
<th>Description</th>
<th>Uses</th>
<th>Zoning</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>To provide for accommodation facilities for visitors and tourists to nature/game reserves.</td>
<td>A residential unit and/or rooms with or without kitchens used for provision of temporary accommodation to visitors of nature conservation areas and/or nature recreational areas and outdoor adventure areas. A game lodge may also include conference facilities and may be licensed to sell liquor as ancillary use.</td>
<td>Game and hunting lodges; caravan parks. (NB. with the consent from relevant Department in support of the rights through application of applicable legislations and policies)</td>
<td></td>
</tr>
</tbody>
</table>

### 8: Airports

<table>
<thead>
<tr>
<th>Description</th>
<th>Uses</th>
<th>Zoning</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes the International airport, local airport (municipal) and individual</td>
<td>Serves the local-, regional- and international markets.</td>
<td>An airport is a location where aircraft such as fixed-wing aircraft, helicopters, and blimps take off and land. Aircraft may be</td>
<td>Include runways to accommodate large passenger and cargo aircrafts, Gateway International airport, that makes provision for regional and international flight departure</td>
</tr>
</tbody>
</table>
### 9: Intermodal Transportation Hub

| landing strips. | The integration of various forms of passenger and cargo transportation modes at a certain strategic points/nodes | Intermodal passenger transport involves more than one mode of transport of passengers. Some modes of transportation have always been intermodal; for example, most major airports have extensive facilities for automobile parking and have good rail or bus connections to the cities nearby. Urban bus systems generally serve train and subway stations and often extend to the local airport. A major goal of modern intermodal passenger transport, at least in developed countries, is to reduce dependence on the automobile as the major mode of ground transportation and increase use of public transport. To encourage them to do this, intermodal journey planners are used to make users aware of possible services and to facilitate their use. | Development of an intermodal transportation node in the northern western part of the Polokwane CBD, integration of bus, taxi and railway. |
| Taxi, bus, rail, airport. | | Taxi, bus and railway facilities focused at a central point/node. |

### 10: Medical

| Medical facilities / Consulting rooms | Regional medical consultancy, research facilities | Specialised medical (application of medical, surgical, dental, diagnostic and therapeutic principles to humans), & Specialized Veterinarian (application of medical, surgical, dental, diagnostic and therapeutic principles to pet, domestic, wildlife and livestock animals). | Doctors consulting rooms, institutions, laboratories. |
| Medical facilities / Consulting rooms | Regional medical consultancy, research facilities | Specialised medical (application of medical, surgical, dental, diagnostic and therapeutic principles to humans), & Specialized Veterinarian (application of medical, surgical, dental, diagnostic and therapeutic principles to pet, domestic, wildlife and livestock animals). | Doctors consulting rooms, institutions, laboratories. |
| b) Institutions, laboratories | | |

**NOTES:**

1. All category 1 uses are subject to the Hierarchic system i.r.o provision of business facilities as contained elsewhere in this document.
2. Specialized urban areas will most probably have some form of zoning (town planning).
6.4.7.5 DENSIFICATION

BACKGROUND

Residential densities are guided by various national policies and land use management guidelines, e.g. The Development Facilitation Act 67 of 1995 (Chapter 3 principles), The Breaking of New Ground Policy, which promotes the integration of various mixed residential densities within urban areas, the Polokwane/Perskebult Town Planning Scheme, 2007 and the density policy of the municipality as revised from time to time.

The Town Planning Scheme, 2007 currently refers to the terms habitable rooms per ha and dwelling units per ha, which creates confusion in some instances. The approach should be to develop an integrated housing density policy for the municipal area, which should be aligned with a uniform Land Use Scheme for the whole municipal area in respect of terminology (e.g. the use of the terms dwelling unit and habitable rooms), principles and approach. A Densification Plan needs to be well coordinated and informed and should go hand in hand with a service delivery-, infrastructure development plan and integrated public transport development plan.

A new approach should be investigated and introduced in land use management and urban spatial framework plans which will encourage the optimum use of land i.e. higher residential densities on prime sites. This will imply that in certain areas densification will only be allowed if the density is above a certain number of units/hectare. This should especially be the case in the CBD, along development corridors and in and adjacent to other nodal points.

Most of the town planning schemes regulating residential densities in small and intermediate cities such as Polokwane did not encourage the optimal use of land within the urban envelope. This, together with the fact that land was historically more affordable and available, resulted the horizontal development of most of our cities CBD’s and sub-urban areas.

a. PRINCIPLES FOR DENSIFICATION

- The aim should be to integrate various densities within a neighbourhood in line with the “Breaking New Ground Policy” principles. Typically, you will find the highest residential density within the central area, at nodes and along important corridors. As one move away from nodes and corridors into the suburban area, the permissible residential density should decrease.

- The principle that should apply within existing rural settlements (e.g. Nobody, Ga Maja, Molepo), is that densification should be promoted to achieve a density norm of at least 10 units per ha in order to optimise land, resources and infrastructure.

- The desired densities as outlined in Table 57 and 58 in this document is applicable in the interim period before a detailed densification Polocy for the proclaimed townships and areas within the Town Planning Scheme area is compiled for Polokwane Municipality.

b. GUIDELINES FOR DENSIFICATION

The following guidelines should be used considering a densification strategy:

- Locational factors, e.g important nodes and transportation routes should achieve higher densities
- Locality (access to open spaces, community facilities and recreation facilities)
- Public transport accessibility levels,
- Proximity of schools and other institutions
- Proximity of shopping facilities and employment opportunities
- Setting and predominant housing typologies in the area,
- Suitability of the property in respect of access to individual units and access to the public street system,
• Suitability of the property, taking into consideration the possible negative impact of the adjacent properties, in respect of shape, orientation, privacy and convenience.
• Engineering service availability (Infrastructure availability).

Increased densification must be motivated on these locational factors and development principles:
• Compliance with existing policies/development plans.
• Applications for densification and/or township development should be informed by the inputs of the technical SBU’s (electricity, water & sanitation, roads and storm water) of the municipality, and other relevant technical bodies/institutions (e.g. Water Affairs & ESKOM) with regard to service availability and capacity of services to cater for proposed developments.
• Avoidance of undue adverse impact on the amenities of surrounding areas.
• Appropriate urban design pattern should be followed.

Potential benefits of densification should include:
• Local services and employment should be supported.
• Increase the optimal use of existing infrastructure.
• Assist urban regeneration initiatives.
• Encourage affordable housing provision, and
• Sustain alternative modes of transport, such as walking, cycling and public transport.

Integrated Site Assessment should include:
• Critical assessment of adjacent properties (height, orientation, privacy, landscaping, vegetation etc.).
• Natural features on and around the site.
• Topography (i.e. slope and contours).
• Existing and proposed public transport infrastructure.
• Vehicular access control measures (how is access going to be facilitated – have opportunities to consolidate access points been considered?)

• Pedestrian access (how will pedestrian access the site maximizing the opportunities afforded by existing or proposed public transport routes?).
• Physical and social infrastructure assessment (availability of / and impact on existing infrastructure capacity).
• A Conceptual Site Development Plan should accompany a densification application (development proposals) indicating mitigation of constraining aspects as identified in site-assessment (where possible, inclusive of parking and landscaping).

i. OTHER ASPECTS TO BE CONSIDERED DURING SUBDIVISION/DENSIFICATION

Slopes:
• Maximum gradient/slope to be allowed is 1:4;
• Erven with steeper slopes, the erf size should be increased;
• Slopes of panhandle erven shall not exceed 1:8;
• Borders and corners:
  • It is preferred that erven with 2 or more street fronts should be 20% larger than the ruling erf size in the area;
  • Erven with sharp corners should be avoided.

Erf front:
• The erf front of rectangular erven should not be less than 10m in the case of detached dwelling units and 5m in the case of semi-detached dwelling units;
• The erf front for irregular shaped erven should not be less than 3m;

Erf shape & proportion:
• Erven should be properly shaped, especially if the erf is smaller than 500m².
• The ideal proportion is: a=0,64b [where a=street front; b=depth]. Irregular shaped erven should normally be 20% larger than the ruling erf size
• Irregular shaped erven should under no circumstances be smaller than 400m²;
Erf size:
- Apart from the above mentioned minimum erf sizes, the municipality may permit a 10% deviation of the minimum erf size in the case where semi-detachable dwelling units will be provided. (The necessary Site Development Plan should be submitted and conditions should be laid down in order to guarantee the development outcome);

Panhandle erven:
- Panhandles shall not be less than 3m wide in the case of a density of one dwelling unit per erf.
- In order to accommodate 2-way traffic, panhandles shall not be less than 6m wide in the case of any density from 45 dwelling units per hectare and higher. These requirements may be relaxed in exceptional circumstances if a proper traffic impact study is submitted to proof the desirability thereof

ii. PROPOSED DENSITY INDICATIVES

Table 57 and 58 provides indicatives for the preferred density scenario at a macro & city wide level read together with Annexure F the criteria for densification within Residential 1-4. These indicatives are not mandatory but services as a guideline for densification development. Each proposal / application for densification must qualify and substantiate a preferred density.

The following principles should form the backbone of the densification strategy:
- Highest densities should apply at nodes (e.g. Central Business District area, regional-, community and neighbourhood centres)
- Higher densities should apply along corridors (e.g. National / Provincial Corridors, Activity Corridors, Activity Spines and Activity Streets).
- Densities should decrease further away from nodes and corridors.
- The required minimum subdivision in respect of Agricultural Holdings should be in line with Act 22 of 1919 (Transvaal Agricultural Holdings Act)(e.g. Dalmada, Ivydale and Elmadal).
- A minimum of 8ha sub-divisions will be recommended by the Municipality in terms of Act 70 of 1970 for the division of agricultural land within the urban edge.
- Once Act 70 of 1970 for the subdivision of Agricultural land has been excised within the Proclaimed Polokwane/Perskebul Town Planning Scheme, 2007 are gazetted, the Land division Ordinance will be enforced to be a legislative ordinance for subdivision of agricultural land.
- Division of farmland within the urban fringe will be informed by the guidelines of the Department of Agriculture and Fisheries.
- In order to protect agriculture land, subdivisions in general should not result in units smaller than:
  - A unit able to carry 60 livestock units as land used for grazing
  - A unit of 100 ha. on land used for dry land crop production
  - A unit of 20 ha. On irrigated land with the provision that of validated water rights from a recognizable source.
Table 57: Desired densification guidelines on “Residential 1”

<table>
<thead>
<tr>
<th>LOCALITY</th>
<th>DESIRED DENSITIES (MINIMUM ERF SIZE) (RESIDENTIAL 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBD, Pietersburg X4(E), X6, X7, Bendor X7, X77</td>
<td>16.7 Dwelling units/Ha (600m²)</td>
</tr>
<tr>
<td>BO-Dorp, Bendor (W)</td>
<td>12.5 Dwelling units/Ha (800m²)</td>
</tr>
<tr>
<td>Peninapark &amp; Peninapark X1, Southern part (Grobler Street) of Pietersburg X11, Bendor X9, X10, X11, Ivypark, Ivypark (E), Nirvana, Nirvana X1, X2 &amp; X3</td>
<td>20 Dwelling units/ha (500m²)</td>
</tr>
<tr>
<td>Annadale</td>
<td>10 Dwelling units/ha (1000m²)</td>
</tr>
<tr>
<td>Northern-part (Grobler Street) of Pietersburg X11, Bendor, Welgelegen, Welgelegen X4 &amp; Welgelegen (N), Pietersburg X4 (W)</td>
<td>14.2 Dwelling units/ha (700m²)</td>
</tr>
<tr>
<td>Bendor X72, X74, X14, X60, X64, X62, X63, X35, X80, X81, X78, X84, X87, X91, X92, X93, X94, X95, X96, X97, X98, X101, X102, X103, X106, X108, X112 &amp; Remaining part of Bendor (Future Townships)</td>
<td>25 Dwelling units/ha (400m²)</td>
</tr>
<tr>
<td>Bendor X85, X51, X52, X53, X82, X19, X20, X23, X22, X21, X18, X70 &amp; X75</td>
<td>33.3 Dwelling units/ha (300m²)</td>
</tr>
<tr>
<td>Ivypark X9, X17, X32, X19, X20, X21, X5, X18, X6, X12, X13, X7, X38 &amp; all remaining approved and future townships</td>
<td></td>
</tr>
<tr>
<td>Pietersburg X33, X34, X35, X36, X37, X38, X40, X44, X41, X29, X61, X65, X66</td>
<td></td>
</tr>
<tr>
<td>Polokwane X71, X72, X73, X75, X76, X83 and other approved and future townships</td>
<td></td>
</tr>
<tr>
<td>Mankweng and Sebayeng Townships</td>
<td>50 Dwelling units/ha (200m²)</td>
</tr>
<tr>
<td>Westenburg X3</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Refer to relevant Densification Map for exact location and boundaries of areas/density zones identified in table.
1: Minimum erf sizes of subdivided portions is applicable as outlined in Table 57 and Map 11.
2. Refer to Map 11, the preferred densities per area.
Table 58: Desired densification guidelines on “Residential 2” to “Residential 4” (these densities will be applicable until such time that the Urban Densification Policy is compiled and being adopted by the Council) read with annexure F.

<table>
<thead>
<tr>
<th>LOCALITY</th>
<th>Desired Dwelling Unit/ha or (Residential Building) Rooms/ha under (Residential 2 - 4) Maximum Densities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within defined nodes (N1 Bypass, Activity Corridor &amp; Activity Spines)</td>
<td>75 dwelling units/ha / 112 rooms/ha</td>
</tr>
<tr>
<td>Activity streets</td>
<td>44 units / 66 rooms</td>
</tr>
<tr>
<td>Polokwane CBD</td>
<td>74 dwelling units/ha or 111 rooms/ha</td>
</tr>
<tr>
<td>(Refer to Densification Map)</td>
<td></td>
</tr>
<tr>
<td>Between Thabo Mbeki Street and Grobler Street, including erven adjacent</td>
<td>74 dwelling units/ha or 112 rooms/ha</td>
</tr>
<tr>
<td>and to the north of Grobler Street and south of Thabo Mbeki Street (Midblock), east of Biccard Street, to Savannah Centre.</td>
<td>(Refer to Densification Map)</td>
</tr>
<tr>
<td>Bo-Dorp excluding erven between and facing Grobler and Thabo Mbeki Street to Savannah centre</td>
<td>64 dwelling units/ha or 96 rooms/ha</td>
</tr>
<tr>
<td>Annadale</td>
<td>(Refer to Densification Map)</td>
</tr>
<tr>
<td>Peninapark &amp; Peninapark X1 &amp; X2, as well as future township extensions</td>
<td>31 dwelling units/ha or 46 rooms/ha</td>
</tr>
<tr>
<td>Nirvana, Nirvana X1,X2 &amp; X3 as well as future township extensions</td>
<td></td>
</tr>
<tr>
<td>Ivypark (Proper)</td>
<td>(Refer to Densification Map and Roads and stormwater watercourse Map )</td>
</tr>
<tr>
<td>Bendor and Welgelegen extensions as well as future township extensions</td>
<td></td>
</tr>
<tr>
<td>Pietersburg X4, X6, X7, X11</td>
<td>44 dwelling units/ha or 66 rooms/ha</td>
</tr>
<tr>
<td>Ivypark X9, X17, X32, X19, X20, X21, X5, X18, X6, X12, X13, X7, X38 &amp; all remaining approved and future townships</td>
<td>(Refer to Densification Map)</td>
</tr>
<tr>
<td>Pietersburg X33, X34, X35, X36, X37, X38, X40, X44, X41, X29, X61, X65, X66</td>
<td></td>
</tr>
<tr>
<td>Polokwane X71, X72, X73, X75, X76, X83 and other approved and future townships</td>
<td>(Refer to Densification Map)</td>
</tr>
<tr>
<td>Seshego townships</td>
<td></td>
</tr>
<tr>
<td>Westenburg</td>
<td>64 dwelling units/ha or 96 rooms/ha</td>
</tr>
<tr>
<td>Remainder of Mankweng and Sebayeng within urban edge</td>
<td>i.e. Lifestyle Policy Guidelines</td>
</tr>
<tr>
<td>Remainder of area inside the urban edge, accompanied by a formal development application.</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
- Refer to relevant Densification Map for exact location and boundaries of areas/density zones identified in this table.
- All developments is subject to existing Town planning scheme control parameters. Residential 4 rights will be applicable on erven with an extent of 300 – 399m².
  1: Nodes and corridors are defined and indicated in Paragraph 6.4.2 above on the Macro level.
  2: Refer to Map 12, The preferred densities per area.
III. LAND USE MANAGEMENT AND MINING AREAS

There is a need for an integrated and comprehensive approach towards land use planning and management in order to address the mining industry’s need as well as the expectations of communities and stakeholders during the life cycle of mining operations (including pre and post mining activities). Proper land use planning and management is needed to:

- Ensure that potential mining areas will not be sterilized and to ensure continued access to high potential mineral lands that will maximize the probability of exploration success.
- Ensure proper planning and management during the life cycle of mining operations in order to enhance land use compatibility and reduce negative impacts on communities and the environment.
- Ensure post mining site regeneration and closure through an integrated approach whereby joint action of stakeholders – mining companies, government and communities – assume responsibility for the long-term sustainability of closing mining areas.
- Ensure that uses other than mining are not sterilized by reserving non-viable mining resources indefinitely. (ICMM, 2008)

Future land use management schemes should therefore include/reflect the life cycle of mining activities in order to enhance land use planning coordination and management. It further proposed that mining activities (sand mining) must not be permitted on the following portions of farms as they are within the river buffer. Farms that are affected by the 200m buffer include the following:

- Pelgrimshoop 630LS, Portions 9, 10, 11, 12, 13, 14, 15, 16, 39, 40, 41, 42, 43, 44, 45, 46, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60.
- Portions 47, 48, 49 and 50.
- Portion 28 of the Farm Doornkraal 680 LS
Table 59: Indicates the integration of the various phases of mining activities with land use planning.

<table>
<thead>
<tr>
<th>LUP PHASES</th>
<th>LUP STRATEGIC ACTION</th>
<th>RESPONSIBLE AUTHORITY</th>
<th>MINING PHASES</th>
<th>NON-MINING INTEREST</th>
<th>INTERFACE WITH STAKEHOLDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHASE I</td>
<td>Identification of mineral deposits; The spatial distribution of mineral resources; The evaluation and grading of mineral deposits.</td>
<td>National / Provincial / District / Local Mining Authorities / Institutions</td>
<td>Exploration to determine the spatial occurrence and distribution of resources. Providing mineral information to Government Authorities.</td>
<td>Identify alternative land use and its expected spatial distribution.</td>
<td>Consultation with government and other economic sectors.</td>
</tr>
<tr>
<td>PHASE III</td>
<td>Update existing LUMS to include mining permit areas.</td>
<td>Local Government</td>
<td>Application for rezoning of land for mining purposes. Application for mining permits. Compilation of EMP: Bankable business case Availability of Services Closure Plan</td>
<td>Initiate interface with adjacent land uses to minimize the mining impacts. Make provision for alternative economy post mining.</td>
<td>Consultation via joint fora for development planning.</td>
</tr>
</tbody>
</table>
C. EXISTING SPATIAL POLICIES

There are a number of existing spatial policies addressing specific needs within the Local Municipality area of jurisdiction that forms part of the existing Land Use Management System (LUMS). Mention should be made of:

- The CBD development plan
- Spaza’s and Taverns
- Medical Land use policy
- Regional Medical Node
- Lifestyle estates
- Gated communities
- Telecommunication structure / mast policy

I. THE CBD DEVELOPMENT PLAN

The development strategy and approved policy for the CBD (which was part of the LDO’s of Pietersburg / Polokwane), titled: Pietersburg CBD Development Plan, 30 June 2000 forms part of the LUMS. This plan was later reviewed and a policy in respect of the establishment of business zonings south of Marchall street, as well as for the expansion of the eastern boundary of the CBD was adopted.

II. SPAZA’S AND TAVERNS POLICY 2000

A Spaza’s and Taverns Policy were adopted in 2002. This policy serves to provide a mechanism through spaza’s and taverns across the (whole previously called) TLC could be managed.

III. MEDICAL LAND USE POLICY

A short study and policy pertaining to the provision of medical and related land uses within the jurisdiction area of Polokwane Municipality was compiled in October 2001.

IV. REGIONAL MEDICAL NODE

A land use policy in this regard (Policy Review Pertaining to the Provision of Medical and Related Land Uses within the Polokwane Regional Medical Node) was accepted in September 2006, and specific criteria are set out in the afore-mentioned document.

However, although the policy’s criteria and principles are adopted as part of this development framework, it may be necessary to re-arrange some proposed nodes in the said policy, because the IDP and provincial spatial planning initiatives may require it. It is proposed that the growth points, population concentration points and local service points receive preference over other lower order settlements i.r.o. nodes.
The Policy pertaining the distribution of medical and related land uses, identifies the Regional Medical Node and expansion thereof, as well as the distribution of medical related land uses throughout Polokwane City.

It is submitted that the principles of the Policy be adapted and applied throughout the municipal area.

V. LIFESTYLE ESTATES

A Lifestyle Estate policy was drafted for Polokwane Local Municipality and was revised during 2010.

According to the policy Lifestyle Estate is defined as “a low density formal residential development usually within the peripheral area of towns or settlements and in some instances in the rural farming areas of the Municipality with the emphasis on preserving the natural habitat and resources as well as establishing self sustainable communities inclusive of the provision of municipal infrastructure services. These developments provide a lifestyle, a specific standard of living and other communal facilities / benefits to residents”.

It is important that all types of Lifestyle Estates should be seen as formal developments and that applicants apply in terms of the existing Lifestyle Estate Policy.

VI. GATED COMMUNITIES

The Polokwane City Council in August 2001 approved a policy to deal with matters pertaining to the so-called enclosed neighborhoods and security villages, which addressed aspects of security measures by residents and access control to such areas. This policy was reviewed in 2005 and is titled: Gated Communities in Polokwane.

These are two categories of gated communities:

- Purpose-built or green-fields development (permanent nature).
- Conversion of existing neighborhoods into gated communities (temporary nature).

An application should be in line with conditions contained in the policy.

VII. TELECOMMUNICATION STRUCTURE / MAST POLICY

A policy for the erection and location of telecommunication structures, masts and base transceiver stations in the Polokwane Municipal area of jurisdiction was adopted in 2004. The purpose of the study was to investigate the common concerns of erection of telecommunication structures / base receiver stations and subsequently provide policy guidelines.

CONCLUSION

The focus of this chapter was on spatial guidelines on a macro level which includes the Greater Polokwane Municipal Area. The main aim is to enhance sustainable development throughout the municipal area. Therefore specific spatial guidelines are provided to guide future socio and economic development and to assist the municipality to identify development projects and to prioritise between them.

Chapter 7 deals with conceptual Local Spatial Development Framework Plans for Polokwane City as well as the Mankweng / Badimong cluster and the Sebayeng / Dikgale cluster.
CHAPTER 7: SPATIAL DEVELOPMENT FRAMEWORK (MICRO LEVEL)

INTRODUCTION

This Chapter highlights the Local Spatial Development Frameworks (LSDF) at Local Level. It comprises of Three (3) Local Spatial Development Framework proposals as follows:

A. CONCEPTUAL LOCAL SPATIAL DEVELOPMENT FRAMEWORK PLAN FOR POLOKWANE CITY (7.1) (URBAN BUILT-UP AREA)
B. CONCEPTUAL SPATIAL DEVELOPMENT FRAMEWORK PLAN FOR NOBODY, MANKWENG & BADIMONG AREA (7.2)
C. CONCEPTUAL SPATIAL DEVELOPMENT FRAMEWORK PLAN FOR SEBAYENG-DIKGALE AREA (7.3)
D. DEVELOPMENT OF RURAL AREAS AND REMAINING RURAL VILLAGES (7.4)

7.1 CONCEPTUAL LOCAL SPATIAL DEVELOPMENT FRAMEWORK PLAN FOR POLOKWANE CITY (URBAN BUILT-UP AREA)

INTRODUCTION

The Local Spatial Development Framework Plan for Polokwane City includes the following areas: Polokwane City, Seshego, and Perskebult which is further demarcated by the urban edge as identified in this section.

The Polokwane City presently lacks a comprehensive Urban Development framework plan as indicated in section 6.4.3.1(a). This section provides the basic outline for the compilation of such a plan and provides therefore only a broad concept.

The 2007 SDF divided the municipal area into eight strategic development areas (SDA) and four potential development areas as mentioned in paragraph 3.2.4.1. Polokwane itself were divided into SDA 1, 2 and 3. These areas include Polokwane City and Seshego, the Lyndale agricultural holding area and the eastern suburbs of Polokwane City. PDA’s were also identified for future expansion of urban edges.

It is proposed that in the absence of a comprehensive urban development framework plan, the spatial development framework plans for SDA 1, 2 and 3 still be applicable till such a plan is available. These plans should form the “building blocks” of such a future urban development framework plan for the Greater Polokwane City.

7.1.1 URBAN SPATIAL DEVELOPMENT PRINCIPLES

The following basic urban spatial development principles are applicable:

- Capitalizing on the location of Polokwane situated on the Great North Road and Gateway to Africa
- Enhance Polokwane as a Capital of the Limpopo Province.
- Enhancement of sustainable development which involves:
  - The protection, sustainable use and management of the environment;
  - Proper land use management;
  - The cost-effective provision of services and;
- The enhancement of the principle of compact cities theory though the planning of quality and efficient urban spaces.
- The curbing of urban sprawl through the delineation of an urban edge.
- The promotion of urban integration and urban infilling.
- The enhancement of intra-urban linkages along mixed land-use corridors and nodes in order to reduce the need for people to travel over long distances.
- Encouragement of densification in identified areas.
- Creating quality, well balanced urban environments, which are convenient, attractive and safe.
- Enhancement of the image and legibility of urban areas.
- Conservation, development and management of a functional open space system.
7.1.2 PROPOSED NEW DEVELOPMENT ZONES

The Greater Polokwane area can be subdivided into the following development zones: (Refer to Map 17)

- **Urban Edge**
  This area indicates the area that is prioritised for future urban development. It is a demarcated zone and interrelated policy that serves to manage direct and limit urban expansion. The main function of the urban edge is to restrict urban sprawl, promote densification of areas and the protection of agricultural and environmental resources. This area includes the build-up areas as well as expected short and medium term developments.

- **Urban Fringe**
  Refers to the zone of transition in land use just outside the urban edge including the surrounding rural interland.

As far as development is concerned, the following strategic interventions should be applicable within these zones:

- **Urban Edge**
  - Densification and integration
  - Urban infill
  - Upgrading and proper maintenance of infrastructure
  - Urban renewal
  - Protection of environmental sensitive areas as well as cultural heritage resources
  - Planning and provision of bulk services for new development areas
  - Planning and development of new township establishments / development projects in such a manner that it will enhance integration of areas.
  - Integration of environmental sensitive areas within the municipal open space system.
  - Stimulation of local economic development projects.

- **Urban Fringe**
  - Protection of environmental sensitive areas as well as high potential agricultural land.
  - Stimulation of urban agricultural projects.
  - Development projects to be considered on merits provided that the municipality will not be responsible for the funding of bulk and external services, and that it will not compromise the purposes of the edge to promote a more compact city and to restrict urban sprawl.
  - Proper land use management.

As a general guideline, urban infilling should take place before a next zone develop i.e. 90% of the urban edge developed before traditional township establishment be allowed in the urban fringe. The urban fringe also corresponds with the existing Town Planning Scheme Area and can also demarcate the area which is in a process of excision from the Previsions of Act 70 of 70 (subdivision of farmland).

**OBJECTIVES OF DENSIFICATION AND COMPACT CITIES.**

- Minimizing or reducing the footprint of the city: Cities transform natural land and alter the ecosystems in which they are located in a magnitude of ways. This is in itself warrants a concerted effort to limit the impact of affected areas, as well as the ecosystems involved.
- Prevention of destruction of agricultural land: The urban sprawl impacts on areas of high value agricultural land. In many developing countries urban agriculture also provides employment and food security to the urban poor.
- Improvement of the use of public transport: Improving the use of public transport by increasing residential densities in nodes and along public transport corridors, which has major implications for the way in which cities are built and managed. The other is greater integration between the various entities involved in land use and transport.
- Improvement of the efficiency of urban areas: Compact cities increases general accessibility, the level of convenience reduces costs in terms of time, money and opportunity, both for local government as well as for citizens. Compact cities in which infrastructure investment is planned are more efficient than cities in which this is not the case.
- Reducing inequality: One of the objectives of intervening in the form and density of development of urban areas is to ensure greater access for all, especially the poor, to the benefit and opportunity of urban living.
- Increase of the marketability of the city: The physical urban environment of a city, including its quality and liveability, plays a major role in its competitiveness. In addition to this, the message that potential investors get from a city that seems under control and function well, is that it is well planned and managed in an integrated way. **(Source: Pekelharing, 2008; Tswana 2005)**
7.1.3 FORM-GIVING SPATIAL ELEMENTS

7.1.3.1 CORRIDOR DEVELOPMENT

❖ **Spatial Development Initiative (National Corridor)** (Refer also to classification in Section and Map 13)

- The N1 eastern by-pass forms part of this corridor, and in view of its importance, development adjacent to this corridor should complement its function. In terms of land use management development adjacent to this corridor, must be subject to special conditions such as:
  - Special attention must be given to the aesthetic appearance of building structures, fencing and landscaping. Council must ensure that adequate provision has been made for the fore-mentioned measures in land use change applications as well as development plans/building plans.
  - Restriction of heavy vehicle parking within the road reserve of the N1.
  - Proper management of hawkers/informal trading adjacent to the roads and intersections.
  - Restrict commercial, light industries and business developments to non-noxious activities.
  - Proper management of the erection and maintenance of outdoor advertising signs.
  - All parking must be provided on site.

❖ **Activity Corridor**

The second level of corridors refers to the activity corridors and includes the main routes within the urban area, also linking the City of Polokwane with adjacent municipalities and towns. These corridors are formed by:

- Dilokong Provincial Corridor to Burgersfort (Chuenespoort road) (Part of Old DC2).
- Old N1 (DC1) – R71 including Grobler and Thabo Mbeki Streets. This route also forms part of the Provincial east-west corridor with the N1. This corridor also forms the main link between Polokwane urban area and Mankweng/Badimong.
  - R81
  - Landdros Mare Street (Part of old DC2).

In conjunction with the N1 primary development corridor, these corridors should be utilized to facilitate major new developments that are dependent on high levels of accessibility.

❖ **Activity Spines**

Activity spines refer to urban level routes that form the main distribution network within the urban area and between different urban areas. Supporting land use types based on mixed land uses and nodes should be focused along these routes. The spines include:

- Nelson Mandela Drive
- New Area Drive (Gilead)
- P94/1 – road to Dendron
- Polokwane Drive

In order to improve accessibility as well as a more direct link between the N1 South and the Polokwane International Airport, a new route is proposed linking the N1 with the Matlala-road, Nelson Mandela Drive, Dendron Road (P94/1) with Landdros Mare Street. As a further phase, a link road can also be provided to link the Dendron Road with the N1 (Louis Trichardt Avenue), especially when the future cargo hub at the Polokwane International Airport becomes a reality. These routes can eventually replace the proposed Provincial Western by-pass that is not possible due to existing developments (townships).
### Table 60: Guidelines for future land use rights in identified corridors

<table>
<thead>
<tr>
<th>ROAD</th>
<th>CLASSIFICATION</th>
<th>TYPE OF LAND USE</th>
<th>DISTANCE FROM ROAD RESERVE</th>
<th>DENSITY</th>
</tr>
</thead>
</table>
| N1 – (Eastern bypass) | National Trans Limpopo SDI | • Development of gateways (only identified gateway nodes and that are within the Development phase map, 14). Mixed land uses that are desirable within the gateway nodes includes:  
• Business, Commercial, Offices of regional significance (not less than 15 000m²), Industrial parks (high-tech industries, pharmaceutical industries, etc.)  
• Sport- and recreation  
• High residential densities (Refer Table 58 and Annexure F) | Approximately 500 – 800m radius away from the road reserve and the compact node. | Maximum of 74 dwelling units/ha |
| • P33-1 (Part of old DC2)  
• Old N1 (DC1) - R71, R81  
• Landdros Maree Street (Part of Old DC2) | Activity Corridor | • Mixed land uses (within the realm of development phase map 14  
• Business – restricted to nodes  
• Sport / recreation  
• High residential densities (Refer Table 58 and Annexure F) | Within urban edge:  
- Stands fronting on corridor  
- Outside edge:  
- Concentrated in nodes | Maximum of 64 dwelling units/ha |
| • Between Thabo Mbeki and Grobler street | Activity Corridor | • Mixed land uses eg. Overnight accommodation with related facilities e.t.c  
• Dwelling offices  
• Offices on erven facing the street  
• High residential densities (Refer Table 58 and Annexure F) | Within urban edge:  
- Stands fronting on corridor  
- Dwelling offices will be considered after the Study has been conducted and adopted by the Council. | Maximum of 74 dwelling units/ha |
| • Nelson Mandela Drive  
• New Era Drive (Gilead D – 3390)  
• P94/1(Road to Dendron) up to the urban edge.  
• Polokwane Drive | Activity Spines | • Mixed land uses (properties with direct access or access from service lanes)  
• Commercial / Business 3 restricted to nodes  
• Sport / recreation  
• Higher residential densities (Refer Table 58 and Annexure F) | Stands fronting on corridors | Maximum density of 64 dwelling units/ha |
Notes
1. Refer to applicable policy guidelines.
4. Erven fronting on corridors should not be consolidated with properties which does not have direct access (See map 13).
5. Commercial use = uses such as distributing centres, wholesale trade, storage, cartage and transport services, laboratories and computer centres. Offices directly related and subservient to the main use conducted to land.
6. Corporate Office Park means: Buildings designed or used for administrative, professional and related purposes, including a bank, insurance company, building society and related offices or rooms, but excluding banking halls or other similar facilities and excluding medical consulting rooms.
7.1.3.2 PUBLIC TRANSPORTATION & ROAD NETWORK SYSTEMS

- **Hierarchy of roads**

It is very crucial to classify roads in terms of a clear hierarchy as different roads play different roles and classified according to their sizes. Hierarchy of Roads ranges from roads that play a bigger role such as a freeway or regional distributor whereas other roads are more local connecting different neighbourhoods.

<table>
<thead>
<tr>
<th>Roads Class</th>
<th>Name</th>
<th>Description</th>
<th>Traffic Culming</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Freeway</td>
<td>High mobility, no or very limited access</td>
<td>No traffic calming</td>
</tr>
<tr>
<td>2</td>
<td>Major Arterial / Regional</td>
<td>High mobility, limited access (intersection), no direct property access</td>
<td>No traffic calming</td>
</tr>
<tr>
<td>3</td>
<td>Arterial/ Major Collector</td>
<td>Balance mobility and accessibility function-typical direct property access in older suburbs,</td>
<td>Traffic calming only to consist of signage, and road markings, no physical elements in the road way, except possibilities rumble strips</td>
</tr>
<tr>
<td>4</td>
<td>Collector</td>
<td>More accessibility, less mobility, direct property access</td>
<td>All types of traffic calming allowed, focus more on mini-circles, less speed humps where possible</td>
</tr>
<tr>
<td>5</td>
<td>Local Street</td>
<td>Limited mobility, more accessibility</td>
<td>All types of traffic calming allowed, focus more on speed humps, aesthetically, pleasing measures(paved areas etc)</td>
</tr>
</tbody>
</table>

Source: [www.sarf.org.za](http://www.sarf.org.za)

The identified hierarchy of roads in Polokwane City ranges as follows:

- Freeway, (N1 North and East by-pass)
- Major Arterial / Regional
- Arterial/ Major Collector
- Collector
- Local Street (See map)

The detailed information pertaining to the roads classifications are covered in Table 62.
### TABLE 62: Summary of Roads Classification and Specification

<table>
<thead>
<tr>
<th>Basic Function</th>
<th>Description</th>
<th>Mobility</th>
<th>Traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Class number (L)</td>
<td>Class name</td>
</tr>
<tr>
<td>Mobility</td>
<td>vehicle priority, vehicle type, long distance, through, high, high speed, all manner, commercial, economic, strategic/roads, arterial road or highway</td>
<td>1</td>
<td>Principal arterial (Highway)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>Major arterial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>Minor arterial</td>
</tr>
<tr>
<td>Access / Activity</td>
<td>access, mixed pedestrian and vehicular traffic, short distance, low order, low speed, community, rural</td>
<td>4a</td>
<td>Collector commercial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4b</td>
<td>Collector, residential</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5a</td>
<td>Local street commercial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5b</td>
<td>Local street, residential</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6a</td>
<td>Walkway, pole or bar priority</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6b</td>
<td>Walkway, pole or bar only</td>
</tr>
</tbody>
</table>

**Notes:**
- Only class class 1-5 (one to Five) where identified and mapped. See Map 8
- Class 6 (Six) will be detailed in the Framework level.

**Source:** [www.sarf.org.za](http://www.sarf.org.za)
Integrated Transport Planning (ITP)

Polokwane Municipality has prepared its Integrated Transport Plan in 2007 in line with National Land Transport Transitional Act as a strategic transport plan. This plan informs the delivery of services and infrastructure. This plan (ITP) must be incorporated in the Integrated Development Plan.

Furthermore, in 2009, the Municipality prepared a plan entitled, Integrated Urban Realm and Movement Plan for Polokwane Municipality (IURMP). The proposals and Integrated Urban Realm and Movement Plan for Polokwane Municipality (IURMP) dated February 2009, should be incorporated in the ITP and the LSDF of Polokwane City. The objective of the plan was to provide a strategic overview of the movement patterns for both pedestrians and public transport. The intervention was intended to create a sense of space (hard open space) attractiveness within the Polokwane CBD.

Furthermore, the Municipality has prepared a Operational Plan for the implementation of the Public Transport Strategy in terms of the Integrated Rapid Public Transport Network (IRPTN). The objective of the Operation Plan was to provide detailed transport diagnostic, network planning, traffic engineering and the operational strategy to implement the public transport. In this regard, proposal for the implementation of the Bus Rapid Transit proposes area between Polokwane CBD and Seshgo/Moletjie (Phase 1) corridor.

There is a need to develop Polokwane in a more sustainable and attractive manner integrating an urban realm that presents a sense of place and identity. The attractiveness of the city and the provision of safe, reliable and accessible public transport are key to encouraging travel choice. The benefits include encouraging and improving the comfort of active travel modes and very importantly the retention of existing public transport users.

Given that historically there is limited consideration towards sustainable transport and the urban realm, the opportunities for improvement are considerable.

- The economic catalysts for the regeneration of the CBD include the 2010 World Cup, the Bus Rapid Transit (BRT) project and fundamentally the encouragement of quality goods and services to the city centre within easy access of offices and public transport.
- The urban realm catalyst is the development of a pedestrian exclusive boulevard along the length of General Joubert Street that could become a cultural and recreational hub for the city.
- A strategic catalyst for encouraging healthy and sustainable travel is the development of pedestrian and cycling networks that provide good continuity and amenity.
- Although not a component of this study, a BRT would bring an opportunity to provide equitable, safe and attractive transport and encourages socio-economic development. The interchanges can become features that contribute positively to the urban landscape.
- The integration of transport services with land use management becomes a central issue to ensure that proper transport services is provided where people live and conduct business activities, and that proper land use rights and densities are promoted to make transport more effective and efficient.

Supporting and reinforcing the aspirations of the city is a Functional Road Hierarchy designed to guide decision making. Arup conducted the study to develop a set of strategic and project based initiatives that aim to develop an attractive, equitable and more sustainable city. These are a set of practical recommendations for the Municipality to consider in the short, medium and long term.

Long-term recommendations are considered to be 5 – 10 years projects. Despite the longer timeframe these are considered to be equally significant and only on completion of the long-term projects will the continuity of networks be realised. It is within this time period that it is recommended that the strategy be revisited, progressed and updated.
Other land use types that are core to the success of transportation network system in Polokwane includes the following:

- **Airports**

  The Polokwane Municipal Airport in the southern part of Polokwane City mainly serves a local and regional market.

  The Polokwane International Airport in the northern part of the city serves a national and international market. Various commercial flights enter and exit the airport.

- **Intermodal/ Long Distance Transport Hub**

  Lack of transport facilities for the long distance transport services and the integration with existing local public transport services, BRT is one of the challenges that need to be addressed. The integration of these services with land use management becomes a central issue to ensure that proper transport services is provided where people live and conduct business activities and that proper land use rights and densities are promoted to make transport more effective and efficient. Public transport amenities e.g. taxi- bus and railway facilities are focused in the north western part of Polokwane CBD between the Buite Street taxi holding area and the Polokwane Railway station. Future links can be established between the taxi/bus terminus, the railway station and Polokwane International Airport.

7.1.3.3 ECONOMIC DEVELOPMENT PROPOSALS

I. **NODAL DEVELOPMENT**

- **PRIMARY ACTIVITY NODE**

Polokwane Central Business District (CBD) is classified as the primary activity node. It is acknowledged to be of Regional importance because of its foundation to provide specialized goods and services. The existing CBD development plan should be read with and forms part of this Spatial Development Framework. The core contains a full range of uses associated with a CBD. It is proposed that the recent extension of the CBD node (Southern Part of the CBD and Eastern Side of Bicard Street wherein “Business 2 zonings” with an FAR of 2.0 should be permitted, the so-called motor town, westward towards Builders Market and Northward towards the so-called “Value Centre area” (Game and Hi-Fi Corporation) should be included in the CBD area as the “frame” of the CBD.

In terms of the nodal classification (Shopping Centre Classification guidelines, the following derivation in respect of the hierarchy of shopping facilities is made.

- **Regional Shopping centres:**

  There is one “Regional shopping Centre that will serve a regional function which is Mall of the North (Bendor X 99).

- **Small Regional Centre:**

  The existing Savannah Shopping Centre is the only existing Small Regional Centre in Polokwane. There is one approved but not developed Small Regional shopping Centre located along Nelson Mandela corridor within a Township to be proclaimed as Polokwane X 108

- **Community Centres:**

  Community Centres serve a community function and would have a retail component ranging from 15 000m² - 30 000m². These centres provide convenience goods, personal services, clothing and appliances. There is only one existing Community Shopping Centres in Polokwane City which is the existing Lifestyle Centre (Pietersburg X 3).

- **Neighbourhood Centres:**

  The Neighbourhood Shopping Centres operate at a high neighbourhood level, and have a retail component between 5000m² and 15 000m². Centres normally...
provide primary convenience goods, and numerous personal services. These nodes can occur in two forms, viz. as mono use centres (pure retailing) and those with a multi-use. The following approved or existing neighbourhood centres includes the following (Map 15):

- Bendor Shopping Centre
- Flora Park Centre
- Pietersburg X 28, Serala View
- Thornhill Shopping Centre
- Shopping Centre at Ivypark X41
- Bendor X103
- Shopping centre in Polokwane X87
- X96
- Seshego Plaza

Local Centres and Small free standing centres:

Convenience and limited speciality shops are provided at these centres. Centres usually include a national franchise supermarket or regional supermarket. These centres are focused at a localized market. A number of local centres exist throughout the Municipal area, and will continue to develop as new township developments evolve over time. Existing Local service centres within Polokwane city includes the following:

- Platinum Park
- Cycad
- Food Zone (Ivy Park 9)
- Business rights in Ivy Park X 32
- Florapark (Vleis Lapa & Garage)

There are also other approved and pending LCC shopping centres in different areas.

Development and land use management guidelines for Business nodes:

The municipality aims to promote the development of business centres and other related land uses throughout the municipal area as long as the development is motivated not to be detrimental or jeopardize the viability and sustainability of the CBD. Apart from the hierarchy of business centres, the Municipality followed an approach which involves the appliance of various policies to guide development within different nodes. These policies include:

- The Urban Development Zone Policy (part of the CBD Development Plan, 2005).
- Revised CBD Development Plan, 2008 (Extension of CBD boundaries).

It is submitted that there are various shortfalls / issues in respect of the current approach and policy administration in respect of the development of non-residential land uses, and especially business related land uses, throughout the municipal area. The following proposals are made in respect of the hierarchy of business centres:

- Development of various hierarchies of business centres (based on the existing classification of the South African Council for Shopping Centres, 2006 and the Regional Retail Sector Investigation by Urban Econ, 2005) should be analysed in terms of a holistic framework. An “Urban Development Plan” should be compiled in order to capture all existing business ventures, and identify possible locations of new business centres towards local business centre levels.
- Development of business centres and other non-residential land uses should be considered by the local municipality on the basis that it should not be to the detriment / jeopardize the CBD or any other existing development. A strategy to ensure the sustainability of the CBD should include inter alia:
Initiatives to encourage development within the CBD such as decreasing service contributions.
- Retaining and ensuring that all government offices are centralised within the CBD.
- Maintain infrastructure in the CBD area.
- Projects to improve the aesthetics of the CBD (Urban Renewal Strategies should be in place).
- Market research studies to verify the need for new business/offices in decentralised localities.

The management of business nodes within the urban area should be based on the following principles:

Strengthening of existing nodes should be encouraged;

The development of new development nodes should be discourages. However the need for the development of gateway nodes within the urban edge as identified in map 15 should be motivated and justifiable in terms of need. Each development application should be evaluated in terms of the following criteria:

- Market research study
- Traffic impact
- Environmental impact
- Social impact
- Infrastructure capacity
- Any other requirements of the Local Municipality (policies).

II. SPECIAL NODES

- Gateway Nodes:

“Gateway Nodes” can be defined as major entry points (intersections) to the city that can also contribute towards the improvement of the image of the city. Due to the major energy flow along the main intersections on the N1 (South) as well as the intersections with P33/1 (Burgersfort), a number of sites can develop in attractive gateway nodes.

Current and new development initiatives already include the Casino / hotel development on the Southern N1 Gateway as well as the Regional shopping Centre (Mall of the North) on the intersection with R81. In view of the fact that these offer high accessibility, visibility and exposure, certain transport orientated business, commercial development, accommodation enterprises and value centres can be considered at these nodes, provided that these nodes or precincts are well managed, through proper design and landscaping guidelines focusing on street frontages, building facades, open spaces and access.

Although market forces will determine the growth and potential for growth, it could be expected that the size of the gateways will be influenced or affected by i.e. the actual and potential interactions (volume of traffic) on relevant corridors; the size and importance of nodes on the corridors and their ability/potential to activate traffic; and the distance between nodes and their sphere of influence.

Other secondary factors might include good accessibility and visibility from main corridors. Based on the above mentioned factors but especially the volumes of traffic (as indicators of interaction between nodes) as the identified gateways could be classified in terms of relevant importance and correctly only three (3) gateways should be explored. Those gateways includes the following:

- Gateway 1 : Landmark Lodge up to meropa Casino
- Gateway 2 : Mall of the North and Bolivia Lodge
- Gateway 3 : P33/1 (Burgersfort) and Church Street Intersection (Dilokong)

It is proposed that the following criteria should apply in evaluating applications for the development within the identifies gateways:

- Development of Gateway nodes **should be** within the urban edge read together with map 14 which indicates phasing of development.
- Applications should be motivated in terms of applicable policies and strategies of the local municipality, and supportive documentation, e.g. market research and...
feasibility analysis, should accompany such applications as the need for the creation of such nodes should be well proven.

- Locational attributes must also be considered in accessing such applications, e.g. accessibility, availability of public transport, amenities in the area, etc.

- Economic attributes, e.g. feasibility and Impact Assessment must be conducted.

- Sub-letting of offices to Government departments must not be permitted within the Gateway nodes.

- Aesthetically appealing and architecturally designed is very critical in Gateway Nodes as first impression into the city should be promoted.

Possibility of development along other significant intersections will be considered i.e.

- Intersections between P33/1 (Burgersfort), and R81 Duvelskloof road (Mall of the North and Bolivia Lodge) and N1 By-pass.

- Intersection between P17/1(Tzaneen road/R71) and N1 by-pass.

- Medical Node:

The Regional medical node forms part of the urban area, and should be addressed in the LSDF for Polokwane City. The development of medical and related uses is guided by the Medical and related land use policy, dated September 2006. Important components of the urban structure in respect of medical related land uses include the Polokwane Provincial Hospital and the Limpopo Medi-Clinic. All special medical related uses of Regional significance must be centralised within the demarcated Regional medical Node area. (See map 19)

- Administrative Node:

This node forms part of the southern-/south western part of the CBD area where most of the government and related administrative components are located. All the government related offices must be located within the CBD (Administrative Node) for improved accessibility and conglomeration.

- Sports Node:

The sports fields, golf course, cricket fields, gymnasium as well as the new- and old Peter Mokaba Sports Complex, form the main components of the sports node of Polokwane. (See Map 19)

III. INDUSTRIAL AND COMMERCIAL DEVELOPMENT (See map 19)

The existing industrial areas should develop to its full potential. The industrial node in Seshego Zone F holds potential for further development and incentives should be put in place to attract industrialists.

The new industrial township between Polokwane City and Seshego (Polokwane Ext. 108) is centrally located in terms of access to the market and employment opportunities. Recent industrial development in Polokwane City progresses to the North East of Pietersburg X 12 (Magna Via).

Due to the strategic location of Polokwane Municipality at the centre of the Limpopo province and with the advantage of significant Regional distributors and Major distributor Roads connecting Polokwane with neighbouring countries there is a need to make land available for future industrial and commercial development in order to develop Polokwane into an industrial hub which will then have positive impact on Economic Growth and creation of employment opportunities in Polokwane (LEGDP). However the emphases should be focus on the vacant piece of land within the Urban edge read together with Development Phases under Map 14.

- Mixed Land Use

The area along the N1-route from the urban edge, just to the west of Meropa Casino towards the Central Business District of Polokwane is identified as a mixed land use area, wherein special land uses such as the proposed Convention
Centre, and commercial related- and other mixed land use with diverse residential land uses are encouraged (see map 13).

The area along Nelson Mandela Drive, Northwest of the Sand River towards the filling station in Madiba Park can develop as a mixed land use area wherein various housing topologies and limited service industrial land uses can develop provided that the there is a service lane or if the proposed mixed land use development have direct access from Nelson Mandela road.

The land adjacent to and along the Church Street Extension (south) and the P33-1 (Burgersfort Road) is suitable for mixed land use development. Various non-residential land uses has established along this corridor. It is proposed that various housing topologies, limited commercial-, tourism related-, service industrial land uses (related to the smelter), land uses associated with the mining sector, and other mixed land uses can establish along the P33-1 between the Ivypark X 41 up to the Urban edge. The need for extension of theb mixed land use development within the urban fringe will be determined in future. Development from the urban edge up-to Platinum Smelter (Polokwane Metallurgical Complex).

The erven along Thabo Mbeki Street and Grobler Street have become less desirable for residential purposes in view of the fact that the axis have developed into a strong East-West corridor, wherein pressure is experienced to permit non-residential land uses. Various housing topologies and housing densities, limited commercial and residential compatible land uses should be permitted on its own merits along this corridor.

Erven between Thabo Mbeki Street and Grobler Street, between the CBD and Pietersburg X 28 (at the intersection of De Wet Drive and Grobler Street), erven with having direct access to Grobler (on the northern side of the Street) & Thabo Mbeki( on the Southern side of the street) Streets is supported for the development of mixed land uses. (See table 60 & map 13)

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**Figure 31: Illustration of a Mixed Land Use concept**

![Mixed Land Use Concept](image)

Reference is also made to macro level proposals on mixed land use concept

- **Office Development**

  The Polokwane CBD remains the primary business area wherein a variety of retail, commercial office, government offices and other related land uses are agglomerated.

  A diversity of offices occurs in the CBD of Polokwane e.g. institutional offices (i.e. municipality and government departments, professional offices (e.g. engineers, architects etc), administrative office, financial services, medical rooms etc. Apart from the offices that occur in the CBD of Polokwane, various suburban office nodes have established / were approved over time, within the Polokwane Urban area, e.g. Hampton Court, Pro Park, Pro Limpopo offices in Bendor, Eduan Park, Welgelegen, Platinum Park, Ismini Office Park and Thornhill Corporate Office Park and Ivy Park x 49.

  It is also proposed that a detail policy on office development outside the CBD of Polokwane City be done to guide future suburban office development in
Polokwane Municipality. It is further proposed that the following criteria should apply in evaluating applications for office development outside the CBD area and as proposed in Table 60.

- Applications should be motivated in terms of applicable policies and strategies of the local municipality, and supportive documentation, e.g. market research and feasibility analysis, should accompany such applications.
- Offices of regional significance (not less than 15 000m²) should be promoted along the N1 corridor.
- Offices of regional significance (not less than 5 000m²) should be promoted along Activity corridors.
- All Government related offices must be centralised within the CBD.
- Any other Office development must be within the CBD in accordance with the CBD Development Plan and Feasibility study of South of Marshall and only if the need is well proven and also if it will not be detrimental to the CBD.
- Offices development along the corridors and nodes should be aesthetically appealing and architecturally designed.
- Locational attributes must also be considered in accessing such applications, e.g. accessibility, availability of public transport, amenities in the area, etc.
- Economic attributes, e.g. feasibility and impact on existing office developments especially the CBD area must addressed.
- Suburban office / Office developments outside the CBD should be in a corporate environment / portray a corporate image.
- Sub-letting of offices to Government departments must not be permitted within the suburban offices/exisiting office development outside.

![POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK, 2010](image)

- Green buffers along the rivers (Blood river – Sand river – Sterkloop Spruit-river basin) (1:100 years flood line)
- Sensitive areas (Bird Sanctuary, Polokwane Game Reserve, Sterpark Koppie, African Giant Bull Frog Colony area & Euphoria Clivicola area)
- Green Buffers along the Power lines
- Public open Spaces
- Sport Precinct
- Urban Agriculture

Polokwane Municipality commissioned a study on ecological and heritage conservation in order to determine the existence of the Euphoria Clivicola and the Pyxicephalus Adspersu. The intention was to determine the exact location of the species. The study revealed that there were habitat of Euphoria Clivicola in Pietersburg Extension 11 and the African Giant Bull Frog Colony (Pyxicephalus Adspersus) in Pietersburg Extension 7 (See map 18). Euphoria Clivicola is a rare species which is only found in two locations in the whole world (only found in Pietersburg X 11 and in the Percy fyf nature reserve).

Since the above-mentioned study was never adopted by Council it is therefore recommended that the report be submitted to council for adoption of the specialist study report on the Environmental Management, rehabilitation and protection plan with the aim of declaring the affected area sensitive areas where development should not take place.

The elements of the Open Space System that forms part of the urban fabric are linked and integrated with each other forming a green matrix. Integration of open space system can further be achieved through the “greening” of important streets such as connector roads i.e. Dorp.

Certain areas could be viewed as environmentally sensitive areas, including hills, ridges, river basins and wetland areas. General guidelines for these areas include:
 Only development that is essential to research, the maintenance and upkeep of such area will be permitted in these areas.

- Subsidiary eco-tourism facilities in sensitive areas may be considered at the discretion of the municipality and based on the merits of the application after submission of a detailed environmental impact assessment and appropriate rezoning of the portion of the sensitive areas to be used for such purposes.

- Subsidiary eco-tourism facilities may only include the following land uses, but not all will be allowed at a specific area.

- No development within 32 meters buffer zone from the edge of a riparian zone of a river, stream and wetland or the 1:100 year flood line. “Riparian habitat includes the physical structure and associated vegetation of the areas associated with a watercourse which are commonly characterized by alluvial soils (deposited by the current river system), and which are inundated of flooded to an extent and with a frequency sufficient to support vegetation of species with a composition and physical structure distinct from those adjacent wetland characterized by saturation within 50cm of the soil surface for less than three months of the year.

- As far as land use applications are concerned, these areas should be zoned as “public” open spaces in order to ensure community ownership.

- Sports facilities

The major sport facilities are currently clustered in the southern part of the city, adjacent and to the north of the N1-Eastern By-pass and Dorp Street intersection.

Sport amenities which serve both a local and regional/national function are located within this precinct, e.g. the Peter Mokaba Sport Stadium, the golf course, Virgin Active Gym, Cricket fields and other ancillary land uses. The Polokwane Motor Cross track, go-cart track and 4X4 track is located just to the south of the Sport Precinct, opposite the Polokwane Game Reserve, along the Dorp Street Extension.

There is a need for the extension of the river buffers to 200m on municipal owned properties highlited as follows:

- Pelgrimshoop 630LS: portions
  9,10,11,12,13,14,15,16,19,40,41,42,43,44,45,46,51,52,53,54,55,56,57,58,59,60, and Portions 47, 48, 49 and 50

- Portion 28 of the Farm Doornkraal 680 LS

The reason behind the extension of the river buffer along the above mentioned portions of farms are in two folds:

- Polokwane Municipality has a unique aquifer in the Sand and Blood rivers. This aquifer is one of three in South Africa. The estimate is that we have a storage capacity in the sand that is between 4 and 30 meters deep, of 2 million kiloliters. We can also pump up to 18 kiloliters per day out of this aquifer (This is the same as what we can utilize from Dap Naude Dam).

- The second reason is that the municipality intends to extend the borehole field in the above said aquifer. The municipality is currently importing water from outside the municipal area and has to utilize the maximum groundwater. In view of the above, DWAF (Department of Water Affairs) has a policy pertaining to the usage of ground water and the Municipality needs to conform to the policy.

There is a proposed Regional Sewer Plant to be development on Portions 2, 93 and 95 of the farm Doornbult 624 LS. The proposed regional Sewer Plant will be developed on 120Ha of Land.

7.1.3.4 OTHER SIGNIFICANT LAND USES

The aim of a comprehensive Spatial Development Framework Plan is to support and create a compact urban structure, which will capitalize on resources and existing infrastructure, and focus capital investment at development within the urban edge.

The land uses as indicated on Map 19 provide a broad framework for the main land uses within the urban edge.
Residential Development

The existing residential developments are focused in the area between Polokwane City and Seshego, the area west of Nirvana and Westenburg, the Ivedale Agricultural Holdings area and the north eastern townships northeast and east of Bendor/ Koppiefontein and Pietersburg X 11 (Sterpark, Fauna- and Flora Park).

Future residential development areas should take place in a northern, eastern, southern and western direction as indicated on Map 14. Residential development of various densities can develop in the earmarked area.

Infill residential development should take place within the built-up urban areas and then urban edge of Polokwane LSDF as per development phase map 14. Housing development projects in the municipal area must be based on the Breaking New Ground (BNG) principles for Sustainable Human Settlements. Well-managed entities where economic growth and social development are in balance with the carrying capacity of the natural systems on which they depend for their existence and result in sustainable development, wealth creation, poverty alleviation and equity. The present and future inhabitants of sustainable human settlements located in urban, live in safe and secure environments, and have adequate access to economic opportunities, a mix of safe and, mixed land use, diverse, life-enhancing environments with maximum possibilities for pedestrian movement and transit via safe and efficient public transport.

Social Amenities

Social amenities/services provided by Government, local municipality, agencies/institutions often resulting in fragmented and uncoordinated service delivery. Problems resulting from this area duplication of infrastructure in some areas and under-provision in others. A need for a more holistic and integrated approach to social delivery is evident – to serve the needs of the community and contribute to social development.

Education

The area East (Edu-Park) of the Peter Mokaba Sport Complex has developed into an educational precinct. Land is available at this location for extension, and incentive should be put in place to encourage educational institutions e.g. UNISA, MEDUNSA and TUT to locate within the educational precinct. However, supporting land uses (e.g. sport grounds) can also be promoted within this node. There are other educational precincts within various neighbourhoods throughout the City.

The area between the Mankweng Educational Hospital and the University of Limpopo in Mankweng has the potential to develop into an educational precinct. Medical- and related institutions e.g. MEDUNSA should be encouraged locating within the precinct.

7.1.4 CONCLUSION

This section has dealt with a conceptual Local Spatial Development Framework Plan for Polokwane City. The compilation of a comprehensive Local Spatial Development Framework Plan for Polokwane City is however proposed. This plan should ultimately provide detail Spatial Development proposals on a local level. It should be based on detail land use surveys, land ownership, the availability of infrastructure, environmental issues as well as taking into account social and economic trends.
7.2 CONCEPTUAL SPATIAL DEVELOPMENT FRAMEWORK PLAN FOR MANKWENG & BADIMONG AREA (CLUSTER).

The Mankweng / Badimong Cluster is identified as the second order settlement cluster and the need was identified to develop a conceptual framework plan in order to delineate an urban edge, provide guidelines in respect of potential future development opportunities, growth direction, combating urban sprawl etc., through identifying the main form giving elements in the area and identification of future developable land.

Mankweng / Badimong Cluster is situated on the R71 (P17-1) linking Tzaneen with Polokwane. This road forms a provincial East-West Corridor that could be classified as an ‘activity corridor’.

The financial rational is that development funding will be concentrated in rural villages with the highest growth potential and prospects for sustainable development based on their locality in regional context, accessibility, prospects to create jobs etc.

It was indicated in the analysis phase that this area lacks proper structure planning, and detailed planning. It is therefore proposed that a detailed framework plan should be compiled for this area.

7.2.1 SPATIAL DEVELOPMENT PRINCIPLES

The following spatial development principles should be applicable for the development of this conceptual Spatial Development Framework for Mankweng/ Badimong Cluster:

- Promote the principles of compact settlement development.
- Curbing of settlement sprawl through the delineation of a “settlement cluster edge”.
- Promoting the integration of rural settlements in order to improve the economy of scale within settlement clusters.
- Densification of rural settlements through innovative and attractive methods;
- Creating, quality, well balanced land uses and serviced settlements which are convenient, attractive and safe.
- Ensure good accessibility.
- Enhance the principles of sustainable development through the alignment of rural settlement development with the occurrences of natural resources, the provision of social and civil infrastructure and the creation of job-opportunities.

The importance of the formalization of large parts of parts of these clusters (which is still informal) and the integration of these clusters into the urban envelope will also be

The Mankweng / Badimong cluster consists of the following settlements (Map 20):

- Mankweng township and extensions;
- Nobody-Mothiba;
- Ga-Motholo;
- Moria Boyne;
- River View;
- Ga-Moswedi;
- Badimong;
- Komaneng;
- Ga-Mahlantlhe;
- Thabakgone;
- Viking;
- Matsela-Pata;
- Manthorwane;
- Ga-Makanye;
- Nobody-Mothapo;

7.2.2 OBJECTIVES

The main objectives that should be persuaded through proper spatial planning of the Mankweng / Badimong Cluster include:

- Promotion of sustainable urban development
- Maximizing return on capital spend on projects
- Optimize opportunities for economic growth and job-creation
- Social upliftment and the alleviation of poverty- increase in living standards.
- Promotion of higher level of social and community services in close proximity to residents.
- Cost-effective provision of higher level of civil services.
7.2.3 FACTORS INFLUENCING URBAN FORM

The following form-giving elements are prominent in the area:

- Good linkages on an inter-city scale
  - R71 (Regional distributer)
  - Activity spines
    - Route D617 Houtbosdorp Road & Route D844 (Mankweng/Sebayeng Road
      - Mankweng – Manthorwane
      - Moria/Boyne– Mankgaile
- Education hub – University of the North
- Moria / Boyne Institutional area
- Existing protected areas, hills/ridges, streams and wetlands
- Adjacent intensive agricultural land (Map 20).

7.2.4 SPATIAL PLANNING PROPOSALS FOR MANKWENG / BADIMONG CLUSTER

An urban plan should be compiled for the Mankweng / Badimong cluster based on the spatial development principles discussed in section 7.2.1. The main elements of such a plan should include:

- The verification of the proposed urban edge in order to promote compactness and prevent urban sprawl.
- The integration of the settlements by way of urban infilling along communication lines and corridors.
- Capitalization on the activity corridors and spines running through the area for the establishment of activity nodes. These nodes could include inter alia businesses, offices, social amenities, recreation and higher residential densities.
- The formalization of informal settlements that forms part of this cluster should be viewed as a high priority. The objectives, benefits and methodology are discussed in detail under table 64.
- The identification of an open space system which will protect sensitive areas such as hills and ridges, streams and wetlands, but also reserve/zone areas for future sport and recreational purposes.
- The integration of local economic development (LED) initiatives with spatial development in order to create job-opportunities in close proximity to where people stay. This could include the provision of urban-agriculture, agri-industries and cooperatives and transport related activities.
- Planning of effective public transport routes and facilities.
7.3 CONCEPTUAL SPATIAL DEVELOPMENT FRAMEWORK PLAN FOR SEBAYENG-DIKGALE AREA

The Sebayeng / Dikgale Cluster is situated on North-Eastern part of the Polokwane CBD and accessible via the R81 (P43-1) duivelskloof Road, that is classified as a ‘Public Transport corridor”. Sebayeng / Dikgale Cluster is also linked with the Mankweng / Badimong Cluster via Collector Road.

The Sebayeng / Dikgale Cluster consist of the following settlements (Map 21):

- Sebayeng Township and extensions
- Mogabane / Dikgopeng
- Mantheding
- Ga-Mokgopo
- Titibe
- Dikagale
- Makgoba

7.3.1 OBJECTIVES

The main objectives that should be persuaded through proper spatial planning of the Mankweng cluster include:

- Promotion of sustainable urban development
- Maximizing return on capital send on projects
- Optimize opportunities for economic growth and job-creation
- Social upliftment and the alleviation of poverty- increase in living standards.
- Promotion of higher level of social and community services in close proximity to residents.
- Cost-effective provision of higher level of civil services.
- Adjacent intensive agricultural land (Map 9).

7.3.3 SPATIAL PLANNING PROPOSALS FOR THE SEBAYENG / DIKGALE CLUSTER

An LSDF needs to be compiled for the Sebayeng- Dikgale area based on the spatial development principles. The main elements of such a plan should include:

- The verification of the proposed urban edge in order to promote compactness and prevent urban sprawl.
- The integration of the settlements by away of urban infilling along corridors.
- Capitalization on the activity corridors and spines running through the area for the establishment of activity nodes. These nodes could include inter alia businesses, offices, social amenities, recreation and higher residential densities. Especially Sebayeng A and B, and Ga-Mokgopo should be encouraged to develop towards the R81.
- The formalization of informal settlements that forms part of this cluster should be viewed as a high priority. The objectives, benefits and methodology are discussed in detail in section 7.3.1.
- The identification of an open space system which will protect sensitive areas such as hills and ridges, streams and wetlands, but also reserve/zone areas for future sport and recreational purposes.
- The integration of local economic development (LED) initiatives with spatial development in order to create job-opportunities in close proximity to where people stay. This could include the provision of urban-agriculture, agri-industries and cooperatives and transport related activities.
- Planning of effective public transport routes and facilities.

Both these two forms of formalisation could have the following advantages:

- It will serve as the basis for identification of IDP development projects.
- It will provide updated cadastral information that should be managed and updated for future use.
  - It will form the basis for proper planning and balanced land use provision.
  - It will form the basis for sustainable environmental development.
Through urban infilling and densification land could be used more rationally.

- It will provide guidelines to determine the priorities and timeframes for development projects.
- More dense, formalized settlements will make the provision of engineering and electrical services more cost effective.
- A higher level of services might be more obtainable over a short period of time.
- Provide layout plans that can assist the general postal services and delivery systems in the area.

### TABLE 63: CHARACTERISTIC OF SUSTAINABILITY

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<thead>
<tr>
<th>More Sustainable Settlements</th>
<th>Less Sustainable Settlements</th>
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</thead>
<tbody>
<tr>
<td>Compact forms of residential development</td>
<td>Low density, spread-out development</td>
</tr>
<tr>
<td>Mixed land use in close proximity</td>
<td>Segregation of land uses into concentrations</td>
</tr>
<tr>
<td>Employment based primarily on education and skills</td>
<td>Employment based on environment polluting or non-renewable resources based industry</td>
</tr>
<tr>
<td>Movement on foot and by bicycle and transit</td>
<td>Heavy dependence on private cars</td>
</tr>
<tr>
<td>Wind and solar energy</td>
<td>Thermal and nuclear energy</td>
</tr>
<tr>
<td>Tertiary treatment of sewage: use of natural means of sewage treatment</td>
<td>Discharge of sewage into water-courses untreated or with low level treatment</td>
</tr>
<tr>
<td>Protection and use of natural hydrologic systems.</td>
<td>Hard surface preventing infiltration; channelling</td>
</tr>
<tr>
<td>Natural open space; protection of wetlands, etc.: use of manure, compost, integrated pest management</td>
<td>Destruction of natural landscapes; “manicured” parkland with species; heavy use of chemical fertilizers, herbicides, pesticides</td>
</tr>
<tr>
<td>Reduction, recovery, re-use and recycling of waste</td>
<td>Landfills, incinerators</td>
</tr>
</tbody>
</table>

Source: (Richards, 2000)

If formalization involves township establishment, the following additional advantages could be obtained; it could eventually form the basis for proper township establishment that could open-up opportunities for 99-year leasehold or private land ownership through full title; it could improve over the longer run the revenue collection basis of the local municipality; it could economically empower people when owning their own properties. The methodology to be followed is summarized in Table 64:
<table>
<thead>
<tr>
<th>PHASE</th>
<th>METHODOLOGY</th>
<th>OUTPUT</th>
</tr>
</thead>
</table>
| **PHASE 1**                  | • Apply parameters to determine areas with the highest probability to become sustainable.  
   Identification of priority areas  
   • Criteria could include:  
     - Availability of water  
     - Availability of agricultural land  
     - Accessibility and linkages  
     - Level of services  
     - Size of the market (population concentration)  
     - Ability to create job opportunities | Hierarchy of settlements |
| **PHASE 2**                  | • Aerial photographs  
   Developing basic cadastral data for each village / town and township  
   • Digital ortho rectification of scanned aerial photographs  
   • Conversions of aerial photos to electronic format  
   Above-mentioned includes:  
   • Ground control points  
   • Creation of digital elevation model  
   • Trigonometry beacons | Aerial photographs  
   • Base map for village |
| **PHASE 3**                  | • Printing of field maps for survey  
   Pre-planning surveys  
   • Conducting land use surveys  
   • Conducting socio-economic surveys  
   • Survey existing infrastructure  
   • Survey existing social facilities  
   • Environmental assessment  
     - Sensitive areas  
     - Floodlines  
     - Hills and Ridges | Land use map  
   • Field map indicating land uses, existing services and environmental areas.  
   • Socio-economic data base |
| **PHASE 4**                  | • Capturing of attribute data and linking it to cadastral data.  
   Land use infrastructure map on digital format  
   • Compilation of Land Use and infrastructure map. | Digital Information System |

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19 Public Participation during all phases is essential for buy-in in the project.
**PHASE 5**
Compilation of a settlement structure plan
- Setting up of Steering Committee and identification of role-players.
- Analyse status quo
- Identification of strategic issues
- Formalizing development approach
- Formalizing development proposals

**Settlement structure plan**

**PHASE 6**
- Formalization of village
- Planning of new expansions

- The methodology and approach is describe in more detail in section.

- New layout plan for the settlements.

**PHASE 7**
Incorporation of plans into land use management

- Include settlements in database when compiling land use management scheme’s

- Comprehensive land use management scheme.

**PHASE 8**
Township Establishment (if required):

- Townplanning establishment process to be followed as regulated by law.

- Established and proclaimed township.
7.4 LAYOUT PRINCIPLES

As far as the detail layout with regard to formalization and the establishment of new residential areas are concerned, all planning should be done in accordance with modern layout principles where applicable such as included in the Guidelines for the provision of engineering services in residential townships (or the newer version Guidelines for: engineering services and amenities) and principles developed by the University of Cape Town. The latter was published in a book titled “Making of urban places”.

7.5 ALTERNATIVES FOR DENSIFICATION

Densification could be obtained through the process of subdivision of existing stands and through the process of urban infilling. Densification of existing towns and villages is essential in order to provide engineering services in a cost-effective way and for general maintenance and upgrading of areas. These should be done in close cooperation with the Tribal authority.

7.6 INFILLING

In cases where open spaces exist between existing stands, new land uses will be allocated to the stands. These stands might be residential in nature, but could also include other land uses such as future school sites, stands for business purposes and stands earmarked for accommodating sport facilities.

In situations where stands are adjacent to each other, but do not have a joined boundary, the situation will be addressed by extending the boundaries of the involved stands so that they will border each other.

In some cases there might be a need to utilize such open strips between stands as a future road reserve or a park strip to provide direct access for pedestrians in certain directions.

The process of infilling will also be used to integrate the various portions of the villages with each other. The principal of integration is also important to create more compact towns and villages, which will enhance the more cost effective provision of services.

7.7 SUBDIVISION OF STANDS

The subdivision of stands should not be enforced on communities, but in order to obtain the advantages densification could have on future development and maintenance of towns and villages, the tribal authority should develop measures to encourage people to spontaneously join in this process. The most effective measure might be where people will financially gain by subdividing the properties they are occupying.

As the subdivision of stands might be a personal option (with respect to size and form of stands) it will be difficult to prescribe to the community how they should subdivide their stands. In support of the the above, the proposed Densification Policy on Agricultural frams have to be considered by both Local Authority, Local Government and Housing, and Department of Agriculture once the Municipal council has adopted the policy.

7.8 DIVERSITY AND STAND ALLOCATIONS

Cognizance should be taken of the different needs of people with regard to the provision of stands. Some people might still prefer the traditional way of making a living on the land they live on (small scale farmers involved in a substance economy), but other might prefer smaller stands only for residential purposes. The latter would be obtained by the subdivision process or by providing smaller stands in new extensions.

The former, however, would be addressed by creating a balance between modern urbanization trends and the traditional way of living. This balance could be found by still providing agricultural land for small farmers in close proximity of the new established planned township extensions. This approach will also help to achieve the goal set previously, namely to create more cost-effective towns and villages.

The layout principal referred to here is in accordance with the concept of urban agriculture and will make agriculture projects in the villages a more viable proposition.
Affluent coming from a sewerage treatment plant can for instance be used for irrigation purposes.

7.9 INTEGRATION OF SETTLEMENT / SETTLEMENT CLUSTERS INTO THE URBAN SYSTEM

The integration of settlements/settlement clusters into the urban system is important to ensure sustainable growth and development in the area. Integration could be enhance through administrative /management processes, socio-cultural, economic as well as physical integration.

- TRANSPORTATION LINKAGES

  The Mankweng and Sebayeng clusters do have access from provincial or regional roads. Good accessibility is important in order to ensure mobility of people, resources and economic interaction. It also enhances the prospects for the efficient prioritisation and utilization of public transport facilities.

  The priorities for upgrading of roads should be a function of the order of the settlements in the hierarchy situated on, or in close proximity, of the roads. Priority should be given to collector roads within settlement (which should be identified through the process of formalization). The road network should make provision for proper public and transport facilities to serve the rural communities.

- ECONOMIC LINKAGES

  The concept of sustainable development is closely linked to the availability of job-opportunities in proximity of where the population is concentrated. This is also an important point of departure if PLM want to address the mismatch of where people have to live and work.

  The municipality should, as part of their developmental role, draw up strategies to enhance local economic development. These strategies should take cognisance of the spatial guidelines provided in the SDF when allocating projects to certain areas. The direct guidelines emanating from the SDF proposals include inter alia:

  - The concentration of economic activity and job-creation projects in or in close proximity of higher order settlements / settlement clusters and on development corridors. Land should be allocated for these purposes during the formalization of settlements.
  - Capitalizing on the comparative advantages the region has to offer. This includes wholesale and trade, finance and business services, community services and transport and communication.
  - The upgrading of infrastructure to support local economic development in strategic localities.
  - The establishment of core areas for rural settlements / clusters. Economic activity and social infrastructure should enhance their attraction as nodal points in PLM.

- EXTENDED SOCIAL AND SERVICE DELIVERY LINKAGES

  The provision of social infrastructure such as schools, clinics, community halls, sport and recreation etc. should receive priority in these settlements clusters and could be supported by proper linkages with local, district and provincial activities.

  Other linkages that should use the same guidelines for the determination of priorities are telecommunication linkages, commercial and financial linkages.
7.10 DEVELOPMENT OF RURAL AREAS AND REMAINING RURAL VILLAGES

The NSDP proceeds from the premise that the reconstruction and development of South African society should include the reconfiguration of apartheid spatial relations. This requires an acknowledgement in our development planning of the existing and changing spatial pattern of population settlement, economic development and general potential. Further, whatever spatial priorities are implemented, they should be guided by these realities, as well as the constitutional imperative to provide basic services to all South Africans wherever they may be located. At the core of the NSDP is the view that the diverse and disparate spatial context suggests a policy approach that itself should be differentiated and conducive to the specific requirements of the different spatial contexts.

A divergent view that is gaining currency is that it is not always true that poverty is best addressed where it manifests itself. The view states that poverty is prevalent in some areas because “economic and social dynamism is at such low ebb in those areas and is unlikely to improve under any feasible scenario of intervention by government or donors”.

In terms of poverty eradication the NSDP is underpinned by the following assumptions:

- Location is critical for the poor to exploit opportunities for growth;
- The poor, who are concentrated around vibrant and active junction points or activity corridors, have greater opportunity to gain from higher rates of economic growth and to improve their welfare;
- Areas of demonstrated economic potential give greater protection to the poor against adverse effects of economic shock because of greater opportunities to diversify income sources;
- Areas with demonstrated economic potential are the most favourable for overcoming poverty;
- Migration studies conclusively prove that the poor are making rational choices about locating to areas of employment and economic opportunities; however
- Government must ensure that policies and programmes are in place to ensure the poor are able to benefit fully from growth and development opportunities in such areas.

The approach adopted by the NSDP is, in part, informed by international case studies that show that:

- Unfocused infrastructure spending does not necessarily result in improved GDP growth;
- Unfocused human resource development does not improve GDP growth;
- Regions that already have some economic success are more likely to grow than other regions, because successful regions have individuals, firms and industries with the ability to learn;
- Successful learning occurs when institutions and incentives work and when institutions are locally specific;
- Success is often achieved through focused and polarized investment; and
- Redirecting public investment from economically dominant regions to lagging regions had not automatically spurred economic activity in lagging regions.

The NSDP is unequivocal about suggesting that economic growth and poverty alleviation should be focused on people (that is, follow the trends) and not on places that have become poverty traps for many of the poor (that is, we cannot expect to bring about social equality through spatial equality).

International comparative research has firmly established that no factor correlates dynamic growth with equity as strongly as human capital development. Remediying the plight of persons who are stuck in poverty traps in areas with low prospects for sustaining livelihoods in the foreseeable future, may well be better served by forceful efforts directed at human capital development and greater social support (education, skills acquisition, welfare, labour-market intelligence, land reform and agricultural extension services to sustain livelihoods).
While the focus on places – that is the geographical distribution of localities with demonstrated economic potential – seems quite narrow, the focus on people and on localities with demonstrated economic potential addresses the majority of the population. It can be “shown” that it is in these areas that Government’s objectives of both promoting economic growth and alleviating poverty will best be achieved. In areas of limited potential, it is recommended that, beyond a level of basic services to which all citizens are entitled, government should concentrate primarily on human capital development by providing social transfers, education and training and poverty-relief programmes; and by reducing migration costs by providing labour-market intelligence and/or helping with set-up costs to give people in these areas better information, opportunities and capabilities to gravitate towards areas with greater demonstrated potential for economic development, should they so choose.

In addition to this, important intervention that are livelihood-enhancing and supporting will have to be considered, including (1) sound rural-development planning policies and programmers; (2) far more aggressive land and agrarian reform initiatives; and (3) significant expansion of agricultural extension services. ([NSDP, 2006](#)).

**Table 65** provides an indication of the proposed spatial differential approach and its implication for the provision of services.

<table>
<thead>
<tr>
<th>SERVICES</th>
<th>SETTLEMENTS WITH GROWTH POTENTIAL</th>
<th>RURAL REMAINDER WITH LESS POTENTIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Civil Engineering Services</strong></td>
<td>Stand water connections Higher order sanitation i.e V.I.P. and /or water related sewer system</td>
<td>Communal stand pipes Sealed V.I.P.</td>
</tr>
<tr>
<td><strong>Water Sanitation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Roads</strong></td>
<td>Formalized road network</td>
<td>Gravel roads in informal townships</td>
</tr>
<tr>
<td><strong>Electricity</strong></td>
<td>On stand</td>
<td>On stand</td>
</tr>
<tr>
<td><strong>Social services</strong></td>
<td>Community clinic Primary and secondary schools Post Office Police Station Pension Pay Points</td>
<td>Mobile clinic Primary schools Mobile police stations Social upliftment programmes</td>
</tr>
</tbody>
</table>
### TABLE 66: SUMMARY OF PRIORITY INTERVENTIONS

<table>
<thead>
<tr>
<th>INTERVENTION ZONE</th>
<th>OBJECTIVES</th>
<th>PRIORITY INTERVENTIONS (IDP PROJECTS SPATIAL PLANNING)</th>
<th>SECTORAL STRATEGIES (IDP PROJECTS)</th>
</tr>
</thead>
</table>
| Macro level (Municipal Wide) | • Capitalizing on the location of Polokwane situated on the Great North Road and Gateway to Africa  
• Enhance Polokwane as a Capital of the Limpopo Province.  
• Enhancement of sustainable development which involves:  
  o The protection, sustainable use and management of the environment;  
  o Proper land use management;  
  o The cost-effective provision of services and;  
• The enhancement of the principle of compact cities theory through the planning of quality and efficient urban spaces.  
• The curbing of urban sprawl through the delineation of an urban edge.  
• The promotion of urban integration and urban infilling.  
• The enhancement of intra-urban linkages along mixed land-use corridors and nodes in order to reduce the need for people to travel over long distances.  
• Creating quality, well balanced urban environments, which are convenient, attractive and safe.  
• Enhancement of the image and legibility of urban areas.  
• Conservation, development and management of a functional open space system. | 1. Drafting of a new LUMS (Town Planning Scheme) for the PLM area of jurisdiction | Technical Services:  
1. Water Service Delivery Programme  
2. Roads Master Plan |
|                    |                                                       | LED:  
1. Compilation of the LED Strategy  
2. Compilation of Rural Development Strategy  
3. Development of investment & Marketing Strategy for Polokwane City  
4. Compilation of Co-operatives Development Strategy  
5. Review of the SMME Strategy  
6. Review of Tourism Development Strategy | LED:  
4. Compilation of the LED Strategy  
5. Compilation of Rural Development Strategy  
6. Development of investment & Marketing Strategy for Polokwane City  
3. Compilation of Co-operatives Development Strategy  
4. Review of the SMME Strategy  
5. Review of Tourism Development Strategy |
| Local Level: Polokwane City | 1. Compilation of LSDFP for Polokwane  
2. Review of the Polokwane/Perskebult Town Planning Scheme.  
3. Densification & Subdivision strategies for the Proclaimed Townships and Farms within the Town Planning Scheme Area  
4. Urban Renewal Strategy for Polokwane CBD  
5. Office Development Policy  
6. Revision of the CBD Development Plan (to increase F.A.R)  
7. Precinct plan for the transportation hub.  
8. Compilation of Overnight Accommodation Policy  
9. Compilation of Dwelling office study between Thabo Mbeki and Grobler | Civil Engineering:  
2. Development of a new sewer Plant |
| Local Level: Mankweng-Badimong area | • Promotion of sustainable urban development  
• Maximizing return on capital spend on projects  
• Optimize opportunities for economic growth and job-creation  
• Social upliftment and the alleviation of poverty - increase in living standards.  
• Promotion of higher level of social and community services in close proximity to residents.  
• Cost-effective provision of higher level of civil services. | Spatial Planning and LUM  
1. Compilation of a SDFP for Mankweng, Nobody-Badimong  
2. Tenure Upgrading of R293 Townships  
3. Formalization of R293 Townships Revitalisation and expansion of existing nodes | Spatial Planning and LUM  
| Local Level: Sebayeng | • Promotion of sustainable urban development |  
| LED: | 1. Compilation of a Plan for Urban Agriculture  
2. Compile Economic Growth investment Plan |
### POLOKWANE MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK, 2010

<table>
<thead>
<tr>
<th>Dikgale</th>
<th>Polokwane Municipal area</th>
</tr>
</thead>
</table>
| • Maximizing return on capital spend on projects  
• Optimize opportunities for economic growth and job-creation  
• Social upliftment and the alleviation of poverty- increase in living standards.  
• Promotion of higher level of social and community services in close proximity to residents.  
• Cost-effective provision of higher level of civil services. | • To Alignment the Reviewed Polokwane/Perskebult Town Planning Scheme with the Newly Drafted R293 and R188 (Mankweng/Sebayeng/Rural Area) Town planning schemes commissioned by Department of Corporate Government Human Settlement and Traditional Affairs |
| 2. Tenure Upgrading of R293 Townships.  
3. Formalization of R293 Townships.  
4. Revitalisation and expansion of existing nodes | 1. Consolidation of the Town Planning Scheme and alignment with LUMS  
• One Town Planning scheme of Polokwane Municipality |
| Rural remainder | Civil Engineer:  
• Basic service delivery programme  
• Community development projects:  
  - Education  
  - Skills acquisition  
  - Labour – market intelligence  
| 1. Registration of proposed sites for dermacation within Tribal Authority (Locat Traditional Authority as per request) and submitted to the Department of Corporate Government Human Settlement and Traditional Affairs. | Human capital development /greater social support  
Land reform and agricultural extension services |

**Civil Engineer:**

- Basic service delivery programme
- Community development projects:
  - Education
  - Skills acquisition
  - Labour – market intelligence

**Human capital development /greater social support**

- Land reform and agricultural extension services

**Spatial Planning and LUM**

- One Town Planning scheme of Polokwane Municipality