



**BUSHBUCKRIDGE LOCAL  
MUNICIPALITY:  
SPATIAL DEVELOPMENT  
FRAMEWORK**



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# 1 INTRODUCTION AND BACKGROUND

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## 1.1 INTRODUCTION TO SPATIAL DEVELOPMENT FRAMEWORK

In terms of the Municipal Systems Act (Act No 32 of 2000) and the Municipal Planning and Performance Management Regulations (Notice 796 of 2001) the Municipal Spatial Development Framework has to be formulated as a core component of the Integrated Development Plan (IDP).

Spatial development planning is a public sector activity aimed at the coordination and optimisation of those human activities that require physical space or have a direct impact on it. It creates investment and regulatory frameworks within which private sector investment can occur. These frameworks are known as ***Spatial Development Frameworks***.

The **principal goal** of a spatial development framework is to:

- Give effect to the Chapter 1 Principles of the Development Facilitation Act (Act 67 of 1995),
- Set out objectives that reflect the desired spatial form of the Bushbuckridge Local Municipality (BLM),
- Contain strategies and policies regarding the manner in which the above objectives (especially with regards to desirable land use patterns, spatial reconstruction of the Municipality and the location and nature of development within the BLM) will be achieved,
- Set out basic guidelines for a land use management system in the BLM,
- Contain a strategic assessment of the environmental impact of planning proposals,
- Identify programmes and projects for the development of land,
- Provide visual representation of the desired spatial form of the municipality, indicating the following:





- Where public and private sector development and infrastructure investments should take place,
- Desired or undesired utilisation of space in particular areas,
- Urban/rural edge
- Areas where strategic intervention is required,
- Areas where priority spending is required, and
- Be aligned with the Spatial Development Frameworks of neighbouring Municipalities.

Spatial Development Frameworks establish a geographic context to the development framework process regarding the form, structure and location of future development. They further:

- Provide an appropriate and integrated spatial framework for sustainable development,
- Provide spatial direction to development as such, and ensure maximum impact in the short, medium and long term,
- Ensure directed public investment, through the identification of sectoral and geographic areas where interventions are necessary,
- Guide local development, in relation to urban/rural movement and activity systems, in order to realise the vision of sustainability,
- Inform developers of the location, structure and form of development most likely to be approved and the planning and development guidelines to be considered,
- Promote a proactive approach by managers in using public sector funds, so as to lay the basis for effective community and private sector growth and development.

## **1.2 HIERARCHY OF SPATIAL DEVELOPMENT FRAMEWORKS**

Dealing with all the aspects of Spatial Development of the Bushbuckridge Local Municipality area simultaneously and within a single Spatial Development

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Framework would be an impossible task. For this reason a **hierarchy system of spatial development frameworks** is instituted which is characterised by the following:

- Broader strategic issues are dealt with by the larger scale frameworks, while detailed spatial development aspects are resolved by smaller scale frameworks focussing on specific areas;
- Larger scale frameworks bind smaller scale frameworks

The Hierarchy consists of the following plans:

- Provincial Spatial Development Framework
- Bohlabela District Municipality Spatial Development Framework
- Bushbuckridge Local Municipality Spatial Development Framework
- Ward Spatial Development Framework
- Special area Spatial Development Framework
- Precinct Spatial Development Framework
- Site Development Plan

The MSDF is the only compulsory Spatial Development Framework, while the need for smaller scale frameworks can differ from area to area and should be determined on the basis of the circumstances, development pressure, conservation worthiness etc.

### **1.3 PURPOSE OF THE SDF AND ITS RELATIONSHIP WITH LAND USE MANAGEMENT SYSTEM**

According to the White Paper on Spatial Planning and Land Use Management (2001), each sphere of government must take responsibility for spatial planning in their areas of jurisdiction. The spatial fabric of South African Society is characterised by displaced urbanisation and a settlement pattern that is distorted, fragmented, unequal, incoherent and inefficient. In this regard, the local



government being the sphere of government operating closest to the community will have a direct role to play in spatial planning and land use management of our communities. According to the white Paper, municipalities are responsible for formulating the planning frameworks on which all decisions on land development should be based. The White Paper classifies the **role of local government** into three categories: -

- Spatial Development Frameworks, as an integral part of the municipal IDP;
- Decision Making, on land development applications made to local government; and
- Enforcement, of the provisions of land use schemes.

Government realised that these inequities needed to be addressed and adopted a system of planning. The new system requires every municipality to have an indicative plan showing desired patterns of land use, direction of growth, indicate special development areas, and conservative worthy areas as well as scheme (Land Use Management System). The former has a legal effect of guiding and informing land development and management and the latter effect on the development and management.

The SDF should be flexible and be able to change to reflect changing priorities, whereas the Land Use Management System should be tighter and only amended where required for a particular development. The SDF should inform the content of the LUMS. In this regard the SDF should: -

- Only be strategic, indicative and flexible forward planning tool to guide planning and decisions on land development;
- Develop an argument or approach to have development of the area of jurisdiction which is clear enough to allow decision makers to deal with unexpected;
- Develop a spatial logic which guides private sector investments;
- Ensure the social, economic and environmental sustainability of the area;
- Establish priorities for public sector development and investment; and



- Identify spatial priorities and places where public-private partnerships are a possibility.

To fulfil the role of spatial planning, the Municipal system Act, promulgated in 2000, section 26 describe the IDP as a single, inclusive and strategic plan for the development of the municipality, a planning instrument that guides and informs all planning and development, and all decisions with regard to planning, management and development in the municipality. The Key part of the Municipal System Act is that every Municipality, both district and local, prepare and adopt its spatial development framework as part of its IDP and align with the framework of the IDP.

The Spatial Development Framework is a core component of the IDP process. It identifies spatial issues and trends for which spatial strategies are formulated, such as the integration of previously segregated areas. It also gives the localised spatial dimension to development principles, objectives and projects. It must form the basis for the local government's land use management system.

The **Spatial Development Framework** is an indicative plan showing the desired patterns of land use, direction of growth, urban edges, special development areas and conservation-worthy areas. The SDF should be flexible and be able to change thus reflecting the changing priorities of the municipality. The SDF will effectively fulfil the role played by Land Development Objectives (LDO'S), but now explicitly and directly forming part of the IDP.

The **Features of development patterns in Bushbuckridge** local municipality today are:

- Large dormitory areas far from places of economic, cultural, recreational and educational opportunities;
- Severely overcrowded former homelands, forced to depend on limited agricultural land, in turn leading to severe environmental degradation;
- Substantial inequality between areas set aside under apartheid for white and black residential occupation; and



- Wide disparities in the provision of infrastructure and services.

The SDF is therefore the spatial representation of the structuring and transformation objectives of the above features and also ensuring that a more sustainable land use pattern and optimum utilisation of space are achieved.

In rural areas, it will be necessary to deal specifically with natural resources management issues, land rights and tenure arrangements, land capability, subdivision and consolidation of farms and the protection of agricultural land.

The purpose of the SDF is not to infringe upon existing land rights but to guide future land uses. The maps would be used as a systematic representation of the desired spatial form to be achieved by the municipality in the long term. The boundaries created through this process should therefore be left for interpretation and not be scaled.



## 2 METHODOLOGY

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The Development Facilitation Act, The White Paper on Spatial Planning, Land Use Management Bill and the Municipal Systems Act, will be used as a principal reference documents for the compilation of the Bushbuckridge Local Municipality Spatial Development Framework.

A broad overview of the **current spatial pattern** and trends will be provided from the planning perspective of the Spatial Rationale in order to identify critical limitations for development and areas where surplus capacity does exist. The IDP document will also be considered.

An evaluation will be given of the **socio-economic and infrastructural development** to achieve the provision of the White Paper on Spatial Planning and Land Use Management. The results of the evaluation and interactions with stakeholders will be consolidated into **SWOT analysis** format and translated into **goals and action plans**, which are likely to impact on the formulation of strategies and policy options.

This document is structured as follows:

- **Section 3** provides an overview of the geographic locations and characteristics
- **Section 4** discusses the legal and policy framework
- **Section 5** gives a brief overview of the current physical reality.
- **Section 6** is a SWOT analysis of the Bushbuckridge Local Municipality.
- **Section 7** lists the visions and objectives of the Bushbuckridge Local Municipality
- **Section 8** discusses spatial development principles and guidelines
- **Section 9** covers the strategies and development concepts



- **Section 10** provides an overview of the municipal Spatial Development Framework
- **Section 11** discusses local spatial development frameworks for various identified areas.



### **3 GEOGRAPHICAL LOCATION AND CHARACTERISTICS**

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The Bushbuckridge Local Municipality is a presidential nodal point located in the south eastern part of Limpopo Province and north- eastern part of Mpumalanga Province. The municipality is one of the two constituents of Bohlabele District Municipality, and is bounded by Kruger National Park in the east and Nelspruit in the South (see attached map). It also forms part of the Kruger to Canyon Biosphere. It is bounded by Moroleng Local Municipality in the North, and Mopani District Municipality (within Ba-phalaborwa Local Municipality) further north, Fetakgomo Local Municipality in the west. The Municipal area provides a link to Lydenburg and other centres in the lowveld, particularly Hoedspruit, Pilgrim Rest and Graskop. The Bushbuckridge Local Municipality can therefore be called the gateway to the major tourism attraction points in Mpumalanga and the eastern part of the Limpopo Province.

The Municipality covers 25586.76 ha of land area, of which 255.74 ha are agricultural land, 207.82ha residential area and 3.9ha waterbodies. Bushbuckridge Local Municipality consists of 135 settlements and is divided into 34 wards (see attached map)





**INSERT MAP 1:  
Regional Locality**



**INSERT MAP 2:  
Locality**



## 4 LEGAL AND POLICY FRAMEWORK

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The **legal and policy framework** requires the Spatial Development Framework to be informed by the norms and principles, which are contained in the Development Facilitation Act, Municipal System Act, Land Use Management Bill and other relevant legislations. Overabundances of planning and related laws, mostly racially based were enacted and have up to date not been rescinded or replaced.

Significant progress towards the clarification and rationalization of legislation dealing with the natural and built environments was made by the Development and Planning Commission, appointed by the Minister of Land Affairs, together with the Ministers for Housing and Constitutional Development (now Provincial & Local Government) in 1997. A key piece of work produced by the Commission was a study of the planning laws in place in each province, including laws inherited from pre – 1994 provinces and homelands as well as those designed purely for application in black urban areas. This revealed an extraordinary complex and inefficient legal framework, with planning officials in all spheres of government having to deal with numerous systems within the jurisdiction of each province, and indeed within most municipalities.

A white paper on Spatial Planning and land Use management was approved by the National Government and gazetted on July 27 2001. The most dramatic effect of the White paper is the rationalisation of the existing overabundance of planning laws into one national system that will be applicable in each province, in order to achieve the national objective of wise land use. The white paper also builds the concept of the Municipal Integrated Development plan (IDP), as provided in the Municipal Systems Act, 2000 and required spatial development framework that should guide and inform all decisions of the municipality relating to the use, development and planning of land.



The aim of this section is to provide a broad summary of existing legislation and policy documents that have reference on the use, development and planning of land in the Bushbuckridge Local Municipal Area and that the municipality must take into cognisance of during the compilation of Spatial development Framework Plans.

#### **4.1 MUNICIPAL STRUCTURES ACT, 1998**

The municipality has the functions and powers assigned to it in terms of sections 156 and 229 of the constitution. The Municipal Structures Act, 1998 (MSTA) assigns and divides powers to and between District and Local Municipalities.

The MSTA requires that the Local Municipalities "...must seek to achieve the integrated, sustainable and equitable social and economic development of its area as a whole..." It also assigns powers and functions to Local Municipalities that includes, inter alia:

- Integrated development planning for the Local Municipality as whole , including a framework for integrated development plan of the District Municipality;
- A bulk supply of water, sewerage and electricity and solid waste disposal;
- Municipal roads that form an integral part of a road transport system for the area of the Local Municipality
- Promotion of the local tourism for the area, etc

The aforementioned powers and exercise of such powers by the Bushbuckridge Municipality have an impact on the Spatial Development pattern of the local municipal areas and district municipal area. It is therefore essential that horizontal (between local municipalities) and vertical alignment (between the district municipality and Local municipalities.) take place during the drafting of the Spatial Development Framework Plan.



## 4.2 MUNICIPAL SYSTEMS ACT, 2000 (ACT NO. 32 OF 2000)

The most important Act that regulates integrated development planning is the Municipal Systems Act, 2000 (Act No. 32 of 2000) read with the Municipal Planning and Regulations, 2001.

The following sections of the MSA, 2000 are of specific importance:

**Section 25 (1):** The municipal council must, within a prescribed period after the start of its elected term, adopt a single, inclusive and strategic plan for the development of the municipality which:

- a) Links, integrates and co-ordinates plans and takes into account proposals for the development of the municipality.
- b) Aligns the resources and capacity of the municipality with the implementation plan
- c) Forms the policy framework and general basis on which annual budgets must be based
- d) Is compatible with national and provincial development plans

An integrated development plan must reflect the council's vision for long term development, a spatial Development framework which must include the provision of basic guidelines for a land use management system of the municipality

A spatial development framework reflected in a municipality's integrated development plan must-

- a) give effect to the principles contained in Chapter 1 of the Development facilitation Act' 1995 (Act No. 67 of 1995);
- b) Set out objectives that reflect the desired – spatial form of the municipality;
- c) Contain strategies and policies regarding the manner in which to achieve the objectives referred to in paragraph (b), which strategies and policies must-



- i. Indicate desired patterns of land use within the municipality;
  - ii. Address the spatial reconstruction of the municipality; and
  - iii. Provide strategic guidance in respect of the location and nature of development within the municipality.
- d) set out basic guidelines for a land use management system in the municipality;
- e) set out capital investment framework for the municipality's development programs;
- f) contain strategic assessment of the environmental impact of the spatial development framework;
- g) identify programs and projects for the development of land within the municipality.
- h) be aligned with the spatial development frameworks reflected in the neighbouring municipalities; and
- i) provide a visual representation of the desired spatial form of the municipality, which representation:
- i. must indicate where public and private land development and infrastructure investment should take place;
  - ii. must indicate desired or undesired utilisation of space in a particular area;
  - iii. may delineate the urban edge;
  - iv. must identify areas where strategic intervention is required; and
  - v. must indicate area where priority spending is required

#### **4.3 LAND USE MANAGEMENT BILL**

The Land Use Management Bill provide for national, provincial and municipal spatial development frameworks, set basic principles that would guide spatial planning, land use management and land development in South Africa and provide for the regulation of land use management uniformly in the country.



The Land Use Management Bill also requires that local authorities prepare and adopt spatial development frameworks as part of their integrated development plans in accordance with Chapter 5 of the Municipal Systems Act, 2000.

The Land Use Management Bill has the following requirements with respect to the content of municipal SDF:

25. (1) The Spatial development framework of a municipality that must be included in the municipality's integrated development plan in terms of section 26 (e) of the Municipal Systems Act must-

- a) give effect to the directive principles;
- b) be consistent with the national land use framework;
- c) be consistent with the provincial spatial development framework applicable in the area of the municipality;
- d) be consistent with any applicable national or provincial legislation on environmental management; and
- e) give effect to any national and provincial plans and planning legislation

(2) A municipal spatial development framework must reflect at least-

- a) the current patterns of land use in the municipality;
- b) any spatial imbalances in the current land use patterns in the municipality;
- c) a conceptual framework to guide-
  - i. desired patterns of land use in the municipal area;
  - ii. the spatial reconstruction of the municipal area, including
    - (aa) the correction of past imbalances and the integration of formerly disadvantaged areas;
    - (bb) directions of growth;
    - (cc) major transport and movement routes;
    - (dd) the conservation of the natural and built environment;
    - (ee) the identification of areas in which the intensity of land development should be increased or reduced, and



- (ff) the identification of areas in which particular areas should be encouraged or discouraged; and
- iii. decision- making relating to the location and nature of development in the municipal area;
- d) a plan at a prescribed scale graphically illustrating, or where appropriate describing, the desired spatial form of the municipal area
- e) an analysis of vacant land in the municipality indicating
  - i. strategically- located vacant land;
  - ii. the ownership and value for such land;
  - iii. the current zoning of such land;
  - iv. the geotechnical and other physical conditions of such land;
  - v. the surrounding land uses; and
  - vi. the most suitable use for such land
- f) basic guidelines for a land use management system in the municipal area;
- g) a capital expenditure programme for implementing the municipality's spatial development framework;
- h) a strategic assessment of the environmental impact of the spatial development framework; and
- i) any other matters that may be prescribed

The requirements of the Land Use Management Bill with respect to the content of municipal SDF are more extensive than the requirements of the Regulations of the MSA and municipality' should be proactive in aligning their SDF with the requirements of the Act.

#### **4.4 DEVELOPMENT FACILITATION ACT, 1995 (ACT NO. 67 OF 1995)**

The Development Facilitation Act, 1995 (DFA) was introduced to introduce extraordinary measures to facilitate and speed up the implementation of land related projects, to provide for nationally uniform procedures for the subdivision and development of land in urban and rural areas so as to promote the speedy provision and development of land for residential, small-scale farming or other





needs and uses and to lay down general principles governing land development throughout the country.

The Chapter 1 principles of the DFA are a set of interrelated intentions (desirable directions) to guide land planning and development in South Africa. The principles are necessary to establish a more equitable and developmental planning system for the country and apply to all forms of planning that affect land development including:

- Spatial planning and policy formulation;
- The planning of whole settlements as well as parts or elements of settlements;
- The decisions of all public authorities affecting land development under law, including those of traditional leaders acting under customary law; and
- All legislation, including all land control systems and instruments affecting the development of land.

These principles are also binding on all future actions of national, provincial and local government and all laws, regulations and by-laws that are passed or changed must conform to these principles.

The Chapter 1 principles are normative principles that mean that they describe norms or standards that are based on a set of values. Appropriate development planning is underpinned by two sets of values, i.e. the one is people centered and the other is based on an awareness of nature that provides the basic resources for human life. Normative planning moves away from a mainly static, perspective planning system based on rules and regulations to a proactive one based on a vision of a better future. It is also based on negotiations, compromise and conflict resolution and it strengthens, and relies on, creative local decision-making and accountability in government.



Five central concerns underpin the Chapter 1 principles:

- The need to create new forms and structures for South African settlements to improve their performance;
- The need to work harmoniously with nature;
- The need to speed up the pace of development;
- The need to promote a better planning system; and
- The need to promote security of tenure.

The Chapter 1 principles reject low-density, sprawling, fragmented, largely mono-functional settlement forms that were established under apartheid and call for the emergence of settlement systems that yield accessible benefits to all p. positive performing settlements of this type reflect at least seven basic qualities, i.e. they are generative ( of economic opportunities and social institutions and support for people), they are convenient ( enable inhabitants to conduct their daily activities quickly, easily and as inexpensively as possible), they offer a choice of living conditions to all (choices range from very public to conditions of great privacy), they are equitable (all inhabitants have reasonable access to the opportunities and facilities), they promote the efficient use of resources ( such as land, finance, building materials, energy and water, etc.), they appeal to the senses ( aesthetically appealing) and they accommodate growth and change well .

“Integration” is a term of considerable importance in the principles. The following forms of integration are inherent in the term:

- Integration between rural, urban and (by implication) primeval landscapes;
- Integration between elements of spatial structure (e.g. integration between different movement modes; between public transport and social facilities, etc.);
- Integration between land-uses;



- Integration of new development with old (New development should be integrated with historical investments in social, economic and utility infrastructure); and
- Integration of different classes of people.

The Chapter 1 principles require an improvement of the current planning system towards a more integrated planning and development system. The principles demand that all the dimensions of development be considered in relation to the others. Any plan drafted by an institution would therefore need to take into account its spatial, structural, environmental, economic, movement, social, cultural and institutional consequences.

The Chapter 1 principles also require that the planning and implementation dimensions of the developmental process should not be separated. Plans should not be general statements, as they need to be translated into financial and budgetary frameworks, specific time frames and legal and institutional mechanisms to ensure implementation. Plans should also be seen as ongoing processes and monitoring mechanisms need to be put in place and procedures for adjusting plans in.

#### **4.5 LAND-USE MANAGEMENT SYSTEM (LUMS)**

The purpose of the Act is “to promote the orderly physical development of the Republic, and for that purpose to provide for the division of the republic into regions, for the preparation of national development plans, regional development plans, regional structure plans and urban structure plans by the various authorities responsible for physical planning, and for matters connected therewith.”

The 1991 Act set out to provide a comprehensive hierarchy of planning measures from a national development plan through to an urban structure plan, which did not realize. The Act was not implemented in the early 1990’s as the division of South Africa into regions was at that time sensitive issue.



Section 6 and 8 of act No. 88 of 1967 are still applicable and provides for the issuing of permits to allow for the use of land in a manner contrary to that which it was being used for at the time that it was declared a controlled area. The Act is currently utilized to obtain business rights on farmland, i.e. land previously located outside the areas of jurisdiction of local authorities.

#### **4.6 ENVIRONMENTAL**

Every national department listed in Schedule 1 of the National Environmental Management Act, (107 of 1998) (NEMA) as exercising functions which may affect the environment and every Province must prepare an environmental implementation plan within one year of the promulgation of the same Act and at least every four years thereafter. The **Environmental Implementation Plan** (EIP) describes Departmental policies, plans and programmes that may impact on the environment and how these will comply with the NEMA principles and national environmental norms and standards.

Every national department listed in Schedule 2 as exercising functions involving the management of the environment must prepare an environmental management plan within one year of the promulgation of this Act and at least every four years thereafter. The **Environmental Management Plan** (EMP) describes the Department's environmental management functions and environmental policies/laws, and efforts to ensure compliance by other departments, with such environmental policies and laws. Every national department that is listed in both Schedule 1 and Schedule 2 is also required to prepare a consolidated environmental implementation and management plan.

Section 4 (b) of NEMA points out that it is the responsibility of each provincial government to ensure that municipalities adhere to the relevant environmental implementation and management plans, and the principles contained in section 2 in the preparation of any policy, programme or plan, including the IDP and land



development objectives. In particular, greater consideration needs to be given to the participation of the municipalities in the process of developing the EIPs especially with respect to integrating the outputs and outcomes of their Integrated Development Planning processes.

It is also essential that the EIP should describe how local government would engage /how they can become more actively involved in the EIP process. What mechanisms or forums would be used to bring them on board?

Second, and in the light of the above point, the issue of **cooperative governance** must continue to be stressed both in relation to the three spheres of government but also with respect to other stakeholders such as parastatals and broader civil society.

The need and importance of co-operative governance within the environmental sector has been recognized in NEMA. Section 41 of the Constitution (Act 108 of 1996) provides the principles and foundations of cooperative government and intergovernmental relations.

The new EIA Regulations also encourage institutions to prepare environmental management frameworks (EMFs) which will guide environmental management in their areas of jurisdiction. These EMFs have a potential of expediting project implementation as once they are prepared and approved by the Dept. of Environmental Affairs, there won't be any need to prepare individual EIA for each project, which currently proves to be time-consuming and not supportive to service delivery by local authorities. The recommendation would be for municipalities to prepare EMFs (Environmental Management Plans) for their area of jurisdiction.



#### **4.7 THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA, 1996 (ACT NO. 108 OF 1996)**

The Constitution is the cornerstone of the South African framework for environmental governance. Section 24 of the Constitution entrenches environmental rights as fundamental rights as follows:

“Everyone has the right-

to an environment that is not harmful to their health or well being; and

to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-

prevent pollution and ecological degradation;

promote conservation; and

secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development” (RSA 1996).

#### **4.8 NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998)**

The National Environmental Management Act, 1998 (NEMA) is the primary national law enabling the environmental rights entrenched in Section 24 of the Constitution. As such, it provides frameworks of principle that are binding on all levels and spheres of government. NEMA also establishes principles for decision-making on matters affecting the environment to promote co-operative governance and management can be objectively monitored and assessed by all stakeholders.

#### **4.9 NATIONAL WATER ACT, 1998 (ACT NO 36 OF 1998)**

The National Water Act, 1998 governs water use throughout the country. In so doing it has a crucial impact on environmental governance in all provinces.



#### **4.10 THE MUNICIPAL SYSTEMS ACT, 2000 (ACT NO. 32 OF 2000)**

All municipalities must draft Integrated Development Plans (IDP) in terms of the Municipal systems Act, 2000. An IDP is a comprehensive strategic plan for the development of the environmental impact of the spatial development framework of the municipality. The resultant Integrated Environmental Programme must be aligned and in accordance with provincial and national plans, policies and strategies.

#### **4.11 UPGRADING OF LAND TENURE RIGHTS ACT, 1991(ACT NO. 112 OF 1991)**

The purpose of the Act is "to Provide upgrading and conversion into ownership of certain right granted in respect of land; for the transfer of tribal land in full ownership to tribes; and for matters connected therewith".

The Act is used in the former self-governing territories to upgrade land tenure rights (PTO's and Deeds of Grants) in unproclaimed settlements and townships and to convert tenure rights mentioned in Schedule 1 and 2 to the Act (e.g. leaseholds, PTO's etc) into rights of ownership.

#### **4.12 PROVISION OF LAND AND ASSISTANCE ACT, 1993 ( ACT NO. 126 OF 1993)**

The purpose of the Act is "To provide the designation of certain land; to regulate the subdivision of such land and the settlement of persons thereon; to provide for the rendering of financial assistance for the acquisition of land and to secure tenure rights; and to provide for matters connected therewith".

The Act is utilized in cases where communities are settled residentially (e.g. rural settlement or agri-village) on agricultural land in terms of the integrated



programmes of land redistribution and agricultural development of the Department of Land Affairs. The Act makes provision for the approval of a partition plan (layout plan) and conditions (e.g. establishment conditions and land-use conditions) by the Minister of Land Affairs to ensure proper planning and future control of such rural settlements or agric-villages.

#### **4.13 LESS FORMAL TOWNSHIP ESTABLISHMENT ACT, 1991 (ACT NO. 113 OF 1991)**

The purpose of the Act is “to provide for shortened procedures for the designation, provision and development of land, and the establishment of townships, for less formal forms of residential settlement; to regulate the use of land by tribal communities for communal forms of residential settlement; and to provide for matters connected therewith”.

Act No. 113 was used for the designation of Land by provinces and for the speedy development of such land, bypassing usual planning procedures. Although the Act is still in force, it is not utilized for township establishment anymore as the Development Facilitation Act, 1995 is a more effective mechanism.

#### **4.14 THE INTEGRATED SUSTAINABLE RURAL DEVELOPMENT STRATEGY (ISRDS)**

The ISRDS is a national development intervention and spatial specific in order to improve the living conditions of people who are deprived of basic needs. Bohlabele District Municipality has been declared priority nodes for development and Bushbuckridge falls within the district municipality.





## 5 CURRENT PHYSICAL REALITY

### 5.1 SOCIO-DEMOGRAPHIC PROFILE

The main purpose of this section is to develop a good understanding of the key social and economic features of the municipal area and their impact in the compilation and the future of the SDF and specially the provision of infrastructure.

#### 5.1.1 Age and Gender

Accurate population figures remain controversial issues, but for the sake of the study it will rely on the 2001 source of statistics. The highest population is registered by Africans with 497 771 people, residing in Bushbuckridge followed by coloured with 853 people, Indians/Asians with 109 people and whites registering the lowest with 334 people.

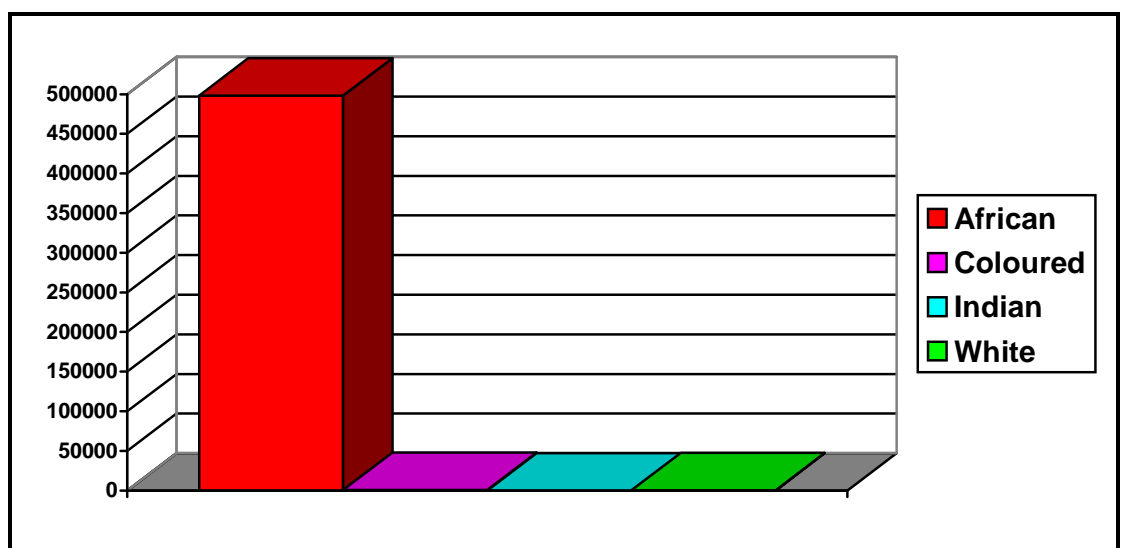
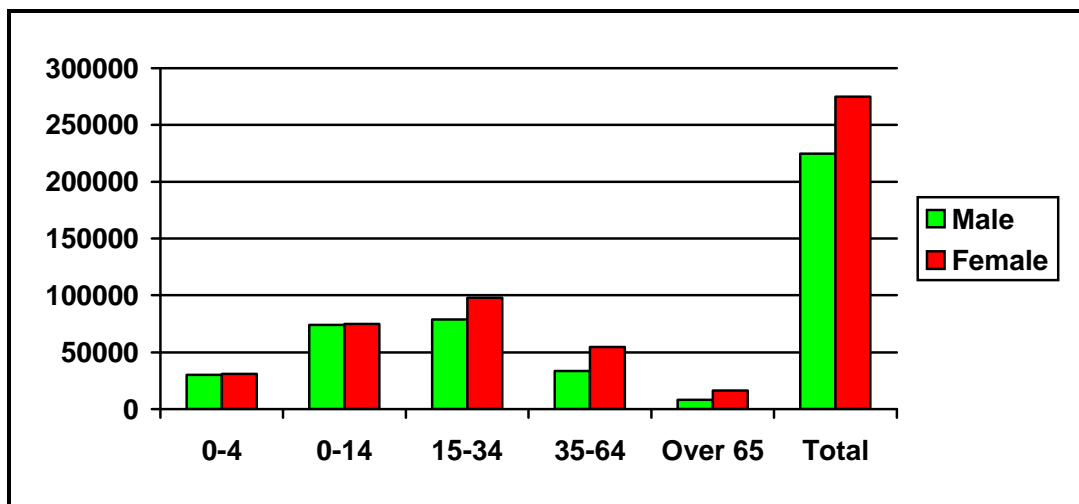


Figure 1: Race Profile



According to the census, Bushbuckridge local municipality is the largest municipality in the Bohlabele District Municipality, which is almost 65% of the population. Females represent a considerable majority (almost 54%), reflecting the impact of the migrant labour. The age groups of 0-5 yrs and 6-15 yrs, males are substantially more than females, which reflect a more normal curve.



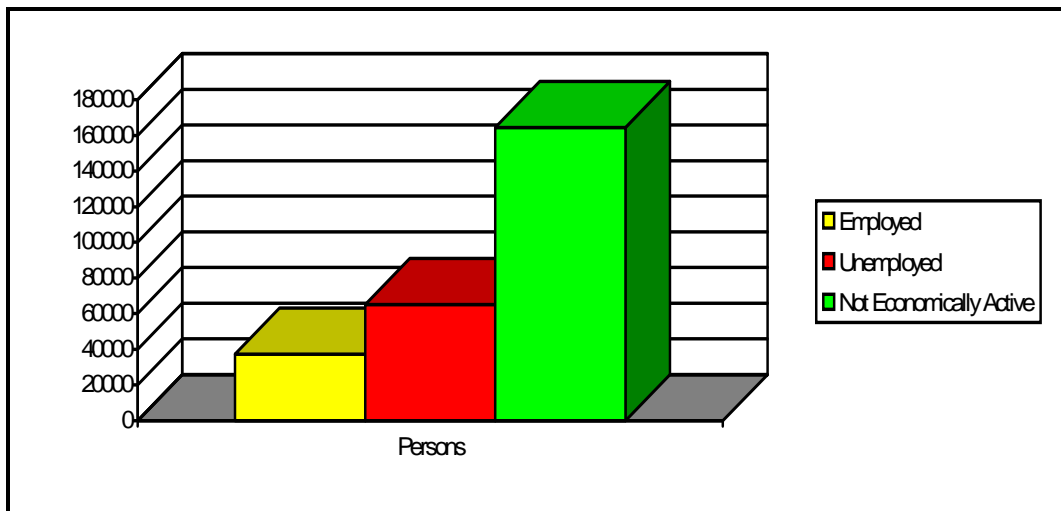
**Figure 2: Gender Profile**

The municipal area also registers the highest average settlement density with 21.10 people per ha.

### **5.1.2 Employment Opportunities**

The employment and unemployment rates are very useful in the compilation of the Spatial Development Framework in order to determine the extent of planning and decision making in addressing relevant issues and formulating appropriate strategies.

The figure below indicates the status of employment. It leaves no doubt that unemployment is very high in the municipal area especially in rural areas, with less than 15% of the total population is employed.



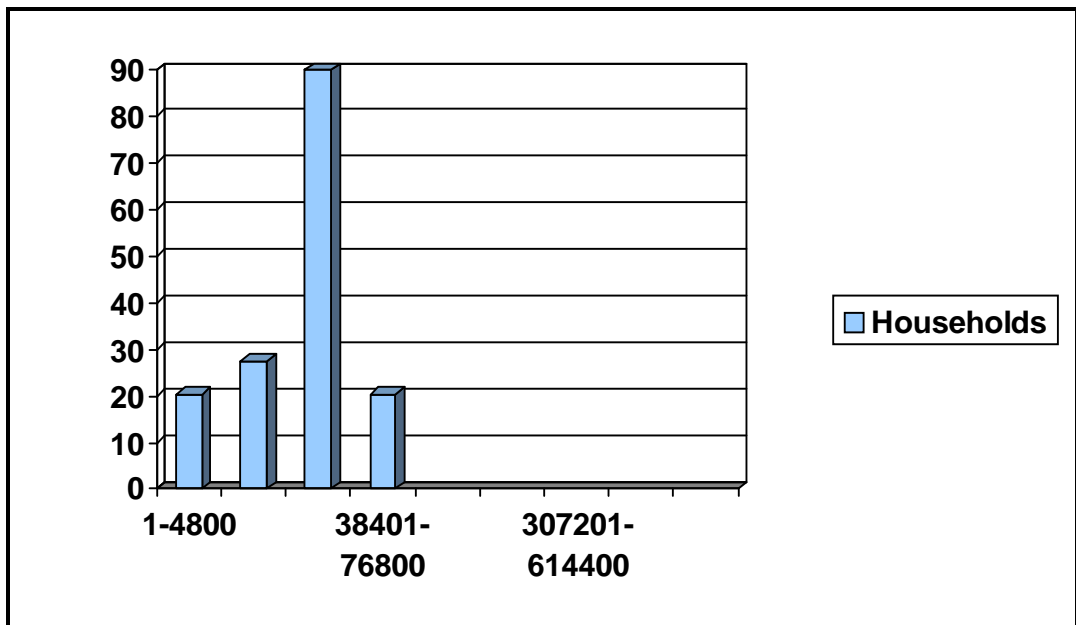
**Figure 3: Employment Profile**

Due to the large population size of the municipality and limited economic opportunities, high level of unemployment are recorded.

### **5.1.3 Income Per Household**

Income per household is very necessary to determine the overall living standard of people in the municipal area. The municipal area is characterised by high levels of poverty resulting in low income per household in settlements. Incomes in the area are constrained by scarce economic activities.

The below figure demonstrate that the household income in the municipal area is below the subsistence income levels level for most of the households and reflect a high level of poverty.



**Figure 4: Employment Profile**

#### **5.1.4 Health and HIV (AIDS)**

Health Services and facilities are very poor in the municipal area, with three (3) hospitals, 31 clinics and 2 health centres. Taking into an account the geographical location of the area, the municipality is in dire need of health infrastructural provision and improvement.

The prevalence of HIV/AIDS within the municipal area is likely to impact on economic development of the area in the future. It has increased from 6% in 1996 to 11% in 1999 and sharp increase in year 2000 to 16%.

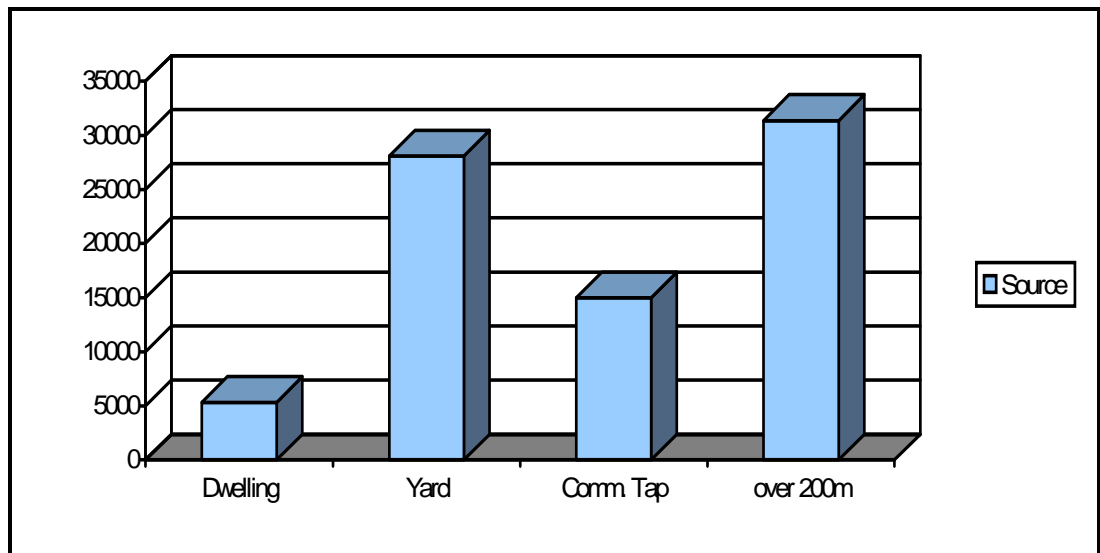
The sharp increase indicates a serious problem with detrimental effects on future development. The Spatial Rationale argues that the economically active population and education groups with the highest schooling grades are most effected. This will in turn impact on the planning and the implementation of development in the area.



## 5.2 INFRASTRUCTURE ASSESSMENT

### 5.2.1 Water Supply and Sanitation

Water supply is a dominant problem in the municipal area especially in rural areas with 61% not meeting RDP water supply levels. More than 60% of the households do not have access to potable water, 16% rely on tap water, while 10.7% rely on borehole and 3% on natural water (spring and rivers).



**Figure 5: Sources of water**

**Water reticulation and Sanitation** both managed by DWAF and the municipality require provision and upgrading in most of the areas in the municipality. Water supply to settlements and townships is still not reliable. On certain days taps are dry in the townships whereas some settlements go through dry taps for days.

Linked to water supply problems is the issue of poor sanitation, particularly in the densely populated settlement clusters and dispersed small settlements. Approximately 80% of the households in the municipal area use pit latrines, 84%



of the population do not meet RDP sanitation standards. The extensive use of unlined pit latrines poses a potential pollution threat to the surface and ground water resource of the area.

The below figure indicates that various townships are provided with water-borne sewage systems. The water and sanitation supply in the majority of the rural areas in the Bushbuckridge municipality are below RDP standards. However, a number of formal townships are well serviced with sanitation services.

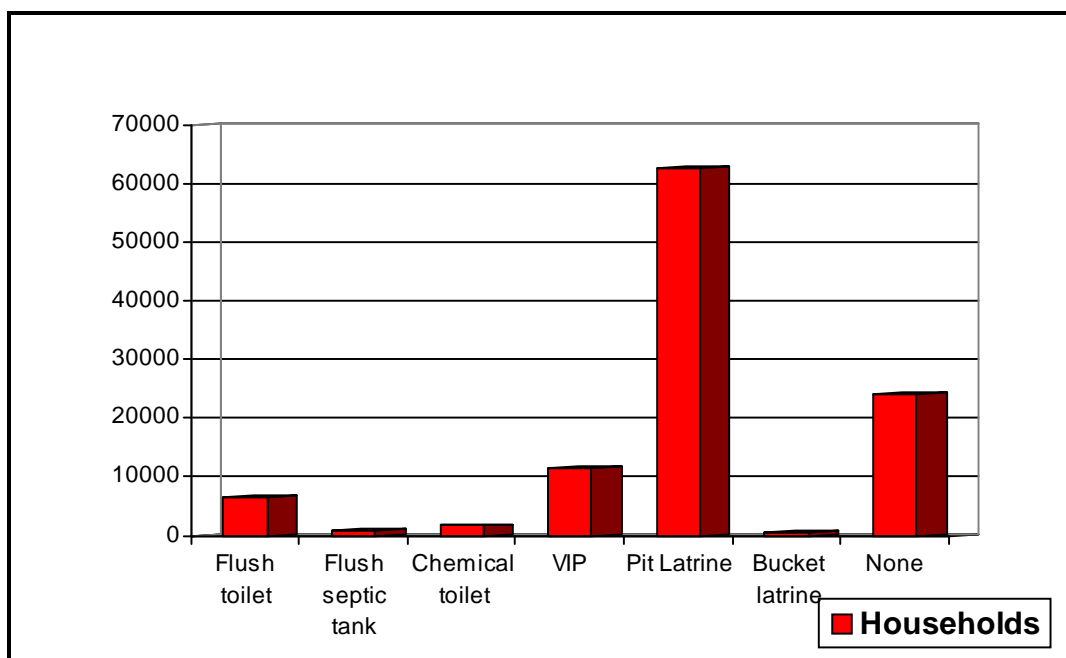


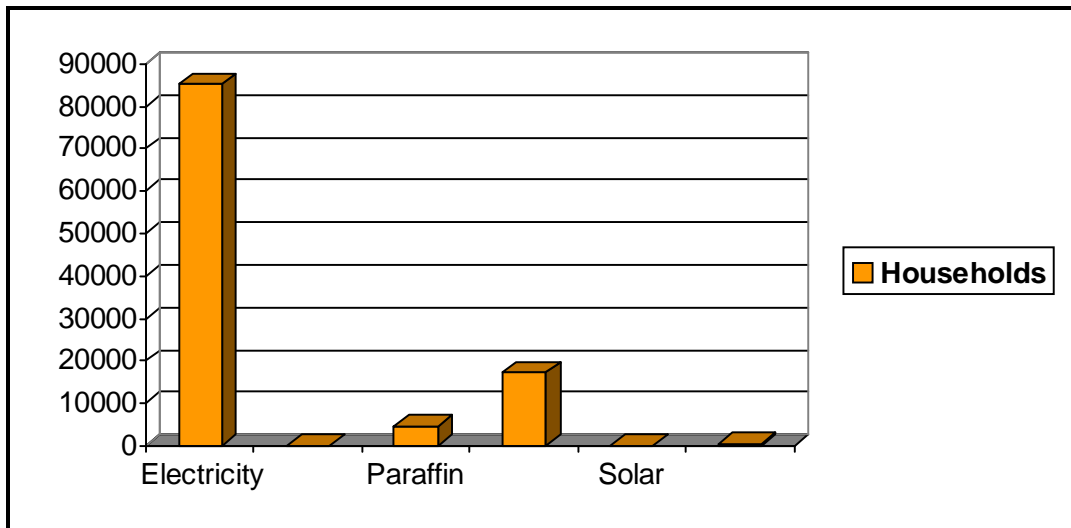
Figure 6: Sanitation Levels

As far as **sanitation** is concerned, pit latrines are used in most of the rural areas. However, the issue of pit latrines usage can also have adverse effects on the ground water. It is therefore necessary that certain studies be conducted to establish the areas where special care has to be taken so as not to contaminate the ground water. Water borne sewerage systems facilities are only available in the main townships. RDP townships do not have such facilities, and therefore there a need for provision of such.



### 5.2.2 Sources of Energy

The Municipality is well provided with electricity. More than 60% of the households are electrified, with other areas using gas, paraffin, candles and solar panels.



**Figure 7: Sources of Energy**

**Electricity** supply within the municipality is of acceptable standards. However, provision in the area need to be upgraded especially in rural areas where interruptions of electricity supply occurs. There is a need to improve the current infrastructure to an acceptable level. Certain communities still need to be electrified.

### 5.2.3 Telecommunication Infrastructure

A large section of the municipal area (51%) is provided with formal telecommunications facilities. Eighty percent of the inhabitants rely on communication services such as Cell phones, while 70% rely on public phones. Telecommunication is well provided in big institutions such as hospitals, schools and government departments.

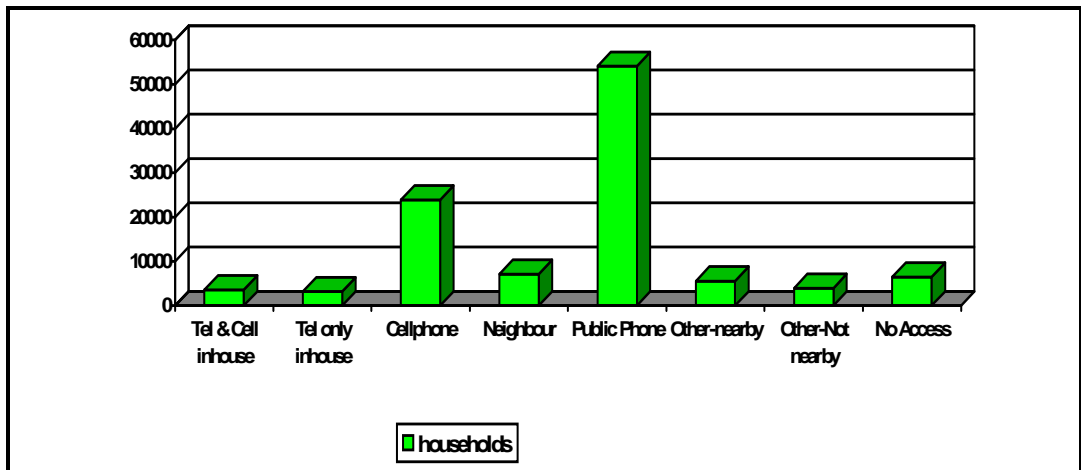


Figure 8: Telecommunication

#### 5.2.4 Waste Removal

More than 70% of the population do not have access to refuse removal services and rely on communal dumping areas. Formal waste removal is mostly limited to the formal townships.

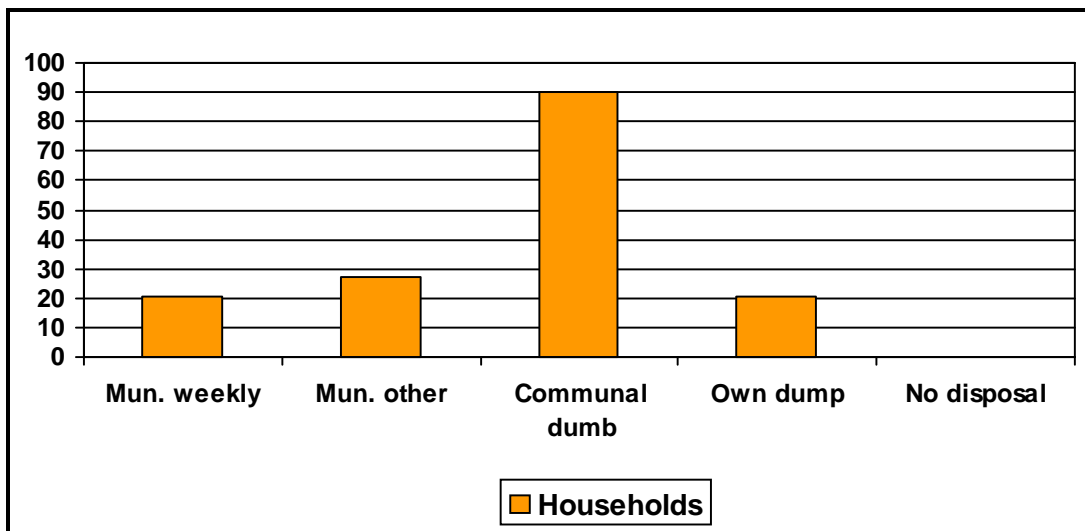


Figure 9: Refuse Disposal

**Solid Waste disposal** is still a big problem within the municipality. There is a need to identify solid wastes sites in the municipal area.





### **5.2.5 Cemeteries**

The shortages of **cemeteries** and refusal by community members to bury the deceased in cemeteries is a big problem, because people bury within their yards and in family cemeteries which do not take into consideration the issue hydrology of the areas therefore leading into contamination of ground water.

### **5.2.6 Safety and Security**

The municipal area has five (5) major police stations, which are strategically located in Thulamahaxi, Bushbuckridge, Mkhuhku, Saselani and Acornhoek. The facilities are supplemented by two (2) satellites offices in Mariti and Hluvukani with magistrate courts in Thulamahaxi, Bushbuckridge and Mkhuhku. The attached map depicts the spatial locations of these facilities. Spatial planning guidelines prescribe that residents should be within 1,5km distance from a police station. This is clearly not the case in this LM and as such these services need to be increased to ensure that all residents are at least in close proximity to satellite safety and security facilities. Services need to be accessible to all communities in all the areas.

### **5.2.7 Education and Labour Force**

According to the Department of Education, the number of schools in an area should relate to the population of the area. The municipal area has 207 primary schools, 112 secondary schools, 4 combined schools and 1 tertiary institution (see attached map). There are facilities, which are currently not used such as Mapulneng and Hoxane college of Education. The attached series of maps depicts the sphere of influence of primary and secondary schools according to spatial planning guidelines. Pupils should reside within 1,5km of a secondary or combined school. It is evident from these maps that the spatial coverage of these spheres of influence do cover a large section of the local municipalities area of jurisdiction. However, serious problems are experienced in many of these schools including overcrowding, high failure rate and poor infrastructure and facilities.



**INSERT MAP 3:  
Safety and Security**



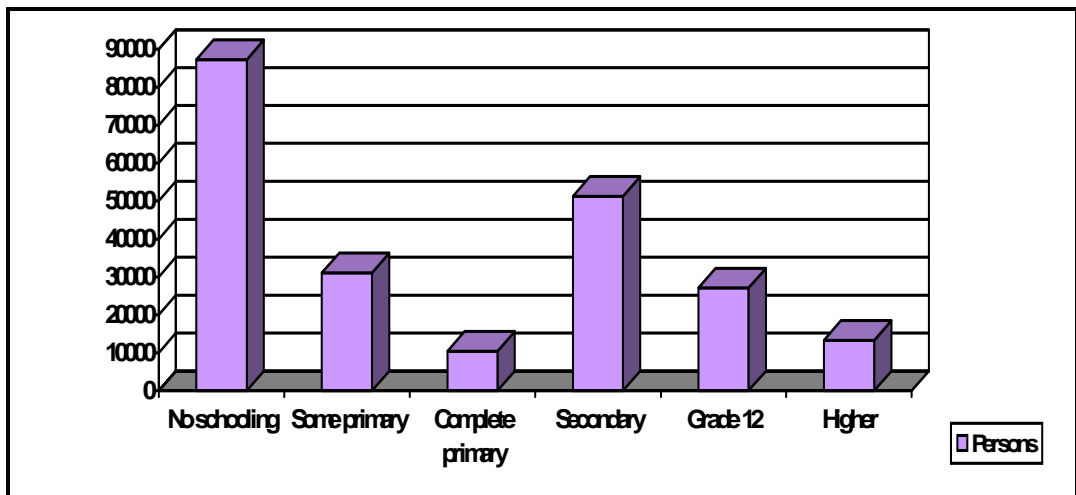
**INSERT MAP 4:  
Education**



**INSERT MAP 5:  
Education: Primary Schools**



**INSERT MAP 6:  
Education: Secondary Schools**



**Figure 10: Highest Education Levels Attained by over 20 year olds**

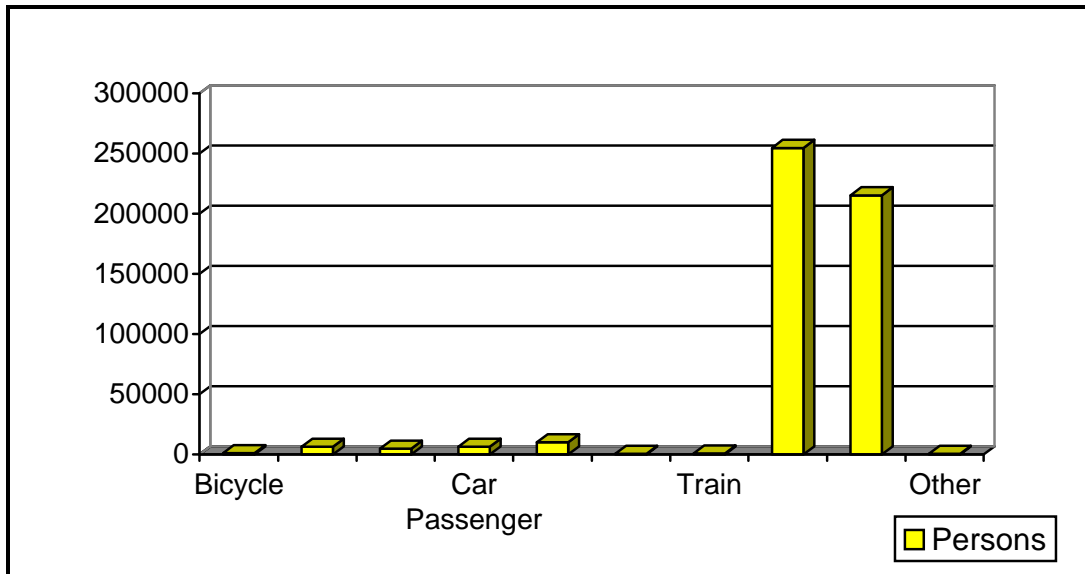
From the above figure it is clear that 17,5% of the population is illiterate, while 18% is literate. Currently there are no community libraries to serve the whole Bushbuckridge local municipality. Youth depend on school sport facilities for entertainment, which are not well maintained.

### **5.2.8 Housing Type**

Most of the people in the municipal area live in formal housing structures erected on separate stands (63%), while 27,4% reside in traditional houses, mostly prevalent in rural areas. The traditional houses are associated with natural disaster and health problems. Informal dwelling shacks are a reality and need to be addressed as a matter of priority, as 2,16% of the population falls within it. This form of settlement exists within the boundaries of the formal townships.

### **5.2.9 Mode of Transport**

The majority of people within the municipality walk to school and/work. They are then followed by people who use public transport. The lack of transport is a great challenge for adequate planning for pedestrians and public transport users.



**Figure 11: Mode of Travel to work or school**

There is a need for better access paths and roads to be established to improve accessibility to all strategic areas. The municipal infrastructure network requires on-going maintenance, replacement and upgrading.

The municipal area consists mostly of **gravel roads** in rural area. A limited amount of tarred roads have been developed especially in the townships and main towns. The formal surfacing of gravel roads should address a range of issues such as environmental, health, maintenance, etc.

**The upgrade of roads** could also attract tourists to access the tourism service points within the municipality, as well as the private game lodges on the eastern side of the municipality. The safety of pedestrians on the Hazyview-Klaserie road is a matter of importance as many fatal accidents have been reported in this area.

### 5.3 LOCAL ECONOMY AND ECONOMIC BASE

The Municipal area has the smallest economy, limited resource base and contributes the least to the district and the provincial GGP. Agriculture and tourism activities make a meaningful contribution to the local economy, and have a great



potential of reducing unemployment within the municipality and create economic growth.

### **5.3.1 Tourism**

Tourism has a great potential of creating jobs and stimulation the economic activities of the area, taking into an account its close proximity with the Kruger National Park (KNP), the government nature reserves, i.e. Manyeleti and various renowned private nature reserves such as Mhala- Mhala, Sabie-Sabie located along the boundary of the KNP. The municipal area also falls within the Kruger to Canyon Biosphere, which stretches northwards via Hoedspruit to Tzanneen.

According to the Tourism Growth and Development Strategy that was conducted by the Department of Finance and Economic Development, 2004, tourism in the area has a competitive advantage and has a potential to contribute significantly towards accelerating growth in the tourism industry. The study mentions the following attraction available in the area: -

- The publicly owned game reserves
- Private game reserves and game farms
- The culture of the people
- The attractive and unspoilt natural resource of the area
- The municipal area has number of tourism accommodation consisting of caravanning and camping sites, holiday flats, huts and chalets, bush camps and game lodges.

However the industry has number of shortfalls: -

- Constraints on development
  - Lack of unified marketing strategies
  - Malaria
  - Perception of high crime rate; and
  - Lack of involvement in, and benefit from, tourism for local communities.
-





### **5.3.2 Agriculture**

Agriculture is closely related with soil types, climate, access to service infrastructure, and access to suitable water both ground and surface water. Agriculture in the municipal area has a strong competitive advantage in terms of the climate, bio diversity and number of dams. But this advantage is impacted by problems associated with it such as droughts, veld fires, and rural/bad farming practices.

Although commercial agriculture provides bulk of the employment opportunities, approximately half of the population, particularly the youth, is unemployed. The constraints and issues related to agriculture in the municipal area are: -

- Access of communities in traditional authorities areas to viable parcels of arable land;
- Management of communal land grazing; and
- Conversion from subsistence to commercial agriculture in traditional authority areas.

### **5.3.3 Mining**

There are no major mining activities in the area, only stone aggregate sand which is used by local people to build their houses.



## **5.4 NATURAL ENVIRONMENT**

The Bushbuckridge Local Municipality is characterised by variations of relief, climate and vegetation. The Municipality is located in the Savanna Biome. The Savanna Biome is the largest Biome in southern Africa, occupying 46% of its area, and over one-third the area of South Africa. It is well developed over the lowveld and Kalahari region of South Africa and is also the dominant vegetation in Botswana, Namibia and Zimbabwe. The Savanna Biome is characterized by a grassy ground layer and a distinct upper layer of woody plants, referred to as Shrubveld, Woodland, or Bushveld. The shrub-tree layer may vary from 1 to 20 m in height, but in Bushveld typically varies from 3 to 7 m. The shrub-tree element may come to dominate the vegetation in areas which are being overgrazed. Most of the savanna vegetation types are used for grazing, mainly by cattle or game.

### **5.4.1 Climate**

The Municipal area experiences extreme temperatures, most summer days being around 35-40°C. The annual summer rainfall for the area varies from 450 to 600 mm. Temperatures vary between -4°C and 45°C, with an average of 22°C. Temperatures can be extreme in some of the higher altitudes where snowfalls may occasionally occur.

### **5.4.2 Rainfall**

Rainfall is seasonal and is distributed mostly in summer months between November- December and April, while the winters are cool and dry. Altitude in these areas ranges from sea level to 2 000 m while rainfall varies from 235 to 1 000 mm per year. A major factor delimiting the Savanna biome is the lack of sufficient rainfall. Summer rainfall is essential for the grass dominance, which, with its fine material, fuels near-annual fires



### 5.4.3 Vegetation

The attached map depicts the vegetation subclasses dominant in the study area. The area is mainly covered by three vegetation subclasses, including:

- Mixed Lowveld Bushveld
- Sour Lowveld Bushveld
- Afomonotane Forest

#### 5.4.3.1 Mixed Lowveld Bushveld

(van Rooyen & Bredenkamp In: Low & Robelo (eds) Vegetation of South Africa, Lesotho and Swaziland. Department of Environmental Affairs and Tourism, Pretoria)

Synonyms for this vegetation subtype include Lowveld (A10), Arid Lowveld (A11); Mixed Combretum spp./ Terminalia sericea Woodland; Rooibosveld, Rooibos/Mopanieveld. The mixed lowveld Bushveld covers approximately 15 204 km<sup>2</sup> of which  $\pm$  30% is transformed and 28.25% conserved. A quarter of the area of Mixed Lowveld Bushveld is conserved in the Kruger National Park and adjacent private game farms and conservation areas. This subtype is found mostly on flat to undulating landscapes between 350 and 500 m in Northern Province, Mpumalanga and Swaziland.

This vegetation type can be described variously as dense bush on the uplands, open tree savanna in the bottomlands, and dense riverine woodland on Ever banks. The tree layer is characterised by Red Bushwillow *Combretum apiculatum*, Largefruit Bushwillow *C. zeyheri*, Silver Clusterleaf *Terminalia sericea*, Strychnos madagascariensis, *Sclerocarya birrea*, *Lanea stuhlmannii* and *Peltophorum africanum*. Bottomland situations are dominated by Knob Thom *Acacia nigrescens*, Scented Thom *A. nilotica*, Common Falsethorn *Albizia harveyi* and *Euclea divinorum*. The shrub layer is moderately developed and individuals of Hairy Corkwood *Commiphora africana*, Wild



**INSERT MAP 7:  
Vegetation**



Grape Cissus cornifolia, Sickle Bush Dichrostachys cinerea, Acacia exuvialis, Dalbergia melanoxylon and Pterocarpus rotundifolia are commonly found. The grass layer is poorly to moderately developed, and grasses such as Herringbone Grass Pogonarthia squarrosa, Bluseed Grass Tricholaena monachne, Curlyleaf Lovegrass Eragrostis rigidior, Melinis repens Brachiaria nigropedata Panicum maximum Digitaria eriantha and Heteropogon contortus are the conspicuous species. Other grasses that can be found are Kalahari Sand Quick Schmidtia pappophoroides, Spreading Bristlegrass Aristida congesta, Bushveld Signalgrass Urochloa mosambicensis and Enneapogon cenchroides.

This bushveld is confined to a frost-free area, with frequent fires and general grazing by cattle and game. Economic Uses include cattle and game farming, ecotourism, and the cultivation of subtropical fruit, vegetables and sugar cane.

#### 5.4.3.2 Sour Lowveld Bushveld

(van Rooyen & Bredenkamp In: Low & Robelo (eds) Vegetation of South Africa, Lesotho and Swaziland. Department of Environmental Affairs and Tourism, Pretoria)

Synonyms for this vegetation subtype include Lowveld Sour Bushveld (A8); Lowveld Sub-humid Mountain Bushveld, Malelane Mountain Bushveld; Gemengde Bergbosveld, Vaalboom/Sekelbosveld. The sour lowveld bushveld covers approximately 19 662 km<sup>2</sup> of which ±76% is transformed and 9.65% conserved. This subtype is well conserved in Blyde River Canyon Nature Reserve, Entabeni State Forest, Barberton Nature Reserve, and other game farms and conservation areas

The sour lowveld bushveld is found on the lower eastern slopes and foothills of the Drakensberg, from the Soutpansberg in Northern Province, through Mpumalanga and into Swaziland. The landscape is undulating, at an altitude between 550 and 800 m.



This open tree savanna is dominated by Silver Clusterleaf *Terminalia sericea*, Bushwillow *Combretum collinum*, Paperbark Thorn *Acacia sieberiana*, Parinari *curatellifolia*, *Pterocarpus angolensis*, *Acacia caffra*, *Ficus thonningii* and *Strychnos madagascariensis*. The shrub layer is characterised by Sickie Bush *Dichrostachys cinerea*, Large Sourplum *Ximenia caffra*, Camel's Foot *Piliostigma thonningii*, *Antidesma venosum* and *Maytenus heterophylla*. The grass constituent is tall, tufted and relatively dense, and the common species are Yellow Thatching Grass *Hyperthelia dissolute*, Wire Grass *Elionurus muticus*, Common Thatchgrass *Hyparrhenia hirta*, *Setaria sphacelata*, *Melinis nerviglumis*, *Cymbopogon excavatus* and *Heteropogon contortus*.

The higher rainfall and frost-free climate allow a lush vegetation to develop. Acocks considered the climax of this area to be forest, which still occurs in the kloofs along the escarpment. However, fires prevent forest from developing in this vegetation type. Grazing by cattle and game also helps to prevent forest encroachment. The main economic uses include Cattle and game farming, ecotourism, cultivation of subtropical fruit, and forestry.

#### 5.4.3.3 Afomonotane Forest

(Lubke & McKenzie In: Low & Robelo (eds) Vegetation of South Africa, Lesotho and Swaziland. Department of Environmental Affairs and Tourism, Pretoria)

Synonyms for this vegetation subtype include Knysna Forest (A4), North-eastern Mountain Sourveld (A8), Highland & Dohne Sourveld (A44a & b); Montane Forest. The afomonotane forest covers an area of approximately 5964 km<sup>2</sup> of which 44% is transformed and 17.64% conserved. Afromontane Forest is well conserved in a number of areas, and many stands are safe from exploitation by their isolation in remote areas. Plantations of pine threaten the water supply to the indigenous forests in many regions.

Patches of forest with Afromontane floristic affinities occur all along the mountain chains (altitudes from sea level up to 1 500 m) from Northern Province through Swaziland (not mapped) and KwaZulu-Natal to Western



Cape. In the latter they occur on south-facing ridges and in ravines where moisture is higher and the maximum effect of the south-westerly and south-easterly wind-driven rains is apparent. Forests of these regions range from small to extensive patches on mountain-sides depending on locality and variation in aspect, geology and soils. Afromontane Forest reaches its greatest stature in the Tsitsikamma region from where it extends to Knysna.

Floristically the Afromontane element is dominant, but Pondoland-Tongaland forest species may be common in Eastern Cape and KwaZulu-Natal. Thus, although Afromontane Forests are greatest in stature in the Knysna region, there is a greater diversity of plant species in the Amatole Mountains of Eastern Cape where more Pondoland-Tongaland species are present. Trees can be up to 30 m or 40 m tall and distinct strata of emergent trees, canopy trees and shrub and herb layers are present. Tree species include: Real Yellowwood *Podocarpus latifolius*, Outeniqua Yellowwood *P. falcatus*, White Witchhazel *Trichocladus ellipticus*, *Rhus chirensensis*, *Curtisia dentata*, *Calodendrum capense*, *Apodytes dimidiata*, *Halleria lucida*, *Ilex mitis*, *Kiggelaria africana*, *Nuxia floribunda*, *Xymalos monospora* and *Ocotea bullata*. Shrubs and climbers are common and include: Common Spikethorn *Maytenus heterophylla*, Cat-thorn *Scutia myrtina*, Numnum *Carissa bispinosa*, *Secamone alpinii*, *Canthium ciliatum*, *Rhoicissus tridentata*, *Zanthoxylum capense* and *Burchellia bubalina*. In the undergrowth grasses, herbs and ferns may be locally common: Basketgrass *Oplismenus hirtellus*, Bushman Grass *Stipa dregeana* var. *elongata*, Pigs-ears *Centella asiatica*, *Cyperus albostrigatus*, *Polypodium polypodioides*, *Polystichum tuctuosum*, *Streptocarpus rexii* and *Plectranthus* spp. Ferns, shrubs and small trees such as Cape Beech *Rapanea melanophloeos* are often abundant along the forest edges.

As is evident from the way the forest is confined to kloofs and gullies, water is a key limiting factor. However, Afromontane Forest would certainly spread into both grasslands and Fynbos were it not for fires - all forest patches are in fire-safe habitats with the largest stands occurring in the moist valleys of the



Garden Route where they are protected by the sea and the Cape Fold Belt mountains.

Forest trees are continually exploited for timber although specific species are usually selected. Likewise, other species are selected for muti and, in the more populated areas, for firewood.

#### 5.4.4 **Geology and soil types**

The attached map depicts the geology of the study area. It is evident from the map that Felsic, intermediate rocks and Granite Gneiss mainly underlie the area of interest. The table below depicts the percentage of the municipal area underlain by specific geology.

**Table 1: Geology – municipal breakdown**

<b><u>Lithology Class</u></b>	<b><u>Area</u></b>	
	<b><u>Km2</u></b>	<b><u>% of LM</u></b>
Amphibolite, serpentine (met. mafic and ultramafic rock)	0.55	0.0%
Felsic, intermediate rocks	1050.66	40.5%
Fine-grained felsic rocks	30.89	1.2%
Granite Gneiss	1290.02	49.7%
Mafic and Ultramafic volcanic rocks	158.70	6.1%
Siliciclastic rocks	62.99	2.4%
<b>Total</b>	<b>2593.81</b>	

Data Source: Council for Geosciences

The substrate is characterised by sandy soils in the uplands and clayey soils with a high sodium content in the bottomlands. The bushveld is found on deep, predominantly sandy to sandy loam soils in the uplands, to clayey soils with a strong structure in the bottomlands. Soils are generally well-developed and mature, and, in the higher-rainfall regions, may be leached. They tend to be shallow on steeper slopes, but may be fairly deep in valleys. The geology is granite and gneiss with numerous dolerite intrusions and areas covered by gabbro.





**INSERT MAP 8:  
Geology**



#### **5.4.5 Other aspects**

Other problems associated with the environment include: -

- Water pollution
- Deforestation
- Veld fires
- Soil erosion
- Informal settlement
- Overgrazing and
- The lack of Waste management Systems.



## 5.5 SPATIAL ANALYSIS (LAND USE)

The current spatial analysis (land use) in Bushbuckridge LM is guided by:

- No formal physical planning that was compiled for the municipal area. The municipality has allocated 10% of land per year for the next five years for development purposes.
- The fact that the municipal area is bounded by KNP and a boundary to Mpumalanga province is special features that require particular strategies to promote game farming and conservation.
- Major access paths and roads run from Hoedspruit to Nelspruit and need to be reinforced through environmental management and infrastructure to emerging settlement along them.
- Better east (KNP boundary) need to be improved to tourism and LED opportunities.
- There are number of vacant and underutilised land available in the municipal area belonging to traditional authorities next to the private owned reserves, which requires strategies to utilise them appropriately.
- There is poor distribution of community facilities and infrastructure in most of the areas especially rural area.
- There is a railway line that crosses within the areas of the municipal area.
- Bushbuckridge local Municipality is mainly rural with four (4) urban nodes, namely Bushbuckridge, Acornhoek, Thulamahaxi, Hazyview, Mkhuhlu and as well as surrounding rural areas (see attached map).



**INSERT MAP 9:  
Urban Nodes**



### **5.5.1 Towns**

Shatale, Dwarsloop, Thulamahaxi and Mkhuhlu towns were established as towns for displaced people resulting in majority of residents being from rural areas.

Local Shopping centres are developed in the middle of these towns and provides a range of facilities to the local community. Most of the industries that were developed during the homelands government have collapse due to lack of support from the government.

Very little employment opportunities exists with entrepreneurial business being main source of employment. Others seek employment opportunities outside the municipal area to Nelspruit giving rise to residents commuting everyday to work.

### **5.5.2 Rural Areas**

The rural areas are extensively subsistence farming, where cattle farming are the main practices established in the area. Although there are basic infrastructure like gravel roads, electricity and telephones, the main services are in urban and township areas. These areas are only functioning as residential with lack or limited economic base. They fall within the third and fourth order of settlement hierarchy and most of the people in the municipality fall within these areas.

- Many residents in rural areas keep cattle within their yard; the vacant open spaces and communal land are grazed extensively. Signs of overgrazing are visible.
- The areas have very rich cultural activities and more emphasis should be put on cultural tourism.



- The availability of water in these areas needs to be established in order to investigate for intensive farming activities.

### **5.5.3 Land Reform and land claims**

The issue of land reform is very critical in the municipal area. The most applicable land reform matters in the municipal area are land restitution and land tenure. Approximately 121327 ha representing 46, 83% of the land area of the municipality is subjected to land claims. The potential impact of land claims could hamper development and future planning in the area.

## **5.6 CLASSIFICATION OF LAND PARCELS**

It is of utmost importance that land parcels within the municipal area are classified or categorised so as to get an understanding of issues to be dealt with when development strategies/scenarios are developed. The following land parcels exist within the municipality:

**Tribal area land** registered under the name of the Republic of South Africa (Nominal ownership by the Minister of land Affairs). The following Traditional authorities exist within the municipality:

- Setlhare Traditional Authority
- Moreipuso Traditional Authority
- Mnisi Traditional Authority
- Amashangana Traditional Authority
- Thabakgolo Traditional Authority
- Mathibela Traditional Authority
- Jongilanga Traditional Authority
- Hoxani Traditional Authority



**INSERT MAP 10:  
Traditional Authorities**



R293 townships registered in the name of the Provincial Government of Limpopo.  
The list of R293 townships is as follows:

**Table 2: Townships**

<b>Township Name</b>
1. Thulamahaxi
2. Dwarsloop
3. Mkhuhlu
4. Shatale
5. Acornhoek A
6. Acornhoek A ext 1
7. Angincourt A ext 1
8. Allandale A
9. Croquet Lawn A
10.Kildare A
11.Kildare B
12.Lillydale A
13.Maviljan A
14.MP Stream
15. New Forest
16.Okkernootboom A
17.Orpen gate
18. Welperdiend B
19. Gottenburg
20.Xanthia
21.Islington A
22.Xanthia Ext 1
23.Tintswalo Village
24.Orinoco B





- Game Reserves registered in the name of the National Government of South Africa (Dept. of Land Affairs)
- Properties registered in the name of the Republic of South Africa (National Dept. of Public Works)
- Properties registered in the name of the previous homeland development corporations (LIMDEV being the successor)
- Properties under private ownership

## 5.7 DEVELOPMENT TRENDS

The above demographic trends, socio-economic situations, economic and spatial patterns gave rise to development trends in the municipal area, which are as follows:

- Some parcels of land are still allocated by chiefs and many of the residents have no security of tenure. Investment is limited due to insecurity of tenure.
- Public facilities and industries in rural areas have closed down. This gave rise to the outflow of factories and businesses from the area.
- Developments still favours private motor vehicles as mode of transport and there is lack of bicycle routes, proper pedestrian walkways and public transport amenities are concentrated in formal towns.
- There has been a lack of private investment in certain areas within the municipal area. This has led to the deterioration of these areas and underutilisation of existing infrastructure.
- Environmental problems such as overgrazing and veld fires are evident in rural areas.
- High level of unemployment in the area especially among the younger people.

The **challenges faced by the Municipality** includes:

- Redirecting growth and development towards the previous disadvantaged areas of economic opportunity



- Integrating the formal town with the surrounding rural areas in terms of facilities and services.
- Relocating the informal dwellings to formal places
- Alleviating poverty through creating employment and economic opportunities within rural areas
- To plan the impact of HIV/AIDS for the social and economic benefit if it.
- Improving and provision of municipal services in the rural areas.

The challenges described above give rise to the need for spatial reconstruction through addressing the unequal distribution of resources and facilities, addressing the lack of opportunities in disadvantaged communities and increasing the use of public transport. This should include the integration of environmental and transport planning as part of development in the area. The following **projects/infrastructures** were prioritised for 2004-05: -

- Water reticulation and upgrading in rural affected areas
- Servicing Dwarsloop, Thulamahaxi, MAviljan and Mkhuhlu.
- Upgrading and maintaining new and existing roads and streets
- Provision of universal telecommunication access
- Provision of transportation services
- Establishment of Market Stars and Taxi Rank
- Greening of Bushbuckridge
- MaviJan Urban Renewal
- Building of PHP housing projects
- Upgrading the existing graveyards
- Renovation of the existing sports grounds
- Building of classroom



## 6 SWOT ANALYSIS

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Based on the previous report of the status quo and workshops held with stakeholders of the municipal area, the following strengths, weaknesses, opportunities and threats have been identified with regard to spatial issues:

### 6.1 STRENGTHS

#### 6.1.1 Location-

- The area is located in close proximity to the world famous Kruger National Park, where many tourists visit the area
- It is bordered by both provincial and international boundaries (south-Mpumalanga and east to Mozambique).
- The municipal area is located within the Maputo sub-corridor, i.e. Nelspruit to Phalaborwa via Hoedspruit, which is very important in terms of tourism activities

#### 6.1.2 Tourism-

- The area is unique and marketable even at a national scale with regard to biodiversity and cultural heritage issues
- The natural resources of the area are used extensively for food, crafts, construction and traditional healing purposes
- The area is part of the Canyon to Kruger biosphere
- The municipal area consists of large proportion of tourism accommodation and facilities.
- The tourism facilities are primarily concentrated along the Kruger Road via Orpen road and Manyeleti game reserve.



- The ethnic landscapes, unspoiled and attractive natural resources create a good investment proposals and investments
- The vacant land under the traditional authorities next to the private owned game reserves provides many economic opportunities which have not been explored to date

### **6.1.3 Environment-**

- The area has a rich environment and natural resource base to enhance to enhance and maximise its structure and extends opportunities of agriculture and tourism

## **6.2 WEAKNESSES: -**

### **6.2.1 Planning-**

- Spatial segregation of towns and township areas. Large distances between rural settlements and amenities offered by towns with poor public transport.
- Uncontrolled sprawl of residential settlements which result in costly and inefficient provision of services
- The majority of the municipal area is underdeveloped and comprises of densely populated and scattered settlements
- Poor accessibility within the rural areas and lack of integration within the various parts of the settlements
- No sector or dimensions plans have been developed in the municipal area to control and manage development

### **6.2.2 Economic issues-**

- High levels of poverty and unemployment, especially the youth
- Low education and skills levels



- The high rate of HIV/Aids is a hindrance of the workforce needed for future planning
- The closing down of the community facilities and industries has led to outflow of factories and businesses from the area
- Most of the facilities that are provided by the services centre offers very little, and does not meet the local needs

### **6.2.3 Infrastructure-**

- Poor public transport, facilities and pedestrian access
- Poor distribution of community facilities in other parts of the municipal area, especially the rural part.
- There are number of settlements, which have experienced significant growth in populations and are under extreme pressure in terms of the provision of potable water and sanitation to their residents.

### **6.2.4 Tourism and Agriculture-**

- Lack of a unified marketing strategy for the municipal area
- There is visible signs of overgrazing and soil depletion in number of farm holdings that belong to the community
- The climate and rainfall are limiting factors that could encourage significant forms of agriculture in the area
- Unsustainable management of communal grazing areas
- Malaria is regarded as a perceived risk
- Abandoned agricultural projects which lead to land invasion



### **6.3 OPPORTUNITIES: -**

#### **6.3.1 Location-**

- Proximity to major urban centres, i.e. Nelspruit
- The municipal area is bounded by the Kruger National park in the east, resulting particular strategies to promote conservation and Trans-border access

#### **6.3.2 Tourism-**

- Within the municipality, there are number of public and private owned game and nature reserves, which form the basis of eco-tourism developments, as well as hunting, game farming and fishing.

### **6.4 THREATS: -**

#### **6.4.1 Infrastructure-**

- The encroachment of residential and commercial land uses onto major national roads is creating a potential traffic hazard in some places and negatively impacting on the aesthetic quality of the area as seen from the road.
- Lack of in-time maintenance and refurbishment has put enormous constrain on the municipal resources and infrastructure.

#### **6.4.2 Tourism-**

- Lack of involvement and benefits in tourism from the local communities



### **6.4.3 Planning-**

- The continuation of low developments in the disadvantaged areas has given rise to longer travelling distances and the dislocation of poor people



## **7 VISIONS AND OBJECTIVES**

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For the purpose of establishing the Spatial Development Framework for the municipality that will in time normalise the existing spatial pattern, it is necessary to formulate the spatial vision, objectives, principles and structuring elements that will guide decision making.

The principles and norms contained in the DFA and the Land Use Bill are relevant to the study as they reject low density, segregation, fragmented and mono-functional development, they support and embrace compact, integrated and mixed use settlements.

### **7.1 VISION**

According to the Reviewed IDP of the municipality, the vision of the municipality is to “strive for development and prosperous live for all”, which subscribes to the following values or mission: -

- Accountability;
- Transparency; and
- Responsible government.

The above vision and mission is directly in line with the mandate of the municipality as defined in the Constitution of the country and conforms with the key developmental outcomes of local government as stipulated in the White Paper on Local Government, which are: -

- Provision of households infra-structure and services;
- Creation of liveable, integrated cities, towns and rural areas;
- Local economic development; and





- Community empowerment and redistribution.

The vision for Spatial Development is closely linked to the above core elements to ensure successful spatial development in the municipal area. The spatial vision of the municipality is to “**envisage a well planned Bushbuckridge Local Municipality leading to sustainable livelihoods for all**”. This spatial vision aims to contribute to social stability, economic growth and development in an equitable and sustainable way and address the problem of rural-urban inequality.

## **7.2 OBJECTIVES**

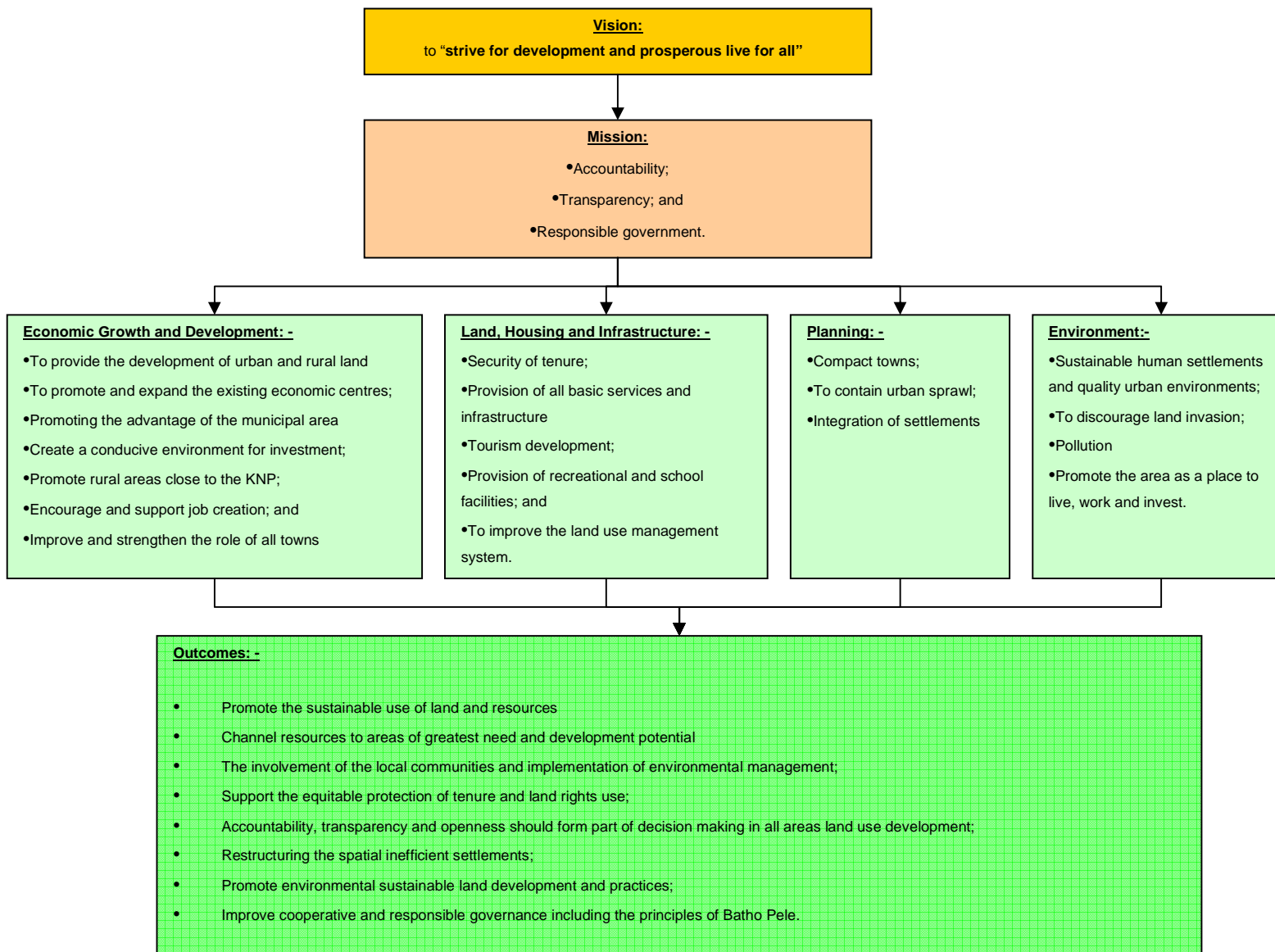
The SDF is a visual translation into space. Each element of the vision (and sub elements from the white paper) needs to be considered in formulating the SDF and be translated into objectives. Based on the analysis of the current spatial elements of development within the municipal area and the vision of the municipality, set of objectives is outlined, namely: -

### **7.2.1 Economic Growth and Development: -**

- To provide the development of urban and rural land, existing and new;
- To promote and expand the existing economic centres;
- Promotion the advantage of the municipal area by focusing on tourism and supporting initiatives of agriculture;
- Create a conducive environment for investment;



## **BUSHBUCKRIDGE LOCAL MUNICIPALITY**





- Promote rural areas close to the KNP and international lodges for cultural activities;
- Encourage and support job creation; and
- Improve and strengthen the role of all towns and service centres.

### **7.2.2 Environment:-**

- To promote the creation of sustainable human settlements and quality urban environments;
- To discourage land invasion;
- Pollution with signs and littering should receive attention;
- Promote the area as a place to live, work and invest.

### **7.2.3 Land, Housing and Infrastructure: -**

- Security of tenure;
- Provision of all basic services and infrastructure in all the communities, especially the rural poor;
- Tourism development should be promoted and information centres should be ready available;
- Provision of recreational and school facilities; and
- To improve the land use management system.

### **7.2.4 Planning: -**

- To contribute to more compact towns;
- To contain urban sprawl and promote residential intensification;
- To encourage integration of settlements and redress the imbalances of the past; and



These objectives should lead to achieving the following desired **outcomes**: -

- Promote the sustainable use of land and resources
- Channel resources to areas of greatest need and development potential, thereby redressing the inequitable historical treatment of marginalised areas;
- The involvement of the local communities and implementation of environmental management;
- Support the equitable protection of tenure and land rights use;

Accountability, transparency and openness should form part of decision-making in all land use development;

- Restructuring the spatial inefficient settlements;
- Promote environmental sustainable land development and practices;
- Improve cooperative and responsible governance including the principles of Batho Pele.



## 8 SPATIAL DEVELOPMENT PRINCIPLES AND GUIDELINES

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### 8.1 SPATIAL DEVELOPMENT PRINCIPALS

A set of spatial principles has been formulated in support of the spatial vision and objectives. These principles have been informed by various policy guidelines and legislations, and do not only incorporate the DFA principles, but goes beyond it and integrate all other relevant principles. Although these principles are linked to a specific spatial objective, it should be interpreted as being interrelated and need to be in support of one another.

The objective of formulating the spatial development principles is to influence directly the substantive outcomes of planning decisions, whether to spatial development framework, or land use change or development applications. Land use and development applications should therefore be consistent with the majority of these principles.

#### 8.1.1.1 SDF Principles: -

- Harmonise the interaction between the three major systems, namely the economic, social and natural environments, with special attention to sensitive or vulnerable areas or groups.
- Ensure that affordable and sustainable basic services and infrastructure are available for all communities and promote the optimum utilisation of scarce resources.
- Promote education, training and lifelong learning of good standard, as part of planning and development.
- Ensure equitable access to natural and non-natural resources.
- Promote efficient and appropriate land management systems.



- Build habitable and safe communities where homes are safe and places of work are productive.
- Protect and manage areas with a significant natural resources base from human settlement development e.g. agricultural, recreational, mineral or ecological potential
- Identify land for business, social, and natural purposes
- Strategic Environmental assessment for proposed developments
- Use existing infrastructure and land more optimally
- Promote different housing and tenure options that increase choice in the municipal area while contributing to residential intensification.
- Residential intensification should lead to the creation of better quality living environments. The density of proposed and existing built-up areas should correlate with the availability of productive open spaces and public amenities in close proximity of the development under discussion; the higher the density/intensity of residential developments, the more productive open space and public amenities should be made available.
- Residential intensification should be discouraged in areas with already high residential densities.
- High-density residential development, which promotes high-rise development, is preferable rather than smaller single residential sites.
- Areas designated for public use should be incorporated within high-density developments and larger public open spaces should be provided in close vicinity of these developments.
- Medium-density residential development should promote a mixture of cluster housing, which does not exceed densities of 30 units per hectare.
- Promote a competitive and fast growing economy that creates wealth, sufficient jobs and alleviate poverty
- Promote the development of housing in close proximity of job opportunities
- Create an integrated transport network that promotes accessibility through efficient and effective public and private multi-mode transport networks and facilities



- Integrate urban communities and land uses and achieve mutually supportive mix of residential, recreational, commercial and employment opportunities throughout the urban areas
- Direct a significant portion of investment into public infrastructure and social services in areas of greatest need
- Encourage private investment in previous disadvantaged areas
- Facilitate tenure through interaction with role players
- Active intervention by Council with reference to land availability for settlement purposes
- Make social and economic opportunities more accessible to lower-income people.

## 8.2 STRUCTURING ELEMENTS

The Spatial Development Framework needs to be indicative and therefore the need to adopt a set of **structuring elements** that can give future structure to the urban and rural form of the municipal area. Three spatial structuring elements were identified that could promote a more sustainable settlements with inherent savings as a result of greater efficiencies. The following gives a short explanation to the terminology used:

### 8.2.1 Nodes:

These are areas where development (facilities, services and economic opportunities) tends to concentrate. Nodes are important structuring elements, which also impact on the surrounding areas. Nodes may accommodate a single land use, i.e. industrial or commercial or a mix of uses. These may include a range of public facilities depending on the node's role and within the municipal area. Declining and/or stagnant nodes have a detrimental impact on both public and private investments. Nodes serve to: -



- Ensure clustering of various activities at appropriate locations
- Support viable public transport
- Create opportunities for people to manufacture, trade and provide services
- Maximize opportunities and diversity at accessible points

Different types of nodes can be distinguished:

- **Municipal Nodes** are pockets of concentration of human settlement at a specific locality at the regional scale and offer a spectrum of supporting infrastructure and services needed to maintain and develop new services and infrastructure within these urban nodes.
- **Existing nodes** can be defined as an area where a concentration of commercial and social activities is located. The existing nodes provide services to the surrounding areas and the influence sphere of the existing nodes varies from a local to a regional scale.
- **Development nodes** are areas where local economic growth will be promoted. Social and public amenities may also be located within or nearby the development node. The size, scale, nature and form of a node will differ from one another as a variety of activities will be tend to cluster in and around the node. The larger the influence sphere of a node, the more intense the development associated with the node and the greater the density and area, which the node will occupy.

Nodes within neighbourhoods will also tend to concentrate more public amenities with it, e.g. schools, recreation facilities, etc. with lesser degree of commercial activity.

Some nodes may also specialise in the development and promotion of one or more sectors:

- **Tourism nodes** will thus offer leisure and tourism products to the consumer. These nodes may include a variety of products in support of the services





offered. Areas close to the Orpen road and the Kruger National Park can serve as a tourism node in the municipal area

- **Social service nodes** are places where services can be rendered at a central point to communities. It is areas where services could be rendered more economically to remote areas.
- **Agri-villages** are places where people are residing as communities, which are linked with agricultural opportunities provided within or in close proximity of the agri-villages. The agri-villages also offer civil and social services to the communities.
- **Villages** are communities established under traditional leadership that are linked with communal agricultural practices. Social and civil infrastructure may be provided at central points to these communities. The municipal area consists of 135 rural villages.
- **Transportation** Distribution Hub is a concentration of public transport amenities that enables commuters to access different public transport modes within close proximity of one another. The Transportation distribution hub in this case are scattered in the municipal area.

### 8.2.2 Corridors

The development of corridors has been identified as one of the potential instruments available to restructure the current settlements into robust and efficient areas.

Corridors are linear tracts of land that contain a variety of transportation modes, especially public transport and a variety of intense and dense land uses. The purpose of corridors in our area: -

- Contribute to the growth and development of the municipal area
- Support more efficient service provision
- Create access to opportunities to large numbers of the community located in the corridor
- Support public transport.



It is important to note that corridor development does not occur over a short period of time. The critical factors to take into account are time frames and phasing of development. Different types of corridors can be distinguished:

**Movement corridors** are national roads, which form the primary mobility network of roads within the identified nodes. The term "movement" describes the importance of protecting the mobility of these roads, implying that direct access to adjacent land uses should be restricted. Speed limits of 60 km/h or 70 km/h are typically imposed along these corridors. As with these development corridors, public transport forms an integral part of movement corridors.

**Development corridors** are characterized by higher order ribbon-like development along routes that would otherwise be classified as movement corridors. These types of corridors thus fall in a class somewhere between movement corridors and activity corridors. Mobility is still regarded as a priority, but access to adjacent land uses can be considered if it complies with specific design criteria. Redevelopment of land to higher order uses (larger traffic generators) can usually only be considered if smaller erven are consolidated into larger properties. These routes still forms part of the primary road network within urban development nodes. Due to the presence of economic activity, specific attention should be given to the provision of pedestrian facilities. High commuter volumes may necessitate direct access to public transport facilities.

Railway link can be regarded as a **rail corridor**, which connects the urban development nodes, focusing primarily on public transport. It can be viewed as an additional public transport service in support of existing road based public transport modes.

### 8.2.3 Districts

Districts are areas with common identifying characteristics and usually have a homogeneous land use associated with it. It comprises medium to large sections



of the spatial environment. Different kinds of districts have been identified for the purpose of the SDF:

- **Mixed land use districts** are districts where the horizontal and vertical integration of suitable and compatible residential and non-residential land uses are found within the same area or on the same parcel of land. It is aimed at accommodating a wide range of residential types within close proximity of employment, educational, social and recreational opportunities. Different mixed land uses can be distinguished:
  - **Mixed land use with mainly restricted business development** refers to a mix of residential and office development. Commercial or other supportive developments may occur at strategically located positions within the district in support of the mixed land use character of the area.
  - **Mixed land use with service industrial development** refers to a combination of residential and service industries. Commercial or other supportive developments may occur at strategically located positions within the district in support of the mixed land use character of the area.
  - **Mixed land use with a combination of commercial and restricted business developments** refers to an area where residential uses are promoted in combination with either a commercial and/or a restricted business (office) development. This district will allow commercial development to take place in combination with residential development at any location within the district, as long as the locality of the commercial development is supportive to the character of the area. Commercial development that may create a nuisance will not be considered next to residential development.
  - **Mixed land use with more intense residential development** refers to a combination of low intensity residential uses (single residential units) and higher intensity residential developments (guesthouses or higher density residential complexes like townhouses or flats).



- **Neighbourhood districts** are self-contained areas with regard to the provision of facilities for daily necessities. It can include a range of public and private investments, which ranges from residential, social, recreational and institutional facilities. It however does not contain high concentrations of workplaces, although isolated pockets of commercial activities or home industries may be evident.
- **Industrial districts** are areas where warehousing, manufacturing, processing or assembly of articles, commodities, goods or foodstuffs takes place. Different intensity of impact or nuisance can be associated with industrial activities and therefore the need to distinguish between service industries (Low impact), industrial activities (medium impact) and noxious industries (high impact).
  - **Service industry districts** are areas where service industries are located. These are usually activities, which are compatible with residential and commercial uses as their environmental impacts are within limits. The kind of activities associated with service industries can be performed in combination with other land uses and can therefore be allowed as a form of mixed use.
  - **Industrial districts** are areas used for industrial activity, which is not obnoxious or instill a threat to life and usually does not generate high levels of pollution or unacceptable by-products.
  - **Noxious industrial districts** are areas usually associated with industrial activities with high levels of noise, smoke and/or the creation of unacceptable by-products. These activities should not be developed in close proximity of human settlements. Specific areas should be delineated for this kind of land use in order to isolate the impact it might have on the environment.
- **Agricultural districts** are areas surrounding intense human settlement and are usually associated with agricultural activities. Different intensity of utilisation can be distinguished and give rise to different districts:
  - **Peri-urban agricultural district** is the agricultural land included or directly adjacent to the urban node. These areas are usually subdivided into smaller agricultural units (smallholdings), which



combine agricultural and residential uses in a much more intense land use pattern than usually associated with commercial or communal agricultural land uses.

- **Commercial agricultural districts** are the larger agricultural land units, which accommodate a diversity of agricultural production for the commercial market.
- **Communal agricultural districts** are the areas utilised for communal grazing, forestry and / or agricultural activity by a community and usually support subsistence farming activities. These areas are the commonages and may include tribal land.
- **Intensive agricultural districts** are areas with smaller commercial agricultural units with normally a higher production yield per hectare. These units usually incorporate irrigation schemes.
  - Institutional districts accommodate land uses that are utilized by a number of people. These may include uses like hospitals, education facilities, military complexes, etc.
  - Corporate districts *are* concentrations of large office development within an area and are usually occupied by corporate companies.
  - Historical Precinct District is an area dedicated for the preservation and restoring of old buildings, cultural artifacts or places of historic significance.

### 8.3 SPATIAL GUIDELINES

The above-mentioned elements will be used in the SDF to present the future desired form of the municipal area. Because of their normative nature, it is necessary to develop a set of guidelines that will be used supplementary to the spatial principles defined above.

**Development Guidelines** attempt to bring certainty for decision-makers, developers and investors by describing the desired land use envisaged with the



SDF. These guidelines will evolve and will be refined over time, and Council remains in a position to review or change the Guidelines through consensus.

The guidelines do not attempt to be restrictive, but aim to facilitate a better understanding of what is desired in terms of the SDF. The guidelines are therefore supplementary to the spatial principles adopted with the SDF and both should be used to inform development proposals.

### 8.3.1 **Nodes**

The following **general principles** need to be applied to inform nodal development:

- Nodes should be the focus of service and infrastructure investment.
- Concentration of people should therefore be discouraged at dispersed locations away from the municipal node.
- The potential for development of a municipal node is relative to its threshold to drawn investment and its exposure to people visiting the area. Therefore not all of the municipal node will develop at the same intensity.
- Development within these nodes should be in accordance with these guidelines, local structure plans and the town planning schemes where applicable. Each application should be evaluated on its own merits, particularly if these guideline documents and statutory plans are not informative enough.
- The Minimum subdivision of agricultural land or smallholdings within the municipal node must be according to approved land use management instruments.
- Higher density developments should be encouraged within the municipal nodes, therefore promoting compaction within the rural environment. Higher density developments should be concentrated closer to the major development corridors and activity streets to encourage public transport development along these routes.



### 8.3.2 Existing Nodes

The following **general guidelines** are applicable for the development of existing nodes:

- The further development of existing nodes must support the existing land uses within the node and the land uses in the surrounding area. Development within the node will be informed by the economic and social structure of the communities it serves.
- The proposals for the development at existing nodes must be co-ordinated with the phasing of any surrounding planning activity.
- The increased economic activity must enhance and / or make a positive contribution to the economic vitality of the node.
- The expansion of the nodes can be considered if it can be fully supported by the transportation system.
- The development must take the provision of public transport facilities and existing public transport routes, as well as pedestrian movement into account.
- The development must be compatible with the surrounding development density. However, higher density developments will be encouraged within the core of the node and along development corridors serving the node.
- The new development must not have a negative influence on the accessibility of the area from residential pockets.
- The site design and layout of the new development must enhance the local environment. The proposed new development must be complementary to the character of the surrounding areas, especially in areas of historical significance.
- The impact of future spatial planning patterns within the local environment must be considered.
- The development at existing nodes must be in accordance with the guidelines of existing local area development plans.
- The town planning schemes of the respective areas will prevail to regulate land uses within these nodes.



- The availability of infrastructure and services must be considered.

### **8.3.3 Development Nodes**

- The following are **general guidelines** to the development of new nodes and will determine the size, scale, nature and form of the node:
- In principle, the scale, intensity and density of development within a node must be informed by the local conditions. As these are unique to each location, the characteristics and composition of mixed land uses and transportation infrastructure will define the proposed development within the node. The respective town planning schemes will regulate the density and other requirements with each development.
- Development nodes adjacent to provincial and national roads that are characterized by major through movement must visually have a positive contribution to the image of the area.
- Development nodes must support the existing land uses within the surrounding area and will these nodes offer limited to the local threshold support.
- Mixed land uses must be promoted at development nodes. Both public and private investment should be encouraged within the node. This will ensure that the proposed development node can become a service centre for the surrounding area.
- Residential uses should be encouraged within these nodes and a mixed land use should get preference over a uniform land use. However, where a specific sector like the tourism sector is targeted, uniform land uses in support of specialization may be considered.
- Development at these nodes must be coordinated with the phasing of any planning activity of the surrounding area.
- Development stemming from the nodes should be instantiated from and directed into a development or activity corridor. Direction of growth into the corridor will thus start at the node and then grow towards the outside.





- A development node must be financially viable for the municipality with regard to the delivery of services, except in instances where the developer can provide these services at an acceptable standard.
- The current and / or future capacity of infrastructure must be sufficient to accommodate the proposed scale of development.
- The expansion of the nodes can be considered if it can be fully supported by the transportation system, or if the applicant is willing to upgrade the street system to prevent reduction in the levels of service.
- The development must take the provision of public transport facilities and existing public transport routes, as well as pedestrian movement into account.
- The development or expansion of nodes must take future traffic demand into account.
- The development must be compatible with the surrounding density. Higher densities may be concentrated closer towards to core of the node.
- The proposed new development node must be complementary to the character of the surrounding areas, especially in areas of historical or ecological significance.
- The site design and layout of the new development must enhance the local environment. In principle all development should be orientated to the street and permit pedestrian movement throughout the proposed node.
- Pedestrian movement routes must be designed through development layouts to link with public transport facilities. These must be safe and secure.
- The site layout of the development must make a positive contribution to the pedestrian environment through appropriate orientation of the development, building design, parking arrangements and land-use arrangements.
- Public open spaces should be incorporated as structuring and recreational elements within a development. Developments should therefore contribute to define space and positive environments.
- The development node must complement the surrounding physical environment.
- The impact of future spatial planning patterns within the local context must be considered with all new development proposals.



- Proposals must take into consideration the future expansion of the node.
- The development must create new opportunities to the surrounding community.
- Public sector investment in a development node must be supportive of formal and informal trade.
- The availability of infrastructure and services must be considered.

#### **8.3.4 Tourism Development Nodes**

All developments within the development node must enhance the rural character of the surrounding areas. Development along pans, open spaces, river embankments and dams must be supported by an acceptable environmental impact study and management plan. Developments that promote water sport and recreation need to submit as part of the environmental management plan the rules associated with the use of the water resource for water sport and recreation.

#### **8.3.5 Service nodes**

The following **general guidelines** are applicable in the development of a service node.

- Existing places of concentrated human activity should receive preference over the development of new social service nodes.
- Public amenities like schools, clinics, post offices, municipal pay points, etc. should preferably be located within these social service nodes. Private investments in the form of small shops, distribution points of a co-operative, etc. may also be encouraged at the social service nodes.
- Easy access to the rural community it serve should be an important location factor when developing these social service nodes.
- Residential development may be considered at these service nodes, but should be restricted to a maximum number of residences as not to create dispersed settlements. The residential use should be linked to the management of the services offered at the service node.



- Public transport must be made available, if viable, at the social service nodes and associated infrastructure may be developed.

### **8.3.6 Village (rural areas)**

The following **general guidelines** should be applicable in the development of a village:

- The expansion of existing villages should be linked with employment opportunities within the village. Residents should therefore have the opportunity to farm in close proximity of the settlement as a source of income.
- The provision of services will be rudimentary and must be sustainable and affordable to these settlements.
- No informal settlement may be developed within the village and illegal occupation of land should be discouraged.
- The management of the village by the tribal authority must be done in collaboration with the municipality and other government bodies.
- Provision of infrastructures and services in these villages to support their economic needs should be encouraged.

### **8.3.7 Transportation distribution hub**

- The following **general guidelines** should be applicable in the development of future transportation distribution hub:
- A transportation distribution hub should be an area where the termini of different public transport modes such as buses; taxi's, trains, etc. are concentrated to function in an integrated manner.
- Transportation distribution hubs must be located at positions where a high demand for public transport exists and where the commuter volumes will justify the provision of high quality facilities. Location of new transport distribution hubs will therefore require in-depth investigations.



- New transportation distribution hubs must be located and designed so as to cater for future expansion when passenger or modal demands increase.
- Given the high infrastructure investment necessary to develop a distribution hub, such facilities are usually only provided at inter-city transfer points or where major movement restrictions are present. This suggests that only one true distribution hub town should be developed.
- All major public transport modes utilized in a specific area should be represented in a distribution hub.
- The development of non-offensive service industries, focusing on the needs of the transport industry, can be encouraged in the vicinity of a distribution hub. This will provide facilities where vehicles can be serviced or cleaned away from the commuting public.
- Maintenance and cleaning of vehicles inside termini and inside public road reserves should be prohibited.
- The mobility of the roads serving the distribution hub must be protected at all costs to maximize accessibility, support adjacent economic activity and to minimize criminal impact on passing traffic.
- Traffic and pedestrian safety are regarded as essential aspects that must be ensured.
- Transportation distribution hubs must be designed so as to discourage criminal activity, maximize accessibility, minimize congestion and vehicle queues. This will ensure easy maintenance and future upgrading.
- Transportation distribution hubs generally serve as catalysts for local economic development. In this regard, the economic activity in the vicinity of the hub should be encouraged. The development of high-density residential areas in close proximity should also be allowed.
- Since commuters will depend on pedestrian routes to move between different termini that form part of the transportation distribution hub, the whole area must be designed as a pedestrian friendly environment.
- Adequate access for pedestrians and public transport vehicles should be provided.
- Special attention should be given to facilities for the disabled.



- Facilities provided as part of a transportation distribution hub must be kept clean and functional at all times.
- No hawker facilities should be allowed inside termini. Hawkers can be accommodated along pedestrian routes linking the different termini.
- Hawkers should only be allowed along pedestrian routes that are wide enough to accommodate hawker facilities and pedestrian volumes.
- Sufficient loading facilities and refuse removal service should be provided at strategic points where hawkers are allowed.
- Hawkers should not be allowed to compete with formal businesses that are developed to serve the public transport industry.
- Sufficient ablution facilities must be provided with the possibility for further extension in the future when demands increase.
- An independent management structure should be responsible for managing operations at a transportation distribution hub.

### **8.3.8 Mixed land use districts**

The following **general guidelines** should be applicable in the development of mixed land use with mainly restricted business development

- Low density and low-rise development should receive preference.
- The land use and density of new development must be compatible with the surrounding area.
- Existing historical building stock must be preserved as far as possible.
- Land use management must ensure that noise levels are controlled and the mix of land use should not threaten the residential component.
- Pedestrian movement must be promoted in the area and all development must be pedestrian friendly.
- Development can be considered if it can be fully supported by the transportation system, or if the applicant is willing to upgrade the street system to prevent reduction in the levels of service.



- The development must take the provision of public transport facilities and existing public transport routes, as well as pedestrian movement into account.
- The development must take future traffic demand into account.
- Any land uses that might be morally offensives or require a liquor licence must obtain the input of the ward committee and ward councillor for approval.
- Existing open spaces and sport facilities must be conserved and be in accordance with the principles laid down by the municipalities in terms of environmental management.
- All advertisings materials and signs must promote and be compatible with the residential and aesthetic character of the area.
- The availability of infrastructure and services must be considered.

The following **general guidelines** should be applicable in the development Mixed land uses with service industrial development

- No noxious or offensive land uses will be permitted in the area
- Higher intensity residential developments like social housing can be promoted in areas where a mixture of residential and service industries is developed.
- All land uses and density of new development must be compatible with the surrounding area.
- The site layout of the development must make a positive contribution to the pedestrian environment through appropriate orientation of the development, building design, parking arrangements, street landscaping and land-use arrangements.
- Development can be considered if it can be fully supported by the transportation system, or if the applicant is willing to upgrade the street system to prevent reduction in the levels of service.
- The development must take the provision of public transport facilities and existing public transport routes, as well as pedestrian movement into account.
- The development must take future traffic demand into account.



- Existing open spaces and sport facilities must be conserved in line with the principles made in terms of the environmental and open space management.
- The availability of infrastructure and services must be considered.

The following **general guidelines** should be applicable in the development of mixed land uses with commercial development:

- High-density residential development can be promoted in areas close to the town.
- Land use management must ensure that noise levels are controlled, and that the residential component is not threatened.
- The land use composition and density of new development must be compatible with the surrounding area.
- The site layout of the development must make a positive contribution to the pedestrian environment and streetscape through appropriate orientation of the development, building design, parking arrangements, street landscaping and land-use arrangements.
- Development can be considered if it can be fully supported by the transportation system, or if the applicant is willing to upgrade the street system to prevent reduction in the levels of service.
- The development must take the provision of public transport facilities and existing public transport routes, as well as pedestrian movement into account.
- The development must take future traffic demand into account.
- Any land uses that might be morally offensives or require a liquor licence will need the prior approval of the ward committee and the ward councillor.
- Existing open spaces and sport facilities must be conserved in accordance with the recommendations of the municipality in terms of the environmental management plan.
- All advertisings materials and signs must promote and be compatible with the character and aesthetic value of the area.



- Commercial activities might be permitted in the area if the location of the new development is desirable and in public interest. Noise controls will have to be implemented in the case of nightclubs, restaurants, etc.
- Noise pollution should be controlled.
- The availability of infrastructure and services must be considered.

The following **general guidelines** should be applicable in the development of mixed land uses with diverse residential developments

- Area development Plans must be compiled for the areas where there is currently no plan in place and future rezoning application must be in accordance with these area development Plans.
- The density of new development must be compatible with the surrounding area.
- The site layout of the development must make a positive contribution to the pedestrian environment and streetscape through appropriate orientation of the development, building design, parking arrangements, street landscaping and land-use arrangements.
- Development can be considered if it can be fully supported by the transportation system, or if the applicant is willing to upgrade the street system to prevent reduction in the levels of service.
- The development must take the provision of public transport facilities and existing public transport routes, as well as pedestrian movement into account.
- The development must take future traffic demand into account.
- Any land uses that might be morally offensives or require a liquor licence must get the prior approval of the ward committee and the ward councillor.
- All advertising materials and signs must promote and be compatible with the aesthetic value of the area.
- The architectural style of new buildings must be compatible with the surrounding area.
- The availability of infrastructure and services must be considered.





### **8.3.9 Industrial districts**

The following **general guidelines** should be applicable in the development of industrial district:

- Service industries and light industries may develop in close proximity of residential areas
- Noxious industries may not develop close to residential areas. Consideration should also be given to the direction of prevailing winds, natural resources downstream, accessibility, infrastructure provision, handling of waste, etc. before new industrial areas are developed.
- For all developments promoting noxious and large industrial activity, EIAs that addresses the handling of effluent and waste according to environmental and health standards need to be submitted.
- All industries must comply with environmental and health standard regulations.
- Proper access to industrial areas should receive priority when new areas are planned.

### **8.3.10 Agricultural districts**

The following **general guidelines** should inform the development of an agricultural district:

- All applications for subdivision or change of land use in agricultural districts should be considered on merit.
- The location of the proposed subdivision or change of land use in relation with existing and future urban areas should be considered.
- The quality of the land and agricultural potential of the land under discussion should be investigated with every development proposal.
- Motivation for the change in land use or subdivisions should indicate the future agricultural potential of the land under discussion and its relationship with the surrounding area.



- The development proposals should take into consideration the current land uses of the surrounding area.
- The availability of engineering services, particularly potable water, sewerage disposal, appropriate access roads and storm water runoff should be addressed in all development proposals.
- The location of the proposed development in relation to road infrastructure should be considered.
- The development proposal should indicate the impact of new infrastructure provisioning on agricultural land. Service agreements with service providers, where the developer is not providing the service, should be attached with all development proposals.
- Prime agricultural land and irrigation schemes should be protected from a change in land use that is not supportive of the agricultural potential of the land and subdivisions that are not sustainable in the long run should not be considered.
- A change of land use or subdivision of land within a node should get preference above a similar application at a dispersed locality.
- The impact on the environment should be addressed and the protection of natural and heritage areas should be regarded as essential.
- Peri-urban agricultural land may not be subdivided into smaller units of a hectare each or where a minimum subdivision area has been specified in existing land use management documents, this minimum subdivision area will prevail. All development is also dependant on the availability of bulk infrastructure and the future spatial planning of the area. The major road network for future development should be considered and the proposed subdivisions need to accommodate these proposed future road alignments or any other bulk infrastructure alignment within the development proposed.
- A map indicating the 1:100 year flood line as determined by a professional engineer must accompany all applications adjacent to rivers and public dams.
- Proposed developments should not occur in areas of unstable geological formations.
- Developers may be required to submit impact studies or any other study to support decision-making.



### **8.3.11 Cemeteries:**

The following **general guidelines** need to inform the development of a cemetery:

- Cemeteries should be subdivided and the town planning scheme boundary be extended to include this area after rezoning for a cemetery.
- An EIA and geo-technical report will be required as well as a management plan for the approval of a private cemetery. Financial guarantees for managing the cemetery may also be required.
- In the case of farmland, a reversion clause must be registered in the Deed of Title that should the property not develop as a cemetery within a specified time frame, the land will be used for agricultural purposes.
- The locality of a cemetery needs careful consideration. Distances from access roads and from churches need consideration.
- Provide public amenities at cemeteries
- Embark on maintenance programme for existing cemeteries

### **8.3.12 Communal farming areas:**

The following **general guidelines** need to inform the development of a communal farming area:

- Communal farming should be environmentally sustainable.
- Management plans should be developed for commonages.
- EIAs will be required for the establishment of community kraals.
- Fencing along major roads should be enforced.



### **8.3.13 Institutional district**

The following **general guidelines** need to inform the development of an institutional district:

- Accessibility to these areas should receive priority.
- The location of these districts should encourage public interaction.
- The development of supporting infrastructure and services may be considered in these areas e.g. commercial development.
- High-density residential development may also be located close to the institutional districts.
- Multi-purpose facilities should receive priority over single purpose facilities.
- Education facilities should be made both accessible to the local resident by foot or bicycle while accommodating public and private transport.

### **8.3.14 Historical Precinct district**

The development of historical precinct district should follow the following **general guidelines**:

- Light and heavy Industrial related land uses must be minimized in the historical precinct district.
- All buildings in that forms part of the national proclaimed heritages area may not be demolished. A pedestrian walkway and tourist amenities should be encouraged.
- All land uses and business licences that are approved in the historical precinct area must enforce high land value of the area.
- All recreational and green open spaces in the historical precinct area must be preserve and no further development may be encourages on these open areas.
- All new development in the area must enhance the environment by greening the area.



- Informal trading must be limited near to buildings that have historical value. This mechanism will enhance the built environment.
- Control over the architectural appearance of new buildings must be enforced.
- The Aesthetical Committee of the municipality needs to approve all proposed development within the historical precinct area.

### **8.3.15 Movement corridors**

The following **general guidelines** should inform the development of movement corridors in the municipal area:

- Although market forces tend to concentrate development along movement corridors, the high mobility function of these corridors may not be compromised.
- Direct access to adjacent properties must not be permitted and should be restricted to lower order public roads, intersecting with these corridors.
- Development proposals along these corridors will be dealt with on an ad-hoc basis and the municipality may exercise its authority not to support such development proposals.
- The municipality may require developers to make financial contributions towards the upgrading of road infrastructure and traffic control measures if necessitated by new developments.
- The development of land use concentrations along these corridors must be accompanied by the provision of sufficient public transport facilities.
- Formal traffic road signage should take preference to commercial advertising.
- Advertisement applications along these corridors must be considered in terms of the criteria of The South African Manual for Outdoor Advertising Control (SAMOAC).
- Conflict between vehicles and pedestrians must be limited. In this regard, the design of all road elements should reflect the fact that the emphasis is more on vehicular mobility than pedestrian movement.
- In terms of the guidelines supplied by the South African Department of Transport, the implementation of traffic calming measures cannot be allowed.



- Land use changes within the traffic catchments areas of these corridors must be carefully managed and only be considered for approval from a traffic point of view if it can be positively motivated by traffic impact studies compiled in accordance with the guidelines of the South African Department of Transport.
- The development of new land use concentrations along these corridors must be accompanied by the provision of sufficient public transport facilities.
- No formal public transport facilities may be provided within formal traffic lanes of movement corridors.
- No on-street loading facilities must be allowed.
- Existing building lines must be maintained to cater for future road and roadside improvements.

### **8.3.16 Development corridors**

The following **general guidelines** need to inform the development of development corridors in the area:

- Although market forces tend to concentrate development along development corridors, the high mobility function of these corridors may not be compromised.
- New development corridors must be developed as dual carriageway roads, thus providing refuge islands for pedestrians to cross these roads.
- Direct access to adjacent properties must comply with arterial access spacing criteria.
- Development proposals along these corridors will be dealt with on an ad-hoc basis and the municipality may exercise its authority not to support such development proposals.
- Land use changes within the traffic catchment areas of these corridors must be carefully managed and only be considered for approval from a traffic point of view if it can be positively motivated by traffic impact studies compiled in accordance with the guidelines of the South African Department of Transport.
- The municipality may require developers to make financial contributions towards the upgrading of road infrastructure and traffic control measures if necessitated by new developments.



- The development of new land use concentrations along these corridors must be accompanied by the provision of sufficient public transport facilities.
- No formal public transport facilities may be provided within formal traffic lanes of development corridors.
- The design criteria applied with respect to arterial roads as defined in the latest Transport Plan will be applicable to development corridors.
- Formal traffic road signage should take preference to commercial advertising.
- Advertisement applications along these corridors must be considered in terms of the criteria of The South African Manual for Outdoor Advertising Control (SAMOAC).
- Conflict between vehicles and pedestrians must be limited. In this regard, the design of all road elements should reflect the fact that the emphasis is more on vehicular mobility than pedestrian movement.
- In terms of the guidelines supplied by the South African Department of Transport, the implementation of traffic calming measures cannot be allowed.
- Land use changes within the traffic catchment areas of these corridors must be carefully managed and only be considered for approval from a traffic point of view if it can be positively motivated by traffic impact studies compiled in accordance with the guidelines of the South African Department of Transport.
- No on-street loading facilities must be allowed.
- Existing building lines must be maintained to cater for future road and roadside improvements.



## 9 STRATEGIES AND DEVELOPMENT CONCEPT

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### 9.1 STRATEGIES

#### 9.1.1 Spatial Reconstruction

The legacy of past spatial policies has left the urban landscape in South Africa's towns and cities fragmented, expensive and difficult to manage, and environmentally unsustainable. These policies also had its affect on the urban landscape of the Bushbuckridge Municipal Area, which is clearly seen in its settlement pattern. This urban sprawl pattern is indicative of a forced urban pattern brought about by historic policies.

The sprawling urban pattern of the Bushbuckridge Local Municipality has distinct drawbacks, which impact on the efficiency and cost-effectiveness with which municipal planners can manage the spatial and services aspects of the region. For example, bulk services have to be constructed over large distances to supply outlying settlements with relatively small population numbers. This urban structure is also expensive for those people living in it. Large proportions of household incomes have to be spent on public transport to access social, employment and shopping opportunities. Spatial reconstruction is required to address these critical spatial issues and imbalances.

#### 9.1.2 Development Strategies

Although the current spatial pattern is generally inefficient and expensive, it is a fixed spatial pattern. It is impossible to completely restructure the existing pattern





and the aim should thus rather be to guide future development towards a better, more efficient and more cost-effective urban structure. In short, one should start addressing the weaknesses of the spatial structure through the planning and development of its future growth. Six strategies can be adopted to achieve this:

#### 9.1.2.1 Strategy 1: Urban integration

Consolidating existing outlying settlements with each other. This can be achieved by filling in the unpopulated areas between these settlements with the future growth where feasible. Settlements will thus be joined together forming continuous urban areas. Such an integrated urban structure will form the bases for providing cost-effective municipal services and public transportation infrastructure.

#### 9.1.2.2 Strategy 2: Bulk infrastructure development

Providing bulk infrastructure can be an important tool to achieve the above-mentioned spatial pattern. All future bulk infrastructures should be focused on the urban areas described above. In this manner, bulk services will force future urban development into a more rational and desirable urban pattern.

#### 9.1.2.3 Strategy 3: Equitable access to social services

Limited access to social services results in high public transportation cost for the poor living. It is imperative that a number of these social services be provided in outlying settlements through the development of Service Delivery Centres. A hierarchy of such SDCs, containing facilities such as clinics, police stations and community centres, will bring these facilities closer to settlements, thus making them more accessible and achieving greater urban integration.



#### 9.1.2.4 Strategy 4: Land use and transportation integration

Land use development and public transportation are interlinked and affect each other significantly. Urban corridors create the optimal land use structure for the cost-effective operation of public transport systems. Public transportation works most effectively in a linear pattern, as opposed to winding its way through a widespread urban area. Such a linear land use pattern also benefits commuters, because it implies that residential settlements hug the corridor road or railway line, placing commuters within short walking distances of such public transportation termini.

#### 9.1.2.5 Strategy 5: Protection of open space

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

#### 9.1.2.6 Strategy 6: Provision of affordable housing

Bushbuckridge Local Municipality will have to accommodate a greater number of affordable housing units in order to align itself with the aims of the national housing policy. In areas that are identified for future development expansion, proper planning principles should be put in place, i.e. formal township development should be done. This should culminate in properly managed RDP housing projects.



## 9.2 DEVELOPMENT CONCEPT

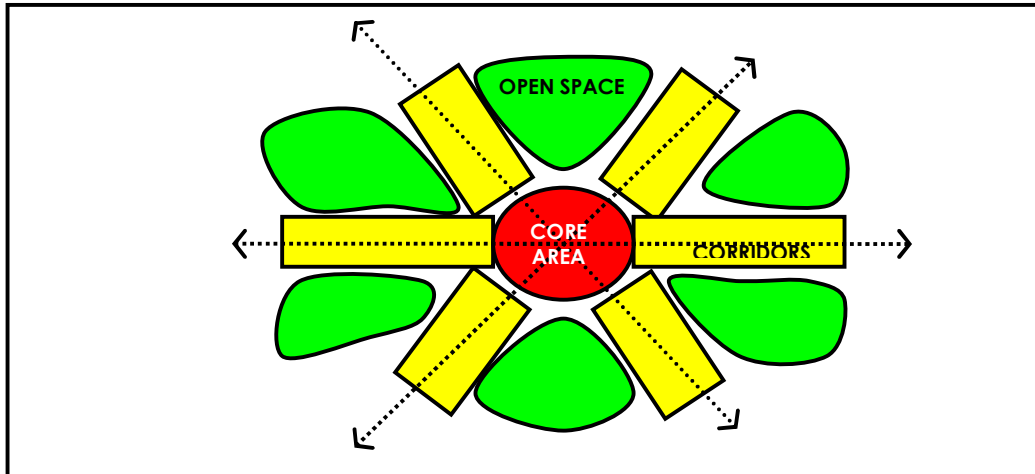
The Development Concept was based on the strategies defined above, which aim to reconstruct the urban landscape of the Bushbuckridge Local Municipality into a more rational, cost-effective and manageable structure.

### 9.2.1 Selected Spatial Configuration

Various potential spatial configurations exist for urban centres, providing different advantages. Some promote the efficient use of public transportation systems, while others promote the conservation of natural areas and resources. To arrive at an appropriate Development Concept for the Bushbuckridge Local Municipality, it is necessary to first consider the different spatial configurations to find the one best suited for the this area. Failing to select a spatial configuration will result in the Municipal Area developing on an ad-hoc bases, not taking cognisance of the advantages that a more structured spatial configuration will provide.

After exploring the different spatial configurations, a radial settlement configuration was identified as best suited to the Bushbuckridge Local Municipality. This configuration comprises a core area and concentrates development along a limited number of roads that extend outwards from the central core.

The radial settlement configuration is well suited for the Bushbuckridge Local Municipality, because it concentrates development along public transportation routes. This allows the integration of the outlying urban settlements to core areas, in this instance the three identified municipal nodes.

**Radial Settlement Configuration (Source: Rustenburg SDF, April 2005)****9.2.2 Core Areas/ Nodes**

The core area of the Municipality is the three identified municipal nodal points. Core Areas/ nodes are areas where development (facilities, services and economic opportunities) tends to concentrate. The following are the identified municipal nodes; Acornhoek, Thulamahaxi and Bushbuckridge (Maviljan)

**9.2.3 Development and Transport Corridors**

Of specific concern is the scattered location of settlements within the Bushbuckridge Local Municipality. Attempts should be made to integrate these settlements with the core areas and to one another. The primary means and most natural way to establish a stronger link between municipal nodes and other settlements would be to focus development along a selected number of corridors.



## **INSERT MAP 11: Municipal Nodes**



There are a number of reasons why it is beneficial to direct growth in a linear corridor pattern, extending from a core area. The two main benefits are municipal services provision and public transport development. With regard to the former, it is cost-effective to provide bulk services (water, sanitation and electricity) in a concentrated, linear pattern, as opposed to dispersing such a network over a wide area. With the proposed linear pattern, bulk services follow a single route along the corridor and all the settlements along the route, as well as new residential infill developments, connect to a singular bulk service line.

With regard to public transport, numerous benefits are obtained from a linear development pattern. Such a development pattern follows single or parallel roads, making the route to be followed by busses and taxis uncomplicated and cost-effective. Bus stops and taxi termini are placed at nodal points along such a route like a string of beads.

#### 9.2.3.1 Advantages of corridor development

Corridors are able to achieve a wide range of highly desirable long and short-term objectives. Given the approach followed that corridors be used to integrate the existing fragmented urban structure, an overview of these advantages is listed in the following section. The advantages influence many spheres that range from the economic to the social to the spatial to the environmental.

##### *(i) Economic & Financial*

- Reduce Transport Subsidies.
- Reduce use of non-renewable resources.
- Reduce transport costs for the poor.
- Attract new investment to a municipal area.
- Increase Economic Opportunities.
- Improve the efficiency of infrastructure
- Linking to the global economy.



(ii) *Transport*

- Integrate land-use and transport.
- Increase the use, efficiency and quality of public transport.
- Increase/maximize accessibility.
- Increase/maximize mobility.
- Increase modal choice.
- Increase modal integration.
- Shorter and fewer.
- Reduce peak travel times.

(iii) *Social*

- Alleviate poverty and reduce inequality and social exclusion.
- Improve access to social services.

(iv) *Physical & Urban Form*

- Restructure the urban landscape through spatial integration.
- Redevelop blighted areas.
- Steer urban development.
- Create urbanity.
- Improve legibility of the urban landscape.

(v) *Institutional*

- Build partnerships.

(vi) *Environmental*

- Reduce the need for transport and ensure more sustainable urban development.
- Reduce pollution.
- Contain urban development/ sprawl



It is imperative that the proposed corridors become the focus for providing social amenities, providing basic social services to these outlying settlements. Social amenities and shopping opportunities can best be provided through Service Delivery Centres (SDCs): a nodal land use configuration developed along the proposed corridor. These SDCs must be developed in a hierarchical fashion, municipal nodes being the nodes of highest order and the hierarchies of the other nodes corresponding with the population size of the settlements they serve. The SDCs must be linked to the public transport system operating within the proposed corridors, with the hierarchy of each transit stop coinciding with the hierarchy of the SDC at which it is located.

A number of **primary and secondary corridors** have been identified within the area that attempts to address the dispersed settlement pattern and strengthen the Core Areas. The development of corridors has been identified as one of the potential instruments available to restructure the current settlements into robust and efficient areas. It is important to note that corridor development does not occur over a short period of time. The critical factors to take into account are time frames and phasing of development.

**Transportation Distribution Hub** is a concentration of public transport amenities that enables commuters to access different public transport modes within close proximity of one another. The Transportation distribution hub in this case are scattered in the municipal area. Three main Transportation Distribution hubs, which happen to be within the three municipal nodes, are identified, namely Acornhoek, Thulamahaxi and Bushbuckridge, and sub-distribution hubs identified at Casteel, Hluvukani, Dwarsloop, Kildare and Mkhuhlu.

The area along the Hazyview-Acornhoek road could be developed as a **primary road transport corridor**. A **primary rail transport** corridor has been identified and can be regarded as a rail corridor, which connects the urban development nodes, focusing primarily on public transport. It can be viewed as an additional public transport service in support of existing road based public transport modes.





## **INSERT MAP 12: Transportation Hubs**



## **INSERT MAP 13: Development Corridors**



However the existing railway line mainly caters for long distance passengers, and amendments of the facilities and services should be explored to establish whether this could be used as a primary rail transport corridor. A number of **secondary road transport corridors** have been identified linking various settlements (see attached Map).

**Movement systems** should facilitate access to all facilities including physical, social and economic opportunities of the area. The main challenge facing the municipality is working or developing a structure within a context of scattered settlements and poor planning of infrastructure. However network roads and access paths should be the foundation of the framework representing the lines of integration that link opportunity at different levels.

In this proposed SDF, in many cases routes will represent the spines around which development around which development has been attracted to, and potentially represent the locus of new investment. Hence locating facilities at a particular route increases the ability of people to access these facilities. These routes provide the basis for the establishment of an investment framework and are considered as investment lines.

#### **9.2.4 Secondary Nodes**

The corridor proposed above tie the majority of settlements and the municipal population into an integrated urban spatial structure. A number of secondary nodes have been identified where development should be focussed. **Social service nodes** are places where services can be rendered at a central point to communities. The municipality has already established 11 regional offices which can be classified as service nodes. The nodes are Acornhoek, Casteel, Shatale, Thulamahaxi, Hluvukani, Dwarsloop, Angincourt, Kildare, Marite, Bushbuckridge (Maviljan) and Mkhuhlu.



**INSERT MAP 14:  
Social Services Nodes**



### **9.2.5 Rural Settlements**

A number of rural settlements are located throughout the Municipal Area that cannot be directly linked into this spatial structure. Many of these settlements are not situated in logical locations and often have population numbers that are larger than can be sustained in these types of settlements. These settlements can thus be described as rural settlements, not forming part of the core urban structure.

If these areas are accepted as rural settlements, the challenge is to define a role for these settlements. Firstly, these settlements should not be viewed as focus areas for future growth within the Municipal Area. These rural settlements should only accommodate the growth of its existing population through natural growth. Secondly, these settlements must become the focus of the rural areas surrounding them. This will involve creating a local economic base for these settlements, for example subsistence farming or tourism. It must also involve developing Rural Service Delivery Centres at these settlements to service the surrounding rural population, containing community facilities such as schools and clinics.

### **9.2.6 Open Space System**

An integrated open space system needs to be developed for the Bushbuckridge Local Municipality. Such a system should include all natural elements of value linked to each other through a continuous open space lattice. For example, an isolated open space, surrounded by urban settlements, has little chance of sustaining its original biodiversity. It is only when it is linked to other open spaces by means of corridors that it remains large enough to sustain its biodiversity. Environmental elements to be included in such an open space system will include mountain ranges, proclaimed nature reserves and rivers environments.



**INSERT MAP 15:  
Tourism Nodes**



### 9.2.7 **Tourism Areas**

The municipal area has significant natural and cultural features, which could be utilised for focused tourism development. **Tourism nodes** offer leisure and tourism products to the consumer. These nodes may include a variety of products in support of the services offered. The eastern part including the rural areas bordering the Kruger National Park and the private game lodges like Mhala-Mhala, Sabi- sabi need to be used for their cultural significance and be developed as a tourism belt. These areas can be enlarged and eco tourism supplemented by cultural significance be promoted. The tourism development nodes could be enhanced by encouraging public/private partnerships where, communal areas within those areas get excised for conservation purposes.

The Orpen road to KNP need to be developed also as tourism belt as number of lodges, public, private reserves and local communities are located along the road. Open spaces between private game lodges and rural areas need to be developed and extended if possible to form partnership with private investors.

### 9.2.8 **Recommendations**

A fundamental starting point for the spatial framework is acknowledging, protecting and enhancing the inherent qualities of the landscape. Included in this concept should be sustainable utilisation of natural resource. The framework should go beyond the conservation and environmental point of view, but more fundamentally from a productive and economic development point of view.

Here the concern rests in managing the natural environment as the prime assets and resource base for the district.



Environmental sustainability, restoration and rehabilitation should be the means to create an appropriate platform for rural development and in its own right as a meaningful part of development.

It is important to note that most of the settlements are located within traditional authority land. Tenure upgrading projects have already been prioritised in the municipal and district IDP's. It is important that such areas, more especially the municipal nodes be upgraded to ensure the economic growth of such areas. Both the municipal nodes and the service nodes could be declared as development nodes, i.e. they get promoted as areas of economic activities.

It is necessary to identify the overall management framework to guide future development. Such framework should move beyond spatial form of the municipal area to strike a balance between growth and development and also on social responsibility and upliftment of the areas. Such guidance should include the identification of primary land use zones including environmental conservation zones, agricultural zones, and areas for residential settlements.

The framework should wisely achieve the goals to infill, densification, mixed uses and desired spatial municipal form. The following elements are required to support the mentioned scenarios of the SDF:

- The application of robust land management systems;
- Appropriate land development incentives;
- The development and upgrading of social and engineering infrastructure;
- Strategic interventions to accommodate growth and development in a sustainable manner and give direction to public-private partnership
- Need for policy and institutional elements
- All relevant sector plans are aligned to the SDF
- Strengthening the municipal role and responsibility in terms of managing development processes and trends





The above scenarios, strategies and concepts should form the basis and the foundations on which the SDF is based.

### 9.3 POLICIES AND GUIDELINES

The key outcome of the formulation of Spatial Development Framework of the BBR municipality is the normalisation of the existing spatial pattern with a proper hierarchy of settlements, which are economically viable and able to support the majority of the inhabitants with jobs and access to social and municipal services. The existing spatial and settlement patterns are not conducive for longer term sustainable growth and development to support the people, hence the development of SDF.

These strategies, policies and guidelines attempt to bring certainty for decision makers, developers and investors by describing the desired land use envisaged with the SDF and facilitate a better understanding of what is desired in terms of SDF. These serves as supplementary to the spatial objectives and principles adopted with the SDF and both should be used to inform the overall SDF.

#### 9.3.1 Municipal Nodes

Acornhoek, Bushbuckridge and Thulamahaxi are currently the largest and major investment nodes in the municipal area where public and private investment are concentrated. They are also regarded as important focus for future development. The **present characteristics** of these areas are:

- Taxi ranks and hawkers are situated next to the main road;
- No clear pedestrian crossing and foot path (not pedestrian friendly);
- Lack of maintenance and management led to deteriorating and decaying environment;



- Traffic movements conflicting with pedestrian movement because of narrow roads;
- No proper signage for traffic;
- Mixed land use activities, both private and few public investment;
- Generally have no street parking;
- Meets local needs, rural areas borders these urban centres;
- Most of the buildings are occupied by foreigners;
- Not enough vehicle parking
- Hawkers are scattered along the roads;
- Shops are developed along the main road;
- Traditional rural areas with lack of infrastructure and services bound these urban centres.

**Guidelines and management** of the above nodes are as follows: -

- A need for easy pedestrian access; i.e. walkways
- Public transport facilities need to be allocated within these nodes in an acceptable manner in terms of accessibility and linkages with transportation systems;
- All infrastructure need to be upgraded;
- Mixed land uses to be encouraged within the nodes;
- Encourage clustering of various activities at appropriate location;
- Road network to be improved and upgraded; i.e. road intersection, parking areas and facilities
- Limited hawkers next to the main road and should not inhibit pedestrian movement and social facilities
- Encourage residential use around the node
- Higher density development to be encouraged within the urban nodes, therefore promoting compaction within the environment
- Clear linkages between the municipal nodes and the surrounding rural area and their benefits



**Group proposals: -**

- Service points to be developed between the nodes
- Roads need to be upgraded and bigger
- Robots and pedestrian crossing
- Satellite police station in all the nodes
- Security lights at night
- Planning of Acornhoek
- Control rural sprawl and land invasion around the node

**9.3.2 Tourism Nodes**

The municipal area has significant natural and cultural features, which could be utilised for focused tourism development. The eastern part including the rural areas bordering the Kruger National Park and the private game lodges like Mhala-Mhala, Sabi- sabi need to be used for their cultural significance and be developed as a tourism belt. These areas can be enlarged and eco tourism supplemented by cultural significance be promoted.

The Orpen road to KNP need to be developed also as tourism belt as number of lodges, public, private reserves and local communities are located along the road.

The open spaces between the private game lodges and the rural areas need to be developed and extended if possible to form partnership with private investors. The formal conservation area needs to be expanded and new zones identified. Ngwaritsane is the biggest dam in the municipal area with natural features where eco tourism could be promoted



The proposed nodes are **presently characterised by:**

- Rural areas are adjacent to the reserves;
- Local communities are not benefiting from these areas;
- Vacant land separating the tourism attractions and the communities;
- Open spaces unutilised

**Guidelines and management** of tourism nodes: -

- Protect and enhance the identified scenic, historic and cultural resources;
- Eco tourism and recreational facilities along the Inyaka Dam;
- Revitalise all nature reserves found in the area such as Bushbuckridge Nature Reserve;
- Protect habitat diversity of plants and animals;
- Maintain the natural resource based industries
- Form partnership with private and public sectors facilitate by the local government
- The road network connecting different tourism nodes need to be upgraded and be accessible in a friendly manner;
- Community market stalls to be developed along the private game lodges and public owned reserves to boost the economy;
- Public open spaces should be incorporated as recreational elements within the tourism belt.
- The tourism belt and node need to complement the surrounding rural areas in terms of services, facilities and development
- The tourism node need to have a positive contribution to the image of the municipal area in terms of its infrastructure, services and resources;
- Both public and private investment need to be encouraged along the eastern tourism belt;
- Create awareness campaign in all areas of the municipality;
- All reserves should form partnership with the municipality in the management of them.



### 9.3.3 Agricultural

Rural areas are predominately communal farming areas, with very few commercial farming in white and developed areas. Most of the people in rural areas have developed small irrigation schemes, but these are unsustainable due to lack of water and support in terms of financial and social issues. The **present characteristics** of agriculture in the municipal area are as follows:

- No viable agricultural area;
- Agricultural specifically farming schemes that were introduced by the former Gazankulu government have collapsed;
- Lack of water and equipment;
- No financial assistance;
- Abounded schemes including orchards
- Unsustainable agricultural methods;
- Lack of land for grazing;
- Overgrazing and deteriorating of soils is visible in number of places;

**Guidelines and management** of agriculture in the municipal area should be as follows: -

- The department of agriculture and the municipality should assist subsistence farmers to access of land, financial support and ownership;
- Re establish RDC agricultural schemes that were collapsed to supplement employment opportunities in areas in close proximity with Ngwaritsane and Inyaka dams, including viable streams in the municipal area;
- Assist rural people with skills and finances to enter into commercial farming
- Regenerate the former government farming schemes that are no longer viable; i.e. Utha cattle schemes;
- More land to be identified for agricultural purposes;
- Empower the rural communities in terms of skills and financial



- Encourage small commercial agricultural units;
- Integrate agricultural and residential land use associated with communal agricultural land use

#### 9.3.4 **Corridors**

The Klaserie road to Hazyview via the municipal area is earmarked as a development corridor, which can also be called a **movement corridor**, as it passes the municipal area through the main road.

**Present characteristics** of the corridor: -

- The corridor characterised by lower vehicle speed limit which range between 60km/h and 80k/h;
- Economic activities is limited to the surrounding rural/residential areas;
- Too small to accommodate traffic;
- Dense residential land use along the road;
- No clear protection of people from the busy road;
- There is an existing railway line passes along the movement corridor
- No pedestrian path or routes along the road;
- No residential edge with the road;
- No clear signage and pedestrian crossing

Other development corridors need to be identified within the municipal area.

**Guidelines and management** of the corridor should be as follows: -

- Pedestrian paths along the road need to be strengthened;
- There should be clear signage, managed roads and pedestrian crossing;
- Upgrading the road infrastructure and traffic control measures along the movement corridor;
- The development of integrated transport plan to have the design criteria that need to be established



- Conflict between vehicles and pedestrian need to be limited, and pedestrian movement need to be taken into account;
- Clear signage of the corridor along the main road with robots;
- Land use changes should be carefully considered and managed. Approval from a traffic point of view and positively motivated in accordance with the guideless of the South African Department of Transport;
- Infrastructure, service and business opportunities to be allocated next to the movement corridor;
- The movement corridor needs to be upgraded from time to time.
- Expansion of the road in terms of size to accommodate traffic during peak times
- Fencing along the corridor should be enforced;
- Infrastructure upgrading along the corridor need to be given a priority
- Traffic impact studies need to developed along the corridor specifically for the municipality

### 9.3.5 **Movement Systems**

The movement system and the transportation system need to be supported by the development of Integrated Transport Plan that will consider a much wider base of transportation and movement issues in detail. Movement system can be grouped as tertiary, secondary and primary roads. In any development, the efficiency of the settlement areas is supported by effective and efficient movement system.

The present **characteristics of roads** in the municipal area are as follows: -

- Only tertiary-major roads are tarred, few secondary and gravelled primary roads;
- Not well maintained gravel roads;
- No easy access to different areas and places;
- The are has an existing rail network, which is not fully utilised;
- No clear linkages with other areas, coupled with longer travelling distances;



- The current roads structure could not contain floods and serious run off.

**Guidelines and management** of movement system are as follows: -

- Ensuring that the major roads functions are retained and enhanced;
- Ensuring that the movement system links directly with residential and other economic centres;
- Provision of pedestrian pavements along the tertiary roads;
- On site parking to be provided along the tertiary roads;
- Easy pedestrian access due to close proximity with residential areas;
- Proper integration of movement system with rail transport which is available in the area;
- Services nodes and station of both public and private transport need to be developed to complement the movement system;
- Facilitates mixed traffic within neighbourhoods safely and at a low speed;
- Support public transport;
- Promote accessibility of communities to employment, recreation and social opportunities;
- Decrease travel time and connectivity to number of places;
- Well maintained and upgraded gravel roads

### 9.3.6 **Rural Areas:**

The municipal area is predominately rural with minimal infrastructure and municipal services. The **present characteristics** of these areas are: -

- Subsistence and cattle farming are the dominant and main agricultural practices;
- A significant RDP housing backlog exists;
- The housing backlog is also associated with lack of social and economic development components;
- Limited employment opportunities have transpired;





- Traditional leadership;
- Lack of basic infrastructure such as water;
- Not well maintained gravel roads;
- Lack of transport facilities, people depend on taxis and buses which are not reliable and costly;
- Most of the people especially youth are unemployed;
- Uncoordinated demarcation of sites by individuals;
- Land invasion is common;
- Far from services which led to commuting everyday
- Lack of land to be utilised for irrigation and agricultural schemes;
- No security of tenure;
- Limited economic resources base.

The **guidelines and management** of these areas should be as follows: -

- The extension of rural areas should be linked with employment opportunities
- Land for agricultural purposes should be identified in close proximity with residential areas;
- Provision of sustainable and affordable services to these areas;
- Illegal occupation of land should be discouraged;
- The demarcation of sites should involve all relevant stakeholders; i.e. structured communities, municipality and the tribal offices;
- The management of the areas by the tribal authority should be done in consultation with the municipality;
- The demarcation of sites should be coupled with the provision of affordable services and infrastructure;
- Provision of services such as pensioners pay point;
- Tenure upgrading should receive a priority;
- Promote integration with other rural areas and major economic centres through connectivity;
- Linked to the movement system and operating transportation system.



### 9.3.7 **Townships**

Townships within the municipal area follow the similar trend of development. Their **present characteristics** are as follows: -

- Gravel roads which are not well maintained;
- No clear township boundary to the rural areas;
- Run off is evident along the streets;
- No or poor recreational facilities;
- Poor planning in terms of sites and streets;
- Squatters settlements along the edge and floodline areas;
- Cemeteries in close proximity with the township
- Basic infrastructure and services;
- Limited transport system;
- No signs and proper footpath routes;
- No shopping complex, rely on the main urban centres;

**Guidelines and management** of these townships are as follows: -

- The need for township establishment in areas like Shatale and Maviljan;
- Development need to be considered coupled with transportation system and upgrading of streets;
- An environmental Impact Assessment need to be conducted in the establishment of cemeteries in close proximity with residential to avoid contamination of water;
- Provision and maintenance of recreational facilities;
- More dumpsites to be identified;
- Provision of storm drainage system;
- Encourage integration of services and infrastructure;
- Encourage private investment to supplement economic base of the area.



### **9.3.8 Transportation hub**

It is the concentration of public transport amenities and transport that enables commuters to access different places; i.e. taxi ranks and public transport.

**Guidelines and management** of transportation should be as follows: -

- Sufficient public transport should be provided and maintained in all areas;
- No on-street loading facilities must be allowed;
- Sufficient space must be reserved at public transport termini to support linkages with other types of transport;
- Transportation hub should be located where a high demand for public transport;
- Provision of high quality services of transport infrastructure;
- Traffic and pedestrian safety should receive a priority;
- It should be well maintained places and functional facilities
- Hawkers and taxis should complement each other, not conflicting one another;
- Provision of other services should be line with the upgrading of the area
- Pedestrian friendly
- Provision of refuse removal

### **9.3.9 Social Services Nodes**

Although most of the commercial and infrastructure are located within the identified urban areas, 11 strategically located social services have been identified, which are Maviljan, Marite, Mkhuhlu, Kildare, Angincourt, Hluvukani, Acornhoek, Shatale, Dwarsloop, and Casteel.

**Present characteristics** of these service areas are:

- They cater for the surrounding rural areas;



- Have basic services such as satellite government offices and infrastructure such as gravel roads;
- No clear movement or transportation system with the surrounding villages
- Limited social services and employment opportunities;

These areas need to be developed in future into agri-village with productive agricultural units and cultural tourism centres supporting families staying in the area. **Guidelines and management** of social services are as follows:

- The provision of bulk infrastructure and service in these centres need to be considered and impact on development of the surrounding areas;
- Mixed land uses within the service centres need to be encouraged;
- Transport network system need to be in place to support the surrounding rural areas;
- Development at these centres must be coordinated with the phasing of any planning activity of the surrounding areas;
- Expansion of these areas should be supported by the transportation system and the level of provision of infrastructure and services
- The increase of economic activities need to be considered and enhance to make positive contribution to the economic vitality of the centre;
- Tourism and agricultural enterprises should be encouraged;
- Provision of Engineering and communication infrastructure;
- Financial services to be provided such as banks;
- High order services such as hospitals and police station;
- Able to cater and service for the rural hinterland



## 10 MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK

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The Municipal Spatial Development Framework applies to the entire Municipal Area of Bushbuckridge. The proposals made in this Municipal SDF will inform the proposals of the Local Spatial Development Frameworks, dealing with specific settlements or settlement clusters within the Municipal Area (see attached map)

### 10.1 LAND USE & TRANSPORTATION

#### 10.1.1 Land Use & Transportation Integration

Land use and transportation integration forms the backbone of an efficient urban structure. It not only ensures the cost-effective operation of the region's public transportation system, but it also tends to limit urban sprawl by concentrating urban development at higher densities close to public transportation systems. The proposals on land use and transportation integration are illustrated on the Municipal Spatial Development Framework. The Municipal SDF identified three main transportation distribution hubs and five sub-distribution hubs. The main distribution hubs are located at Bosbokrand, Thulamahaxi and Arconhoek respectively. The sub-distribution hubs are located at Kildare, Mkhuhlu, Casteel, Dwarsloop and Hluvukani.

##### 10.1.1.1 Theory of Land Use and Transportation Integration

The viability and efficiency of transport systems, especially public transport systems, reside in the integration of land use and transportation development. Two



elements are important for successful integration: land use densification next to public transport routes and the mixing of land uses next to public transport routes

Densifying and mixing land uses next to public transport routes have various advantages. For example, higher-density residential areas within public transport corridors establish larger commuter markets in close proximity of public transport systems, which increases public transport patronage and therefore contributes to the viability of public transport systems. In addition, the mixing of land uses creates a better relationship between areas of residence and employment, which can lead to shorter commuter distances and a better two-way use of transport infrastructure.

The key to successful land use and transportation integration is obtaining higher land use densities and a greater mix of land uses at public transportation stops, such as bus stops and taxi ranks. These are the points where access is obtained to the public transport systems and attempts should thus be made to optimally use these strategic locations. This can be done by locating a mix of work, social and residential uses at these stops, thus creating a one-stop service area for commuters. The collector roads of urban areas should also be designed to intersect logically with these stops, thus increasing accessibility to the public transportation systems and allowing modal transfer.

#### 10.1.1.2 Development Concept Applied

The aim of the Development Concept was to formulate the desired spatial structure of the Bushbuckridge Municipal Area. It is important that the principles of land use and transportation integration apply to this Development Concept.

The Development Concept adheres to the principles of land use and transportation planning for two reasons. Firstly, it proposes urban corridors aligned along public transportation routes, thus promoting higher densities along these transportation routes. Secondly, it proposes a hierarchy of Service Delivery Centres (or SDCs) along these corridors, thus creating opportunities for mixed land use around



transportation bus stops and taxi ranks. Based on the above, implementing the Development Concept will require two practical objectives to be met:

- Firstly, the towns and settlements within the Municipal Area will have to extended and densified within the boundaries of the proposed corridors
- Secondly, Service Delivery Centres will have to designed and implemented around existing and proposed transit stops (bus and taxi).

### **10.1.2 Settlement Development & Densification**

Settlement development and densification within the Municipal Area is a complex matter that is impacted upon by a number of factors and restrictions, such as topographical constrains.

#### **10.1.2.1 Residential Densification through Infill**

Most international and local literature on urbanization tends to agree that higher residential densities should be encouraged and that infilling of vacant land between urban areas is promoted and so limit urban sprawl.

One of the most significant advantages of higher densities through infilling is that they allow the cost-effective provision of infrastructure, as opposed to lower residential areas, simply because the same bulk infrastructure network serves a larger population in a given geographical area. In addition, the densification of residential areas will promote the efficient use of a public transport system because it places a larger number of people within walking distance of public transportation systems.



**INSERT MAP 16:  
Municipal Spatial Development Framework**





#### 10.1.2.2 Proposed Residential Expansion

Residential expansion proposed for the Bushbuckridge Municipal Area is aimed at strengthening the corridors proposed in the Development Concept by linking the major settlements of the Municipal Area to each other through infill development. Towns and settlements such as Bosbokrand (Maviljan) and Marite should thus be initiated to grow towards each other, filling the vacant land between them.

A proposed area for future expansion is provided for identified areas within the Municipal Area (See Section 11).

#### 10.1.2.3 Focus Areas for Residential Expansion

The following areas have been identified for residential expansion

- Mkhuhlu
- Casteel
- Acornhoek
- Dwarsloop
- Kildare B
- Hluvukani
- Thulamahaxi
- Maviljan (Bushbuckridge)
- Marite
- Lilydale
- Angincourt
- Shatale
- Arthur Stone

The identified settlements are all linked with development corridors. The Spatial Development Framework differentiate between three corridors, the first corridor is the Primary Transport Corridor (road corridor) that runs from the south to the



north of the municipality along the R40 Arterial Route and this corridor includes Marite, Maviljan/ Bushbuckridge, Dwarsloop, Shatale, Casteel, and the east of Acornhoek. The second corridor that have been identified is the Secondary Corridor that runs from the Primary corridor into the far reach areas of the municipality and links the Primary Road corridor with the third corridor and this being the Primary Rail corridor.

#### 10.1.2.4 Municipal Development Nodes

The Development Concept envisages three municipal development nodes, Bushbuckridge, Thulamhaxi and Acornhoek linked to other major settlements via development corridors. These settlements are seen as part of the urban spatial structure because, firstly they are located within these corridors, and secondly they are located within a 25km radius of one of the municipal development nodes.

Two settlements that have been identified as future expansion areas exist outside the 25km radius from the Municipal Development Nodes. These are Lillydale and Kildare B.

#### 10.1.3 Road Network Development

Proposals for the improvement of the road network largely revolve around the better integration of the surrounding settlements with the identified Municipal Development Nodes.

#### 10.1.4 Demarcating an Urban Edge

Demarcating an urban edge has a number of specific advantages; the most importantly prevent uncontrolled urban sprawl. Urban sprawl is undesirable since it increases pressures on the limited resources of local government, such as public transport, water and sanitation infrastructure provision. An urban edge will also



protect valuable agricultural land and ecologically sensitive areas from urban encroachment. There may however also be some negative aspects associated with an urban edge. For example, it can restrict the supply of land for development, which could lead to illegal land occupation around the urban boundary.

A balance should be reached between providing sufficient land for development and the need for sustainable development. Taking these aspects into account, an urban edge was demarcated for the Bushbuckridge Municipal Area as illustrated on the attached map.

A guideline for the type of land uses to be provided inside and outside of an urban edge are depicted in the Table below. As a rule, the urban edge applies to all developments requiring a township establishment application. *It is thus recommended that no township establishment application for development outside the Urban Edge be supported.*

**Table 3: Land uses related to the urban edge**

Inside urban edge	Outside urban edge
<ul style="list-style-type: none"><li>• Urban settlements</li><li>• Rural settlements</li><li>• Business and office nodes</li><li>• Industrial and commercial areas</li><li>• Governmental uses</li></ul>	<ul style="list-style-type: none"><li>• Extensive and intensive agriculture areas</li><li>• Conservation areas and nature reserves</li><li>• Tourism facilities and related activities</li><li>• Rural services (social &amp; economic)</li><li>• Agricultural holdings</li><li>• Communal farms</li><li>• Mining activities</li></ul>

The Urban Edge for the Bushbuckridge Municipal Area aims to support a more compact and efficient urban structure and to focus urban development along the corridors proposed in the Development Concept. This boundary also aims to contain the development of the rural settlements located on the fringes of the Municipal Area. The Urban Edge furthermore aims to prohibit urban sprawl into sensitive natural areas.



## 10.2 SOCIAL AMENITIES

### 10.2.1 Service Delivery Centres

Social facilities should be concentrated, rather than dispersed, in order to (a) stimulate the viability of these activities, (b) create strong focal points with which the surrounding communities can identify and (c) create a more ordered spatial structure. To achieve this concentration of facilities, a hierarchy of Service Delivery Centres should be created.

#### 10.2.1.1 Land Use and Transportation Integration

Public transport systems are accessed via bus and taxi ranks. These ranks should be the focus of land use development within public transport corridors to obtain maximum land use and transportation integration. The proposed Service Delivery Centres aim to establish a unique mix of land uses around these bus and taxi ranks and should be designed to facilitate access to these ranks. In addition, SDCs can create functional shopping environments and create focal areas for social facilities within communities.

Various land uses can be mixed within SDCs, for example retail, office, education, health and residential uses. The land use mix, however, will depend on the socio-economic status and needs of users and can therefore differ from case to case. For example, in a CBD setting the focus will be on establishing larger retail facilities. In rural settlements the focus will be to concentrate on lower-order social facilities and basic retail facilities.

Apart from having the desired mix of land uses within SDCs, the radius of this land use mix is important. The key factor that determines this radius is the walking distance from the periphery of the SDC to its transit terminus. Generally, 400m is



considered a comfortable walking distance. This distance, however, is only an indication and can be extended for higher-order urban centres and compacted for lower order rural centres.

#### 10.2.1.2 Development Prerequisites

It is proposed that the SDC concept be embraced by the Bushbuckridge Municipal Area and implemented over the long term. The Town Planning of the Municipality should lead the way in establishing SDCs, since this process are responsible for establishing urban development objectives, designating development areas and administering the planning processes. Practically, this will involve identifying and acquiring land for SDCs, appointing consultants to design the SDC layouts and even providing certain SDC facilities, such as bus and taxi ranks.

Initially, one or two of these SDCs can be developed to demonstrate that public transport is an important community asset and that the development of these SDCs can form the basis for community development as a whole. Because the success of SDCs require committed Provincial departments, private developers and transit agencies, these bodies should be involved in all the planning stages of such prototype SDCs.

#### 10.2.2 Proposed SDC Hierarchy

Two types of SDCs are proposed for the Bushbuckridge Municipal Area: Municipal SDCs and Secondary SDCs. This hierarchy took into account certain key variables, such as its intended function; the population size its serves and its geographical location. In turn, the order of the SDC determines its size and the type of facilities located within it. The SDC hierarchy, its threshold population and the service radius of each centre, is depicted in the Table below. The locations of the SDCs are illustrated on the attached map.



**Table 4: Urban services delivery centres**

SDC hierarchy	Existing transit facilities	Threshold population	Access	SDC area
Municipal Development Node	Bosbokrand Area	30 000 +	Distributor, collector and internal	50 ha
Municipal Development Node	Thulamhaxi Area	30 000 +	Distributor, collector and internal	50 ha
Municipal Development Node	Arconhoek Area	30 000 +	Distributor, collector and internal	50 ha
Secondary	Kildare B	Less than 30 000	Distributor, collector and internal	20 ha
Secondary	Mkhuhlu	Less than 30 000	Distributor, collector and internal	20 ha
Secondary	Casteel	Less than 30 000	Distributor, collector and internal	20 ha
Secondary	Dwarsloop	Less than 30 000	Distributor, collector and internal	20 ha
Secondary	Hluvukani	Less than 30 000	Distributor, collector and internal	20 ha

10.2.2.1 Municipal Development Node (SDC)

The areas identified as the Municipal Development Nodes was selected, because of the area’s population size and its location.

10.2.2.2 Second Order SDC

The secondary SDC’s was selected due to the strategic location of the settlements within the proposed development corridors. An area of approximately 20ha should be allocated for the development of a secondary Service Delivery Centre. The intent of the Secondary SDCs is to serve the rural population on the fringes of the Municipal Area.



The exact location of a SDC within a settlement is to be determined during the basic planning of such a facility. However, general guidelines for its location include the following:

- It should be located on a public transportation route.
- Where two major public transport routes intersect, a SDC should be located as close as possible to this intersection.
- It should utilise existing, formal taxi ranks or bus stops, where they exist.
- It should be located on an area with enough vacant land for its development.
- If possible, it should be located adjacent to or in close proximity of existing social facilities. The inclusion of existing formal retail centres, schools, clinics, community halls and other social facilities, will provide core facilities around which the SDC can develop.

**10.2.3 Composition of SDC Social Component**

The composition of the proposed SDCs for the Bushbuckridge Municipal Area has been specifically developed to suite the region and should serve as a guideline for the design and development of these centres.

**Table 5: SDC Social Component**

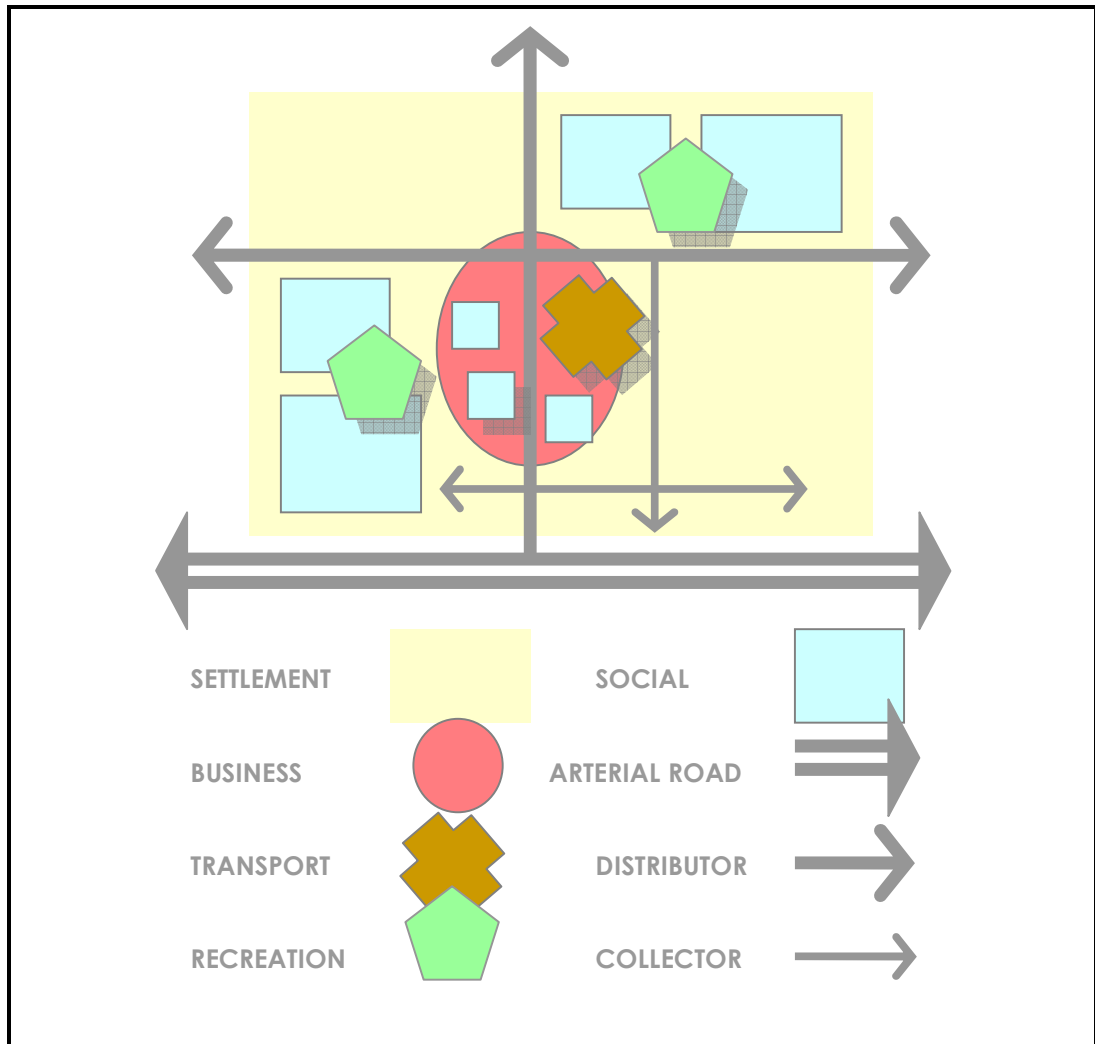
SDC hierarchy	Threshold population	Service radius	Access requirements	Proposed composition
Municipal Development Node	30 000 +	Entire region	Distributor road, collector road and internal street	Various educational facilities such as primary schools, secondary schools and tertiary educational facilities. Other high order community facilities such as a hospital, community hall, police station and post office.
Secondary	Less than 30 000	10 km	Distributor road, collector road and internal street	Community facilities such as a secondary school, a primary school and a small post office.



#### 10.2.3.1 Municipal Development Node (SDC)

A Municipal Development Node provides social services for the Municipal Area as a whole, providing the Municipal Area's higher-order social services. It provides the entire range of social facilities. With regard to educational facilities, the Municipal Development Node should accommodate a number of primary and secondary schools, as well as the region's tertiary educational facilities. With regard to health care, it should provide the region's hospital(s), as well as other highest-order medical facilities. Other social facilities to be provided by this centre include a community hall, library, police station, post office and a large bus and taxi rank. These facilities are all highest-order facilities when compared to similar facilities provided in the Secondary SDC's.





**Figure 12: Generic model of 1<sup>st</sup> order SDC (Source: Rustenburg SDF, April 2005)**

### 10.2.3.2 Secondary SDC

Secondary SDCs provides low-order, day-to-day social services to surrounding agricultural areas and scattered rural settlements. Consequently, it should be located as centrally as possible to the group of rural settlements it serves. A Secondary SDC should comprise a secondary school, a primary school, post office, as well as a small square and bus and taxi stop.



SDCs should be accessible for both vehicles and pedestrians, and should thus be designed in a way that would enhance its accessibility. This accessibility is important, not only because of the type of facilities located in these centres, but also because these centres should act as public transportation termini. Accessibility for vehicles is most important in the case of Municipal Development Nodes, while accessibility for pedestrians is more important in the case of Secondary SDC's.

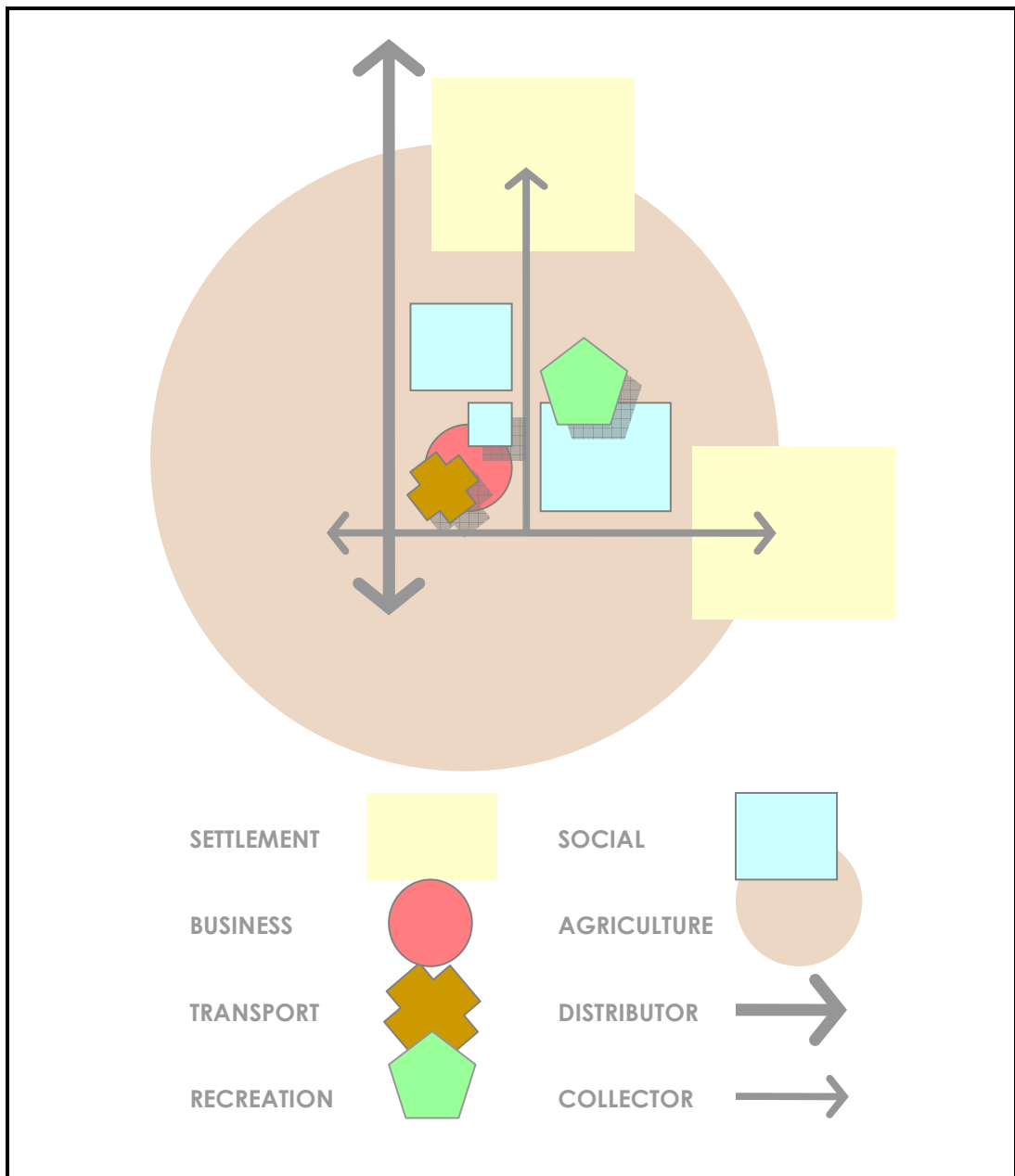


Figure 13: Secondary SDC (Source: Rustenburg SDF, April 2005)



#### **10.2.4 Proposed Social Facilities**

The Spatial Development Framework deals primarily with the spatial aspects of social infrastructure planning and development. The provision of additional social facilities where necessary will be included in the proposed expansion areas of each identified settlement.

According to the Department of Education, the number of schools in an area should relate to the population of the area. The municipal area has 207 primary schools, 112 secondary schools, 4 combined schools and 1 tertiary institution. There are facilities, which are currently not used such as Mapulneng and Hoxane college of Education.

### **10.3 HOUSING & TENURE**

Housing delivery and tenure upgrading is the responsibility of National, Provincial and Local Government. It therefore requires an approach that enables a synergy of ideas and coordinated planning. With regard to the latter, documents such as the Bushbuckridge Integrated Development Plan are relevant. Also to be taken into account are National and Provincial housing policies and programs.

#### **10.3.1 Housing Delivery Options**

Addressing the housing need within the municipal area requires a tailor-made approach, one that uses one or a combination of the 3 phases of housing delivery: the provision of tenure, the supply of essential services, and the construction of top structures.



The provision of tenure basically involves a township establishment process, which includes designing the township layout, drafting and submitting the township application, and surveying the township. The second component, the supply of essential services, is an engineering aspect and involves the design and implementation of engineering services (water, sanitation, electricity and roads). The third component of housing and tenure delivery is the construction of top structures. The construction of the top structures is done through the provision of government subsidies and is normally constructed by private construction companies.

The above three-part housing delivery process can either be dealt with as one process or in separate stages. In other words, it is possible to only provide tenure at one stage, without necessarily having to provide services or housing directly after that. This variation of approaches also commonly distinguishes the two main focus areas of housing and tenure delivery. The first is affordable housing and tenure delivery, dealing with all the mentioned components (tenure, services and housing). The second is informal settlement upgrading, which basically provides tenure and services to existing informal settlements.

### **10.3.2 Housing Strategy Shift**

In the past, national and provincial housing departments decided that the best way to address the housing backlog was to adopt a strategy that was based on chasing numbers: a mass housing approach. Through this approach, houses were built where land could be acquired cheaply and this usually perpetuated urban sprawl. This meant that houses were built further from job opportunities and social amenities, undermining economic viability and environmental sustainability. Also, the quality of the houses was compromised by this approach.

In recent years, realities in the provision of housing have brought about a shift in the housing strategies of provincial and national governments. Now the challenge is to go beyond the simple provision of houses and build communities and create conditions that promote economic viability and environmental sustainability. This



involves building houses on well-located land that is closer to job opportunities and necessary social amenities. Such land typically is located on infill areas within cities.

### **10.3.3 Housing Responsibility**

Clarity on the policy and legislation pertaining to the roles of the National Department of Housing, the Limpopo Department of Housing and Bushbuckridge Local Municipality in delivering housing is necessary to ensure the effective implementation of the housing and tenure delivery within the Bushbuckridge Municipal Area. In part, this is because often a local municipality that has a mandate for delivery either impedes delivery or seeks forms of delivery that run counter the objectives of national and provincial government.

In terms of the Constitution, housing is a function shared by both national and provincial government. Local government has an obligation to ensure that services are provided in a sustainable manner to the communities they govern. But the role of provinces has been revised in Chapter 3A of the National Housing Code to the extent that a municipality should be the first option as developer and that provinces should assist and build capacity to ensure that this role of the municipality is realised. However, the province may take over the developer role when a municipality cannot undertake development due to capacity or other constraints.

Chapter 3A of the National Housing Code states two routes by which a local municipality can contribute to the delivery of housing. These are:

- *Serve as a developer*: This role is based on a project by project assessment, using criteria that have to do with the municipality's capacity to deliver housing.
- *Municipality becomes accredited*: Hereby the subsidy goes to the municipality and the municipality becomes responsible for approving applications for housing subsidies.



While the Housing Act provides many options for the delivery of housing, there is no indication that municipalities should deliver housing. On the other hand, it often turns out that most municipalities do not have the capacity to administer housing projects. The national government and provincial governments, by legislation and other means, must then support and strengthen the capacity of municipalities to manage their own affairs, to exercise their powers and manage their functions. Therefore, while the intended role of province does not include the delivery of housing, in the absence of municipal capacity, the provincial department of housing can serve as a housing developer.

#### **10.3.4 Role of Bushbuckridge Local Municipality**

In terms of the role of local government in housing delivery as defined above, it is proposed that the Bushbuckridge Local Municipality takes upon itself the following tasks:

- *Develop a housing strategy:* It is generally accepted that a Local Municipality should have a clear housing policy. It is also a legal requirement. In addition, the Municipality will not be able to achieve tangible, longer-term deliverables as long as there is no clear and coordinated housing approach in place.
- *Initiate Housing and Tenure Delivery programmes:* The Municipality should manage affordable housing and tenure delivery within its area of jurisdiction. To do this, they will need to act within the framework of the Municipal Housing Strategy and Spatial Development Framework.
- *Develop responsive management through partnerships:* In order to develop responsive management, the Municipality will have to focus on developing a partnership approach. These partners must include the private sector, local communities and provincial government.



### **10.3.5 Affordable Housing Provision**

The housing strategy shift of provincial and national government has placed the accent of housing development on the location of affordable housing projects. Such housing projects can no longer be located according to the widest and most basic criteria, but should now adhere to very specific criteria, even if it implies sacrificing certain advantages. For example, housing development should promote urban consolidation, which often involves allocating well-located, expensive land rather than allocating cheap land on the outskirts of the Municipal Area. Based on this new approach, the following criteria for the location of affordable housing projects are presented:

#### **10.3.5.1 Availability of Bulk Services**

Affordable housing projects are reliant on access to bulk municipal services. These include water, sewer and electricity bulk infrastructure, of which access to bulk water infrastructure is the most important. As a rule, bulk municipal services are available in or next to existing urban areas. This favors infill development as the primary option for affordable housing development and opposes urban sprawl as a form of urban development.

#### **10.3.5.2 Ownership of Land**

The ownership of land determines the timeframe and cost of affordable housing projects. Land already in ownership of the municipality avoids the tedious and expensive purchase and transfer of private owned land for affordable housing development. However, in light of creating sustainable communities, land ownership should be view in context of the other criteria set out in the section of the SDF.



#### 10.3.5.3 Access to Social Amenities and Economic Opportunities

Affordable housing projects should be located in a manner that will ensure that these settlements will have reasonable access to social amenities and economic opportunities. This will imply that affordable housing projects should be located close to existing social and economic nodes or close to planned socio-economic nodes.

#### 10.3.5.4 Access to Public Transportation

Households that live in affordable housing units are typically dependant on public transport and walking as their mode of transport. It is therefore imperative that affordable housing project be located next to public transport routes (bus and taxi). This is necessary for to obtain access to the social amenities and economic opportunities, as was mentioned in the previous paragraph.

To achieve the abovementioned, affordable housing can be placed in a strip along public transport routes, with a mix of land uses and housing typologies preferably located at the intersections of such roads. The aim is to place higher-density land uses, such as affordable housing, in a strip abutting these public transport routes and in so doing, increasing access to the public transportation systems operating on these routes.

#### 10.3.5.5 Integration of Urban Structure

When locating new housing developments, the chosen areas should always be measured against the extent in which they contributes to the establishment of integrated, economically viable and sustainable communities. Practically, this





involves promoting infill development, instead of allowing urban sprawl to continue unabated.

#### 10.3.5.6 Located within Urban Edge

This criterion is closely related to the aforementioned criterion proposing urban integration. In order to obtain urban integration and limit sprawl, it will be necessary to adhere to the urban edge. No affordable housing projects must be developed outside the boundaries of the urban edge.

#### **10.3.6 Upgrading of Informal Settlements**

With the exception of land ownership, the same criteria for developing affordable housing projects apply to selecting and prioritizing informal settlement upgrading projects. If an existing informal settlement does not adhere to most of the criteria set out above, it is suggested that serious consideration should be given to the relocation of such a settlement. In this regard, the urban edge is of specific importance. For example, if an informal settlement were to establish in an ecologically sensitive area outside the urban edge, the relocation of this settlement to an area within the urban edge should be seriously considered.

### **10.4 OPEN SPACE AND RECREATION**

Open space and recreation within the Municipal Area can be divided into 2 categories: passive and active open space. Proposals with regard to the Municipal Area are therefore made according to these 2 categories.

#### **10.4.1 Passive Open Space**



Passive open space normally consists of land that is unsuitable or undesirable for urban development due to certain topographical or ecological elements. Due to these elements, a passive open space system also fulfils very specific functions, such as

- Hazard avoidance (flood prone areas)
- Resource conservation (conserve indigenous vegetation)
- Social and Recreational purposes

#### **10.4.2 Active Open Space**

Active open space involves the recreational component of the open space system. It provides sport facilities at settlements for use by the local clubs and schools. Correctly located, well-developed and maintained recreation facilities can be an asset for the people of the Bushbuckridge Municipal Area. Such facilities can fulfill the following functions:

- *Social:* Recreation facilities should be venues for social interaction and symbols of community identity. Sport events can become a facilitator of social interaction within a community.
- *Psychological:* Recreation improves the physical and mental health of communities, because it provides space within built-up areas that can be used to relieve people of the stresses of everyday living.
- *Educational:* Recreation is an integral part of the education of school children. The development of well-equipped and designed recreation facilities can be used to enhance the sport education of children.
- *Economic:* Recreation facilities can contribute to the economic development of a community. For example, income can be generated from entrance fees charged at sport matches and secondary spin-offs can be obtained by



businesses surrounding the recreation facilities, providing goods and services to visiting spectators.

### **10.4.3 Principles for Active Open Space**

Formulating development principles for active open space can help ensure that standards of quality and usefulness are achieved in the planning, design and management of active open spaces. The main development principles that need to be taken into account when developing an active open space system for the Bushbuckridge Municipal Area is as follows:

#### **10.4.3.1 Costs Involved in Development and Maintenance**

An important factor in determining the number and size of active open spaces mainly relates to the development and maintenance costs thereof. In other words, the number of active open spaces that are developed should not exceed the budget available to develop such open spaces. Also, there must be sufficient funds to maintain these open spaces over the long run.

Past experience has proved that active open spaces that are not fully developed and maintained often lose their practical value to local residents. Therefore, it is argued that smaller and fewer active open spaces that are reasonably developed and maintained are far more useful than a large number of active open spaces that are not. The minimum number of active open spaces that create a sustainable active open space system should therefore be provided.

#### **10.4.3.2 Type of Facilities Provided**

When planning active open spaces, it is important that appropriate recreation facilities are provided. Often recreational facilities are provided that do not fulfill the needs of the community, usually because they are not the preferred



recreational types. To prevent the provision of inappropriate recreational facilities, the recreational preferences of a local community must be established before planning and developing a recreational facility.

On the other hand, communities often do not participate in certain recreation types, simply because they never had the facilities to learn and participate in the sport. Cricket can be cited as an example. In such cases, two principles should be followed when providing such facilities. Firstly, such facilities should only be provided at the municipal development nodes to ensure that there are enough people within the service area of the facility that would want to learn and participate in the sport. Secondly, these sport facilities should share facilities with the more popular sports. For example, cricket should be played on combined soccer fields or a soccer field should double as a rugby field.

#### 10.4.3.3 Accessibility of Active Open Spaces

When locating active open spaces, it is important to ensure that they are accessible to the larger community. Various criteria apply when locating active open spaces. For example, if a higher order active open space serves a settlement cluster, this open space should be located within the largest and most central settlement of the cluster, so that this active open space is located within walking distance of the largest portion of the population of the settlement cluster. The settlements that do not have access to such an active open space should be linked by means of an efficient transport route with settlements that does. It is also advisable that an active open space be centrally located within a settlement and not on its fringe, to ensure the continued presence of people in the vicinity of such a facility to protect it from vandalism.

#### 10.4.3.4 Urban Form and Function

Active open spaces should also form part of the land use structure of the proposed Service Delivery Centres (SDCs). By doing this, the focal function of a SDC is



enhanced. It is also important that the mentioned focal function be enhanced through the appropriate design of these active open spaces. For example, the planting of trees and landscaping along the periphery of an active open space will enhance the identity and attractiveness of the open space.

If active open spaces are integrated through design with the other facilities within a SDC, it will enhance the usage of these open spaces and enhance the viability of the other land uses the SDC. For example, if an active open space that contains recreation facilities are located next to schools, it would automatically be accessible and available to the schools for use during the week. Placing it close to a retail facility will ensure that during weekend sports events, spectators will have easy access to local businesses, thus benefiting the local economy.

## 10.5 ECONOMIC ACTIVITY

### 10.5.1 Business

Economic activities should be concentrated, rather than dispersed in order to stimulate the viability of these activities. To achieve this, economic activity should be concentrated in the hierarchy of Service Delivery Centres as proposed. The proposed size and composition of the retail and office components of these centres are depicted in the Table below.

**Table 6: SDC Retail and Office Composition**

SDC hierarchy	Trade area	Threshold population	Access requirement	Composition
Municipal Development Node	Entire municipal area	30 000 +	Distributor road, collector road and internal street	Large supermarkets Large clothing stores Entertainment and restaurants Entire range of services
Secondary	Rural Settlements	10 000 – 30 000	Distributor road, collector road and internal street	A supermarket 1 or 2 convenience stores A small office complex



#### 10.5.1.1 Municipal Development Node

A municipal SDC can develop a strong business and office component. This retail component should provide the entire range of consumer goods and services. It could include 2 or 3 large supermarkets, large clothing stores, entertainment venues and restaurants, the full range of services and large-scale offices.

#### 10.5.1.2 Secondary SDC

A Secondary SDC may require a supermarket and one or two convenience stores, providing only day-to-day consumer goods. The office capacity of such a centre can cater for a small-size office complex.

### **10.5.2 Tourism**

There is a strong international tendency towards nature-linked tourism. Research has indicated that international tourists prefer nature-linked tourist destinations in South Africa and that wildlife, followed by natural beauty, are the most popular attractions. Among South Africans nature-linked tourism, which includes nature reserves, wildlife parks, and wilderness areas, is also popular.

The Bushbuckridge Municipal area is located in close proximity of a number of national and internationally recognized tourist destinations such as the Kruger National Park (one of the main tourist destinations). The level and range of tourism attraction within the Municipal area is not at the same level as these internationally recognized destinations. Tourism has the potential to play a large part in the economy of the region.



## 11 LOCAL SPATIAL DEVELOPMENT FRAMEWORKS

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The Local Spatial Development Frameworks deal with a number of individual settlements or settlement clusters within the Municipal Areas. The proposals made for the spatial development of these settlements or settlement clusters have been informed by the proposals contained in the Municipal Level Spatial Development Framework and various workshops held with the relevant communities. The following areas were identified for future residential development and as such local Spatial Development Frameworks have been developed for each:

- Mkhuhlu
- Casteel
- Acornhoek
- Dwarsloop
- Kildare B
- Hluvukani
- Thulamahaxi
- Maviljan (Bushbuckridge)
- Marite
- Lilydale
- Angincourt
- Shatale
- Arthur Stone



## **11.1 MKHUHLU LSDF**

### **11.1.1 Transportation**

Mkhuhlu is located on the southern boundary of the municipality and adjacent to the railway line that bisects the municipality from south to north. This railway line forms the Primary Rail Transport Corridor for the municipality. Access to Mkhuhlu settlement is by means of a road classified as other access route. Mkhuhlu have been identified as a sub-distribution transportation hub within the Municipal Area.

Mkhuhlu has a relative good defined collector road network, providing linkages to the access route to the Secondary road. This encourages land use and transportation integration and contributes to accessibility, especially access to local community facilities. However a new collector road has been proposed for the expansion area, which is illustrated on the attached map. The aim of this collector road alignment is to link the various existing residential areas with the proposed future expansion area.

### **11.1.2 Residential**

Mkhuhlu is a formal town and therefore has a formal residential structure. Mkhuhlu should be extended in a southern direction up to the river that forms a natural boundary for the development. This locality also places this settlement close to the Ngwenyameni River and the urban agriculture opportunities it provides.

### **11.1.3 Economic Activity**

Mkhuhlu have been identified as one of the five Secondary Service Delivery Centres of the Bushbuckridge Local Municipality. Mkhuhlu already suffice to the proposed





composition of a Secondary SDC. According to the Census 2001 approximately 46% of the community of Mkhuhlu is employed in the Community and Social Services sector.

It is proposed that most of the retail and office growth potential for Mkhuhlu, be distributed amongst the 2 community nodes proposed for the area.

#### **11.1.4 Social Amenities**

Mkhuhlu have a well-developed social infrastructure evenly distributed through the settlement, with two primary schools and two secondary schools. There is also a police station and a post office in the settlement.

#### **11.1.5 Open Space**

Mkhuhlu is structured by a number of open space elements. These include a number of perennial rivers and hills. These environmental features need to be protected by the Municipal open space system.



**INSERT MAP 17:**  
**Mkhuhlu**



## **11.2 CASTEEL LSDF**

### **11.2.1 Transportation**

Casteel forms part of the Primary Road Transport Corridor and is bisected by the R40 that forms the specified Corridor.

Casteel has a good defined collector road network, providing linkages to the Primary Road Transport Corridor. This encourages land use and transportation integration and contributes to accessibility, especially access to local community facilities. A new access collector road is being proposed within the identified future expansion area located to the northeast of the existing settlement of Casteel.

### **11.2.2 Residential**

Casteel is also a formal town and therefore has a formal residential structure. Future expansion of Casteel is proposed to the northeast of the existing village.

### **11.2.3 Economic Activity**

According to Census information 20% of the community of Casteel is employed within the Wholesale and Retail Sector and 30% employed in the Community and Social Services Sector. Casteel has also been identified as a Service Delivery Centre. It is suggested that future business development must be focused to the proposed community node within the future expansion area.



#### **11.2.4 Social Amenities**

Casteel is spatially well serviced by educational facilities and other social infrastructure facilities such as medical facilities. Three primary schools, two secondary schools and one commercial school are serving Casteel.

#### **11.2.5 Open Space**

Due to topographical constraints Casteel has numerous of passive open spaces located through the whole settlement. Casteel also has an active open space located in the central portion of the settlement that is being utilized as a soccer field.

### **11.3 ACORNHOEK LSDF**

#### **11.3.1 Transportation**

The settlement of Arconhoek is located on the northern boundary of the Bushbuckridge Municipality and adjacent to the Primary Road Transport Corridor (R40). The Primary Rail Transport Corridor and the Secondary Transport Corridor links up with the Primary Road Transport Corridor in Arconhoek. The northern more formalized part of Arconhoek has a well defined internal road network. Some new collector roads have been proposed for the expansion area of Arconhoek, linking the northern section of Arconhoek directly with the R40.



**INSERT MAP 18:  
Casteel**



**INSERT MAP 19:**  
**Acornhoek**



### **11.3.2 Residential**

The area proposed for future development of Arconhoek is located to the east of the existing settlement up to the Arterial road (R40).

### **11.3.3 Economic Activity**

Arconhoek have been identified as a Municipal Development Node (SDC). The current location of business in Arconhoek is concentrated along the Secondary Transport Corridor. Future business development should be concentrated to the proposed community node within the proposed expansion area.

### **11.3.4 Social Amenities**

The settlement of Arconhoek has a spatially well developed Educational infrastructure, including seven primary schools, three secondary schools and one Technical College, however Arconhoek do not have a Postal Office.

### **11.3.5 Open Space**

The layout of Arconhoek is constrained by various natural features. These features form passive open space areas throughout the whole settlement. There are five active open space areas (Soccerfields) within the settlement which is distributed evenly through the settlement.



## **11.4 DWARSLOOP LSDF**

### **11.4.1 Transportation**

Dwarsloop is accessed via road R40, which is the central spine of Primary Road Transportation Corridor. Dwarsloop has also been identified as a sub-distribution hub for the transport system within the Municipal Area. A new collector road have been proposed linking Dwarsloop and Xanthia, this road will greatly promote interaction between these settlements.

Residential

The proposed expansion area for future development has been identified on the area between Dwarsloop, Xanthia and Arthur Stone, linking these three settlements. Two portions on the eastern side of Dwarsloop have been identified as infill areas (densification), this process have a positive influence regarding the cost in provision of water, sanitation and electrical infrastructure.

### **11.4.2 Economic Activity**

Dwarsloop have been identified as a secondary SDC, it already suffice to the educational conditions of and Secondary SDC except for the lack of a post office. Accoring to the census information just over 50% of the employed commuity are working in the Community and Social infrastructure sector.

### **11.4.3 Social Amenities**

According to the spatial distribution of the available educational facilities, Dwarsloop has a sufficient provision of educational and health facilities. There are however no postal facilites.





**INSERT MAP 20:  
Dwarsloop**



#### **11.4.4 Open Space**

The settlement of Dwarsloop has three sport facilities (active open space areas) and several passive open space areas due to natural development constraints and the lack of concentration of development activities. Passive open space areas that have no environmental value must be in filled.

### **11.5 KILDARE B LSDF**

#### **11.5.1 Transportation**

Kildare B is located adjacent to the railway line that forms the spine of the Primary Rail Transportation Corridor. Access to Kildare B is by means of the Secondary Road that links Kildare B and Lillydale with the Primary Road Transportation Corridor (R40). A new collector road has been proposed for the expansion area located east of the railway line. Usually a railway line is seen as a development constraint, but in this case the lack of available land necessitated the usage of the available land across the railway. For safety reasons it is proposed that an overhead bridge be constructed to separate the rail traffic from the road traffic and pedestrians.

#### **11.5.2 Residential**

Future residential development will be accommodated in the identified expansion area. Residential development must also be concentrated to reduce the cost of service delivery and must be restricted to the proposed areas to limit urban sprawl.



**INSERT MAP 21:  
Kildare B**



### **11.5.3 Economic Activity**

A Secondary SDC is proposed for Kildare B. This SDC should preferably be located next to existing community facilities to strengthen its viability, but also in close proximity to the main road to increase access to the SDC.

### **11.5.4 Social Amenities**

The spatial distribution of the Social Infrastructure within Kildare B indicates that it has a sufficient provision of infrastructure, expect however a post office.

### **11.5.5 Open Space**

There is a lack of active open space areas within Kildare B and only limited passive open space areas. Future planning of within settlement must take the lack of open space into account and make sufficient provision for these areas. Kildare A which is adjacent to Kildare B (500m) however have two soccer fields, thus a feasibility study must first be done before another sport facility are developed within Kildare B to establish the need for such a facility and to ensure the availability of funds to fully develop and maintain the facility.

## **11.6 HLUVUKANI LSDF**

### **11.6.1 Transportation**

Hluvukani is located in the northeastern portion of the municipality and has been identified as one of the five sub-distribution hubs within the municipality. Hluvukani forms the eastern boundary of the northern Secondary development corridor that



links Arconhoek and Hluvukani. The main access to Hluvukani is by means of the Secondary road that forms the spine of the afore mentioned corridor. Hluvukani has a well-developed internal road network except for the eastern informal area. A new collector road has been proposed for this area as well as a new collector road for the proposed expansion area.

### **11.6.2 Residential**

The eastern informal area of the settlement is being proposed for infill. Further future residential development will be accommodated on the southwestern side of the settlement within the proposed expansion area. It is important that future development be kept within the urban edge thus preventing urban sprawl and the high cost of infrastructure installation.

### **11.6.3 Economic Activity**

Due to the spatial location of Hluvukani, it has also been identified as a Secondary SDC intended to serve the surrounding communities. It is proposed that a supermarket be developed within this settlement to better serve the needs of the local community. As is the case with large number of other settlement the largest part of the employed community for part of the Community and Social Services Sector (40%).

### **11.6.4 Social Amenities**

Currently the community of Hluvukani is being served by three Primary Schools, four Secondary Schools, a Satellite Police Station and a Health care centre. Hluvukani itself is thus has a well developed social infrastructure, however the needs of the surrounding communities must be taken into account to determine possible future social facility needs.



**INSERT MAP 22:  
Hluvukani**



### **11.6.5 Open Space**

The layout of Hluvukani made provision for a number of passive open space areas, but however no active open spaces have been provide for recreational purposes. It is proposed that the future extension planning must include the provision of a sport facility.

## **11.7 THULAMAHAXI LSDF**

### **11.7.1 Transportation**

Access to Thulamahaxi is by means of the Secondary road that links Maviljan with Thulamahaxi and then runs up to Acornhoek to link up again with the R40. The protion of the road between Maviljane and Thulamahaxi forms the spine of the Secondary Trasnport Corridor located in the centre portion of the municipality. A new collector road have been proposed to serve the expansion area and link Thulamahaxi and Rolle.

### **11.7.2 Residential**

Thulamahaxi is a formal town and therefore has a formal residential structure with a well-developed internal road network. Thulamahaxi should be extended in an eastern direction up to Rolle settlement.

### **11.7.3 Economic Activity**

The current tendency of business is to locate adjacent to main access road to New Forest A, this must be promoted but kept to the central portion of town to form a



central business district (CBD) within Thulamahaxi. Thulamahaxi is also served by a shopping complex located opposite the crossing of the two main access roads. This area has also been identified along with Arconhoek and Bosbokrand as a Municipal Development node. Future business development must be focus to the proposed CBD area or to the shopping complex, when the need arise for additional business space it must be provided at the proposed community node within the expansion area.

#### **11.7.4 Social Amenities**

Thulamahaxi has a well-developed social infrastructure, including a post office, police station, four primary schools and two secondary schools, as well as health facilities and numerous church denominations.

#### **11.7.5 Open Space**

There are three sport and recreation facilities located within Thulamahaxi, which includes to soccer stadium and a showground. As indicated in the previous section the Municipal Development node is the ideal location to promote other types of sports such as cricket and rugby, these sports can use current soccer fields and thuds reduce the development cost. The current trend throughout the municipality is only soccer stadiums and soccer fields this can be attributed to the lack of knowledge of other sport types. But it is important that other sport types be introduce to the community.





**INSERT MAP 23:  
Thulamahaxi**



## **11.8 MAVILJAN LSDF**

### **11.8.1 Transportation**

Access to Maviljan is by means of the R40 that also forms the spine of the Primary Road Transportation Development Corridor. The southern and northeastern sections of Maviljan has a well developed internal road network, the northern section however are located adjacent to the R40 but lack a collector road. Another new collector road is proposed for the future expansion area located on the western side of the existing settlement.

### **11.8.2 Residential**

The area proposed for the expansion of Maviljan is located on the western side of the existing village between Maviljan and London. However it is proposed that the existing residential areas be densified specifically the area opposite the show grounds.

### **11.8.3 Economic Activity**

The Primary Road Transport Development Corridor bisects Maviljan thus increasing the traffic volumes through the settlement. The current businesses are largely located adjacent to this road within Maviljan A. This area must be developed as a Central Business District and incentives must be provided to business owners to locate in this specified area, when this area is filled new businesses must be focused to the proposed community node.



**INSERT MAP 24:**  
**Maviljan**



#### **11.8.4 Social Amenities**

Maviljan has a well-developed social infrastructure including Health Facilities, six primary schools, two secondary schools and Mapulaneng College.

#### **11.8.5 Open Space**

The only active open space within Maviljan is the show grounds located on the western boundary of the settlement. It is proposed that the planning of the expansion area should include a sport stadium. On the other hand the layout of Maviljan due to topographical constraints made provision for passive open spaces throughout the whole settlement.

### **11.9 MARITE LSDF**

#### **11.9.1 Transportation**

Marite is located in the most southwestern part of the Bushbuckridge Local Municipality. The Primary Road Transport Corridor identified for the municipality start in Marite and runs through the village up to the far northern areas of the municipality. The R40 that forms the Corridor is also the main access route to Marite. Marite has a well developed internal road network, however new collector roads is proposed for the identified future expansion area.



**INSERT MAP 25:**  
**Marite**



### **11.9.2 Residential**

Marite has a relative formal layout that stretches mainly along the R40. The current layout lends itself to the possibility of densification. This possibility must first be investigated before residential expansion continues within the proposed new area situated adjacent to the far northern boundary of Marite and stretches up to Bosbokrand and Maviljan. The densification option has large cost benefits regarding the installation of bulk services..

### **11.9.3 Economic Activity**

Because of Marite's ideal location regarding the Primary Road Transport Corridor the economic possibilities within the area is endless. Currently the economical infrastructure within the settlement is poorly developed and the possibilities not exploited to its full potential. Incentives must be developed for business owners to locate to this area. Business development must however preferably be kept to a centralized area along the R40.

### **11.9.4 Social Amenities**

The area has a well-developed social infrastructure that is evenly distributed through the settlement. The social facilities include four secondary schools and five primary schools.

### **11.9.5 Open Space**

The layout of Marite made provision for several of passive open space areas, some of these areas could be utilized for development through the proposed densification process. However areas with environmental value must be preserved.



There are also two active open space areas within Marite located east and west of the settlement respectively.

## **11.10 ARTHUR STONE LSDF**

### **11.10.1 Transportation**

Arthur Stone is located within the central area of the municipality east of the Primary Road Transport Corridor. Access to the area is by means of the central Secondary Transport Corridor that links up with the Municipal Development Node identified at Thulamahaxi. A new collector road have also been proposed for the expansion area located on the area between Arthur Stone and Orinoco A. The proposed collector will directly link Arthur Stone with Orinoco A.

### **11.10.2 Residential**

Because Arthur Stone is already relatively densified, new housing developments should be located within the identified expansion area. The expansion should however start from the boundary of the settlement and systematically fill the area.

### **11.10.3 Economic Activity**

It is proposed that all new business developments must be located at the proposed community node as indicated on the attached map. The current business activities within Arthur Stone is distributed at various locations within the settlement, it is proposed that further business development within the existing settlement be restricted to the area across from the existing sports facilities of Buyizonto Primary School.



**INSERT MAP 26:  
Arthur Stone**





#### **11.10.4 Social Amenities**

The area has a well developed social infrastructure that is evenly distributed through the settlement. The social facilities include two secondary schools, three primary schools and a post office.

#### **11.10.5 Open Space**

Arthur Stone has several passive open space areas and one active open space area (sport ground). This facility however is a school facility and it is proposed that the development of the expansion area must include a sport stadium.

### **11.11 SHATALE LSDF**

#### **11.11.1 Transportation**

Shatale is located approximately 2km east of the R40 and adjacent to Dwarsloop. Shatale has a well developed internal road network, but is limited in available land for future expansion. It is proposed that future development be done on the area adjacent to London approximately 400m east of Shatale. A new collector road is identified for this expansion area.

#### **11.11.2 Residential**

The northern portion of Shatale has been identified for in-situ upgrading and it is proposed that portions of the northeastern part of the settlement as indicated on the attached map be in-filled. Both these processes have a positive impact on the cost implications of installing bulk services. Due to limited land available for



development adjacent to Shatale the expansion area have been identified adjacent to London, 400m east of Shatale.

### **11.11.3 Economic Activity**

Businesses within Shatale is currently very limited, the area east of the existing soccer field however lends it self to the development of a Central Business Centre that can also serve the settlements of London and Violet Bank as well as the proposed expansion area.

### **11.11.4 Social Amenities**

The current social infrastructure within Shatale includes three primary schools, three secondary schools and a post office. These facilities are distributed evenly through the settlement to ensure easy access.

### **11.11.5 Open Space**

There are two active open spaces provided within Shatale, these areas are both used as soccer fields. The topographical constraints within the centre portion of the settlement ensured that the layout made provision for passive open spaces within this area.



**INSERT MAP 27:**  
**Shatale**



## **11.12 LILYDALE LSDF**

### **11.12.1 Transportation**

The settlement of Lilydale is located within the southwestern portion of the municipality. Access to Lilydale is via the secondary road that bisects the municipality from west to east and links Lilydale, Kildare and Cunningmoor with the Primary Road Transport Corridor (R40). This secondary road forms the spine of the southern Secondary Transport Corridor. A new collector road is proposed for the identified expansion area and also forms a direct link between the northern sections of Lilydale with the southern section.

### **11.12.2 Residential**

The southwestern part of Lilydale should be densified (in-fill) before future residential development is done within the proposed expansion area located adjacent to the south eastern border of the existing village. Future layout planning must be done as densely as possible to reduce the cost of installation of bulk services such as electricity, water and sanitation.

### **11.12.3 Economic Activity**

The businesses currently located within Lilydale are distributed through out the whole settlement. It is proposed that future business development be concentrated to the central portion of Lilydale, adjacent to the main access road. According available census information 50% of the employed population within Lilydale are working in the Wholesale and Retail and Community and Social Services sectors.



**INSERT MAP 28:**  
**Lilydale**



#### **11.12.4 Social Amenities**

Lilydale has a well developed social infrastructure, including a clinic, post office, two primary schools and a secondary school. The Lilydale clinic is located within the centre portion of the settlement adjacent to the main access road thus ensuring easy access for both pedestrians and vehicles

#### **11.12.5 Open Space**

No provision have been made for active open space areas (sports grounds) within Lilydale and it is proposed that future planning must make land available to be utilized as an active open space. Because of the limited size of the settlement the surrounding passive open spaces are more than sufficient.

### **11.13 ANGINCOURT LSDF**

#### **11.13.1 Transportation**

The main access road to Angincourt is the secondary road that links Merry Pebble Stream with Ireagh. This road also provides access to Angincourt to the central Secondary Transportation Corridor. Angincourt has a relatively well developed internal road network, however a new collector road is proposed for the expansion area.



## **INSERT MAP 29: Angincourt**



### **11.13.2 Residential**

The expansion area for the future development of Angincourt is located on the eastern boundary of the settlement adjacent to the newly developed RDP houses. This proposed area will for a link between Angincourt and Newington.

### **11.13.3 Economic Activity**

The current location of existing businesses seems to be focus around the main intersection situated on the eastern section of the settlement. This business focus area is well situated regarding road traffic but negatively towards pedestrians that has to walk the length of the settlement to access these facilities.

### **11.13.4 Social Amenities**

The current social infrastructure within Angincourt includes a primary school, three secondary schools and a clinic. The over provision of secondary schools can be attributed to the central location of Angincourt regarding the surrounding smaller settlements such as Newington, Croquetlawn, Merry Pebble Stream and Xanthia.

### **11.13.5 Open Space**

There are currently no active open spaces provided within Shatale. It is proposed that future planning must make land available to be utilized as an active open space. Several passive open spaces are located throughout Angincourt.