MAGARENG LOCAL MUNICIPALITY

SPATIAL DEVELOPMENT FRAMEWORK

2014 - 2019

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ACSA	Airports Company South Africa.
Agenda 21	Agenda 21 is an international, adopted by more than 178 governments, to put sustainable development into practice around the world. It emerged from the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992.
ASGISA	Accelerated and Shared Growth Initiative for South Africa.
Astronomy reserve	The Astronomy Geographic Advantage Act 21 of 2007 protects 12.5 million hectares in the Northern Cape as a radio astronomy reserve to ensure the future of radio astronomy in the region. This is a protected area for the SKA and MeerKAT initiatives with strict controlling regulations, and is also referred to as the Karoo Central Astronomy Advantage Area. The Astronomy Geography Advantage Act 21 of 2007 prevents the establishment of future sources of radio frequency interference (RFI), and provides for the removal or attenuation of existing RFI sources.
BEE	Black Economic Empowerment
Biodiversity	It is an abbreviation of "biological diversity" which is described as the mix of species in an ecosystem that enables the system both to provide a flow of ecosystem services under given environmental conditions, and to maintain that flow if environmental conditions change. The loss of biodiversity limits the resilience of the affected ecosystem, which in turn, may have direct negative socio-economic implications. Furthermore, biodiversity is the degree of variation of life forms within a given ecosystem, biome, or an entire planet. Biodiversity is one measure of the health of ecosystems, and life on earth today consists of many millions of distinct biological species.
Biodiversity Hotspot	A biodiversity hotspot is a biogeographic region with significant reservoir of biodiversity that is under threat from human interventions. To qualify as a hotspot, a region must meet two strict criteria: **1.** It must contain at least 1 500 species of vascular plants (less than 0.5 percent of the world's total) as endemics. **2.** It has to have lost at least 70 percent of its original habitat.
Biological resources	Includes genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual, or potential, value for humanity.
Bioregional planning	Land use planning and management that promotes sustainable development by recognizing the relationship between, and giving practical effect to, environmental integrity, human well-being and economic efficiency within a defined geographical space, the boundaries of which were determined in accordance with environmental and social criteria.

Biosphere reserve	An area of terrestrial and coastal/marine ecosystems, or a combination thereof, which is internationally recognized within the framework of the UNESCO's MAB Programme. Each biosphere reserve is intended to fulfill three basic functions, which are complementary and mutually reinforcing: 1. A conservation function – to contribute to the conservation of landscapes, ecosystems, species and genetic variation; 2. A development function – to foster economic and human development which is socio-culturally and ecologically sustainable; 3. A logistic function – to provide support for research, monitoring, education and information exchange related to local, national and global issues of conservation and development.
CARA	Conservation of Agricultural Resources Act 43 of 1983.
CASP	Comprehensive Agriculture Support Program.
Catchment or catchment area	The entire drainage area from which water flows into a or other water body. Also known as a watershed, it is an extent or area where surface water from rain and melting snow or ice converges to a single point, usually the exit of the basin, where water joins on other water body such as a river, lake, reservoir, estuary, wetland, sea or ocean. Generally consisting of various smaller 'quaternary' catchments, or 'sub-catchments'.
CBA	Critical Biodiversity Areas
CBD	Central Business District
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
COGHSTA	Department of Cooperative Governance, Human Settlements and Traditional Affairs.
Conservancy	A group of farms, or natural areas, on which the landowners have pooled some, or all, of their resources for the purpose of conserving natural and cultural resources on the combined properties. These resources include wildlife and their habits, indigenous vegetation, forests, catchments, sites of geological and archaeological importance, and generally undisturbed natural and scenic landscapes.
Conservation	The management of human use of the biosphere to yield the greatest benefit to present generations while maintaining the potential to meet the needs and aspirations of future generations. Conservation thus includes sustainable use, protection, maintenance, rehabilitation, restoration, and enhancement of the natural and cultural environment.
Constitution	Constitution of the Republic of South Africa Act 108 of 1996.
CPPP	Community Public Private Partnerships are defined as a contract between a public sector institution/municipality and a private party, in which the private party assumes substantial

	financial, technical and operational risk in the design, financing, building and operation of a project.
CRDP	Comprehensive Rural Development Program.
Critical Regionalism	Critical regionalism constitutes a sensory understanding and appreciation of the environment and its component 'things'. Critical regionalism recognizes the quality and attributes of regional characteristics and builds upon the development of regional idiosyncrasies and variations. It is based on five basic principles or senses that should guide the planning, design and management of development, namely sense of place, sense of history, sense of craft, sense of nature and sense of limits.
CSIR	Council for Scientific and Industrial Research.
CSP	Concentrating Solar Power.
DBSA	Development bank of Southern Africa.
DEA	Department of Environmental Affairs.
DEAT	Department of Environmental Affairs and Tourism.
Developmental State	A development state tries to balance economic growth and social development. It use State resources and State influence to attack poverty and expand economic opportunities.
DNA	Designated National Authority.
DPLG	Department of Provincial and Local Government.
DRDLR	Department of Rural Development and Land Reform.
DTI	Department of Trade and Industry.
DWA	Department of Water Affairs.
DWAF	Department of Water Affairs and Forestry.
ECA	Environmental Conservation Act 73 of 1989.
Ecosystem	A dynamic system of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.
EEZ	Exclusive Economic Zone: Is a sea zone over which a state has special rights over the exploration and use of marine resources, including production of energy from water and wind.
EIA	Environmental Impact Assessment.
EIP	Environmental Performance Indicators.
EMF	Environmental Management Framework.
EMP	Environmental Management Plan.

EMPR	Environmental Management Program Report.
EMS	Environmental Management System.
Endemic species	Any plant or animal species confined to, or exclusive to, a particular, specified area.
Environment	The surroundings within which humans exist and that are made up of: a) The land, water and atmosphere of the earth; b) Micro-organisms, plant and animal life; c) Any part or combination of (a) and (b) and the interrelationships among and between them; and d) The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.
Eskom	Eskom is a South African electricity public utility, and is the largest producer of electricity in Africa, and is among the top seven utilities in the world in terms of generation capacity and among the top nine in terms of sale.
ESSP	Environmental Sector Skills Plan: It is an initiative of the Department of Environmental Affairs and describes the current status quo with regard to demand and supply of environmental skills, and provides the best available information on scarce and critical skills in the sector at present from a supply and demand perspective. It also identifies new trends influencing skills development needs in the sector (e.g. new socio-ecological issues and directions, such as climate change; mainstreaming of environment into development; new science and technology directions in South Africa; and the green economy). It further provides guidance on improving environmental sector skills development planning and implementation within the national education, training and skills development system. It sets objectives for Human Capital Development Strategic Planning for the Environmental Sector, and provides guidelines for Human Capital Development Planning.
Extensive Agriculture	Is an agricultural production system that uses small inputs of labour, fertilizers, and capital, relative to the land area being farmed.
FEPA	Freshwater Ecosystem Priority Area.
Fracking	Hydraulic fracking, also called 'fracking', is part of the process to exploit shale gas reserves which are locked in underground rock formations. To access these reserves which are locked in underground rock formations. To access these reserves, fluid is pumped down a drilled channel (well) into the gas bearing rock at very high pressures. This causes the rock to fracture, creating fissures and cracks through which the gas can 'escape'. The fracturing liquid generally consists of mainly water, mixed with sand and chemicals. Environmental concerns pertaining to the fracking process are that it brings a significant risk of contamination to valuable water resources and fracking uses huge volumes of water.

GAP Housing	Gap housing is a term that describes the shortfall, or 'gap' in the market between residential units supplied by the Sate (which cost R100 000 and less) and houses delivered by the private sector (which are not less than R250 000). The gape housing market comprises people who typically earn between R3 500 and R15 000 per month, which is too little to enable them to participate in the private property market, yet too much to qualify for state assistance.
GEF	Global Environmental Facility.
GGP	The Gross Geographic Product of a particular area amounts to the total income or payment received by the production factors (i.e. land, labour, capital and entrepreneurship) for their participation in the production within that area.
GIS	Geographical information system or a system that captures, stores, analyses, manages and presents data with reference to geographic location data – it is a system of hardware and software used for storage, retrieval, mapping, and analysis of geographic data". It is the merging of cartography, statistical analysis and database technology.
GIWA	Global International Waters Assessment.
HDI	Human Development Index.
HIV	Human Immunodeficiency virus that causes the condition in which progressive failure of the immune system allows life-threatening opportunistic infections and cancers to thrive.
HOD	Head of Department.
IAS	Invasive Alien Species.
I&AP	Interested and Affected Party.
IDC	Industrial Development Corporation.
IDP	Integrated Development Plan.
IDRC	International Development Research Centre.
IEM	Integrated Environmental Management.
IISD	International Institute for Sustainable Development.
Indigenous	Native to a particular area.
Intensive Agriculture	Is an agricultural production system characterized by the high inputs of capital, labour, or heavy usage of technologies such as pesticides and chemical fertilizers relative to land area.
Irreplaceability	The potential contribution of a site to a preservation or representation goal. It is a fundamental way of measuring the conservation value of any site. An irreplaceable site will appear in every analysis of alternative combinations of sites. In other words, it is one which must be included in a conversation area

	because significant options for preservation are lost if the site is excluded.
ISO	The 'International Organisation for Standardisation' is an international standard setting body composed of representatives from various national standard organizations. The organization promulgates worldwide proprietary industrial commercial standards.
IUCN	International Union for the Conservation of Nature.
JPTC	Joint Permanent Technical Committee.
LED	Local Economic Development.
LRAD	Land Reform and Agricultural Development.
MAB	Man and the Biosphere.
MaB Program	Launched in 1971 by UNESCO, it is a global program of international scientific co-operation, dealing with people-environment interactions over the entire realm of bioclimatic and geographic situations of the biosphere.
Macro biogeographical region	A region defined by its unique biological characteristics (flora and fauna) and biophysical characteristics (climate, geology, soils), giving rise to a variety of major landscapes, and variations in human settlement patterns and economic activity.
MDGs	Millennium Development Goals.
MEC	Member of the Executive Council.
MOSS	Municipal Open Space System.
MW	Megawatt is equal to one million watts. Watts are the yardstick for measuring power.
Nautical Mile	Equals 1.85200 kilometers.
NEMA	National Environmental Management Act 107 of 1998.
NEMPA	National Environmental Management: Protected Areas Act 57 of 2003.
NEPAD	New partnership for Africa's Development.
NGO	Non-Governmental organization.
NMT	Non-Motorised Transport.
Northern Cape PSDF	Northern Cape Provincial Spatial Development Framework.
NSDP	National Spatial Development Perspective.
ORASECOM	Orange-Senqu River commission.

PGDS	Northern Cape Provincial Growth and Development Strategy, 2004 – 2014
PRASA	Passenger Rail Agency of South Africa.
PSDF	Provincial Spatial Development Framework.
PWC	Permanent Water Commission.
Quaternary catchment	Usually the area that feeds a tributary of a river or a part of the main river.
RAMSAR	Convention on Wetlands of International Importance.
Rehabilitation	To return a degraded ecosystem or population to a safe, stable, predetermined condition.
Restoration	To return a degraded ecosystem or place to its original condition.
SADC	Southern African development Community.
SAHRA	South African Heritage Resources Agency.
SALT	Southern African Large Telescope.
SANRAL	South African National Roads Agency Limited.
SARD	Sustainable Agriculture and Rural Development.
SDI	Sustainable Development Initiative.
SDF	Spatial Development Framework.
SEA	Strategic Environmental Assessment.
SKEP	Succulent Karoo Ecosystem Plan.
SKA	Square Kilometer Array.
SLAG	Settlement and Land Acquisition Grant (SLAG).
SMA	Special Management Area which defined as 'an area of excellence and good practice, where the ethos sustainable development is served in practice. It is a cadastral geographical unit, which is formally recognized and managed as an area where environmental sustainability is promoted in practice and in accordance with international standards for environmental sustainability'.
SMME	Small Micro Medium Enterprises.
SOER	State of the Environment report
SPC	Spatial Planning Category.
Species	Plants and animals, or other organisms that do not normally interbreed with individuals of another kind, including any sub-

	species, cultivar, variety, strain, hybrid, or geographically separate population provided they are not part of another species.
SPISYS	Spatial Planning Information System.
STEP	Subtropical Thicket Ecosystem Plan.
Stone Age	The earliest known period of human culture, characterized by the use of stone tools. In South Africa, the stone age is divided into three periods: 1. Early Stone Age ranges from between 2 million to 250 000 years ago. 2. Middle Stone Age ranges from between 300 000 to 20 000 years ago and is associated with early modern humans. 3. Late Stone Age dates to the last 20 000 years and is associated with fully modern people.
Sustainable Agriculture	This is refers to agriculture that is socially just, humane, economically viable and environmentally sound. Sustainable agriculture integrates three main goals: environmental stewardship, farm profitability and prosperous farming communities.
Sustainable Development	Sustainable development is development that meet the needs of the present generation without compromising the ability of future generations to meet their own needs.
TB	Tuberculosis is a chronic infectious disease that usually affects the lungs. TB is caused by various strains of mycobacteria, usually Mycobacterium tuberculosis. As TB is a common opportunistic infection ailing people with HIV, South Africa has a particularly high burden of TB due to its high prevalence of HIV.
TOS	Tourism Opportunity Spectrum.
UNCED	United Nations Conference on Environment and Development.
UNDP	United Nations Development Program.
UNEP	United Nations Environmental Program.
UNESCO	United Nations Educational, Scientific and Cultural Organization. It is a specialized agency of the United Nations establishment on 16 November 1945. Its stated purpose is to contribute to peace and security by promoting international collaboration through education, science and culture in order to further universal respect for justice, the rule of law and the human rights along with fundamental freedoms proclaimed in the UN charter.
UNIDO	United Nations Industrial Development Organisation.
Urban Edge	Is the demarcated outer boundary of urban areas and marks the transition between urban and rural land-uses.
WAR	Water Allocation Reform.

WEHAB	Water, Energy, Health, Agriculture and Biodiversity.
WFW	Working for Water
World Heritage Site	A World Heritage Site is a place (such as a desert, mountain, building, architectural monument, etc.) that is listed by UNESCO as of special cultural or physical significance. The list is maintained by the International World Heritage Programme administered by the UNESCO World Heritage Committee. Each World Heritage Site belongs to the country in which it is located, but it is conserved for the benefit of the global community and future generations.
WMA	Water Management Area.
WQOs	Water Quality Objectives.
WRI	World Resources Institute. The WRI is an environmental think tank that conducts research to find practical ways to protect the earth and improve people's lives. It focuses on four key programs, namely: climate protection, governance, markets and enterprise, and people and ecosystems.
WSA	Water Services Authority
WSP	Water Services Provider
WSSD	World Summit on Sustainable Development
WUA	Water User Association
WWF	World Wide Fund for Nature
WWTW	Waste Water Treatment Works.

1 INTRODUCTION

All Municipalities are required to prepare Integrated Development Plans (IDP) which includes a Spatial Development Framework (SDF), according to Section 26(e) of the Municipal Systems Act, (Act 32 of 2000) (MSA) and Section 12 of the Spatial Planning and Land Use Management Act, (Act 16 of 2013) (SPLUMA). A SDF is strategic and indicative in nature and is prepared at a broad scale. It is meant to guide and inform land development and management.

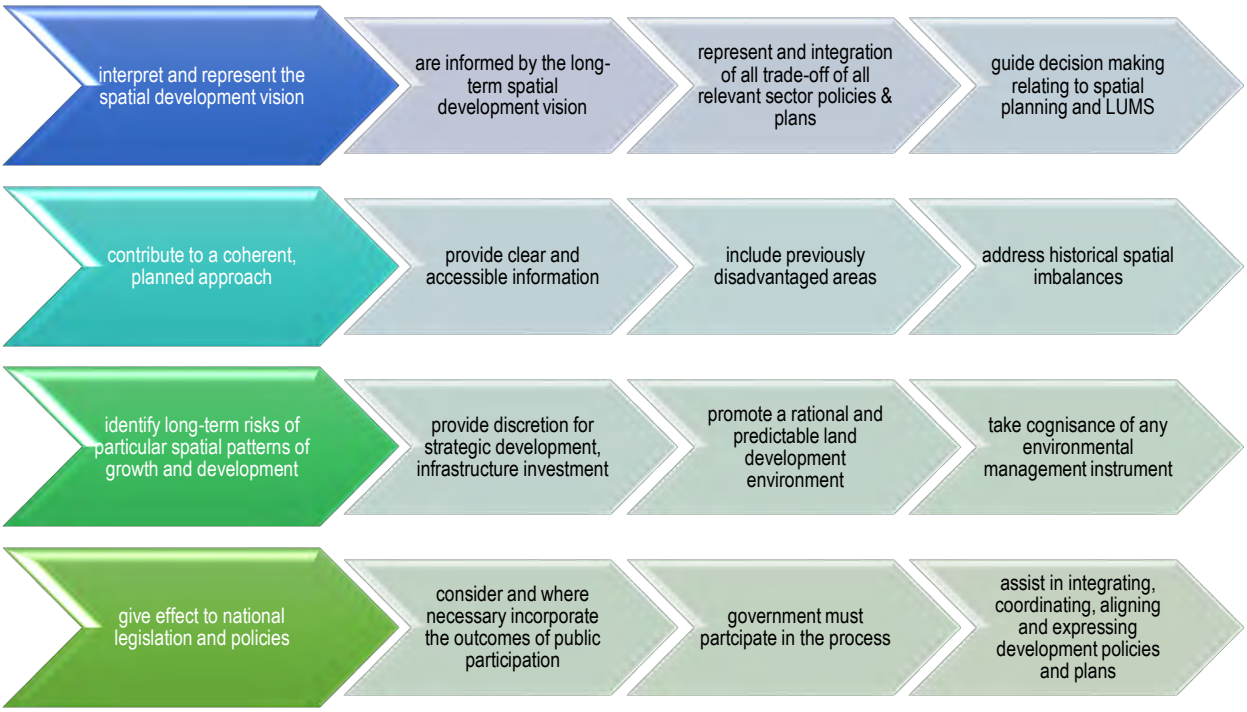
The proposed SDF gives effect to the development principles contained in Section 7 of SPLUMA.

FIGURE 1: DEVELOPMENT PRINCIPLES (SPLUMA)

A Municipality's SDF is not a one dimensional colour-only map or plan. It is an intention to arrange development activities, and the built form, in such a manner that it can accommodate ideas and desires of people without compromising the natural environment and the way services are delivered. If not done properly, the system will be very costly, inefficient, and can even collapse. It is a fine balance that must be attained at all times.

Too much emphasis on one element can harm the total system. Planning the future begins with an understanding of the current situation: the place, the people, and the social and economic forces underlying the trends that shapes a local municipality. Urban/Rural change and growth are inevitable, and development pressures are a given. Nevertheless, local government with foresight and insight can guide and manage public and private development to ensure the best possible outcome for the municipality and its people.

FIGURE 2: ACCORDING TO THE SECTION 21 OF SPLUMA: ALL SDF MUST GIVE EFFECT TO:



This outcome necessarily includes the protection and enhancement of the municipality's key economic, social and environmental resources and assets, and the extension of these economic, social and environmental opportunities to everyone in the municipality. The overall intention of the SDF is to guide and manage urban and rural growth, and to balance competing land use demands, by putting in place a long-term, practical development path that will shape the spatial form and structure of the municipality.

The spatial strategies that underpin the proposed development path is part of the document criteria. These strategies are supported by a set of policies and guidelines to inform day-to-day decision making, and provide a framework for more detailed policy formulation in terms of local-area or sector-specific spatial planning.

Based on the elements outlined above, the goal of the tender is interpreted to be the following:

The formulation of a credible Spatial Development Framework aimed at sustainable land development through proactive planning.

The SDF is a long-term plan to manage growth and change, as it:

- Aligns the municipal spatial development goals, strategies and policies with relevant national and provincial spatial principles, strategies and policies;
- Provides a long-term vision of the desired spatial form and structure of the municipality;
- Provides the spatial component of a cross-sectorial medium to long-term urban and rural development strategy;
- Helps spatially coordinate, prioritize and align public investment in the Municipality's IDP;
- Identifies the areas not suited for development (especially residential development), and the areas where the impacts of development need to be managed; and
- Provides policy guidance to direct decision making on the nature, form, scale and location of urban development, land use change, infrastructure development, disaster mitigation, and environmental resource protection.

FIGURE 3: SECTORS ADDRESSED IN SDF

1.1 NEEDS ASSESSMENT

Based on the terms of reference and the g*uidelines for formulation of SDF*, (2010) the specific needs addressed by this project include:

- The development of a credible and comprehensive SDF.
- Enabling municipalities to utilise the SDF towards future development.
- Ensure an implementable vision and mission is reached with respective policies and strategies to ensure its fulfilment.
- Identifying future projects, especially with a rural nature.
- Emphasis is required on how the SDF could unlock job creation.
- The SDF should be a spatial representation of a 15-20 year vision for any development within the Municipality.
- Effective spatial alignment both horizontally and vertically.

1.2 PROJECT OBJECTIVES

The purpose of the proposed SDF is to provide general direction to guide decision-making and action over a multi-year period aiming at the creation of integrated and habitable cities, towns and residential area.

The SDF must support the Local Municipality's vision and is intended to promote an urban form that will realize the long-term vision. The objective of the SDF is to create areas that are sustainable, accessible and efficient. The outcomes of these objectives are indicated in Table 1.

The formulation of the SDF must be guided and informed by the strategic vision embodied in the municipality's IDP and other broader planning frameworks. The primary objectives of the exercise are summarized as follows:

- The main objective of the project is to create a credible SDF that meets the required standards set by the responsible Provincial government through the implementation of the comprehensive SDF guidelines developed by DRDLR in 2010.

These Comprehensive SDF Guidelines are therefore a component of these terms of reference and provide the necessary details thereof.

Practical lessons during the implementation process are well documented and recommendations are made where the guidelines require improvement.

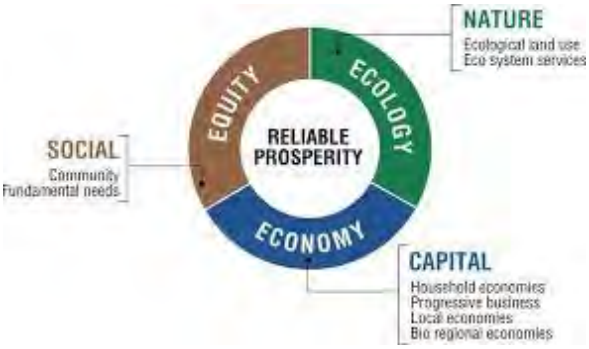
1.3 DELIVERABLES

The main objective of SPLUMA and the NCPDA is to set development principles to guide spatial planning, land use management and land development.

Compliance with the following provisions of the MSA and the Municipal Planning and Performance Management Regulations 2001, as provided for in the SPLUMA and SDF guidelines, is accepted as mandatory:

a) Give effect to development principles and applicable norms and standards set out in Chapter 2 of SPLUMA;
b) Include written and spatial representation of a five-year spatial development plan;
c) Development of a spatial vision (20 years) and objective for the IDP and the whole municipality;
d) Development of a conceptual scenario including the identifying of current and future significant structuring and restructuring elements of spatial form;
e) Setting out of objectives that reflect the desired spatial form of the municipality; contain strategies, policies and plans which will:-
    i. Analyze the opportunities and constraints within the municipality, concerning the heritage, economy, agriculture, environment, infrastructure, tourism and social development;
    ii. Delineate the agricultural land that has high potential;
    iii. Indicate desired patterns of land use within the municipality;
    iv. Identify existing and future land reform projects;
    v. Address the spatial reconstruction of the location and nature of development within the municipality including desired settlement patterns; and
    vi. Provide strategic guidance in respect of the location and nature of development within the municipality; set out a basic framework for the development of a land use management system in the municipality;
f) Include population growth estimates for the next 5 years;
g) Include estimates of demand for housing units;
h) Include estimates of economic activity and employment trends
i) Identify, quantify and provide location requirements for infrastructure and services provision
j) Identify the areas where national and provincial inclusionary housing policies may be applicable
k) Set out a capital investment framework for the municipality's development programs (prioritized list of development interventions and spatial locations).
l) Identify areas where micro-spatial plans must be developed;
m) Analysis and clarification of how sector departments will implement the SDF;
n) Contain a strategic assessment of the environmental impact of the SDF;
o) Provide spatial expression of the coordination, alignment and integration of sectorial policies of all municipal departments;
p) Identify programs, interventions and projects for the development of land within the municipality;
q) Be aligned with the SDFs of neighboring municipalities; and
r) Provide a visual representation of the desired spatial form of the municipality, which

i. will indicate where public and private land development and infrastructure investment should take place;
ii. will indicate all cross boarder issues, challenges and alignment of programs shared with neighboring municipalities, provinces and countries
iii. will indicate desired or undesired utilization of space in a particular area;
iv. will delineate the urban edge (in terms of NEMA);
v. will identify areas where strategic intervention is required; and
vi. Will indicate areas where priority spending is required.
vii. Identify existing and proposed nodal areas for the development of infrastructure and social services.

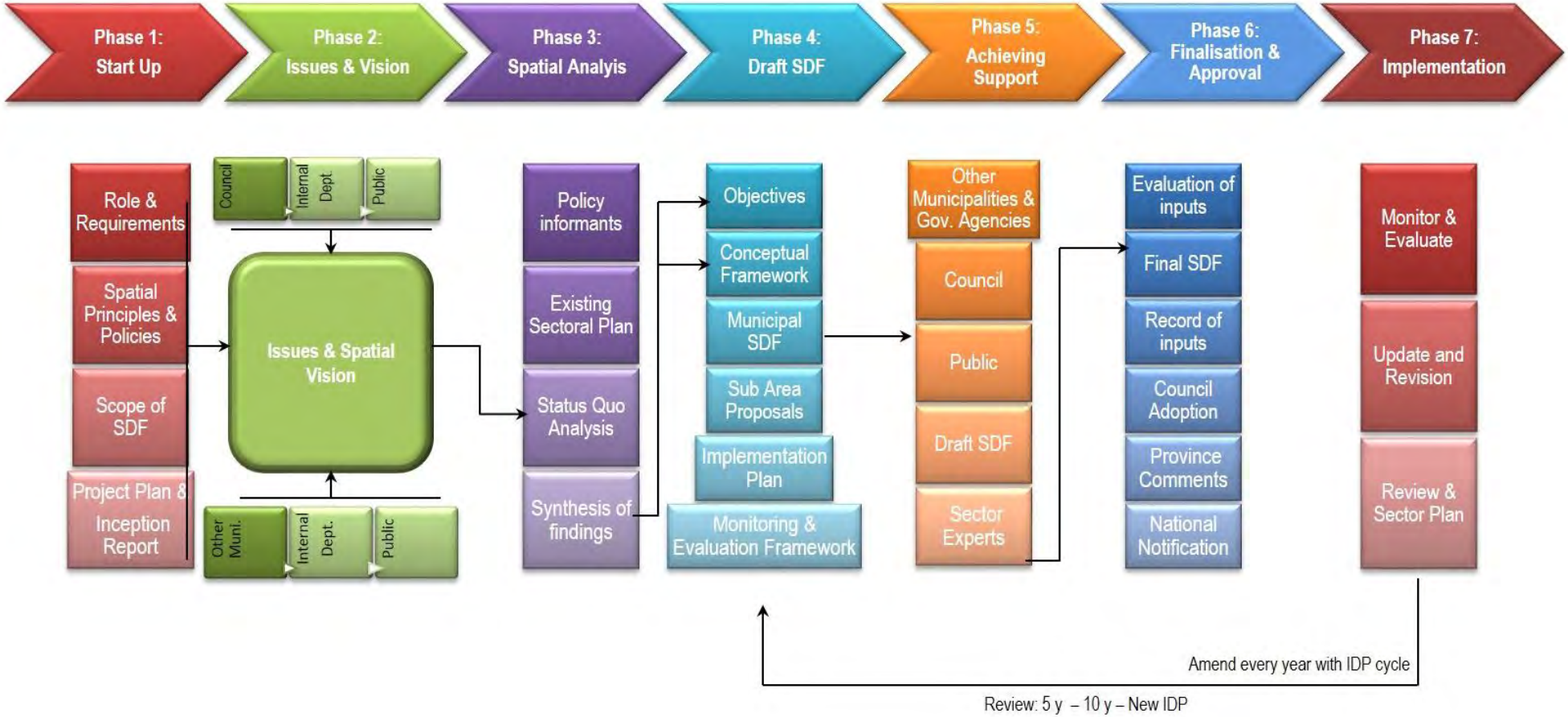


s) Include a implementation plan
t) shortened land use development procedures, may be applicable and land use schemes may be so amended;
u) determine a capital expenditure framework for the municipality's development programmes, depicted spatially;

1.4 PROJECT METHODOLOGY

Based on Chapter 4, Section 21 of SPLUMA, NCPDA as well as *the Guidelines for Formulation of SDF* (2010) we understand the process to entail the following. To implement the project has required a phased approach. This is illustrated in the following diagram as per SDF Guidelines:

FIGURE 4: METHODOLOGY



1.4.1 PHASE 1: START UP

1.4.1.1 POLITICAL SUPPORT

The project started with the involvement of Council from the onset. Workshops were held with Council to obtain Council's views and inputs in each phase of the SDF. Progress reports per phase have been submitted to Council to indicate problems and progress.

1.4.1.2 STEERING COMMITTEE

The first step in initiating is to set up an institutional structure that can oversee the SDF process and ensure delivery in terms of the TOR. A ***steering committee*** has been established out of a group of high-level officials and representatives from each town to oversee and make day to day decisions on SDF. In order to ensure the success of the project it was important to ensure that Department of Rural Development were included in both the steering committee, as well as, the technical committee.

The Steering Committee met at least once a month where the consultants reported back on progress, as well as, challenges.

1.4.1.3 JOINT TECHNICAL COMMITTEE

The joint ***technical committee*** (consisting of consultants, in-house planner and other departmental officials) convened with the steering committee to provide technical input into the SDF. This committee comprised the personnel who actually did the work of preparing the SDF.

The technical committee met at least once a month to discuss progress and technical requirements.

1.4.1.4 PROJECT PLAN

The ***scope of the work*** varied from Municipality to Municipality which differed, depending on the contextual reality and complexities. Therefore a hierarchical system of planning was required. A detailed project plan comprising of the scope of work:

a) Programme for the SDF

b) Proposed public participation

c) Project administration arrangements

Was compiled during the start-up phase, and presented to the steering committee for approval.

1.4.1.5 UNDERSTANDING THE SCOPE OF THE SDF

Legal Requirements were summarized in the start-up phase of the SDF, to ensure that the scope of work is completed and to empower stakeholders through the SDF process.

It is critical that all those involved in the SDF understand ***the role*** of the SDF. The role is presented in the introduction to the SDF. The ***goal*** of the SDF is to achieve the desired spatial form of the Municipality, and its role is to:

- Guide all decisions of the municipality that involve the use and development of land (including infrastructure and buildings), or planning for the future use and development of land. These decisions include:
  - Land use management decisions on applications for changes in land use, such as rezoning or subdivision applications.
  - Decisions on where, and how, public funds (from municipal and other government agencies) are invested, such as the extension of bulk service networks, or the provision of community facilities.
- Guide developers and investors to appropriate locations and forms of development.

The ***components of a SDF*** as required by the relevant Legislation, and summarised in Section 1.5.3. Of the *Guidelines for the formulation of SDF* were incorporated. These components have been summarised in Section 3.4 of this proposal.

1.4.1.6 SDFS RELATIONSHIP WITH IDP AND SECTOR PLANS

The SDF provides a general management mechanism to put into effect the spatial policies, strategies and development objectives of the IDP. Therefore it becomes a critical component of the IDP review, as it is informed and informs the various sector plans.

The SDF will serve as the ***single coordinated framework*** for the spatial aspects of all the sector plans. Therefore, has informed and inform all other sector plans. However, the analysis of these sector plans will only be conducted during Phase 3 of the SDF.

1.4.1.7 NATIONAL AND PROVINCIAL POLICIES AND LEGISLATION

The SDF has been aligned to the National and Provincial legislation and policies, special reference will be made to the Northern Cape Planning and Development Act (Act 7 of 1998).

A summary of the relevant legislation and policies has been undertaken, as part of status quo phase. A presentation to the stakeholders was made during the early part of the project.

1.4.1.8 CRITICAL ASSESSMENT FRAMEWORK: SPATIAL PRINCIPLES

Principles on good spatial practice were introduced in this phase and inform all spatial planning. The overarching principles of spatial planning are reflected in SPLUMA and *Guidelines for formulation of SDF* and reflected in Figure 1.

These principles form the basis and reference of the Critical Assessment Framework (CFA), which provides a set of spatial principles, the corner stone of all elements of the SDF.

1.4.1.9 REVIEW EXISTING SPATIAL PLANS

Background and research is crucial in the first phase. Therefore previous SDF's were reviewed and existing spatial plans were studied, and possibly replaced by the SDF.

The preparation of the sector plans has followed the preparation of the SDF. This is critical, as this coordination must be ideally timed. The SDF has also been aligned with the Environmental Management Framework (EMF).

1.4.1.10 ALIGNMENT WITH SURROUNDING LOCAL AND DISTRICT MUNICIPAL SDF'S

Alignment with surrounding SDF's is crucial to ensure that the spatial vision for the long term development of the municipality will not be contradicted by conflicting planning in neighbouring areas. The SDF's of the surrounding Municipalities (including the relevant District SDF(s) have been obtained and critically studied to ensure that the SDF is in alignment with the Provincial SDF's. Consultation with neighbouring municipalities is undertaken in Phase 2.

1.4.2 PHASE 2: ISSUES AND VISION

1.4.2.1 PUBLIC PARTICIPATION

The success and effectiveness of the SDF has, to a large degree depended on the level of buy-in achieved from all stakeholders. While it is necessary to prepare a single SDF for a Municipality, it is essential that different communities have a say in the formulation of the framework and other plans within their area. Public Participation is essential in the preparation of statement of intent and the establishment of zones, districts and other management mechanisms.

The procedures set out in Municipal Systems Act (Act 32 of 2000), Chapter 4: as well as, SLUMA, Section 20 (3) (a)-(c), together with the guidelines set out in the *Framework for Formulation of SDF* have been used as a guideline for public participation during this project. Public participation has incorporated the existing structures, as set up in the IDP process e.g. ward committees, as well as, the following ***types of stakeholders***:

- Individual residents in the municipality (an ordinary member of the public);
- Community organizations such as civics, ratepayers associations, and informal traders associations who participate through the organization's structures;
- NGOs active in the municipality; and
- Property owners and business people.

The public participation has taken on the form of ***workshops,*** where adequate opportunity for discussion was provided. These workshops were held at all major centres through the municipality. Ample notices and advertisements, as set out in the Guidelines, were conducted.

1.4.2.2 VISION STATEMENT

A spatial vision reflecting on the nature/characteristics of the municipality has been formulated. This vision forms the basis of a set of goals related to the main areas of intervention. These objectives were formulated at the onset of Phase 4 and unpacked into measurable objectives of key performance indicators (KPI).

Effort was taken as part of the vision exercise, to define each municipalities' and each settlement's ***unique sense of place***.

Engaging with neighbouring municipalities during Phase 2 was crucial. Issues that needed to be discussed during these workshops, included, but was not limited to;

- Status of their SDF
- Cross-border issues
- Municipal boundaries
- Urban edge and
- Avoiding proposal that may put pressure on environment.

As part of this phase ***engagement with District Municipality*** also took place. This ensured that the Municipalities SDF is aligned with the District from the onset of the project. It was also crucial to gather input and obtain base information from ***Government Agencies*** from an early stage in the project. In the last step in this phase, the issues, vision and goals are presented to Council for approval.

1.4.3 PHASE 3: SPATIAL ANALYSIS AND SYNTHESIS

Having introduced the SDF to the public and received their feedback on issues and the spatial vision, Phase 3 used these inputs to guide in-depth spatial analysis of condition in the municipality. A comprehensive investigation into all matters that have an impact for the spatial form and development of the municipality has been conducted, so as to ensure that the SDF is strongly rooted in reality.

Finally, this work has been synthesized and interpreted, in order to get an overview of the spatial issues and opportunities within the municipality.

1.4.3.1 SUMMARY OF PHASE 1 AND 2 FINDING

As first step in this phase, the finding of the information gathered in Phase 1 and 2 are summarised and the implications for the SDF formulation unpacked.

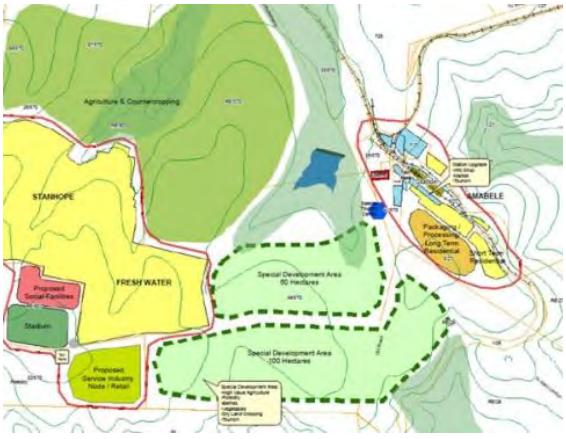
1.4.3.2 STATUS QUO ANALYSIS

The status quo information has systematically been unpacked in to the three main groups. Reference is made to all 26 key sectors listed in Section 3.2.1 of the *Guidelines for formulation of SDF*. All aspects identified during the analysis are from part of the base maps reflecting the true status of the municipality. A desktop land use audit, based on information available and focusing on the spatial and development patterns within the study has been conducted. All information gathered has been processed into the analysis matrix. The status quo analysis presents the overall spatial picture of the municipality. Please note that the availability of data, as well as, the level of detail and relevance has a detrimental impact on the level of information reflected in the status quo report. Should the existing data not be adequate, an additional exercise will need to be conducted to gather the relevant information. The status quo information is based on 3 main themes which include the following:

Biophysical environment: This natural capital base is the primary or foundational layer which includes the geology, soils and climate, and these form the basic geomorphological relationship, which gives rise to hydrological, topographical and biodiversity patterns. These also include agriculture and mining.

The impact of the SDF on the natural environmental has also been assessed, and mitigation measures are included, to minimise the impact on the environment. It is important that the SDF correlates with the EMF to ensure that environmental sensitive areas are conserved and protected by compiling specific development guidelines.

Socio- economic environment: This theme reflects the relationship between population requirements and the natural resource base.



Built environment: This theme reflects on bulk infrastructure, transport, housing and settlement patterns, as well as, the socio-economic base and patterns in any given area. It includes conservation and heritage, agriculture, building materials and mining.

A detail infrastructure analysis has been conducted by the team of engineers focusing on the existing capacity of, sanitation, electricity and water, as well as, the future capacity to accommodate proposed development strategies.

1.4.3.3 COMPILED BASE MAPS REFLECTING STATUS QUO ANALYSIS (ANALYSIS MATRIX)

The information has been captured in the geo-database and displayed on the base maps, which include a compilation of the information in the above mentioned themes. Primary and secondary sources of information have also been included in the base maps. The primary data has been based on the newest surveyor general's cadastral information (erf and farm boundaries) and contains additional information e.g. natural features, like rivers and dams, and infrastructure, like roads and railways. Various data sources e.g. SPYsis, Enpat, demarcation board, and other trustworthy sources were used. Please refer to Annexure A: GIS methodology for more information.

The phase is concluded by a comprehensive synthesis of the finds, with the focus on the implications of the formulation of the SDF. The synthesis has been structured in a way that reflects the relation between the various themes covered in the status quo.

1.4.4 PHASE 4: DRAFT SDF

This phase is the start of the process, which includes the formulation of the spatial vision and goals, principles, issues raised by stakeholders, and the findings of the status quo. It is about how the spatial form of the municipality should be shaped. From phase 1, 2 and 3, it has been possible to determine the appropriate level of management required and the different land use patterns and future development areas which will be needed for each.

1.4.4.1 COMPILE OBJECTIVES

Development principles have been determined that will guide all future development within the municipality. Development principles are based on the finding of the preceding phase.

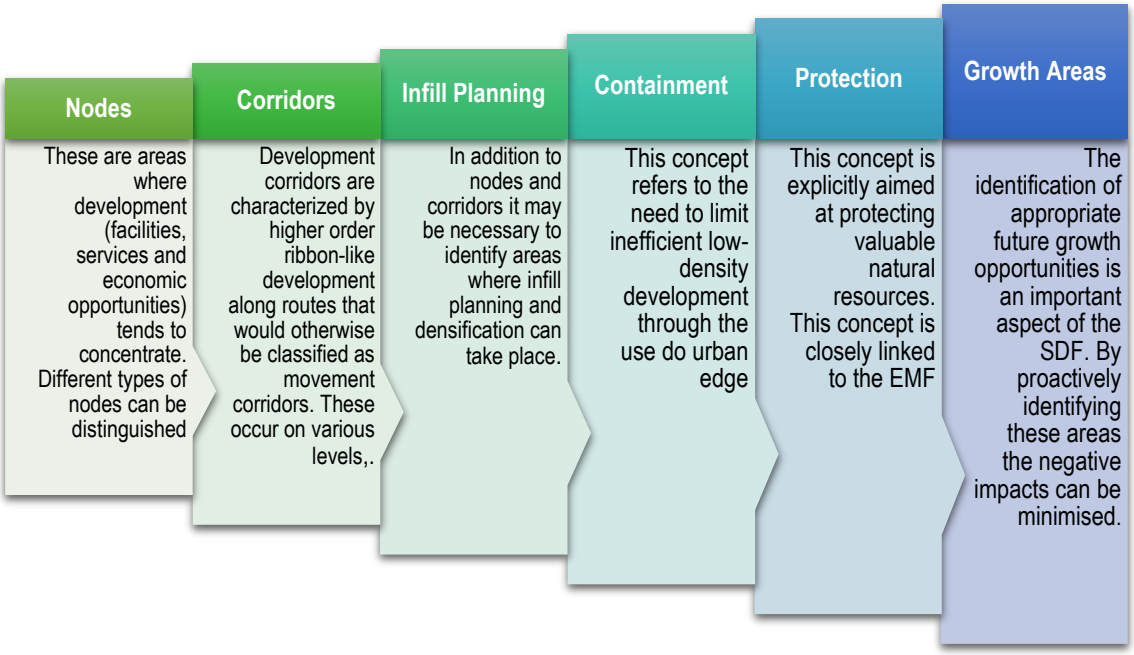
Objectives for the spatial development of the municipality, based on the spatial vision, goals, principles and issues raised during Phase 1 to 3 have been formulated. These objectives indicate the desired long term result related to specific aspects. These objectives guide the municipality towards sustainable development.

1.4.4.2 SPATIAL TOOLS AND CONCEPTS

Having clarified the development direction and vision, this then was placed in the contextual reality of the municipality. Areas of investment and areas with development potential have been identified and recommendations were made, as to which focus areas should be developed, and with what land uses, to ensure the municipality is informed as to how it will function sustainably as a system. This includes recommendations for all major land uses e.g. areas for housing, agricultural areas and business development.

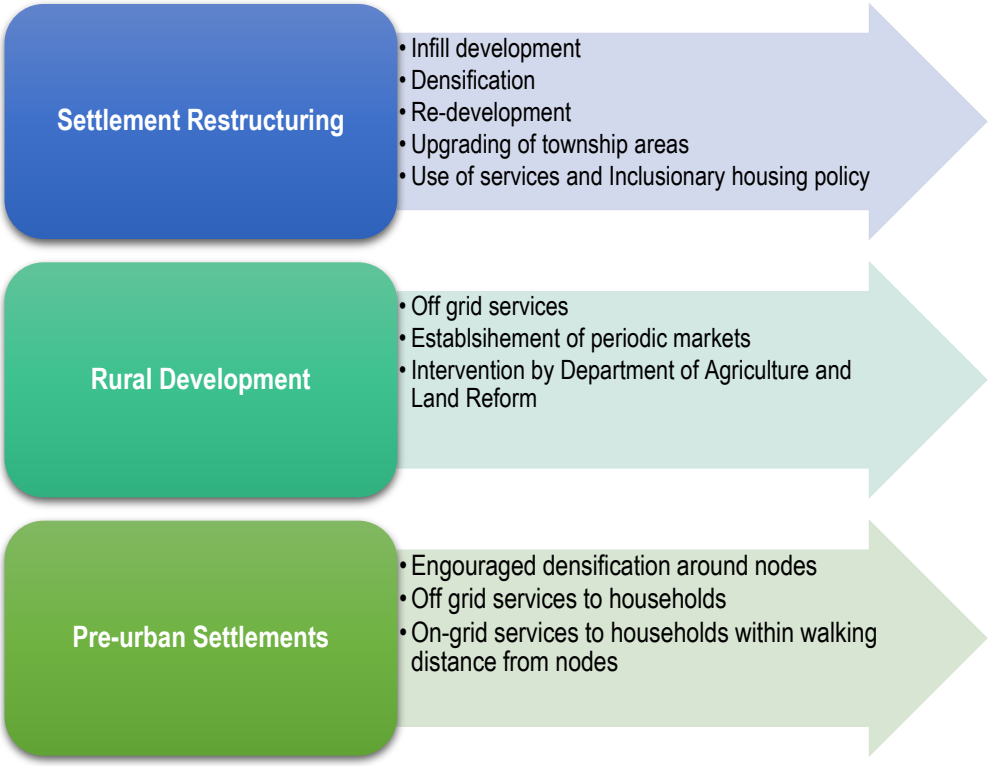
The plans include spatial reconstruction of the study area, including the identification of:

FIGURE 5: TOOLS AND CONCEPTS



Detail proposals/alternatives and strategies have been formulated to address all issues identified during the previous phases. Some of the common issues are depicted in Figure 6.

FIGURE 6: COMMON ISSUES AND TOOLS



1.4.4.3 CONCEPTUAL FRAMEWORK

The next step was to formulate a conceptual framework (CF), based on the spatial implications/ imperatives of the vision and issues identified during the previous phases.

The ***conceptual framework*** is essentially a diagrammatic illustration of the "ideas" that inform the SDF. They have been unpacked in more detail in the SDF itself.

The CF plans include spatial reconstruction of the municipal area including the identification of:

- Local land use patterns.
- Nodal points and their functions.
- Functional development corridors.
- Delineating proposed major bulk infrastructure.
- Urban edge and directions for growth. Prioritise areas with growth potential.
- Environmental sensitivity and conservation.
- High agricultural potential.
- Municipal commonage areas and land reform.

1.4.4.4 SCENARIO PLANNING

Based on the findings in the previous phase, 3 spatial development scenarios have been developed and evaluated. Where complex issues and challenges arise, alternative scenarios for future development have been formulated, which is based on trends (models and threats) and issues identified in the status quo analysis.

1.4.4.5 SDF PROPOSAL INCLUDING MAPS

Having clarified the development direction and vision, this was then placed in the contextual reality of the municipality. Areas of investment and areas with development potential have been identified, and recommendations were made as to which focus areas should be developed, and with what land uses, to ensure the municipality is informed as to how it will function sustainably as a system. This includes recommendations for all major land uses e.g. areas for housing, agricultural areas and business development.

A ***SDF plan*** proposing the future spatial development of a municipality has been compiled as part of the SDF document. This plan is clear enough to be used on its own. The SDF report itself is based on the criteria as set out in the *Guidelines for formulation SDF*.

Detail settlement plans beyond the scope of the local municipal SDF have also been compiled. These settlement plans contributed and ensured a comprehensive SDF was compiled. They are indicating, but not limited to the list in Section 4.6.3 of the *Guidelines for formulation SDF.*

Above SDF plan and detail settlement plan has been supported by ***visual maps***. These SDF maps were designed, built and populated on top of the cadastral base

and incorporating the topography. The GIS format for SDF depiction and document linking is used to incorporate the various component of a municipal SDF's. These maps are indicating, but not limited to:

a.) Status Quo:

- (Geographical features, Population Distribution, Soil potential, Geological, Hydrology, Major land uses on municipal level, Agricultural potential and Services levels)

b.) Future Proposals:

- Status Quo report reflecting desired spatial growth points and reconstruction of municipal area, with focus on the three urban settlements.
- Agricultural land identified by a municipality which will be used for urbanization and small holdings.
- Integration of transport-, disaster-, housing sector plans.
- Spatial presentation of those projects identified during the IDP process, which can be spatially indicated.
- Map indicating land use, future development directions and Spatial Development Initiatives (SDI) on cadastral background.
- Strategic map indicating all vacant land available.

The draft SDF has a section on how it has been implemented, although implementation only forms part of Phase 7. ***Policies and guidelines*** could have been prepared separately where issues were to complex. However the policies and guidelines must be clear on what they want to achieve.

1.4.4.6 RELATIONSHIP WITH THE LAND USE MANAGEMENT SYSTEM (LUMS)

As the SDF forms the broader planning guideline, the LUMS were firstly integrated and aligned with the SDF, to reflect all planning and development guidelines, and secondly, with all other municipal policies and procedures. It is of utmost importance that the LUMS and SDF convey the same planning and development principles and guidelines, and caution was taken to ensure that there are not contradictions between the two documents and their processes.

In cases where the LUMS were outdated, it was necessary to compare the land use management implications on the SDF proposals. A GIS system was utilized to integrate the SDF proposals with the attributes of the LUMS. Please refer to Section 5 on GIS.

1.4.4.7 IMPLEMENTATION AND MONITORING FRAMEWORK

The ***implementation framework*** is a public investment framework, indicating where public funds are to be sent. In addition to capital projects, the IF should also include actions necessary to facilitate implementation of proposal. Implementation has been phased, and not randomly listed.

Priority areas and needs, as well as, the requirements to implement the proposed development, have been identified. These investment components and proposals have taken the resources available, and budget cycles, into consideration.

It is important to monitor and evaluate the impact of the SDF on the spatial development and performance of the municipality. Part of the ***evaluation framework*** outlines the actions required if targets are not met. The preparation of the monitoring and evaluation framework entailed the formulation of measurable goals, or key performance indicators, ensuring that the SDF is based on reality.

1.4.5 PHASE 5: ACHIEVING SUPPORT FOR DRAFT SDF

This phase is focused on achieving support for the SDF proposals. This has been done as extensively as possible. Meeting/ workshops were held with abutting municipalities, government departments, key private stakeholders, and political support.

The draft SDF has also been submitted to sector experts, in order to obtain their inputs. The Draft SDF has been presented to Council for endorsement and to make the draft available for comment. In this round of public participation, a combination of open days and workshops were used to provide ample opportunity for engagement.

1.4.6 PHASE 6: FINALIZATION AND APPROVAL

1.4.6.1 ASSESSMENT OF INPUTS

Inputs and comments from the public/community stakeholders, in particular, have been assessed according to certain criteria.

1.4.6.2 COMPILE RESPONSE REPORT

Once the comments from all the stakeholders were completed, a ***response report*** was compiled and submitted to the steering committee for discussion.

1.4.6.3 AMENDMENT OF DRAFT SDF

The record of amendments has been finalized, with an indication of which aspects of the Draft SDF have been amended.

1.4.6.4 PRESENT REVISED SDF TO MUNICIPALITY AND GOVERNMENT DEPARTMENT

The revised SDF has been presented to all the relevant Municipal and Government departments who were affected, and put the document into effect. These stakeholders formally endorse the SDF.

1.4.6.5 LEGAL REQUIREMENTS FOR POLITICAL APPROVAL

The process included Liaising with Provincial Government, District Municipality, Local Municipality and other role players. The IDP of which the SDF is a core component was then adopted by Council and the MEC. According to NCPDA a SDF has been

approved by the MEC for Department of Co-operative Governance, Human Settlements and Traditional Affairs.

1.4.7 PHASE 7: IMPLEMENTATION

Implementation of the SDF included the monitoring of the goals or KPIs, as well as the implementation of capital investment and policies.

A meeting was convened with the relevant Municipal officials to discuss the implementation plan and also agree on a vehicle for reporting. Responsibilities for the monitoring and implementation of the SDF, as per the approved ***monitoring*** plan, were also discussed.

Revision Cycle included the 20 year horizon, of which the SDF should have provided. Ideally, the SDF will be reviewed over a 5 year cycle to ensure that it remains in line with the IDP and the MTIEF.

The implementation plan should be revised yearly, based on the outcomes of the monitoring and evaluation of the SDF.

1.5 LEGAL STATUS OF MAGARENG SDF

Chapter 5, Part E: Preparation and contents of municipal spatial development framework (Section 20) a Municipality must, by notice in the Provincial Gazette, adopt a municipal spatial development framework for the municipality. Part F: Status of spatial development frameworks states that Municipal Planning Tribunals, or any other authority required or mandated to make a land development decision, in terms of SLUMA, may not make a decision which is inconsistent with a municipal spatial development framework.

Section 27 (1) of The Northern Cape Planning and Development Act (Act 7 of 1998)6 states, that all local and representative councils must compile Local and Representative Council Land Development Plans (LDP), to be approved by the MEC. Similarly, the formulation of a Spatial Development Framework is a legal obligation for all municipalities (both district and local).

Section 26 (e) of the Municipal Systems Act (Act 32 of 2000)7 dictates, that an SDF must be included in a municipality's Integrated Development Plan (IDP). The purpose of the SDF is described in the Act as providing 'basic guidelines for a land use management system for the municipality.' Practically, the proposed contents and purpose of a LDP is extremely similar to that of an SDF.



2 CONTEXT

2.1 THE PRINCIPLE OF SUSTAINABLE DEVELOPMENT

The Magareng SDF takes, as its starting point, the goal of sustainable development. Although sustainable development is a much talked about and widely supported goal, in practice, our development path, globally, nationally and in the TLM, is taking us in the opposite direction. Not everyone has the same interpretation and understanding of "sustainability". This causes numerous problems between civil society, developers, conservationist and authorities.

In the above view, development must only be acceptable and in the public interest, if it is socially equitable, economically viable and environmentally sustainable. This means that, the development needs of present generations should be met without the possibility of future generations to meet their own needs, being compromised.

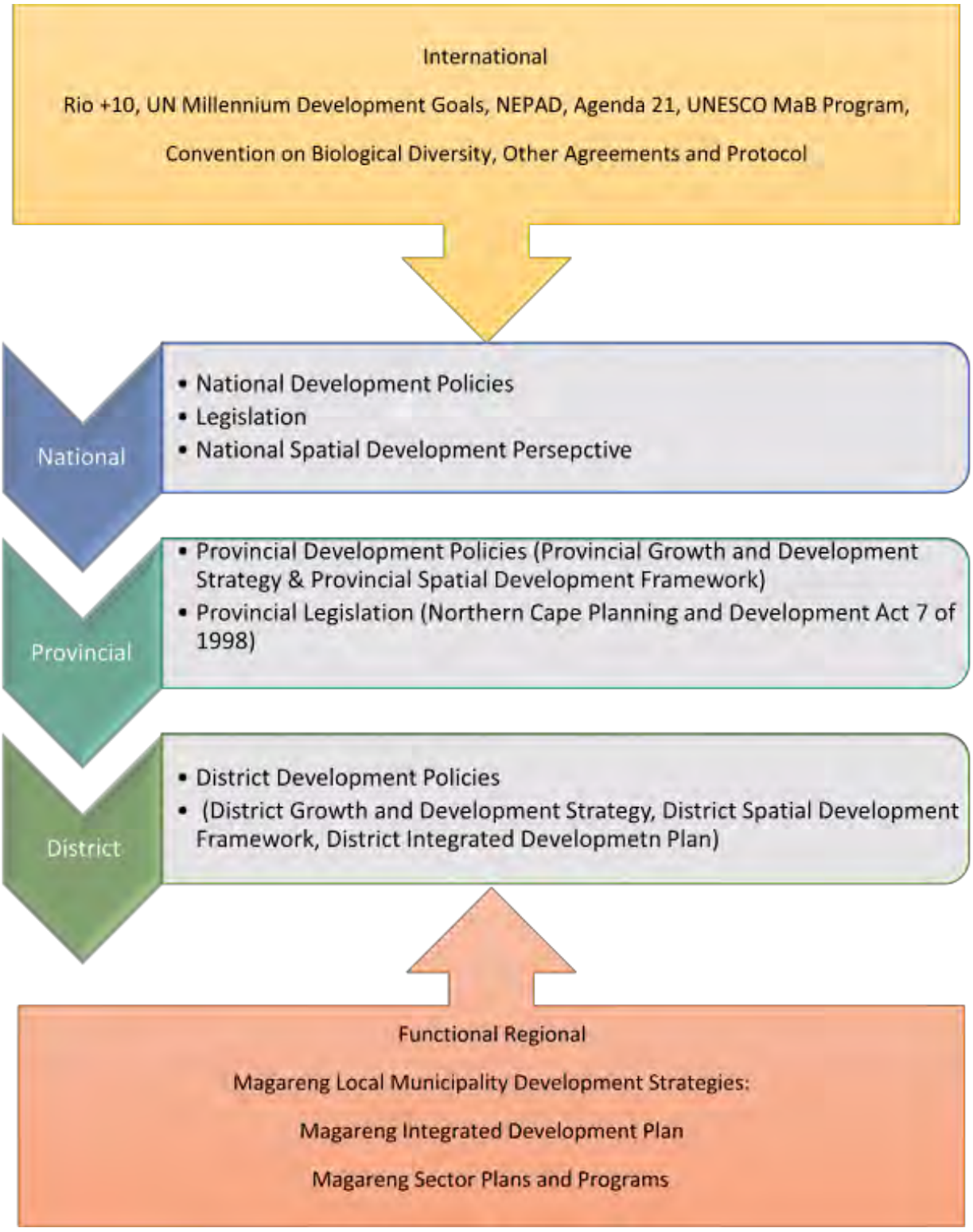
Sustainable development encompasses the integration of social, economic and ecological factors into planning, decision-making and implementation so as to ensure that development serves present, and future generations.

The Northern Cape PSD makes specific reference to sustainable development objectives which will be discussed in Chapter 3.

2.2 NATIONAL LEGISLATIVE CONTEXT & POLICIES

The Magareng SDF must align with the following key legislation:

FIGURE 7: INFORMANT POLICIES AND STRATEGIES



(Source SDF Guidelines, 2010)

2.2.1 THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA (ACT 108 OF 1996)

The Constitution sets out the rights and duties of the citizens of South Africa and defines the structure and the responsibilities of the spheres of government, including local government: namely,

"To promote social and economic development of the community"

2.2.2 THE MUNICIPAL SYSTEMS ACT (MSA) (ACT 32 OF 2000)

The MSA requires the preparation of an IDP, of which an SDF is a component. The requirements of an SDF are listed in the Local Government: Municipal Planning and Performance Regulations (2001), and include the following longer-term, medium-term and shorter-term products:

- A municipal-wide, longer-term spatial plan/policy/strategy, guiding the direction, nature and extent of longer-term growth and development
- Guidelines for the LUMS
- A Public Infrastructure Investment Framework (PIIF), indicating the spatial locations towards which investment will be directed
- A strategic impact assessment (SIA), evaluating the impact of the municipal-wide and/or district-level plans. The municipal-wide, longer-term spatial plan and SIA are the primary focus of this report.

The MSA prescribes a much stronger link between spatial plans (forward planning) and land use management. However, it does not prescribe a process or requirements in this regard. The National Department of Rural Development and Land Reform has recognised this shortcoming, and has prepared new national planning legislation, Spatial Planning and Land Use Management Act (Act 16 of 2013) that will replace all the existing land use regulatory laws in the country, giving effect to the provisions of the MSA.

In terms of the MSA, the IDP is the principal planning instrument, which guides and informs all planning and development. The MLMSDF is a cross-sectorial plan of the IDP. As a cross-sectorial plan, the MLMSDF must inform and be informed by a cross-sectorial, municipal-wide strategy, to direct and coordinate public investment spatially through the five-year IDP.

Implications:

The SDF in compliance with Chapter 4 (Community Participation) and Chapter 5(Integrated Development Planning):

Section 23: Municipal Planning must be developmentally orientated

Section 24: Municipal planning in co-operative governance

Section 25(1a-e): Adoption of Integrated Development Plans

Section 26(e): Core components of IDP

2.2.3 SPATIAL PLANNING AND LAND USE MANAGEMENT ACT (SPLUMA) (ACT 16 OF 2013)

The purpose of the Act that has been promulgated on 5 August 2013 is to provide a framework for spatial planning and land use management in the Republic, in that, it specifies the relationship between spatial planning and the land use management systems, and other planning that give directives to:

Principle: The basis of the system is principles and norms aimed at achieving sustainability, equality, efficiency, fairness and good governance in spatial planning, and land use management. The decisions of planning authorities, whether related to the formulation of plans such as IDPs, or the consideration of land development applications such as rezoning, must all be consistent with these principles and norms. A failure by an authority to affect this enables the Minister to intervene in the decision, either to require that it is reconsidered, or in extreme cases, to make the decision him or herself.

Land use regulators: The Act proposes a category of authorities able to take the different types of decisions falling into the realm of spatial planning and land use management: land use regulators. The most prevalent land use regulators will be municipalities. Each province will have a provincial land use tribunal and appeal tribunal that will be land use regulators in specified situations. Nationally, the Minister will be a land use regulator of last resort, only acting in cases where there has been neglect or flouting of the national principles and norms.

IDP-based local spatial planning: The Municipal Systems Act requires that part of each municipality's IDP must be a spatial development framework. SPLUMA spells out the minimum elements that must be included in a spatial development framework. It also proposes that the spatial development framework operate as an indicative plan, whereas the detailed administration of land development and land use changes, is dealt with by a land use management scheme, which will actually record the land use and development permissions accruing to a piece of land. The inclusion of the spatial development framework, with a direct legal link to the land use management scheme, is an essential step towards integrated and coordinated planning for sustainable and equitable growth and development.

A uniform set of procedures for land development approvals. Where a proposed development is not permissible in terms of the prevailing land use management scheme, then permission is required from the appropriate land use regulator.

Implications:

Any EIA needs to look at existing planning tools (like the SDF) to motivate for the impact.

The SDF is focussed on sustainability and the protection of the natural environment, therefore development not in line with the SDF, and the protection of the natural environment, will not be allowed.

2.2.4 THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NEMA) (ACT 107 OF 1998)

NEMA requires that its principles be applied by municipalities and used to guide Environmental Impact Assessments (EIAs) and prepare Environmental Management Frameworks (EMFs). The key principles require environmentally, socially, and economically sustainable development; the protection of natural resources, and the maintenance of natural systems; equitable access to resources; and environmental management that puts people and their needs first. NEMA requires that the municipality supports international agreements.

2.2.5 THE NATIONAL ENVIRONMENTAL MANAGEMENT BIODIVERSITY ACT (NEMBA) (ACT 10 OF 2004.)

Among other outcomes, NEMBA seeks to provide for the management and conservation of biological diversity within South Africa. To do this, the Act has introduced several new legislated planning tools to assist with the management and conservation of South Africa's biological diversity. These include, the declaration of 'bioregions' and the publication of 'bioregional plans'. These are provided for in Chapter 3 of NEMBA.

Section 48(2) of NEMBA stipulates that any organ of state must prepare an Environmental Implementation Plan or Environmental Management Plan in terms of Section 11 of NEMA. In addition, a municipality, which must adopt an IDP in terms of the MSA, must:

a) align its plan with any applicable bioregional plan;
b) incorporate into that plan those provisions of a bioregional plan that specifically apply to it; and
c) demonstrate in its plan how any applicable bioregional plan may be implemented by the organ of state or municipality.

NEMBA also provides for other mechanisms for managing and conserving biodiversity, such as, the listing of ecosystems that are threatened or in need of protection to ensure the maintenance of their ecological integrity, and the listing of species that are threatened or in need of protection to ensure their survival in the wild.

Implications:

Any EIA needs to look at existing planning tools (like the SDF) to motivate for the impact.

The SDF is focussed on sustainability and the protection of the natural environment, therefore development not in line with the SDF, and the protection of the natural environment, will not be allowed.

2.2.6 THE NATIONAL HERITAGE RESOURCES ACT (NHRA) (ACT 25 OF 1999)

The NHRA empower local authorities, on certain conditions, to formulate by-laws for managing local heritage resources or other higher-order heritage resources where a responsibility may be delegated. There are numerous sections in the NHRA that state clearly what a local authority shall, must, or may do, to protect valuable heritage resources. This includes an obligation to identify or audit heritage resources and heritage areas across the municipal area at the time of preparing a SDF, and to make provision in by-law or zoning scheme for the protection and management of the heritage sites.

Implications:

This includes an obligation to identify or audit heritage resources and heritage areas across the municipal area at the time of preparing a SDF, and to make provision in by-law or zoning scheme for the protection and management of the heritage sites

2.2.7 THE NATIONAL LAND TRANSPORT ACT (NLTA) (ACT 5 OF 2009)

The NLTA replaces the National Land Transport Transition Act (Act 22 of 2000). This legislation drives the preparation of the Municipality's annual Integrated Transport Plan (ITP), which in turn, provides input from a transport and roads perspective for the Municipality's IDP. A key focus area of the NLTA is the integration of land development and land use with transport planning (Section 31).

The NLTA also provides the institutional structure, within which the responsibilities of national, provincial and local government are defined. According to the NLTA, the Municipality, in its capacity as a planning authority, is responsible for a host of functions relating to the preparation of transport policy and plans, financial planning and the implementation and management of intermodal transport networks. The NLTA also provides the institutional structure within which the responsibilities of national, provincial and local government are defined.

Implications:

According to the NLTA, the Municipality, in its capacity as a planning authority, is responsible for a host of functions relating to the preparation of transport policy and plans, financial planning and the implementation and management of intermodal transport networks.

2.2.8 HOUSING ACT (ACT 107 OF 1997) AND HOUSING AMENDMENT ACT (ACT 4 OF 2001)

These two legislations lay down general principles applicable to housing development throughout South Africa. These principles apply specifically to the actions of the three spheres of government, National, Provincial and Local government, to provide a wide choice of housing and tenure options based on integrated development.

The Act further requires that development comply with the principles outlined in Chapter 1 of the Development Facilitation Act (Act 67 of 1995) now repealed and replaced by Chapter 2 Section 7(a-v) of SPLUMA.

Implications:

The SDF needs to identify appropriately located land for social housing development close to employment opportunities.

- The SDF needs to ensure that the spatial, economic and social integration is achieved.
- The SDF needs to identify and promote areas of high density to reduce costs of providing services.

2.2.9 MUNICIPAL DEMARCATION ACT (ACT NO. 27 OF 1998)

The Municipal Demarcation Act 27 of 1998 (DMA) provides criteria and procedures for the determination of municipal boundaries by an independent authority. In terms of the Act, the Municipal Demarcation Board is established to determine municipal boundaries.

Section 24 provides that when demarcating a municipal boundary, the Board must aim to establish an area that would enable the municipality to fulfil its Constitutional obligations, including the provision of services in an equitable and sustainable manner, the promotion of social and economic development, and the promotion of a safe and healthy environment. The tax base must also be as inclusive as possible of users of municipal services in the municipality.

2.2.10 THE NATIONAL SPATIAL DEVELOPMENT PERSPECTIVE (NSDP) (2006)

The NSDP highlights the challenge of urbanisation for cities, especially metropolitan cities, and seeks to direct social and infrastructure investment, spatially between the three spheres of government. On a national scale, it advocates capital investment in areas of growth and potential, with an emphasis on providing basic services, access to social services and human resource development in areas of need and less potential.

The NSDP puts forward a set of five normative principles:

Principle 1:

Rapid economic growth that is sustained and inclusive is a pre-requisite for the achievement of other policy objectives, among which poverty alleviation is key.

Principle 2:

Government has a constitutional obligation to provide basic services to all citizens wherever they reside.

Principle 3:

Government spending on fixed investment should be focused on localities of economic growth and/or economic activities, and to create long-term employment opportunities.

Principle 4:

Efforts to address past and current social inequalities should focus on people, not places. In localities where there are both high levels of poverty and demonstrated economic potential, this could include fixed capital investment beyond basic services to exploit the potential of those localities. In localities with low demonstrated economic potential, government should, beyond the provision of basic services, concentrate primarily on human capital development, by providing education and training, social transfers, such as grant and poverty relief.

Principle 5:

In order to overcome the spatial distortions of apartheid, future settlement and economic development opportunities should be channelled into activity corridors and nodes that are adjacent to or that link the main growth centres. Infrastructure investment should primarily support localities that will become major growth nodes in South Africa and the SADC region to create regional gateways to the global economy.

Implications:

The SDF is in line with the following principles of the NSDP:

- The provision of basic services to all citizens wherever they are located;
- Government spending should be focussed on localities of economic growth or economic potential;
- Efforts to address past and current social inequalities are focussed on people, and not on places;
- To overcome the spatial imbalances of apartheid and to ensure that future settlement and economic development opportunities are channelled into Magareng Municipality;
- In order to generate and sustain economic growth rates above 6%, this rate will have to be supported through appropriate investment in key infrastructure such as roads, railways, telecommunications and parts

2.2.11 THE ACCELERATED AND SHARED GROWTH INITIATIVE FOR SOUTH AFRICA (ASGISA) (2006)

National Government initially set itself the target of halving poverty and unemployment by 2014. To meet this target, an average growth rate of 6% of gross domestic product (GDP) is required. In light of current global economic volatility, Government has had to revise these targets, but remains committed to ASGISA's objectives. Infrastructure programmes, sector investment strategies, skills and education initiatives, second-economy interventions, and macro-economic and public administration adjustments are the vehicles by which it hopes to attain its targets.

Implications:

The development of a Land Development Plan that is consistent with Section 29.

2.2.12 THE NATIONAL STRATEGY FOR SUSTAINABLE DEVELOPMENT AND ACTION PLAN 2010–2014 (DRAFT 2010)

This strategy provides the roadmap for the development path that needs to be followed in South Africa, in order to achieve the vision of a sustainable society. It is intended to provide guidance to public- and private-sector organisations for their own long-term planning, and to the development of sector or subject-specific strategies and action plans, which must all be consistent with the National Strategy for Sustainable Development.

Three key elements have been identified to shift South Africa onto a new development path. These are:

- Directing the development path towards sustainability;
- Changing behaviour, values and attitudes; and
- Restructuring the governance system, and building capacity.

Implications:

- To plan proactive, unlocking spatial potential for sustainable development within the municipality.

2.2.13 THE COMPREHENSIVE PLAN FOR DEVELOPMENT OF SUSTAINABLE HUMAN SETTLEMENTS (BREAKING NEW GROUND) (BNG) (2004)

BNG was introduced in 2004 to address poverty and underdevelopment, and to improve the quality of life of the poorest communities. To achieve this, BNG introduced a number of new programmes to enhance the process of social cohesion and allow municipalities to play a far greater role in creating sustainable human settlements. Municipalities are to take the lead in moving away from a supply-driven framework towards a more demand-driven process. Municipalities are further required to facilitate economic and spatial restructuring through negotiating the location of different housing typologies, developing social and economic infrastructure, and promoting densification and integration.

Implications:

- BNG links closely with SPLUMA Section 21(f) including estimates of the housing demand as well as identification of suitable areas for residential development.

2.2.14 DEPARTMENT OF AGRICULTURE AND LAND REFORM STRATEGIC PLAN 2005 – 2010

The broad policies, priorities and strategic goals of the Department can be summarised as follows:

- To ensure equitable access and participation by the previous disadvantaged individuals and communities.
- Improving global competitiveness and profitability of agricultural sector.
- Promoting the sustainable use of natural resources
- Promoting and implementation of food security programmes

Implications:

- Align strategies to ensure that Land Reform is a core component of a SDF.
- Implement, where possible, broad policies, priorities and strategies

2.3 PROVINCIAL LEGISLATIVE CONTEXT AND POLICIES

2.3.1 NORTHERN CAPE PLANNING ACT 7 OF 1998

This Act is to provide for a single set of procedures and regulations to complement the accelerated development procedures as provided for in the Development Facilitation Act, 1995; and to thereby ensure effective and co-operative planning and land development within the provincial and local spheres of government of the Province of the Northern Cape. Through a set of principles which will guide the preparation and implementation of integrated land development plans, the management of rural and urban land and its development through land-use management mechanisms, subdivisions and matters incidental thereto.

Implications:

The development of a Land Development Plan that is consistent with Section 29.

2.3.2 THE NORTHERN CAPE GROWTH AND DEVELOPMENT STRATEGY (NCGDS) (2012)

According to the Northern Cape Provincial Growth and Development Strategy, 2004-2014, the social and economic development of the province is imperative to address the most significant challenges facing the Northern Cape, being poverty.

According to the strategy the only effective means by which poverty can be reduced is long-term sustainable economic growth and development in the region.

Based on a comprehensive analysis of the status quo of economic and social conditions in the province, the NCPGDS should provide a strategic focus, derived through consensus, around which all stakeholders can harness their collective efforts at promoting economic growth and development in the province. To bring about closer alignment of the planning efforts of local, provincial and national government, the NCPGDS also provides the framework for:

- Linking planning and budgeting in line with jointly agreed strategic objectives;
- Engaging with national government departments that have a core-responsibility for promoting growth and development in the province;
- Local government to derive their IDP's and LED strategies;
- Engaging with DFI's and parastatals to access finance to promote economic development;
- Engaging with the private sector to promote growth and development through the deployment of private investment capital; and
- Implementing strategies for SMME development, BEE and the upliftment of designated vulnerable groups and the poor.

Provincially, the NCPGDS must take centre stage and, as a ten-year rolling strategy, it should:

- Provide the framework and define the parameters within which provincial departments formulate their strategic plans and budgets;
- Serve as a yardstick against which to measure the performance of departments; and
- Be aligned with the electoral and budgeting processes.

Implications:

- The NCGDS forms an integrated part of the Provincial Spatial Development Framework.
- Principles must be aligned to ensure that an environment is created to promote local economic development.

2.3.3 NORTHERN CAPE SMALL MEDIUM AND MICRO ENTERPRISE STRATEGY (SMMES) (2012)

The strategy states that although the Northern Cape's contribution to the national GDP is minimal, the province still houses the largest key economic vehicles namely, mining and agriculture. It also includes a large portion of the population.

The strategy indicates that certain measures must be put in place to turn the Northern Cape economy around and to ensure a meaningful contribution by the province to the local economy.

For the design and development of the new SMMEs for the Northern Cape the following key aspects must be considered:

- A market led approach to ensure that support activities are focussed on practical needs towards getting the market to work properly.
- The prevailing "hand-out" syndrome must be counteracted by engendering an internal focus of control value system.
- Pursue opportunities available through focussing on product markets over and above business service prospects.
- Differentiate between survivalists and the formal small business sector.
- Integrate the perceived opposing forces of sustainability and participation.
- Distinguish political organisations from business operations.
- Based on the principles of Ubuntu instead of competition.

2.3.4 THE NORTHERN CAPE SPATIAL DEVELOPMENT FRAMEWORK (PSDF) (2012)

2.3.4.1 PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK DIRECTIVES

The main functions of the Northern Cape Provincial Spatial Development Framework are to serve as:

Spatial land-use directive which aims to promote environmental, economic and social sustainability through sustainable development;

- Guideline for installing a development state;
- Basis for prioritizing governmental programmes and projects;
- Basis for governmental performance management;
- Manual for integrated land use planning.

The principles, as included in the Northern Cape PSDF, 2012, are as follows:

- Social Sustainability:
  a) Improve the quality of human life, including the elimination of poverty.
  b) Recognise the extent of cultural diversity and respond accordingly.
  c) Protect and promote human health through a healthy environment.
  d) Implement skills training and capacity enhancement for historically disadvantaged people.

- Economic Sustainability:

  Ensure that new development promotes qualitative urban integration, affordable housing, and densification in a financially viable manner, without undermining existing property values.

  a) Ensure that as a whole, the for - and non - profit projects combine into a financially viable local economy that benefits all stakeholders.
  b) Promote employment creation.
  c) Enhance competitiveness within the context of the promotion of policies and practices that advance environmental sustainability.
  d) Invest a meaningful share of the proceeds from the use of non - renewable resources in social and human - made capital, to maintain the capacity to meet the needs of future generations.
  e) Protect and enhance the property and investments of all inhabitants.
  f) Biophysical Sustainability: In the Northern Cape a premium will be placed on the conservation of natural resources, biodiversity and landscapes.

- Biophysical Sustainability:

  a) Minimise the use of the four generic resources, namely energy, water, land, and materials.
  b) Maximise the re - use and/or recycling of resources.
  c) Use renewable resources in preference to non - renewable resources.
  d) Minimise air, land, and water pollution.
  e) Create a healthy, non - toxic environment.
  f) Maintain and restore the Earth's vitality and ecological diversity.
  g) Minimise damage to sensitive landscapes, including scenic, cultural, and historical aspects.

- Technical Sustainability:

  a) Construct durable, reliable and functional structures.
  b) Pursue quality in creating the built environment.

All these principles have been integrated in the SDF in order to support the way towards sustainable development in the region.

2.3.4.2 PROVINCIAL LAND USE MANAGEMENT GUIDELINES

The Northern Cape PSDF strives to integrate and standardise planning at all spheres of government in the province with specific reference to the following:

a. Supporting the district and local municipalities in the preparation of their SDFs:

(Prepared in terms of the Northern Cape Planning and Development Act 7 of 1998, the Local Government Municipal Systems Act 32 of 2000, and the Spatial Planning and Land-use Management Bill -- 2011) with reference to:

i. The land-use classification of all land in the province according to a standard set of Spatial Planning Categories (SPC's);
ii. Describing existing and desired spatial patterns to guarantee integrated, efficient and sustainable settlements for the province.

b. Guiding public investment by means of:
i. Providing a credible context for public investments;
ii. Promoting rational and equitable development of neglected areas;
iii. Providing certainty regarding spatial and socio-economic implications development as planned for the Northern Cape;
iv. Providing a basis for co-ordinated decision-making and policy-formulation regarding future land-use.

c. Facilitating cross-boundary co-operation and co-ordination:

(Between district and local municipalities, adjoining provinces, and bordering countries)

A high priority for the Northern Cape Province is to prepare a provincial industrial development strategy. The responsible institution to commission this is the Department of Economic Development and Tourism.

2.3.4.3 SPATIAL PLANNING CATEGORIES

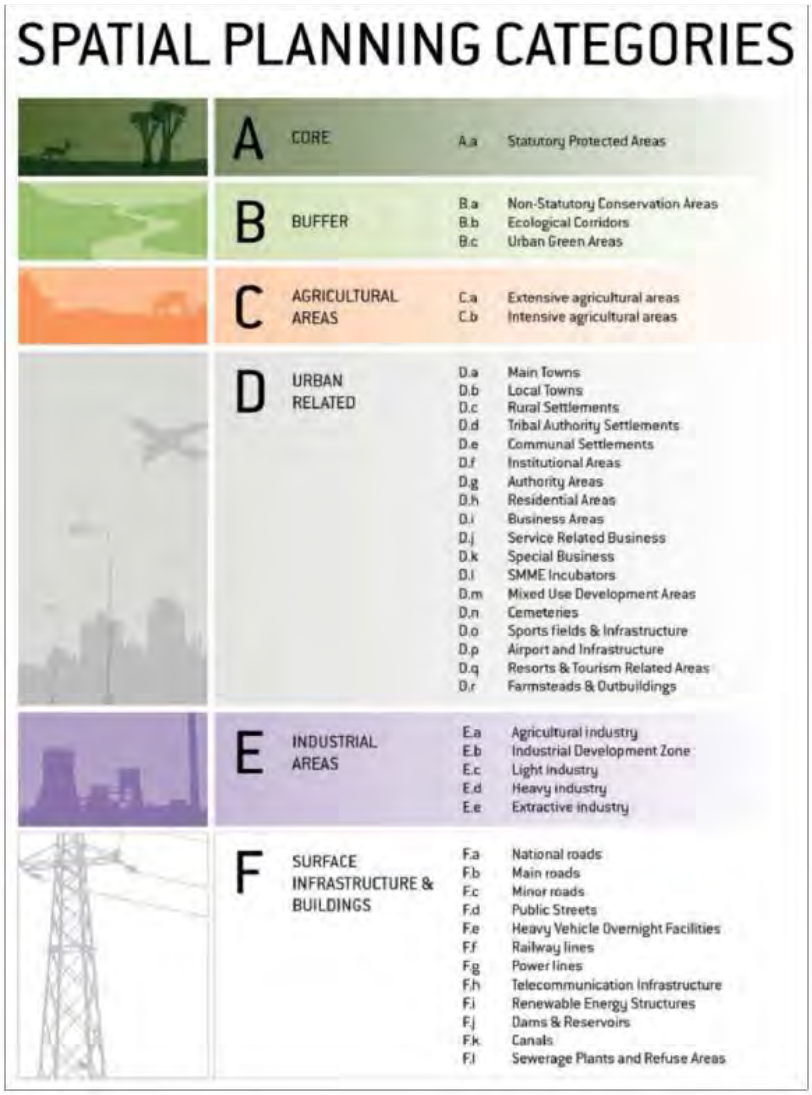
To assist with the standardizing of planning within the Northern Cape the implementation of Spatial Planning Categories, or more commonly known as SPC's, are being prescribed for planning on all local levels. Six (6) main SPATIAL PLANNING CATEGORIES have been formulated in terms of the bioregional planning principles to be applied to the province.

FIGURE 8: SPATIAL PLANNING CATEGORIES

(NCPSDF, 2012)

Detail regarding the six SPC categories (including sub-categories) to be applied is as follows:

FIGURE 9: SPC CATEGORIES



(NCPSDF, 2012)

TABLE 1: DEVELOPMENT GUIDELINES ACCORDING TO THE SPC'S:

SPC	TYPE OF DEVELOPMENT	CONDITION
A	No development allowed.	
B	a)Resort development b) Infrastructure required for research.	a) To be changed to SPC D, depending on the proposed type of development. b) Must be undertaken in accordance with site-specific design and planning guidelines (refer to Chapter C6).
C	a)Agricultural development and infrastructure required for extensive and intensive agricultural land-uses. b)Resort development on game farms. c) Agricultural industry.	a) To be changed to SPC D, depending on the proposed type of development. b) Must be undertaken in accordance with site-specific design and planning guidelines.
D	All urban-related developments.	Must be undertaken in accordance with site-specific design and planning guidelines.
E	Full spectrum of industrial developments required by the economic sectors.	a) Must be undertaken in accordance with site-specific design and planning guidelines. b) All industrial activities must be regulated and managed in accordance with sustainability standards (e.g. ISO 14001).
F	All surface infrastructure and buildings that are required for sustainable socio-economic development and resource use.	a) Must be undertaken in accordance with site-specific design and planning guidelines. b) All industrial activities must be regulated and managed in accordance with sustainability standards (e.g. ISO 14001).

(NCPSDF, 2012)

2.3.4.4 PROVINCIAL DEVELOPMENT REGIONS AND CORRIDORS

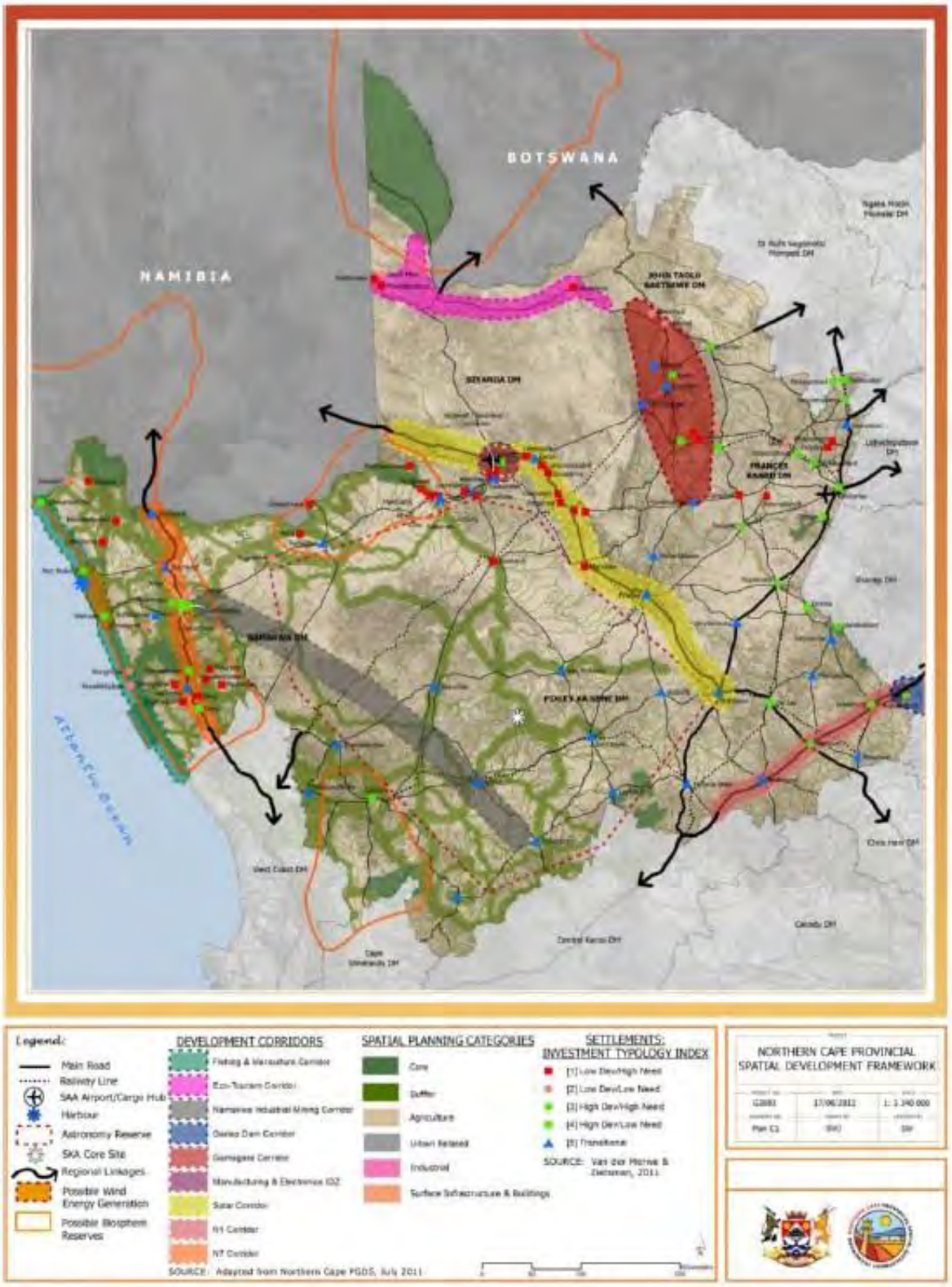
Settlement patterns in the province are informed by economic development opportunities. Specific economic development regions and corridors developed over time responding to:

a) Environmental capital (soil potential, availability of water, minerals, etc.), and

b) Infrastructural capital (roads, bulk engineering infrastructure, electricity).

Development regions and corridors are formed by the clustering of nodes where the capacity of entities and stakeholders within these nodes are coming together to ensure leadership and institutional capacity to constitute regional equity.

MAP 1: NORTHERN CAPE COMPOSITE SPATIAL PLAN



(NCSDF, 2012, P81)

2.3.4.5 BIOREGIONAL PLANNING PRINCIPLES

Bioregional planning is defined in the Northern Cape PSDF as, planning and land management that promote sustainable development by enhancing environmental integrity and human well‐being through economic efficiency within a defined geographical area, the boundaries of which are determined in accordance with environmental, social and economic criteria. From a philosophical perspective bioregional planning refers to reconnecting people to their living environment allowing a better understanding of the areas and dynamics of the area.

The Northern Cape PSDF was prepared in accordance with principles of Bioregional Planning. The objective is to provide a coherent and place-specific methodology for planning and management of the Northern Cape as a district and unique place and to facilitate its management in accordance with local and global best-practice.

Bioregional planning is not about solving problems for people, but rather creating circumstances for people to address their own challenges in a way that acknowledges the uniqueness and value of each person and place. This viewpoint is acknowledged in the Magareng SDF and has been integrated into the development proposals for the district and for each of the Municipalities.

2.3.4.6 PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK STRATEGIC FOCUS AND PRIORITIES

The following provides a summary of the strategic focal points and priorities that were identified in the Northern Cape SDF, with these strategies also forming part of the strategic directives in the Magareng SDF.

TABLE 2: STRATEGIC FOCAL PIONTS

Northern Cape SDF	Directives Description	Magareng SDF
Vision of Sustainable	Society Meeting the fundamental needs of people by effectively managing the Limited ecological resources for future generations. Advancing efficient and effective integrated planning through national, regional and global collaboration.	Support sustainable development through a proactive strategy
Support Bioregional planning	Provide a coherent and place specific methodology for planning and management of the Northern Cape as a district and unique place and to facilitate its management in accordance with local and global best-practice.	Identify unique place specific Elements.
Support and focus along Development corridors	Focus development and investment along identified development corridors that highlight the various existing unique characteristics in The regions.	Include the development corridors in the Magareng SDF with development to focus around these identified Corridors.
Spatial planning according to Biosphere reserve zones	Implements spatial planning categories according to the biospheres areas	Identify different biosphere areas within Magareng.

Northern Cape SDF	Directives Description	Magareng SDF
Effective management of the natural environment	Identify and management the natural environment according to the identified Spatial Planning Categories including: Core areas; Buffer areas, Agricultural areas, Urban areas, Industrial areas Surface infrastructure.	Each Municipal SDF to incorporate the Spatial Planning Categories within their local municipal areas.
Support a Rule-based decision making process	Decisions for development should be based on a thorough understanding of the environment and its process and functions. The desirability and the scale of a development must be based on a site specific environmental criteria, the broader environmental context and the potential cumulative impact of development as well as innovative town planning and urban design criteria.	Ensure that the development scale and design are determined by the carrying capacity of the environment.
Support a strategic approach to investment	New infrastructure should be prioritized in settlements with high economic growth potential. Fixed investment should be directed towards urban settlements with a high economic growth potential in the first instance and high human needs in the second instance.	Magareng town with a development potential: • Warrenton
Support the development of efficient surface infrastructure	Surface infrastructure including transport, water, energy, telecommunication and household services.	Identify priority infrastructure investment within the district.
Enabling the sustainable use of resources.	Ensure that use of resources unlocks meaningful and lasting benefits for the local people and the environment.	Magareng to take the sustainable development initiative approach.
Planning for responsible Tourism	Support tourism as an engine of growth, capable of mobilizing and rejuvenating	Identify tourism routes and attractions within the district municipal area.

Implications:

The SDF must align with the following provincial priorities:

- Strengthening governance and service delivery;
- Sustainable economic development and job creation;
- Sustainable human settlement development
- Integrating investment in strategic infrastructure.
- Capacity building
- Integrating land use management and spatial planning

The SDF must adhere to the provincial development directives and principles

2.4 SDF AND IDP RELATION

The SDF forms an integral part of the IDP and serves to visually depict written elements in the document, as illustrated in the figure below. In effect the SDF takes the development goals and projects, funded by the municipal budget, of the IDP and spatially orientates them to achieve the maximum success. The SDF, as a 10-20 year spatial development vision, then also informs the IDP, which is compiled every 5 years, by identifying strategic growth areas for future development. In addition the SDF defines day to day land use management within the relevant municipality.

In Chapter 3 all the IDP projects were also listed and evaluated according to the relevant Environmental Legislation. The Magareng Council has recently adopted their draft IDP for 2014 - 2015. The spatial synthesis of the detail list of projects will be address in Chapter 3.

3 VISION AND PRINCIPLES

3.1 INTRODUCTION

For the sensible development of South Africa as a whole, different spheres of government need to work together towards the same ultimate goal (national, provincial, district and local). Therefore it is important that development visions across the board align with one another. The following visions are of critical importance and will form a basis for the formulation:

TABLE 3: VARIOUS VISION PERTAINING TO MAGARENG

National Development Plan 2030, 2012	The National Development Plan is a plan for the country to eliminate poverty and reduce inequality by 2030 through uniting South Africans, unleashing the energies of its citizens, growing an inclusive economy, building capabilities, enhancing the capability of the state and leaders working together to solve complex problems. High-level objectives to be achieved by 2030: Reduce the number of people who live in households with a monthly income below R419 per person (in 2009 prices) from 39 percent to zero. Reduce inequality, as measured by the Gini coefficient, from 0.69 to 0.6
Northern Cape Growth and Development Strategy ,2004	Building a • prosperous, • sustainable growing provincial economy to • eradicate poverty and • improve social development"
Northern Cape Spatial Development Framework, 2012	"Enhancing our Future"
Frances Baard Municipal Integrated Development Plan 2013 -17	"To be a municipality with a clear development focus to improve the quality of life of all communities in the district".
Frances Baard Spatial Development Framework, Vision 2013	"To be a municipality that strives for socio-economic freedom through holistic spatial redress, sustainable development and environmental consideration for all communities in the district".
Magareng Local Municipality	Magareng shall be an • effective,

Integrated Development Plan 2014-16	• efficient • accountable and • a sustainable local municipality
Magareng Local Municipality Spatial Development Framework, 2008	"To strive to enhance integrated socio-economic development, to uplift communities focusing on areas where scares resources could be utilised most effectively and in a sustainable manner."

It is noticeable that the different visions, above all, include some form of sustainable development. The PSDF refers to sustainable development as the overarching goal of the province, emphasising its importance throughout the province.

Therefore, sustainable development will form the basis for this study and the spatial suggestions made for Magareng Municipality. To achieve this goal, the following mission, as set out in Magareng Municipality's IDP, will be kept in mind:

- Skills development and institutional capacity-building
- Continuous improvement on internal and external communication
- Strengthening the provision of integrated service delivery
- Striving towards service excellence and value driven *Batho Pele* principles service delivery
- Investing in modern equipment and technology for reliable service delivery.
- Creating a conducive environment for business development

3.2 PUBLIC PARTICIPATION PROCESS

3.2.1 METHODOLOGY

The SDF, as a document guided by the MSA, has to adhere to this statement of the community's right to participation. Public participation thus plays a vital role in the development of the document. The entire process of creating Spatial Development Frameworks, is therefore, first and foremost, influenced by public participation.

Public needs and concerns guide the framework within which the IDP is compiled. The IDP then, in turn, serves the community, but also guides the SDF. Thus, through public participation the public indirectly initiated the setting of a platform from which the SDF may be initiated through their vision statements and objectives.

Information with regard to the meetings (time and place) was published in the local paper, DFA. The DFA is available in every community within the municipal border of Magareng Municipality.

Bopa Lesedi, in collaboration with the municipality, also held a meeting for the Councillors, Ward Committees and CDW's (community development workers) to explain the entire process. In turn, they advertised the meetings by word-of-mouth (church and school announcements) in their respective communities.

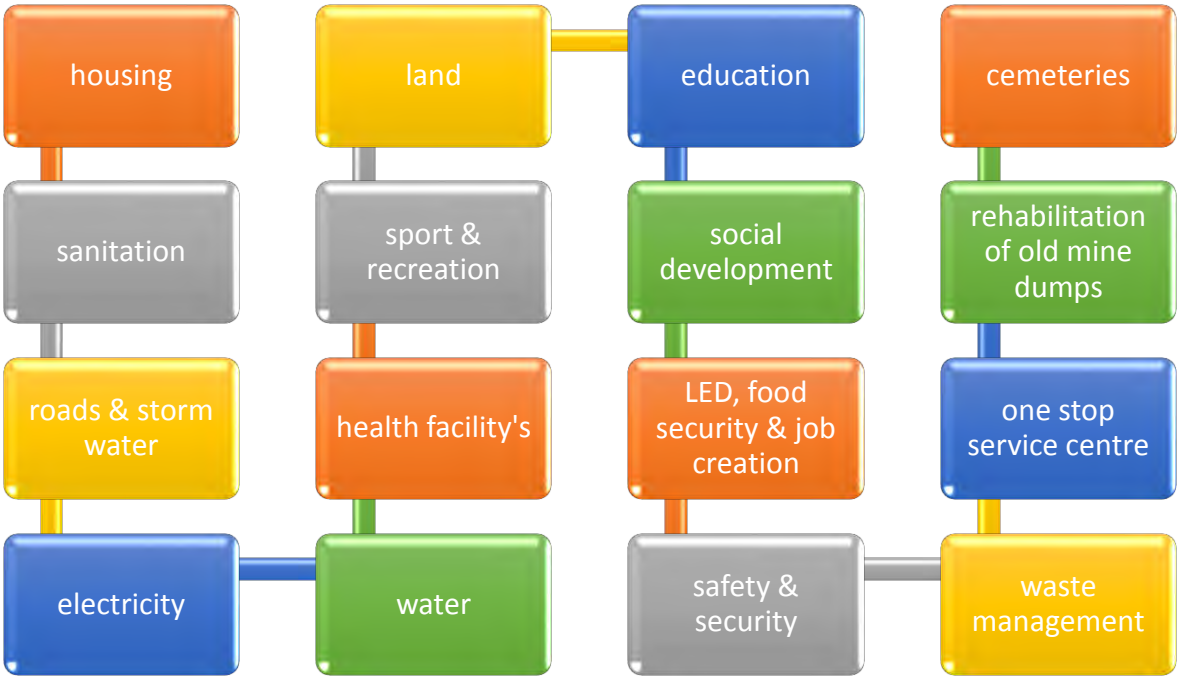
After obtaining all the inputs with regards to the Greenfield layouts of the perspective communities, the focus point turned to future developments. The vision statements

of each community were then discussed and all visions were captured in order to formulate the vision discussed hereafter.

3.2.2 SPATIAL ISSUES AS IDENTIFIED BY COMMUNITIES

From the Community Meetings held throughout the Municipality the following Figure give a clear perspective on what the main issues are pertaining to spatial patterns and development.

Figure 10: Spatial Issues by the Magareng Community



The following table depicts the various issues as was raised by the communities. During the formulation of the goals and objectives special care must be taken to address these issues.

Please refer to the Public Participation Report for details on all consultation sessions.

TABLE 4: COMMUNITY SPATIAL ISSUES

Meeting 1: Ikhutseng Community Hall (Ward 1, 2 and 3)	Meeting 2: Warrenvale Library Hall (Ward 4)	Meeting 3: Warrenton Library Hall (Ward 5)
▪ Illegal dumping	▪ Easier access to cultural resort	▪ Upgrading of town to attract more visitors
▪ Zoning certificates	▪ Ownership of recreation resort must be changed from Sol Plaatje Municipality to Magareng Municipality.	▪ Housing in Sydney's Hope is problematic
▪ Development of land along the N12	▪ Shopping Centre	▪ Pit latrines in rural areas that are privately owned
▪ Shopping centre	▪ Sewerage network	▪ Lack of social facilities in rural areas
▪ Additional high school	▪ Water shortage	▪ School at Nazareth House will be closing
▪ Upgrading of parks	▪ Heritage sites must be proclaimed and maintained	▪ Possibility of clinic in town
▪ Development of FET satellite college	▪ Absence of a museum	▪ Mobile clinic for rural areas
▪ Additional clinic	▪ Safety of children in parks, request for indoor sport facility	▪ Pedestrian safety on N12 and N18
▪ Transportation to clinics	▪ Housing for elderly and disabled	▪
▪ Additional Library	▪ Neighbourhoods are dirty and not cleaned	▪
▪ Upgrading of sport arena and development of indoor sport facilities	▪ Absence of fire station	▪
▪	▪ Clinic not adequate for number of visitors per day	▪
▪	▪ More high mass lights	▪
▪	▪ One stop Government centre including services like home affairs	▪

▪	▪ Storm water drainage is a challenged	▪
▪	▪ Too little vacant areas for housing demand	▪
▪	▪ FET college and youth centre	▪
▪	▪	▪

3.3 SDF VISION

The vision of the SDF was formulated after all the inputs from the public was taken into consideration and combined with the visions already discussed in the previous sections.

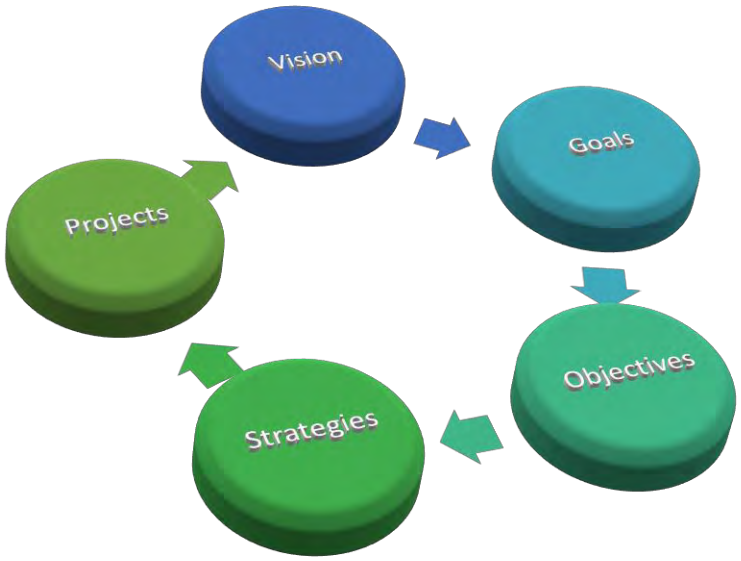
This vision acknowledges the fact that there are limited financial and natural

SDF Vision 2014

"To enhance integrated socio-economic development, through the uplift of communities in a sustainable manner."

resources available and that proper spatial planning should be done in such a manner that it optimally utilises the available funds by the classification of towns, according to needs and development opportunities (NCPSDF, 2012). The identified projects should also be sustainable on an individual and municipal scale due to the fact that they have an all-round influence on each other.

FIGURE 11: SDF COMPONENTS



3.4 SDF GOALS

As described in the NCPSDF, the Northern Cape PGDS states that social and economic development is imperative in order to address the most significant challenge, i.e. poverty. The only effective means by which poverty can be reduced is long-term sustainable economic growth and development. The following goals are formulated:

- To ensure integration of development, planning and environmental processes, resulting in sustainable development.
- Proper spatial planning, resulting in the provision of an economic base for business and industrial development.
- Spatial planning to represent the realistic needs of the community.
- A set of planning principles focussing attention to a bottom-up developmental approach.
- Proper management of the SDF document and implementation of planning objectives and principles resulting in sustainable projects.

The objectives and principles of the SDF are handled in Chapter 5 which gives directive to the different spatial principles of the project.

3.5 SUSTAINABLE DEVELOPMENT PRINCIPLES

SPLUMA further stipulates five development principles that apply especially to 'the preparation, adoption and implementation of any Spatial Development Framework'. These principles are of critical importance to the SDF, as they serve as a normative reference by which the goals of the SDF are measured. The 5 principles can be summarised as follows: Principle:

Spatial Justice

Past spatial and other development imbalances are redressed through improved access to and use of land;

SDFs and policies at all spheres of government address the inclusion of persons and areas that were previously excluded, with an emphasis on informal settlements, former homeland areas and areas characterised by widespread poverty and deprivation;

Spatial planning mechanisms, including land use schemes, include provisions that enable redress in access to land and property by disadvantaged communities and persons;

Land use management systems are inclusive of all areas of a municipality and specifically include provisions that are flexible and appropriate for the management of disadvantaged areas, informal settlements and former homeland areas;

Land development procedures will include provisions that accommodate access to secure tenure and the incremental upgrading of informal areas and;

Where a planning tribunal considers an application before it, the planning tribunal's exercise of discretion may not be impeded or

	restricted on the ground that the value of land or property is affected by the outcome of the application.
	romote and stimulate the effective and equitable functioning of land ıarkets;
	Consider all the current and future costs to all parties for the provision of infrastructure and social services in land developments;
	Promote land development in locations that are sustainable and limit urban sprawl;
	Result in communities that are viable.
Efficiency	Land development optimises the use of existing resources and infrastructure;
	Decision-making procedures are designed with a view to minimising negative financial, social economic or environmental impacts; and
	Development application procedures that are efficient and streamlined and time frames are adhered to by all parties.
Spatial Resilience	Flexibility in spatial plans, policies and land use management systems is accommodated to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks.
Good Administration	All spheres of government ensure an integrated approach to land use and land development that is guided by the spatial planning and land use management systems as embodied in this Act;
	No government department may withhold their sector input or fail to comply with any other prescribed requirements during the preparation or amendment of Spatial Development Frameworks;
	The requirements of any law relating to land development and land use are met timeously;
	The preparation and amendment of spatial plans, policies, land use schemes, as well as procedures for development applications, to include transparent processes of public participation and all parties to have the opportunity to provide inputs on matters affecting them; and
	Policies, legislation and procedures must be clearly set out and inform and empower citizens.

As mentioned, sustainable development plays a critical role in the future planning of the Magareng Municipality. The Provincial SDF provides the following principles pertaining specifically to sustainable development that will guide the formulation of this document:

- The sustainable use of inherent resources (both renewable and non-renewable);
- The equitable sharing of benefits arising from the use and development of these resources;
- Participation by the people of the Northern Cape in the management and decision making processes regarding the ways in which resources are shared;
- Approaches that incorporate the full economic, social and environmental costs and benefits of projects, plans and policies;
- That benefits derived from the use of these resources depend upon such resources:
- Being used within their renewal capacity;
- Maintenance of the integrity of the natural systems which produce such resources;
- Minimising or avoiding the risk or irreversible change induced by humans;
- Adequate investments being made to ensure the conservation of resources;
- Avoiding or minimising the adverse impacts of the use of non-renewable resources.
- Avoidance of negative impacts on the environment by all people and institutions.

3.5.1 ENVIRONMENTAL PRINCIPLES AND REQUIREMENTS FOR SUSTAINABLE DEVELOPMENT

An essential aspect of sustainable development lies in the way in which settlements are shaped and spatially placed within a specific environment, and the manner in which a balance is achieved among the three worldwide imperatives pertaining to sustainable development. Moughtin is of the opinions that the principles for sustainable development including clear objectives for an urban design framework which emphasise the conservation of natural, as well as, the built environment. Conservation should be favoured in the development process and a premium put on the conservation of natural resources, wildlife and landscape. Sustained development can be helped by the structuring and restructuring of the built environment. In this regard the following views of Moughtin, should apply in a SDF:

Principle No 1: The conservation and re-use of buildings, as well as, infrastructure and materials should be a priority.

Principle No 2: Where possible, materials should be used that require low energy inputs in the creation thereof, the transportation to a site, and during construction. Labour intensive materials, rather than energy intensive material should be used.

Principle No 3: The use of materials that may cause environmental damage should be avoided. Any damage should be mitigated and new development should subject to efficient landscaping in an effort to offset detrimental impacts.

Principle No 4: Buildings should be related to the local environment. This includes reduction of external wall surface, orientation of the building towards the sun, and creating conservatories or sun spaces facing north, east or west.

Principle No 5: Buildings should be designed for flexibility for a mixture of uses accommodated under the same roof and the floor plan should be adaptable to different uses during its lifetime.

Principle No 6: Buildings should be placed on public transport routes and closely connected to the existing urban infrastructure. Development should preferably take place by means of 'infill' in existing development or on 'brown land' (i.e. land that was previously used and/or previous wastelands) (Moughtin, C. 1997. Urban Design – Green Dimensions).

A SDF should essentially be a place-specific plan, which recognises that the subject planning area (a defined *place*) has a distinctive *character* and significance to the people who live in that area, as well as to people who visit it. Note: environment's and human's influence. A SDF should express the wishes of the people living in a specific geographical area in respect to their kind of habitat and their aspirations of the future. In realizing this objective it is important to ensure compliance with certain basic requirements:

a) Promote a better understanding with regard to the SDF area in qualitative terms.
b) Develop an appreciation for that which the SDF area, as well as, its component places provides, and the fact that each of them has their specific qualities which give meaning to the existence of mankind.
c) Encourage the communities within the SDF area to contemplate afresh the nature and quality of their area and to express what they signify, wish and aspire.
d) Enabling people to consider the SDF area on terms which is both qualitative and practical and agree on a policy framework which is realistic.

There is a propensity to emphasise the part of the physical, functional and biological components in the formulation of policy and strategies which focusses on the conservation of biodiversity, whilst the value that people attach to their existence (*existential meaning*[20]), as well as, the values that underline it, are being neglected.

3.5.2 SENSE OF PLACE

As previously stated the SDF relates to all projects in the IDP that have a spatial component. Although the SDF places emphasis on development strategies and projects, it has to take care not to corrupt the natural sense of place of the Municipal area. A sense of place can be described as the atmosphere typical to a specific area. Unique natural features, cultures and people all contribute to an exclusive experience, distinctive of a place. The Magareng Municipality is definitely a unique area. Summarised, the following aspects all proved to be quite memorable and therefore contribute to the sense of place experienced by individuals:

- The Vaal River, which acts as life line throughout the Municipality;
- The sense of community and small town charm experienced.

This principle, as described above, is looking at the aspect from a municipal perspective, but must also be accounted for on the level of individual urban

developments. The creation of urban settlements which reflect a sense of place and express the unique nature of their natural and cultural setting is an essential concern.

The following aspects play a significant role in the establishment of a sense of place and should be considered during development decision-making:

3.5.2.1 SENSE OF ARRIVAL:

A sense of arrival is related to the personal experience of entering the district, or arriving, as the heading suggest. This is closely related to natural aspects, for instance, the perceivable change of landscape when one travels to a certain destination, and contributes to a sense of place by differentiating the area from any other. The points of sense of arrival does not necessarily relate to the demarcated boundaries of the municipality, but is rather entrenched in perception (a very important part of place making). For instance, one might hypothesise that in Magareng, two important sense of arrival points are The Vaal River (from Hartswater) and the N12 (From Kimberley). One may build on this perceived sense of arrival by improving the aesthetics and vibrancy of these points. These are also ideal focus points for building on natural and cultural identities unique to the region.

a) Sense of history:

Closely linked to the above mentioned building of cultural identity, is the holistic acknowledgement of the history of the area. It may be said that Magareng has strong historic influences which is uniquely visible in the differentiation of the different communities to be found in the area. When investing in the development of the municipality, the question should arise as to what is being done to conserve the historical vibrancy of the municipality. This could play a significant role in tourism as an economic contributor. Taking historical contexts into account, greater focus should be placed on the preservation of historically valuable buildings as a local and national asset. Consideration of the National Heritage Resources Act (Act 25 of 1999) should be highlighted as being extremely relevant here.

b) Sense of nature:

The aspect of a sense of nature was touched upon under a sense of arrival when it was mentioned that the change in landscape has an important role to play. The Magareng Municipality is defined by the life giving natural force that is the Vaal River. It is also closely related to a sense of history, where this river, as natural occurrence, has had a major role in the establishment of local communities and their livelihoods. It is therefore important that this be acknowledged in planning within the municipality. One should however not disregard the rest of the natural offerings in the municipality, and conservation should be an ever important consideration. The National Environmental Management Act (Act 107 of 1998) can play an important guiding role here, but also have limits in context. Where natural areas have perceived value, the traits contributing to this value should be conserved e.g. through view analysis of developments.

c) Sense of craft:

Strongly linked to a sense of history, this aspect is related to building the cultural identity in communities. This can be achieved through community art projects, commissioned public art such as sculptures and murals; all focussing on social and cultural values of the community.

d) Sense of limits:

This aspect pertains to the limitations of development within the municipality. One might call it the context within which development decisions must be made. For example: None of the urban nodes within the municipality are expected to transform into a city within the foreseeable future. One may therefore expect that agriculture will continue to be the cornerstone of the area's economy and decisions must be cognitive of this.

3.5.3 ENVIRONMENTAL FOCUS OF A SDF

Municipalities have a legal obligation to prepare a SDF which gives an indication of the spatial implications of the issues that were dealt with in the IDP. It is furthermore an important management tool, in that; it gives guidance with regard to future development within a specific geographical area. In addition to this, it also provides strategies and proposals with regard to issues such as urban renewal, environmental planning, land reform, infrastructure planning, integration and urban design, to mention only a few. In all of this, it must be ensured that the general wellbeing of the specific community is promoted in the most effective way. All of these aspects have a bearing on sustainability and sustainable development. The SDF is therefore the primary instrument or mechanism through which sustainability and sustainable development is to be promoted in any area.

The strategies and measures suggested in Section 4 would ensure sustainable development as contemplated by the Constitution and other enabling legislation. The said strategies and measures are broadly encapsulated in the process of Integrated Environmental Management (IEM) advocated by NEMA. IEM is defined as an integrated approach for environmental assessment, management, decision-making, the promotion of sustainable development, and the equitable use of resources.

The following principles of IEM are of specific relevance to the SDF process:

a) Informed decision-making. The SEA process summarised in Section 2.3 is to fulfil a fundamentally important function with regard to the promotion of meaningful stakeholder participation.
b) An open, participatory approach in the planning of proposals. The key requirement in this regard is that all stakeholders need to have an appropriate understanding of their life-world and that they have to identify with the area to the extent that they would actively participate in the SDF process.
c) An attempt to mitigate negative effects and enhancement of positive aspects of development. As stated by the CSIR (2002) the intention of sustainable development is to 'improve the state of'. The SDF should provide clear directives as to how to achieve this.

d) An attempt to ensure that the 'social benefits' (benefits to society as a result of the actions of the developers) outweighs the 'social costs' (costs paid for by society, rather than the developers). The SDF should ensure that the available resources (including public property) are utilised in an economically efficient manner (an imperative for sustainable development) for the benefit of all as is contemplated by the Constitution.

Mechanisms, such as the EIA and the SEA, on their own, cannot ensure sustainability on a broader regional scale. EIAs and SEAs, together with other mechanisms, such as Integrated Environmental Management (EIM) and Social Impact Assessments, should however be used in an integrated manner and as components of an efficient SDF, which has the potential to ensure sustainability.

3.6 SPATIAL STRUCTURING ELEMENTS

Any spatial system consists of a series of structuring elements that are in constant interaction with one another and that must be kept in mind while planning a municipal area for the future. Magareng is no different and the relevant elements will be described under headings that will form part of the spatial planning components and symbols. In order to analyse the spatial structure of Warrenton, it is important to understand the conceptual elements underlying the structure.

3.6.1 URBAN AREAS

An urban area is defined as an area characterised by concentrated, mixed activity such as residential development, business and administrative functions, social services and infrastructure. Warrenton is the only functioning urban area which is easily identifiable and surrounded by agricultural areas within Magareng. The Land Use that was designed as part of the SDF document, indicates the relevant urban area as 'Main and Local Town' surrounding the various towns.

FIGURE 12: WARRENTON TOWN AS AN EXPAMLE OF URBAN AREA

3.6.2 URBAN EGDE

The urban edge can be defined as the urban growth boundary, which indicates the interface between urban and rural environments. In effect, the urban edge indicates the boundary beyond which urban growth should not be allowed. The urban edge has significance as it curbs the uncontrolled expansion of urban settlements into surrounding rural areas (urban sprawl). In short, urban sprawl has the following disadvantages:

- It results in a settlement pattern that has neither urban, nor rural advantages.
- In terms of infrastructure provision, it is extremely expensive to serve.
- It could compromise valuable natural environments and high potential agricultural land.
- People in sprawling areas tend to drive more and this leads to increased energy consumption

3.6.3 MIXED LAND USE

As a spatial term, mixed use can be defined as the mixing of different land uses within a specific location or precinct. Mixed uses can comprise of a combination of residential (mostly higher densities) development, business offices and community facilities. Mixed uses either comprise of different land uses on different erven, but in the same vicinity, or mixed uses in the same building (i.e. the vertical integration of land uses).

3.6.4 CORRIDOR

Development corridors are broad areas of high-intensity urban development centred on activity and development routes. They are characterised by a dynamic, mutually supporting relationship between land use and the supporting movement system. Development corridors are generally supported by a hierarchy of transport services that function as an integrated system to facilitate ease of movement for private and public transport users. Corridor development is focused predominantly on activity / development routes serviced by mass rapid public transport services (i.e. rail or bus rapid transport (BRT)); however, the system of routes may serve different functions, with some routes combining route functionality in terms of accessibility and mobility. Development corridors can be classified as:

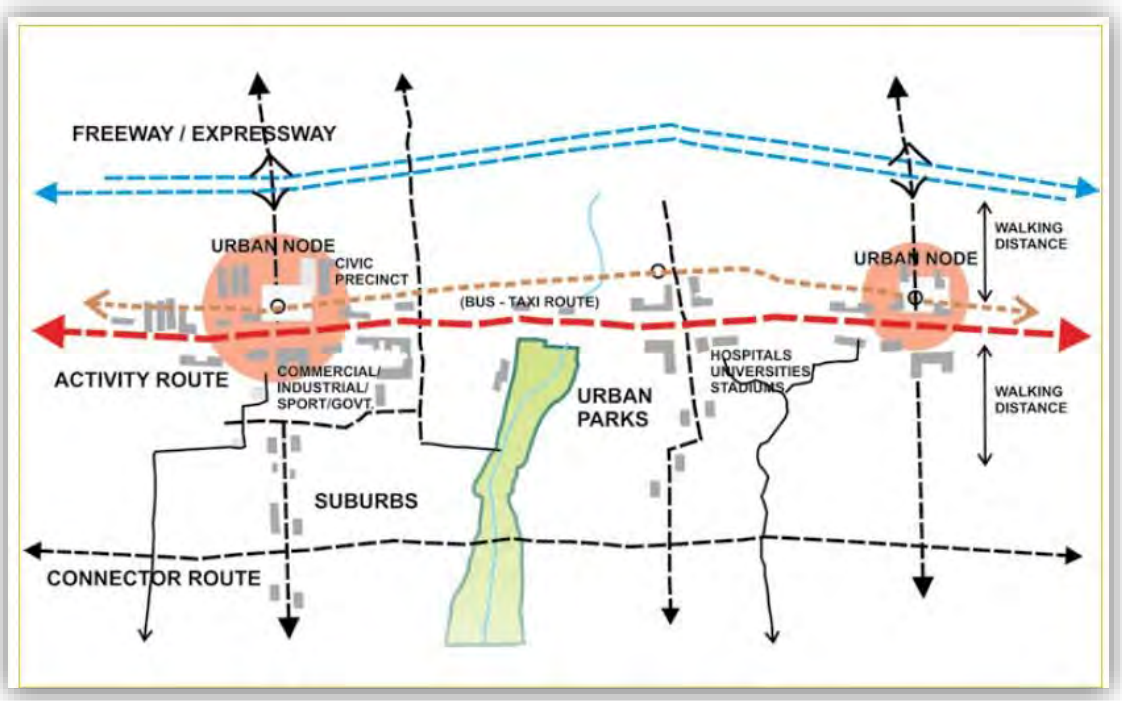
Activity Corridor

This forms the main development corridor where a variety of social and employment opportunities are integrated with high-density mixed land use development.

Activity spines

The activity spines are major routes on which most of the road based public transport services run and on which most of the activities are focused. Activity spines also connect the prominent development nodes and support access to most of the mixed land use developments and community activities within the corridor

FIGURE 13: EXAMPLE OF DEVELOPMENT CORRIDOR



(CTSDF p 33, 2012)

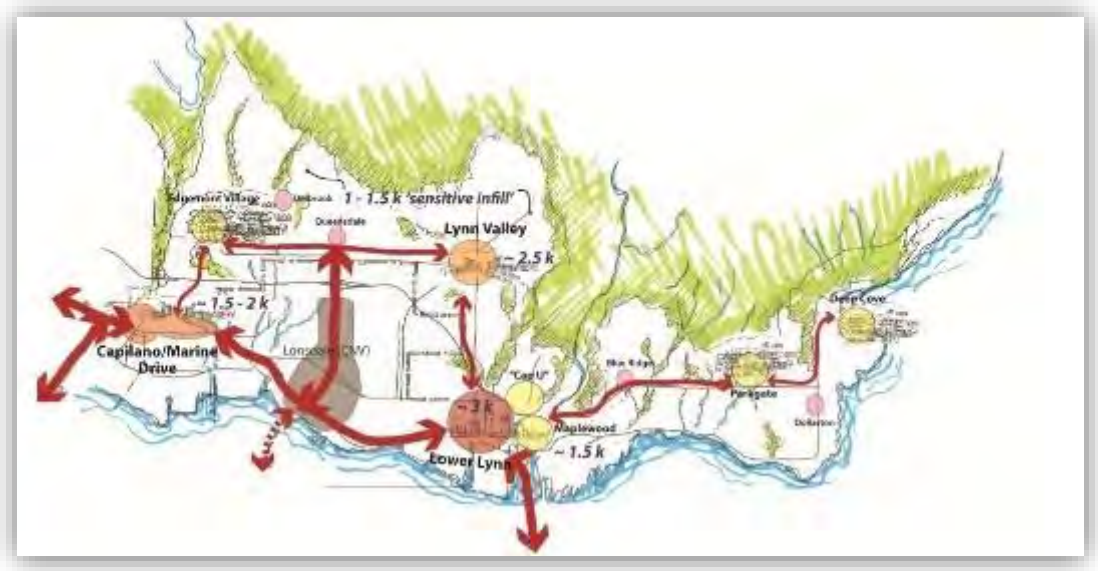
Activity streets

Activity roads form the major linkages between the different sections of the urban area, as well as, the activity corridors and spines. These roads normally attract sufficient passing trade and provide important opportunities for the stimulation of business development and community facilities within neighbourhood nodes.

3.6.5 NODES

Urban nodes are characterised by the intensity, mix and clustering of activities or land uses (including commercial and business development and associated employment opportunities and higher-order services) at points of maximum accessibility, exposure, convenience and urban opportunity. Nodes are best located at the intersections of transport routes, as this increases access, both by private and public transportation. Pedestrian access is crucial and is one of the most important elements in the design and development of nodes.

Increased residential densities in and around nodes will further support the urban structure and reduce the need for private vehicle trips.



Example of urban nodes concentrated through our Vancouver (www.vancouverplanning.com , 2013)

Development / Activity Nodes

A classification of nodes is proposed for the purpose of nodal management. Nodes are also linked to the movement network and therefore the location in the movement network will be a determining factor in the size, type and function of nodes.

Specialised Nodes / Zones:

Nodes characterized by a concentration of specific land uses, e.g. institutional, entertainment, offices or commerce.

FIGURE 14: SPECIALISED ZONES

Example of specialised development zone, Industrial Zone- Prague (www.architech.com, 2014)

Rural Development Nodes:

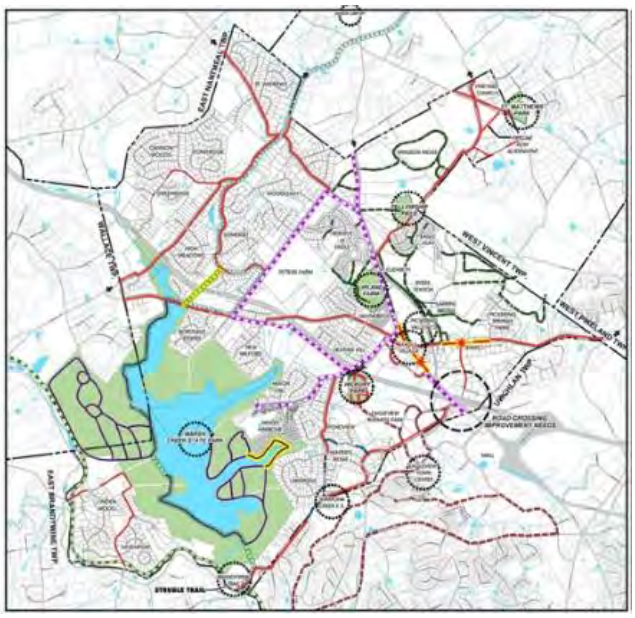
In order to improve the living standards to marginalized communities in the rural areas, more emphasis must be placed on the improvement of social facilities and services on strategic localities within the district. This implies the identification of focal points or nodes adjacent to dominant regional routes or intersection of regional routes in order to increase accessibility to social facilities effective public transport system within the rural areas.

The core function of these nodes should be in the form of multipurpose community development centres that is based on the concept of a "one stop" centre providing for a full range of social services (pension pay point, municipal pay points, clinic, school, Telkom, Post Office, and Police Station etc.) These centres can also be combined with business activities (business facilities, informal business etc.) in order to create more vibrant nodes. Proper maintenance of especially the rural roads is crucial for the proper functioning of these nodes and to enhance public transport. Although Granspan is located just north of the Magareng Municipal Boundary with Phokwane it is a good example of a rural node, with development potential.

FIGURE 15: GRANSPAN (RURAL NODE)

3.6.6 MUNICIPAL OPEN SPACE SYSTEM (MOSS)

Within the context of increased global urbanisation, the importance of open space has been increasingly highlighted. Open space serves a variety of purposes namely conservation, relaxation, recreation etc. It has been realised recently that the various functions of open space do not function in isolation, but rather as a system. The MOSS is a rationalised network of interconnected open space aimed at:



Complementing the built fabric by providing the urban environment with a variety character, a sense of visual relief, open space enjoyment, recreation and general amenity,

As well as, Protection of biodiversity in the urban and rural areas, providing animal and plant species with habitats.

The MOSS can therefore be described as a network of natural and urban green areas throughout the Municipality (www.rayott.com, 2014).

4 SPATIAL ANALYSIS AND SYNTHESIS

4.1 INTRODUCTION

Chapter 3 focuses on the comprehensive investigation into all matters that have a spatial impact on the Magareng area. This chapter gives the reader a full description of the status quo of all aspects that have an influence on the spatial form and development patterns of the Municipality, including the following components, namely:

1. The status Quo of the Municipal area, the Surrounding Municipalities and the Trans Municipal Corridors;
2. The Bio-Physical conditions;
3. The Socio-Economic conditions;
4. The Built Environment and;
5. Synthesis of spatial issues and opportunities.

The findings of Chapters 1 and 2 forms the basis on which this Chapter is built. The understanding of this Chapter and the influence it has on Chapter 5 is very important to interpret the spatial future of Magareng area. Throughout this chapter the components discussed in the previous chapters were kept in mind.

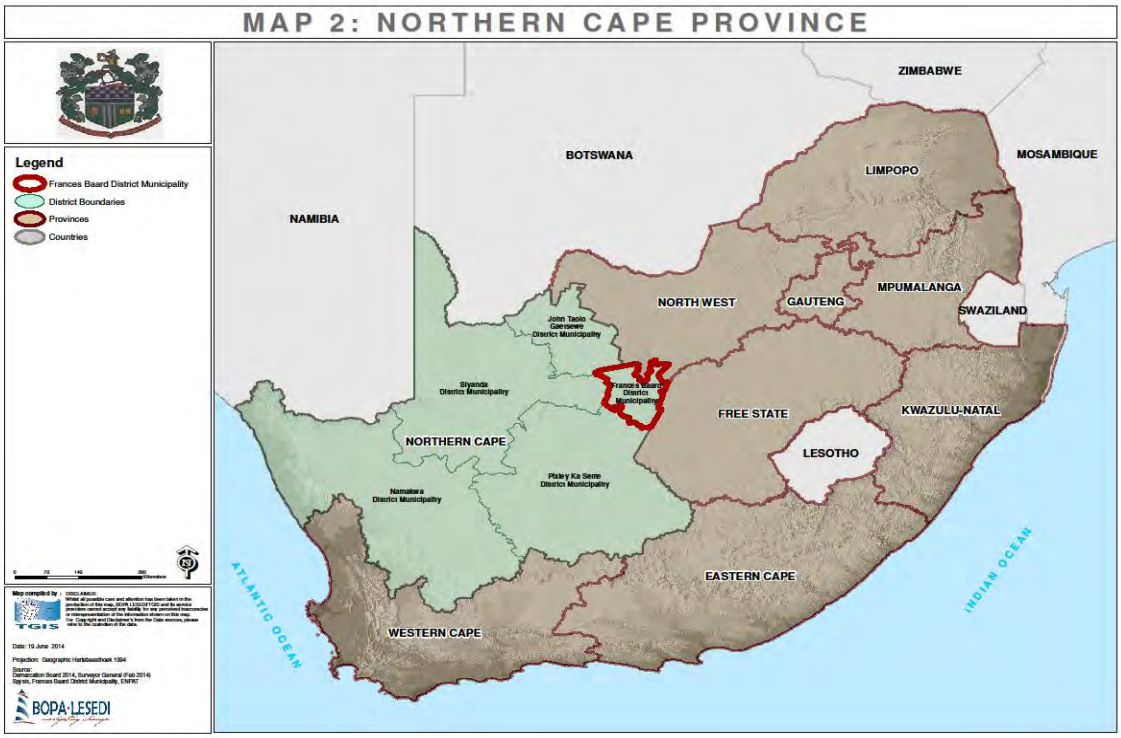
Although there is a national notion for SDF's to be formulated to align vertically and horizontally and be compiled according to the same guidelines, each municipal area is different and this has an influence regarding the outcome and documentation formulation thereof and this will become clear throughout this document.

4.2 STUDY AREA

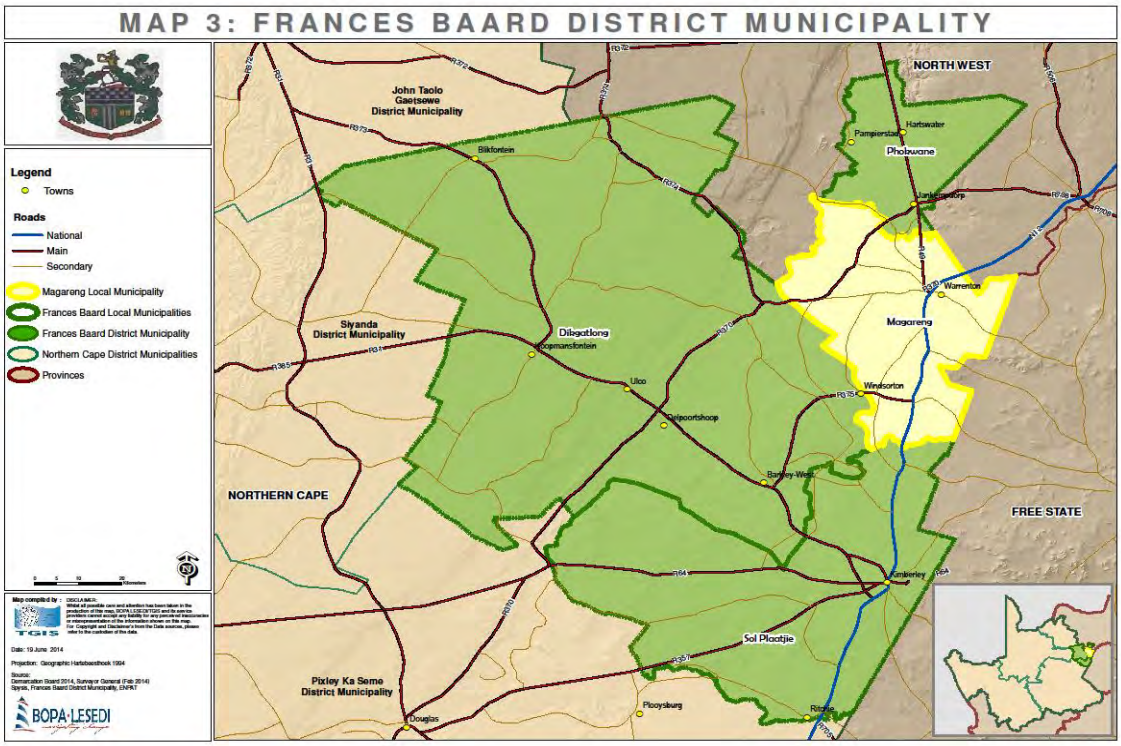
The Local Municipality was established on 5 December 2000 after the amalgamation of Warrenton TLC with portions of Hartswater TLC and Vaal River TRC.

Magareng Local Municipality is situated in the Northern Cape Province and lies within the boundaries of the Frances Baard District Municipality. Warrenton, the administrative centre of Magareng Municipality, is situated approximately 75 km from Kimberley on the banks of the Vaal River.

MAP 2: NORTHERN CAPE PROVINCE



MAP 3: FRANCES BAARD DISTRICT MUNICIPALITY

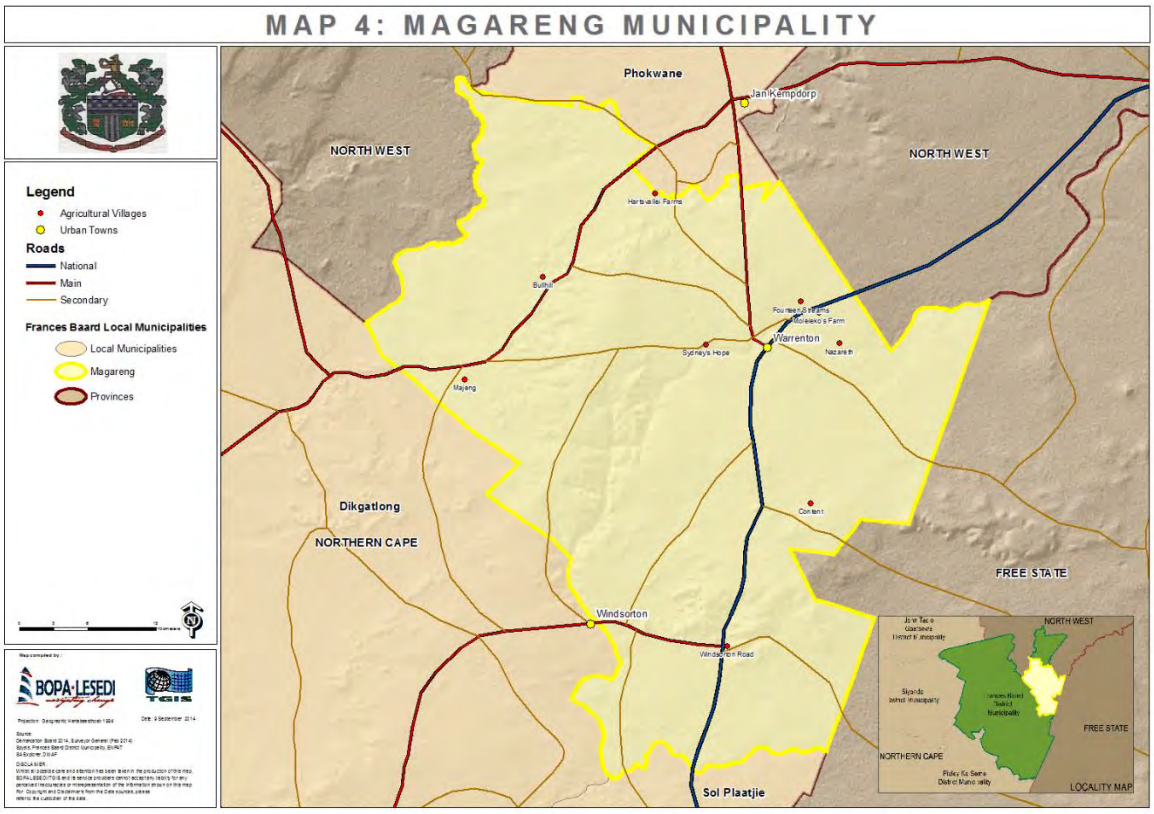


The area of jurisdiction is approximately 1542 km² in extent and accommodates approximately 20,433 people (Community survey 2007). 72% of the total population is Black, 17, 5% Coloured while the White population represents only 10% of the total population. The Indian and Asian population is insignificantly small to impact on the proportional representation.

It constitutes one of five local municipal areas within the district and accommodates almost 8% of the district population (Magareng IDP 2013/14).

The municipality borders Phokwane Local Municipality (Northern Cape Province) in the north, Dikgatlong Local Municipality (Northern Cape Province) in the west, Sol Plaatje Local Municipality (Northern Cape Province) in the south and Lekwa-Teemane Local Municipality (North West Province) in the east.

MAP 4: MAGARENG MUNICIPALITY



Map 4 shows that the majority of the area can be classified as peri-urban with very low densities that makes the provision of basic services very difficult and expensive. The majority of the population is concentrated in Warrenton the only urban area within the Municipality. The municipal area comprises an urban node, as well as, villages and farms. The urban node consists of Warrenton, Warrenvale and Ikhutseng, while small agricultural villages have been establish throughout the municipal area, of which Bullhill, Fourteen Streams, Sydney's Hope, Windsorton Road, Moleleko's Farm, Nazareth and Hartsvallei Farms are the most prominent. The rest of the area comprises mainly mixed farming.

The N12 national road between Kimberley and Christiana, as well as, the N18 route to Vryburg passes through the centre of Warrenton.

The Railway line, that connects Gauteng with the Northern and Western Cape Province, runs through Magareng Municipality with a railway station at Warrenton, Fourteen Streams, and Windsorton station. The railway line also connects the Northern Cape and North West Province.

The municipal area is divided into 5 wards. Wards 1 to 3 constitute Ikhutseng, the former Black residential area, while Warrenvale, the former Coloured residential area, constitutes Ward 4. Ward 5 is made up of Warrenton town, which was previously a predominantly White area, and the surrounding rural areas. Please refer to Map 5 for spatial allocation of the wards (IDP review, 2011/12).

4.2.1 WARRENTON

Warrenton is the main service centre in the municipal area and focuses on serving the community Magareng and through traffic. Most of the business development is concentrated in the Central Business District (CBD) of Warrenton. The N18 route runs through the middle of the town while the Vaal River forms its western and northern boundary. The N12 divides the town from Ikhutseng and Warrenvale.

The southern boundary comprises farmland. The town has been adequately serviced although; some of this infrastructure is old and needs urgent upgrading. The town also accommodates the main municipal office and hospital. Opposite the river is municipal land which accommodates some of the utility services. The municipality is also of the intention to develop the new sewer outfall works on this side of the river. There is also an old water mill and warm spring in the area as well as numerous historic sites that can be used as tourists' attractions (IDP review, 2011/12).

4.2.2 IKHUTSENG

Ikhutseng is the former Black residential township that was developed east of the N12 and west of the railway line. It accommodates almost 56% of the total population of the municipal area. It was designed as a dormitory African township, mainly supplying labour to the businesses and industries that developed in the central business district and industrial area of Warrenton. For this reason, number of schools and community facilities were developed but only small businesses developed in the area. The majority of economic activity is still concentrated in the town of Warrenton itself.

Large areas were left vacant in the past to serve as buffer zones. Some of these areas have recently been invaded by informal settlements. Most of them have been formalised in recent years although not all have been properly serviced yet. Two of the settlements that are still not yet formalised are "Donkerhoek" and "Rabaadjie". The station and railway line forms the eastern boundary of Ikhutseng while the area to the south is mainly farmland (IDP review, 2011/12).

East of the railway line are the auction pens, landing strip and rifle range. The industrial area and golf course are to the north of the road leading to Boshoff.

4.2.3 WARRENVALE

Warrenvale is the former Coloured residential area that was developed east of the N12 and to the north of Ikhutseng. The area accommodates approximately 17% of the total population of the municipal area. This suburb has a few schools, community facilities and small businesses, but, like Ikhutseng, the majority of business activity and work opportunities are still based in the town of Warrenton itself.

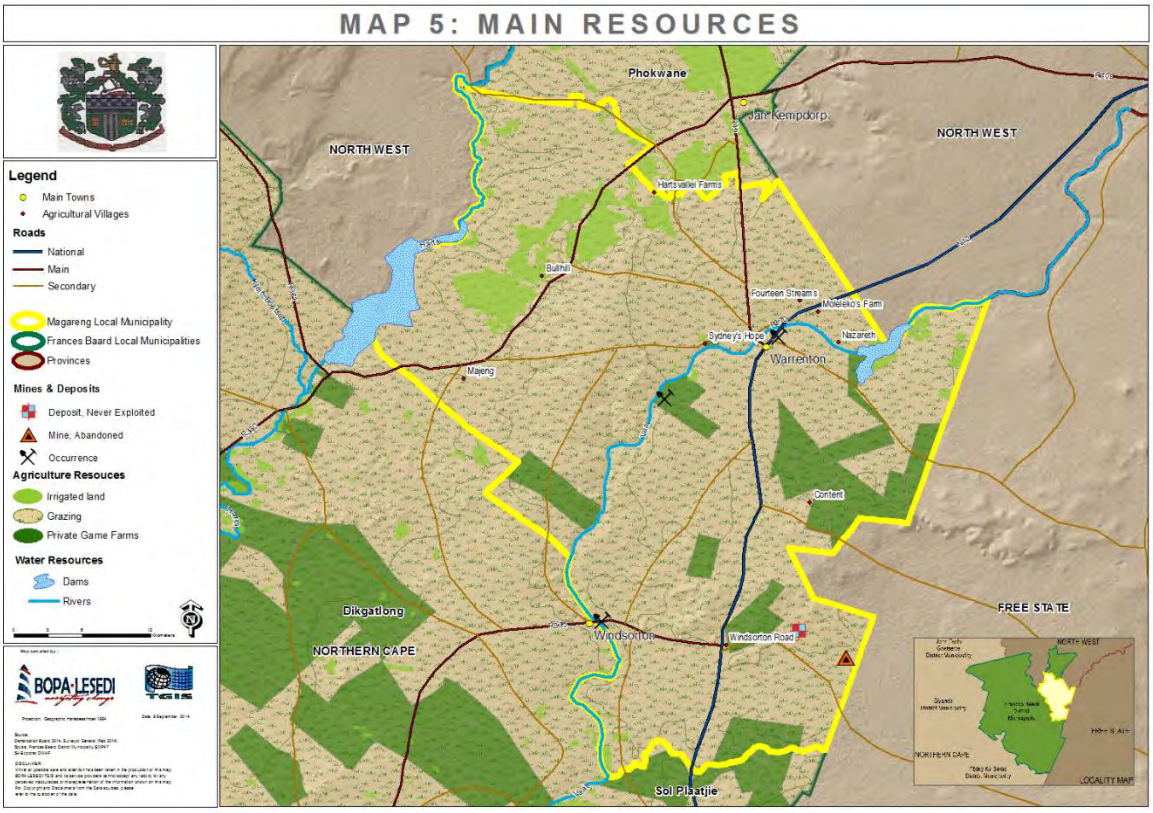
To the north of Warrenvale is Transka Resort, which has been developed on the bank of the Vaal River. The railway line and industrial area to the east of the railway line forms its eastern boundary while a large area, that was mined by small miners, form the southern boundary between it and Ikhutseng. The latter has been earmarked for residential development once the site has been rehabilitated. A large park area was left undeveloped between Warrenvale and the N12, which forms the western boundary of the area. The area has access to a basic level of infrastructure (IDP review, 2011/12).

4.2.4 RURAL

The rural areas comprise mostly extensive and intensive commercial farmland with a few agri-villages that developed in the area. The larger part of the farming area accommodates extensive mixed agriculture, where mostly cattle, game, and goat farming is practised, while the intensive farming areas are concentrated along the water canal system that transverse the area. The latter comprise an area of Majeng, Bull Hill and Hartsvallei, while some intensive farming is also practised a-long the Vaal River next to Moleko's Farm, Nazareth and 14 Streams. These areas produce crops, vegetables, fruit and other perishable products. Other settlements that accommodate a concentration of people are Sydney's Hope and Warrenton Station.

The rural area also accommodates natural features like the Spitskop dam, which forms part of the western border of the municipal area, while the Leeuw River forms part of the southern border of the municipal area. (IDP review, 2011/12)

MAP 5: MAIN RESOURCES



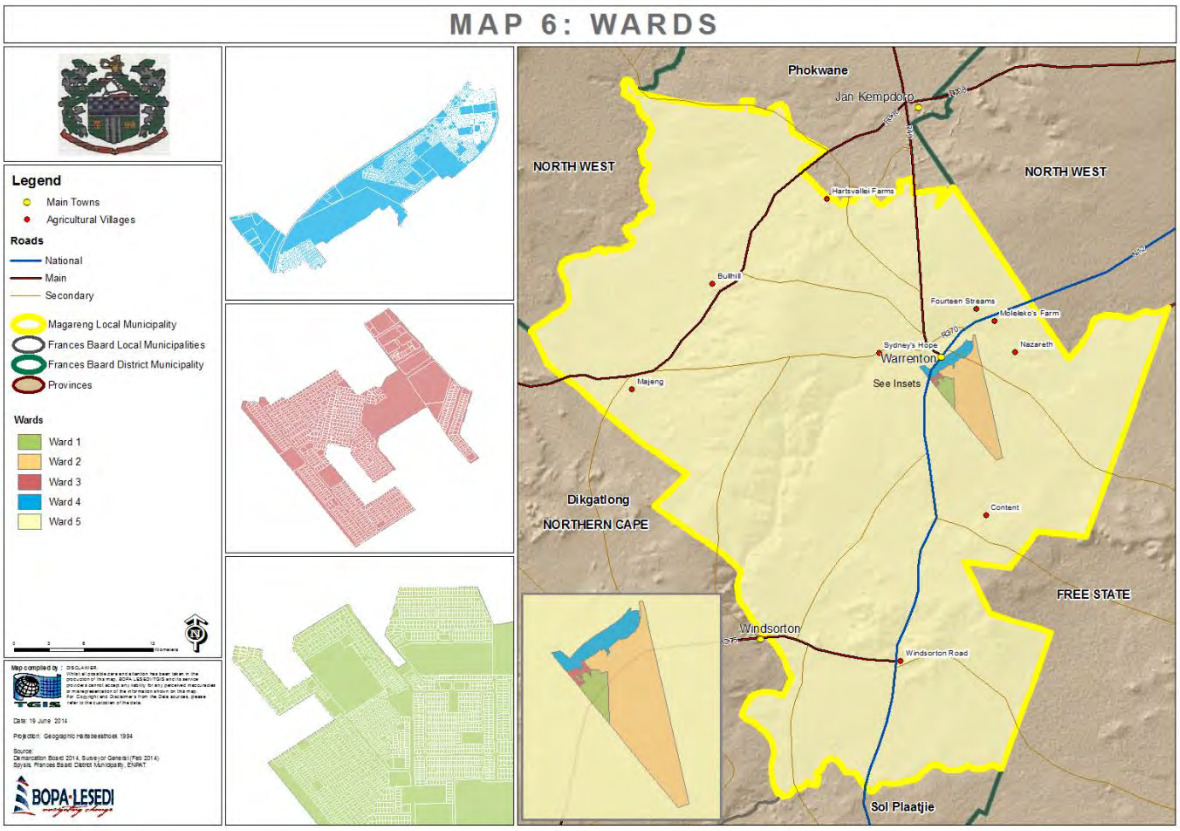
Map 6 gives a spatial representation of the distribution of the main resources. The interaction and impact of these resources will be discussed in the spatial analysis chapter.

The municipal area is divided into 5 wards. Wards 1 and 3 constitute Ikhutseng, the former Black residential area, while Warrenvale, the former Coloured residential area constitutes Ward 4.

Ward 4 is made up of Warrenton Town, which was previously a predominant White area, and the surrounding rural areas. Wards 2 and 5 contain mostly rural area.

The sizes of the wards range from 0.3177 km² and 1515.9 km² (Magareng SDF 2008).

MAP 6: WARDS



4.3 MAGARENG INTEGRATED DEVELOPMENT PLAN, 2013/14

According to Chapter V of the Municipal Systems Act (32 of 2000) all Municipalities are required to prepare Integrated Development Plans as a strategic tool to manage the affairs of the Municipality. As the Integrated Development Plan is a legislative requirement, it has a legal status and it supersedes all other plans that guide development at local government level.

The municipal vision as depicted in the IDP dated 2013/14 is:

"Magareng shall be an effective, efficient, accountable and sustainable local municipality."

Out of the six components identified to realize the vision, the SDF will mostly contribute directly to the following three:

- Strengthening the provision of integrated service delivery
- Striving towards service excellence and value driven *Batho Pele* principles service delivery
- Creating a conducive environment for business development

Section 1.2.4. of the IDP refers to the following municipal priorities, which we must ensure is incorporated into the spatial priorities:

1. Provision of Clean Drinkable Water
2. Upgrading of electrical network, including the provision of Street lighting (High mast light)
3. Provision of Storm water& upgrading of Roads
4. Unemployment (Job creation)
5. Provision of Sanitation& toilet facilities
6. Coordinate the provision of Housing
7. Provision of Safe Social recreational facilities
8. Development of effective, responsive & efficient administration
9. Upgrading of dumping sites

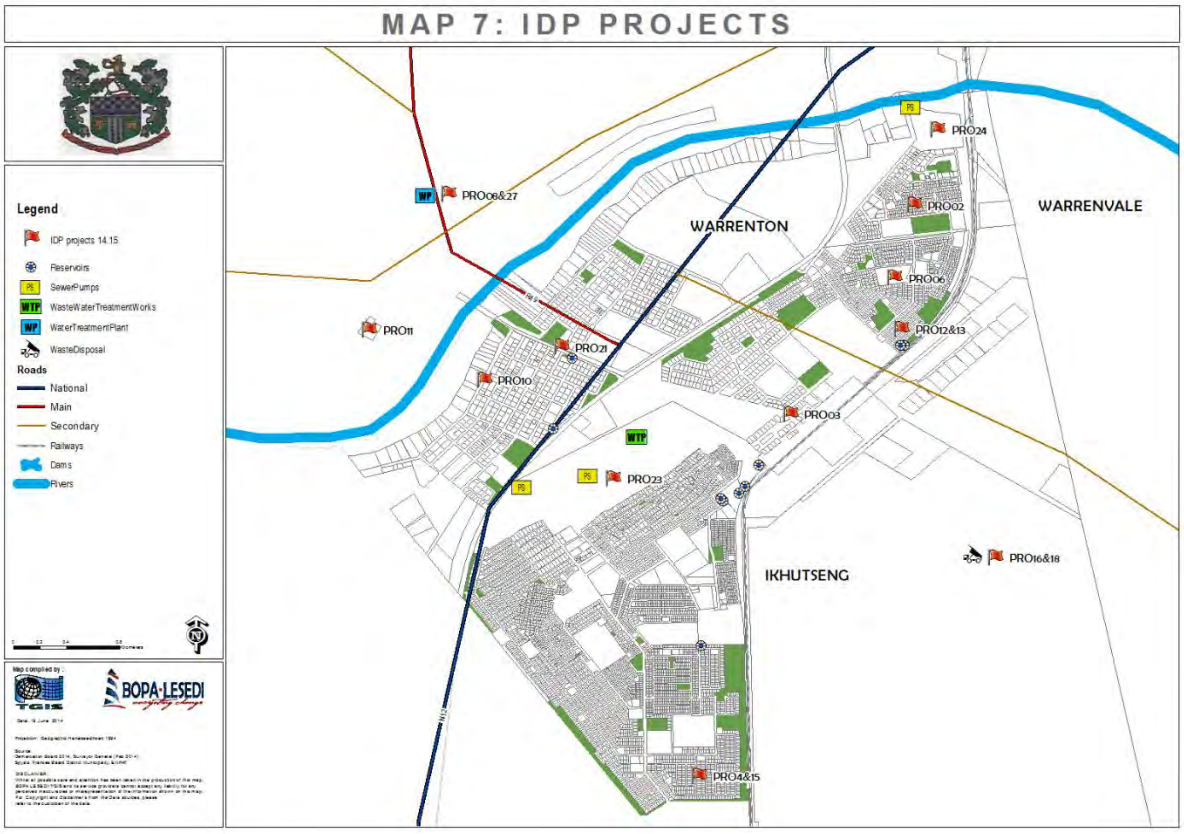
TABLE 5: IDP 2013/14 PROJECTS

MAP REFERENCE	PROJECT NAME	BUDGET	PROGRESS			COMMENTS
		R mil	COMPLETED	IN PROGRESS	NOT STARTED	
PRO01	Frances Baard Livestock Infrastructure	3 594			x	Erect fencing, handling and reticulation facilities
PRO02	Warrenvale roads	11 000			x	Construction of New Interlocking bricks paving roads
PRO03	Station roads	5 000			x	Only 2.5 m allocated for the current year
PRO04	Electrification of 558 stands in Warrenvale	5 100			x	Design Stage
PRO05	Upgrading of electricity by 0.7 MVA in Warrenton	600			X	To start in July 2013
PRO06	Construction of 200 RDP houses	14 000			X	Construction of low cost RDP houses in Warrenton
PRO07	General Maintenance Roads and Storm water	1 000			X	Operational Maintenance
PRO08	General maintenance to Water and Waste Water Treatment Plan	1 000			X	Operational Maintenance
PRO09	Replacement of old Electricity Transformers	700			X	Operational Maintenance
PRO10	Replacement of old Asbestos Pipe in Warren street	4 000			X	Operational Maintenance
PRO11	Renovation to traffic office; Municipal Workshop and Vehicle testing facility	1 000			X	Operational Maintenance
PRO12	Provision of Water Reticulation Network for 558 sites in Warrenvale (phase 2)	3 500			X	Capital Project
PRO13	Provision of sewer Reticulation network for 558 sites in Warrenvale (phase 1)	2 100			X	Only 2.5 m allocated for the current year
PRO14	Provision of sewer Reticulation network for 1298 sites in Ikhutseng (phase 1)	0			X	Capital Project

MAP REFERENCE	PROJECT NAME	BUDGET	PROGRESS			COMMENTS
		R mil	COMPLETED	IN PROGRESS	NOT STARTED	
PRO15	Provision for Water Reticulation Network for 1298 sites in Ikhutseng (phase 1)	0			X	Capital Project
PRO16	Purchasing of landfill compactor	0			X	Capital Project
PRO17	Construction of new library in Warrenton	0			X	Capital Project
PRO18	Rehabilitation of landfill site	0			X	Capital Project
PRO19	Purchasing of sewer tanker	0			X	Capital Project
PRO20	Renovation of traffic department facilities to comply with the transport regulations	0			X	Capital Project
PRO21	Renovations and upgrading to existing Municipal buildings	0			X	Capital Project
PRO22	Work on Parks and installation of children play grounds	0			X	Capital Project
PRO23	Rehabilitation of borrow pits mines between Ikhutseng and Warrenton	0			X	Capital Project
PRO24	Transferring and registering for ownership of Transka Resort	0			X	Capital Project
PRO25	Transferring and registering for ownership and upgrading of Dooringhof building	0			X	Capital Project
PRO26	Acquisition of a fire fighting vehicle	0			X	Capital Project
PRO27	Upgrading of Water Treatment plan	250 00			X	Looking for funding for designs and implementation
PRO28	Construction of new waste water treatment plant	90 000			X	Funding for Feasibility study, design and implementation

(Magareng IDP, 2013/14)

MAP 7: IDP PRIORITIES AND FUNDED PROJECTS



(Magareng IDP 2013/14)

Map 7 depicts the spatial location of the funded projects as listed in the IDP of 2013/14 and it is becoming clear that most of the priority and funded projects are located in the urban settlements.

This aligns with the regulations of the NCPSDF and where the focus is placed on the development potential of certain towns. The alignment with the NCPSDF and the Investment type is very important. This can be summarised as follows as it is found in the PSDF, namely:

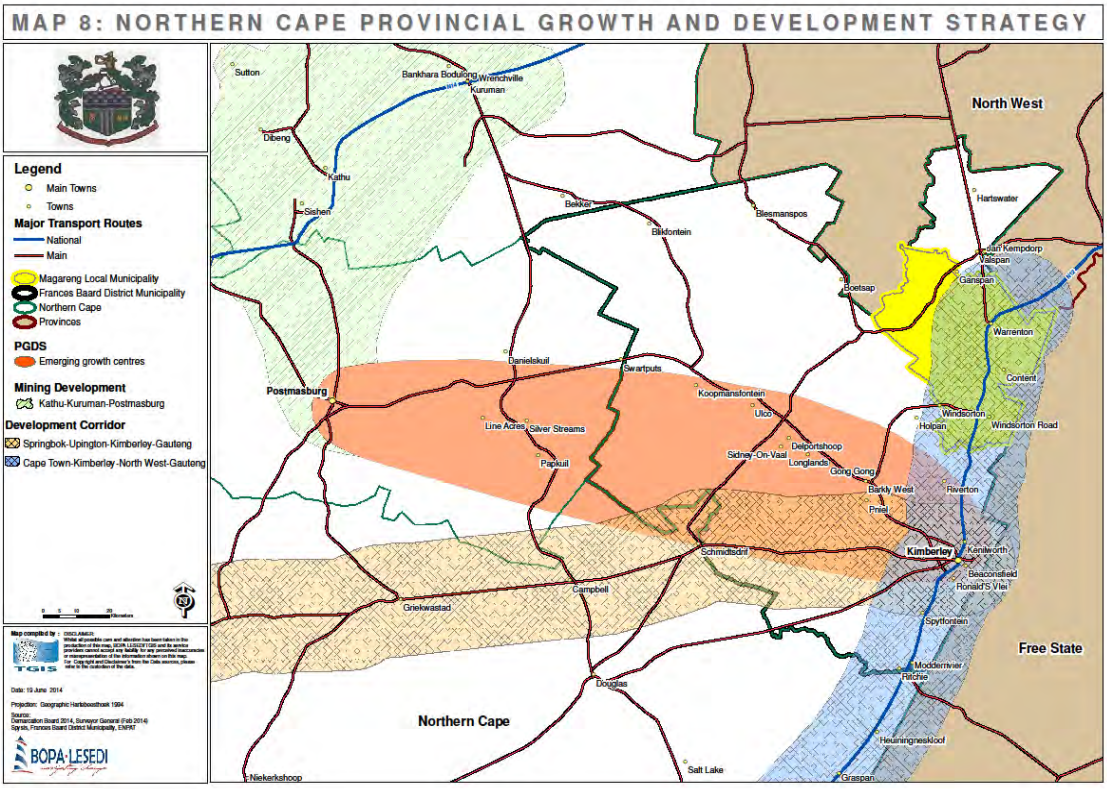
a) **Human Capital** refers to people's health, education, training, knowledge, skills, spirituality and motivation, which are needed for a flourishing economy, productive work, poverty reduction and capacity for human relationships.
b) **Social Capital** concerns investments by institutions that help us maintain and develop human capital e.g. families, communities, municipalities, trade unions, hospitals and schools. This means access to varied and supportive opportunities for work, health, living conditions, etc.
c) **Manufactured (Infrastructure) Capital** comprises material goods or fixed assets which contribute to the production process and service provision rather than being the output itself – e.g. tools, machines and buildings. The main components include buildings and infrastructure such as roads, communications, waste disposal, water systems, etc.
d) **Natural Capital** of the physical environment refers to the natural resources (matter and energy) and processes that are needed to maintain life and to produce/deliver goods and services. They include renewable resources such as

fresh water, fisheries, and wood and non-renewable resources such as, mineral deposits.

e) **Financial (Monetary) Capital** plays a critical role in any economy, enabling the other types of capital to be owned and traded, for example, through shares, bonds, or money (NCPSDF, 2012).

This document refers to the investment type as far as possible and keeps the Municipal profile in mind.

MAP 8: NORTHERN CAPE PROVINCIAL GROWTH AND DEVELOPMENT STRATEGY



(NCPSDF 2012)

According to the NCPSDF Magareng Municipality forms part of the Kimberly Food Corridor. This corridor constitutes the food producing areas from Hartswater and Jan Kempdorp through Prieska, Hopetown and Douglas (NCPSDF, P68, 2012).

4.4 MUNICIPAL SECTOR PLANS

As part of the IDP Process, Municipalities are required to prepare integrated programmes and sector plans. The purpose of these plans and programmes is to ensure fulfilments of sectorial planning requirements and compliance with sectorial principles, strategies and programmes, thereby providing basis for departmental operational planning and budgeting.

It is important that all sector plans and policies be incorporated into the SDF as it will determine the level of capacity available for future developments. Where sector plans indicate challenges and red flagged issues it is important that the SDF takes it into consideration for future development.

4.4.1.1 MAGARENG SDF 2008

The main aim of the SDF 2008 was to promote a consistent urban development policy approach for effective urban reconstruction and development, to guide development policies, strategies, and action of all stakeholders in the urban development process, and to steer them towards the achievement of a collective vision.

The main objectives were:

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

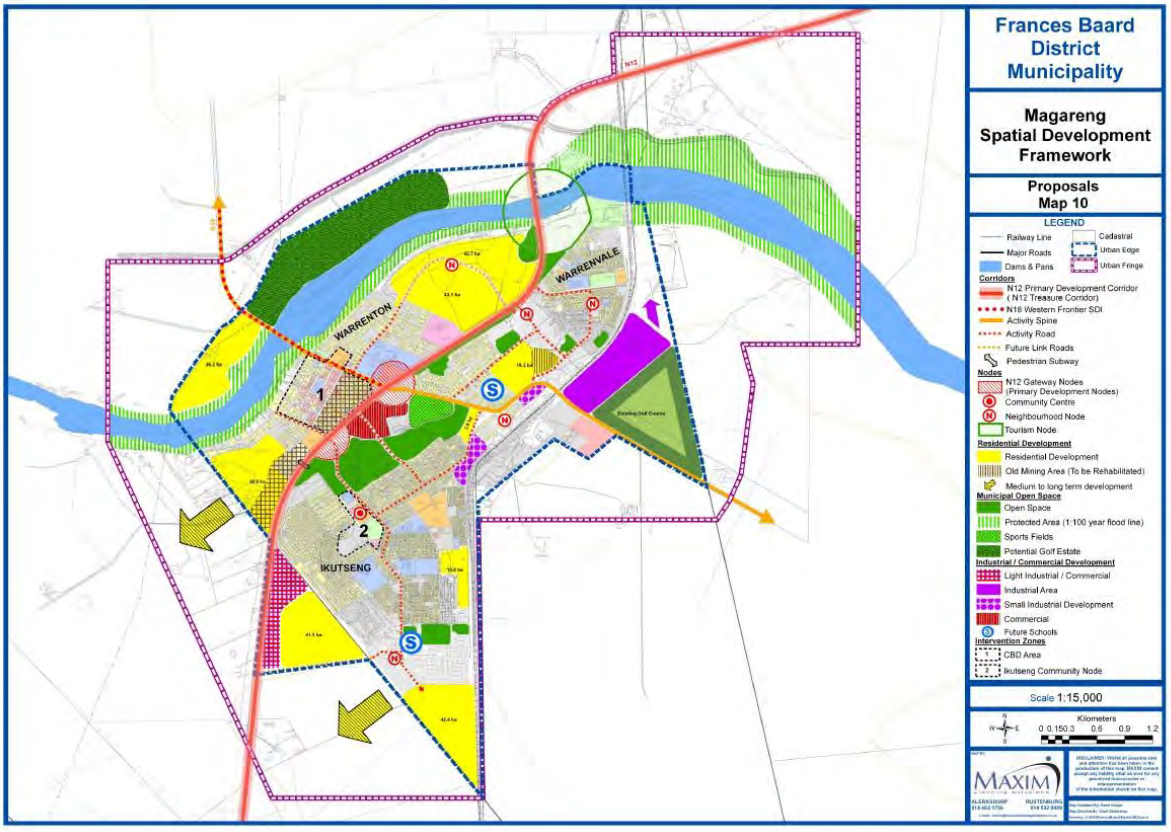
Spatial Strategies that were formulated based on Frances Baard District Spatial Development Framework are:

- Warrenton should strongly promote itself as a tourism stop-over and well located rural residential area with the potential for a retirement centre in an upgraded railway village at the scenic sites along the Vaal River. This should include residential infilling between the three components of the town.
- The desirability of the Bulhill irrigation area becoming part of Phokwane as a specialist intensive agriculture area or remaining part of Dikgatlong should be investigated. The decision as to whether to upgrade the road between Bulhill and Warrenton will be addressed by the outcome of this decision.
- The remainder of the municipality should be promoted for extensive agriculture, game farming and tourism. The veld in the western part of the district requires rehabilitation and erosion control.

- Investigate whether it would be appropriate for Bulhill Irrigation Scheme and Warrenton to become part of Phokwane with Windsorton Road joining Sol Plaatjie (Magareng SDF 2008)

Above objectives, as well as, strategies have been re-evaluated against the current status quo of the municipality, as well as, the need of the community. Where possible, it has been updated to reflect the true current status to ensure their relevance in the development of Magareng Municipality.

MAP 9: MAGARENG SDF 2008



(Magareng SDF, 2008)

4.5 REGIONAL PERSPECTIVE

4.5.1 FRANCES BAARD DISTRICT SPATIAL DEVELOPMENT FRAMEWORK FBDSDF

In order to align the Magareng SDF with the District Municipal SDF we needed to adhere to the spatial guidelines as principles as set out in the SDF, Section 2.4

All development proposals, as mentioned in the District SDF, have been incorporated into the local SDF. The following spatial objectives have been listed in the District SDF, Section 2.3.4.2:

- Give effect to the principles of efficiency, integration, sustainable development and fair and good governance;

- Capitalizing on the location of Magareng on the N12 Treasure Corridor (SDI) of National and Provincial importance, as well as, the N18 (Western Frontier SDI);
- Enhancement of Magareng as prominent regional centre and core area of importance;
- Enhancement of sustainable development which involves:
- The protection, sustainable use and proper management of the environment;
- Proper land use management;
- Cost-effective provision of services.
- Improving the living standards of people within the dormitory townships as well as, in the rural areas, by providing much needed community facilities and business opportunities within accessible and centralised nodes;
- Alignment and identification of economic opportunities along major development corridors;
- Identification of sufficient land for urban development within a well demarcated urban edge, in such a manner that it will promote integration of areas;
- Implementation of urban renewal programme.

The following development zones have been identified:

a) Mixed Land Uses:

A missed land use zone is indicated adjacent to the N12.

b) Residential:
   - The local housing backlog in the area is 2 328 units;
   - For the backlog approximately 278 ha is needed, which will be provided east and west of the N12;
   - A densification and integration approach is proposed.

c) Open space system:
   - The upgrading of the quality and amenity value of open spaces is proposed;
   - All developments along the banks of the river should be outside the 1:100 year flood line;
   - Development of a central sport field for the Warrenton population;

d) Industrial and commercial development:
   - Proposed development of business attractions along the N12 in order to capitalize on the through traffic;
   - Develop the existing open spaces along the railway line for industrial purposes;
   - Cater for smaller industries and SMME developments;
   - Development of a community and Entrepreneurial Centre.

e) Social development:
   - A need for a more holistic and integrated approach to social development is proposed;
   - Development of multipurpose community development centres is proposed.

f) Rural Development areas:
   - Development of rural nodes alongside access routes and existing infrastructure;
   - These nodes refer to multipurpose "one stop" centres.

- Planning of agri-villages in areas of high agricultural potential;
- Protection of prime agricultural land.

According to the Frances Baard District SDF, Warrenton is classified as a Second Level settlement. The following Table provides a summary of the settlement profiles according to the development potential, human needs and investment times.

TABLE 6: INTEGRATED SETTLEMENT PROFILES

Settlement	Population	Economic Base	Potential & Need	Investment Type
Warrenton	Large	Agriculture	Transition	Infra & Social

Agriculture centre: Related to traditional service centres are those settlements with a substantial component of agriculture activities within the town structure.

Transportation and access to nodal points and places of employment is one of the most important issues in land use planning. A transport system serves to bind the urban and rural fabric together. Traveling issues could be measured in time and distance. According to the FBDMSDF the two major transport routes are both running though Magareng Municipal Area.

N12 – This road runs in a north-south direction from the Modder-River to the south through Kimberley, Warrenton and over the Vaal River to the north.

N18 – The N8 road connects with the N12 at Magareng and runs north-wards through Hartswater to link with Bloemfontein and the Free State. This road runs in a western direction to Campbell, Griekwastad and from there to Upington.

The main railway line from Cape Town to Gauteng runs through Magareng, Warrenton.

4.5.2 NEIGHBORING LOCAL MUNICIPALITIES

4.5.2.1 PHOKWANE LOCAL MUNICIPALITY

Phokwane Local Municipality is the only cross-border municipality in the area. The Northern Cape and the North West Provinces share the cross-border area, which includes Pampierstad. Hartswater is the administrative centre and is centrally located approximately 110 km nor th of Kimberley and 92 km south of Vryburg.

The towns of Hartswater, Jan Kempdorp, Pampierstad and Ganspan are the main residential areas in the municipality. Economic activities are mainly agricultural, varying from stock farmers in the dry areas, to irrigated crops in the Vaalharts irrigation scheme. Phokwane Municipality has a high potential for economic growth in the district after Sol Plaatjie Municipality (IDP, 2012/13 to 2016)

4.5.2.2 DIKGATLONG LOCAL MUNICIPALITY

Dikgatlong Local Municipality (DLM) is a category B municipality with seven wards. The municipal area consists of the disestablished municipalities of Barkly West, Windsorton, Delportshoop and a portion of the former Diamantveld District Council.

The head office of the municipality is situated in the town of Barkly West that is approximately 35-km north-west of the city of Kimberley on the northern bank of the Vaal River. Barkly West is situated on the growth corridor Kimberley-Postmasburg, and agriculture and mining form the economic basis of the area. The Municipal area covers approximately 2377 km² and borders with the Magareng Municipality in the north-east and Sol Plaatje in the south-east.

The town is located on the main road to the Kalahari and Upington alongside the Vaal Rivers.

The town acts as a minor service centre to the surrounding farming population. The surrounding economic activities mainly refer to intensive diamond digging along the river, intensive irrigation schemes and grazing further away from the rivers. Game farming and hunting activities take place during the winter months.

The following smaller settlement areas of Delportshoop, Longlands, Gong Gong, as well as, Windsorton also fall under this municipality. Map 4.19 indicates the settlement structure for Barkly West (FBDMSDF, 2014).

From their SDF, 2013 the following strategic proposals will have an impact on Magareng spatial development:

- Protect and extend tourism as a "new industry";
- The improvement of the transport and linkage facilities to surrounding communities and amenities.

4.5.2.3 SOL PLAATJE LOCAL MUNICIPALITY

This municipality, with Kimberley as its base, forms the economical and administrative node in the Frances Baard District Municipality, as well as, Northern Cape Province.

The Sol Plaatje Local Municipality comprises a large urban node in the form of Kimberley, villages, and farms. Kimberley is the administrative centre of the Municipality. The economic activities consist of several retailers, industries, as well as, mining and farming.

The SPLM accommodates approximately 247 000 people. Sol Plaatje is a major contributor to the economy of the Province and accounts for 28.9% of total provincial Gross Domestic Product (GDP) in 2009 - and 82.1% of Frances Baard District Municipality (DM)), Sol Plaatje LM certainly is encumbered with ensuring that the Province as a whole reaches its accelerated growth objectives. Sol Plaatje Local Municipality is the largest local municipality in the Frances Baard District Municipality (FBDMSDF, 2013)

Kimberley follows a typical colonial, apartheid urban structure with low income areas, Galashewe, a low density sprawling African township to the north-west and other working class coloured areas to the north abutting the mining areas. The south of the town consists of low density upmarket suburbs.

There is extreme interaction between Sol Plaatjie and Magareng municipality due to the close proximity and adequate road linkages. The direction of interaction is mostly Magareng residents visiting Kimberley due to numerous reasons (employment, high order functions, schools etc.)(Sol Plaatjie IDP 2013).

4.5.2.4 TOKOLOGO LOCAL MUNICIPALITY (FREE STATE)

Tokologo Municipality is situated on the eastern side of Magareng and is located in the Free State Province. The municipality forms part of the Lejweleputswa District Municipality.

This rural municipality consists mainly of extensive farms and the urban towns of Boshoff and Dealesville. Interaction between the two municipalities is very limited at present, due to the lack of transport infrastructure linking these two Municipalities (Tokologo SDF 2014).

4.5.2.5 LEKWA-TEEMANE LOCAL MUNICIPALITY (NORTH WEST)

Lekwa - Teemane Local Municipality (LTLMA) (NW394) is approximately 3681, 25 km² in extent. This land mass is 7.75% of the total area of the Dr. Ruth S Molopo District Municipality area. The administrative centre of the municipality is in the rural area of Christiana. The other offices are located in Bloemhof. Figure 1 below shows the spatial positioning of the LTLM.

The major towns are Bloemhof and Christiana and these are predominantly farming towns, hence the major private sector employers are farmers. Both of these towns can be described as rural to semi-rural and spreads. Apart from these two rural towns most of the residents are living in villages.
The main road is the N12 highway, which is the tourist attraction, as it passes along the Vaal River and Bloemhof dam (Lekwa-Teemane IDP, 2015).
The implications of the local SDFs and their more detailed proposals for the district SDF include that the principles and proposals contained in these SDFs should be kept in mind in developing future spatial patterns in the district. These aspects include:

- Promotion of compact urban structures through urban infill and densification;
- The creation of a logical hierarchy of settlements to support effective service delivery;
- Creation of urban edges to contain urban sprawl;
- Locate new housing development within a rational urban structure and urban development boundary to ensure sustainable development;
- Enhance Nodal viability through development of housing in strategic locations.
- Plan to protect ecologically sensitive natural areas;
- Respect the flood lines of the major rivers and dams;
- Capitalize on natural resources/tourism opportunities.

- Use transport system as method to develop Hartswater, Pampierstad and Jan Kempdorp as a "social city"
- Service infrastructure
- Locate urban development, specifically housing development, within reach of bulk municipal services
- Community facilities must be developed in line with the nodal importance of settlements.
- Community facilities must be provided according to accepted planning and development standards and guidelines.
- Create a viable business node hierarchy linked to service delivery centres;
- Identify and develop tourism facilities which would support the local, national and international tourism market;
- Identify and protect high-potential agricultural land from urban encroachment;
- Promote beneficiation of agricultural products to broaden the economic base (FBDMSDF, 2013).

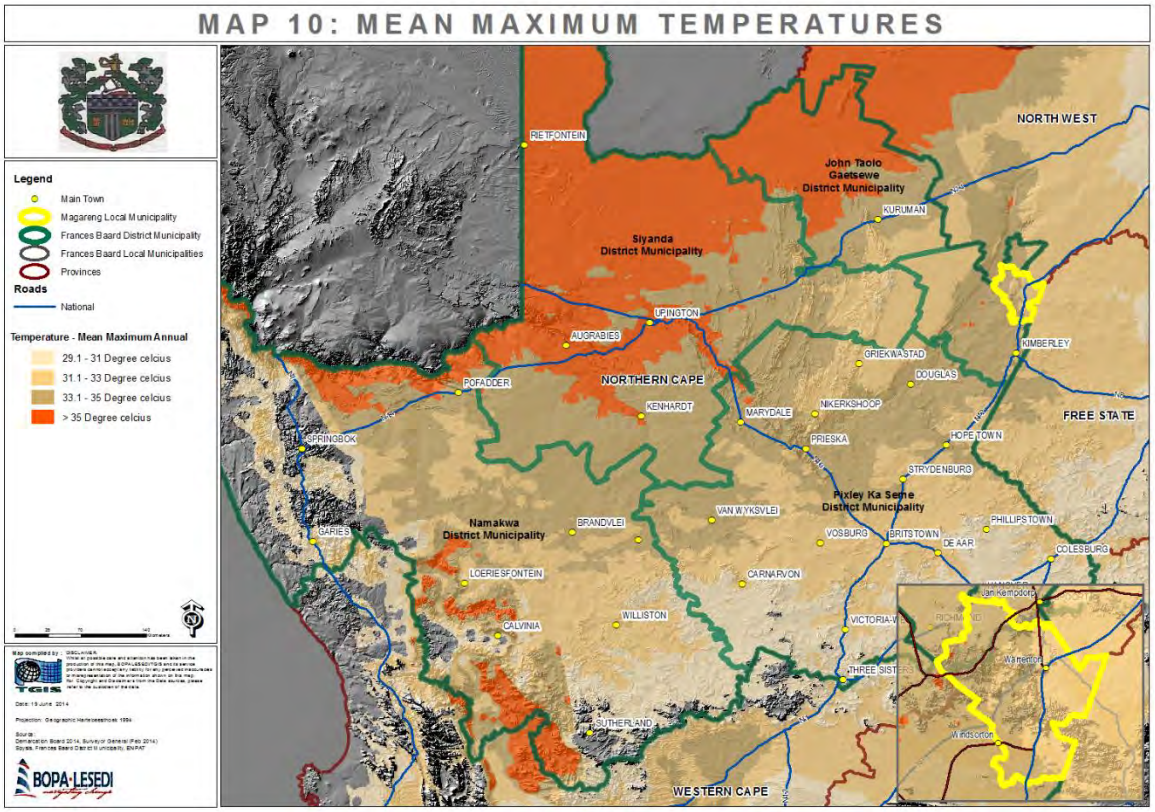
4.6 BIOPHYSICAL ENVIRONMENT

4.6.1 CLIMATE

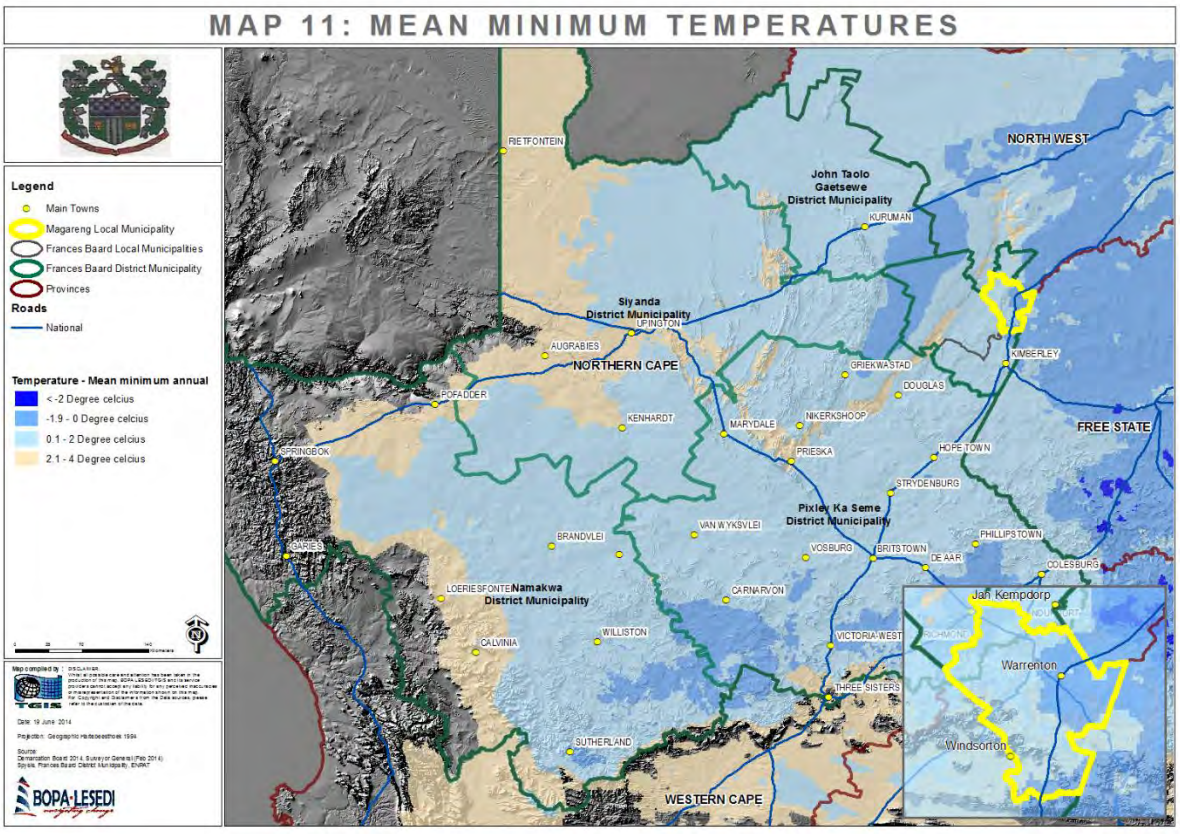
The Northern Cape is known for its extreme climate conditions and the Magareng Municipal area is by no means an exception to the rule.

The surrounding landscape is characterized by the Savanna in the Eastern Kalahari Bioregion, wavy hills, sand plains, agricultural farms and beautiful cultivated land along the rivers. The area is semi-desert area, with low summer rainfall levels. The average summer temperatures differ between 18ºC and 36ºC, with extremes of up to 43ºC. Winter temperatures are moderates and differ between 3ºC and 20ºC.

MAP 10: MEAN MAXIMUM TEMPERATURES



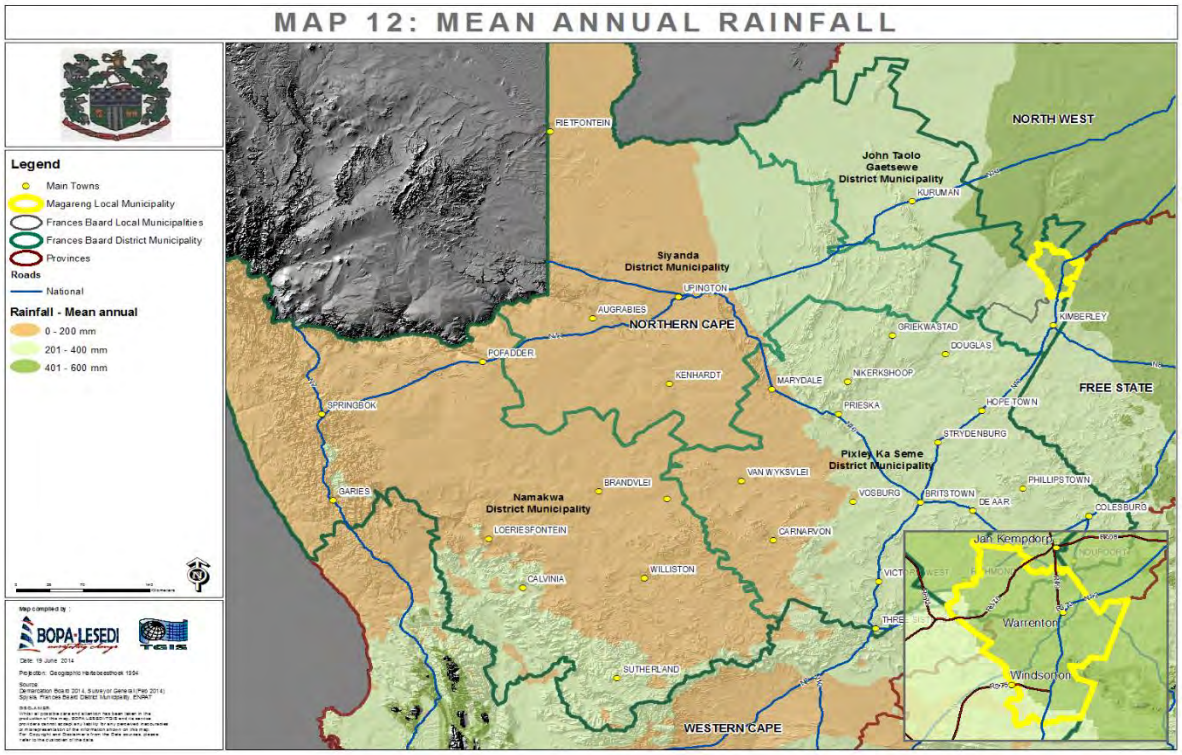
MAP 11: MEAN MINIMUM TEMPERATURES



The area falls within a rain shadow. Rain generally occurs early in spring and then again between February and April. Average rainfall of the area, differs between 150 and 200mm per annum.

Relating to the above-mentioned, the area has a typical continental climate with extreme high temperatures and rainfall in the form of thunderstorms, mainly occurring during the summer months. Of the highest summer day temperatures in South Africa occur in this area – temperatures of more than 40ºC are measured during November, December, January and February. On the other hand the winters are extreme with temperatures often below 0ºC experienced during June, July and August (www.erc.uct.ac.za).

MAP 12: MEAN ANNUAL RAINFALL



4.6.2 GEOLOGY AND SOIL

The Magareng Municipality consists mainly out of the Karoo Super group and the following two sub-groups:

The Dwyka and Ecca Groups

The Dwyka Group represents the lowermost unit of the Karoo Supergroup. It consists, almost throughout, of gravelly sediments viz diamictite with subordinate vorved shale and mudstone containing scraped and facetted pebbles, all of which are thought to be of glacial origin, as well as, fluvioglacial gravel and conglomerate. In places these materials can be seen to have been deposited on typical glacier floors.

The Ecca Group was deposited in a marine environment and can be compared to the Black Sea, larger and shallower. It consists predominantly of dark-grey shale which is carbon-rich in places, with interlayered sandstone. Plant fossils, especially

Glossopteris, are abundant, while reptile fossils are absent, except for *Mesosaurus*, which occur in the Whitehill Formation.

The Beaufort Group

The Beaufort Group occupies the largest portion of the Karoo basin and comprises sand and clay deposits which represent deposition on land, in contrast to the predominantly marine deposits of the underlying Ecca Group.

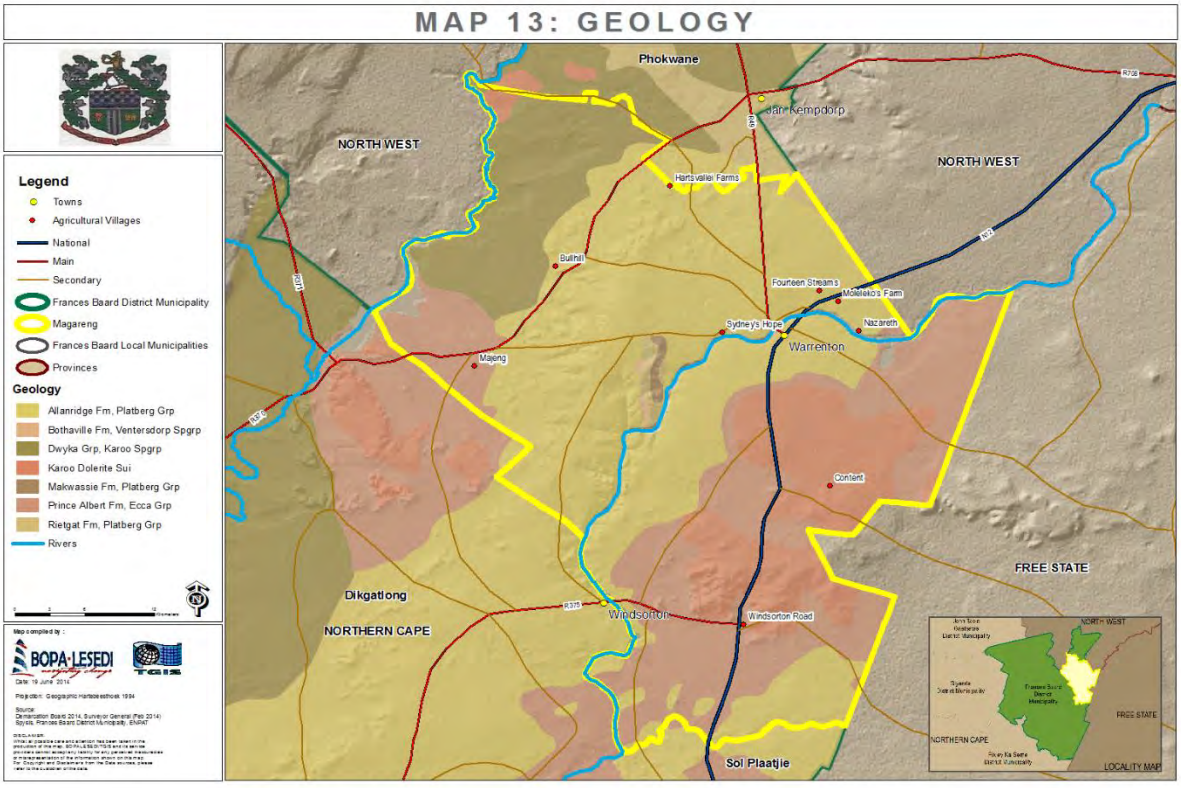
The clay deposits are represented by green-grey, blue-grey or red and purple mudstone, while the sand deposits comprise dirty sandstone in which cross-layering is characteristic. Upwards fining fluvial cycles are common in the group and fossils of reptiles are abundant, which indicate the transition to a land environment. (www.councilgorgeoscience.org.za)

The Rietgat Formation and by breccia, conglomerate and shale belonging to the Kameeldoorns formation, both formations of the Platberg Group, Ventersdorp Supergroup. The entire eastern portion of the municipality is underlain by dolerite, shale and andesite bedrock belonging to the Allanridge Formation, Ventersdorp Supergroup.

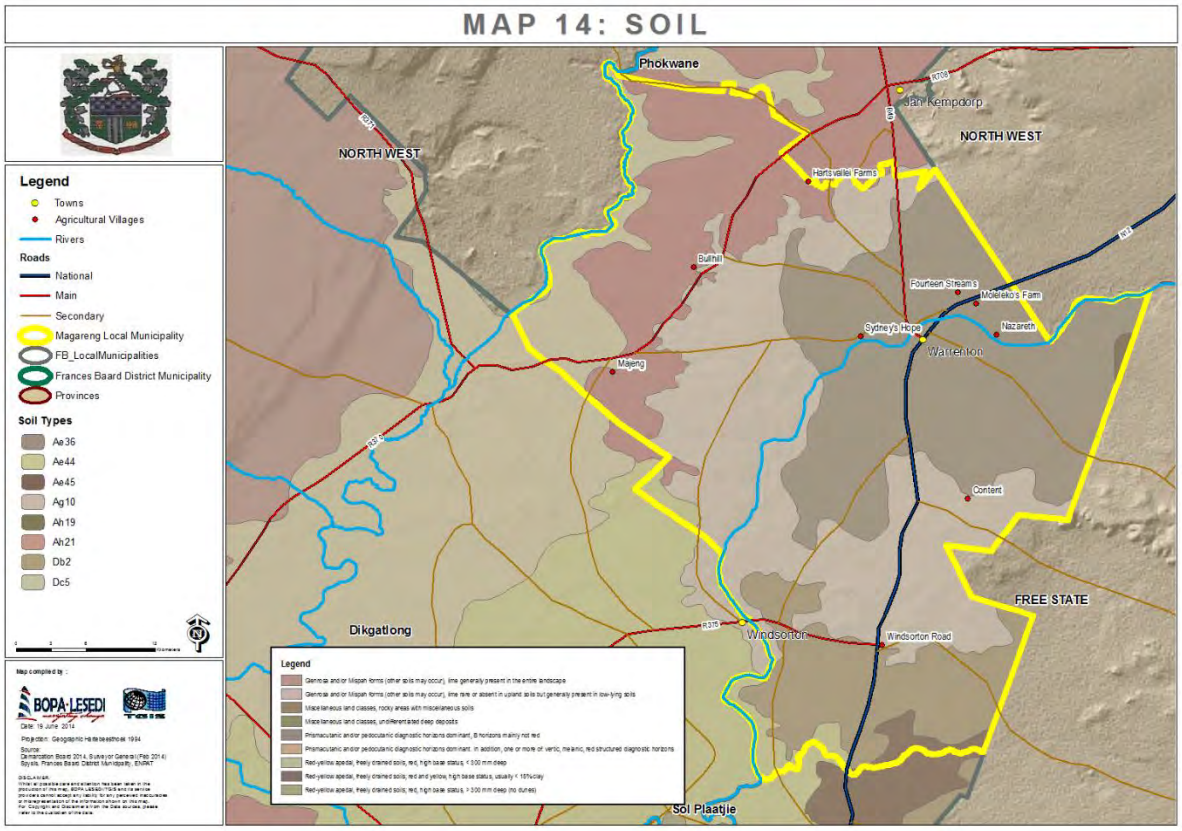
The soils in Magareng are predominantly suited for grazing, with the area around the irrigation scheme allowing for more intensive grazing. The soils are of generally poor suitability for arable agriculture, but due to the presence of the Irrigation system, agriculture is one of the main land uses (%).

With reference to mineral resources available for mining, Magareng does not pose any significant deposits that can be exploited.

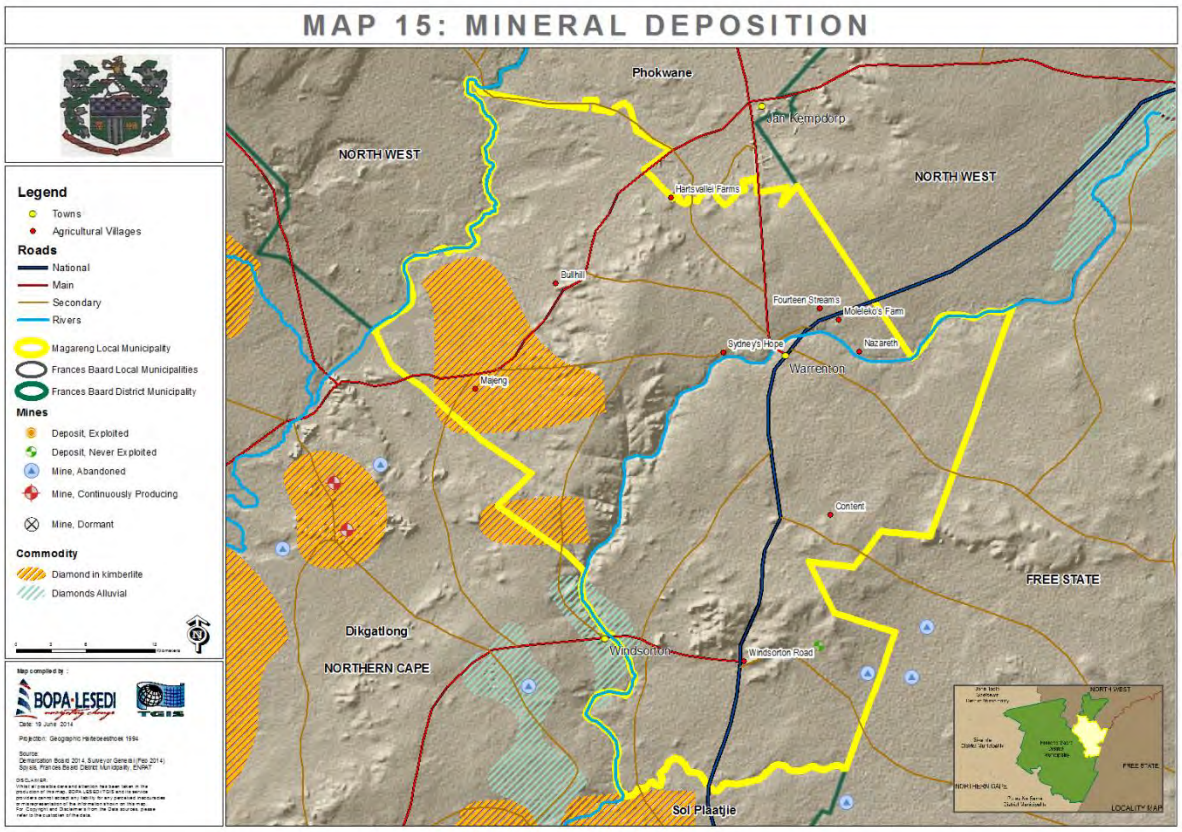
MAP 13: GEOLOGY



MAP 14: SOIL



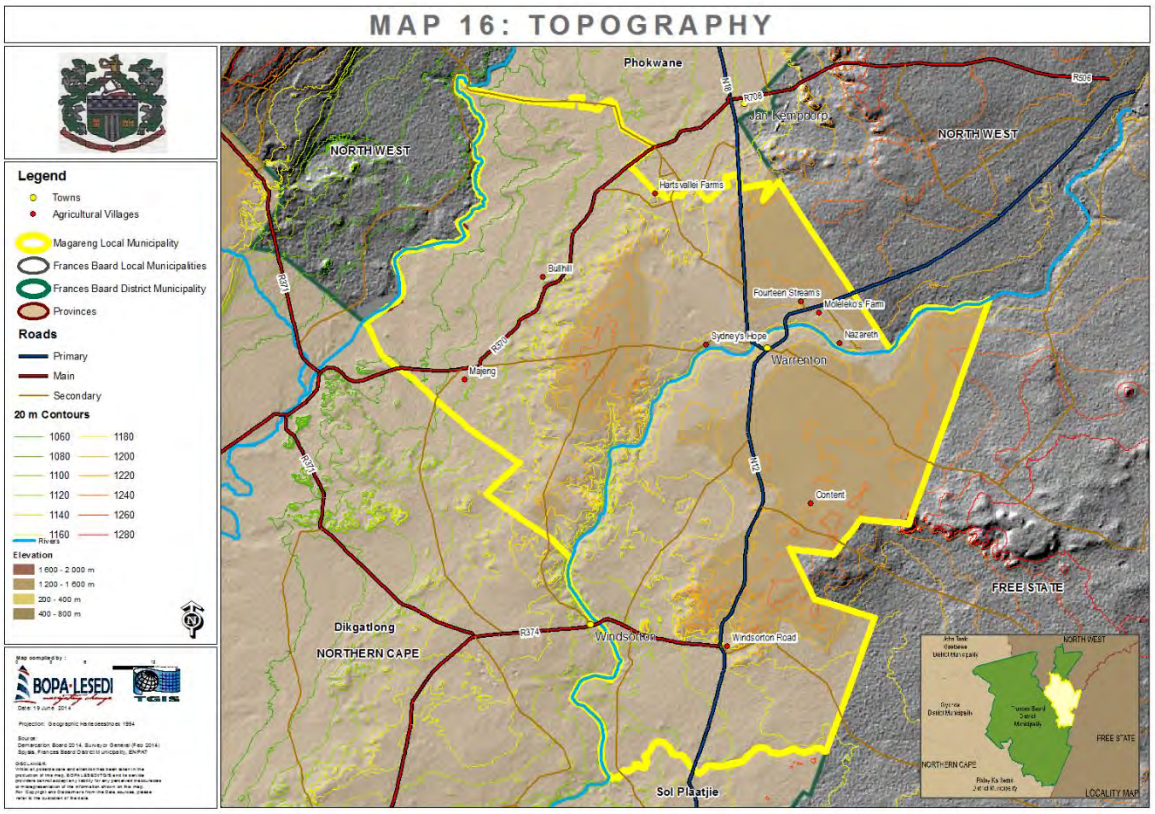
MAP 15: MINERAL DEPOSITION



4.6.3 TOPOGRAPHY

The following Map is an analysis of the slopes to be found throughout the municipal area and it is clear that the majority of the area has a relative flat slope of 0-9%. The areas surrounding the rivers show a deviation to this flat slope with higher slopes to be found in the central to north-western and central western sections of the Municipal area. The areas alongside the rivers also show higher slopes.

MAP 16: TOPOGRAPHY



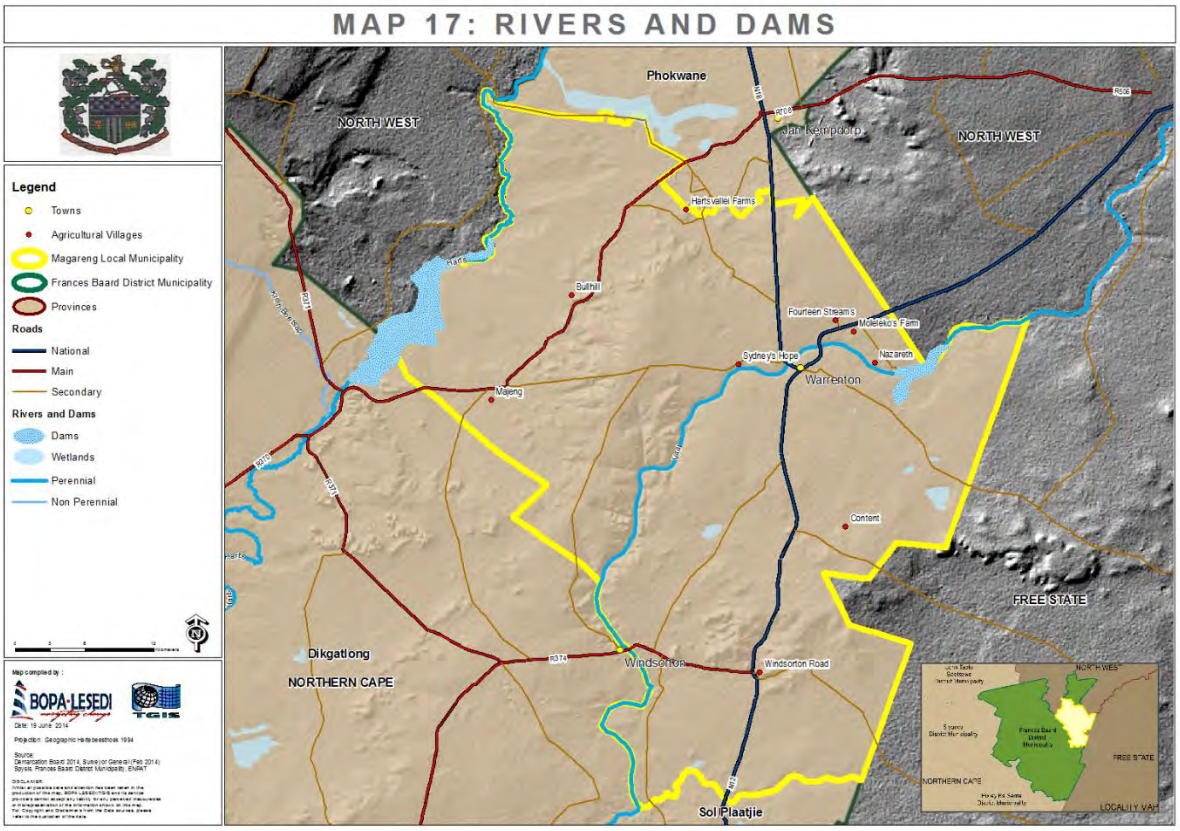
4.6.4 HYDROLOGY

The Vaal River flows from east to west through the Municipal Area, with a large amount of dry rivers also intersecting the area. The Harts River forms the western boundary of the municipality. These two rivers are the only two perennial rivers within the municipal area.

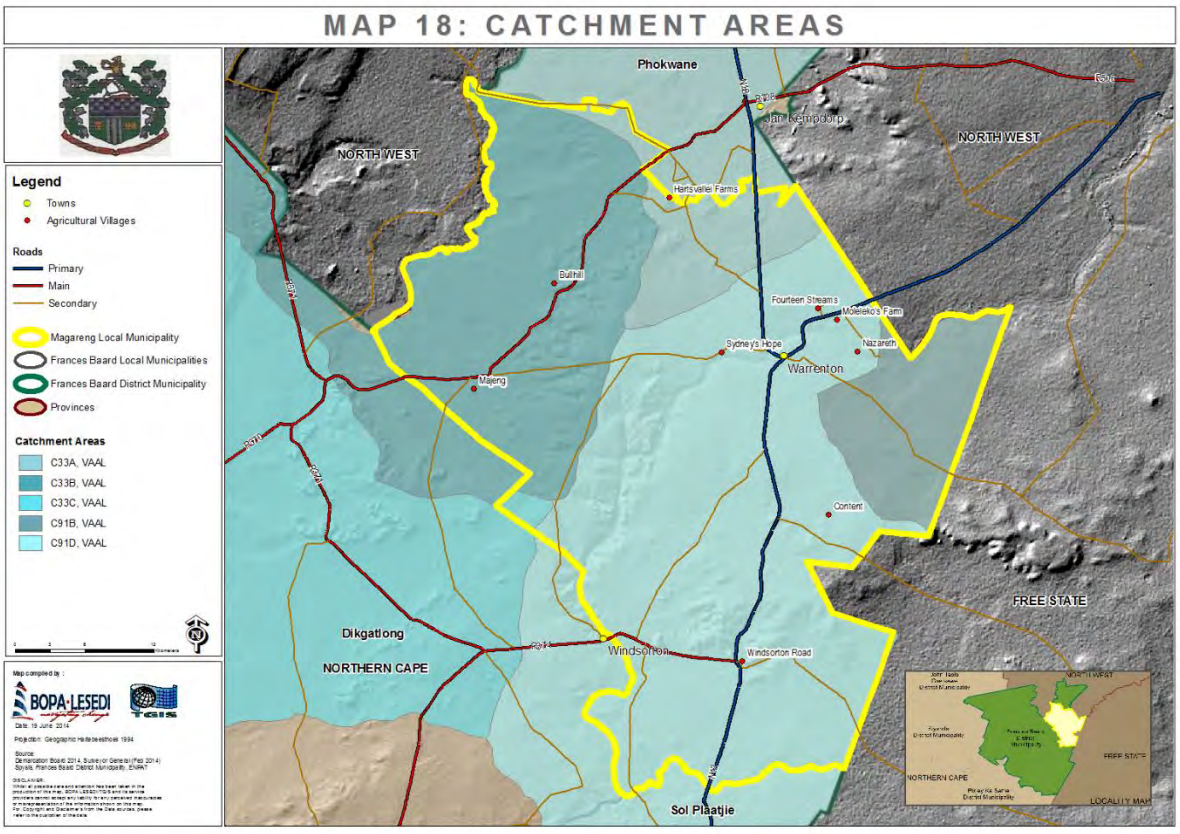
As a number four river order, the Harts River is specifically vulnerable to upstream pollution, which, if not managed, could have decidedly detrimental impact on the agricultural economy.

Magareng has a medium level of useable groundwater exploitation potential, but due to high temperatures, low rainfall, and high evaporation rates, the recharge of groundwater systems is problematic.

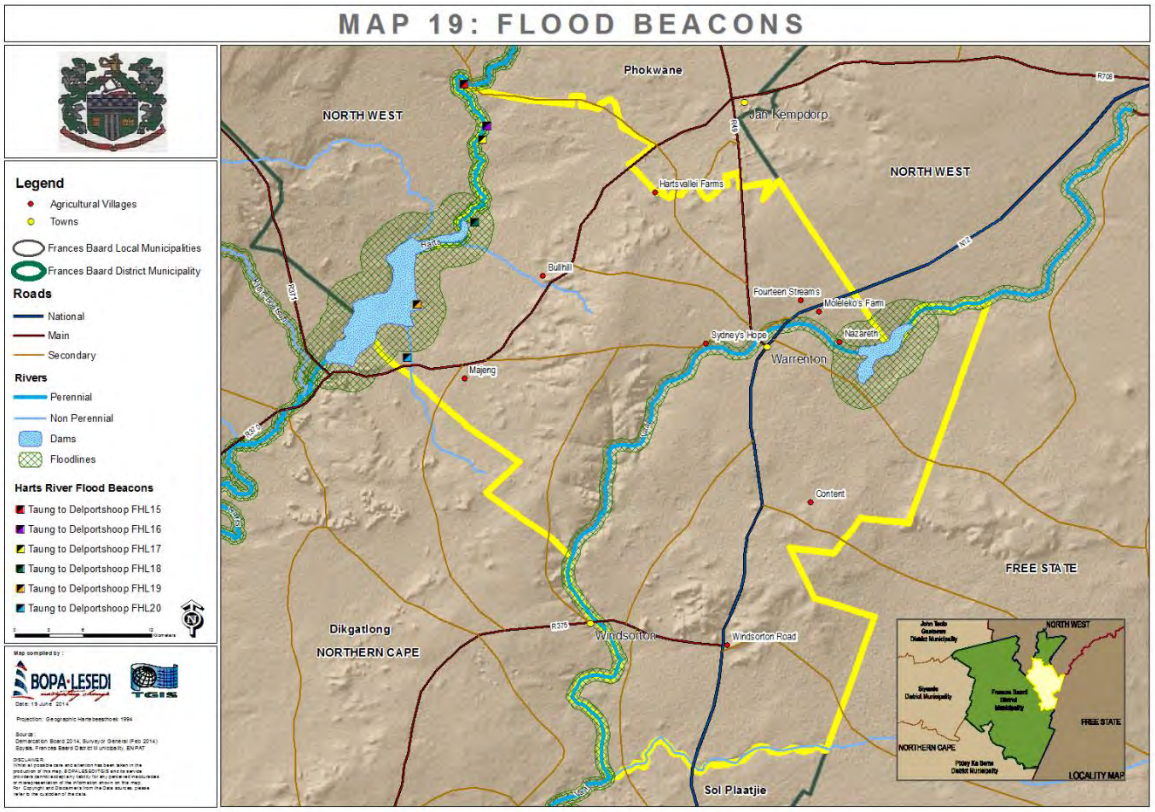
MAP 17: RIVERS AND DAMS



MAP 18: CATCHMENT AREAS



MAP 19: FLOOD BEACONS



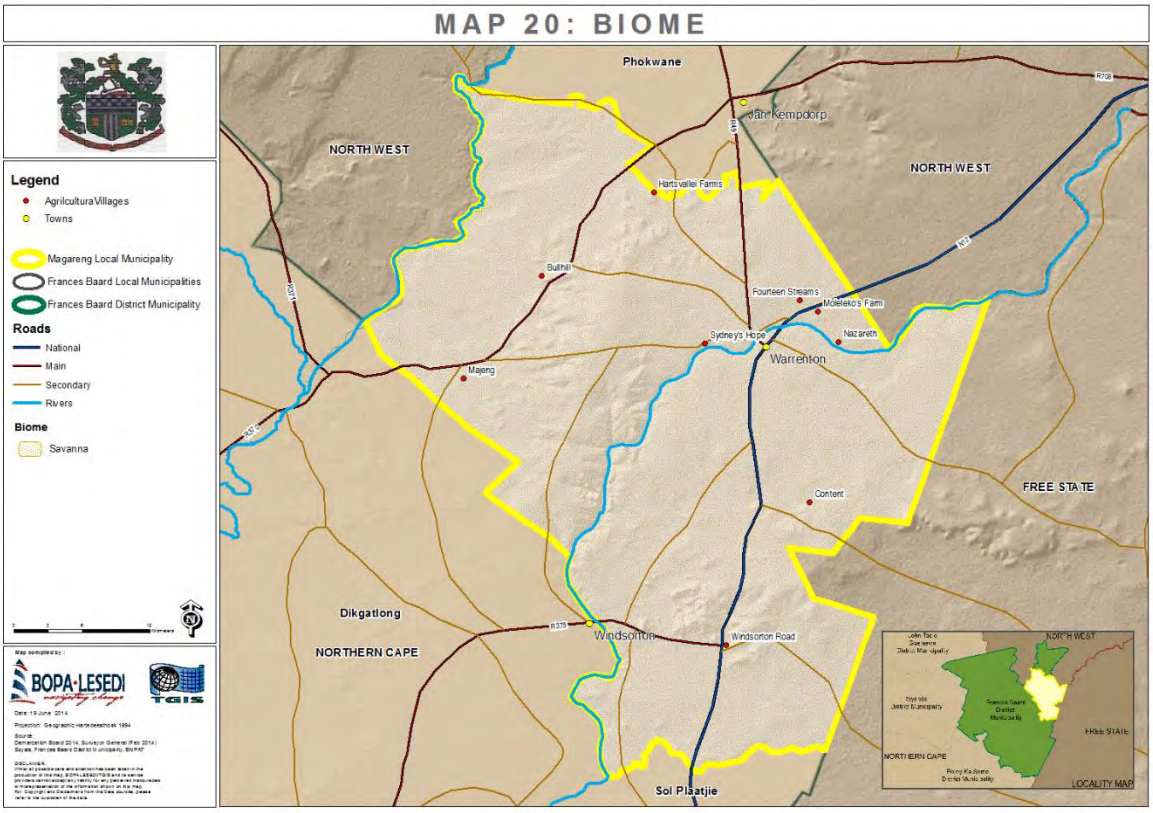
Map 19 indicates the flood beacons located along the Vaal River. A schematic representation of the flood lines are indicated along the rivers. The purpose of these buffers is to highlight the sensitivity of the biodiversity along the rivers and should not be used as exact flood lines determined by engineers.

4.6.5 FUANA AND FLORA

There are an estimated 5400 plant species in the Northern Cape that occur in six large biomes, namely the Nama Karoo Biome, Succulent Karoo Biome, Savanna Biome, Grassland Biome, Fynbos Biome & Desert Biome. Each biome is subdivided into vegetation types, which are groups of plant communities that share similar ecosystem processes, and have similar climatic and geological requirements. (www.musuemsnc.co.za)

Magareng area falls within the Savanna Biome, which is characterized by a grassy ground layer and a distinct upper layer of woody plants. Where this upper layer is near the ground the vegetation may be referred to as Shrubveld, where it is dense as Woodland, and the intermediate stages are locally known as Bushveld.

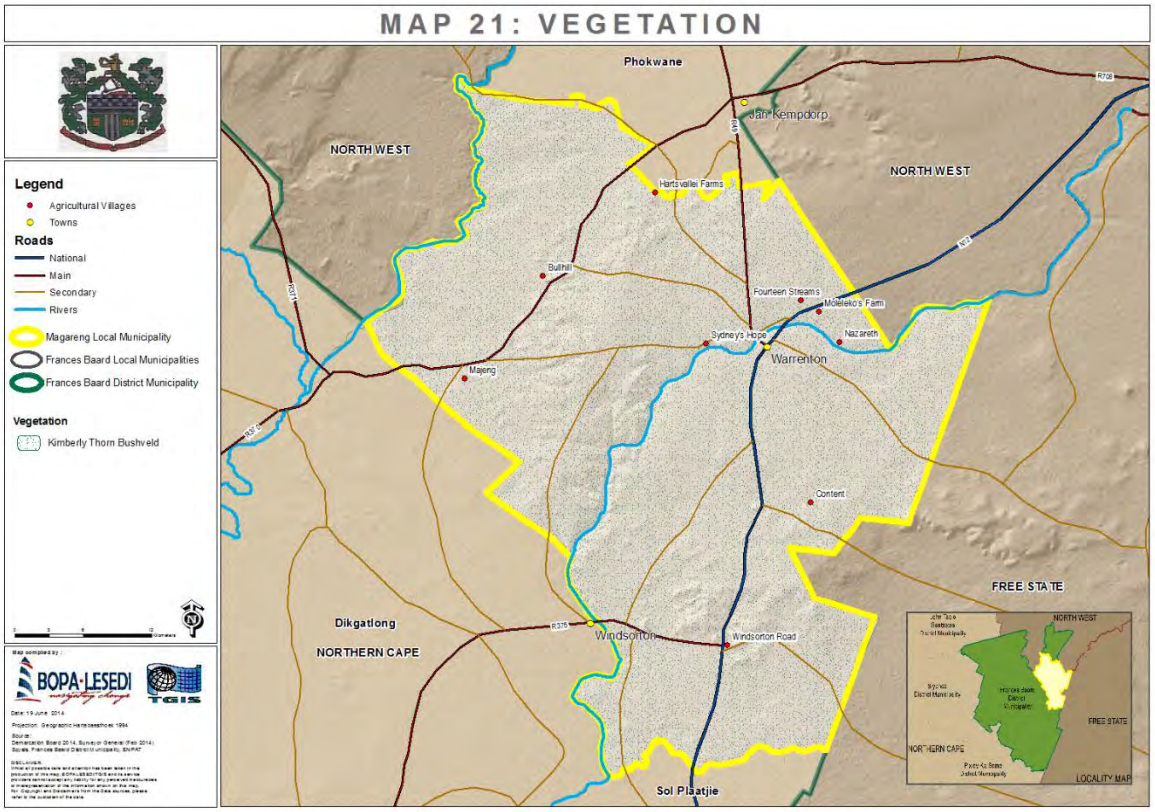
MAP 20: BIOME



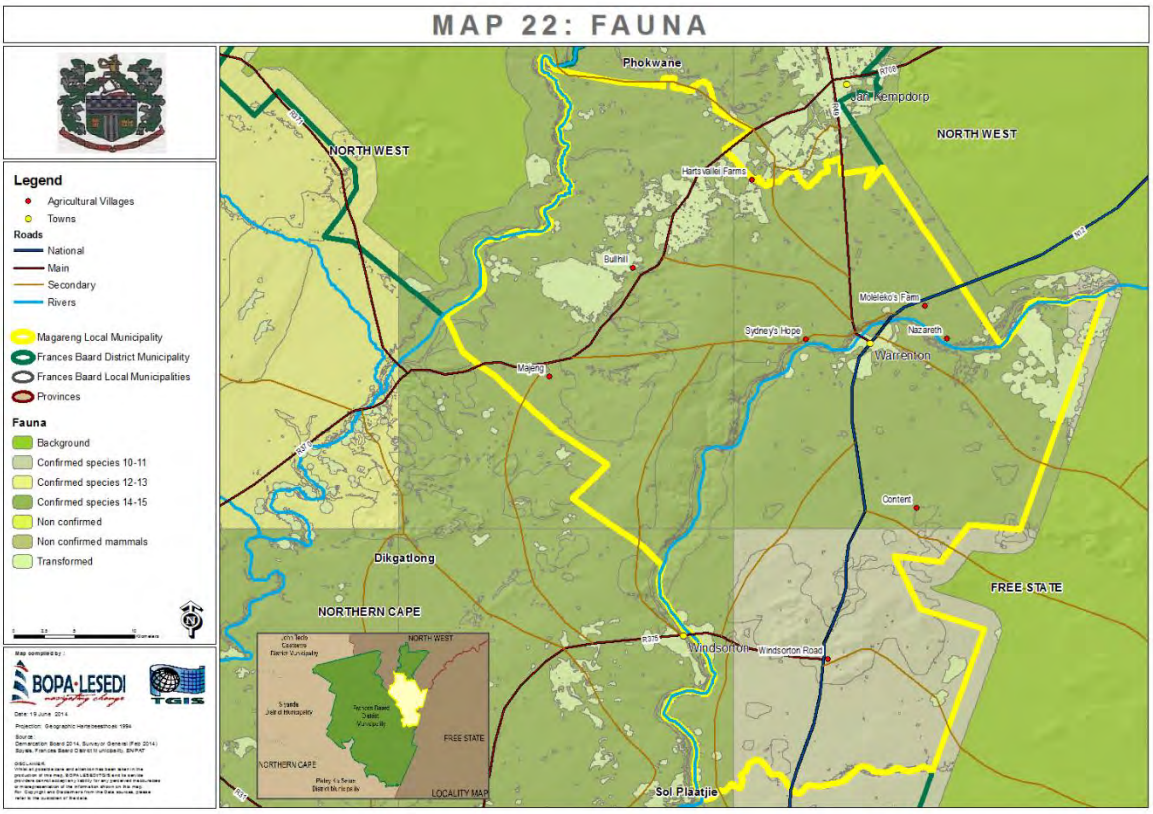
The environmental factors delimiting the biome are complex: altitude ranges from sea level to 2 000 m; rainfall varies from 235 to 1 000 mm per year; frost may occur from 0 to 120 days per year; and almost every major geological and soil type occurs within the biome. A major factor delimiting the biome is the lack of sufficient rainfall which prevents the upper layer from dominating, coupled with fires and grazing, which keep the grass layer dominant. Summer rainfall is essential for the grass dominance, which, with its fine material, fuels near-annual fires. In fact, almost all species are adapted to survive fires, usually with less than 10% of plants, both in the grass and tree layer, killed by fire. Even with severe burning, most species can sprout from the stem bases.

Most of the savannah vegetation types are used for grazing, mainly by cattle or game. In the southernmost savannah types, goats are the major stock. In some types crops and subtropical fruit are cultivated. These mainly include the Clay Thorn Bushveld (14), parts of Mixed Bushveld (18), and Sweet Lowveld Bushveld (21). Urbanization is not a problem, perhaps because the hot, moist climate and diseases (sleeping sickness, malaria) hindered urban development (www.plantsafrica.com).

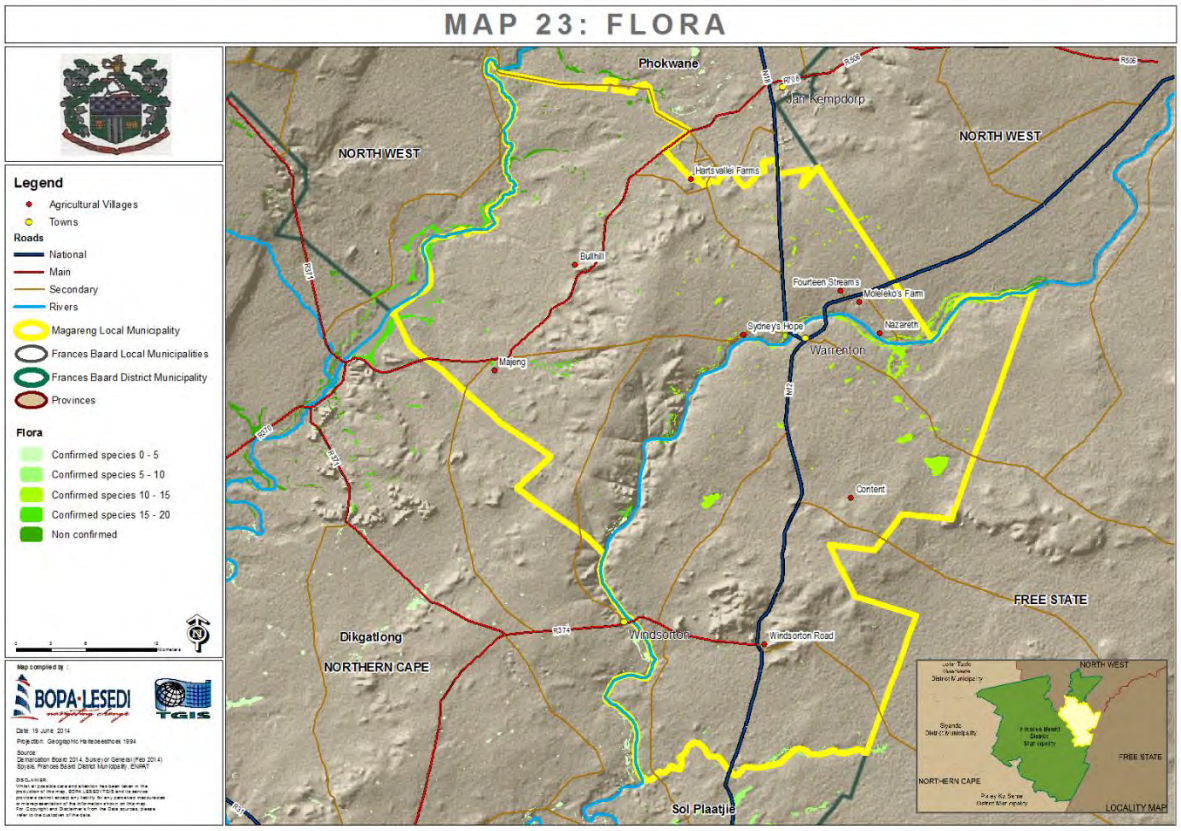
MAP 21: VEGETATION



MAP 22: FAUNA



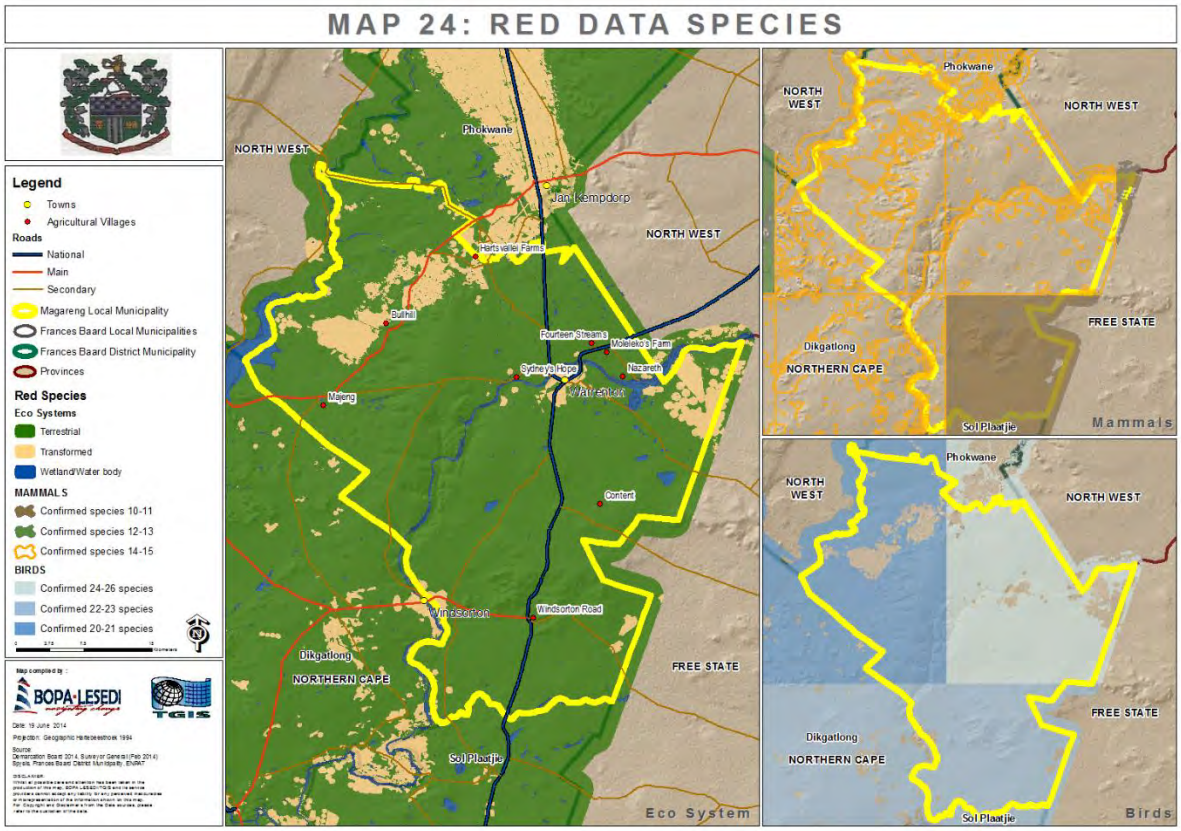
MAP 23: FLORA



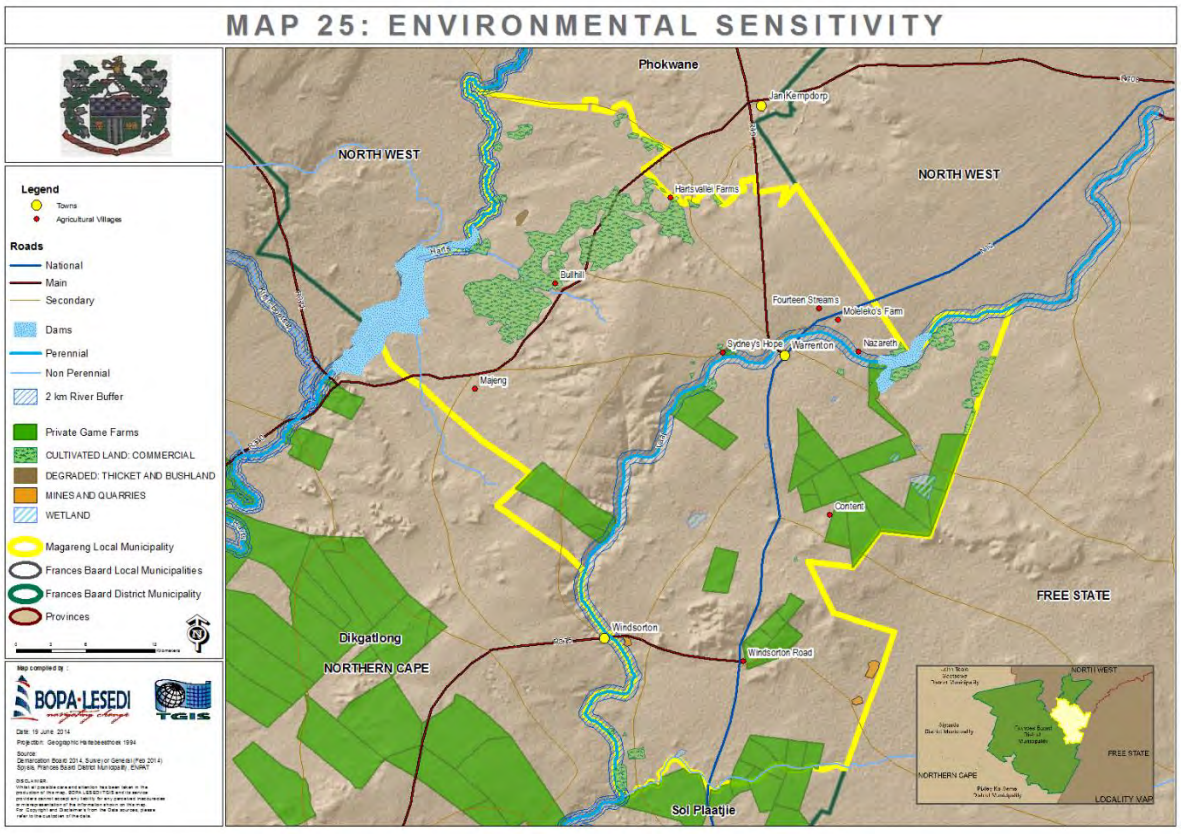
Since South Africa's first comprehensive national Red List was completed in 2009, more than 300 plant species new to science have been documented. With over 20 000 species, South Africa has the world's richest temperate flora, but much still remains to be explored and discovered. Most of these new species were discovered in areas considered botanically well-explored, such as the Western Cape, but they are also predominantly range-restricted, often cryptic, and occurring in specialized micro-habitats such as quartz patches or mountain summits. Areas with the highest number of new species described include known centres of endemism such as the Hantam-Roggeveld (16 species), Gariep (9 species) and Knersvlakte (9 species), as well as other areas such as the Cederberg (15 species), Overberg (10 species), and the Vredenburg Peninsula, where 10 new species have been found in an area of less than 1000 km^2 (www.redlist.SANBI.org). .

More concerning is the fact that nearly 40% of these species are in danger of extinction. Many are recent discoveries, but others were described from material collected a long time ago, and five are probably already extinct, highlighting the importance of continued botanical exploration and study, as well as regular updating of the national plant. Map 25 indicates the areas where there are red data species for both fauna and flora.

MAP 24: RED DATA SPECIES



MAP 25: ENVIRONMENTAL SENSITIVITY



4.6.6 AIR QUALITY

The interaction of the climate patterns of the earth's atmosphere, with the underlying geological structure gives rise to the patterns of soil, rivers, and vegetation. The climatic patterns of the District closely correlate with the broad pattern of the geology. To the west above the Ghaap Escarpment temperatures tend to be the most extreme ranging from -10 to 42 degrees Celsius. Rainfall tends to be lower in this region. The average annual rainfall in the District is about 250mm per annum. As one moves westwards temperatures remain extreme although maximum temperatures may be slightly lower in some cases. However, rainfall increases as one moves westward averaging from 330mm to over 420mm.

Legislation relating to air pollution (Part III of Act 45 of 1965) is applicable to the region and was promulgated in the Government Gazette R1255 of 19 July 1978. This act is specifically applicable to households with coal stoves, as well as any fuel burning applicable installed at a business or any other property which would make use of it (Siyanda District Municipality IDP, 2007/08).

Apart from the CO2 emissions related to mining activities other major contribution to air pollution is the emission of dust particles mainly generated from dirt-roads, un-rehabilitated waste rock dumps, transfer points and slime dams. Dust fallout and particulate matter smaller than 10 micrometers are measured monthly and compliance to applicable standards assessed at residential areas surrounding the mines.

Air pollution as a result of elevated dust levels caused by mining activities is an ongoing focus area. The mines constantly monitor dust levels to determine the effects of dust emissions on the surrounding communities. Studies have found that due to the arid climate of the region in, background dust levels are naturally high and not all dust arises from mining activities. This was confirmed by means of a dust composition analysis, which showed high organic content arising from natural sources. Based on the monitoring results it has been independently concluded that no adverse health risk is posed to neighboring communities.

4.6.7 RENEWABLE ENERGY

The White Paper on Renewable Energy (2003) has set a target of 10 000 GWh of energy to be produced from renewable energy sources (mainly biomass, wind, solar, and small-scale hydro) by 2013. Achieving the target will:

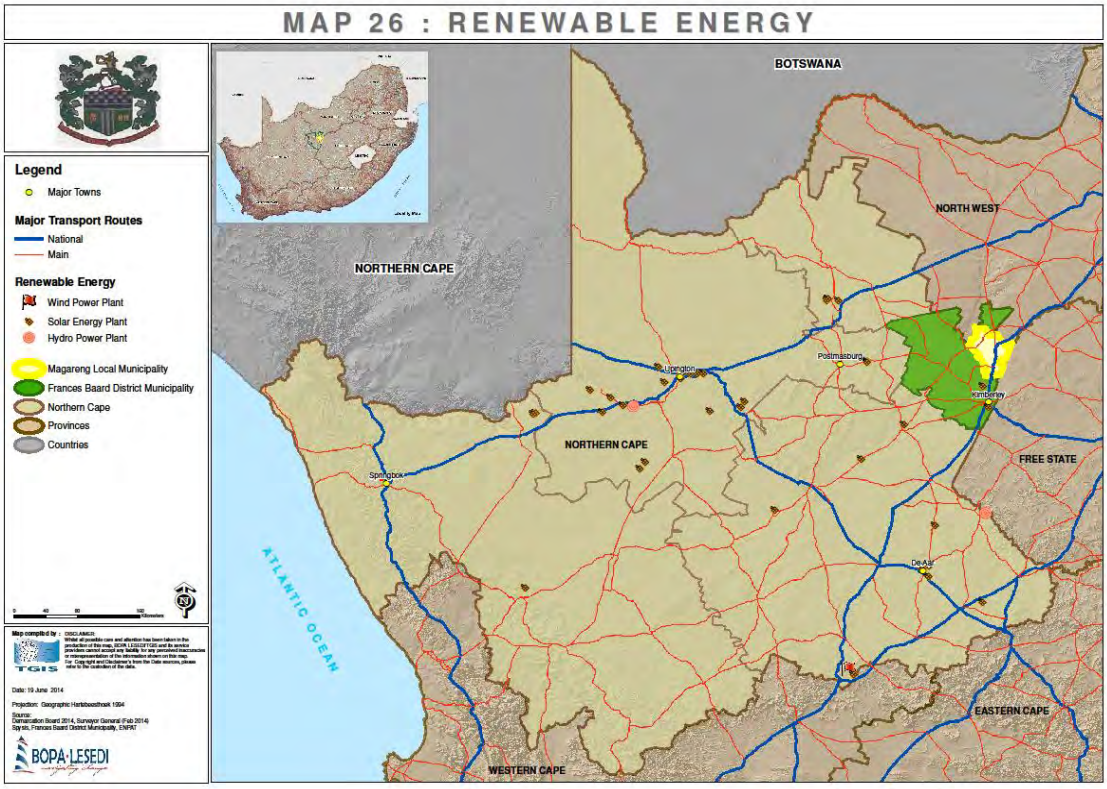
a) Add approximately 1.667 MW new renewable energy capacities with a net impact on GDP as high as R1.071 billion a year.
b) Create additional government revenue of R299 million.
c) Stimulate additional income that will flow to low-income households by as much as R128 million, creating just over 20 000 new jobs.
d) Contribute to water savings of 16.5 million kilolitres which translates into a R26.6 million saving.

The total area of high radiation in South Africa amounts to approximately 194 000 km2 of which the majority falls within the Northern Cape. It is estimated that, if the electricity production per km2 of mirror surface in a solar thermal power station were 30.2 MW and only 1% of the area of high radiation were available for solar power

generation, then generation potential would equate to approximately 64 GW. A mere 1.25% of the area of high radiation could thus meet projected South African electricity demand in 2025 (80 GW). This would, however, require large investments in transmission lines from the areas of high radiation to the main electricity consumer centres (Pegels, 2009). The implementation of large *concentrating solar power* (CSP) plants has been proposed as one of the main contributors to greenhouse gas emission reductions in South Africa.

There is considerable potential for wind energy in the Northern Cape (PGDS, July 2011), in particular, along the Namaqualand coast and in certain parts of the interior of the province. Various solar parks and CSP plants have been proposed in the province with Upington being the hub of such developments (NCPSDF, 2012 P65).

MAP 26: RENEWABLE ENERGY



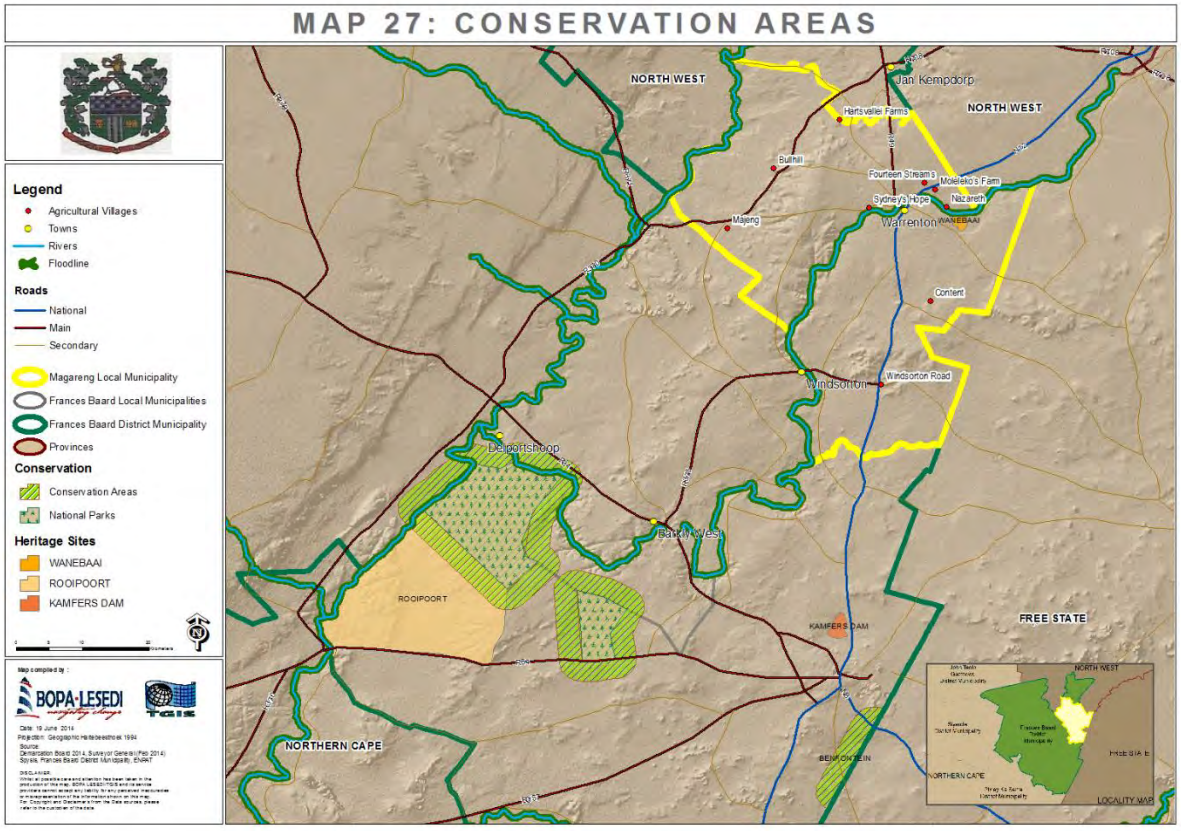
According to above map there are only two renewable energy projects located within Frances Baard District Municipality and none in Magareng.

4.6.8 CONSERVATION AND HERITAGE

The historical and cultural heritage of our country and within the jurisdiction of local governments is regulated by various laws, including the National Heritage Resources Act, 1999 (Act 25 of 1999). According to this law, which strives to protect and conserve these resources, permission must be obtained from the South African Heritage Resources Agency (SAHRA), before any changes may be made to the facades of buildings older than 60 years, and before any building older than 60 years may be demolished.

Areas where buildings and structures of this nature occur must be identified early in order to ensure that this receives adequate attention and that the prescriptions of the law are adhered to. No plan is available indicating this segment at present.

MAP 27: CONSERVATION AREAS & HERITATE SITES



4.6.9 ENVIRONMENTAL SCORING

4.6.9.1 NATURAL ENVIRONMENT UNDER THREAT

Magareng municipality lacks an overall environmental assessment and currently uses the overall district municipal wide GIS based (Enpat) of environmental conditions and, to create a basic understanding of some of the environmental realities within the municipal area. In general, the areas towards the north of the municipality are more sensitive as well areas along the rivers and dams. The high value agricultural land are found towards the north of the municipality and the various water runoff areas are the most important environmental areas of consideration during most of the developmental efforts within the municipality.

Key issues affecting the natural environment include pollution, degradation, donga and sheet erosion, alien invasive plants loss of indigenous vegetation, solid waste and sanitation.

4.6.9.2 POOR OPEN SPACES.

Urban open spaces serve to enhance the quality of all life within the urban area and they furthermore make a major contribution to sustainable development within the

city. Sustainable development is commonly achieved through maintaining a functional balance between economic, social and ecological development. Within Magareng municipality it was found that there are three main areas of concern or themes of issues, namely:

a) Ineffective public transport network

Public transport can never be effective or viable in an area characterized by urban sprawl and/or low residential densities.

b) Lack of infrastructure

Magareng is faced with lack of infrastructure especially in rural area, while the bulk sewer network is under presure.

c) Spatial Structure

Warrenton's spatial structure remains fragmented and a challenge despite dramatic change, growth and development. Warrenton is an excellent example of an apartheid ideology which focused on separate development where infrastructure roads and buffer zones were used to divide communities.

4.7 SOCIO-ECONOMIC ENVIRONMENT

The purpose of this section is to analyse key trends in the various demographic characteristics in the Magareng local municipality. Where possible the demographic profile is depicted per ward, please refer to Map 6 for the Ward delimitation.

4.7.1 POPULATION

According to the Provincial Spatial Development Framework, a growth rate of 0.95% in the Northern Cape, while the Local Economic Development (LED) Strategy estimates a growth rate of 0.3%. The population estimate of the Community Survey (2007) represents a significant discrepancy in the population composition as estimated by Statistics South Africa and the LED Strategy. For the purpose of this report we will accept the growth rate as published by StatSA of 0.95%.

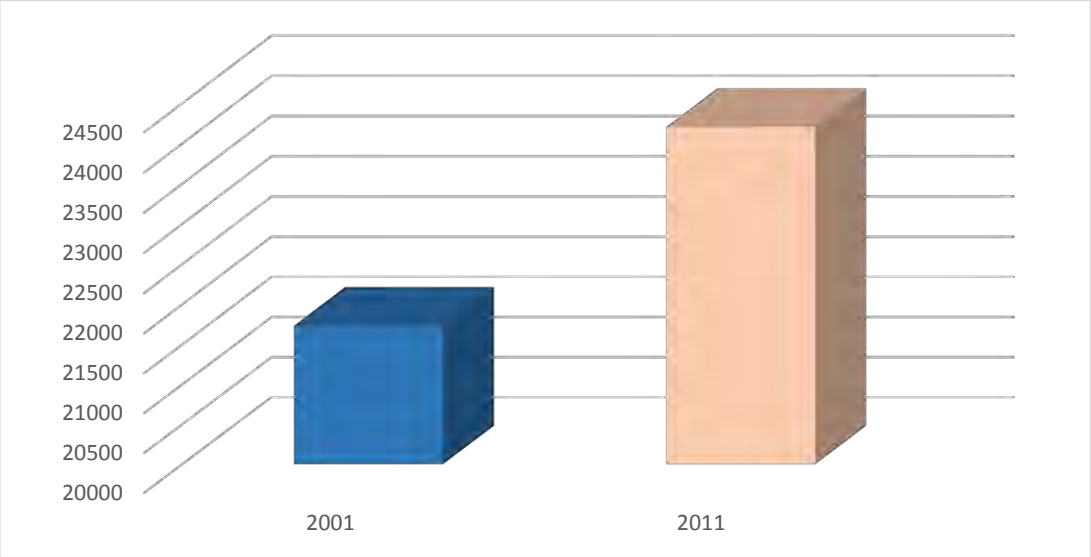
The population of the Magareng municipal increased from 21 733 in 2001 to 24 204 in 2011 (StatsSA 2014). Two possible factors influencing the population growth rate are migration and generally lower national population growth rates.

TABLE 7: TOTAL POPULATION

Magareng	24 204
Ward 1	7 517
Ward 2	4 940
Ward 3	2 570
Ward 4	6 037
Ward 5	3 140

(STATSSA Census 2011)

FIGURE 16 : POPULATION



(STATSSA Census 2011)

It is clear from the population distribution that the largest percentage of the population is living in and around Warrenton. The largest numbers of people are found in Wards 1 and 2 (Ikhutseng), while the lowest number is found in Ward 5 (Rural), as can be seen in the following graph.

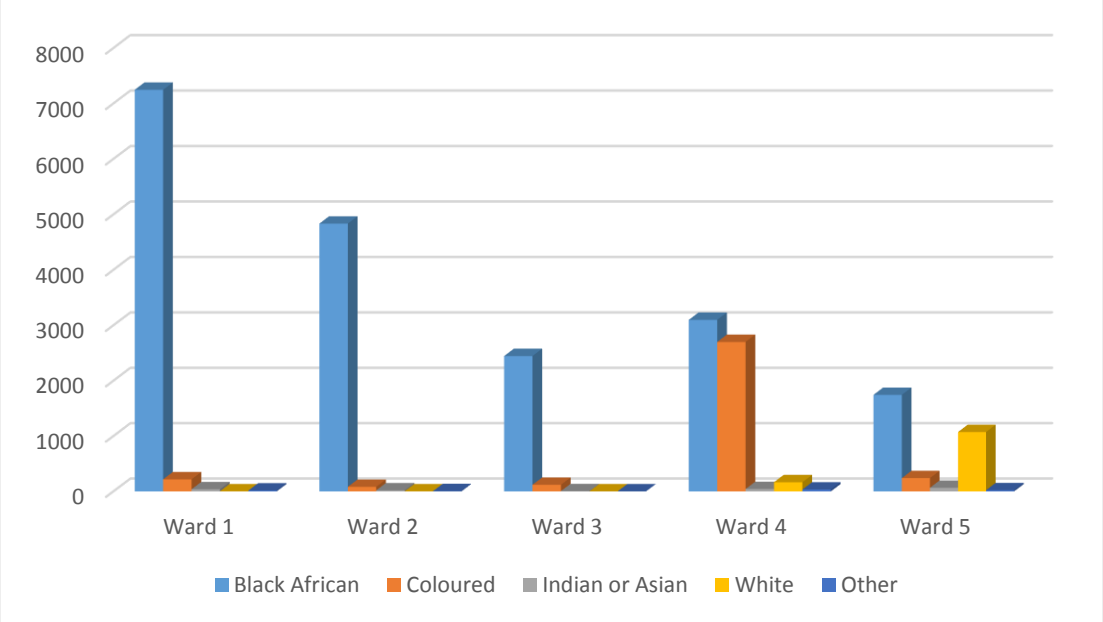
The insert is for reference purposes only. Population is concentrated in the four smaller settlements scattered through the municipality area e.g. Bullhill situated in the irrigation area. Map 28 indicates the

TABLE 8: POPULATION DISTRIBUTION

	Black African	Coloured	Indian or Asian	White	Other
Magareng	19366	3357	166	1240	76
Ward 1	7246	217	37	1	16
Ward 2	4833	82	18	1	5
Ward 3	2445	119	4	-	1
Ward 4	3098	2699	43	165	33
Ward 5	1743	239	64	1072	21

(STATSSA Census 2011)

FIGURE 17 : POPULATION DISTRIBUTION



(STATSSA Census 2011)

From Map 28 it is evident that the largest percentage of the population is located in Ward 1, 2, 3 and 4 all located within the greater Warrenton area. Only a small percentage area shatters throughout the rural areas.

MAP 28: POPULATION DISTRIBUTION

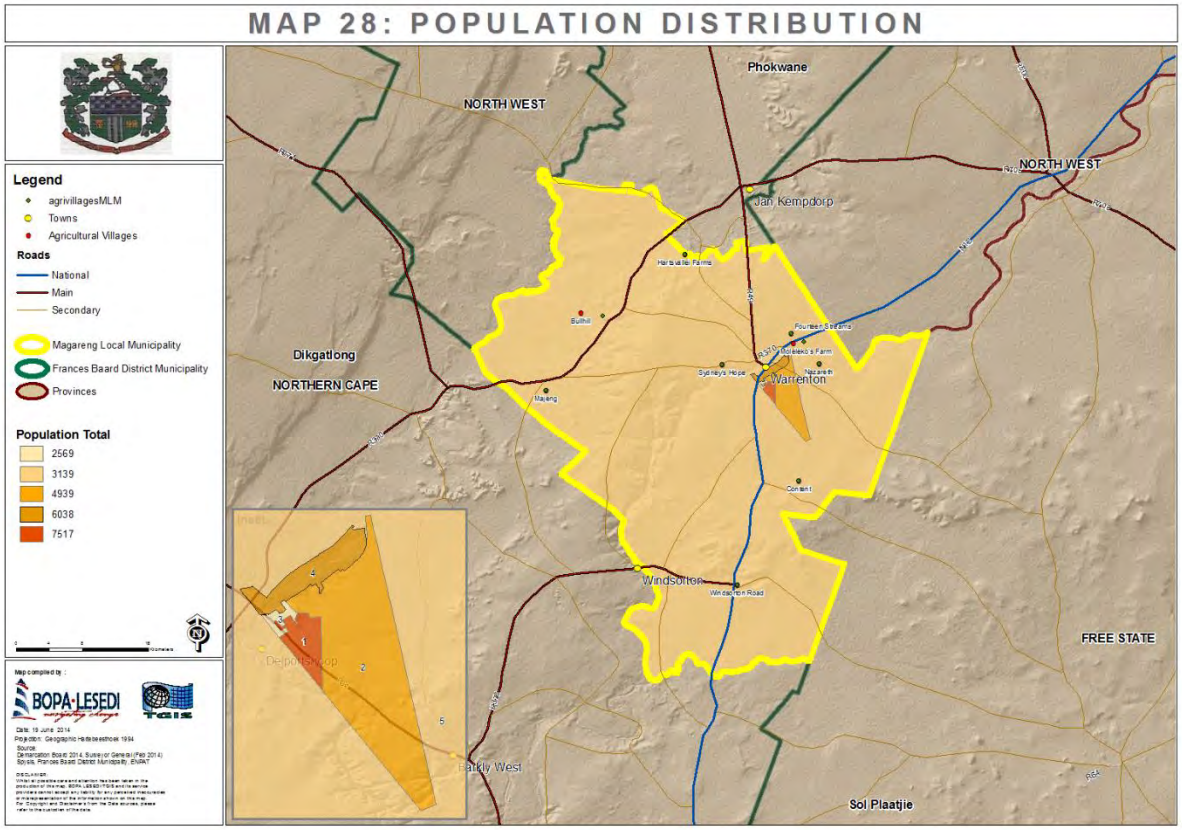
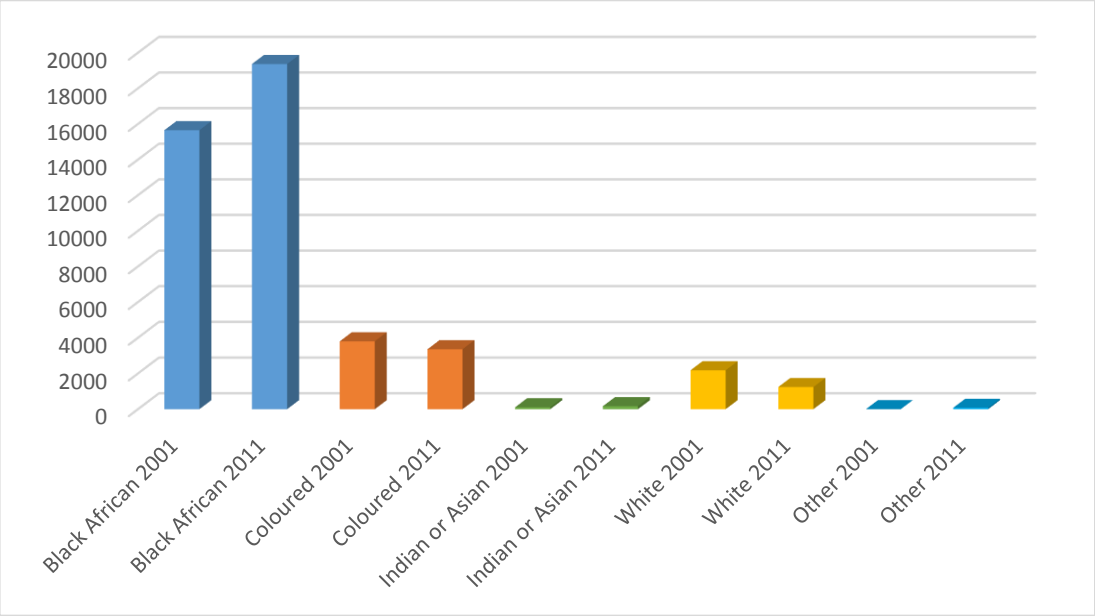


TABLE 9: POPULATION COMPARISON

	Black African 2001	Black African 2011	Coloured 2001	Coloured 2011	Indian or Asian 2001	Indian or Asian 2011	White 2001	White 2011	Other 2001	Other 2011
Magareng	15648	19366	3801	3357	105	166	2180	1240	0	76
Ward 1	4362	7246	218	217	0	37	0	1	0	16
Ward 2	4060	4833	231	82	0	18	0	1	0	5
Ward 3	1548	2445	28	119	0	4	0	0	0	1
Ward 4	2957	3098	2788	2699	29	43	546	165	0	33
Ward 5	2720	1743	536	239	76	64	1634	1072	0	21

(STATSSA Census 2011)

FIGURE 18 : POPULATION COMPARISON PER CENSUS



(STATSSA Census 2011)

The Black African population is by far the most numerous population group. There has also been a drastic increase in the number of Black African people, whereas the number of Coloured people, as well as, White people has decreased during the period 2001 to 2011.

4.7.2 NUMBER OF HOUSEHOLDS

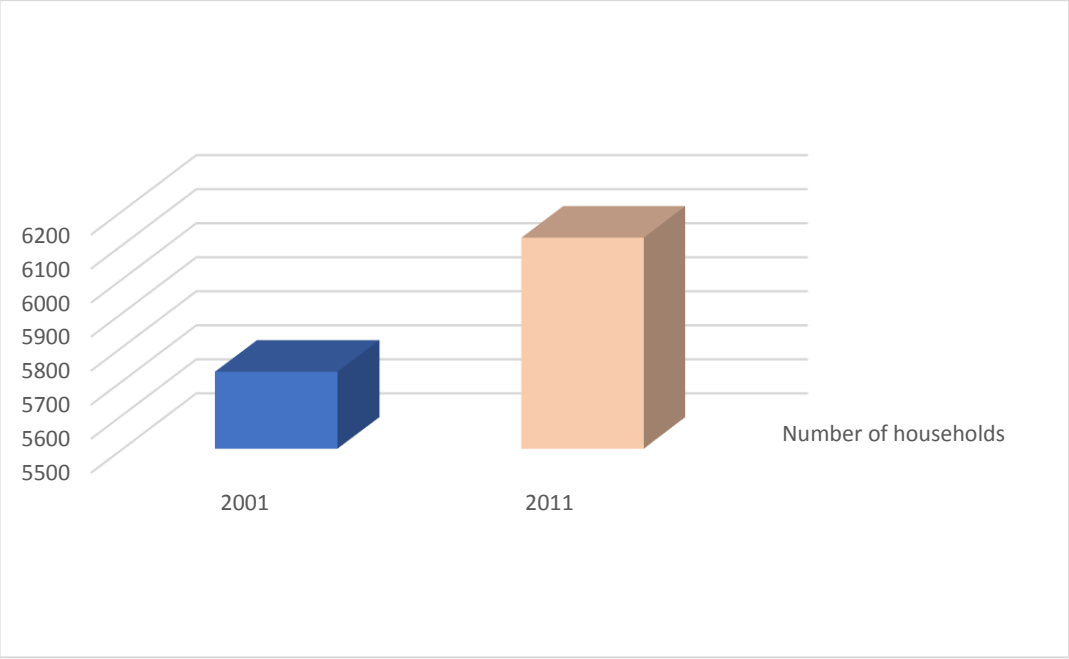
The total number of households increased from 2001 to 2011 from 5811 households to 6120 households. The size of households decreased from 5.03 people to 4.08 people per house over a 10 year period. This statistic can be seen as very positive because of the interpretation that more of the inhabitants are able to live in their own house.

TABLE 10: NUMBER OF HOUSEHOLDS

	2001	2011	2013
Magareng	5 811	6 120	

(STATSSA Census 2001 & 2011)

FIGURE 19 NUMBER OF HOUSEHOLDS



(STATSSA Census 2011)

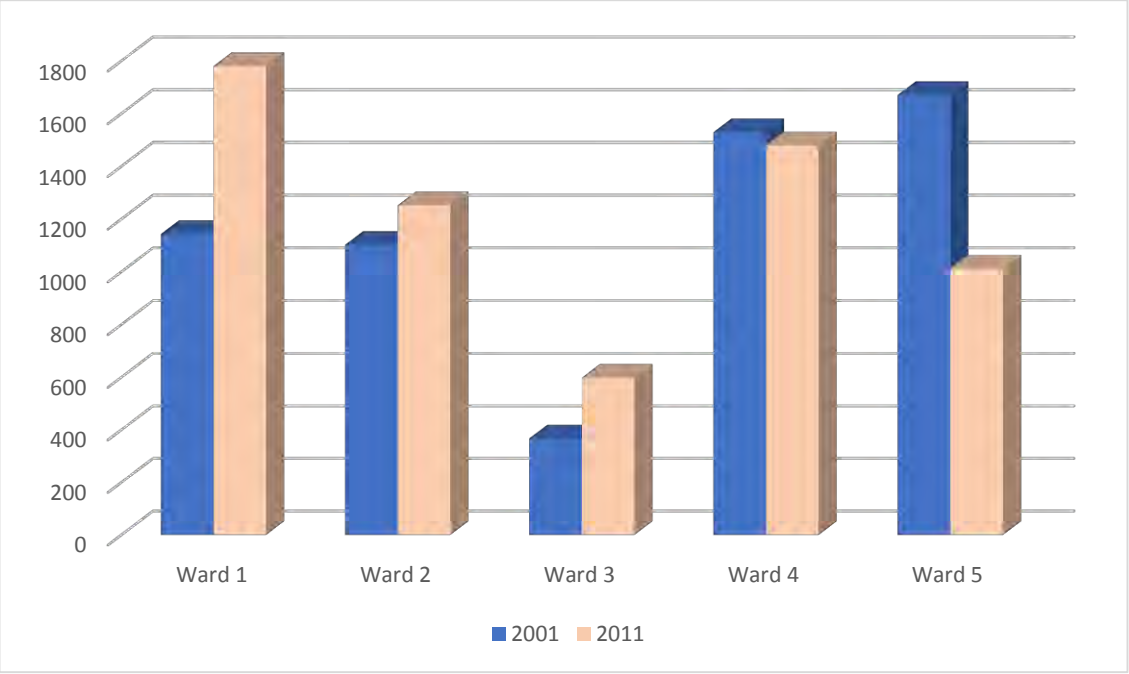
The largest increase in the number of households is found in Wards 1 and 3, while there was a decrease in the number of households in Wards 5 and 6, this may be due to the rural nature of Wards 5 and 6.

TABLE 11: NUMBER OF HOUSEHOLDS PER WARD

	2001	2011
Ward 1	1143	1780
Ward 2	1102	1252
Ward 3	367	598
Ward 4	1529	1479
Ward 5	1670	1012

(STATSSA Census 2001 & 2011)

FIGURE 20 : NUMBER OF HOUSEHOLDS PER WARD



(STATSSA Census 2001 & 2011)

TABLE 12: POPULATION AND HOUSEHOLD COMPARISON

	Population	Households	Average Household Size
Ward 1	7517	1780	4.2
Ward 2	4940	1252	3.9
Ward 3	2570	598	4.3
Ward 4	6037	1479	4.1
Ward 5	3140	1012	3.1
Total	**24204**	**6120**	**4.0**

(Magareng Housing Sector Plan, 2014)

As illustrated above the average household size in Magareng is 3.9 the same as Frances Baard District Municipality. According to the Housing Sector Plan (2014), there are two main ways of determining housing demand/need within municipal areas, these are:

4.7.3 DEPENDANCY RATIO

Definition: Age dependency ratios are broad indicators of the potential dependency burden of children under 15 years of age, and the aged (people aged over 65 years) to the working population aged 15–65 years. These ratios are calculated by looking at the number of dependent people in the dependency years for each 100 people in the working age population (STATSSA 2011).

The dependency ratio within the Magareng municipal area decreased from 63.70% in 2001 to 60.70% in 2011.

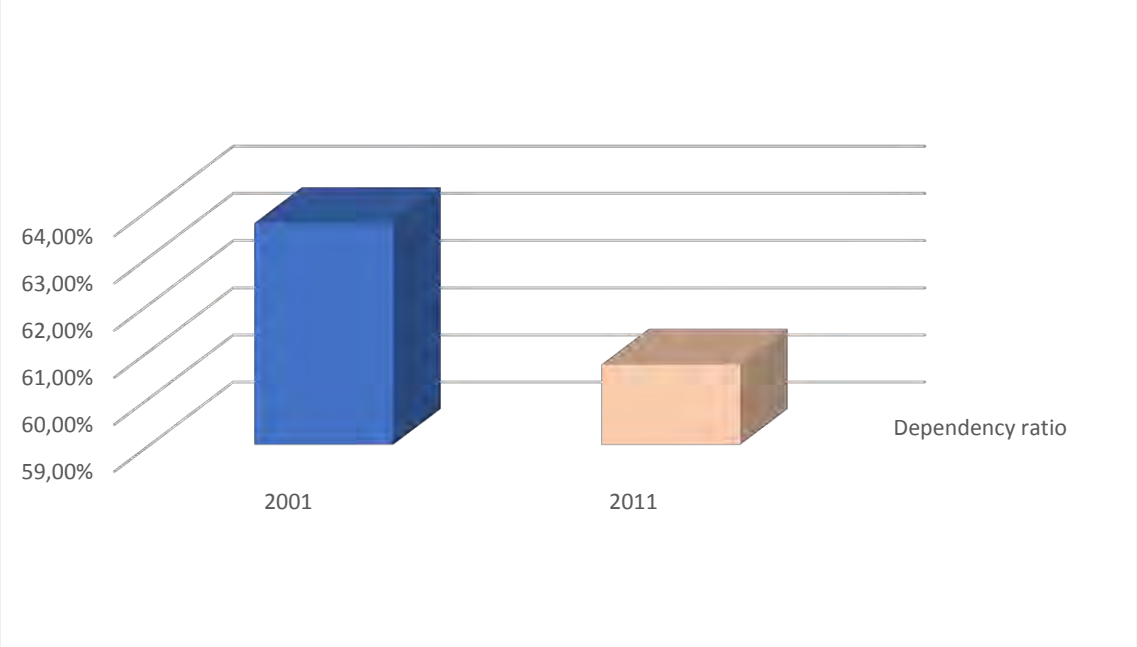
The decrease in the dependency ratio illustrates a growth in prosperity within the Municipality over the past 10 years.

TABLE 13: DEPENDENCY RATIO

Magareng	1996	2001	2011
	66.8	63.7	60.7

(STATSSA Census 2011)

FIGURE 21 : DEPENDENCY RATIO



(STATSSA Census 2001 & 2011)

4.7.4 GENDER

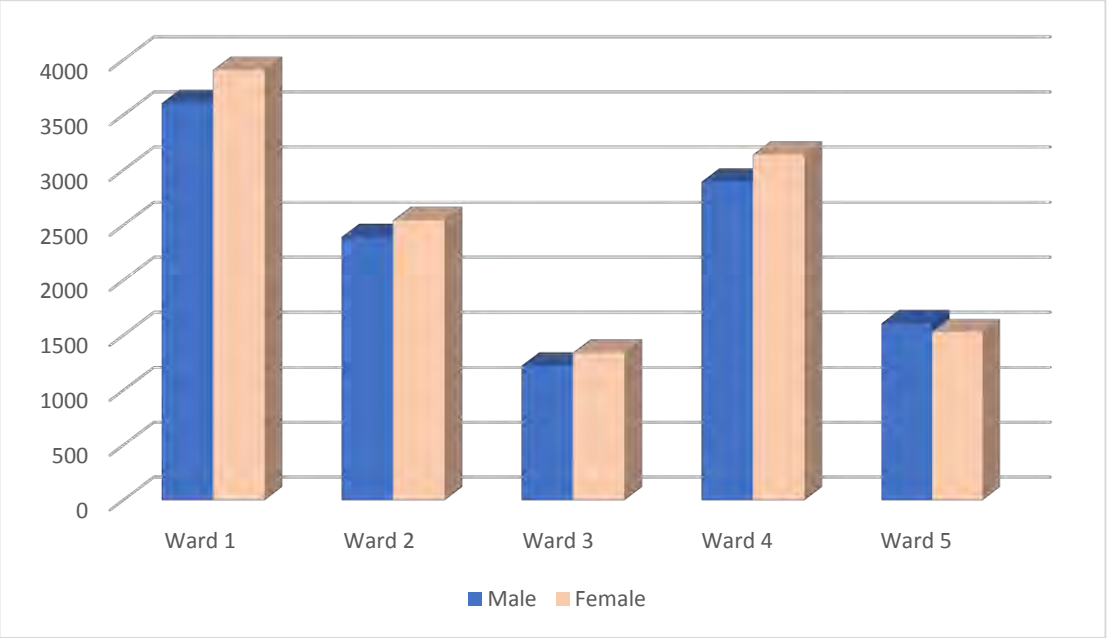
As is the case in most parts of the Northern Cape, the gender distribution within Magareng Local Municipality is, with the exception of Ward 5, a higher number of women than men.

TABLE 14: GENDER DISTRIBUTION PER WARD

	Male	Female
Ward 1	3608	3910
Ward 2	2394	2546
Ward 3	1225	1345
Ward 4	2895	3142
Ward 5	1610	1530

(STATSSA Census 2011)

FIGURE 22 : GENDER DISTRIBUTION PER WARD



(STATSSA Census 2011)

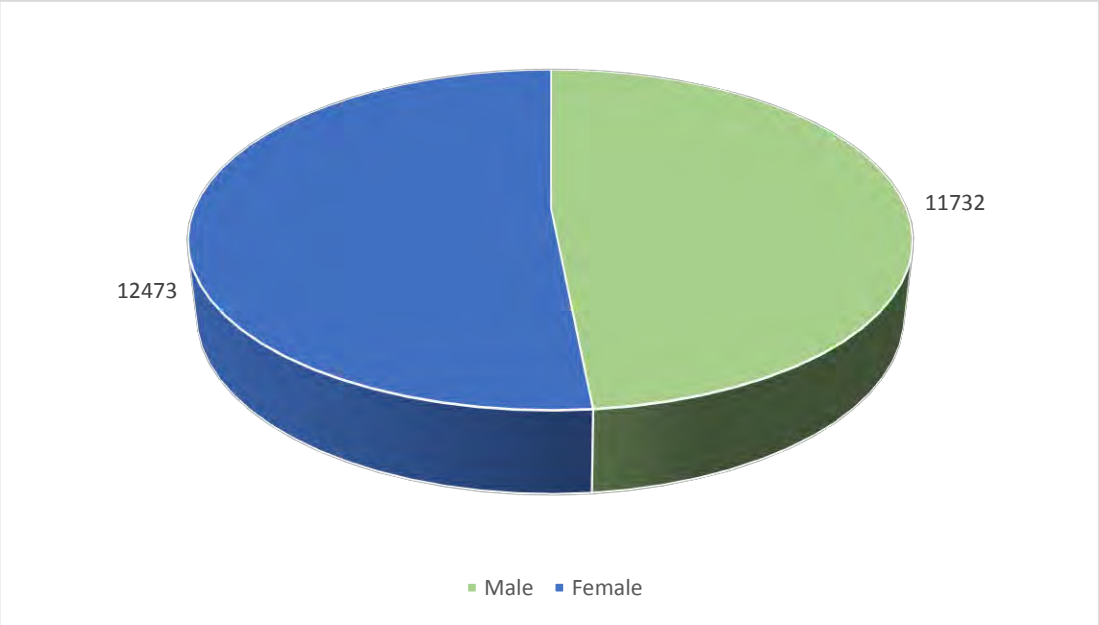
The overall gender distribution is 51.54% women and 48.46% men.

TABLE 15: GENDER DISTRIBUTION

	Male	Female
Magareng	11732	12473

(STATSSA Census 2011)

FIGURE 23 : GENDER DISTRIBUTION



(STATSSA Census 2011)

The numbers of female headed households have increased over the past 15 years. With the 1996 census 32.4% of households were headed by females, during 2001 37.6% were headed by females and in 2011 41.7% of households were headed by females.

Below is a table with the number of female headed households per census period:

TABLE 16: FEMALE HEADED HOUSEHOLDS

	1996	2001	2011
Magareng	1697	2152	2552

(STATSSA Census 2001 & 2011)

4.7.5 AGE

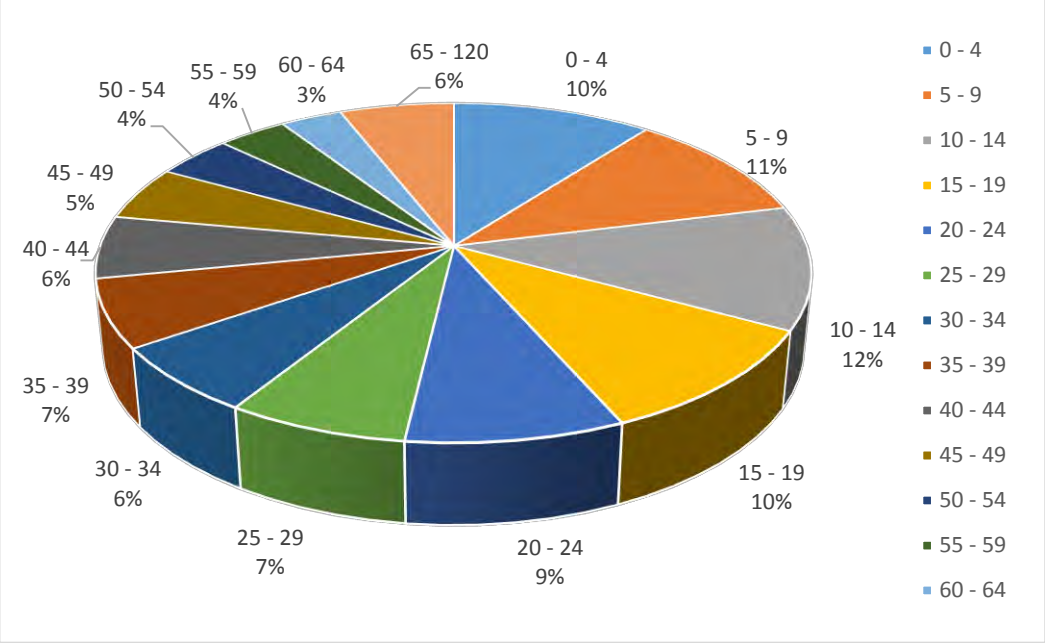
The age structure of the population in the Magareng region is similar to that of the Northern Cape. An average of 10% of the Magareng population is below 4 years of age, 11% is between the ages of 5 to 9 with an average of 9% above the age of 60. A total of approximately 33% of the population is of school going age, while the economically active population of between the ages of 20 and 59 years account for 48%, almost half, of the population. This indicates a high demand on the provision of social and physical infrastructure in the district. The age distribution within the Municipality is summarized in the following table:

TABLE 17: AGE DISTRIBUTION

Age	Number
0 - 4	2274
5 - 9	2323
10 - 14	2549
15 - 19	2270
20 - 24	1853
25 - 29	1540
30 - 34	1404
35 - 39	1409
40 - 44	1294
45 - 49	1122
50 - 54	880
55 - 59	793
60 - 64	705
65 - 120	1305
Total	21721

(STATSSA Census 2011)

FIGURE 24 : AGE DISTRIBUTION



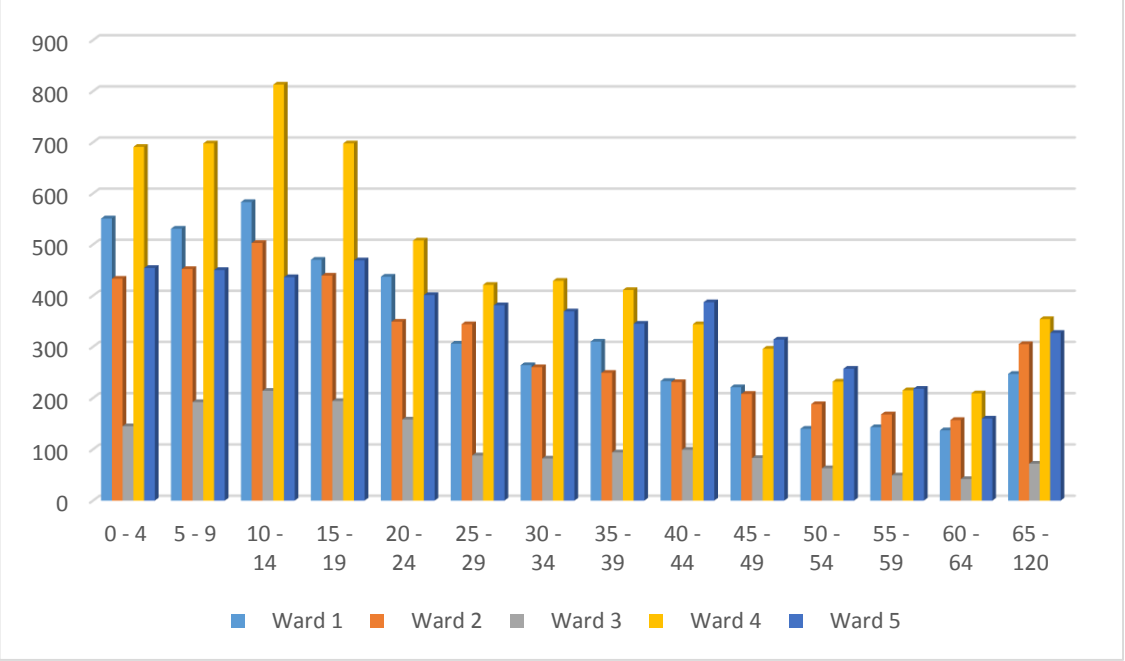
(STATSSA Census 2011)

TABLE 18: AGE DISTRIBUTION PER WARD

	Ward 1	Ward 2	Ward 3	Ward 4	Ward 5
0 - 4	551	433	145	691	454
5 - 9	531	452	192	698	450
10 - 14	583	503	214	813	436
15 - 19	470	439	194	698	469
20 - 24	437	349	158	508	401
25 - 29	306	344	88	421	381
30 - 34	264	260	82	429	369
35 - 39	310	249	94	411	345
40 - 44	233	231	99	344	387
45 - 49	221	208	83	296	314
50 - 54	140	188	63	232	257
55 - 59	143	168	49	215	218
60 - 64	137	157	42	209	160
65 - 120	247	305	72	354	327

(STATSSA Census 2011)

FIGURE 25 : AGE DISTRIBUTION PER WARD



(STATSSA Census 2011)

When looking at the age distribution per Ward within the Municipality there is no clear trend. The age distribution varies per Ward.

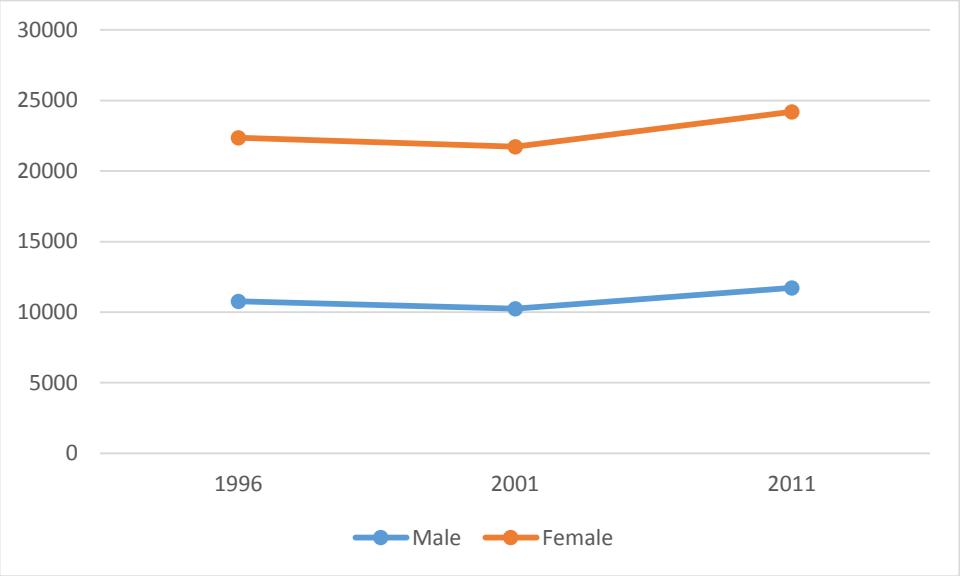
A summary of the changes of age profiles between the three censuses are included in the following table:

TABLE 19: AGE PROFILE CHANGES PER CENSUS

	1996		2001		2011	
	Male	Female	Male	Female	Male	Female
0-4	1225	1212	1133	1139	1338	1352
5-9	1356	1292	1147	1177	1312	1183
10-14	1293	1346	1284	1264	1249	1167
15-19	1264	1260	1131	1140	1155	1153
20-24	897	1115	845	1009	1211	1112
25-29	737	879	681	863	932	982
30-34	738	834	644	759	793	913
35-39	670	651	613	793	668	769
40-44	603	600	651	641	586	688
45-49	459	495	557	568	551	711
50-54	416	447	406	474	545	573
55-59	313	400	371	422	480	523
60-64	285	346	304	403	300	412
64-69	216	259	200	294	252	322
>69	293	466	291	532	358	611
TOTAL	**10765**	**11602**	**10258**	**11478**	**11730**	**12471**

(STATSSA 1996, 2001, 2011)

FIGURE 26: AGE PROFILE CHANGES PER CENSUS



(STATSSA Census 2011)

4.7.6 ECONOMIC PROFILE

The Northern Cape Province is renowned for its diamond mining. The GDP contribution by the mining and quarrying sector of the economy was 21,4% in 2001 while the finance, real estate and business services sector contributed 19,8% of the GDP of the province in 2001. However, the contribution made by the mining and quarrying sector to the GDP of South Africa in 2001 was only 5,7%. (Stats SA, 2002).

The Northern Cape Province has showed an increase in its contribution to the GDP of South Africa of 2,7% for 2001, which is almost equal to the national average of 2,8%.

However, if one analyses the local economy of Magareng, the contribution made by the mining and quarrying sector will be far less than that recorded for the rest of the province, as most of the mining and quarrying activities fall outside the municipal area. Although there is no research that can support these conclusions drawn, participants in the IDP review workshops felt that agricultural sector was the predominant income base of the municipal area. This assumption is supported by the employment industry statistics which indicates that the agricultural sector is the largest employer in the municipal area, followed by the Social Services sector. One can therefore assume that the local economy is profoundly based on agriculture. (Magareng IDP, 2011/12)

4.7.6.1 LEVEL OF INCOME

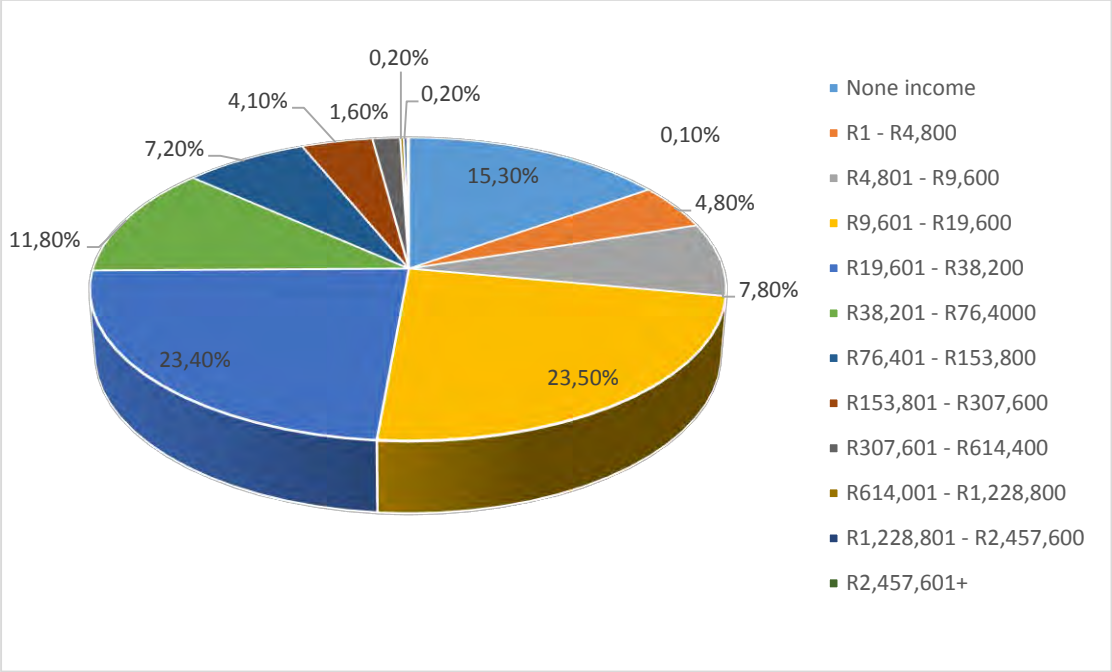
The individual income of people in Magareng for 2011 is reflected in the figure. According to Census 2011 (Stats SA) almost 15% of individuals between the age 15 and 65 have no income

TABLE 20: LEVEL OF INCOME

Income	Percentage
None income	15,30%
R1 - R4,800	4,80%
R4,801 - R9,600	7,80%
R9,601 - R19,600	23,50%
R19,601 - R38,200	23,40%
R38,201 - R76,4000	11,80%
R76,401 - R153,800	7,20%
R153,801 - R307,600	4,10%
R307,601 - R614,400	1,60%
R614,001 - R1,228,800	0,20%
R1,228,801 - R2,457,600	0,20%
R2,457,601+	0,10%

(STATSSA Census 2011)

FIGURE 27 : LEVEL OF INCOME



STATSSA (Census 2011)

A worrying number of people within the Municipality are listed as "not economically active according to STATSSA's 2011 census figures. A further 17% of people are unemployed.

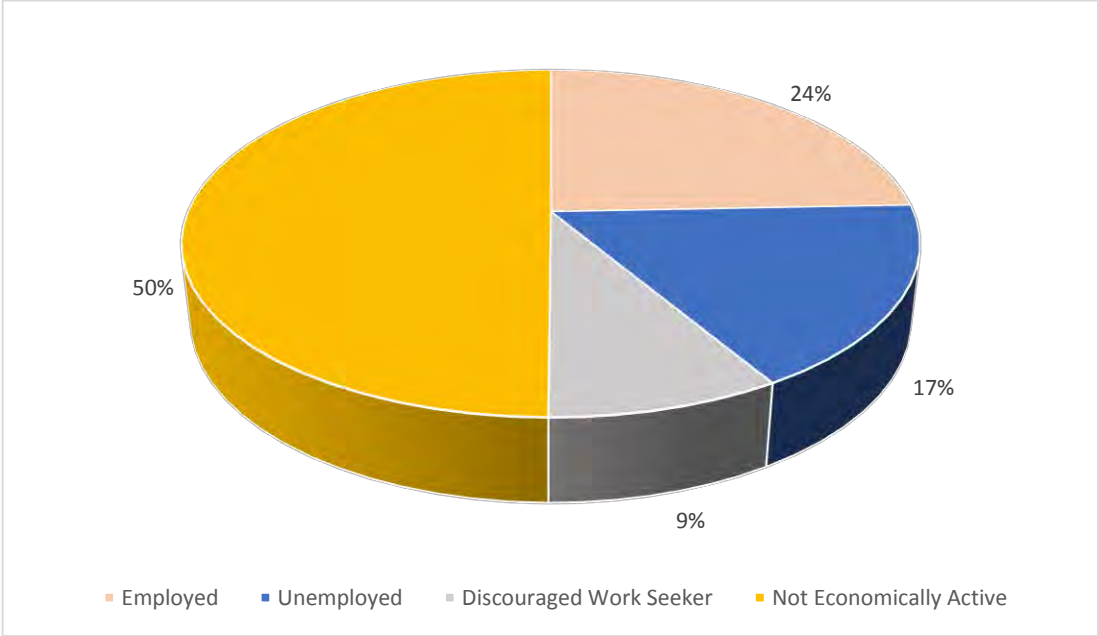
TABLE 21: EMPLOYMENT

Employment Status	Number
Employed	3669
Unemployed	2570
Discouraged Work Seeker	1304
Not Economically Active	7515

(STATSSA Census 2011)

The high unemployment rate has a direct impact on the explosion of development opportunities within the municipal area. Local capital investment is limited to only a small percentage of the population. The Magareng Municipality can be classified as a below average to poor community. Due to the lack of economic opportunities within the municipal area post matriculates are migrating mostly to Kimberly to find better job opportunities.

FIGURE 28 : EMPLOYMENT



(STATSSA Census 2011)

4.8 BUILT ENVIRONMENT

This section provides a perspective of the urban and regional relationships in, and around the study area. The historical reasons for the establishment of Warrenton still exists to some extent, but improved transportation and linkages towards Kimberley, eroded some of the early potential to grow. However, it could also be argued that improved transportation and linkages opened-up other markets further away than Kimberley that should be exploited.

The identification and development of the N12 Treasure Corridor and the Western Frontier, confirms Warrenton's strategic locality from a Provincial as well as District perspective. However, as long as the lack of a well-developed regional road network exist, as well as, the fact that the N12 is not yet fully upgraded to national road standards, this potential remains latent.

Challenges:

Changes made in demarcation of census sub-places make comparison between 2001 and 2011, making the identification of trends problematic.

4.8.1 HERARCHY OF SETTLEMENTS

An important characteristic of the study area is the low population densities and small number of urban or semi-urban settlements. According to SA stats, 96,35% of the population is, however, urbanized. This implies even a lower rural density in general.

The Francis Baard Spatial Development Framework classifies Warrenton (together with Barkley West, Jan Kempdorp, Hartswater and Pampierstad) as second order settlements (after Kimberley, that is the only first order settlement with a population of 200 000 people). The rural node of Bullhill is the only rural node situated within the irrigation scheme.

TABLE 22: NODES AND CORRIDORS

CLASSIFICATION	FUNCTION
Neighbourhood nodes	▪ These nodes serve one or more neighbourhood ▪ Activities are of a local nature providing for daily consumables and social services ▪ They are normally located on activity spines and streets. Nodes within neighbourhood that only serve a neighbourhood or a portion of a neighbourhood is also referred to as local nodes. (Point nodes*)
District nodes (Community node*)	▪ These nodes serve specific sub-regional areas or districts. ▪ They could have specialized services, e.g. offices, industry. ▪ They are significantly larger than neighbourhood nodes and may also include some local functions found in neighbourhood nodes. ▪ In some instances they have developed from the expansion of neighbourhoods nodes. These nodes are situated near mobility spines and activity corridors, supported by activity roads.

CLASSIFICATION	FUNCTION
Regional/Economic nodes	▪ These nodes are situated on activity corridors supported by mobility spines ▪ These nodes have regional significance in terms of attracting people from areas beyond the city due to a variety of goods , services and speciality products found at the node, based on its scale and development intensity.
SDI	N12 Treasure Corridor and N18 Western Frontier. Although the strategic location of Warrenton hold same development potential, it should be understood that: ▪ Because of the nature of the Treasure Corridor (which is merely a "communication corridor", the development potential is lower than elsewhere. Also the fact that Warrenton is not a major node or central place, restricts its growth potential. ▪ The Western Frontier is in fact not a real development corridor in true sense of the word, because it does not link major nodes. ▪ The infrastructure upgrading (N12 – road surface) is not yet fully completed and on national road stands.
Activity corridors and spines	The N18 function on a urban scale as only activity corridor or spine. However, most of the business development is situated along internal roads not benefiting from passing traffic on the main corridors.
Activity streets	A few activity streets exist that provides access toward Ikhutseng and Warrenvale.
NODES	
Neighbourhood Nodes	There exists a small neighbourhood node in Ikhutseng.
Regional/Economic Node	The existing CBD of Warrenton serves as a regional node.
Rural Node	Windsorton Road Content Espachdrift
Urban Edge	To be determined
Municipal Open Space	Undefined

Development (infrastructure as well as population) in Magareng is therefore already concentrated in a minimum number of central places and rural service points. Where normally a large number of smaller villages create problems in other municipal areas, here, the spatial development framework will have to determine if more rural nodes are necessary to serve the rural population (even when taking into account the low level of rural densities).

4.8.2 URBAN STRUCTURE

The early town of Warrenton was established as a typical "Voortrekkerdorp" with a gridiron layout. Larger stands or agricultural holdings were provided along the riverside for the growth of vegetables.

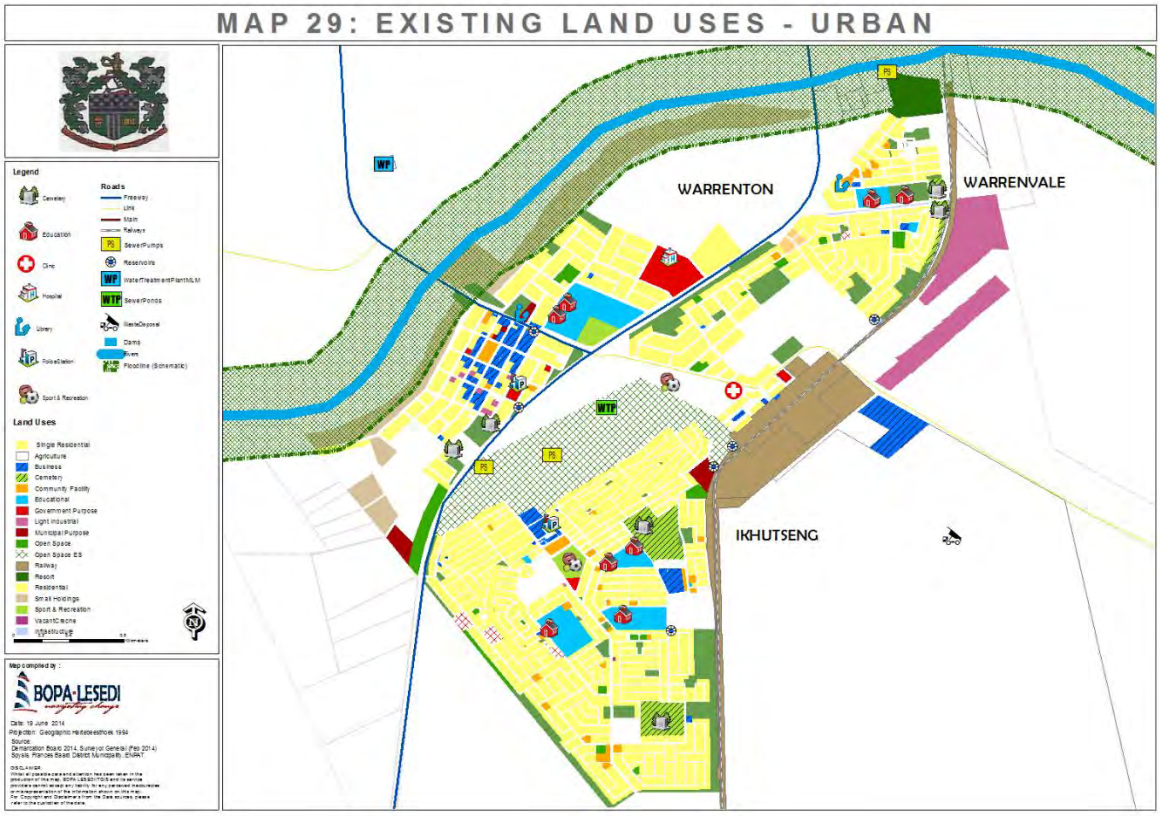
The town developed under the, then policy, of "separate development" in a fragmented way with the colored townships east of the national highway and the white areas west thereof.

The urban structure has been influenced further by the Vaal Rivier on the western side and railway line and station forming the eastern border. Warrenton developed on both sides of the national highway, which functionally divided the town in two

halves. Although Warrenton is situated on the intersection of two Spatial Development Initiatives (SDI's), and on the banks of the Vaal Rivier, it seems that the town does not really capitalize on the benefits these attributes could have on the development of the town:

- It is clear from the layout that very little of the existing businesses enjoys the benefits of highway locality.
- Although situated on the banks of the Vaal Rivier, very few of the residential areas have the benefit of nice vista's overlooking the river.
- The industrial area was located adjacent to the railway line and station – with the change of transport preference, these sites become less attractive. With proper planning, future industrial sites could benefit more from highway localities in terms of good accessibility and free marketing.
- The "core" of the town seems to exist of large portions of vacant land boarding the N12 – leaving one with no invitation to enter the town, or a feeling of "I have arrived", or welcoming effect.

MAP 29: URBAN LAND USE



4.8.2.1 RESIDENTIAL

Six thousand five hundred and sixty three (6 563) of the 7 160 stands are used for residential purposes. 2 372 of these stands accommodate informal dwellings. (Magareng SDF, 2008)

4.8.2.2 BUSINESS

The second highest land use, are businesses, namely 170 stands. Within Warrenton there are a number of businesses situated within the CBD in a linear form. Signs of urban decay characterize this area. These businesses vary form supermarkets, filling stations, furniture stores, etc. A Multi-Purpose Centre is being erected at the entrance of Warrenton. Within Ihkutseng there is a business node at the entrance

From the N12, as well as, small (informal) businesses scattered throughout the area. They are mostly tuck shops or taverns behind houses. Only a small number of businesses are found in Warrenvalle.

The limited number of businesses in Warrenvalle and Ihkutseng induce pedestrian crossings over the N12, which is very dangerous. A pedestrian crossing underneath the N12 is therefore identified as a project and started on the 5th May 2008.

4.8.2.3 INDUTRIAL

The industrial sites are located east of the railway line. However, most of these stands are still vacant after all these years.

There is a lack of a proper developed open space system including sport fields. Even existing sport facilities are in quite a bad state.

4.8.3 HOUSING

Housing has been at the forefront of the national agenda for delivery since 1994. According to the Breaking New Ground in Housing Delivery Strategy and the Municipal Systems Act (32 of 2000) which introduced Integrated Development Plans as the primary form of planning for all municipalities, there is a need to align planning processes within all three spheres of government to ensure an integrated approach to housing, planning and service delivery.

As a response to the above mentioned plea for integration and to adhere to the requirements of the Housing Act (Act 107 of 1997) which requires municipalities to formulate housing strategies and targets and incorporate these into their Integrated Development Plans, the following housing sector plan is submitted to encourage and facilitate the development of sustainable human settlements.

The Housing Sector Plan (HSP) is intended to guide the Municipality to deliver housing in a planned and coordinated manner. If successfully implemented, the Plan will help the Municipality to stimulate the local economy, create an environment for local job creation and address the needs of the aged, the disabled and HIV/AIDS victims. It will also allow the Municipality to correct the spatial disparities of the apartheid era and ensure that integration and coordination happen between housing

and other service provision such as infrastructure development, roads, transport, education, health, tourism, safety and security, etc.

TABLE 23: POPULATION AND HOUSEHOLD COMPARISON

	Population	Households	Average Household Size
Ward 1	7517	1780	4.2
Ward 2	4940	1252	3.9
Ward 3	2570	598	4.3
Ward 4	6037	1479	4.1
Ward 5	3140	1012	3.1
Total	**24204**	**6120**	**4.0**

(Magareng Housing Sector Plan, 2014)

As illustrated above the average household size in Magareng is 3.9 the same as Frances Baard District Municipality. According to the Housing Sector Plan (2014), there are two main ways of determining housing demand/need within municipal areas, these are:

1) using statistical calculations captured through the census or other relevant studies or

2) through the analysis of housing waiting lists or provincial housing needs data base (US Aid, 2006).

TABLE 24: STATISTICAL HOUSING DEMAND

	Informal Dwellings	Traditional Dwellings	Other	Backlog
Ward 1	341	7	1	349
Ward 2	47	2	3	52
Ward 3	217	4	0	221
Ward 4	120	-	7	127
Ward 5	23	17	0	40
Total	**743**	**36**	**18**	**797**

(Magareng Housing Sector Plan, 2014)

From the figure above it is clear that the current backlog in terms of Census data is approximately 797 units, with the greatest backlog in ward three and in ward five. This figure includes the informal housing, traditional housing and other housing categories not falling within formal housing. Furthermore, based on the income statistics, it is clear that a large portion of the residents have no income, and will in turn not be able to develop their own houses, and thus need assistance from the state.

The Department of Housing and a number of municipalities have initiated the process of establishing an overall provincial housing demand data base. The Housing Needs Register indicates that there are currently a demand for 3,312 units.

It is clear that there are a major difference between the needs register and the actual Stats SA data obtained in the latest census. Housing waiting lists and needs registers can have a number of shortcomings including, applicants putting their names down on more than one municipal housing waiting list and many potential beneficiaries have not placed their names on these lists (Magareng Housing Sector Plan, 2014).

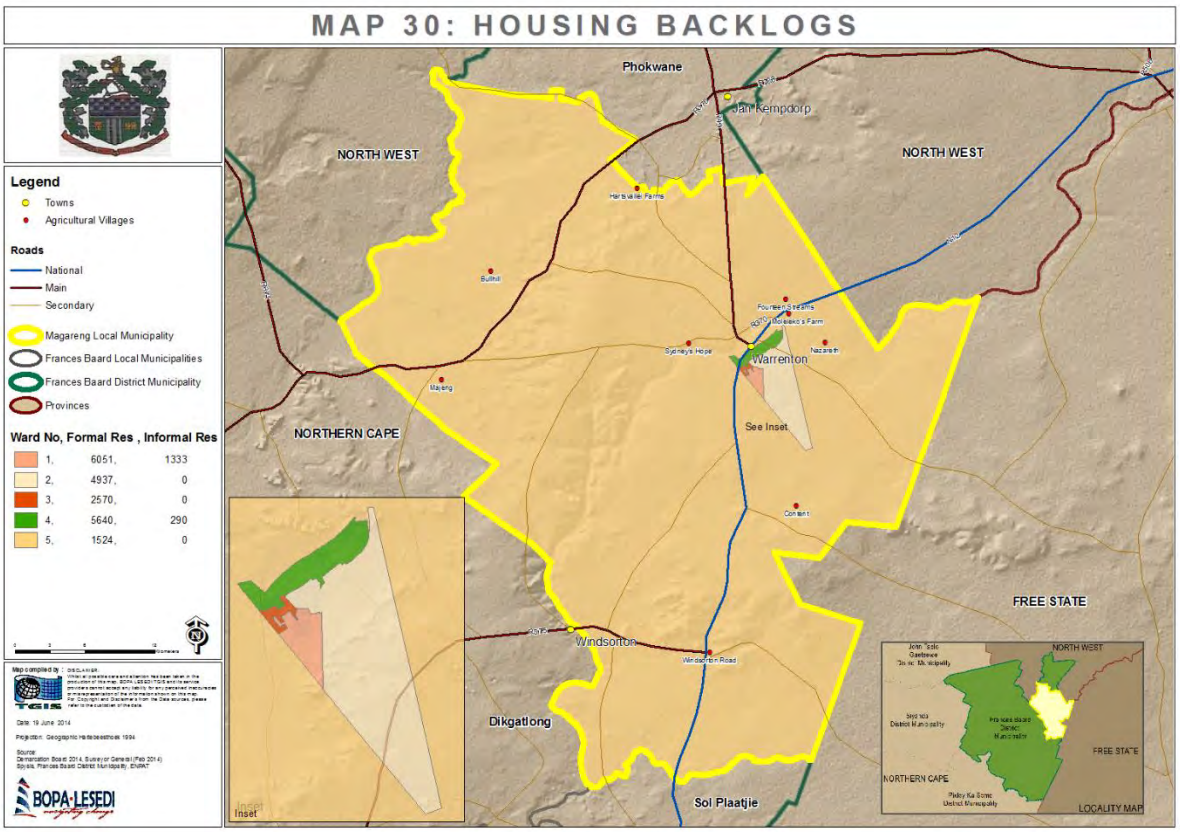
The current Municipal IDP (2012/14) illustrates the following demand in the Municipality per ward.

TABLE 25: IDP HOUSING DEMAND

	Backlog
Ward 1	1298
Ward 2	200
Ward 3	400
Ward 4	558
Ward 5	800
Total	**3256**

(Magareng IDP, 2013/14)

MAP 30: HOUSING BACKLOG



During the land use survey it became evident that there are a number of informal dwellings within Warrenvale and Ihkutseng. Areas with informal dwellings are

indicated on Map 30 Housing Backlog. According to the IDP 2013/14 the following challenges have been identified:

Challenges

Informal housing: A vast number of informal houses occur in Magareng; Warrenvale and Ikhutseng. The drastic increase in urban population contributes to this problem. Please refer to Map 30 for location of these informal settlements.

During our land use survey we have discovered that some of the dwellings are located on erven earmarked for non-residential purposes.

Too few housing subsidies allocated: The housing backlog requires more subsidies to be allocated in order to eradicate the housing backlog. Housing subsidies are also not provided for differently abled persons. The differently abled people feel that they are discriminated against and are not taken into consideration. The rest of the community thinks that they are incapable to have their own house and running a normal household. This is now giving an indication that the consumer education has to be strengthened and awareness on different housing programmes be implemented.

According to the latest IDP 2013/14 the following two housing projects has been earmarked for the period 2013 -2017. Adequate areas to accommodate the next 5 to 10 years for future residential development have been earmarked in the SDF. Please refer to Maps 50 to 54.

TABLE 26: HOUSING PROJECTS

Project	Target	2013	2014	2015	2016
Construction of 1297 houses in Ikhutseng	325		325	325	325
Construction of 559 houses in Warrenvale	100		100	100	259

(Magareng IDP 2013/14)

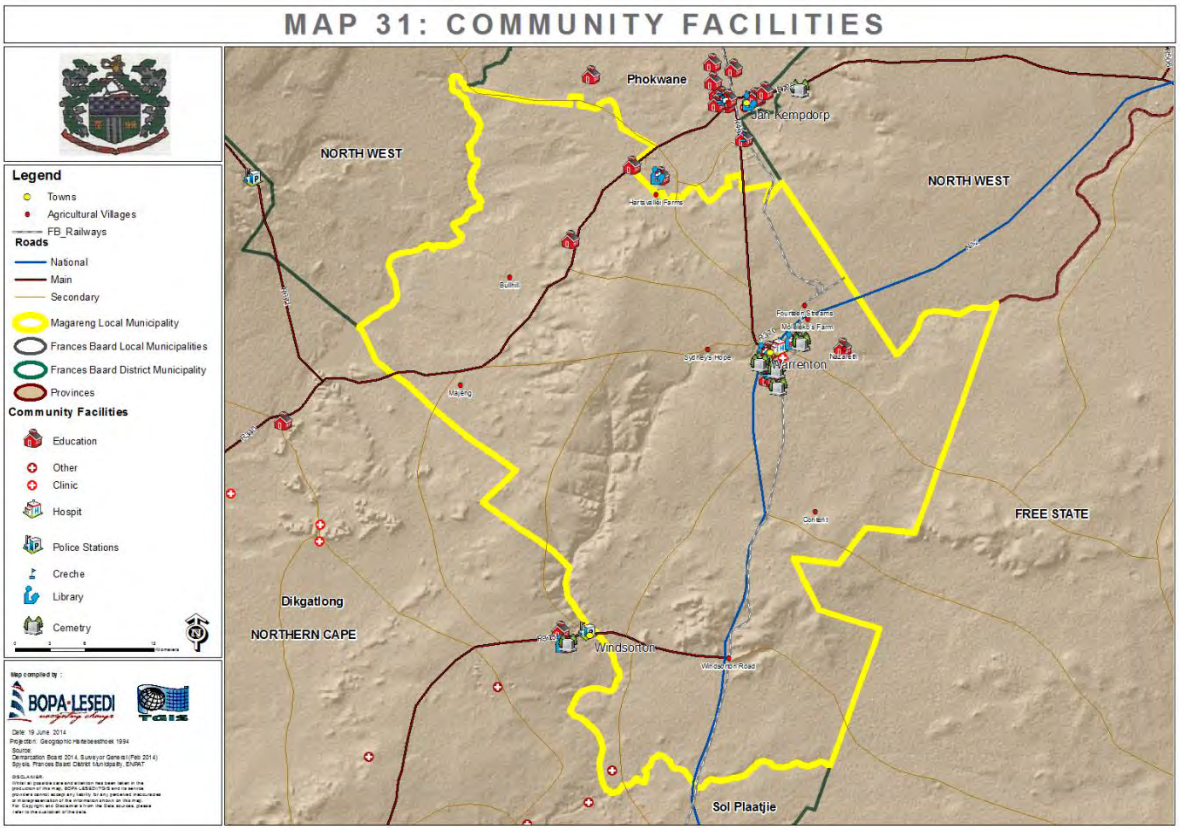
4.8.4 COMMUNITY FACILITIES

Community facilities provide the social infrastructure that serves the urban and rural communities. Through the analysis of the area, a need for the provision of more community services, especially in the segregated communities was identified. This includes community halls, libraries, recreation, sport facilities and cemeteries to provide more opportunities to the youth in the region.

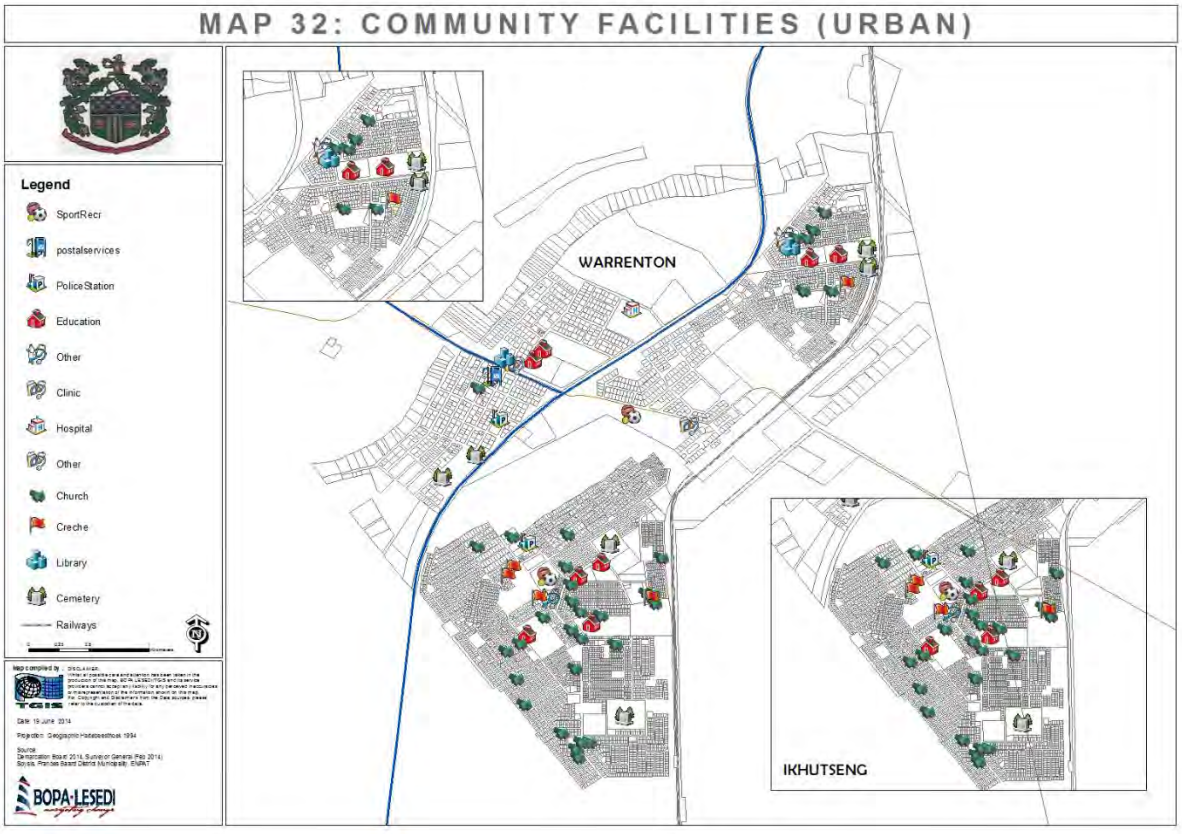
The high level of unemployment, especially under the young population, and lack of recreational facilities lead to increased crime, vandalism, alcohol and drug abuse and violence.

The provision of adequate community service and infrastructure therefore play a very important role in the creation of strong and healthy communities, especially in the remote rural and urban areas. It is also important that these services are incorporated into the future planning of areas to allow for a more equal distribution of these facilities between the different communities and towns. Please refer to Map 31 and 32 Community Facilities.

MAP 31: COMMUNITY FACILITIES



MAP 32: COMMUNITY FACILITIES (URBAN)



4.8.4.1 HEALTH SERVICES

It is extremely difficult to determine the level of human development of the municipal area, due to a lack of accurate and recent information. There is currently no Human Development Index for the area.

The only information that is readily available is census data, which does not reflect the health status of a community.

The health questionnaire used in preparation of the Water Services Business Plan, and completed by Ikhutseng Clinic Staff, indicates that the greatest health concern for this area is Sexually Transmitted Diseases (STDs), Tuberculoses (TB), Malnutrition and HIV/AIDS. Bad hygiene practices include the spitting of sputum everywhere and the disposal of refuse illegally contributes to health problems in the area. There is also a fear of Cholera, because of leaking / vandalised sewerage pipes and overflow of manholes in some areas. The fact that children swim and play in contaminated water increases their risk for diseases. (Magareng IDP, 2011/12)

There is a definite need for health services within Magareng. There are no Hospitals located within the Municipality and a limited number of clinics. The current clinics listed are:

- Warrenton Satellite Clinic at Library
- Ikhutseng Clinic
- Warrenvale Clinic

4.8.4.2 EDUCATION

Schools in the Magareng Local Municipality face numerous challenges, including long travelling distances between homes and schools, especially relating to high schools. Low quality sport and recreational facilities and a lack of teachers and class rooms are also huge challenges.

There are a total of ten schools in the Magareng Municipality. This includes 5 Primary Schools, 1 Intermediary School and 3 High Schools.

TABLE 27: SPATIAL DISPERSION OF EDUCATIONAL FACILITIES

	Primary	Intermediate	Secondary
Ward 1	1	0	1
Ward 2	2	0	
Ward 3	0	0	0
Ward 4	1	0	1
Ward 5	1	1	1
Total	**5**	**1**	**3**

Location of above schools is depicted on Map 31: Social Facilities. According to the 2011 Census Magareng has a very low number of people with a higher education. The Educational profile of the Municipality is depicted in the following table:

TABLE 28: EDUCATIONAL PROFILE

	No schooling	Some primary	Completed primary	Some secondary	Grade 12/Std 10	Higher
Total	2372	2614	708	4641	3419	493
Black African	2048	2232	567	3494	2567	316
Coloured	308	326	120	687	388	42
Indian or Asian	8	6	4	36	45	8
White	4	44	16	410	392	124
Other	4	6	1	14	27	3

(STATSSA Census 2011)

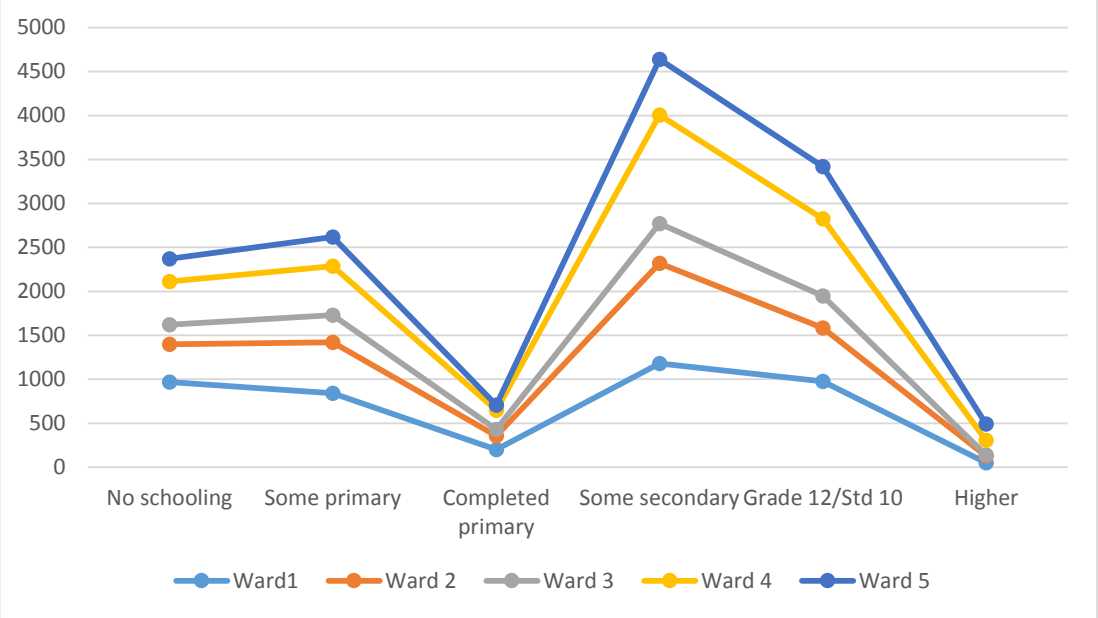
When investigating the trends per ward, we see a very similar profile in all 5 the wards of Magareng. The Education level per Ward is summarized in the following graph:

TABLE 29: LEVEL OF EDUCATION PER WARD

	No schooling	Some primary	Completed primary	Some secondary	Grade 12/Std 10	Higher	Other
Ward 1	968	840	198	1178	977	51	0
Ward 2	431	580	158	1140	605	74	0
Ward 3	222	308	74	452	366	13	0
Ward 4	492	560	218	1234	876	166	0
Ward 5	259	329	58	636	595	187	0

(STATSSA Census 2011)

FIGURE 29 : LEVEL OF EDUCATION PER WARD



(STATSSA Census 2011)

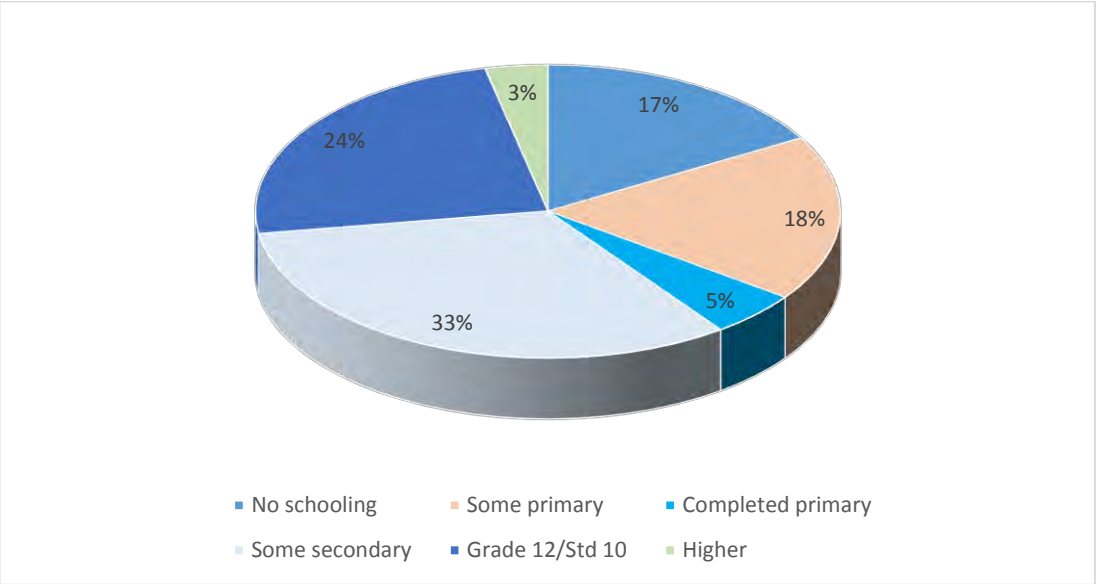
The highest number of people (33%) only had some secondary schooling, whilst the second highest category is people with a Grade 12 (24%). Within the population only 3% obtained a higher education. This number is alarming, as it is a clear indication that skills are needed within the Municipal area.

TABLE 30: LEVEL OF EDUCATION

	No schooling	Some primary	Completed primary	Some secondary	Grade 12	Higher	Other
Magareng	2372	2614	708	4641	3419	493	14247

(STATSSA Census 2011)

FIGURE 30 : LEVEL OF EDUCATION



(STATSSA Census 2011)

If one compares the literacy rate of the municipal area with that of the district, it is again alarming to note that the municipality is performing poorer than the average of the district. In the district only 17% of persons aged 20 years and older has no formal education while 18% has some primary education.

32% of this segment of the population in the district had some secondary qualification while 18% completed Grade 12. 7% of this proportion of the population had some higher education qualification.

Below is a comparative table with regards to the school attendance within the Municipality:

TABLE 31: SCHOOL ATTENDANCE PER CENSUS

	1996		2001		2011	
	Male	Female	Male	Female	Male	Female
Attending	68%	66%	72%	67%	71%	68%
Not attending	32%	34%	28%	33%	29%	32%

(Census 2011 Municipal Report – STATSSA)

4.8.4.3 SAFETY AND SECURITY

The state of crime in South Africa has been the topic of many media articles and papers in the past years. Safety and security remains a critical point in any Municipal area. The only Police station in the Magareng Local Municipality is located in Warrenton please refer to Social Facilities map. There are no prisons within the boundaries of the Municipality.

4.8.4.4 LIBRARIES

Libraries play an important part in the provision of information and recreation to the communities and are sometimes the only form of information that can be accessed by the poor communities. There are two formal libraries located in Warrenvale and Warrenton, two container libraries are located in Ikhutseng. Library facilities in the rural areas are limited to Sydney's Hope, Nazareth House and Majeng.

4.8.4.5 COMMUNITY HALLS

The only Community Hall within the Local Municipal area is located in Warrenton.

4.8.4.6 RECREATIONAL FACILITIES

Some of the few recreational activities include a shooting range and golf course. Where possible, more recreational facilities should be developed in the towns where the human needs level is very high, in order to stimulate alternative forms of recreation.

4.8.4.7 RELIGIOUS FACILITIES

There are various churches of different denominations located within the municipal areas. Most of these churches are very old, and in need of an upgrade. Please refer to current land use section for spatial representation and synthesis.

4.8.4.8 CEMETERIES

There are a total of 5 cemeteries within the Municipal area. The cemeteries within Warrenvale and Ikhutseng have adequate capacity for at least the next 5 years.

There are two cemeteries located next to another in Warrenton; one contains historical Indian graves while the second larger one are currently still in use by the residents of Warrenton. The cemetery is close to full capacity. It is proposed that the area adjacent to the Indian graves be extended for future use as a cemetery. A detail investigation should however be conducted to determine the impact of a cemetery on the stream located on the western boundary of the proposed new cemetery site.

4.8.5 INFRASTRUCTURE

The levels of service are generally above RDP standards in the urban (Warrenton town), Warrenvale, as well as, Ikhutseng township area, although they may be below RDP standards in certain areas such as informal and rural settlements. The service level profile for Magareng Local Municipality is summarised in the table below.

TABLE 32: LEVEL OF SERVICE PROFILE

Item	House Connections	Yard Connections	Stand Pipe	Temporary Service	Total
Population Services	839	22589	0	1891	23617
Household Services	222	5976	0	506	6704

(IDP 2013/14)

The service levels depicted clearly indicate the significant potential for proper metering and billing in Magareng Municipality. The water supply system appears largely formal which means that the necessary technical structures should be present to affect sound cost recovery in the area (Magareng IDP 2013/14).

4.8.5.1 WATER

Water for the urban node is abstracted from the Vaal-Harts irrigation canal and Vaal River that runs along the western boundary of Warrenton. The municipality has a permit to abstract 3572 Ml of raw water annually from both water sources. No groundwater is used to supplement the present source. Water meters were installed and are maintained by the Department of Water Affairs and Forestry to monitor the consumption of the municipality at both abstraction points.

TABLE 33: WATER SERVICE

	Regional/local water scheme *	Bore hole	Spring	Rain water tank	Dam/pool/ stagnant water	River stream	Water vendor	Water tanker	Other
Magareng	5172	412	7	22	4	16	13	224	250
Ward 1	1587	2	2	19	-	-	3	152	15
Ward 2	1233	1	-	1	-	-	-	2	14
Ward 3	389	-	2	1	1	-	2	6	197
Ward 4	1438	15	1	1	-	-	4	5	14
Ward 5	524	394	2	-	3	16	4	58	11

(STATSSA Census 2011)

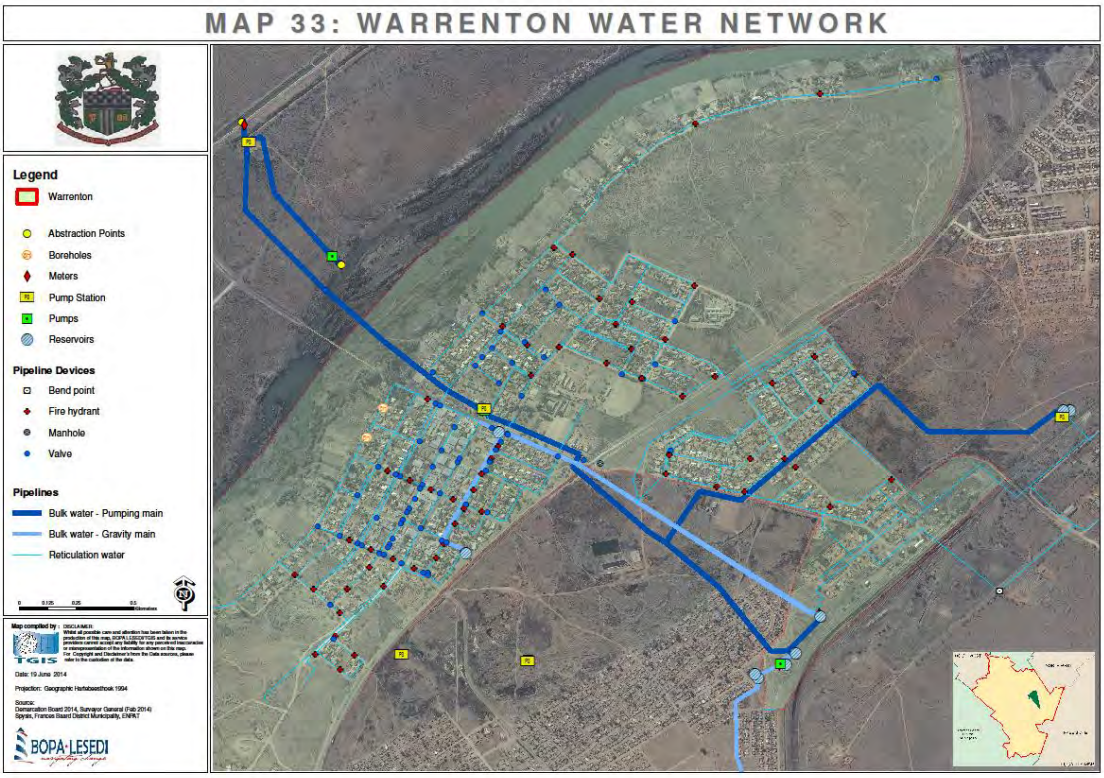
*(operated by municipality or other water services provider)

Currently only indigent residents of Magareng, excluding farming areas, receive 6kl of water free and Majeng area is getting water from the borehole and jojo tanks. The Municipality has requested funding to erect solar panel water pumps to the farming areas; including Majeng, Moleko's farm, and Windsorton station (Magareng IDP 2013/14).

The distribution of water in Warrenton is done through a network of pipes with diameters from 50 mm to 160 mm. The pipes are mainly manufactured of asbes cement and PVC. Ring feeds were incorporated in the layout. All the developed erven are equipped with a metered connection. The water-meters are monthly read and itemised bills are provided monthly to each consumer.

Approximately 40% of the network in Warrenton has been in operation for more than 40 years, but now the municipality is planning the upgrading of the aged infrastructure. This hampers the water service authority to provide an effective service and water is lost through leaking pipes. It is one of the main priorities of the municipality to upgrade the internal water reticulation network in the older areas of Warrenton station (Magareng IDP 2013/14).

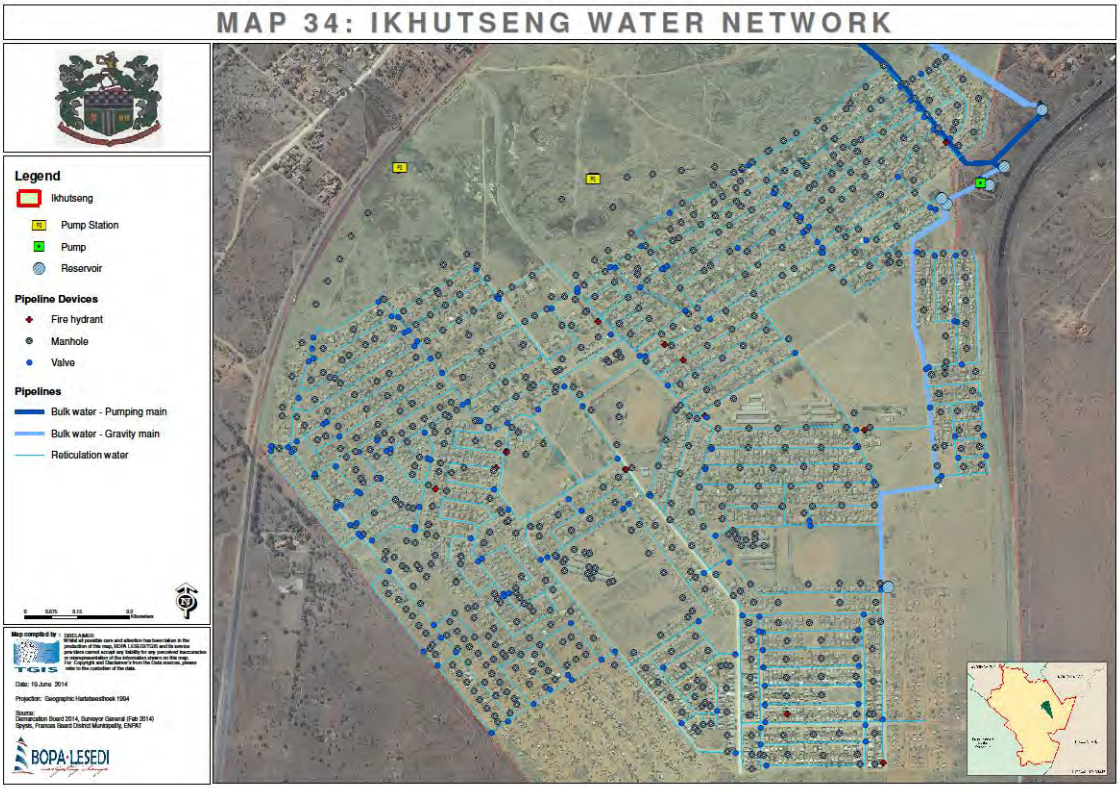
MAP 33: WARRENTON WATER NETWORK



Water distribution in **Ikhutseng** is done with one 150 mm diameter pipe. Through this pipe water is pumped from a 5, 2 Ml reservoir to an elevated press steel tank. Utilising the distribution network, water is pumped to a second elevated press steel tank. This operating methodology provides the following difficulties; the supply to the area is limited to the capacity of the supply pipe, 150 mm diameter and the associated electrical driven pumps. The distribution of water to individual sites in Ikhutseng is done through a network of pipes with diameters from 50 mm to 200 mm. The pipes are mainly manufactured of PVC because the network is relatively new. Ring feeds are incorporated in the distribution. All erven on the approved plan are equipped or can be provided with a metered water connection.

The water-meters are read on a monthly basis and itemised bills are provided monthly to each consumer. Approximately 250 households in Rabaadjie and 150 in Warrenvale have access only to communal taps. A number of unauthorised and unmetered or bypassed water connections where present in the area. With funds from the Municipal Support Programme, a house-to house survey was conducted and problem areas were identified. The municipality has put in place a programme of remedying the situation. This will assist in improving the income base of the municipality and reduce the amount of water unaccounted for station (Magareng IDP 2013/14).

MAP 34: IKHUTSENG WATER NETWORK

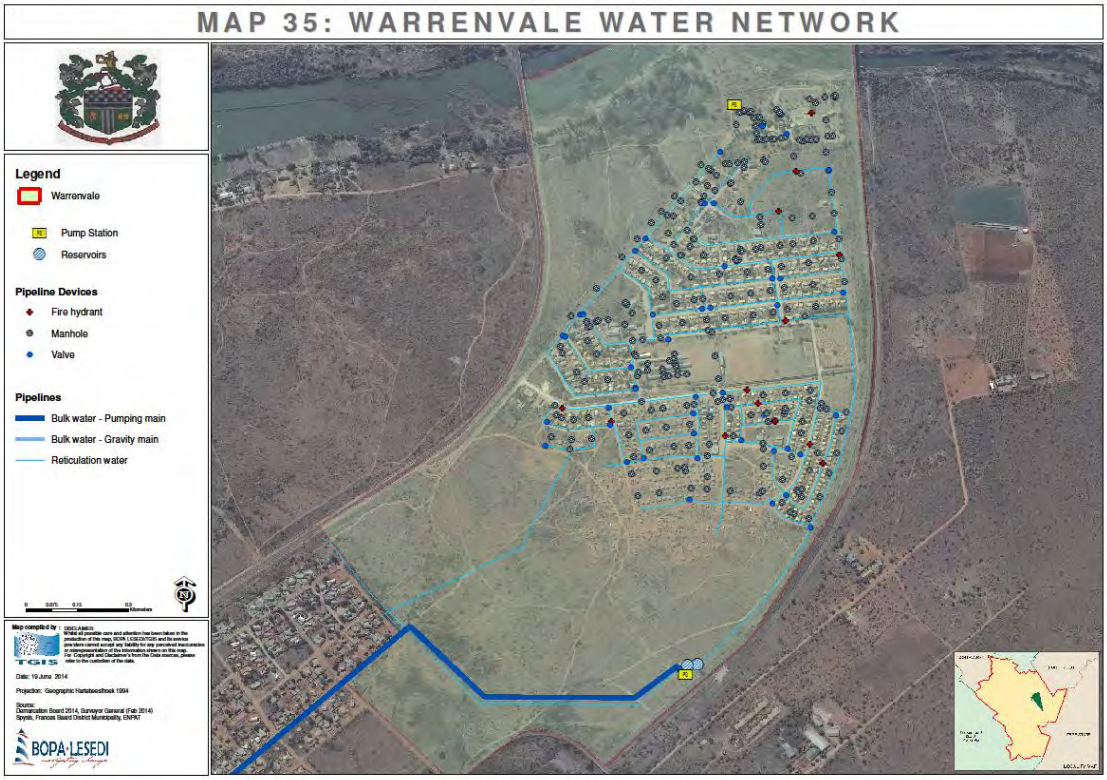


The distribution of water in **Warrenvale** is done through a network of pipes with diameters from 50 mm to 160 mm. Ring feeds with asbestos-cement and PVC pipes were incorporated in the network.

All erven on the layout plan are or can be provided with a metered water connection. The meters are read each month and itemised bills are provided to each consumer.

The 200 mm diameter connector pipe to Warrenvale is in a good condition. The capacity of the supply meets the current demand. Depending on the time frames for the provision of additional houses, the capacity of the electrical driven pumps, which supply water to an elevated tank, must be increased (Magareng IDP 2013/14).

MAP 35: WARRENVALE WATER NETWORK



The Frances Baard District Municipality before the amalgamation process provided electricity, water infrastructure and VIP toilets, as well as, hygiene awareness training to communities living in the rural areas. Arrangements were made with the farmers whereby the District Municipality provided infrastructure to the farm workers and the farmers had to maintain these services. Contracts were signed with these farmers. Presently, the municipality is responsible for maintaining the water pumps at Nazareth, Moleko's farm, Sydney's Hope, Majeng and Windsorton Station. Bull Hill and Hartsvallei depend on the farmers to maintain the infrastructure. Moleko's Farm needs to be provided with clean drinking water station (Magareng IDP 2013/14).

Challenges

The Municipality is still facing the same challenges as discussed numerous times ago, like insufficient backwash capacity, leaking and cracking of the settler, the under capacity issue of the water plant as well as the maintenance challenges.

The Municipality also has serious challenges when it comes to the distribution network. There are still a lot of asbestos cement pipes that must be replaced. The network does not have scour valves to clean the network on a regular basis. We use the fire hydrants for this purpose, but it is not very effective.

The Municipality planned in 2012/13 Financial Year to start with the project of replacing some of the network. The Municipality is going to start at Warrenweg because it was observed as the most critical area in terms of water losses station (Magareng IDP 2013/14).

4.8.5.2 SANITATION

Warrenton town is serviced by either septic tanks or French drains. These systems require that the municipality empty these tanks on a regular basis. The effluent from these septic tanks is transported by tanker to the sewer outfall works. All sewage from Warrenvale drains to a single sewer pump station that pumps the sewage to the sewer outfall works.

Groundwater contamination is presently experience with the septic and French drains operational in Warrenton. Urgent attention will therefore have to be paid to ensure that the drinking water is not affected so the septic tanks will have to be replaced to curb the problem (Magareng IDP 2013/14).

TABLE 34: SANITATION

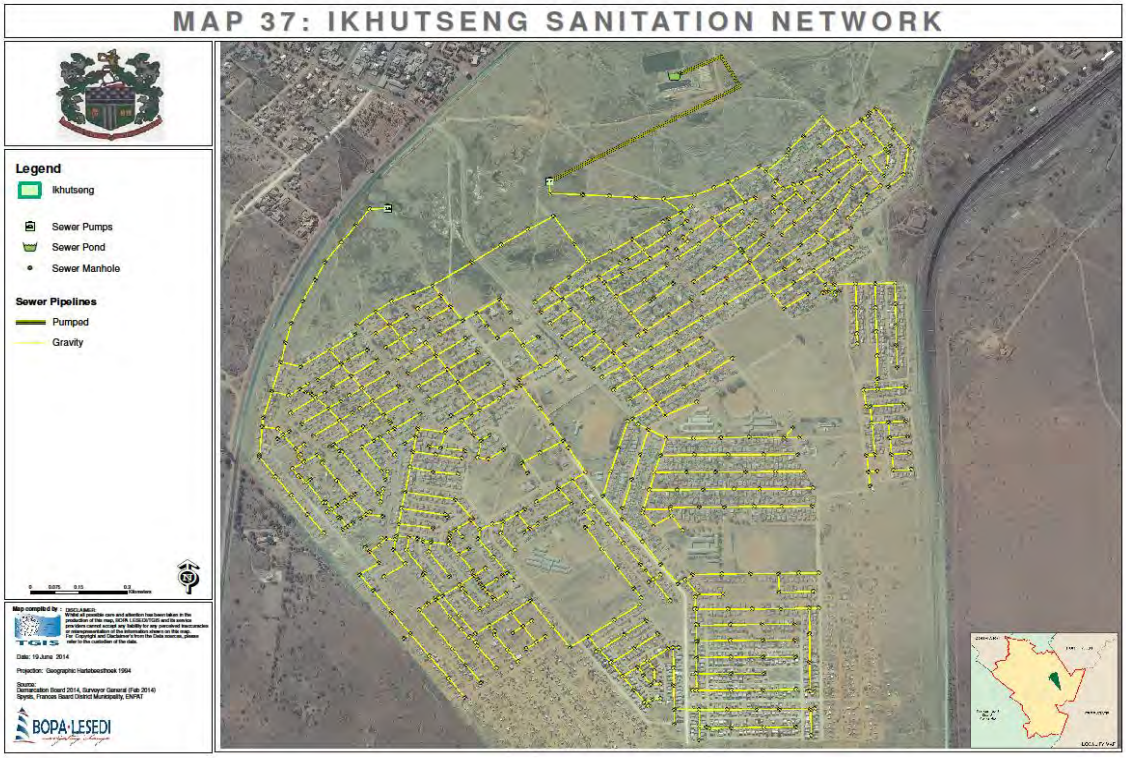
	None	Flush toilet (connected to sewerage system)	Flush toilet (with septic tank)	Chemical toilet	Pit toilet with ventilation (VIP)	Pit toilet without ventilation	Bucket toilet	Other
Magareng	264	4970	147	3	392	304	17	24
Ward 1	13	1354	6	-	299	108	1	-
Ward 2	28	1219	2	-	-	-	-	2
Ward 3	5	578	4	-	3	1	4	2
Ward 4	90	1345	10	3	4	18	2	6
Ward 5	128	473	124	-	86	176	11	13

(STATSSA Census 2011)

MAP 36: WARRENTON SANITATION NETWORK

A small sewer pump station receives the sewage from the southern areas of Ikhutseng and then pumps it into one of the main gravity sewer lines. All the sewage of Ikhutseng then drains to a single pump station that pumps the sewage to the sewer outfall works.

MAP 37: IKHUTSENG SANITATION NETWORK



All the plots in Warrenton have either a French drain or a septic tank. All plots in **Warrenvale** have waterborne sewerage. The informal settlement called Rabaadjie (250 households) have no sanitation service at all. UDS (urine drain system) is the process the municipality is planning to construct sewer mainline with pump stations since the new Waste Water Treatment Plant is to be constructed. The same as electricity we are only able to provide basic sanitation to the registered indigents beneficiaries on the system (Magareng IDP 2013/14).

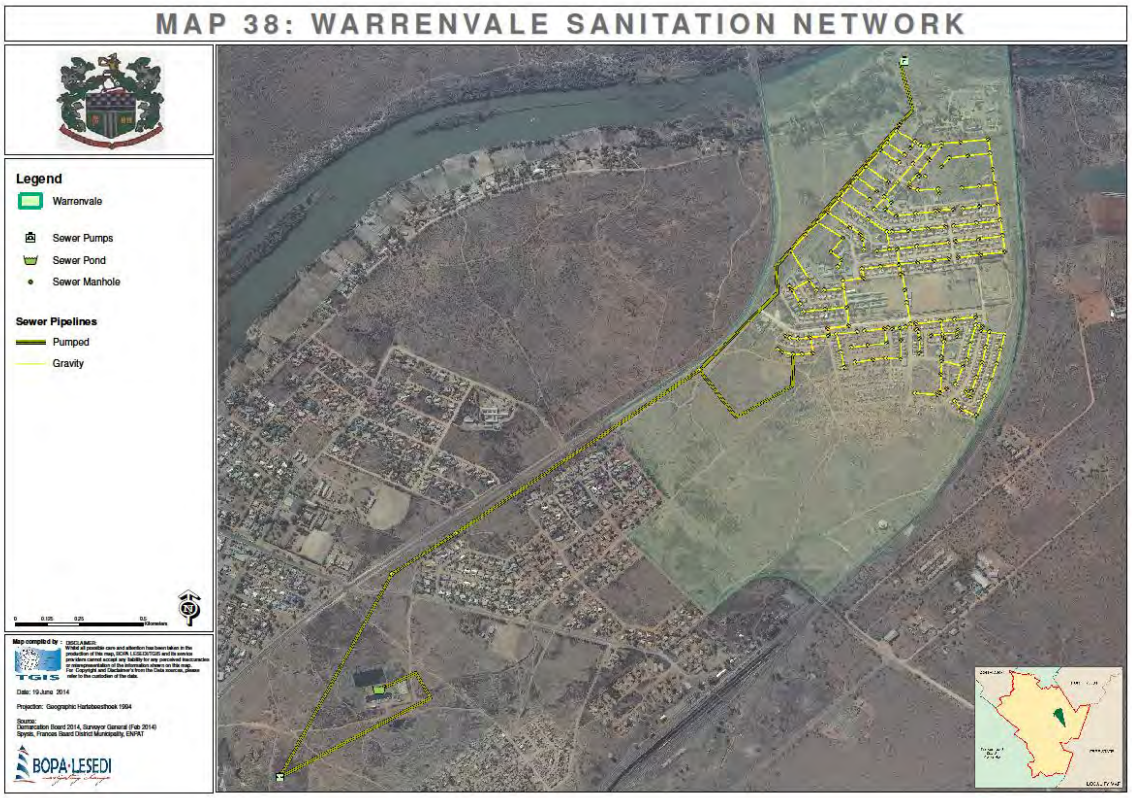
The following infrastructure backlogs exist in the urban area of Magareng:

- Sewer reticulation to 1693 newly developed sites currently they are using UDS toilets
- All newly planned areas. This will include the area of Majeng presently accommodating 300 families which will develop in future into a residential area of approximately 800 households.
- We are also looking at planning another 1000 sites in the next coming years. The sewer outfall works is situated in the centre of the urban node.

Due to the relatively flat topography, all sewerage must be pumped to the outfall works. The outfall works is 12 years old and was designed to treat 2 Ml/day of raw sewerage. The treated effluent of the sewer outfall works drains via a natural watercourse through sections of Warrenton to the Vaal River. The quality of treated

effluent is still good, although the present rate of inflow is 2, 4 Ml/ day. Extensions to the sewer outfall works are thus essential (Magareng IDP 2013/14).

MAP 38: WARRENVALE SANITATION NETWORK



4.8.5.3 LAND FILL AND SOLID WASTE

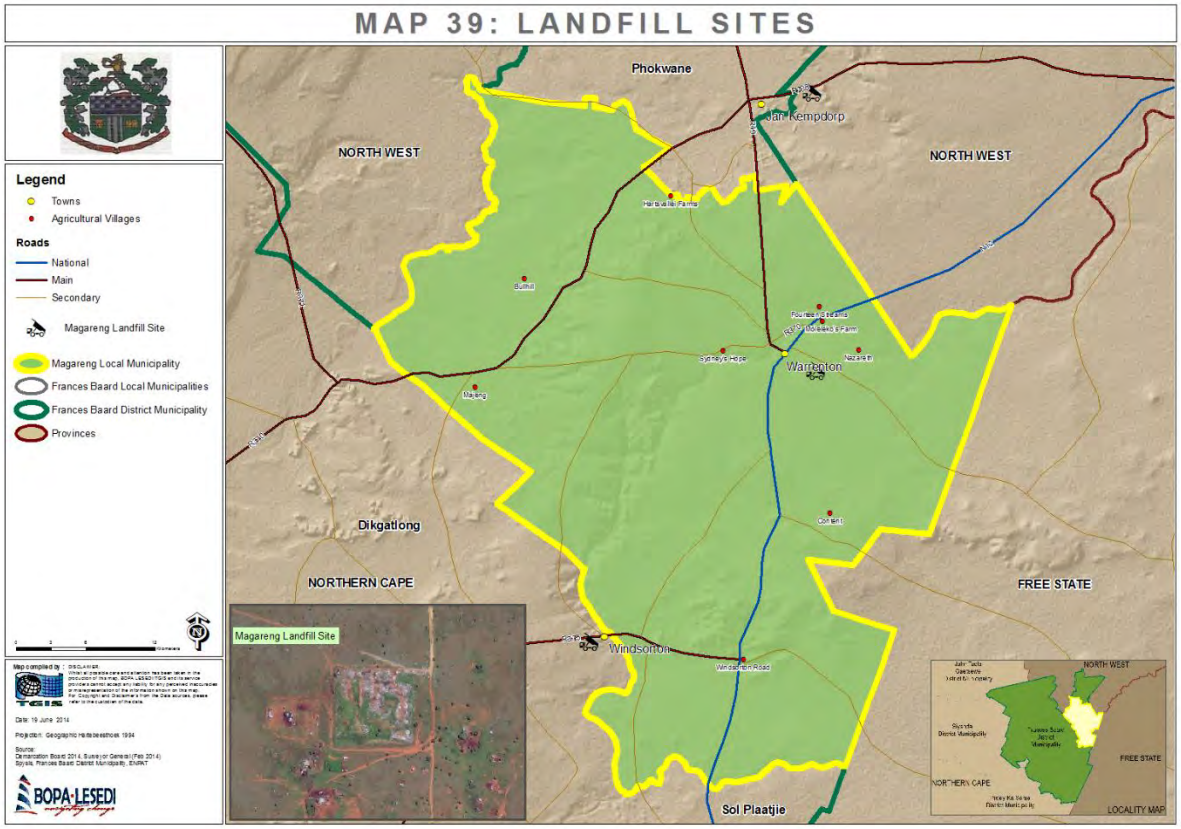
According to the Integrated Waste Management Plan, Magareng municipality generates approximately 12.08 tonnes of waste per day. The collection of this waste to 1985 households is done on a weekly basis. Of the total of households (5724) in the municipality only 566 have no access to the waste collection and disposal system. These are mainly households in the rural areas or un-serviced area within the jurisdiction of the municipality. All refuse sites are fenced and the registration is in process.

Many people dump waste on open areas. The reasons offered is the lack of waste bins and the irregular service currently received from the municipality. Building material, in particular, gets dumped everywhere as people are not having access to transport to remove these materials.

Waste collection not done regularly: The municipality has two heavy vehicles that need to service the urban node.

Poor management of dumping sites: The municipality does not have sufficient equipment to properly maintain the dumping sites in the area. This leads to pollution as waste gets blown away from the dumping area (Magareng IDP 2013/14).

MAP 39: LANDFILL SITES



4.8.5.4 ENERGY

Eskom supplies 11kv bulk supply to a substation situated in Warrenton. From there, the 11kv supply is distributed to 11kv transformers which steps it down to 380V networks in Warrenton CBD, Warrenton residential, Warrenvale and the surrounding plots. Supply in Warrenvale is by means of prepaid metering system and Warrenton CBD and residential is by means of credit meters.

Some residences in Warrenton have also changed to pre-paid system. Municipality is planning to review the policy to standardise the electricity metering system.

Moleko's farm gets the bulk supply from Eskom and the municipality distributes it by means of a pre-paid system. The following areas get both the bulk and low tension supply directly from Eskom: Ikhutseng, Bull Hill, Sydney's Hope and Hartsvalley. Windsorton station and Majeng have not yet been electrified.

Windsorton station previously was supplied by Transnet. Transnet gets the bulk 11kv supply from the municipality and further distributes this to their own transformers and networks. The electrical network also is very old therefore needs to be upgraded.

TABLE 35: ENERGY FOR COOKING

	Electricity	Gas	Paraffin	Wood	Coal	Animal dung	Solar	Other	None
Magareng	4858	260	639	326	3	3	7	5	20
Ward 1	1280	51	391	47	-	-	3	-	9
Ward 2	1131	30	68	17	-	2	-	-	4
Ward 3	540	14	31	8	-	-	2	-	3
Ward 4	1260	77	115	17	1	1	1	1	4
Ward 5	647	88	34	236	2	-	-	4	-

(STATSSA Census 2011)

TABLE 36: ENERGY FOR LIGHTING

	Electricity	Gas	Paraffin	Candles	Solar	Other	None
Magareng	5200	16	67	806	13	-	16
Ward 1	1334	4	45	391	3	-	3
Ward 2	1195	1	3	46	2	-	4
Ward 3	576	-	-	15	2	-	5
Ward 4	1334	2	7	134	1	-	2
Ward 5	761	10	12	220	5	-	4

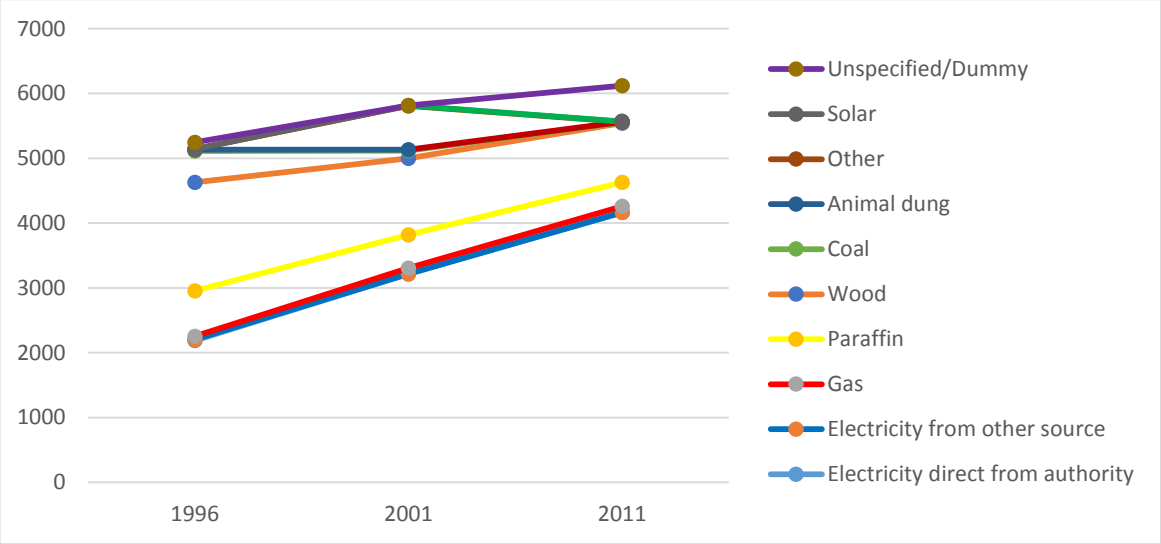
(STATSSA Census 2011)

TABLE 37: ENERGY FOR HEATING

	Electricity	Gas	Paraffin	Wood	Coal	Animal dung	Solar	Other	None
Magareng	4163	93	373	912	18	1	9	-	550
Ward 1	1131	24	255	253	3	-	1	-	113
Ward 2	1046	3	32	64	2	1	3	-	99
Ward 3	449	2	18	56	4	-	1	-	68
Ward 4	969	30	50	262	7	-	2	-	159
Ward 5	567	34	18	276	3	-	2	-	112

(STATSSA Census 2011)

FIGURE 31: ELECTRICITY USAGE – ENERGY FOR HEATING



(STATSSA Census 2011)

The municipality is responsible for internal electricity distribution to Warrenton, Warrenvale and Moleko's farm. The municipality is planning to upgrade existing and construct the new electricity mainline for the new developments, as well as, its electrification.

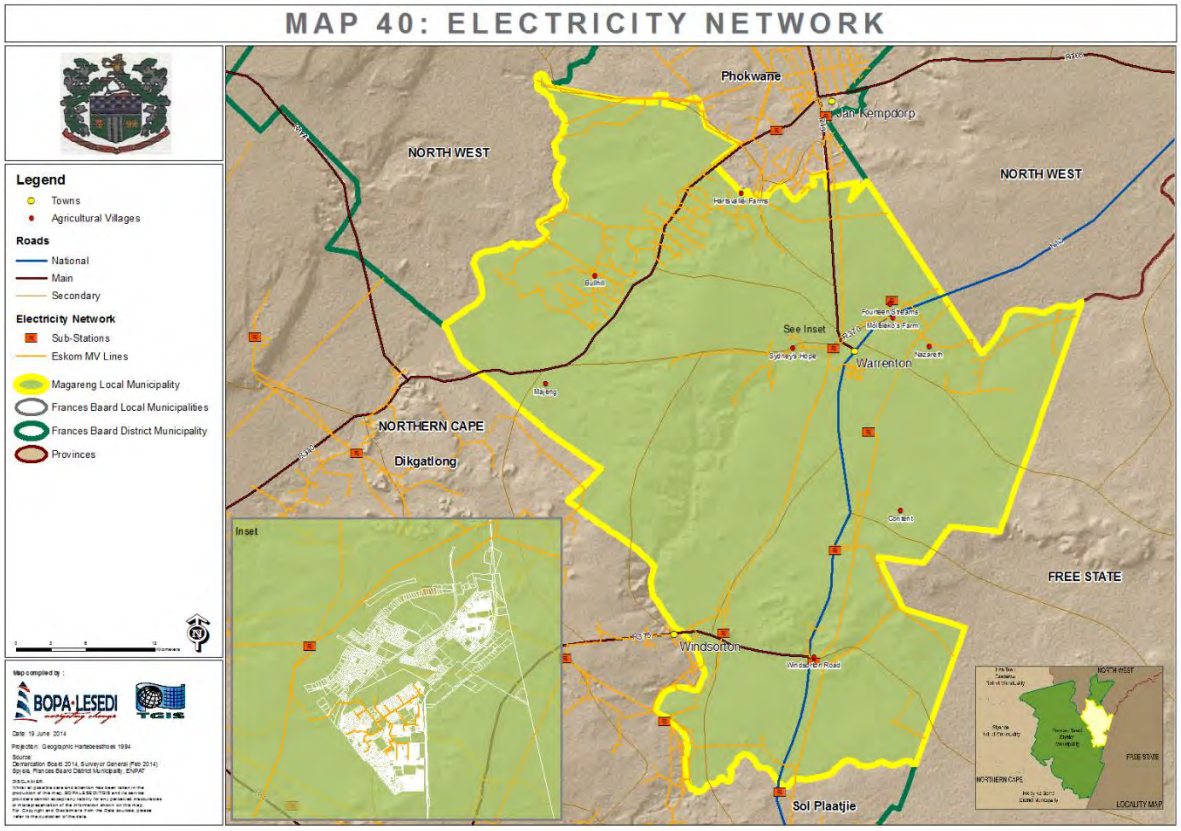
Only indigent beneficiaries are receiving 50 kW of electricity free. Both the residents' receive services by Eskom and the municipality, as service providers (Magareng IDP 2013/14).

Challenges

Most of the backlogs in electrical supply relates to areas in Ikhutseng and the rural areas not yet serviced by Eskom.

- 525 new sites in Warrenvale
- Majeng 110 and
- The newly planned CBD as well as to new development areas.

MAP 40: ELECTRICITY NETWORK



4.8.6 TRANSPORT

Within the Magareng Local Municipality there are a number of roads that connect the town with the adjacent towns. The N12 is a national road that runs from Cape Town, to Mpumulanga via Warrenton Town and Gauteng (Johannesburg). There are also a large number of unpaved (gravel) roads within the municipal boundary of Magareng. The other paved roads in Magareng Municipal area are the roads between Warrenton and Jan Kempdorp, the link road between the N12 and Barkley West, as well as, the road from Jan Kempdorp to DMA. The condition of the N12 and the paved roads in the Magareng Local Municipality are fair and good respectively. The rest of the roads are gravel roads.

According to the Integrated Transport Plan (ITP) of Frances Baard District Municipality that was compiled in March 2005, the annual daily traffic for the Magareng Local Municipality is on the N12 over 1000, as well as the road from Warrenton to Jan Kempdorp. The link road between the N12 and Barkley West has an annual daily traffic between 500 – 1000. The annual daily freight traffic for the N12 is over 500 and on the other main roads, the freight traffic is between 200 and 500.

Taxi & Bus Service:

There are a number of busses that travel along the N12, as well as, all the other paved roads in the Magareng Local Municipality. Taxi routes are only found within Warrenton Town linking with Warrenville and Ikhutseng. Busses transport the passengers to adjacent towns.

Airport & Railway

There are a railway line running parallel with the N12 from Kimberley to North West Province and Jan Kempdorp, via Warrenton. There are a small airfield located at Warrenton.

Bicycles:

Non-motorized modes of transport that can be found within Magareng is the use of bicycles. The bicycle is one of the most commonly used forms of non-motorised transport in the Northern Cape. The bicycle is a form of mobility that has been used in Europe since 1870, to date there are over 24 countries world-wide that use bicycles as a form of mobility. In developed countries, the bicycle is used for recreation while developing countries like South Africa it is mainly used by poor as a transport mode.

Donkey Cart:

Donkey drawn carts are commonly used in some parts of the rural areas of the Northern Cape.

These donkey drawn carts are for leisure and for economic benefits. When the pensioners go to their pension pay points they use donkey drawn carts. In most cases in the Northern Cape rural areas, donkey drawn carts maybe the only mode of transport. Legislation exists to provide for the needs of donkey carts in the Northern Cape Province.

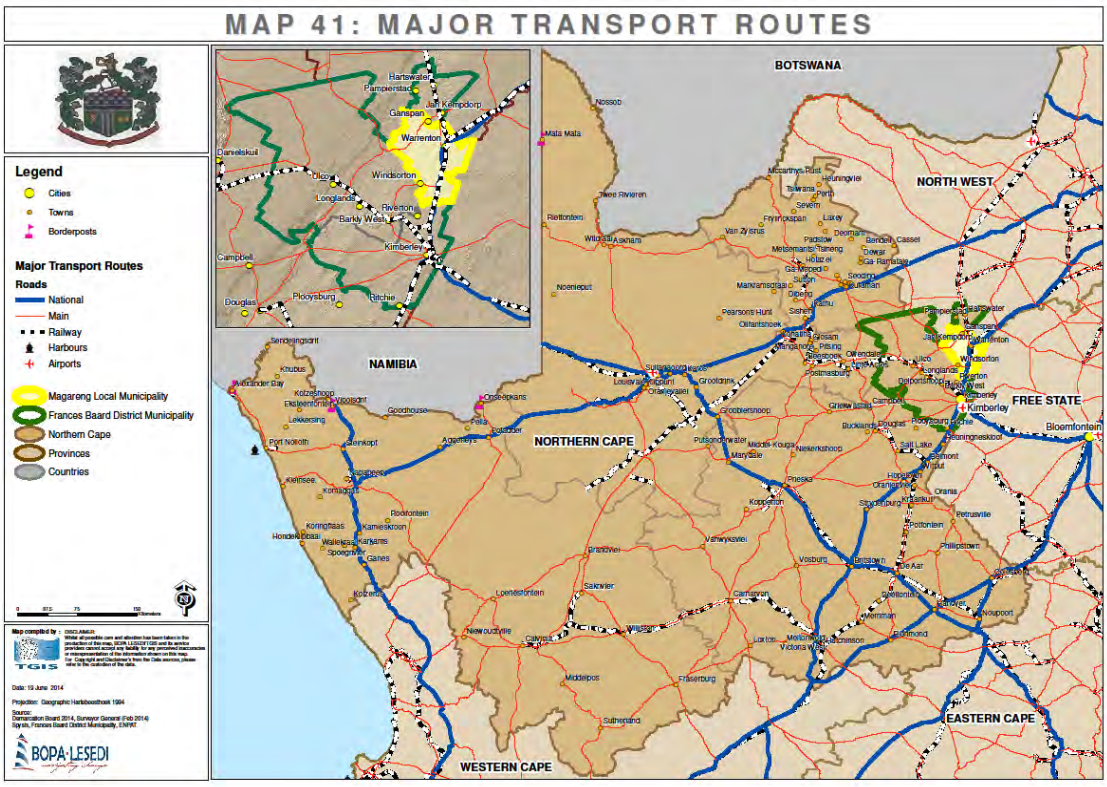
Walking:

Walking is another form of non-motorised transport. In the rural areas women still walk distances to fetch water or to collect firewood and children walk long distances to schools. In some of the areas in the Northern Cape there is no other mode of transport except for people to walk long distances.

Wheelbarrows:

Wheelbarrows are also the commonly used in the rural areas. It is used to buy household goods, to fetch water and in some cases to transport a sick person to the clinic.

MAP 41: MAJOR TRANSPORT ROUTES



4.8.7 MINING

In 1880 a syndicate bought the western portion of the farm Grasbult on the Vaal River to irrigate the fertile land and produce vegetables for those working the diamond fields. Named after Sir Charles Warren, diamonds were discovered here in 1888.Up until today, mining still continuous on a smaller scale but, the scars of an era of mismanagement has left it on the habitat and the eco system.

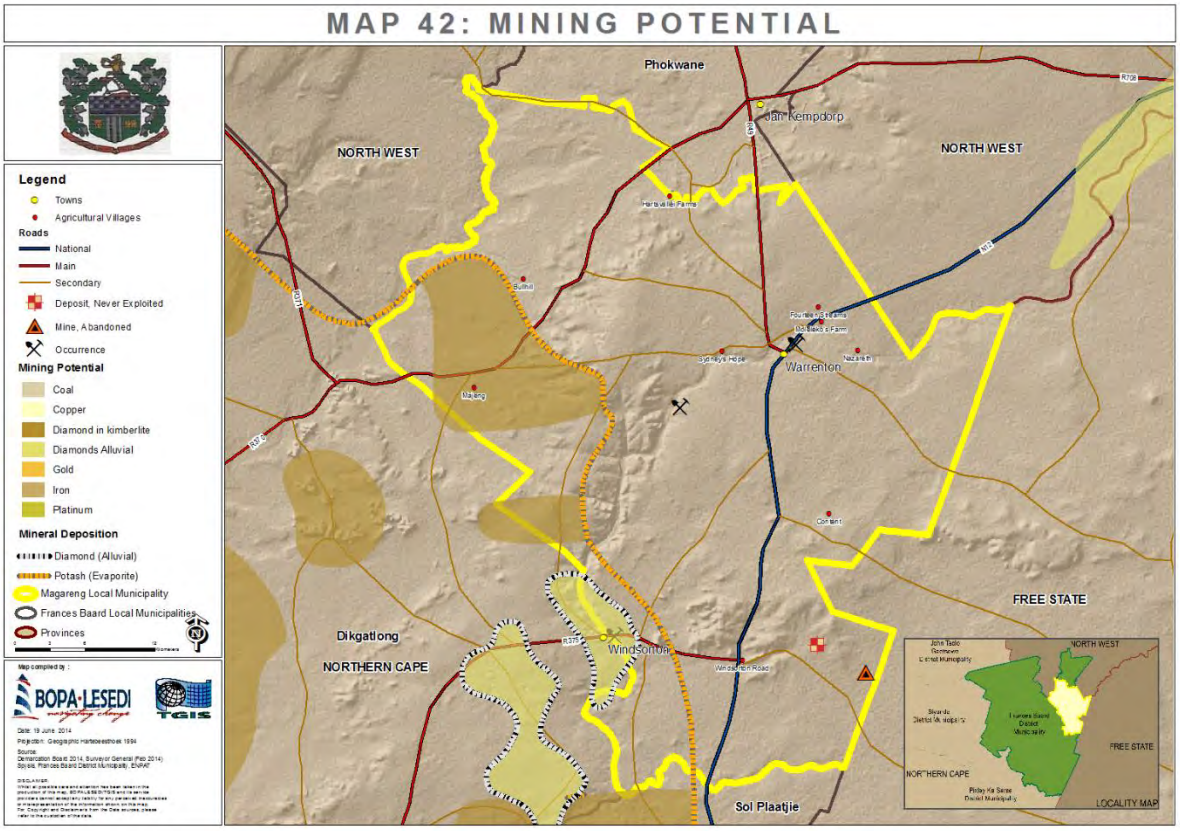
Although the law requires rehabilitation of the mined area, this 'rehabilitation' seldom happens. In the earlier years of Diamond mining, the rehabilitation was the

responsibility of the mining group or the owner. Legislation was enforced but, there was an easy escape. The mine was abandoned after diamonds were worked out; a fine for 'not' rehabilitating the mine was issued. Usually this fine was affordable and more financially viable than rehabilitating the area where mining took place.

In recent years legislation changed but, yet again, the mines are not rehabilitated. In the process of doing an application for diamond mining, a sound financial plan must be submitted as well as impact studies and a deposit of an 'x' amount in order to rehabilitate the mining area. The deposit is held by the relevant department and at the end of a mining contract the mine is abandoned and left like that. Pebbles, no more topsoil, heaps of rocks, alien plants and chemical spills from leaking machines and mishandling of fossil fuels. The habitat and Eco-system are contaminated, spoilt and never returned to its original state. (http://corumana.wordpress.com/2013)

In view of the impact of future mining on the environment as well as economic development (job creation) it is very important that Department of Mineral and Energy Affairs identify potential mining areas based on the economic viability of the resource.

MAP 42: MINING POTENTIAL



The following Swot analysis was compiled within the current mining sector.

Strengths	Weaknesses
▪ Vaal River: Water extraction and alluvial diamond mining ▪ Mining: Diamonds – can establish small miners ▪ Commonage: can also be used for mining ▪ Small Open cast mining in Warrenvale and Ikhutseng and along ▪ the river	▪
Opportunities	**Threats**
▪ Draw investment to the area ▪ Local implementation of new mining charter ▪ Attract investors ▪ Establish associations ▪ Network with larger mining companies ▪ Closer interaction with DME ▪ Mineral beneficiation and processing ▪ Mining and Agricultural related industries ▪ Study on potential for precious stone mining ▪ Rehabilitation of mine dumps ▪ Development of tour guide for the mining industry	▪ Outflow of money to other areas ▪ Lack of skills ▪ Illegal dumping ▪ Lack of management and technical skills ▪ Lack of revenue generated from mining

4.8.8 TOURISM

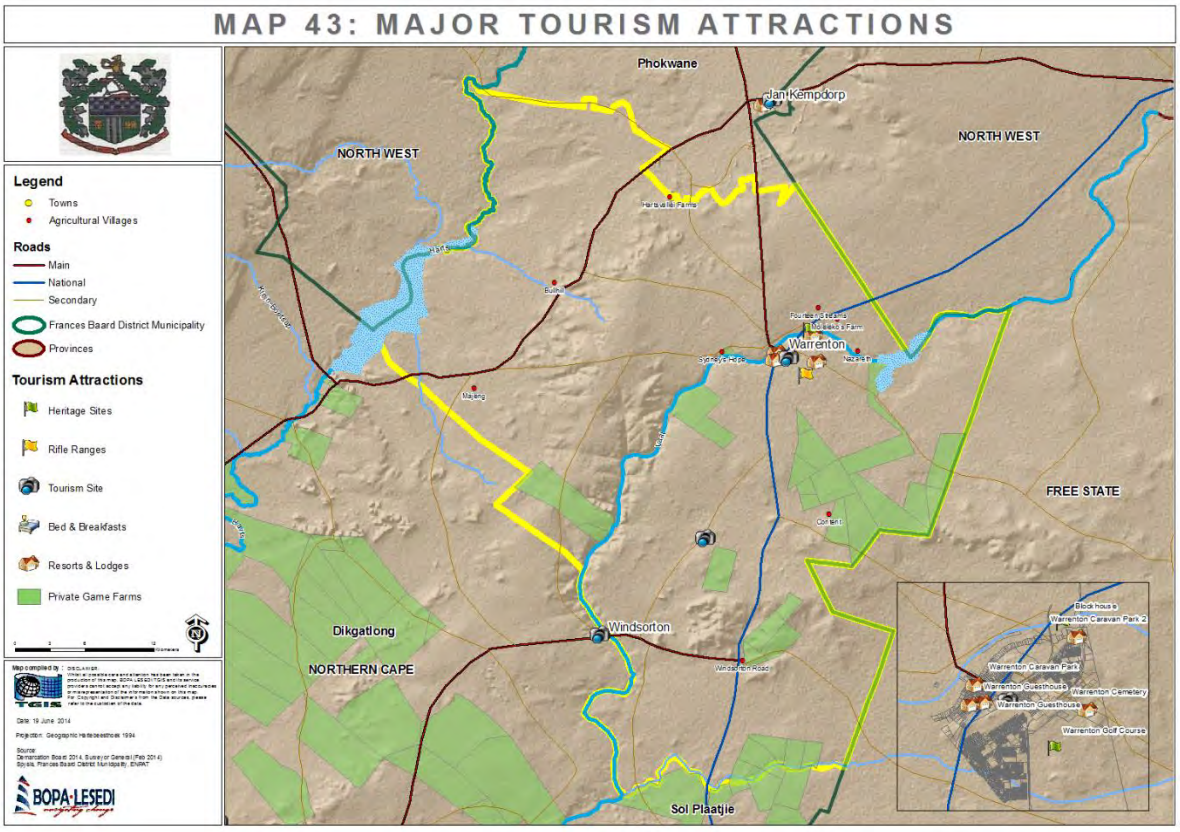
The Northern Cape is well known especially for its wildlife conservation destinations, but also game farms, hunting, star gazing, adventure tourism, historic and cultural sites, festivals, ecotourism and agri-tourism.

The contribution of tourism to the provincial GGP is estimated at 6%. According to the LED strategy tourism in the Northern Cape grew annually with 17% in national and 25% in international visitors over a period of 10 years (2001-2011). This is a very important economic sector that should be further enhanced in all the respective municipal areas. Some of the major tourism attractions are listed below:

- ❑ Vaal-Harts Dam
- ❑ Class 19D Train
- ❑ Nazareth House Mission Station
- ❑ Warrenton Cultural Resort
- ❑ Spitskop Dam

- Fourteen Streams

MAP 43: MAJOR TOURISM ATTRACTIONS



The following potential was identified in the Frances Baard District Tourism Strategy, 2009:

Adventure route: The pristine, open air, and natural plains, hills and gravel roads in the district offers opportunities to develop adventure routes focused on adventure adrenalin sporting activities. Guided adventure tours could include existing routes and identified potential route should be developed and included in the packages. The route packages could be tailored to suit individual needs.

Both Magareng and Dikgatlong Municipalities are ideal for the development of the *youth outdoor and adventure camp* or survival/boot camp getaway aimed at providing budget backpackers accommodation to the youth while partaking in challenges aimed at grooming and motivating them. This proposed centre could offer conferencing, and teambuilding. The centre could also include a nature based training centre

similar to the school field trips. The facility could be a basic 'rustic' hostel style camp. Training and environmental linkages to the Rekaofela Adventure centre in Warrenton could include environmental awareness, hikes, animal print tracking, etc.

N12 Treasure Route: The N12 Treasure Route is an exciting tourism development starting in the North West Province and running through the Northern Cape and the Frances Baard District. This route is created to open a wide range of wildlife, cultural, scenic, and industrial and eco attractions to the visitor as well as numerous tourism investment opportunities along the route. The idea is a to have a diverse choice of types of accommodation available along the Treasure Route and in the Frances Baard District there is the opportunity to develop the N12 route linked to Anglo Boer War Sites.

Revival of resorts: Magareng, Dikgatlong and Sol Plaatje Municipalities have municipal resorts that could be revitalised and developed into fully operating establishments. This is also a perfect opportunity for creating an alliance with the government in a form of Public Private Partnership. These resorts could be revamped and cater for the business travellers as well as the Tourism Strategy for the Frances Baard District Municipality ordinary tourist. These resorts are either not utilised to their maximum capacities or not utilised at all, which brings a perfect opportunity to add value through revitalisation (FBDM Tourism Strategy 2009).

The following Swot analysis could be made from the current tourism sector.

Strengths	Weaknesses
▪ Railway line, which runs from JHB to Cape Town as well as from Mafikeng and Botswana passenger services, are offered at Windsorton Station, ▪ Warrenton Station and 14 Streams Station. This offers opportunities for the development of B&B and Cafes and the utilizing of goods sheds at these localities for alternative uses. ▪ Transaka Resort: Next to river host festivals, pleasure resort with swimming pool ▪ Nazareth & 14 Streams: Rock engravings, battle grounds, churches, bungalows for overnight ▪ Forts next to railway line and river – heritage sites	▪

▪ Bird park – new development to be used by community ▪ Spitskop Dam: fishing with hotel – boat houses for entertainment ▪ Oupa's Tavern onto old dam – B&B and restaurant ▪ Warm spring, heritage resources like old graves, fort, water wheel etc.	
Opportunities	**Threats**
▪ Cultural Resort: cultural events can be hosted there, Facilities offer a hall, ▪ swimming pool with forts; can also be used to host conferences N12 and N18: centrality – can encourage the development of B&B's, ▪ Tourism center with shopping complex and filling station ▪ Weir can serve as tourist attraction: fishing, tourism, water sport ▪ Development a marketing strategy for the area ▪ Development of a comprehensive tourism product ▪ Focusing on a particular market segment ▪ Maximizes the unique features and resources of the region ▪ Promote vertical and horizontal integration to build strong regional brand and create opportunities for BEE ▪ Establish a representative tourism forum ▪ Establish a tourism information Centre ▪ Promotion of partnership on resort development ▪ Promotion of joint venture in the B&B industry	▪ Small town – few investments ▪ Not marketing the area properly ▪ Low payment rate for services and lack of funding for development ▪ Outflow of money to other areas ▪ Lack of skills ▪ Not using our resources to its fullest potential (N12) ▪ Dirt roads and single bridges poses problems to travelers ▪ Crime ▪ Development of new resort threat to the environment ▪ Lack of recreational facilities

4.8.9 RURAL LAND USE PATTERNS

Most of the Municipal area is still covered with natural vegetation, although mining activities, such as prospecting, occurs in the central, southern and northern parts of the area (Map 44).

MAP 44: LAND COVER

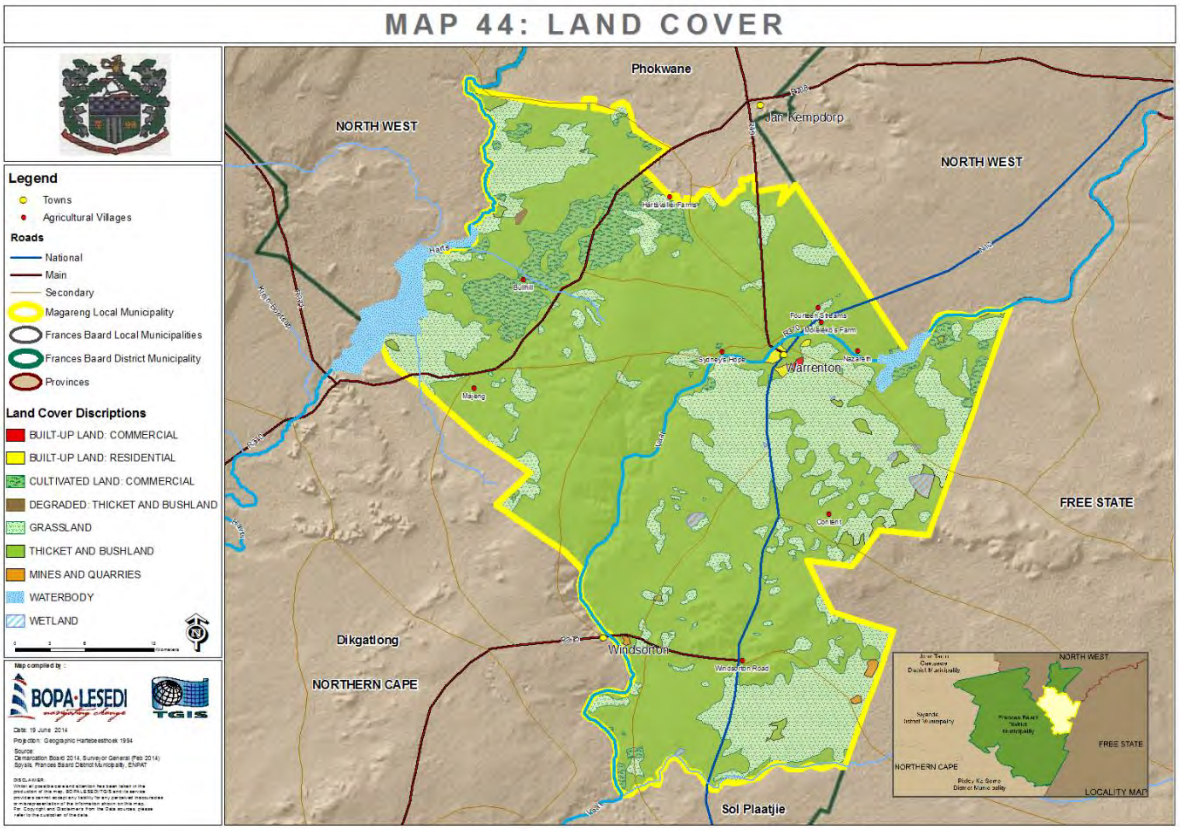


TABLE 38: LAND COVER

LANCOVER	AREA m²	HECTARES
Irrigation	102337288.048	10233,728
High erosion potential	199629230,458	19962,923
Degraded land	65592177,047	6559,217
Mining	8077411,459	807,741
Water bodies	6955459,055	695,545
Wetlands	10981605,062	1098,160
Hills and Ridges	59501297,042	5950,129
Natural vegetation	1076572656,892	107657,265
Total Municipal Area	**1541613938,960**	**154161,393**

(Magareng SDF 2008)

The Bullhill irrigation scheme is located toward the north of the area along the Vaal River, quite a substantial part of the study area is under irrigation (10233,2 ha) while approximately the same area is also under cultivation (Table 37).

Twenty percent of the area could be classified as sensitive for erosion due to soil conditions. Only a small number of hills and ridges, which are normally also sensitive, occur in the central areas (Map 34).

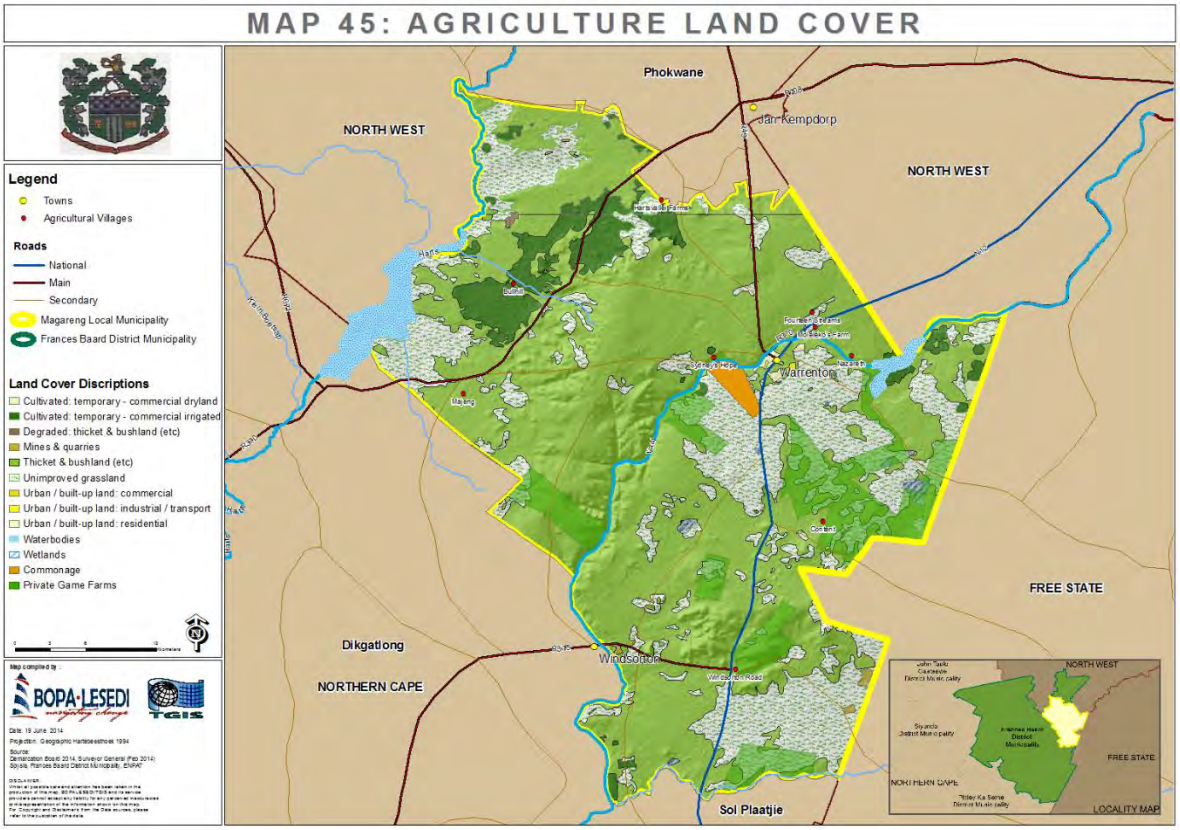
The Vaal River that runs through the area and the Spitskop and Vaalharts dams are some of the most important water bodies found in the area, which makes irrigation possible.

4.8.10 AGRICULTURE

According to the Frances Baard District Municipality SDF, the type of agriculture that can be found in the Magareng Local Municipality is dry land farming, with pieces of irrigated land portions.

The map below indicates the agricultural land capability of the Magareng area and the map only indicates the areas used for grazing and wildlife. The rural areas comprise mostly extensive commercial farmland with a few Agri-villages that developed in the area. The larger part of the farming area accommodates extensive mixed agriculture where mostly cattle, game and goat farming is practiced whilst the intensive farming area are concentrated along the water canal system that transverse the area. The latter comprises an area of Majeng, Bull Hill and Hartsvallei, while some intensive farming is also practised along the Vaal River next to Moleko's Farm, Nazareth and 14 Streams. These areas produce crops, vegetables, fruit and other perishable products. Other settlements that accommodate a concentration of people are Sydney's Hope and Warrenton Station.

MAP 45: AGRICULTURE LAND COVER



The rural area also accommodates natural features like the Spitskop dam, which forms part of the western border of the municipal area while the Leeu River forms part of the southern border of the municipal area. Approximately 45 farms are found in the Magareng municipal area.

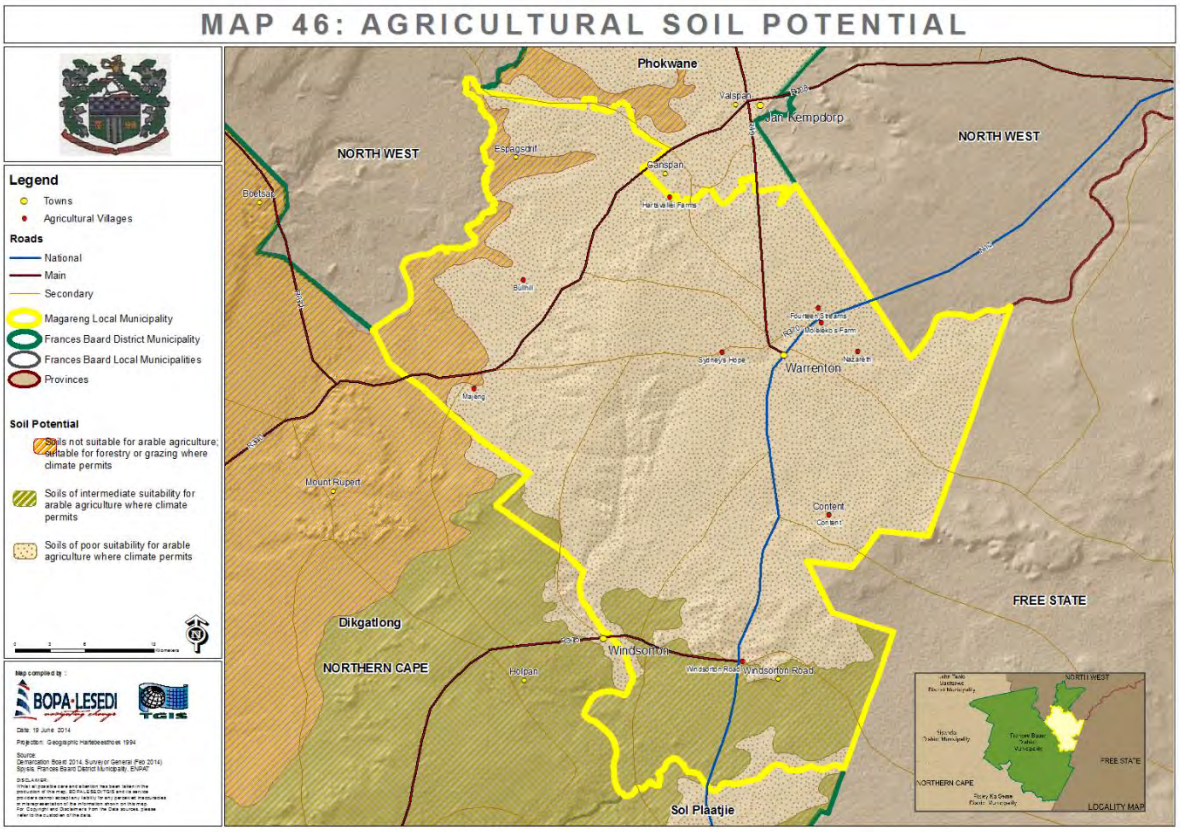
- Preliminary key issues affecting formal agriculture are as follows:
- Sheep-farming is declining due to large and regular stock theft
- Development of informal settlements next to farms

- Statistical data regarding agriculture is very limited
- Land being bought for small-scale farming development without (Magareng SDF, 2008)

Commonage

The following Map indicates the agricultural soil potential of the Magareng area and the largest section of the land is indicated as being soils highly suited to arable agriculture where the climate permits it.

MAP 46: AGRICULTURAL SOIL POTENTIAL

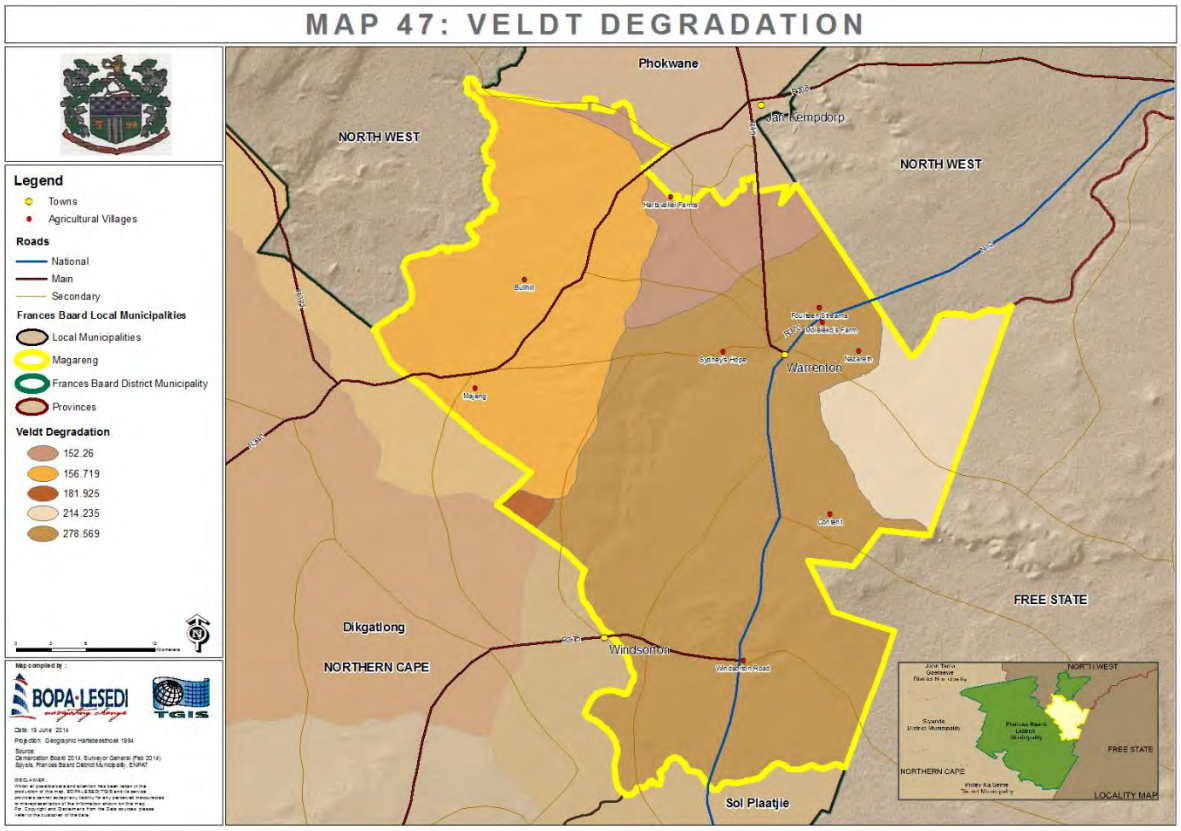


A disturbing factor is the rate at which degradation of the agricultural capacity and grazing potential in the service area is taking place. Potential reasons for these actions are:

- Poor rainfall and extreme temperatures;
- Mining activities;
- Townships development; and
- Bush/forest clearing for agricultural activities.

The following figures indicate the Veld degradation index (*Map 47*) and the Erosion index (*Map 48) (FBDM SDF 2013)*

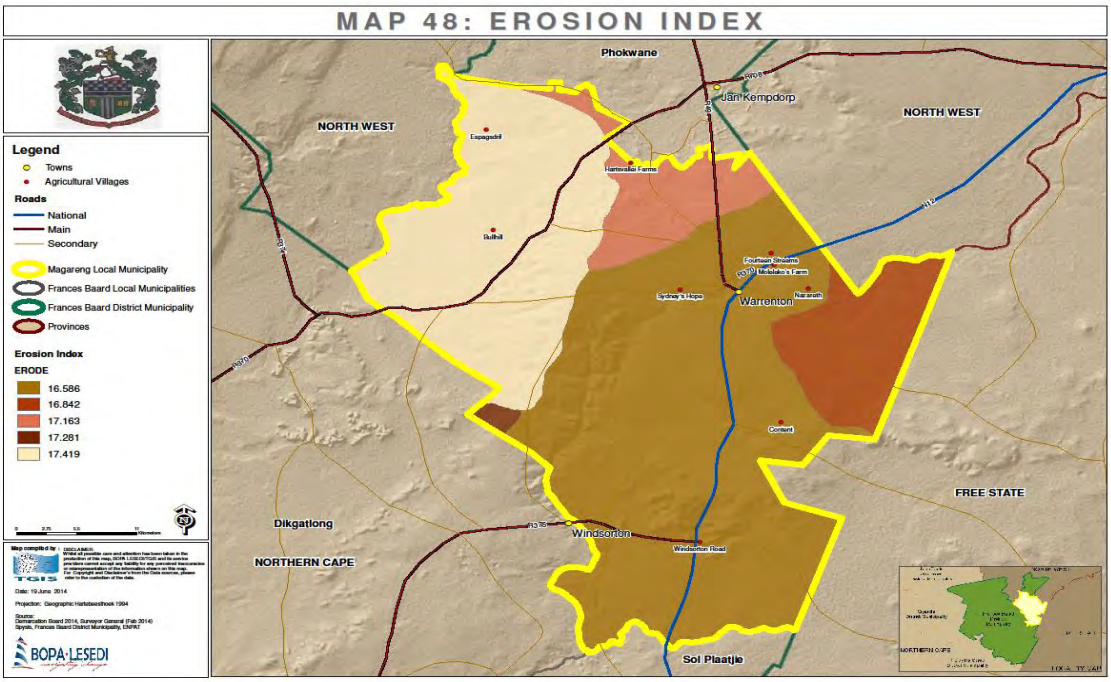
MAP 47: VELDT DEGRADATION



The Municipality is situated in a low rainfall area and the plant species are restricted to those that can handle drought conditions. Although ground erosion is a natural process, it can be accelerated by human activities. The faster wind and water moves, the more soil is eroded. The sparser the vegetation, the faster the wind and water causes damage. As result of overgrazing the natural vegetation is removed, which could cause erosion during heavy rainfalls and strong winds, reducing valuable top-soil.

The above-mentioned factors all contribute to desert forming whereby productive land is changed to unproductive desert area. The result of desert forming is that the soil in time will

MAP 48: EROSION INDEX



The above map indicates the derived grazing capacity in the District. This ranges from 18 hectares per large stock unit in the south of the District through to 11 hectares per large stock unit in parts of the Ghaap plateau. This suggests that veld carrying capacities are higher in the more arid parts of the District.

The area offers significant potential for game and this has a number of spin-offs. A study at the wildlife management centre at the University of Pretoria found that an average sized game farm can generate 54% of its gross income from hunting, 21% from live animal sales, 18% from foreign trophy hunters, 5% from eco-tourism and 2% from meat production. (FBDMSDF 2013)

Small-scale farming activities comprises of cattle farming, groundnuts, sheep, game [to a small extend] Lucerne, citrus, and others. The Tswaraganang Small Farmers Trust comprises of approximately 28 small-scale farmers and has approx. 37ha Lucerne under irrigation and approx. 9ha citrus. Support to small-scale farmers is given by inter-alia; Landbank (financial), Farm Africa, and the Department of Agriculture. The Agricultural Research Centre near Jan Kempdorp gives further support to both formal as well as small-scale farmers (Magareng SDF, 2008).

4.8.11 LAND REFORM

Government's land reform programme comprises 3 components, namely:

I. Land Redistribution and Agricultural Development (LRAD)

II. Tenure upgrading

III. Land Restitution.

There is also a commonage development programme targeting municipalities which have a shortage in municipal land used for communal agricultural purposes, as well as, a Settlement and Land Acquisition Grant whereby municipalities can be assisted to buy land for township establishment.

Several sets of legislation have been passed to protect land rights in South Africa. One of these is the Extension of Security of Tenure Act (ESTA) which is particularly applicable to farming communities. This act aims to reduce farm evictions and improve tenure security to farm workers.

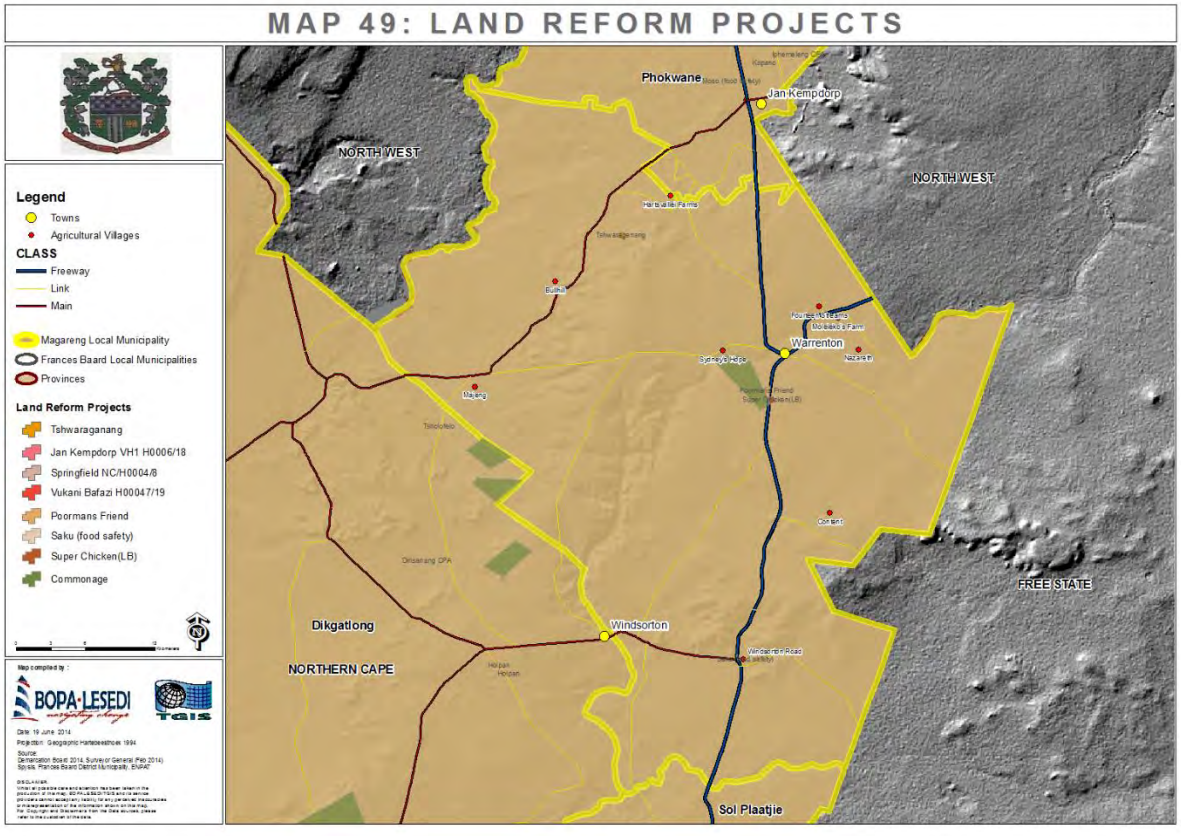
The Department of Land Affairs administer, the land reform process, and therefore, the municipality is not aware of all the land reform projects presently undertaken in the municipal area.

Majeng is the only land reform project within the municipality.

The Majeng land is situated about 100Km north-west of Kimberley. The Majeng community comprises approximately of 800 families, many of whom are currently residents at Kgomotso, some 60km north of Majeng, in the North West Province. The community was forcible evicted from Majeng over the period between 1962 and 1975 (Majeng Business Plan, 2010).

The current status of the restitution case of the Majeng community has been settled and that they are now in the planning phase of the project. (Magareng IDP 2013/14)

MAP 49: LAND REFORM PROJECTS



The following Swot analysis was compiled from the current agricultural sector.

Strengths	Weaknesses
▪ The Vaal River – which provides water that, can be used for human consumption, agricultural and industrial purposes ▪ Fertile soil – vegetables were produced as far back as 1878 to provide food to the mining community of Kimberley ▪ Agricultural land for grazing and crop production ▪ Commonage: can be used for establishment of emerging farmers and mining ▪ Vaalharts Water Scheme focused on irrigation ▪ Bull Hill, Hartsvallei: Chicken broiler, irrigation farming, crop and vegetable farming ▪ Neighboring assets such as orange packing factory, Ganspan fishing resources etc.	▪ Expansion of urban area could have impact on agricultural land ▪ Unemployment and poverty ▪ Outflow of money to other areas ▪ Dirt roads and single bridges ▪ Crime ▪ Overgrazing – Soil erosion ▪ Resource Centres – lack of information ▪ Sheep farming is declining due to regular stock theft ▪ Development of informal settlements next to farms ▪ Land is being bought for small-scale farming development, without adequate support for emerging farmers ▪ Lack of support from local authority ▪ Soil in the area poses problems for irrigation ▪ Limited access to resources ▪ People leave the area to do processing elsewhere ▪ Poor soil condition around Warrenton
Opportunities	**Threats**
▪ Majeng: Agricultural opportunity, 60ha ploughed land (460 ha potential), grazing land, goats and cattle etc. ▪ Irrigation due to canal – also producing potatoes ▪ Industrial area – 46 ha for citrus growing ▪ Peanut oil factory, fruit processing and meat processing ▪ Game farming, aloe farming, chicken farming opportunities ▪ Vaal River: Water extraction ▪ Agricultural Processing ▪ Agricultural Beneficiation ▪ Community agricultural activities ▪ Agri-BEE projects and value-adding (Organic Farming etc.) ▪ New technologies: Hydroponics and Biotechnology ▪ Skills development ▪ Promotion of small scale poultry farming	▪ Location of markets ▪

4.9 SYNTHESIS OF SPATIAL ANALYSIS

This section's focus is on the synthesis of the status quo analysis and the influence the different spheres have on each other. The biophysical-, Socio-Economic and Built Environment influences each other and must all be kept in mind for Chapter 5 as part of the Spatial Planning process.

The above-mentioned aspects of the previous sections are all key development factors and, in some respects, a big challenge for sustainable development in Magareng. Service provision and divisions in Magareng Municipality are currently underperforming due to a number of factors and the consequential challenges. This is problematic since it has a tendency to inhibit sustainable development practices in the municipality which forms part of the SDF vision. Access to basic services is a prerequisite for economic and social development throughout South Africa and with the status quo of the towns and settlement discussed in the previous sections, this can be clearly understood.

While development and the level thereof are directly proportionate to the accessibility of different locations throughout the municipality. The primary town in Magareng has fairly acceptable urban environments, which must be enhanced by this document so that the town can grow sustainably in future. Certain problems does however exist, relating to housing shortages, lacking basic services, limited access to green open spaces, recreational facilities and other public facilities and institutions that are needed in places (see Phase II Public Participation Report).

The fact that so many settlements and communities are isolated due to their remote proximity to each other, does not enhance developmental practices and or sustainable development. Development is sustained through the accessibility of facilities and the sharing of certain central functions that limits the duplication of public infrastructure. Transport networks in Magareng are, for the most part in an acceptable condition, except for the remote locations.

Land uses in the region have been dictated by historical patterns of land tenure as well as some recent initiatives to stimulate growth; achieve equitable distribution of services and opportunities; improve livelihood conditions; and protect the environment and cultural resources.

The Spatial Development Framework is based on the existing spatial structure of the region, seeking to strengthen its positive aspects and to mitigate its weaknesses. In the case of Magareng, the strengths / opportunities of the spatial economy include:

4.9.1 SWOT ANALYSIS

Constraints:

- ***High unemployment rate and poverty***: A great percentage of the residents of Magareng of not earn a proper income. This can be ascribed to the fact that there is a lack of job opportunities within the municipal area. The high number of retrenchments from farms and the mines also contributes to the ever-increasing demand for jobs
- ***Lack of investment***: The smaller economy does not justify businesses or industries to invest in Magareng. The Magareng Municipality does not have a marketing plan to emphasise the potential of the area and this also contributes to the lack of investment. There are also no incentives for industries to encourage investment in the area.
- ***Lack of entrepreneurship:*** A reason for this is that lack of business support, limits access to start-up capital and the lack of information about possible ventures.
- ***Lack of business support***: SMME's experience a great difficulty to have access to start-up capital or loans at banks. There is limited access to business support services. A lack of access to procurement opportunities for emerging entrepreneurs also hampers the development of this sector.
- ***Lack of proper business centres***: Most of the businesses are located in Warrenton.
- This increases the necessity of people to cross over the N12 route from Ikhutseng or Warrenvale. A lot of business opportunities area also missed by not capitalising in the N12 route passing through the area. Lack of food security: People are living in poverty. Some need to do crime to ensure a living. The lack of food security in the area is a problem.
- Low payment rate for services and lack of funding for development
- Outflow of money to other areas
- Poor soil condition around Warrenton
- Duplication and lack of skills
- HIV/AIDS
- Dirt road and single bridge
- Illegal dumping
- Crime
- Overgrazing – soil erosion.
- Resource centres – lack of information.
- Lack of management and technical skills in municipality.
- Lack of land use management.

Opportunities:

- Draw investment to the area – CBD
- Develop SMME's
- Reduce retrenchments
- Establish Proper business centres – especially along corridors. A business centre should thus be developed on the eastern side of the N12, which can focus on tourists and traffic visiting the area.
- Food Security
- Reduce Poverty
- Railway line, JHB, CT, Mafeking & Botswana (Passenger services, are offered at
- Windsorton, Warrenton, 14 streams - B&B and Cafés and the utilizing of the goods shed)
- Vaal River: Water Extraction
- Mining: Diamonds (including alluvial) – small miners
- Commonage can also be used for mining
- Agriculture
    - Irrigation due to canal also producing potatoes
    - Industrial area – 46 ha for citrus growing
    - Soil in the area poses problems for irrigation
    - Peanut oil factory, fruit processing and meat processing
    - Game farming, aloe farming – sisal production
    - Chicken farming, community bakery in Warrenton
    - N12 and N18 – centrality – B&B, Tourism centre with shopping complex and filling station
    - Weir: fishing, tourism, water sport
- Transka Resort: Next to river host festivals, pleasure resort with swimming pool
- Nazareth & 14 streams: rock engravings, battle grounds, churches, bungalows for overnight and weir – can serve as a tourist attraction
- Cultural resort: cultural events can be hosted. Facilities offer a hall, swimming pool with forts – can be used to host conferences
- Spitskop dam: fishing with hotel – boat houses for entertainment
    - Bird park – new development to be used by community
    - Oupa's tavern onto old dam – B&B and restaurant
    - Retirement village – scenic sites along the Vaalrivier.
    - Transport related development along N12.
    - Industrial Opportunities along N12.
    - Accommodation for tourists.
    - Vaalharts water scheme focused on irrigation: this can assist with producing specialized produce and the establishment of processing plants.
    - Auction pen: can maybe be used for feeding facilities on commonage or maybe can be changed to host game auctions
    - Majeng: Panoramic view of the district, agricultural opportunity, graves of soldiers, 60 ha ploughed land (460 ha potential), grazing land, brick making, Goats and cattle, tourism attraction (botanical garden and game)
    - Bull hill, Hartsvallei: Chicken broiler, irrigation farming, crop and vegetable farming o Vacant or undeveloped land that can be used for new residential development to integrate the town.
    - Vacant or undeveloped land that can be used for new residential development to integrate the town.
- Neighbouring assets:
    - Orange packing factory close by

4.9.2 FACTORS SHAPING THE SPATIAL SYSTEM

The factors that have shaped the urban-regional system could be discussed under strengths or opportunities and development constraints that exist.

The main factors that shaped the urban region system were the fact that Warrenton was identified as the "bread basket" of the region, supplying especially Kimberley with fresh produce. Improved linkages by way of rail and road enhanced the functional role of Warrenton as a central place within the region.

The development potential of Magareng relates directly to its strategic locality on the one hand, but also because of the existence of natural resources. Factors that can shape the future urban-regional interrelationships includes inter alia:

The "central" location of Warrenton that enhances its potential as service centre for the region.

The strategic position of Warrenton on the intersection of two SDI's confirms the inherent development potential of this nodal point on the two development corridors, which should be unlocked.

The government's viewpoint to stimulate development along strategic corridors and nodes (NSDP, 2006) confirms the fact that Warrenton should be prioritized in terms of government spending.

The existence of prime agricultural land, Water from the Vaal River, the Vaalharts agricultural scheme and Spitskop dam.

The occurrence of mineral resources that could be exploited in a formal or informal way.

Tourism potential – capitalizing on some sites along the Vaal River as stop over points on the Treasure Corridor.

Constraining factors hampering the growth of Warrenton is the fact that the linkages towards Warrenton are not good enough. The N12 in its totality should be upgraded in the first place before this corridor will develop to its full potential.

Secondly, the regional roads (which are mainly gravel roads) restricting the central place function (in the case of Bullhill and Vaalharts for instance) and the development potential of Warrenton.

A lack of funding for projects on provincial and district level seems also to limit new investment from the private sector in Warrenton (Magareng SDF, 2008).

4.9.3 EXTRACTION OF SPATIAL ISSUES

- Vast open areas and the strategic locality of the area should be used more effectively.
- Dormitory towns should be integrated and where possible work opportunities should be created close to residential areas.
- Integrated housing strategy.
- Tourism development should be encouraged where possible.

- Emerging farmers should be established on land close to town, particularly where irrigation can be applied.
- Utilisation of redundant infrastructure like the good sheds at the station and the auction pen.
- Land claims should be properly planned and integrated with the rest of the area.
- Restructuring and capitalizing on SDI location.
- Promote sustainable use of land and resources.
- Small service centres for rural areas.
- Lack of Land Use Management.
- Spatial planning to open-up opportunities for business, industry and tourism along SDI's;
- Curbing of urban sprawl;
- Development of an open space system;
- Enhance rural integration with Warrenton.

As indicated before, the core spatial challenges of the Spatial Development Framework would be to ensure spatial **equity, efficiency and sustainability**. However, current practices does not always promote these concepts and it is therefore vital to identify in which manner current trends does not impact on the achievement of these responsibilities and the eventual realization of the Vision. This analysis will assist in identifying key spatial issues to be addressed.

5 PROPOSALS AND BROAD SETTLEMENT PROPOSALS

Chapter 5 focuses on the desirable future planning patters of land use relating to all property and erven within the Municipal area of Magareng. This chapter will discuss the objectives for the spatial planning process and guide all land use change decisions to be taken by Council in future. The data analysed in Chapter 4 and illustrated through Maps, together with the insets from the public through the public participation process will inform and guide the maps in this chapter and give guidance to the formulation of the SDF maps and the detail maps that were done for each of the towns.

As stated in the Guidelines for formulation of SDF's the objectives should indicate the long term results that relate to a specific aspect of the vision. As already stated, the sustainability of development has been identified as one of the overarching components of the SDF Vision and will be one of the key factors in the SDF objectives. The objectives that form part of the NCPSDF were also included in this chapter and were interpreted in order to align with the Provincial planning process.

5.1 KEY COMPONENTS OF NCPSDF

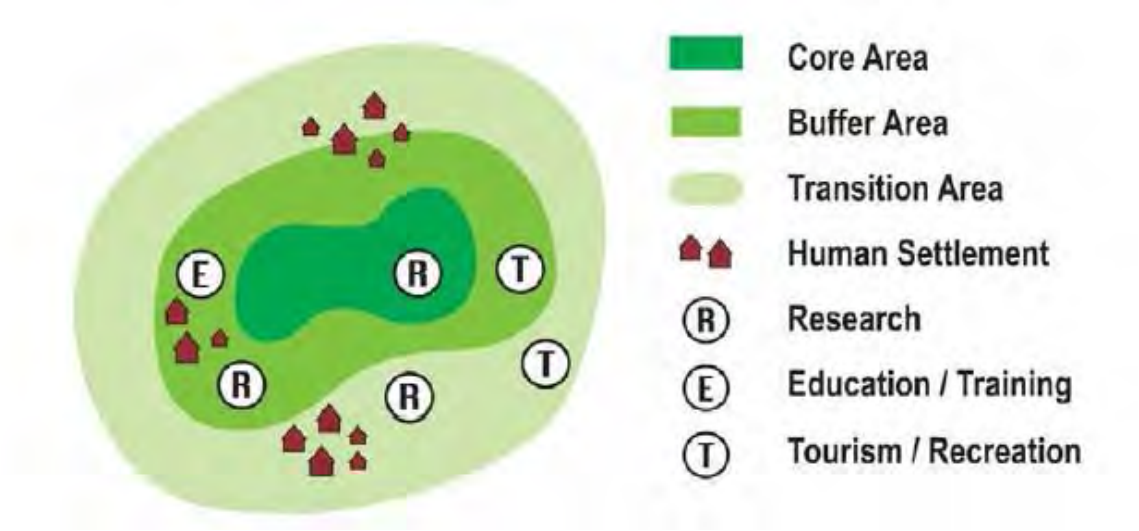
As already mentioned, the NCPSDF forms an important guiding document and the various objectives and key elements were taken into consideration. The key objectives of the NCPSDF as it relates to spatial planning are to integrate and standardise planning at all spheres of government in the province with specific reference to the following:

a) Supporting the district and local municipalities in the preparation of their SDFs prepared in terms of the Northern Cape Planning and Development Act 7 of 1998, the Local Government Municipal Systems Act 32 of 2000, and the Spatial Planning and Land Use Management Bill (2011). Specific reference is made to:
   i. Facilitating the land-use classification of the entire land surface of the province in a standard format in accordance with a set of dedicated Spatial Planning Categories (SPCs).
   ii. Describing the existing and desired future spatial patterns that provide for integrated, efficient and sustainable settlements throughout the province.

b) Guiding the investment of public resources through the following:
   i. Providing a credible context for public investments in the coming years.
   ii. Promoting rational and equitable development of areas that have lagged behind.
   iii. Providing certainty to all stakeholders regarding spatial and socio-economic implications of future development in the Northern Cape.
   iv. Providing a basis for co-ordinated decision-making and policy-formulation regarding future land-use.

c) Facilitating cross-boundary co-operation and co-ordination between district and local municipalities, adjoining provinces, and bordering countries in respect of issues that are of mutual interest for their respective areas of jurisdiction (refer to inter alia issues pertaining to land-use, biodiversity conservation, and resource utilisation).

FIGURE 32: LAND USE CLASSIFICATION - NCPSDF



According to the NCPSDF, it is important to ensure the sustainability of urban development to achieve a balance between the conflicting interests of land-use planning. In this regard, a key objective of the NCPSDF is to promote rehabilitation of existing settlements and to ensure that any future developments are sustainable (i.e. supportive of environmental integrity, human well-being and economic efficiency). Standard town planning criteria applicable in the evaluation and assessment of development applications, building plan approval, change of land-use, etc. are still relevant and will not be replaced by this policy. These criteria relate to inter alia taking due cognisance of natural and/or unique resources and land and coastal elements, prevention of urban sprawl, preference for strengthening and densification of existing nodes, and taking into consideration the cumulative impact of development.

The settlement system in the Magareng Municipality takes on the same form as that of the whole of the Northern Cape Province, with small and often isolated urban and quasi-urban settlements scattered across a vast area. Many of these settlements find it hard to provide basic services and sufficient income generating-opportunities to their inhabitants. According to the NCPSDF, sustainable rural development is closely bound to a vibrant and functional urban settlement system. Villages, settlements and cities are the 'engine rooms' that drive regional development and economic growth, but not all urban settlements have the same growth potential (NCPSDF Development and Resource Management Plan, 2012)

The basic driving force behind a town's growth is provided by its specific economic activities, which generate job opportunities, capital, buildings and infrastructure. An economic, social, and environmental interdependence exists between urban and rural areas and the 'rural-urban linkage development perspective' is increasingly becoming the accepted approach in developing countries. Rural-urban linkage generally refers to the flow of monetary capital, people, goods and information between urban and rural areas. Infrastructure related to transportation, communications, energy and basic services form the backbone of the urban-rural development linkage approach. Adequate investment in this domain improves rural productivity and better access to markets, jobs and public services.

5.1.1 NCPSDF OBJECTIVES FOR URBAN DEVELOPMENT

The following objectives, as set out in detail in the NCPSD, forms an important aspect of the Magareng's SDF and will thus be formulated as part of the SDF Objectives:

a) Develop sustainable settlements that would promote the well-being of the people of the Northern Cape, i.e. where they can live with dignity and pride.
b) End the apartheid structure of urban settlements.
    i. Prohibit further outward expansion of urban settlements that entrenches the current spatial apartheid pattern and results in urban sprawl.
    ii. Ensure that public funds are not spent in perpetuating segregated and unsustainable settlement patterns.
    iii. Use socio-economic gradients based on walking distance to create a higher level of integration than currently exists, while remaining sensitive to community social norms and levels of living.
    iv. Use publicly-owned land and premises to spatially integrate urban areas and to give access for second economy operators into first economy spaces.
c) Promote sustainable urban activities and public and non-motorised transport. Use walking distance as the primary measure of accessibility.
    i. Develop walking and cycling routes.
    ii. Densify urban settlements, especially along main transport routes, at nodal interchanges etc.
    iii. Identify areas of highest accessibility that can be designed to maximise safe social and economic activity, especially for participants in the second economy.
    iv. Restructure road networks to promote economic activity in appropriate locations.
    v. Cluster community facilities together with commercial, transport, informal sector and other activities.

5.2 SPATIAL PLANNING CATEGORIES – NCPSDF

The NCPSDF prescribed certain Spatial Planning Categories (SPC) that were all taken into consideration for this document to ensure ultimate alignment with the SDF documents of neighbouring Municipalities and the Northern Cape Province.

Cities all over the world are confronted with a large number of people, resources, services and infrastructure and therefore act as the drivers or gateways of national and international economies. Furthermore cities are also affected by the performance of global, regional and national economies, and have to be taken into consideration when planning for sustained growth and development.

FIGURE 33: SPATIAL PLANNING CATEGORIES

The strategies that were identified in the NCPSDF were used as basis for the SDF Plans that form part of this document.

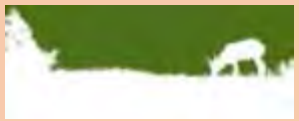
5.3 SDF OBJECTIVES

To ensure the overarching goal to enable sustainability through sustainable development and link this with the vision of Magareng's Municipality, the identified Spatial Planning Objectives, Planning Tools and identified restructuring elements form an important component of the document.

Identification of key problem areas as part of the scenario planning phase will now from the baseline for formulation of spatial objectives and strategies in order to achieve the spatial Vision.

The key problem areas were addressed according to the NCPSDF special planning categories in order to ensure alignment. Objectives and strategies were formulated for each Spatial Planning Category in order to ensure that reference is made to all spatial planning categories that are applicable within Magareng Municipality

TABLE 39: KEY PROBLEM AREAS AND OBJECTIVES

SPECIAL PLANNING CATEGORY			TYPE OF DEVELOPMENT	KEY PROBLEM AREAS	OBJECTIVE
CORE 	**A**	A.a Statutory Protected Areas	No development allowed.	The natural and cultural resources of the Municipality are under pressure due to a number of factors e.g. increasing number of population and non -proactive manner of planning followed in the past.	***Objective 1***: Protection of all conservation sites including terrestrial land and aquatic systems.
BUFFER 	**B**	B.a. Non-statutory Conservation Areas B.b Ecological Corridors B.c Urban Green Areas	a) Resort development b) Infrastructure required for research.	Urban recreational areas and open spaces have been in a state of despair often leading to urban decay. Maintenance of facilities should receive a high priority. Open areas are sometimes lending itself to illegal dumping.	***Objective 2:*** To create an open space system throughout the municipal areas that promotes ecological ecosystems
AGRICULTURAL AREAS 	**C**	C.a .Extensive agricultural areas C.b Intensive agricultural areas	a) Agricultural development and infrastructure required for extensive and intensive agricultural land-uses. b) Resort development on game farms. c) Agricultural industry.	Magareng is characterised as a region that rely heavily on agriculture as an economic sector. Large areas have been identified as agricultural intensive farm land as part of the irrigation schemes. Over utilisation of natural resources should be minimised.	***Objective 3:*** To assist in the development of the agricultural sector of Magareng including land reform and commonage.

SPECIAL PLANNING CATEGORY			TYPE OF DEVELOPMENT	KEY PROBLEM AREAS	OBJECTIVE
URBAN RELATED 	**D**	D.a Main Towns D.b Local Towns D.c Rural Settlements D.e Tribal Authority Settlements D.f Institutional Areas D.g. Authority Areas D.h Residential Areas D.i Business Areas D.j. Service Related Business D.k. Special Business D. l SMME Incubators D.m Mixed use development Areas D.n Cemeteries D.o Sports fields and Infrastructure	All urban-related developments.	As a result of pre-apartheids planning policies, local authorities are still experiencing challenges related to defragmented urban cities where resources have been concentrated and segregated. Municipalities are still playing catchup instead of pro-active planning.	***Objective 4:*** To promote sustainable development of towns that will enhance the living conditions of the communities.
INDUSTRIAL AREAS 	**E**	E.a Agricultural Industry E.b. Light Industry E.c General Industry E.d Nuisance industry D.e Extractive Industry	Full spectrum of industrial developments required by the economic sectors.	Economic activates within the municipal area are limited while resources are over exposed. The region is characterized by low economic growth, lack of economic diversity and high unemployment. The low household income pattern also has implications for the types of local economic initiatives that can be sustained. The dependence ratio and reliance on social grants is high, without social grant a large percentage of the population will be in despair. .	***Objective 5:*** The stimulation of the local economy by exploring and development of new economic development opportunities within the municipality.

SPECIAL PLANNING CATEGORY			TYPE OF DEVELOPMENT	KEY PROBLEM AREAS	OBJECTIVE
SURFACE INFRASTRUCTURE & BUILDINGS 	**F**	F.a National roads F.b Main roads F.c Minor roads F.d Public streets F.e Heavy Vehicle Overnight Facilities F.f Railway lines F.g Power lines G.h. Telecommunications Infrastructure F.i. Renewable energy Structure F.j. Dams and Reservoirs F.k. Canals F.j. Sewerage Plants and refuse Areas	All surface infrastructure and buildings that are required for sustainable socio-economic development and resource use.	The provision of infrastructure and social facilities are under immense pressure because of lake of finance, human resources and increasing demand from communities. I most of the community meetings the issue of lack of social services like clinics and schools has been raised. Distances from spatial rural areas to the nearest social facilities seems to be a major challenge for some of the rural nodes.	***Objective 6:*** To address social decay by provide sustainable infrastructure including buildings, education, recreation facilities and social services to the entire municipal area. ***Objective 7***: To improve connectivity and linkages to the region

From above table 7 main objectives have been identified:

Objective 1: Protection of all conservation sites including terrestrial land and aquatic systems

Objective 2: To create an open space system throughout the municipal areas that promotes ecological ecosystems

Objective 3: To assist in the development of the agricultural sector of Magareng including land reform and commonage.

Objective 4: To promote sustainable development of towns that will enhance the living conditions of the communities.

Objective 5: The stimulation of the local economy by exploring and development of new economic development opportunities within the municipality.

Objective 6: To address social decay by provide sustainable infrastructure including buildings, education, recreation facilities and social services to the entire municipal area.

Objective 7: To improve connectivity and linkages to the region

5.4 SDF STRATEGIES

In order to ultimately arrive at the spatial proposals and projects strategies have been formulated for each of the objectives. All strategies are reflected in Table 2 while the spatial proposals are reflected on the various maps.

TABLE 40: SDF STRATEGIES & PROPOSALS

OBJECTIVES	STRATEGIES
***Objective 1*: Protection of all conservation sites including terrestrial land and aquatic systems.**	1.1 Protection of all conservation sites including terrestrial land and aquatic systems.
	1.2.Identify and develop tourism zones in line with the character of their surrounding environments
***Objective 2*: To create an open space system throughout the municipal areas that promotes ecological ecosystems**	2.1. To protect the MOSS system.
	2.2. To minimize impact of development on nature.
	2.3 Protect and sustainable manage ecologically sensitive natural areas including the development of municipal open space system, comprising ridges, rivers and dams.
	2.4. Respect the flood lines of the major rivers and dams
	2.5. Settlement pollution hotspots must be redressed and managed.
	2.6. Preservation of all heritage sites
	2.7. Increase accessibility of resort to the local community.
***Objective 3:* To assist in the development of the agricultural sector of Magareng including land reform and commonage.**	3.1. Exploit agri-processing possibilities.
	3.2 .To protect high potential agricultural land and expand existing irrigation schemes.
	3.3.To sustainably manage commonage area and small scale farming
***Objective 4:* To promote sustainable development of towns that will enhance the living conditions of the communities.**	4.1. All development must be undertaken in accordance with site-specific design and planning guidelines.
	4.2 Promote a compact urban structure through urban infill and densification
	4.3. Locate new housing development within a rational urban structure and urban development boundary to ensure sustainable development
	4.4. Locate urban development, specifically housing development, within reach of bulk municipal services
	4.5. Define urban area and urban edge to promote integration.
	4.6. Identify precincts in order to promote sustainable social settlements
	4.7. Identify neighborhood nodes and promote development thereof.
	4.8. Identify activity corridors and transport corridors.
	4.9. All vacant land that is suitable for infill planning must be identified.
	4.10. Areas suitable for densification should be earmarked.
	4.11. Priority Economic investment is promoted around CBD and key business precincts.
	4.12. Economic activity will be grouped to enhance thresholds.
	4.13. Employment and residential opportunities promoted in close proximity of each other.
	4.14. Provision of facilities for optimal pedestrian movement must be implemented.

OBJECTIVES	STRATEGIES
Objective 5: **The stimulation of the local economy by exploring and development of new economic development opportunities within the municipality.**	5.1. To define industrial precinct in Warrenton and provide sufficient infrastructure in order to promote development thereof.
	5.2. Ensure that industrial area is designed to promote local economic activity.
	5.3. Promote economic opportunities and provide community facilities that must be clustered with business facilities in service delivery centers.
	5.4. Exploit opportunities of mining sector
	5.5 Diversify the economic base towards growth sectors and new global opportunities through the facilitation of appropriate public and private investments.
Objective 6: **To address social decay by provide sustainable infrastructure including buildings, education, recreation facilities and social services to the entire municipal area.**	6.1. Priority spending on infrastructural upgrading.
	6.2. Provision of adequate sport and recreation facilities
	6.3. All areas are entitled to the highest affordable service levels.
	6.4.
Objective 7: **To improve connectivity and linkages to the region**	7.1. Improve connectivity within the Municipal area and optimize the potential of transport corridors.
	7.2. Roads upgrading and maintenance as well as public transport system as a transport priority in these areas.

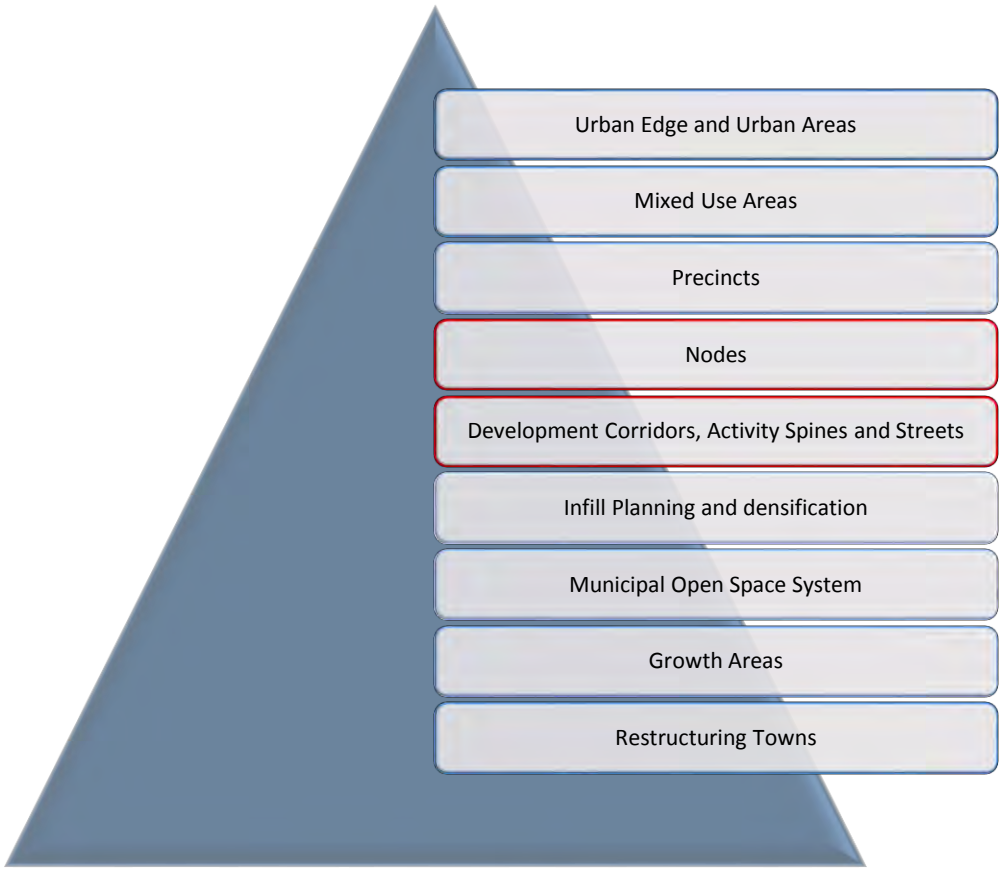
5.5 SPATIAL DEVELOPMENT PROPOSALS

5.5.1 BROAD DEVELOPMENT FRAMEWORK & ELEMENTS

The purpose of the framework is to provide guidance for development through the implementation of the objectives and strategies. The broad development framework guidelines are applicable to all areas within the municipality.

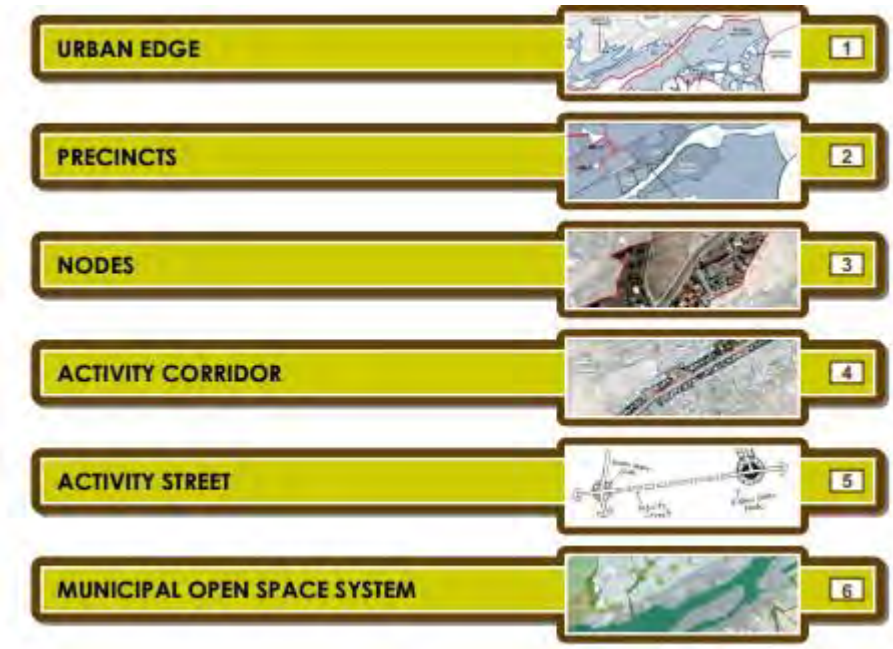
The town of Warrenton is no different from most of South Africa and carries the burden of overcoming apartheid planning, urban sprawl, not formalised communities, urban and rural poverty and unstructured town centres. The spatial structuring elements for detail discussion will be as follows:

FIGURE 34: STRUCTURING ELEMENTS



The structuring elements are based on the NCPSDF and will be discussed in detail in the next chapter. Figure 4 indicates the elements as listed in the NCPSDF. Due to the small scale of Magareng Municipality the broad development framework elements are discussed simultaneously with the urban area of Warrenton.

FIGURE 35: SPATIAL STRUCTURING ELEMENTS TO BE ADOPTED IN THE PLANNING AND DESIGN OF SETTLEMENTS.



(NCPSDF, 2012)

The whole concept of sustainable development must however be organised by a set of principles and policies (Chapter 3) that will give effect to the vision and goals. The SDF focuses on the primary town (Warrenton) of the area with specific objectives indicated for each of the segments thereof. **Maps 50 –** indicates the compilation of all SDF proposals.

5.5.2 NODES

The bioregional planning approach of the NCPSDF indicate some very important nodes that have an influence on the Magareng municipal area. Nodes are classified according to their location and level of influence. The various level of nodes applicable to the area are as follow:

A. Regional Nodes: These are areas/towns of significance in terms of scale, location, impact, diversity, and agglomeration of function (facilities, services and economic activities), which have a significant impact on the Northern Cape Province as a whole. These include:

(i) Upington

(ii) Kimberley

(iii) Springbok

B. Sub-Regional Node: These are areas/towns of significance in terms of the various districts or regions of the Northern Cape Province. These include:

(i) De Aar

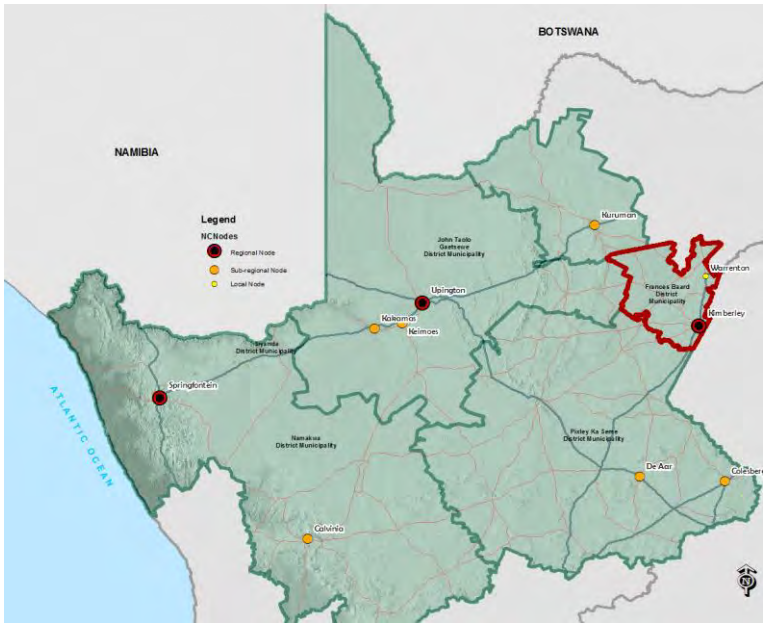
(ii) Colesberg

(iii) Calvinia

(iv) Keimoes

(v) Kakamas

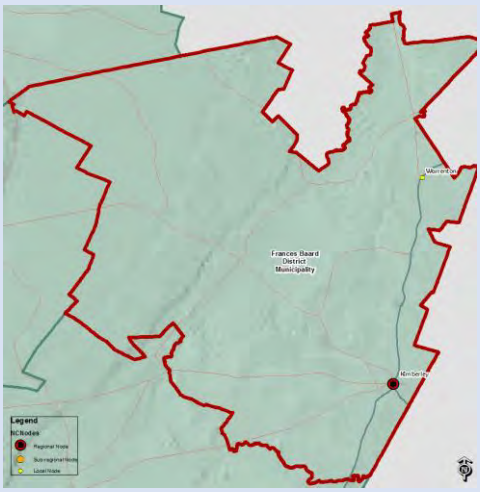
(vi) Kuruman



Local Nodes: This refers to the local settlements and public places. Neighbourhood and Speciality Nodes occur mostly in the urban area of Warrenton.

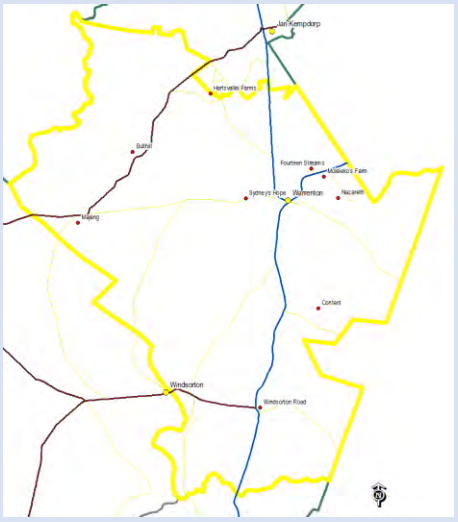
The concentration of activities around a specific point within a town are necessary for community building and can accommodate higher density housing, business, community services, tourism activities, parks, squares and specific community projects identified as part of the IDP process.

Warrenton has been identified as the only local node for development within Magareng Municipality (business and or industrial), land use change applications must be encouraged in these areas.



C.3 Rural Nodes: are nodes from which a collection of services would occur to serve the generally poor rural communities. These nodes are usually located where services are concentrated, which, in turn, serve the rural communities.

There are a few rural nodes within Magareng Municipality servicing the rural agricultural communities. It should however be mentioned that these nodes are located on private land expect for Majeng that is a land restitution project.
This is causing to be a challenge especially with service delivery. Social facilities should be cluster strategically.



Rural Nodal Policies:

- Development for Social Infrastructure facilities, complimentary Medical facilities, and education facilities, must be encouraged in these areas.
- These nodes should be placed at a strategic location within the rural communities shortening the travel time to and from them. Access to these facilities should be promoted.

5.5.1 TRANSPORTATION INTEGRATION

Public transport systems and associated facilities should be the main element of urban areas. Public transport systems are accessed via bus and taxi ranks. These ranks and systems should be the focus of land use development within development corridors and routes to obtain maximum land use and transportation integration. The proposed neighbourhood nodes must establish a unique mix of land uses around these bus and taxi ranks and should be designed to facilitate access to these ranks.

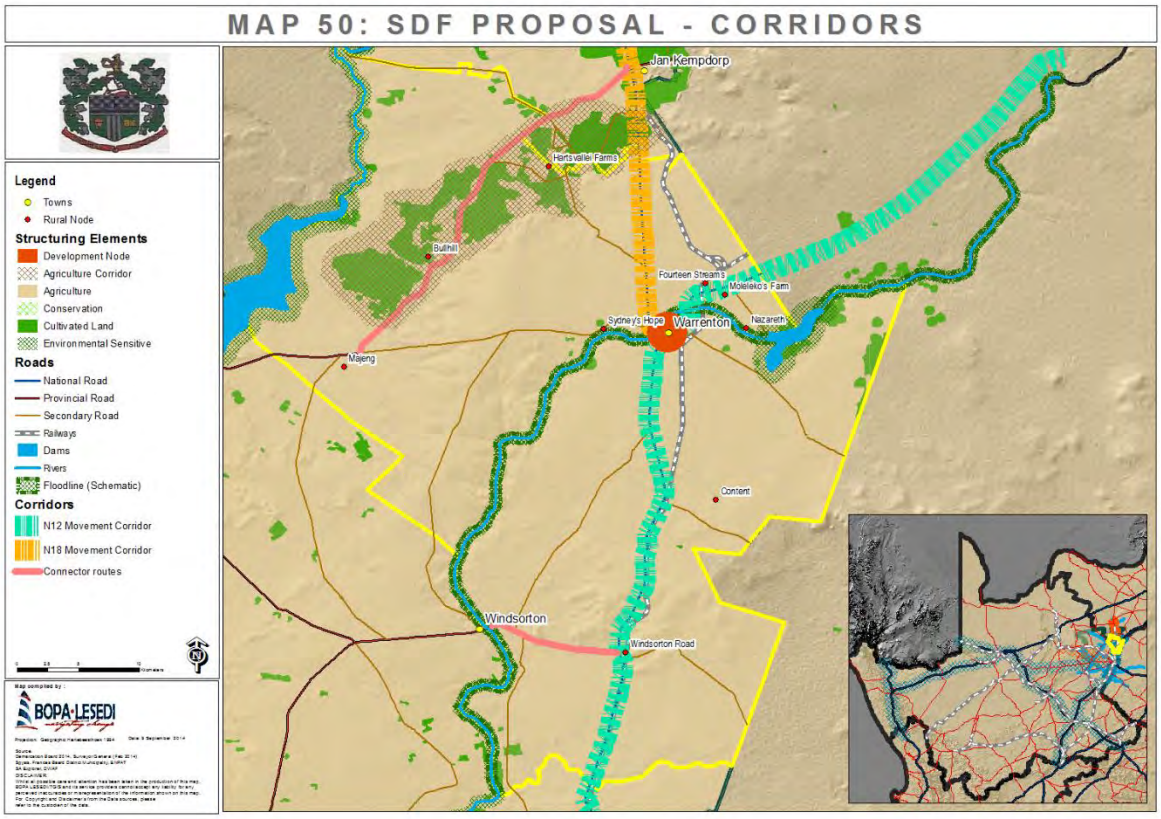
The public transport system within the urban area of Magareng is very limited. Taxis operate on a daily basis to major towns like Kimberly.

Apart from having the right mix of land uses within urban areas, 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 neighbourhood precincts to its bus or taxi rank. Generally, 400m is considered an average walking distance. This distance, however, is only an indication and can be extended for higher-order nodes and reduced for lower-order nodes.

The identified development nodes should be integrated by supporting the two prominent movement corridors running though the Municipal area. From the NCPSDF as well as FBDSDF the two prominent movement corridors have been identified; N12 and N18. The development potential of these two corridors at Warrenton should be further investigated.

Revival of the existing railway network will play and key factor in the exploitation of the various development options within the municipality. The possibility of development of a railway hub is its initiation phase.

MAP 50: SDF PROPOSAL - CORRIDORS



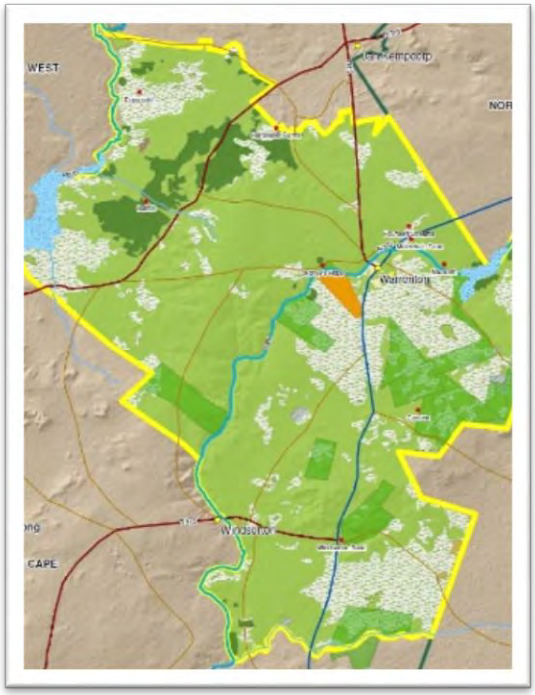
5.5.2 PROTECTION OF AGRICULTURE AND NATURAL RESOUCES

The potential for land to be used productively for agricultural purposes is largely determined by physical factors such as soils, climate, terrain and rainfall. It should be noted that these factors only demonstrate potential; other factors impact on the ability of this potential to be unlocked, such as access to infrastructure (irrigation, roads, and electricity), skills and technical support. It should also be noted that a combination of factors impact on potential. This is particularly the case in assessing soils, which are highly variable over a short distance and difficult to map at large scales, such as at Local Municipality scale.

The agricultural land potential classes are provided in **Map 45 and 46**. High potential land for agricultural purposes occurs in the northern parts of the Municipality between Bullhill and Espagdrif along the irrigation schemes.

The majority of the remaining farms is classified as soils of poor suitability for arable agriculture. To the south a small portion of farms are indicated as moderate suitable for arable land.

Agricultural areas are essential for food security in South Africa. To promote food security, and mitigate against food price increases, Magareng should therefore:

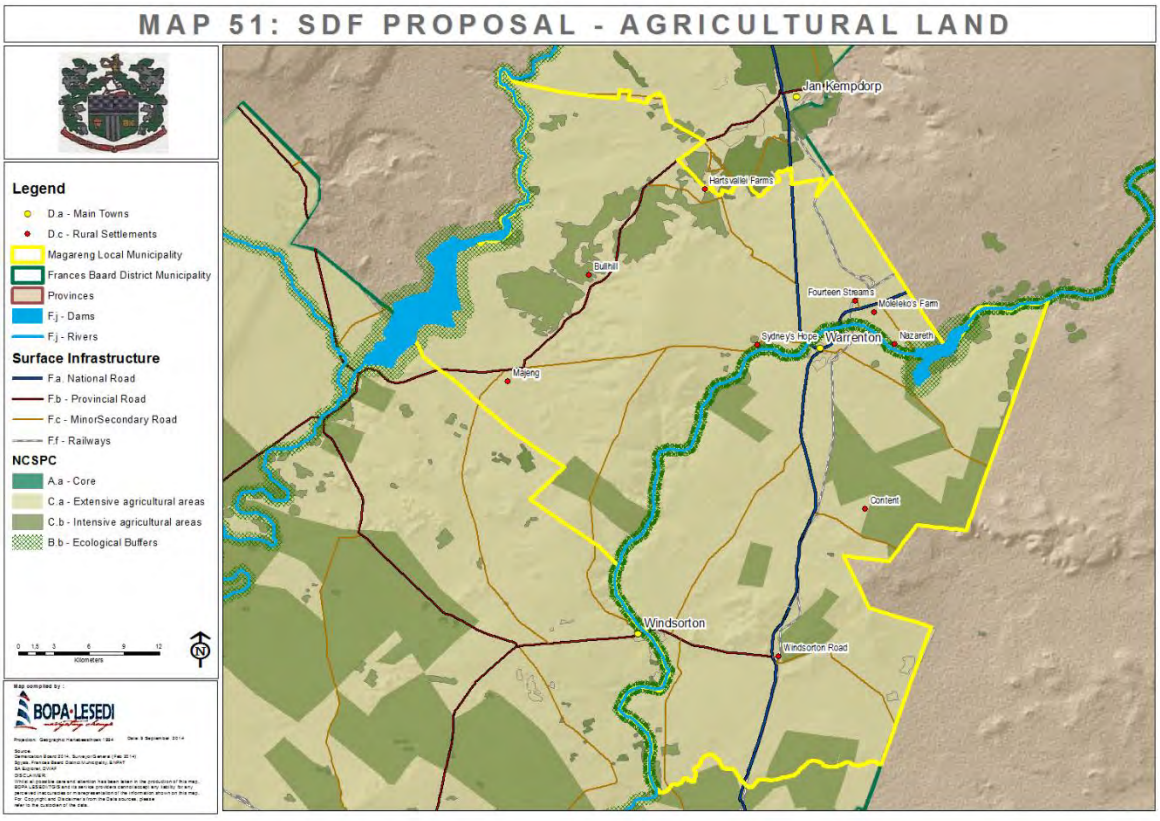


a) identify "high-potential and unique agricultural areas" declared as agricultural landscapes by the South African Heritage Resources Agency (SAHRA)
b) investigate ways in which all agricultural areas with potential could receive local protection (over and above the urban edge)
c) proactively prepare and implement action plans that prevent urban encroachment and unlawful land use, minimize negative impacts of urban development, and manage water and other natural resources.

Agricultural Policy

- The urban edge will also be used to achieve protection of the agricultural land surrounding the urban area
- High potential agricultural land must be excluded from non-agricultural development and must be appropriately utilised in accordance with sustainable agriculture principles.
- Agricultural Open Space such as SPC C.a and C.b outside of the Urban Edge must be handled in accordance with Policies for Land Outside of the Urban Edge.
- Agricultural activities must be monitored and regulated in terms of the Conservation of Agricultural Resources Act 43 of 1983. In particular, restoration and reclamation of eroded land, control of the number of stock kept and the control of weeds and invader plants must be monitored.
- Any enhanced development rights on SPC C areas must be subject to the establishment of a Special Management Area where the ethos of sustainable agriculture is served in practice.
- Special focus should be placed on support for land reform projects.
- A commonage management plan should be compiled to assist in the sustainable utilization of all commonage land.
- Any non-agricultural development on agricultural areas is subject to an appropriate environmental off-set or *quid pro quo*.

MAP 51: SDF PROPOSAL AGRICULTURAL



5.5.2.1 NATURAL RESOUCES

A SDF should enable the people of the planning area to appreciate the value of the environment in which they function. As suggested in the definition of the environment put forward in NEMA, the environment consists of a broad spectrum of 'places' both natural and human-made. The term, 'natural place' refers broadly to the natural environment that has not been considerably changed through human activities and where natural ecosystem processes are maintained. The human-made (cultural) place refers to an environment which, through the creation and/or modification by human activities, diminished or lost its primary ecosystem functions as well as its natural aesthetic appeal.

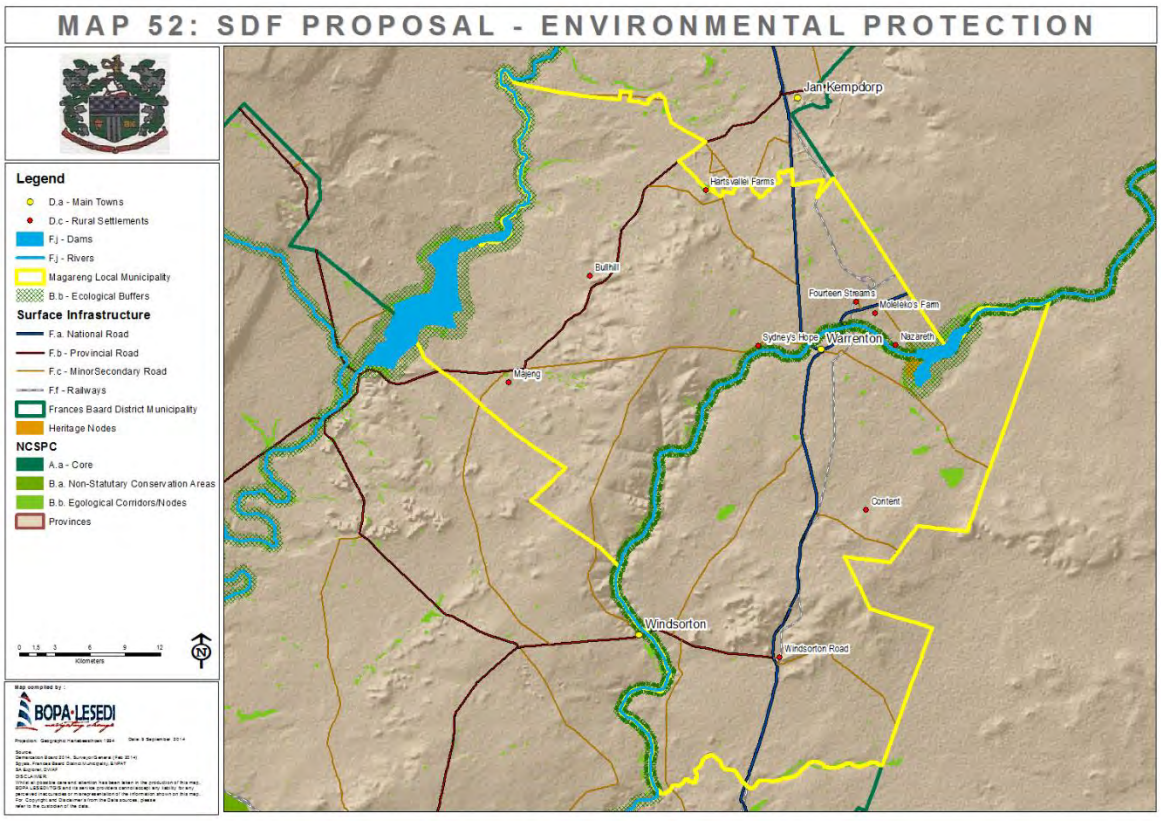
The Municipality needs to safeguard its environmental assets (i.e. biodiversity, cultural heritage and scenic resources), as these underpin the local economy and lifestyle offering. The Municipality's IDP emphasises the sustainable use of its environmental assets, and the Municipal SDF needs to include this aspect into its spatial development strategy.

Notwithstanding the area's rich and varied natural capital, it remains a sensitive and vulnerable environment that the Municipality are the stewards of. The challenge is ensuring the ongoing functioning of eco-system services, that climate change is taken seriously, and the Municipality's town and rural areas are developed sustainable. This necessitates protection and strengthening of the biodiversity network, and cultural and scenic landscapes. Whilst the Municipality's natural assets and productive rural landscapes need to be safeguarded, they also need to be opened up to all – particularly those denied access in the apartheid era.

Natural Resources Policy:

- Adopt and use the new landscape-wide Critical Biodiversity Area information and mapping emanating as primary determinant of how to develop and manage the rural component of the municipal area.
- Actively support the consolidation, extension and linkage of the Conservation areas trough out the Northern Cape Province
- Manage urban and rural land uses in a manner that ensures that landscapes linking critical biodiversity areas can function as ecological corridors (i.e. along the rivers and dams).
- Maintain reasonable public access to nature areas for all citizens and visitors.
- Resist "new" estuarine residential development which is not integrated with existing SDF proposals.
- Protect natural and productive resources trough implementation of Environmental Management Plan

MAP 52: SDF PROPOSAL ENVIRONMENTAL MANAGEMENT



5.5.3 RESTRUCTURING OF TOWNS

Although the principles and norms as set out in SPLUMA has at its core the sustainable development of people, it does however primarily focus on the sustainable use of land to this end. Another component of spatial development, perhaps at a different scale is the enhancement of how people experience their developed space towards a higher quality of life. The municipality also has a role to play in providing policy guidelines (based on national guidelines) to ensure the quality of life through spatial development.

At the core of this SDF is the intention to create a spatial area which can enhance the quality of live for all residents by promoting and enabling developmental activities in balance with the natural environment. The overall spatial development approach followed by the municipality can thus be described as being both people centred and nature centred.

Although Warrenton is treated as a unique spatial area within its own character and spatial influences, there are elements of its spatial needs which is not uncommon throughout all of the post democracy cities and towns within South Africa. The town of Warrenton also has the burden of overcoming apartheid planning and focussing on the development of a functioning core where the human wellbeing is an important factor and can lead to investment and business opportunities.

Restructuring Policy:

- Promote the integration of the social, economic, institutional and physical aspects of land development;
- Promote integrated land development in rural and urban areas in support of each other
- Promote the availability of residential and employment opportunities in close proximity to or integrated with each other.
- Optimise the use of existing resources, including resources relating to agriculture, land, minerals, bulk infrastructure, roads, transportation and social facilities;
- Promote a diverse combination of land use, also at the level of individual even or sub-division of land.
- Discourage the phenomenon of "urban sprawl" and contribute to the development of more compact towns and cities;
- Contribute to the correction of historically distorted spatial patterns of settlement in the Republic and to the optimum use of existing infrastructure; and
- Encourage environmentally sustainable land development practices and processes.

5.5.4 DEVELOPMENT OF RURAL AREAS

The ISRDP set out to create "socially cohesive and stable communities with viable institutions, sustainable economies and universal access to social amenities, able to attract and retain skilled and knowledgeable people who are equipped to contribute to growth and development". The ISRDS defined rural development as "multidimensional and much broader than poverty alleviation through social programmes and transfers; it places emphasis on changing environments to enable poor people to earn more, invest in themselves and their communities and contribute towards the maintenance of key infrastructure (NCRDS, 2010)

International agencies and governments promoting rural development have promoted particular agendas which have changed over time. Rural development thinking has been dynamic and contested. Internationally there remains considerable debate about the best ways to improve the quality of life of rural people. The last decade has been marked by a tension between two approaches:

- conventional sectoral programmes focusing on rural infrastructure development, water and sanitation, small farmer support, agricultural production, food security and the non-farming economy;

- broader livelihoods approaches which try to engage with the complex mix of factors impacting on rural people which are at the centre of rural development interventions.

The livelihoods approach "cuts across the boundaries of more conventional approaches to looking at rural development which focus on defined activities: agriculture, wage employment, farm labour, small-scale enterprise". The approach assesses the different livelihood sources of the poor in particular development settings, highlights shocks and stresses which impact on these as well as the enabling factors which enhance them. It does not automatically cast rural people in the role of farmers, but rather recognises how increasingly they rely on multiple livelihood strategies.

Ultimately rural development approaches and frameworks, irrespective of their theoretical sophistication or the extent to which there has been participation in their development, are only as good as the capacity to implement them. This requires the design of appropriate institutional arrangements which clarify the roles and relationships between the arms and functions of the State and the way in which it relates to rural people, the private sector, NGOs and the citizenry more broadly (NCRDS, 2010).

According to the Northern Cape Rural Development Strategy, 2010 emphasis should be placed on:

- profiling households to determine their needs, skills and employability;
- social mobilisation of rural communities to take initiative and prioritise development interventions;
- Identification of employment creation opportunities in line with planned interventions; targeted training and development in line with identified job creation opportunities;
- identification of meaningful work opportunities through the Expanded Public Works Programme; Working for Forests, Fire and Woodlands together with the Land Care Programme to provide income to indigent households;
- strategic investments in economic and social infrastructure facilitated with relevant departments (Transport, Water, Energy, Agriculture and Housing);
- improved access to water for smallholder farmers;
- improved household access to communication networks;
- implementation of alternative energy solutions;
- disaster risk reduction activities.

The following four policies have been designed in order to promote rural development:

a) Promoting agriculture in a region has various advantages.

Agriculture is less capital intensive than mining and manufacturing. As a job creator it is also less costly than other sectors. It also is one of the few economic sectors that have the adaptability to complement other economic sectors. It is of essence that urban intrusion into these areas be limited by promoting higher-density urban development close to the existing urban areas.

b) Enforce Urban Edge

Demarcating an urban edge has the specific purpose to prevent uncontrolled urban sprawl and in this way contributes to protecting valuable agricultural land. For this reason, the proposed urban edge must be strictly enforced, especially the parts of the urban edge protecting the intensive agricultural areas within the Municipal Area. Beyond this urban edge no bulk services should be provided.

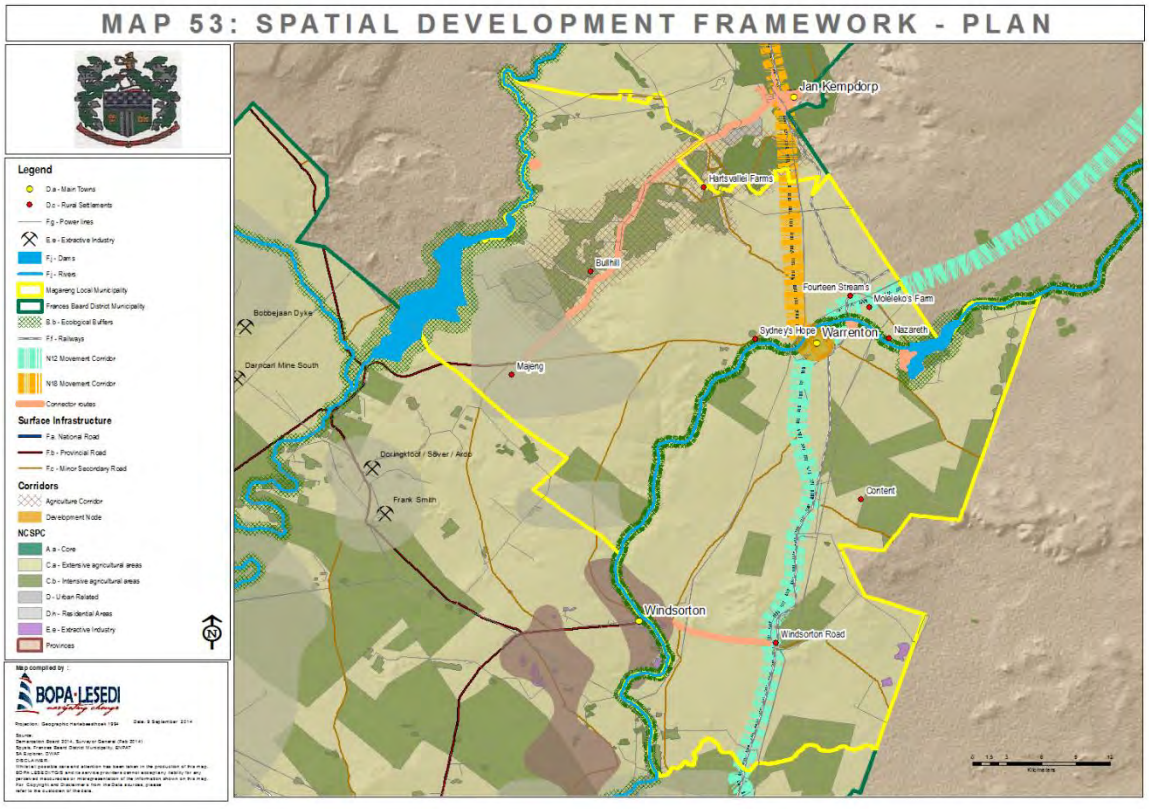
c) Provide Social Amenities to Rural Areas

To sustain a healthy agricultural sector, it will be imperative that the farmers and their employees have reasonable access to social amenities, such as post offices, clinics and schools. These services should be provided within the identified rural nodes.

d) Promote Small-Scale Agricultural

The municipality should formulate policies to develop small-scale farming within Magareng. The implementation of a small-scale farming programme could broaden the economic base of the Municipal Area and create new employment opportunities. It is evident from Map 45, that large agricultural areas are not utilized intensively. This creates the opportunity for small-scale, intensive farming, focused on giving disadvantaged beneficiaries access to land for agricultural purpose.

MAP 53: SDF PROPOSAL SPATIAL DEVELOPMENT FRAMEWORK PLAN



5.6 SPATIAL DEVELOPMENT FRAMEWORK – PER SETTELMENT

5.6.1 URBAN AREAS AND URBAN EDGE

The introduction of urban edge principles to control the sideways expansion of urban settlements, has become fairly common in the municipal environment. However, the success in achieving their primary objective has not been particularly good, as urban expansion sometimes still continues in an uncontrolled way, beyond the existing built-up area.

These types of developments and expansion usually include large, private developments which seek to privatize convenience, in a variety of forms for example, golf and polo estates, eco-and other form of resort villages, retirement complexes based on the theme of retreating to the countryside, and so on, which frequently result in "ad-hoc" sprawl; small scale incremental development by smaller developers and individual land owners, The issue of land prices and low income housing projects, informal settlements and the availability of land usually contributes to development beyond the urban edge.

The urban edge is a medium-term to long-term edge line (5-20 years) that has been demarcated to limit urban sprawl, or to protect natural resources. Demarcating an urban edge has specific advantages, the primary being, to prevent uncontrolled urban sprawl. Urban sprawl is undesirable since it increases pressures on the limited resource of local government, from public transport to water and sanitation infrastructure provision and impede on valuable agricultural land. Drawing an urban edge will also protect valuable agricultural land and ecologically sensitive areas from urban encroachment. But an urban edge can also have drawbacks.

For example, it can restrict the supply of land for urban development, which will inflate land prices within the urban boundary. Care should therefore be taken when demarcating an urban edge. A balance should be reached between providing enough land for urban development and the need for sustainable development.

Certain actions are however required to ensure that the urban edge is effective. These include:

- A clear demarcation of the urban edge;
- Ensure protection of land beyond the urban edge;
- Meeting the demand for growth;
- Strategic densification, urban renewal and infill planning.

An urban edge is demarcated for the Municipal Area as part of the SDF. The proposed urban edge, which is illustrated on Map 52, was demarcated using the following guiding principles:

- The containment of the urban sprawl and the promotion of infill and densification;
- Eradicating sprawl and promoting urban compaction;
- Protecting important elements within urban settlements;
- Promoting small scale agriculture;
- Avoid fragmentation of rural and wilderness landscapes;
- Maintain the dominance of agricultural and wilderness landscapes outside of urban cores;
- The creation of urban corridors along public transportation Routes;
- The future municipal housing need and associated land required;
- The cost implications of establishing new infrastructure for new township developments;
- Taking into consideration unsafe geological conditions
- The conservation of environmentally sensitive areas;
- The protection of high-potential agricultural land;
- Identified desired and undesired utilization of land

A guideline for the type of land uses to be allowed inside and outside of the urban edge are depicted in Table 2. As a rule, the urban edge applies to all developments requiring a township establishment application.

TABLE 41: URBAN EDGE

INSIDE URBAN EDGE	OUTSIDE URBAN EDGE
Urban settlements	Extensive and intensive agricultural areas
Rural settlements -Business and office areas	Tourism facilities and related activities
Industrial and commercial areas	Conservation areas and nature reserves
Governmental uses	Tourism facilities and related activities
Urban agriculture	Rural services (social & economic)
Residential Areas	Bulk infrastructure & Servitudes
Public Open Space	Agricultural holdings
Private Open Space	Communal farms
Bulk infrastructure & Servitudes	Mines & Quarries
	Water Catchments
	Bulk infrastructure & Servitudes

As Warrenton grows, the municipality will need to provide more undeveloped land for urban development, and the urban edge will have to be reviewed and adjusted. These adjustments:

- must not be where natural, heritage, or scenic resources merit protection;
- should facilitate the logical extension of the city's infrastructure network; and
- should allow sufficient urban development land within the edge line to accommodate at least 10 years urban growth.

The Urban Edge for Warrenton aims to contain urban development along the development corridors proposed in the NCPSDF. In addition, it largely aims to prohibit urban sprawl into the intensive agricultural areas along Vaal River and towards the productive agricultural land.

Urban Areas and Urban Edge Policy:

- Applications for land use change developments outside of the Urban Edge must be discouraged, with the exception of Tourism, Agricultural related activities and Special uses.
- Applications for land use change within the Urban Edge must be done in accordance with the preferred land use procedures.
- If an application is done within the Urban Edge for any other use which is not indicated in the SDF maps, special motivation must be given for the application.

5.6.2 LAND USE DEVELOPMENT

In terms of the FBDM SDF and reviewed NCPGDS, Magareng has been identified as secondary investment town. This can be linked to the settlement hierarchy identified in the situational analysis.

5.6.2.1 MIXED LAND USE AREAS

The mixing of different land uses within a specific location or precinct within the urban edge comprises of a combination of residential densities, business, offices and other related community facilities.

This node requires the planning process to focus on facilitating the development of a greater mix of complementary land uses and optimising the development potential of the area. Mixed land uses placed together must be complimentary to one another as to promote long term sustainability. The combination of zonings must be encouraged, but must still be sensitive to the impact on the surrounding areas.

The combination of residential, business, and tourism activities must be used as the preferred combination in areas near existing residential neighbourhoods. The combination of business and light industrial activities must be used as the preferred combination in areas near business and industrial areas.

Mixed land use policy:

- The combination of zonings must be encouraged, but must still be sensitive to the impact on the surrounding areas.
- The combination of residential, business, and tourism activities must be used as the preferred combination in areas near existing residential neighbourhoods.

5.6.3 INFILL PLANNING AND DENSIFICATION

As part of the process of town planning for future development, infill planning was kept in mind throughout the restructuring of the urban area in order to achieve densification and integration throughout. To build a complete, viable community means to create sustainable town centres and neighbourhoods that collectively support a variety of lifestyles, economic development, and efficient management of public infrastructure and resources.

Differentiation should be made between infill planning and densifications; for the purposes of this report the terminology of densification is used in areas where there are already serviced erven. Infill planning is used in areas of open spaces where there are no services erven or in public open spaces where infrastructure services is limited.

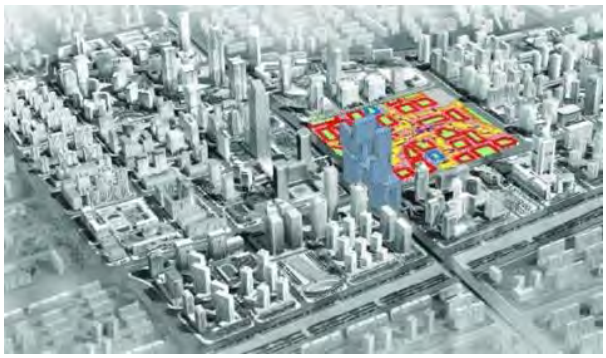
It also means raising the quality of life through environmental protection, provision of public amenities, encouraging various transportation options, and protecting neighbourhood character. One of the key factors in creating a community that is sustainable and liveable, is generating higher neighbourhood densities to support these characteristics (i.e. increasing the number of dwelling units on a hectare unit of land). This can be accomplished through infill, the development of vacant lots found within existing neighbourhoods, or through the redevelopment of other properties.

Areas through-out the urban area have been identified for infill planning and/ or densifications. These development must follow township establishment procedures which include but, is not limited to service report as well as environment impact assessment.

5.6.4 NODAL STRUCTURE

5.6.4.1 PRECINCTS

Precincts are dominated by primary activities that are normally to be found in a concentrated and centred location in relation to the rest of the town and their original function. The precincts identified for the Warrenton area, include the following:



- Central Business District (CBD)
- Industrial Precinct
- Tourism Precinct

Precinct for development (business and or industrial) has been identified in Warrenton (See **Map 52**). The following precincts have been identified with in Warrenton.

WCBD – Warrenton Central Business District have been identified with in the centre of town. The erven between Van Wyk Street to the west and Erasmus Street to the east. All erven located on the outside of the boundary are included in the CBD. Land use change applications for business and business related use must be encouraged in these areas.

WIP – Warrenton Industrial Precinct have been identified to the north east of the town along the existing railway facility. Currently the majority of erven are still vacant. Key to the success of this industrial precinct is the revival of the railway network.

TIP1 – A tourism node is proposed along the Vaal river where two established resort are located. Tourism related land uses e.g. "padstall" should be encourage with in this area.

TIP2 - A second tourism node is proposed opposite the newly build bridge and should be seen as an extension of the proposed business corridor. Tourism related activities should be promoted but strict guidelines should be developed to ensure that only associated land uses are developed. It is proposed that a precinct plan be developed for this area. Special attention should be given to the architectural landscaping in order to ensure that the impact on the environment/ natural surroundings are minimised.

The possibility of a tourism corridor linking the two proposed tourism nodes to the north of town should be explored. The type of land uses that should be promoted must have a tourism related purposes like leisure residential. Urban land uses should not be allowed due to the presences of the 1:50 year flood line.

Precinct Policy:

- Land use change applications must be encouraged in these areas.
- A precinct for tourism development has been identified in areas where tourism opportunities and activities are to be found and land use change applications complimenting the tourism industry must be encouraged in these areas.
- In order for all towns to grow into sustainable centers, it is critical that precincts be developed only in areas were bulk services capacity allows it.
- Where the CBD Edge borders residential areas, the preferred zoning will not include activities such as a Liquor Store, Tavern and a Place of Entertainment.
- The provision of facilities to support optimal pedestrian movement must be implemented.
- Leisure residential land uses to the northern side of the river between the two tourism nodes should be promoted.

5.6.4.2 URBAN NODES

C.1 Neighbourhood Nodes: These operate to serve the community with social and government services. Sometimes these nodes can occur, or be established, outside of the above-mentioned established nodes. Facilities found in these nodes include municipal offices, police stations, courts and other social facilities.

The following Neighbourhood nodes have been identified:

- ***Warrenton***

  NN1 – a new neighbourhood node is proposed in the area earmarked for future residential development to the north of the town.

  Warrenvale

  NN2 – a neighbourhood node is proposed at the entrance of Warrenvale, the existing land uses is already providing a support.

- ***Ikhutseng***

  NN3 - the main neighbourhood node is proposed along one of the major movement corridors. Existing mixed land uses are already complimenting this proposal. Accessibility to the node is high, due to its location.

  NN4 – a third neighbourhood node is proposed between Warrenvale and Ikhutseng along the activity corridor. The main motivation for this medium, to long term node, is to decrease the distance to service and increase the principle of access to services.

  NN5 – the last neighbourhood node is proposed to the south of Ikhutseng to service the proposed new residential developments. This node should be one for the long term development focuses.

Neighbourhood Nodes Policies:

- Land use applications for Business Zone must be encouraged in this nodes.
- Where the Neighbourhood Node Edge borders residential areas, the preferred zoning will not include activities such as a Liquor Store, Tavern and a Place of Entertainment.
- The provision of facilities for optimal pedestrian movement must be implemented.
- Development in the node must be orientated towards the street and should also enhance pedestrian movement by urban design, incorporating public transport systems.

C.2 Speciality Nodes: These nodes surround a specific market segment of a primary activity and are normally linked to the provision of a service linked to that primary usage, such as medical care, public service area and tourism.

(IBSN1) - N12 business node is proposed at the intersection of Magaretha Prinsloo Street and the main entrance (movement corridor) into Ikhutseng. A detailed precinct plan should be developed for this area. Special care should be taken with issues like access to, and from the N12, as well as, bulk services.

A second business node can be identified for long term development. It should however be mentioned that this node can only be developed as secondary proposal. The IBSN1 should be fully exploited before this option could be considered.

For the purpose of Magareng's SDF, speciality nodes within the residential areas are incorporated into neighbourhood nodes, unless otherwise specified.

Speciality Nodes Policies:

- Development for social infrastructure facilities must be encouraged, including recreation and open spaces.
- Development of complimentary medical facilities, including doctors' offices and medical care centres, must be encouraged in these areas.
- Detailed landscaping for the Node must be designed, in order to enhance the character and identity of each of the areas.
- The provision of facilities for optimal pedestrian movement must be implemented.
- A site development plan must form part of the land use change application.

5.6.5 DEVELOPMENT CORRIDORS, SPINES AND STREETS

Development corridors occur along major regional movement routes such as major highways and arterials or a railway line. Corridor developments include activity spines and activity streets and will be combined for the SDF as corridors which include the following:

General Business Corridor – including higher density housing, business and public transport routes on either side of a primary transport route.

The following general business corridor, spines and or streets have been identified:

- **Warrenton**
  (**GBC1**) – a business corridor has been identified along Magaretha Prinsloo Street running from the N12 in a north-western direction linking with the N18. The proposed business corridor is based on the NCPSDF that identified the N12 and N18 as major movement corridors within the Province.
  It is proposed that a detailed urban design be compiled to enhance the sense of place in the area. Closely linked to a marketing strategy, this will also attract investors to the area.

- **Warrenvale/ Ikhutseng**
  It is proposed that GBC1 be extended over the long term in a south-eastern director along the main entrance, activity spine promoting it into a movement corridor. Although there is currently a lack of business erven along the movement corridor, the potential for future development is there. The outward expansion of the movement corridor will ultimately integrate with the proposed N12 node (**N12**)

General Business Corridor Policy:

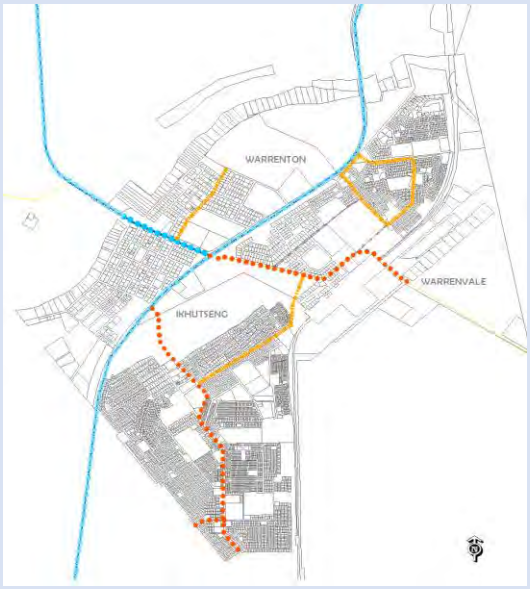
- A General Business Corridor includes the first row of erven on each side of the identified street.
- This area can house a combination of land uses, including high density housing, business activities, authority uses, open spaces, and institutional components.
- Proposed Land uses must complement other existing land uses and must not jeopardise the aesthetics and functionality of the area.
- The provision of facilities for optimal pedestrian movement must be implemented.
- A Site Development plan must form part of the land use change application.

Activity Spines and Movement Corridors – including development alongside major connector routes, between two important destinations (e.g. an activity node on either end). Access to land uses is allowed along an activity spine, but the movement of traffic is still a key component to consider. It is important for an activity spine to achieve balance between promoting access, creating a pedestrian friendly environment and accommodating traffic mobility.

The following activity spines and movement corridors have been identified:

- ***Warrenton***
  An activity street linking the proposed future residential area with the centre of town is proposed.

- ***Warrenvale***
  An activity street is proposed that will increase traffic flow from Warrenvale to Ikhutseng limiting the use of the N12 for daily commuting purposes. Upgrading of these activity streets to paved surfaces is important in order to motivate use thereof.
  Smaller activity streets are proposed within Warrenvale, to increase and move effective flow of transport.



- ***Ikhutseng***
  An activity spine is proposed along the main activity street located next to the proposed NN3. This will not only increase access to the node, but will enhance traffic flow. Ultimately it will become a collector road.
  Smaller activity corridors are proposed through Ikhutseng to enhance traffic flow.

Activity Spines, Streets and Movement Corridors Policy

- Activity Spines and Streets include the first row of erven on each side of the identified street. This area can house a combination of land uses, including guesthouses, hotels, bed and breakfasts, and business activities, such as Coffee Shops, Curio Shops, and Craft Centres.
- Development of these mixed land uses should be clustered along the streets or adjacent to neighbourhood nodes.
- The provision of facilities for optimal pedestrian movement must be implemented.
- A Site Development plan must form part of the land use change application.
- Upgrading of activity spines and streets should have priority in the IDP projects.

5.6.6 FUTURE GROWTH MANAGEMENT (NEIGHBOURHOODS)

The Municipality's approach to managing the direction and form of future urban growth in Warrenton is based on the approach to maintain a clear urban edge around all settlements – large and small – in the municipal area.

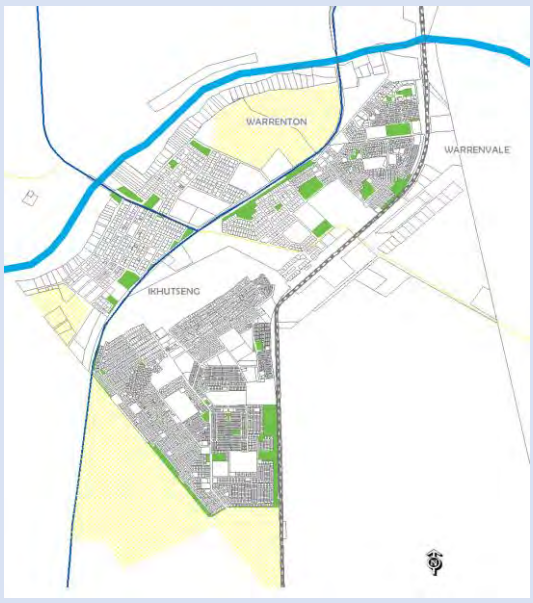
Based on research into the medium term requirements for new urban land, the suitability of surrounding land for urban development, and potential for inward urban growth (i.e. through infill of vacant and underutilised land and densification of existing areas) - an urban edge for Warrenton has been delineated (**Map 50: SDF**).

According to municipal data there are an excess of erven available for future residential development, within the confines of the proposed urban edge. This excludes significant low cost (subsidy) housing development opportunities. It is therefore sensible to maintain a relatively conservative urban edge around Warrenton.

At this stage, improving Warrenton does not require making it spatially bigger, but rather using existing urban areas more effectively. Where future residential areas have been identified, these proposals have been divided into three categories namely:

- 1 – 5 year (Immediate to short term developments)
- 5 – 10 years (Medium term developments)
- 10 – 15 years (Long term developments)

Areas for future growth has been identified throughout Warrenton, these areas should be only developed once all proposed options for infill planning and/or densification have been fully developed.



Future development of these areas are subject to township establishment procedures including infrastructure services report and environmental assessments. Due to lack of bulk services.

FD1 – have been identified as a short term development opportunity.
FD2 – extension of Ikhutseng into a south-western direction towards the N12 was earmarked for medium to long term development. The character of the existing Ikhutseng (low density residential) should be promoted into the new area.
FD3 – extension of Ikhutseng in a southern direction was earmarked for long term development.
FD4 – the area north of Warrenton towards the Vaal River has been earmarked for leisure residential over the long term.
FD5 – the small area between Warrenvale and the N12 is earmarked for residential infill planning with a buffer along the N12. This area is however reserved as a last option to expansion and should be seen as long term development. Due to the two buffers (N12,

railway and river) Warrenvale has reached its maximum development potential. The area between Warrenvale and Ikhutseng is the only alternative for expansion of Warrenvale.

FGM Policy

- An urban fringe was identified. This boundary line should preferably not be crossed with proposed new developments.

- Managing the direction and form of new urban growth so that it is sustainable.
- Focus on making settlements "better", through inward growth and development, as opposed to making them spatially bigger.
- Developing and maintaining a system of interdependent settlements, with distinct roles and a complementary mix of activities.
- Maintaining a compact settlement form to facilitate internal settlement restructuring and integration of activities for better efficiency in service delivery and better use of resources.
- Avoiding investing in "Greenfields" residential developments that are detached from the existing network of human settlements.
- Promoting a form of urban development respectful of the environment and historic development patterns.
- Enhancing existing river corridors and open spaces to create functional open spaces connected to each other
- Promoting development that supports public transport

5.6.7 MUNICIPAL OPEN SPACE SYSTEMS (MOSS)

An open space system fulfils a number of functions. These functions include hazard avoidance, resource conservation, ensuring social well-being and educational. With development and urbanisation in the municipal area becoming more evident, the protection and importance of open space has been highlighted and identified as an important aspect of planning. These functions of an open space system are listed in more detail in Table 4.

TABLE 42: MOSS FUNCTIONS

Hazard avoidance	Resource conservation	Recreational and psychological	Educational
Open spaces must reserve flood prone areas. Open spaces must reserve steep slopes and geologically unstable ground. Open spaces should protect drinking water sources from being contaminated.	Open spaces must protect water sources. Open spaces must protect linked areas of conservable indigenous vegetation.	Developed and maintained open space must be provided for recreational purposes. Open space must be provided for social interaction and as symbols of community identity. Open spaces must be protected for psychological relief from the stresses of urban live.	Open spaces must be protected for environmental education purposes. Well-equipped and designed open spaces must be provided for sport education

(Maluleke Luthuli and Associates, 2005)

In principle the Urban Open Spaces within the municipality is seen as vital resources to enhance the quality of life within for all residents.

An ***open space system*** needs to be developed for Warrenton that includes all natural elements of value linked to each other through a continuous open space lattice. Environmental elements included in the open space system include natural features, proclaimed nature reserves and rivers environments. The Magareng SDF also makes proposals towards the open space system.

The focus of the Policy document and framework is aimed at defining the official position of the Magareng Local Municipality towards the conversation and maintenance of its urban open spaces, the utilisation thereof by various users, the design and development of current and additional urban open spaces as well as the alienation of certain areas which is not suited as urban open spaces. Furthermore the incorporation of previously existing policies as well as new issues emerging from the discussions in the formulation of the Urban Open Space Framework must be included within this policy.

MOSS Policy:

- No land indicated as part of the MOSS under SPC A.a and A.b, as well as SPC B.a and SPC B.b (Ecological Open Space) will be utilised for any other land use, except in unforeseen circumstances and very well motivated cases.
- Only activities that have an acceptable ecological footprint are permitted in SPC B. Where applications are made for such developments the onus is on the applicant to prove the desirability and sustainability of the proposed development.
- No structures and permanent human habitation will be permitted below the 1:50 year flood line of the Vaal River and or any other local rivers or storm water component in Magareng.
- In the case of existing building, resorts and developments below the flood line and or where the flood line has been altered, the development and or redevelopment may be allowed on the condition that a comprehensive flood management plan is drawn up and approved by the various authorities. Such a plan must focus on flood proofing buildings, construction of buildings on fill above the flood level, buildings on piers and columns and taking into consideration the flood height, duration of floods and velocity of water flow.
- Where social open spaces are conveniently located in the centre of a community, the multi-use of such spaces can be obtained by

incorporating the usage of urban agriculture, parks, sport grounds and even cemeteries into one space.

- Ribbon development along the riverbanks (refer specifically to the Orange River) outside the defined urban edge is prohibited.
- River bank development must be behind the ecological setback lines including flood and storm surge lines (1:50 year flood line for property boundaries and 1:100 years flood line for building footprint)

5.6.8 GROWTH AREAS

The identification of future growth areas and opportunities for development are included in the SDF Maps. This includes the redevelopment of existing areas, green field sites and leading the market in order to invest in certain areas. The municipalities and settlements of the Northern Cape fall within one of the classes or typologies summarised below.

TABLE 43: EXTRACT FROM THE INTEGRATED SETTLEMENT PROFILES

CLASS	DEVELOPMENT POTENTIAL	DESCRIPTION
1&2	"Very low" and "Low" growth potential	Settlements in this category possess limited economic and human resources, devoid of potential to stimulate the urban economy in a significant way. The difference between 'Low' and 'Very low' is only a degree variation.
3	"Medium" growth potential	The development indices of settlements in this category are roughly in line with the average value of the provinces' aggregate on the 115 settlements. Consistent and moderate growth prevails in these settlements and certain sectors of the economy show signs of growth, or have the potential for it.
4&5	"High" and "Very High" growth potential	Settlements in this category experience sustainable growth above the provincial average. They already have an established and proven track record as 'growth engines' at a certain level. They have the potential to grow at a sustainable and powerful rate in line with the capacity of their resources and to operate as service providers to a relatively extensive gravitational area. The difference between 'High' and 'Very High' status only lies in the diversity and intensity of the town dynamics.

(NCPSDF, 2012)

The PSDF supports the principle that the capital (resources) of the province are to be developed and employed in an equitable manner in order to generate sustainable benefit for the province as a whole. Accordingly, the aim is to facilitate the employment of the various forms of capital vested in the province to achieve sustainable development goals and objectives in the settlements. The *Capitals Model* (Forum for the Future 2010) was used to define and describe the various forms of capital of the province, namely:

Environmental Capital:

For the purposes of the PSDF environmental capital has been defined in accordance with the broad description of the 'environment' put forward by NEMA, namely the aggregate of all external conditions and influences affecting the life of an organism. In particular, 'environment' refers to the surroundings within which humans exist and that are made up of:

a) the land, water and atmosphere of the earth;
b) micro-organisms, plant and animal life;
c) any part or combination of (a) and (b) and the interrelationships among and between them; and
d) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

The environmental capital of the province includes the natural resources (energy and matter) and processes needed by the province and its communities to achieve their goals and objectives. It also comprises invisible and intangible elements such as natural sinks that absorb, neutralise or recycle wastes, and processes, such as climate regulation, the carbon cycle, and the nitrogen cycle that enable life to continue in a balanced manner.

Monetary Capital:

Smith et al (2001) describe monetary capital as those inputs that are necessary in economic processes and that endure (as opposed to inputs that are used up upon consumption). It is, in other words, what we pass on today so that the economy may continue tomorrow. As a concept, capital aligns very well with the temporal aspect of sustainable development. The essence of sustainability is that we wish economic production to continue for the benefit of the future (not because production is inherently good but because it contributes to human welfare). To do this, we need to maintain the means of production – capital – intact over time. Capital embodies much of what is necessary to create the flows of services and materials necessary for economic production, today and for the future.

If capital is maintained constant or growing over time, then economic production too can be sustained over time. The PSDF builds on the contention that there is a huge volume of latent monetary capital vested in the Northern Cape that is not being unlocked under the current land-use regimes, with the result that the local communities only receive limited benefit from such capital, and then only through 'trickling-down'. The PSDF intends to give effect to the imperative of economic efficiency which refers to making the best use of available resources, including human resources, funds, land, infrastructure, etc. Economic efficiency is also understood as the optimisation of benefit at the lowest cost for valued things.

Infrastructural Capital:

Infrastructural capital is material goods and infrastructure owned, leased or controlled by government and the private sector that contribute to production or service provision, but do not become part of its output. The main components include roads, communications, community service centres, waste disposal systems and technologies. The PSDF proposes to enhance and utilise this form of capital through the following:

a) Using infrastructure, technologies and processes in an efficient manner.
b) Reverse logistics and re-use and re-manufacturing systems.
c) Zero-waste and zero emissions production systems.
d) Industrial ecology (i.e. promoting synergistic production systems where the waste stream of one enterprise is used by another enterprise).
e) Improvements in product systems (eco-efficiency and eco-innovation).
f) Sustainable construction techniques.

Social Capital:

The Forum for the Future (2010) defines social capital as any value added to the activities and economic outputs of an organisation by human relationships, partnerships and co-operation, and human capital as the health, knowledge, skills, intellectual outputs, motivation and capacity for relationships of the individual. Poverty and inequality stands in the way of human and social development and it needs to be recognised that the only way to reduce poverty is to grow the economy. A primary objective of the PSDF is to improve the well-being of the people of the Northern Cape and to fulfil a leading role in addressing the issues of poverty, inequality, empowerment and transformation. Intellectual capital and knowledge management is increasingly recognised as a key intangible creator of well-being.

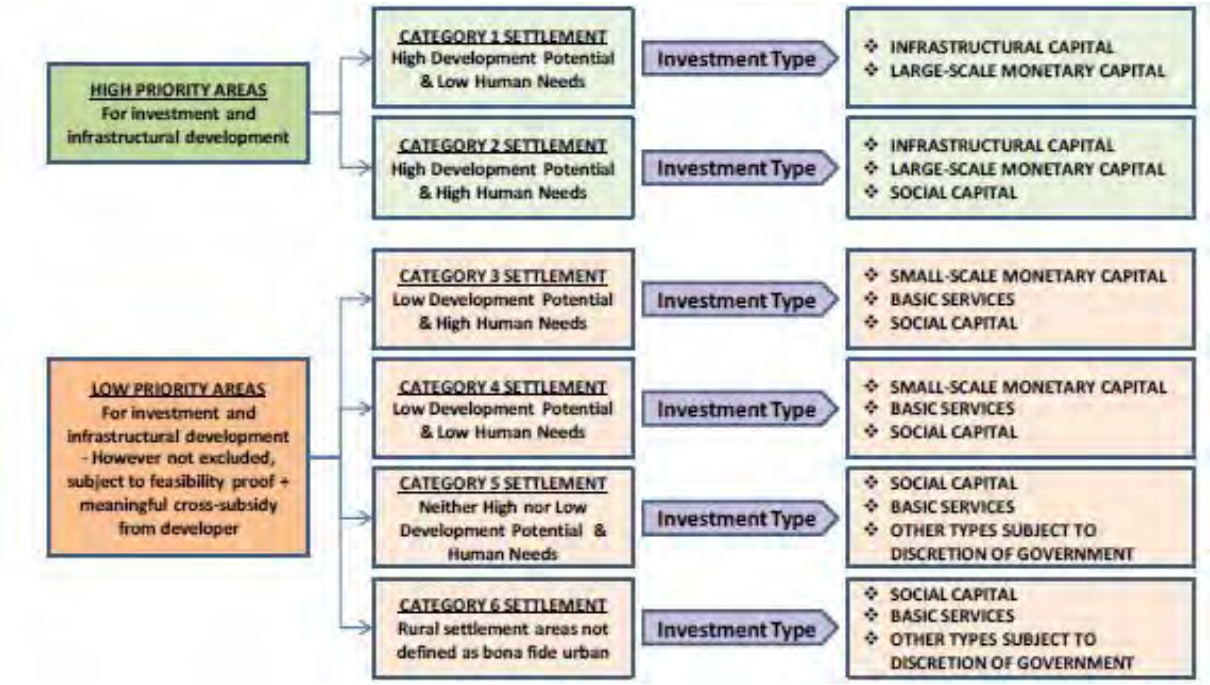
Damaging social/human capital by abuse of human or labour rights or compromising health and safety has direct, as well as reputational costs. The PSDF builds upon and aims to enhance the social relationships and interactions among the communities of the province. In this regard, social capital takes the form of shared values, trust, efficient communication, and shared cultural norms which enable people to work cohesively and reach its objectives. A key objective is to create appropriate social structures that will help create a climate of consent within which wider functions of society are possible.

While the idea of focusing government spending on fixed infrastructure in areas with potential for economic development may seem to exclude other areas/settlements from development this is, in fact, not the case. Different regions and settlements have different economic potential and the spatial variations in the incidence of poverty are also vastly different.

According to the NSDP these diverse and disparate spatial contexts suggest a policy approach that, in itself, should be differentiated and conducive to the requirements of the different contexts. Hence, in areas of low or no economic potential, the path of development and poverty reduction should be through a focus on investment in social capital (e.g. education, training, social welfare, rural development planning, land and agrarian reform, expansion of agricultural extension services, etc.)

This means that each individual settlement should discover its real development potential and then grow to the maximum of that potential. It is important to stress that the NSDP and the PSDF do not in any way rule out investment in small settlements *per se.* What matters is whether an area has the potential to grow economically in a sustainable way, create jobs and alleviate poverty (NCPSDF, 2012).

FIGURE 36: GENERAL APPROACH TO THE APPROPRIATION OF CAPITAL



(NCPSDF, 2012)

The next figure as described in the NCPSDF indicates the settlement categories in terms of their level of Human Need and Economic Potential.

FIGURE 37: SPATIAL PLAN FOR SPC D INDICATING THE SETTLEMENTS CATEGORISED IN TERMS OF THEIR LEVEL OF HUMAN NEED AND ECONOMIC POTENTIAL

(NCPSDF, 2012)

TABLE 44: EXTRACT FROM THE INTEGRATED SETTLEMENT PROFILES

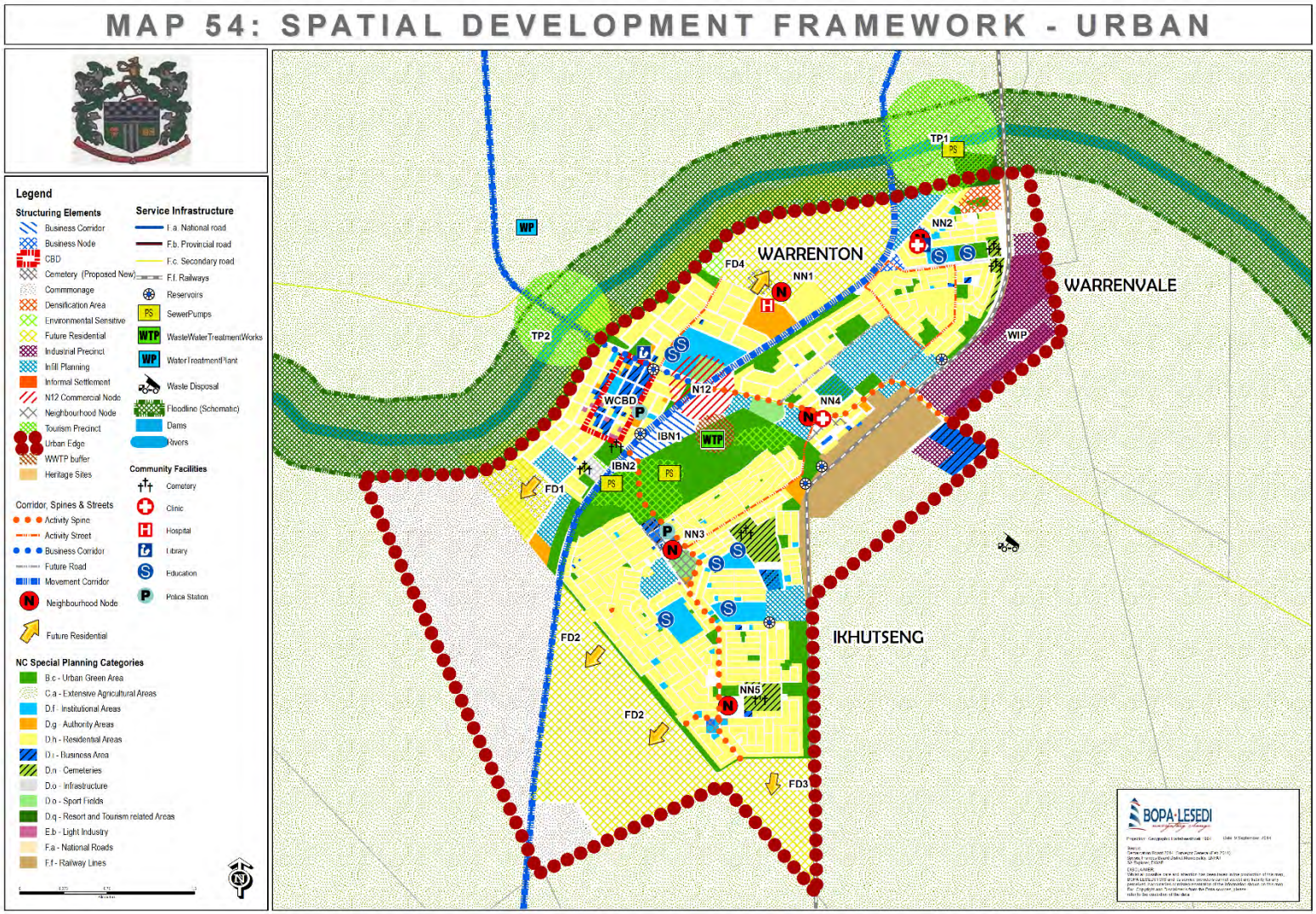
Population	Economic Base	Potential & Needs	Investment Type
Large	Agriculture	Transition	Infra & Social

(NCPSDF, P 130, 2012)

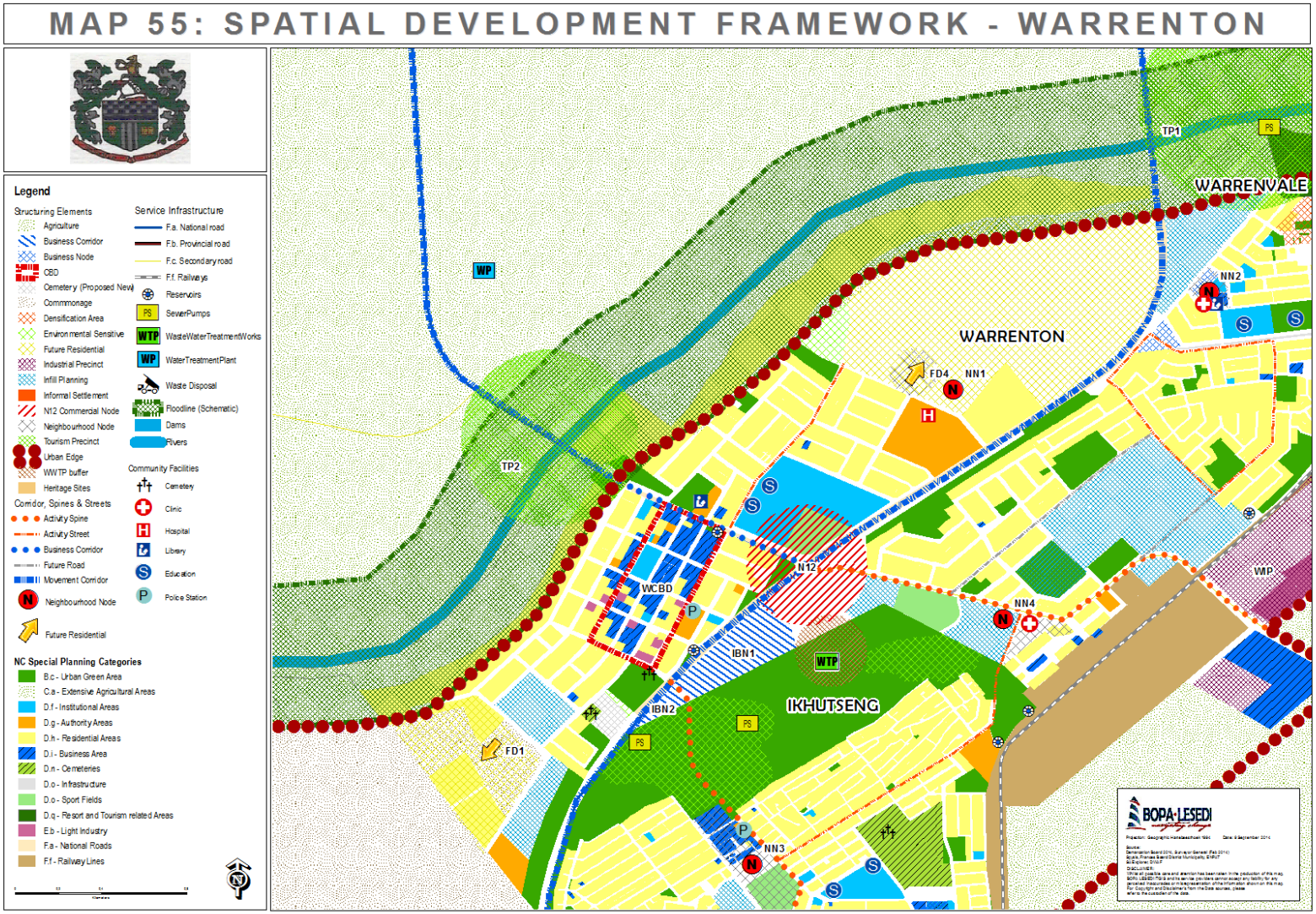
In order to provide a premise for the appropriation of public funds and the investment of private resources the above mentioned table provides a summary of the profiles of the settlements in Magareng as it relates to their economic base (type of settlement), development potential and human need, and investment type required.

Warrenton is classified as an Agriculture centre that related to traditional service centres are those settlements with a substantial component of agriculture activities within the town structure.

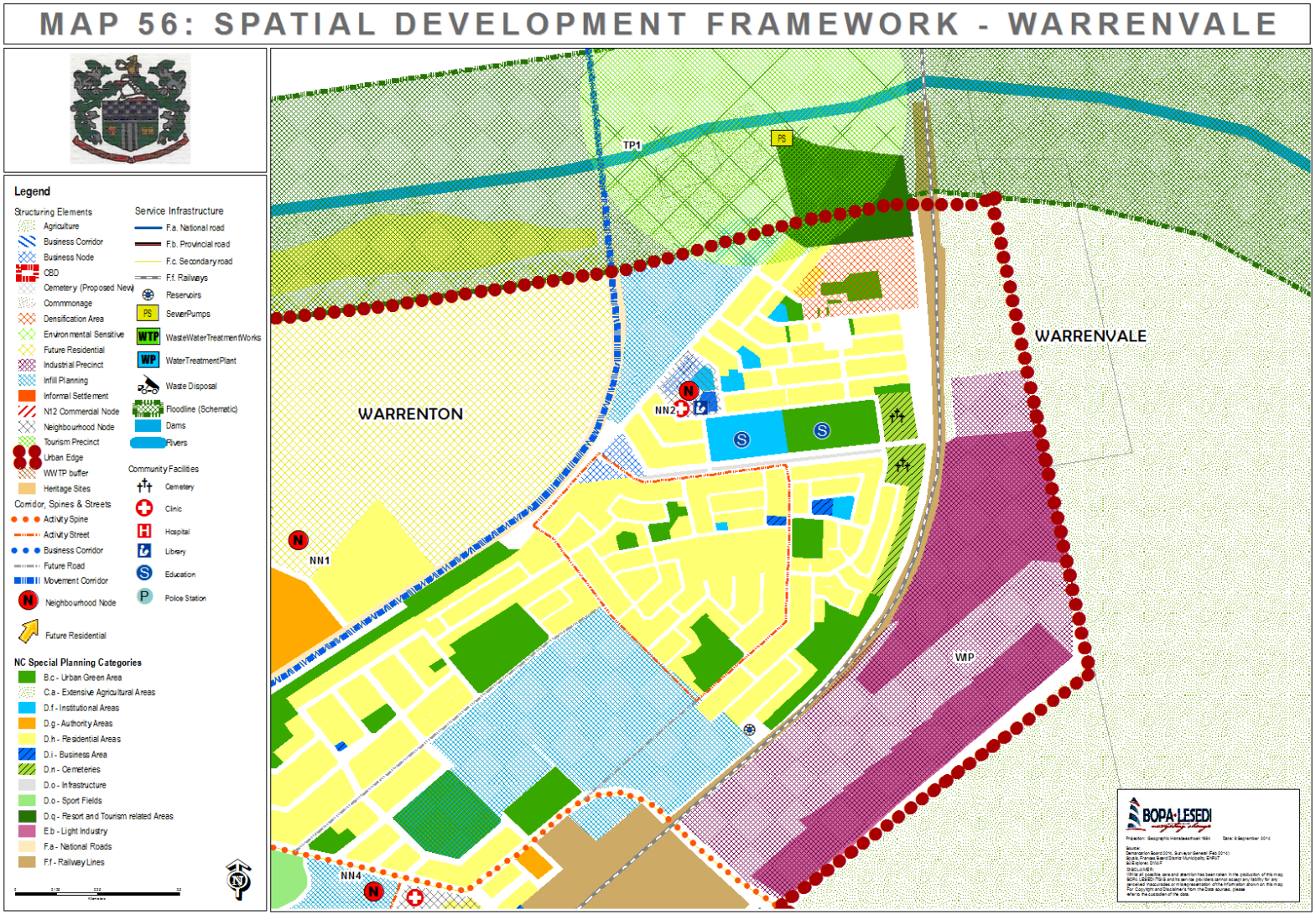
MAP 54: SDF PROPOSAL BROAD FRAMEWORK FOR WARRENTON



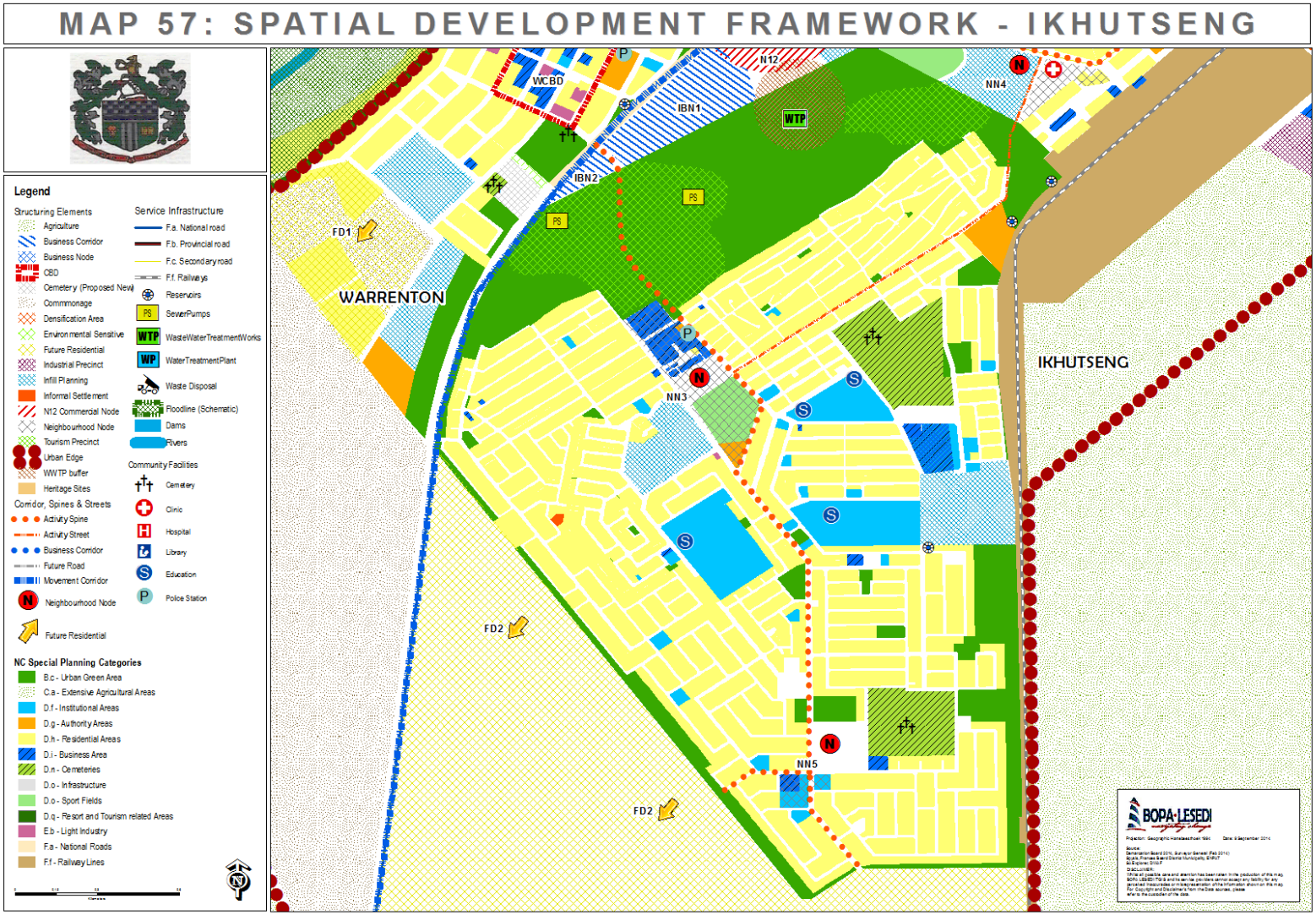
MAP 55: SDF PROPOSAL BROAD FRAMEWORK FOR WARRENTON - CENTRAL



MAP 56: SDF PROPOSAL FRAMEWORK FOR WARRENVALE



MAP 57: SDF PROPOSAL BROAD FRAMEWORK FOR IKHUTSENG



6 IMPLEMENTATION PLAN

6.1 INTRODUCTION

As part of the Magareng SDF its implementation is crucial to the development of the municipal area and its communities. Through the IDP, the SDF will influence budgeting and resource allocation and specific interventions will be measured through the performance management system. Practical implementation of the SDF will be achieved through the further detailed planning of special development areas and the Magareng Integrated Zoning Scheme (Land Use Management System), still to be formulated.

The SDF proposals are implemented in a number of ways:

- Direct Investment by the municipality in infrastructure and development (projects);
- Policies and guidelines which provide the private sector and other stakeholders with the tools and incentives to implement the SDF;
- Alignment with other Planning Policies and Documents;
- Integration with IDP.

The Department of Planning and Development in Magareng will be responsible for the oversight of the implementation of the SDF. It is important that the document be updated annually to reflect the change in information, technology as well as human needs.

6.2 PROPOSED PROJECTS

Each project must be identified for the implementation phase and must be scored in terms of compliance with the five spatial fundamentals, alignment with provincial, district and local SDF, and benefit to the local community. A final score for each project determines the priority. The proposed projects are included in Map 58.

The table below gives an indication of the method of scoring where the Odd-Even-Odd number method is used. The scoring method is applied to each of the identified projects resulting in a score as a result of the Magareng SDF.

TABLE 45: SCORING CHARTER

Low			Medium			High		
Low Low	Low Medium	Low High	Medium Low	Medium Medium	Medium High	High Low	High Medium	High High
1	3	5	6	8	10	11	13	15
Maintaining Status Quo.			Ensure a moderate improvement.			Enable the Municipality to fulfil its mandate.		

The following table presents a list of key projects and/or actions which were identified in order to give effect to each of the Spatial Objectives as defined in the previous Chapter.

Prj No.	Projects/Actions	Priority	Time Frame	Responsible
Objective 1 **: Protection of all conservation sites including terrestrial land and aquatic systems.**				
EM 1.1.1	Prepare and implement a Municipal environmental Management Plan that includes guidelines for development in environmental sensitive area, policy for conservation of all aquatic systems (EMP) and marketing of conservation areas. The possibility of establishment of a conservation area along the Vaalhart Dam should be investigated.	Medium	0-5 years	Provincial Government District Municipality Local Municipality
Objective 2: **To create an open space system throughout the municipal area that promotes ecological ecosystems.**				
EM. 2.1.1.	Prepare and implement a MOSS policy for all urban areas that address the promotion of conservation of open space area with the municipality.	Medium	0-5 years	Provincial Government District Municipality Local Municipality
EM.2.1.2	1/50 and 1/100 flood lines must be determined. Public awareness of these flood lines and the implication of building under them must be promoted at the community.	High	0-2 years	Provincial Government District Municipality Local Municipality
EM.2.1.3.	Compile a Heritage register where all heritage site have been recorded.	Low	0-5 years	Provincial Government District Municipality Local Municipality
EM.2.1.4.	Compile a Local Tourism Strategy highlighting tourism resources as well as opportunities including marketing strategy for the Municipality. The tourism strategy should be closely integrated with the LED of the municipality.	Medium	0-5 years	Provincial Government District Municipality Local Municipality

Prj No.	Projects/Actions	Priority	Time Frame	Responsible
EM.2.5.4.	Compile a disaster management plan that links with the flood line determination as well as other disasters.	High	0-2 years	Provincial Government District Municipality Local Municipality
Objective 3: **To assist in the development of the agricultural sector of Magareng including land reform and commonage.**				
LED.3.1.1.	The development of an agricultural development strategy including commonage and small scale farming: A detail agricultural development strategy focusing on the potential of agricultural land should be development. Special emphasis should be placed on marketing opportunities as well as local economic development. Sustainable management of the municipal communal land as well as possible assistance from Municipality to small scale farmers should be included.	High	0-3 years	Provincial Government District Municipality Local Municipality
LED.3.1.2.	Compilation of a local LED for Magareng: A fully-fledged Economic Development Plan must be developed for the Municipality as a whole flagging the opportunities within the urban areas.	High	0-3 years	Provincial Government District Municipality Local Municipality
Objective 4: **To promote sustainable development of towns that will enhance the living conditions of the communities.**				
LU.4.1.1.	To compile a township revitalisation and urbanization plan: A detail plan for urban revitalization in all urban areas must be development with the aim to increase the since of place as well as visual ascetics of the area	High	0-5 years	Provincial Government District Municipality Local Municipality

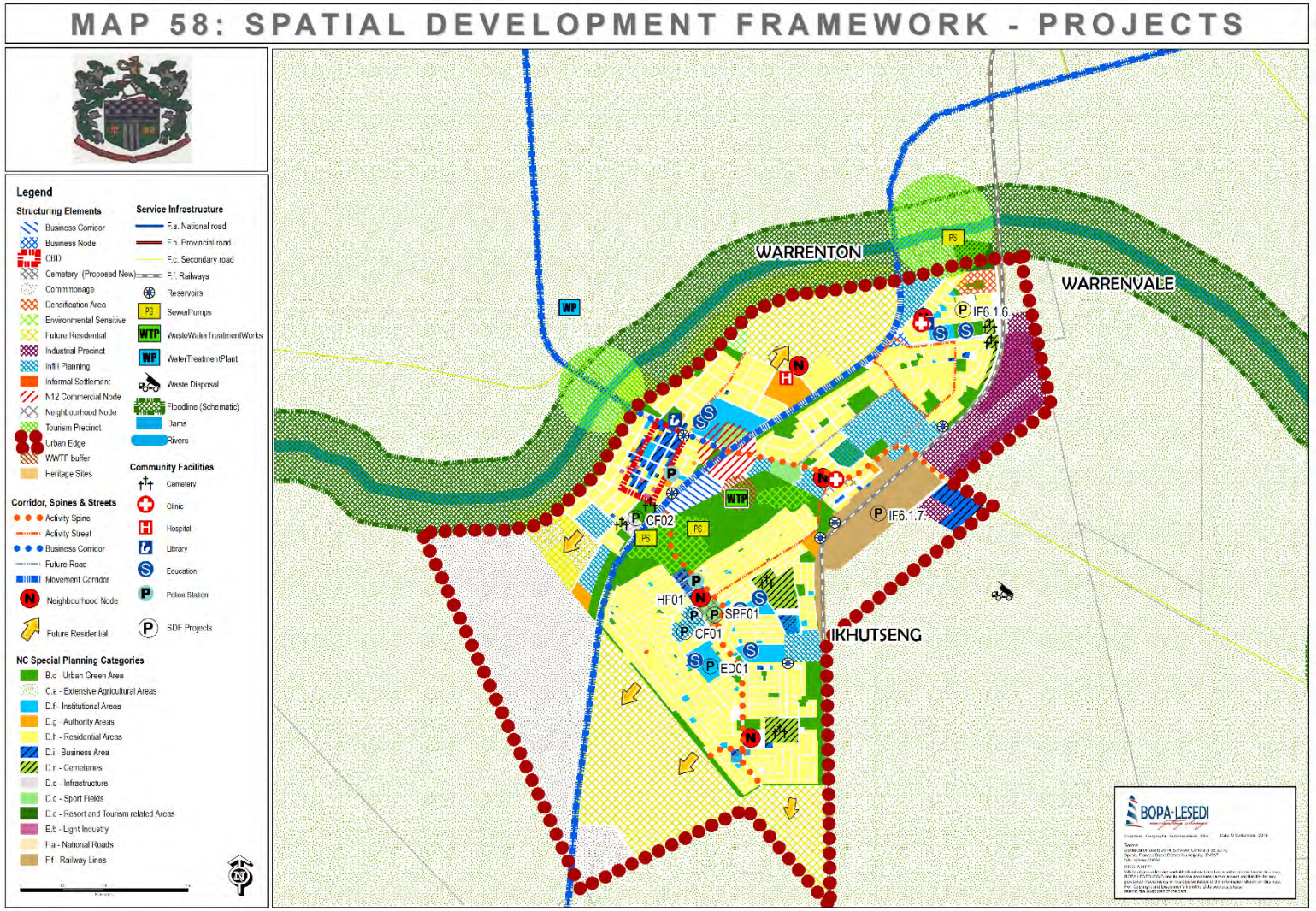
Prj No.	Projects/Actions	Priority	Time Frame	Responsible
LU. 4.1.2.	Compile housing sector plan: A detail housing plan which addresses all issues related to housing and future development should be compiled. It is important that as part of this project a detail survey be conducted to reflect the true number of housing need as well as backlog within the Municipality.	Medium	0-5 years	Provincial Government District Municipality Local Municipality
LU.4.1.3.	Compile integrated zoning plan: A detail interacted zoning scheme in accordance with SPLUMA and Northern Cape Planning Act must be compiled to manage development and land use in an effective manner.	High	0-2 years	Provincial Government District Municipality Local Municipality
LU.4.1.4.	Compile regulation and guidelines on for all precinct plans: A detail precinct/ urban design framework must be developed in order to set minimum requirement and give guidance for all future development.	High	0-5 years	Provincial Government District Municipality Local Municipality
LU.4.1.5.	Compile a tavern, bottle store and club policy: A detail policy addressing the implementation of above land uses must be compiled in order to give guidance to the municipality in allowing these land uses.	High	0-2 years	Provincial Government District Municipality Local Municipality
***Objective 5*: The stimulation of the local economy by exploring and development of new economic development opportunities within the municipality.**				
LED 5.1.1.	Develop an industrial precinct plan including opportunities to revive the existing infrastructure.	Medium	5 - 10 years	PRASA District Municipality Local Municipality Private Sector

Prj No.	Projects/Actions	Priority	Time Frame	Responsible
LED 5.1.2.	Development of a Marketing strategy for the Municipality insuring the optimal utilisation of all existing buildings and facilities and to promote the urban area of Warrenton for future investors.	Medium	5 - 10 years	District Municipality Local Municipality
LED.5.1.3.	Development of a mining plan identifying all possible areas for mining exploitation as well as the impact there off on the environment.	High	5 - 10 years	District Municipality Local Municipality
LED.5.1.4.	Conduct a feasibility study on the establishment of a Cultural Centre as part of N12 node	High	5-10 years	Provincial Government District Municipality Local Municipality Private Sector
LED.5.1.5.	Conduct a detail feasibility study as well as business plan for development of N12 node			
Objective 6: **To address social decay by provide sustainable infrastructure including buildings, education, recreation facilities and social services to the entire municipal area.**				
Objective 7: **To improve connectivity and linkages to the region**				
IF 6.1.1.	Provision of a water management plan to address the current issues of water shortage within the municipal area. Special emphasis should be placed on the upgrading of the water treatment works that is already at maximum capacity.	High	0-5 years	Provincial Government District Municipality Local Municipality
IF 6.1.2.	Provision of a sanitation plan as part of the water management plan must be compiled addressing future growth.	High	0-5 years	Provincial Government District Municipality Local Municipality

Prj No.	Projects/Actions	Priority	Time Frame	Responsible
IF.6.1.3.	Provision of electricity management plan.	High	0-5 years	Provincial Government District Municipality Local Municipality
IF.6.1.4.	Provision and maintenance of sport and recreation facilities: A detail plan should be developed for the prioritisation of upgrading of existing sport facilities.	High	0-5 years	Provincial Government District Municipality Local Municipality
IF.6.1.5.	An Integrated Transport Plan must be developed in order to propose appropriate solutions for the transport, connectivity and movement systems in the municipality. In order to improve roads, inter-connectivity and accessibility.	High	5 - 10 years	Provincial Government District Municipality Local Municipality
IF.6.1.6	Upgrading of internal streets: identification and prioritization of all internal streets to be upgraded.	High	Ongoing	National Government Provincial Government District Municipality Local Municipality
IF.6.1.7	Identification and costing of all connector roads to be upgraded in the municipality.	Medium	Ongoing	Provincial Government District Municipality Local Municipality
IF.6.1.8	Revive old railway facility and infrastructure; investigate the possibility of the revival of the existing railway network for freight and passengers between Northern Cape and Gauteng.	High	0-2-years	PRASA District Municipality Local Government

Prj No.	Projects/Actions	Priority	Time Frame	Responsible
IF.6.1.9	Develop a waste management plan.	High	0-2-years	Provincial Government District Municipality Local Municipality

MAP 58: IDENTIFIED SDF PROJECTS



6.3 MONITORING

According to the DRDLR Guideline document, it is also important to "monitor and evaluate the impact of the SDF on the spatial development and performance of the municipality. It is through the process of monitoring and evaluation that aspects or components of the SDF that need to be amended or strengthened will be identified."

The monitoring and evaluation framework is prepared as part of the SDF, although the actual monitoring will only start in Phase 7, once the SDF has been formally approved. The preparation of the monitoring and evaluation framework entails the formulation of measurable goals or key performance indicators that will assist in ensuring that the SDF is based in reality.

Municipal Tribunals as stipulated by Spluma will play a crucial role in the monitoring of the SDF. In order for the Tribunal to fully monitor development in accordance with the SDF document, any application of land use change must be measured in accordance with the SDF. The Tribunal must inform the Council regarding the alignment between the proposed development and the SDF document. The SDF must be amended at least every 5 years and specific implementation strategies can be updated yearly to align with the changing status quo and needs of the community.

The Magareng Municipality will be committed to evaluating and monitoring the impact of any activities, service delivery, development of the economy and future development of their towns. The assessment of these activities and outcomes can then be communicated back to the general public via the Council and into the organisation in order for them to continue to grow and adapt in ways that best suit the wider communities. As previously discussed, this particular SDF aims to provide a framework and strategy for future spatial and economic development, seeing that this framework also analysed the economic trends and aspects related to poverty, job creation, etc. as part of the process to develop an integrated framework. Therefore, many of the goals and objectives stated in the previous Chapters may also originate in the IDP. It is therefore proposed that the annual review of the IDP be extended to include a component that reviews progress on achieving the objectives of the SDF.