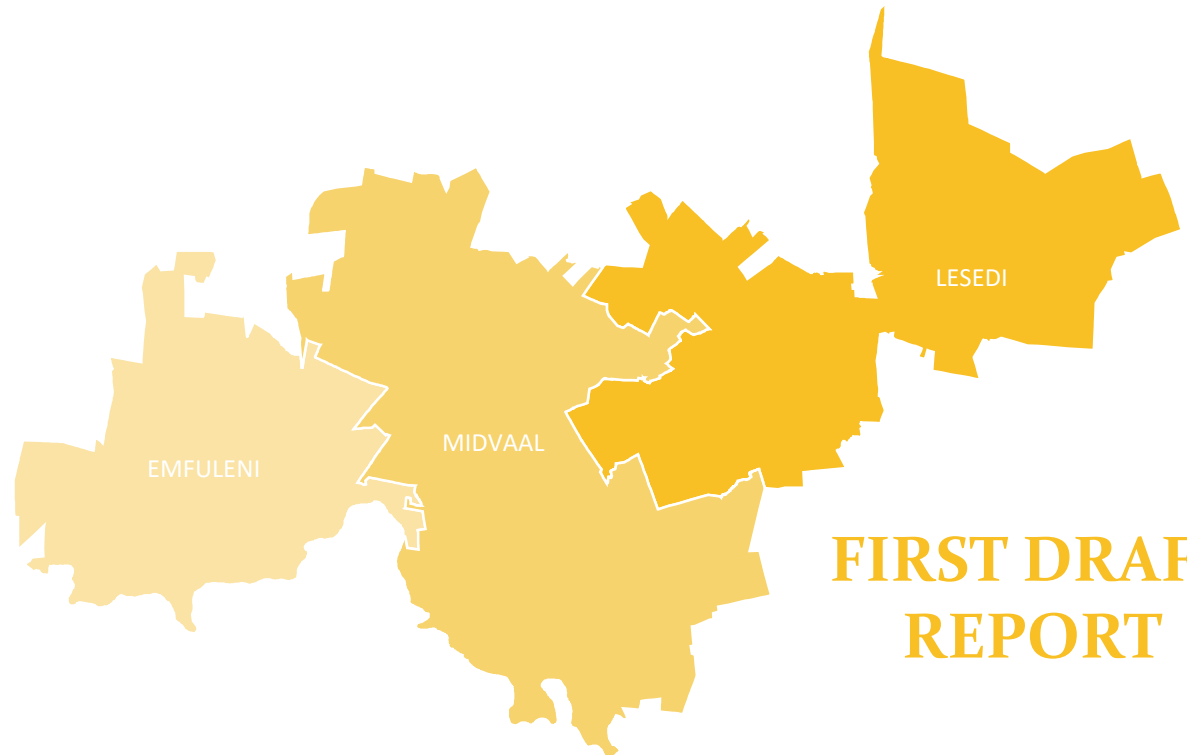




SEDIBENG

DISTRICT MUNICIPALITY

SPATIAL DEVELOPMENT FRAMEWORK



FIRST DRAFT REPORT

Phase 4: Spatial Proposals

Phase 5: Implementation Framework

January 2019

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1 INTRODUCTION

1.1 BACKGROUND

During October 2018 the Department of Rural Development and Land Reform (DRDLR) commissioned the compilation of a Municipal Spatial Development Framework for the Sedibeng District Municipality in line with the requirements of Section 12 of the Spatial Planning and Land Use Management Act, Act 16 of 2013.

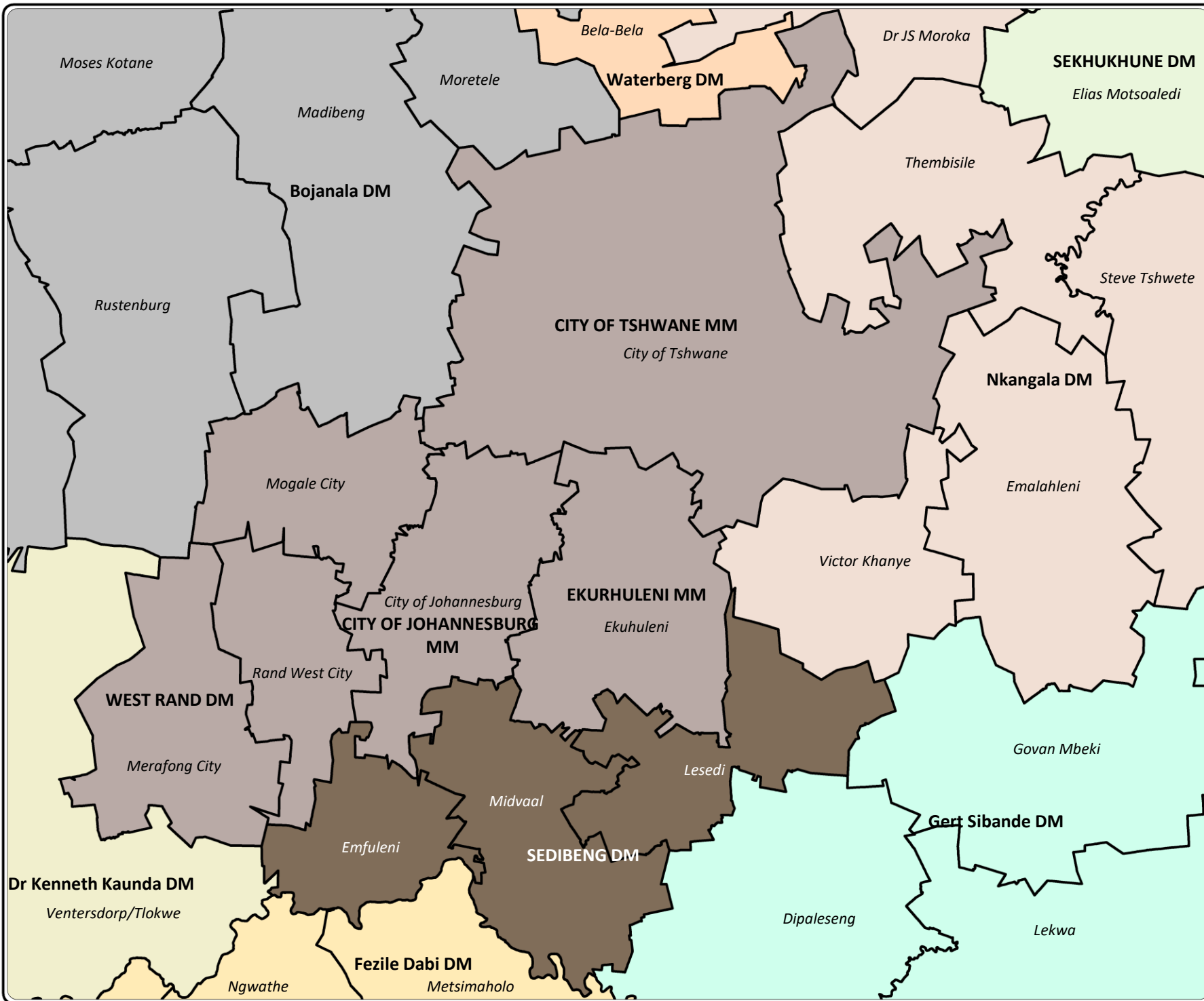
1.2 STUDY OBJECTIVES

The main objective of the project is to develop a SDF for the entire Sedibeng District Municipality area of jurisdiction which includes the Emfuleni, Midvaal and Lesedi local municipalities (refer to **Figure 1**). This SDF needs to address spatial, environmental and economic issues confronting both the urban and rural areas. The District Municipality is characterised by a dispersed spatial structure, with various towns and informal settlements spread across the entire municipal area, whilst the rural areas consist of a large number of farms, as well as agricultural holdings.

The SDF will also respond to the policy and legislative parameters established by National and Provincial Government, and take cognisance of the municipal space economy in the context of the provincial and national space economies.

More specifically, the Sedibeng District SDF will aim towards achieving the following objectives:

- Provide a strategic spatial development vision for the district in line with the broad development objectives of the National and Provincial policies;
- Provide a clear and comprehensive Spatial Framework for the district which will inform, improve and guide cross-sectoral policy alignment and project implementation and integration;
- Indicate in as much detail as possible to stakeholders the desired future spatial form for the district;
- Highlight planning, environmental, infrastructural and institutional issues that gave rise to the proposals contained in the final document;
- Provide all stakeholders an opportunity to participate during the process of formulating the SDF;
- Provide a spatial reflection of the needs and priorities established in the district integrated development plan and identify specific issues which are unique to the district;
- Address rural development issues such as the integration with urban areas, the provision of social facilities and the provision of infrastructure to rural communities;
- Identify areas for economic opportunities, particularly in the industrial, commercial, agricultural and tourism sectors;
- Identify infrastructure needs and services constraints and bring forward tangible solutions to address these;
- Accommodate the growing housing needs taking into account the current backlogs and the projected need for development of various



Sedibeng District Municipality

Regional Context

- Sedibeng DM
- City of Tshwane MM
- Ekurhuleni MM
- City of Johannesburg MM
- West Rand DM
- Bojanala DM
- Waterberg DM
- Nkangala DM
- Sekhukhune DM
- Gert Sibande DM
- Fezile Dabi DM
- Dr Kenneth Kaunda DM



housing methodologies (e.g. “Gap Housing”, Social Housing, FLISP, etc.);

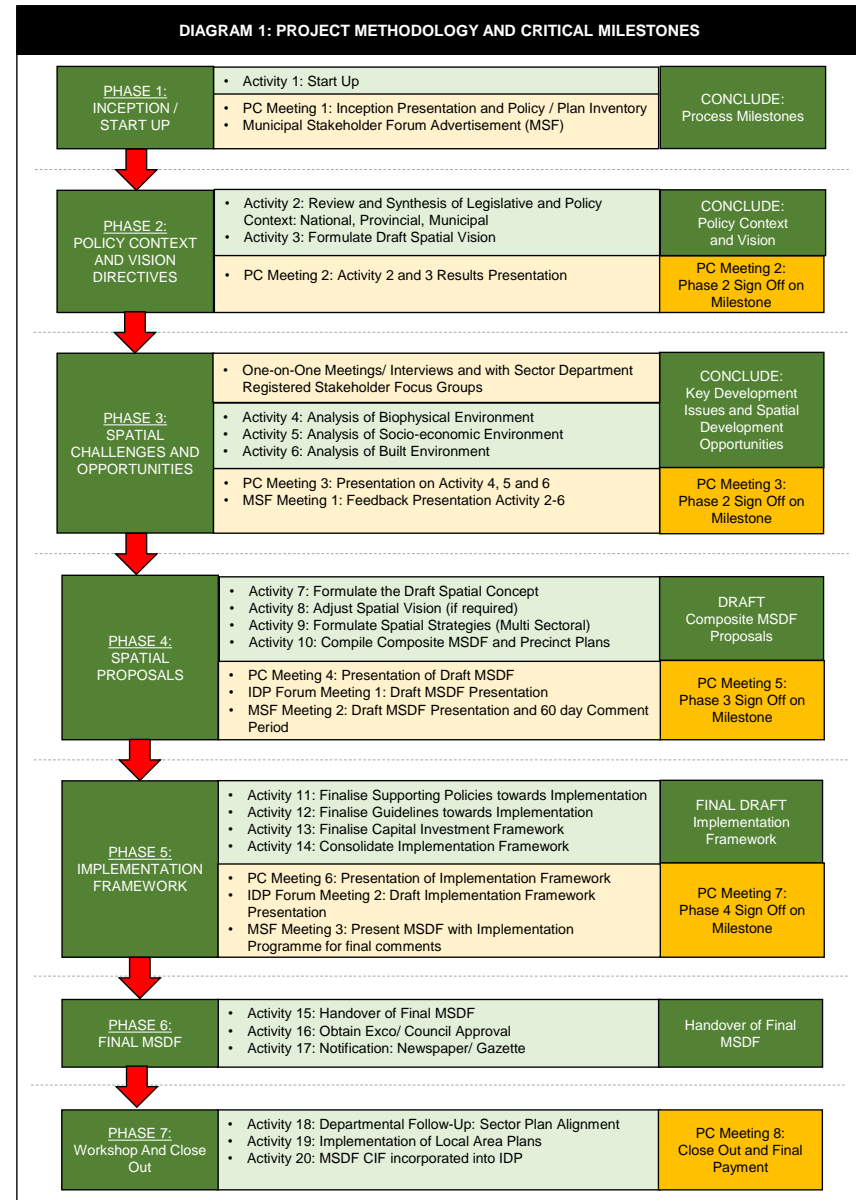
- Protect the natural environment, and more specifically hydrological and topographical resources, biodiversity areas, and high potential agricultural land.

1.3 METHODOLOGY

The approach and methodology followed in preparing the Sedibeng DM is graphically illustrated on **Diagram 1**. The process commenced during October 2018 and is scheduled to be completed by March 2019. (To be finalized after comment period).

2. LEGISLATIVE AND POLICY CONTEXT

This section of the Sedibeng SDF provides a concise summary of the National and Provincial Legislation and Policy Framework, as well as the local policy context.



2.1 NATIONAL CONTEXT

2.1.1 National Legislation

2.1.1.1 Constitution of the Republic of South Africa 108 of 1996

The Constitution of South Africa, contained in Act 108 of 1996, is the supreme law of South Africa. Amongst other things, it prescribes different functions to different tiers of government to ensure the equitable and functional distribution of roles, responsibilities and duties. In terms of section 156 of the Constitution, municipalities have executive authority in respect of the right to administer the functional area of “municipal planning” and more specifically to:

- a. structure and manage its administration, budgeting and planning processes to give priority to the basic needs of the community, and to promote the social and economic development of the community; and
- b. participate in national and provincial development programmes.

The Sedibeng Integrated Development Plan and Spatial Development Framework are two of the most important tools at the disposal of the municipality to fulfil these legal obligations.

2.1.1.2 Municipal Systems Act 32 of 2000

The Act requires all municipalities to compile an **Integrated Development Plan (IDP)** designed to ensure the progressive realisation of the fundamental rights of its citizens. Under Section 26(e) the Act requires that an **IDP must include a Spatial Development Framework (SDF)**.

2.1.1.3 Spatial Planning and Land Use Management Act 16 of 2013 (SPLUMA)

The Spatial Planning and Land Use Management Act, Act 16 of 2013 (SPLUMA) provides the legislative foundation for all spatial planning and land use management activities in South Africa (including the Spatial Development Framework noted above). It seeks to promote consistency and uniformity in procedures and decision-making relating to land use and development.

Development Principles:

SPLUMA further provides a host of development principles, which apply to spatial planning, land development and land use management. These are:

- The principle of **spatial justice**:
 - Deal with spatial imbalances and include areas that were previously excluded
 - Redress access to land for the previously disadvantaged
 - Plan for incremental upgrading and secure tenure

■ The principle of **spatial sustainability**, whereby spatial planning and land use management systems must:

- Promote land development that is within the fiscal, institutional and administrative means of the country
- Protect prime agricultural land and environmental resources
- Promote and stimulate the effective and equitable functioning of land markets
- Carefully consider social and infrastructural costs of land development
- Promote development in sustainable locations
- Establish viable communities

■ The principle of **efficiency**:

- Optimise efficient use of resources and infrastructure
- Minimise negative financial, social, economic or environmental impacts
- Efficient and streamlined application procedures

■ The principle of **spatial resilience**, whereby flexibility in spatial plans, policies and land use management systems are accommodated to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks.

■ The principle of **good administration**:

- Integrated approach to land use and land development

- Free-flow of information, plans and policies between and within tiers of government
- Empowering citizens

The Act clearly states that a Municipal SDF should be in line with the policies of national and provincial government and should be aligned with the plans, policies and development strategies of adjoining municipalities.

Contents of a Municipal Spatial Development Framework:

Section 21 of SPLUMA stipulates that the Sedibeng District SDF must at least comprise/ address the following:

- a) give effect to the development principles and applicable norms and standards set out in Chapter 2;
- b) include a written and spatial representation of a five-year spatial development plan for the spatial form of the municipality;
- c) include a longer term spatial development vision statement for the municipal area which indicates a desired spatial growth and development pattern for the next 10 to 20 years;
- d) identify current and future significant structuring and restructuring elements of the spatial form of the municipality, including development corridors, activity spines and economic nodes where public and private investment will be prioritised and facilitated;
- e) include population growth estimates for the next five years;

- f) include estimates of the demand for housing units across different socio-economic categories and the planned location and density of future housing developments;
- g) include estimates of economic activity and employment trends and locations in the municipal area for the next five years;
- h) identify, quantify and provide location requirements of engineering infrastructure and services provision for existing and future development needs for the next five years;
- i) identify the designated areas where a national or provincial inclusionary housing policy may be applicable;
- j) include a strategic assessment of the environmental pressures and opportunities within the municipal area, including the spatial location of environmental sensitivities, high potential agricultural land and coastal access strips, where applicable;
- k) identify the designation of areas in the municipality where incremental upgrading approaches to development and regulation will be applicable;
- l) identify the designation of areas in which—
 - i. more detailed local plans must be developed; and
 - ii. shortened land use development procedures may be applicable and land use schemes may be so amended;
- m) provide the spatial expression of the coordination, alignment and integration of sectoral policies of all municipal departments;
- n) determine a capital expenditure framework for the municipality's development programmes, depicted spatially;
- o) determine the purpose, desired impact and structure of the land use management scheme to apply in that municipal area; and

- p) include an implementation plan comprising of—
 - i. sectoral requirements, including budgets and resources for implementation;
 - ii. necessary amendments to a land use scheme;
 - iii. specification of institutional arrangements necessary for implementation;
 - iv. specification of implementation targets, including dates and monitoring indicators; and
 - v. specification, where necessary, of any arrangements for partnerships in the implementation process.

2.1.1.4 Synthesis

The Sedibeng District Municipality must fulfil its obligations set out in the Constitution, Municipal Systems Act and SPLUMA through the formulation of an IDP and SDF. The formulation of the Sedibeng SDF should adhere to the requirements of SPLUMA in as far as the principles, methodology and content are concerned.

2.1.2 National Policies

2.1.2.1 National Development Plan 2030

The National Development Plan 2030 - *Our future – make it work* - 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 capacity of the state and leaders working together to solve complex problems.

The thirteen key objectives and actions put forward by the NDP are summarized in **Table 1** below, with the specific objectives applicable to the Sedibeng DM elaborated upon in the second column:

Table 1: National Development Plan Objectives and Actions

NATIONAL DEVELOPMENT PLAN	
OBJECTIVES	ACTIONS APPLICABLE TO SEDIBENG DISTRICT
An economy that will create jobs	<ul style="list-style-type: none"> • Reduce the cost of living for poor households and costs of doing business through microeconomic reforms. • Broaden the expanded public works programme to 2 million fulltime equivalent jobs by 2020.
Economy Infrastructure – the foundation for social and economic development	<ul style="list-style-type: none"> • The proportion of people with access to the electricity grid should rise to at least 90% by 2030, with non-grid options available for the rest. • Ensure that all people have access to clean, potable water and that there is enough water for agriculture and industry, recognising trade-offs in the use of water. • Reduce water demand in urban areas to 15% below the business-as-usual scenario by 2030. • Ensure that all people have access to hygienic sanitation. • By 2030 public transport will be user-friendly, less environmentally damaging, cheaper and integrated or seamless.

NATIONAL DEVELOPMENT PLAN	
OBJECTIVES	ACTIONS APPLICABLE TO SEDIBENG DISTRICT
	<ul style="list-style-type: none"> • Consolidate and selectively expand transport and logistics infrastructure, with specific focus on the Durban-Gauteng freight corridor • Improved productivity of infrastructure and increased levels of public and private investment to a combined 30 percent of GDP.
Environmental Sustainability and Resilience – an equitable transition to a low-carbon economy	<ul style="list-style-type: none"> • Absolute reductions in the total volume of waste disposed to landfill each year. • Zero emission building standards by 2030. • Carbon price, building standards, vehicle emission standards and municipal regulations to achieve scale in stimulating renewable energy, waste recycling and in retrofitting buildings. • All new buildings to meet the energy efficiency criteria set out in South African National Standard 204.
Integrated and Inclusive Rural Economy	<ul style="list-style-type: none"> • Improved infrastructure and service delivery, a review of land tenure, service to small and micro farmers, a review of mining industry commitments to social investment, and tourism investments. • Create tenure security for communal farmers, especially women. • Investigate different forms of financing and vesting of private property rights to land reform beneficiaries that does not hamper beneficiaries with a high debt burden.
Positioning South Africa in the Region and the World	<ul style="list-style-type: none"> • Implement a focused regional integration strategy with emphasis on: Road, rail and port infrastructure in the region.



NATIONAL DEVELOPMENT PLAN	
OBJECTIVES	ACTIONS APPLICABLE TO SEDIBENG DISTRICT
Transform Human Settlements and the National Space Economy	<ul style="list-style-type: none"> • Upgrade all informal settlements on suitable, well located land by 2030. • Reform the current planning system for improved coordination. • Develop a strategy to densify cities, promote better located housing and settlements. • Ensure safe, reliable and affordable public transport. • Provide SDF norms, including improving the balance between location of jobs and people. • Review of the grant and subsidy regime for housing • Provide incentives for citizen participation for local planning and development of spatial compacts. • Introduce mechanisms that would make land markets work more effectively for the poor and support rural and urban livelihoods.
Improve Education, Training and Innovation	<ul style="list-style-type: none"> • Improve access to Early Childhood Development Programmes.
Promote Health Care for All	<ul style="list-style-type: none"> • Strengthen the health system.
Build Social Protection (social welfare)	<ul style="list-style-type: none"> • Expand existing public employment initiatives to create opportunities for the unemployed. • All children should enjoy services and benefits aimed at facilitating access to nutrition, health care, education, social care and safety.
Build Safer Communities (policing)	<ul style="list-style-type: none"> • Increase community participation in crime prevention and safety initiatives. • Implement the National Rural Safety Strategy Plan in high risk areas involving all role-players and stakeholders.

NATIONAL DEVELOPMENT PLAN	
OBJECTIVES	ACTIONS APPLICABLE TO SEDIBENG DISTRICT
Build a Capable and Developmental State (institutional)	<ul style="list-style-type: none"> • Improve relations between national, provincial and local government.
Fight Corruption (institutional)	<ul style="list-style-type: none"> • Develop clear rules restricting business interests of public servants should be developed. • Develop restraint-of-trade agreements for senior civil servants and politicians at all levels of government. • All corrupt officials should be made individually liable for all losses incurred as a result of their corrupt actions.
Nation Building and Social Cohesion – social compact	<ul style="list-style-type: none"> • Improve public services and spaces as well as building integrated housing and sport facilities in communities to ensure sharing of common spaces across race and class. • Promote citizen participation in forums such as Integrated Development Plans, Ward Committees, School Governing Boards and Community Policing Forums.

The NDP reports that migration into urban areas, especially by the young and poor, increases pressure on services and transport, which is complicated by the apartheid-fragmented geography. Economic growth has been slower than the demand for employment. In particular, accommodation faces challenges, including financing for lower-end housing and its incorporation into the market, and slow progress on rental accommodation (CRU and Social Housing) and upgrading of informal settlements.



Therefore key NDP recommendations in **urban areas**, include:

- Upgrading all informal settlements on suitable, well-located land by 2030;
- Increased urban densities to reduce sprawl and costs;
- Initiatives to shift jobs and investment to the urban townships on the peripheries;
- Substantial investments in safe, reliable and affordable public transport and better co-ordination among the various modes;
- A comprehensive review of the grant and subsidy regime for housing to ensure diversity in product and finance options and spatial mix;
- A focused strategy on the housing gap market, involving banks, subsidies and employer housing schemes; and
- The development of spatial compacts.

Since the rural areas are vastly different from the urban areas the NDP reports that for the rural areas general productivity has been declining and emigration to cities and towns has been accelerating. The rural landscape is characterised by rural densification without associated infrastructure and governance arrangements, as well as ill-located land reform initiatives from the perspective of viable farming and access to markets. Many of these initiatives are in conflict with other imperatives such as mining or preserving biodiversity.

The NDP suggests that **rural interventions** should distinguish less dense marginal areas primarily needing appropriate service provision, from more viable and denser areas with transport and market access, including:

- Innovative, targeted and better co-ordinated provision of infrastructure (including ICTs) and services provision supported by the spatial consolidation of rural settlements to enhance densities and associated service delivery;
- Prioritising agricultural and rural development along mobility corridors, to build local economies and contribute to national food security;
- Identification of non-agricultural opportunities such as tourism and mining, especially with a “green” focus;
- Small-town development as nodes to harness rural development; and
- Mechanisms to make land markets work more effectively for the poor, especially women.

2.1.2.2 Medium Term Strategic Framework 2014-2019

The Medium Term Strategic Framework (MTSF) is Government’s strategic plan for the 2014-2019 electoral term. It reflects the commitments made in the election manifesto of the governing party, including the commitment to **implement the NDP**.

The aspects specifically impacting on Sedibeng District are detailed in **Table 2** below:

Table 2: MTSF Outcomes relevant to the Sedibeng DM:

MEDIUM TERM STRATEGIC FRAMEWORK OUTCOMES AND PRIORITIES APPLICABLE TO THE SEDIBENG DM	
MTSF OUTCOMES	MTSF PRIORITIES
<p>OUTCOME 6 An effective, competitive and responsive economic infrastructure framework.</p>	<ul style="list-style-type: none"> Improved regulation of infrastructure. Reliable generation, transmission and distribution of energy. Maintenance, strategic expansion, operational efficiency, capacity and competitiveness of our transport infrastructure. Maintenance and supply availability of bulk water resources infrastructure. Expansion, modernisation, access and affordability of information and communications infrastructure ensured.
<p>OUTCOME 7: Vibrant, equitable, sustainable rural communities contributing towards food security for all.</p>	<ul style="list-style-type: none"> Improved land administration and spatial planning for integrated development in rural areas. Sustainable Land Reform contributing to agrarian transformation. Improved food security. Smallholder producers' development and support (technical, financial, infrastructure) for agrarian transformation. Increased access to quality infrastructure and functional services, particularly in education, healthcare and public transport in rural areas. Growth of sustainable rural enterprises and industries – resulting in rural job creation.
<p>OUTCOME 8: Sustainable human settlements and improved quality of household life.</p>	<ul style="list-style-type: none"> Adequate housing and improved quality living environments. A functionally equitable residential property market. Enhanced Institutional capability for effective coordination of spatial investment.
<p>OUTCOME 9: Responsive, accountable and</p>	<ul style="list-style-type: none"> Members of society have sustainable and reliable access to basic services.

<p>efficient local government.</p>	<ul style="list-style-type: none"> Intergovernmental and democratic governance arrangements for a functional system of cooperative governance and participatory democracy strengthened. Sound financial and administrative management. Promotion of social and economic development. Local public employment programmes expanded through the Community Work Programme.
<p>OUTCOME 10: Protect and enhance our environment and natural resources.</p>	<ul style="list-style-type: none"> Ecosystems are sustained and natural resources are used efficiently. An effective climate change mitigation and adaptation response. An environmentally sustainable, low-carbon economy resulting from well-managed just transition. Enhanced governance systems and capacity. Sustainable human communities.

2.1.2.3 Integrated Urban Development Framework and Implementation Plan 2016-2019

The Integrated Urban Development Framework (IUDF) sets out the policy framework for transforming and restructuring South Africa’s urban spaces. The IUDF is guided by the vision of creating ‘liveable, safe, resource-efficient cities and towns that are socially integrated, economically inclusive and globally competitive, where residents actively participate in urban life’.

The IUDF’s overall outcome is to steer urban growth towards a sustainable **growth model of compact, connected and coordinated cities and towns.**

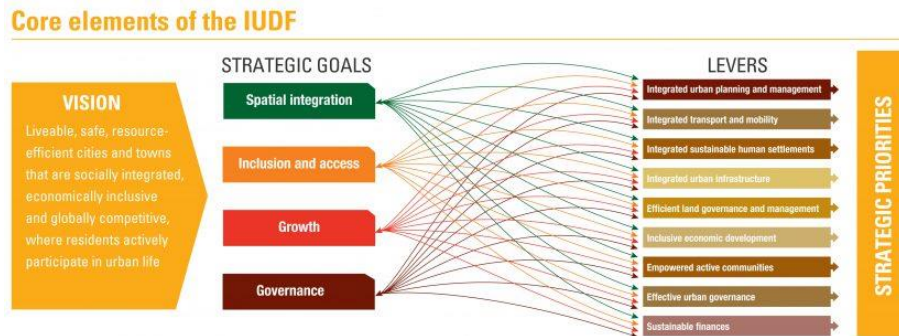


The IUDF's premise is that **jobs, housing and transport** should be used to promote urban restructuring by:

- Reducing travel costs and distances;
- Preventing further development of housing in marginal places;
- Increasing urban densities to reduce sprawl;
- Improving public transport and the coordination between transport modes; and
- Shifting jobs and investment towards dense peripheral townships.

The IUDF consists of a Vision, four Strategic Goals and nine Levers which lead to Strategic Priorities that directly impact on the Sedibeng District (Diagram 2).

Diagram 2: Core elements of the IUDF



The nine Levers, with their implications are:

1. Integrated urban planning and management.
2. Integrated transport and mobility.

3. Integrated sustainable human settlements.

- Rural Areas:
 - Improved land administration and spatial planning for integrated development in rural areas.
 - Sustainable land reform.
 - Improved food security.
 - Smallholder farmer development and support.
 - Increased access to quality basic infrastructure and services.
 - Growth of sustainable rural enterprises and industries.
- Urban Areas:
 - Adequate housing and improved quality living environments.
 - A functionally equitable residential property market.
 - Enhanced institutional capacity and coordination for better spatial targeting.

4. Integrated urban infrastructure.

- Integrated urban space and public transport. Coordinate planning and implementation of public transport, human settlement, economic and social infrastructure and location decisions.
- Agri-logistics and rural infrastructure – Improve investment in agricultural and rural infrastructure that supports expansion of production and employment, small-scale farming and rural development, transport links to main network and tourism infrastructure.
- Maintenance and supply of bulk water resources infrastructure should be ensured.

5. Efficient land governance and management.

6. Inclusive economic development.
 - Productive investment is crowded in through the infrastructure build programme.
 - Spatial imbalances in economic opportunities are addressed through expanded employment in agriculture, the build programme (infrastructure development) and densification in the metros.
7. Empowered active communities.
8. Effective urban governance.
9. Sustainable finances.

The IUDF advocates a **Transit Orientated Development (TOD)** approach to urban design. This promotes higher-density urban developments along mass transit corridors, and should inform investments in human settlements in order to improve access and inclusion. To achieve this will require better alignment of transport, land-use, human settlements and resource-efficient, integrated infrastructure.

2.1.2.4 National Biodiversity Strategy and Action Plan 2005, Biodiversity Assessment 2011

This report assesses the state of South Africa's biodiversity and ecosystems, across terrestrial, freshwater, estuarine and marine environments, with an emphasis on giving spatial information where possible, especially about ecosystems. It provides a spatial picture of the location of South Africa's threatened and under-protected ecosystems, and focuses attention on geographic priority areas for biodiversity conservation.

The Biodiversity Action Plan puts forward the following Key Priorities:

- Enhancing systems for integrated planning and implementation.
- Sustaining our ecosystems and using natural resources efficiently.
- Promoting a green economy.
- Building sustainable communities.
- Responding effectively to climate change.

2.1.2.5 Agricultural Policy Action Plan 2015

The Agricultural Policy Action Plan (APAP, 2015-19) stems from a concern that South Africa increasingly relies on imports of crops (wheat) and livestock products (poultry) while the agricultural sector increasingly relies on imports of inputs (e.g. fertiliser, feed, mechanisation). It argues that we need to establish a more sustainable and productive agricultural sector; to strengthen our competitiveness by supporting localization where potential exists, and to promote agricultural development in a manner that translates into rural development and poverty alleviation.

Key Policy Levers are illustrated in the adjacent Diagram and elaborated on below:

Equity and Transformation

- Ensuring a more producer-friendly (and consumer-friendly) market structure
- Accelerating implementation of the Charters and the Small-scale fisheries policy
- Promoting local food economies
- Investment in agro-logistics

Equitable Growth and Competitiveness

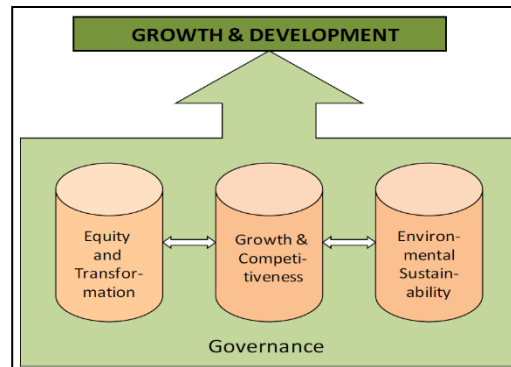
- Promoting import substitution and export expansion through concerted value chain/commodity strategies
- Reducing dependence on industrial and imported inputs
- Increasing productive use of fallow land
- Strengthening Research and Development outcomes

Environmental Sustainability

- Climate Smart Agriculture

Governance

- Support services
- Skills development
- Research and Development



- Knowledge and information management (integrated spatial economic planning)
- Market access, information and regulation
- Institutional arrangements – a more integrated approach

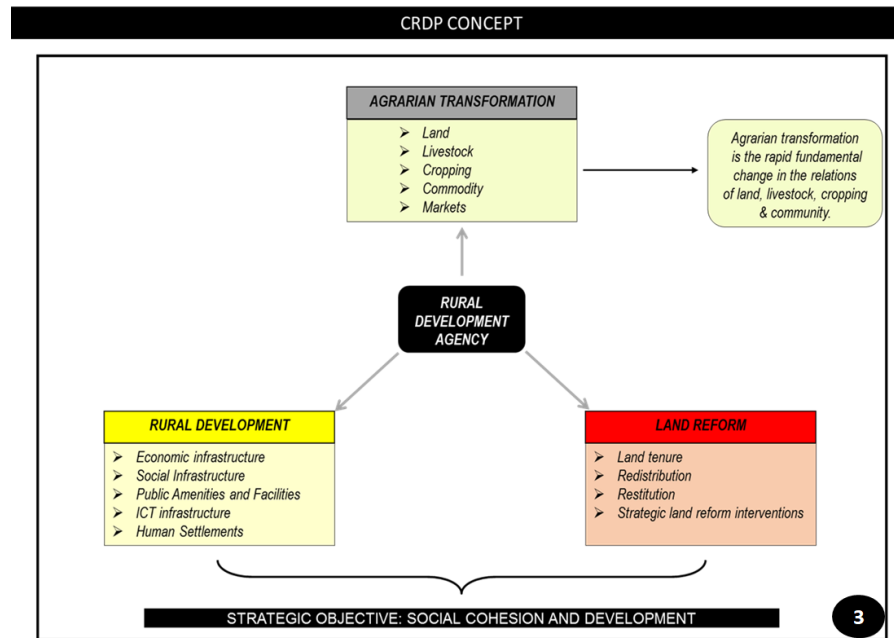
2.1.2.6 National Comprehensive Rural Development Programme 2009

The National Comprehensive Rural Development Programme (CRDP) aims to mobilise and empower rural communities to take initiatives aimed at controlling their own destiny - with the support of government. The goal of the CRDP is to achieve social cohesion and development by ensuring improved access to basic services, enterprise development and village industrialisation. The CRDP implements broad based-agrarian transformation focussing on community organisation and mobilisation as well as strategic investment in economic and social infrastructure.

The vision of the CRDP is to be achieved through a three-pronged strategy based on:

- Co-ordinated and integrated broad-based Agrarian Transformation;
- Strategically increased rural development through infrastructure investment; and
- An improved land reform programme.

The objectives of each of the three strategic thrusts thought applicable to the formulation of the Sedibeng SDF are as follows (**Diagram 3**):

Diagram 3: Comprehensive Rural Development Plan Concept**Agrarian Transformation:**

- Facilitate the establishment of rural and agro-industries, co-operatives, cultural initiatives and vibrant local markets;
- Increase production and sustainable use of natural resources by promoting farming and related value chain development (exploring all possible species of food and economic activity).

Rural Development:

- Access to community and social infrastructure, especially well-resourced clinics;

- Focus on the development of new and the rehabilitation of existing infrastructure;
- Improve and develop infrastructure conducive to economic development, for example distribution and transportation infrastructure, agricultural infrastructure, water and electricity infrastructure, market and storage infrastructure, retail infrastructure and telecommunications infrastructure.
- Improve and develop infrastructure conducive to social development, for instance sanitation infrastructure, health infrastructure, sports and recreation infrastructure and education infrastructure (especially ABET centres).

Land Reform:

- Promote restitution, tenure reform and redistribution in a sustainable manner.
- Increase access to land by previously disadvantaged people.
- Establish agri-villages for local economic development on farms.
- Up-to-date information pertaining to land claims.
- Provide reliable and efficient property (deeds) registration system.
- Contribute to economic growth and housing development by providing government and private agents with essential land information in order to engage in planning as well as economic transactions.
- Provide spatial planning information and services to local municipalities and other public and private institutions that may require these services for development purposes.

2.1.2.7 Industrial Policy Action Plan 2014-2015

The Industrial Policy Action Plan 2012/13 to 2014/15 or the 'Revised IPAP2' as it has become known builds on the National Industrial Policy Framework (NIPF) which has the following core **objectives**:

- To facilitate diversification beyond the economy's current reliance on traditional commodities and non-tradable services that require the promotion of value-addition, characterised particularly by the movement into non-traditional tradable goods and services that compete in export markets and against imports;
- To ensure long-term intensification of South Africa's industrialisation process and movement towards a knowledge economy;
- To promote a labour-absorbing industrialisation path, with the emphasis on tradable labour-absorbing goods and services and economic linkages that create employment;
- To promote industrialisation characterised by the increased participation of historically disadvantaged people and marginalised regions in the industrial economy; and
- To contribute towards industrial development in Africa with a strong emphasis on building the continent's productive capacity and secure regional economic integration.

Significant achievements are to be obtained in implementing transformative industrial policy actions plans at the sectoral level and the development of stronger transversal platforms set the basis for further strengthening of industrial policy interventions. Special emphasis will be placed on **three**

sectors that are particularly well placed for scaling up through leveraging market growth and associated upgrading of supply capacity and capabilities.

These are:

- **“Green” Industries:** In particular, the manufacture of components for the 17.8 GW renewable energy generation programme and the production of solar heaters and components, and a range of other goods and services that arise from the requirements of higher energy efficiency in the economy;
- **Agro-processing:** In particular, the expediting of regulatory and support mechanisms to create a large-scale bio-fuels industry, the identification and promotion of export market opportunities to major net food-importing countries; and investment, production development and standards support.
- **Metal fabrication, capital and transport equipment:** Significant opportunities arise from the leveraging of large public procurement in rail and electricity, the provision of associated investment and upgrading support, and exploitation of opportunities arising from mining capital equipment investment in South Africa and on the rest of the continent.

2.1.2.8 National Infrastructure Development Plan 2012

The National Infrastructure Plan (2012) intends to transform our economic landscape while simultaneously creating significant numbers of new jobs, and to strengthen the delivery of basic services. In line with the above the Presidential Infrastructure Coordinating Committee developed eighteen

Strategic Integrated Projects. These projects cover social and economic infrastructure across all nine provinces (with an emphasis on lagging regions). The SIPs include catalytic projects that can fast-track development and growth. The SIPs are detailed in **Table 3** below:

Table 3: Strategic Infrastructure Projects:

TYPE OF INFRA-STRUCTURE	FOCUS AREAS OF SIPS
Geographic	<ul style="list-style-type: none"> Unlocking the northern mineral belt, with Waterberg as the catalyst Durban–Free State–Gauteng logistics and industrial corridor South-eastern node and corridor development Unlocking economic opportunities in the North West province Saldanha–Northern Cape development corridor
Spatial	<ul style="list-style-type: none"> Integrated municipal infrastructure project Integrated urban space and public transport programme Agri-logistics and rural infrastructure
Energy	<ul style="list-style-type: none"> Green energy in support of SA economy Electricity generation to support socio-economic development Electricity transmission and distribution for all
Education/Health	<ul style="list-style-type: none"> Social infrastructure Revitalisation of public hospitals and other public health facilities National school-build programme Higher education infrastructure
Knowledge	<ul style="list-style-type: none"> Expanding access to communication technology Square Kilometre Array and Meerkat projects
Regional integration	<ul style="list-style-type: none"> Regional integration for African cooperation and development
Water and sanitation	<ul style="list-style-type: none"> Water and sanitation infrastructure

2.1.2.9 National Transport Master Plan 2005-2050

The main purpose of the National Transportation Master Plan 2005-2050 is to motivate a prioritised programme for interventions to upgrade the transportation system in South Africa. The core directives or paradigm shifts emanating from the Master Plan are to:

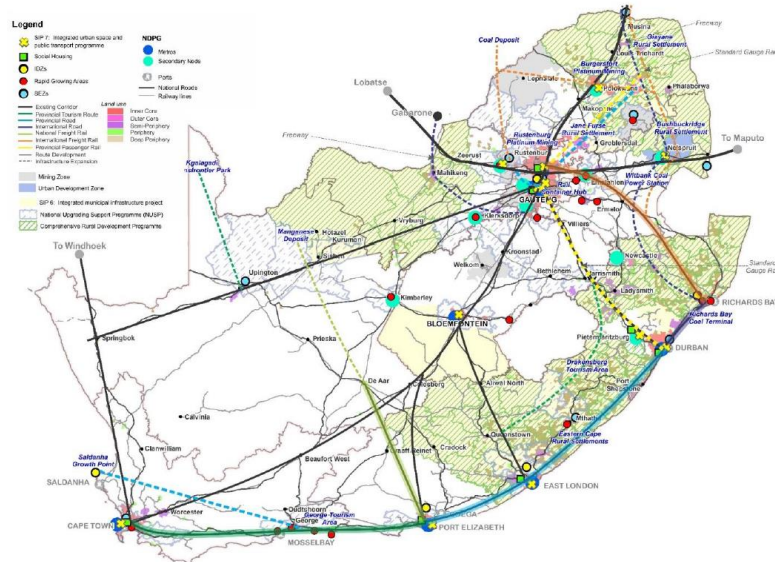
- Place greater emphasis on developing rail as a transportation medium,
- Ensure greater integration between land use development and transportation planning; and
- Put more emphasis on enhancing development of a number of priority national transport corridors.

Figure 2 (from NATMAP) conceptually depicts the spatial integration of NATMAP 2050 with national policies and strategies, as set out in the NDP and IUDF above. With respect to the Sedibeng DM, it should be noted that the district lies within the economic heartland of South Africa, where all the major road and rail infrastructure converge. The study area is in close proximity to the following major existing corridors detailed in the NDP:

- The National Competitiveness Corridor, including the corridor of logistics hubs, road, rail, fuel and other infrastructure, connecting Gauteng and Durban (N3).
- The Primary Transnational Development Corridors and cross-border infrastructure connections. These corridors are critical to creating an integrated southern African economy, which require specific interventions around economic stimulus and trade and transport networks. This includes:

- The Limpopo Development Corridor as strategic link between Zimbabwe and Gauteng Province;
- The MDC – Maputo Development Corridor;
- The Gauteng – Botswana Corridor;
- The Ermelo-Richards Bay Freight Corridor; and
- A rail link between Ermelo and Swaziland.

Figure 2: Spatial Integration of NATMAP with existing policies, SIP Projects

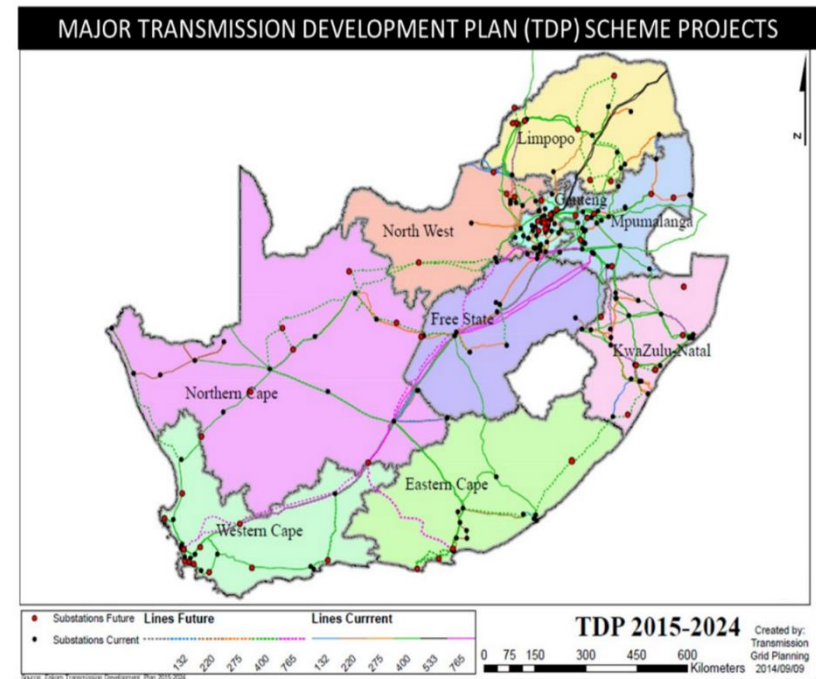


2.1.2.10 Integrated Resource Plan for Electricity 2010-2030

The Integrated Resource Plan for Electricity (IRP) 2010-2030 was promulgated in March 2011, and updated in 2013 to incorporate, amongst others, the national policy objectives and broader economic imperatives as clarified in the National Development Plan (NDP).

Figure 3 emphasises the fact that Sedibeng District is located at the heart of the current and planned electrical infrastructure network, with a number of proposed substations indicated in and around the study area.

Figure 3: Major Transmission Development Scheme Projects



2.1.2.11 Development of Sustainable Human Settlements (*Breaking New Ground*) 2004

The National Strategy for Sustainable Development, alternatively referred to as *Breaking New Ground* (2004), is a comprehensive plan for the development of sustainable human settlements. Commissioned by the Department of Human Settlement, the plan promotes the creation of a non-racial, integrated society through the development of sustainable human settlements and quality housing. Within this, the Department is committed to meeting the following specific objectives:

- Accelerate housing delivery;
- Improve the quality of housing products and environments;
- Ensure asset creation;
- Ensure a single, efficient formal housing market; and
- Restructure and integrate human settlements.

It moves away from the current singular focus of housing delivery (numbers) towards more responsive mechanisms which address the multidimensional needs of sustainable human settlements.

2.1.2.12 Neighbourhood Development Partnership Grant 2006

The Neighbourhood Development Partnership Grant (NDPG) aims to “stimulate and accelerate investment in poor and underserved neighbourhoods.” This stimulation is driven through technical assistance and capital grant financing for municipal projects that are linked to distinctive

private sector element or intended to create such a link. The NDPG seeks to address the lack of development (primarily economic) in townships, informal areas and low income settlements and supports the following types of interventions:

- Turning dormitory townships into fully functional neighbourhoods;
- Strategic economic development projects;
- Land use restructuring;
- Stimulating property markets;
- Purchasing power retention;
- Public sector investment as catalyst;
- Leveraging non-governmental investment;
- Ensuring municipal support; and
- Kick-starting township regeneration.

2.2 PROVINCIAL CONTEXT

2.2.1 Provincial Policy

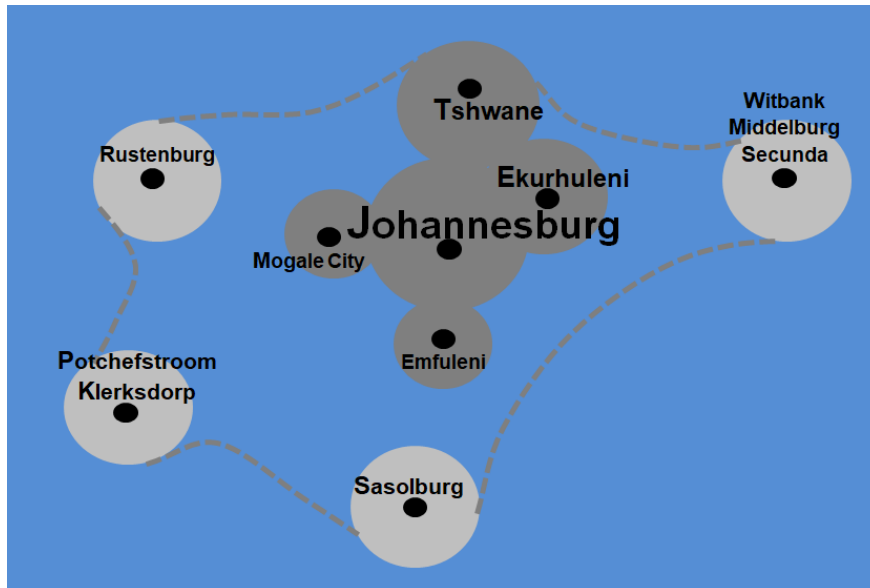
2.2.1.1 Gauteng Global City Region and Vision 2055

The Gauteng Global City Region (GGCR) initiative puts forward a creative, novel and innovative way of addressing provincial and national challenges, by placing less emphasis on administrative boundaries and more on functional geography, including social and economic factors. The primary objective of the GCR is to build Gauteng into an integrated and globally competitive region where the economic activities of different parts of the

province complement each other in consolidating Gauteng as an economic hub of Africa and an internationally recognised global city-region. It also places less emphasis on competition between institutions and more on collaboration.

Figure 4 portrays the footprint of the GGCR schematically. It shows the primary urban cluster comprising Tshwane, Ekurhuleni, Johannesburg, Mogale City and Emfuleni. The Gauteng City Region is supplemented by four large secondary economic clusters around Rustenburg, Potchefstroom/ Klerksdorp, Sasolburg and Secunda/ Middelburg/ Witbank.

Figure 4: Footprint of the Gauteng Global City Region



This initiative puts forward the following strategic pathways and projects summarized in **Table 4**:

Table 4: Global City Region Strategic Pathways and Projects

STRATEGIC PATHWAYS	PROJECTS IN SUPPORT OF PATHWAYS
<p>Strategic Pathway 1: Growing and managing a GCR knowledge based economy.</p> <ul style="list-style-type: none"> • Geared at building capacity through the establishment of institutional and human capital to harness urban social and economic growth; and • The development of research to inform policy, strategy and programme development of the city-region. 	<ul style="list-style-type: none"> • Finalise the Gauteng Urban Observatory, and develop an implementation plan with clear roles and responsibilities. • Establish a Research and Development Agenda.
<p>Strategic Pathway 2: Advancing the positioning of Gauteng as an economically active and sustainable city region.</p> <ul style="list-style-type: none"> • Aimed at the creation of conditions amenable to fostering sustained economic growth and promote city-region objectives through identified strategic sectors which demonstrate present and future growth potential. 	<ul style="list-style-type: none"> • Identify an appropriate model for a city region Development Agency • Build an understanding of the content and 'footprint' of the city-region's economy (build linkages: with other cities, within SADC, and key areas within the continent and internationally). • Facilitate the clustering of knowledge and innovation to enable businesses to move to the next level of the innovation value chain.
<p>Strategic Pathway 3: Integrated planning, implementation, and coordination of economic growth and competitiveness strategies</p>	<ul style="list-style-type: none"> • Alignment of Local Growth and Development Strategies and the Provincial Growth and Development Strategy

STRATEGIC PATHWAYS	PROJECTS IN SUPPORT OF PATHWAYS
<ul style="list-style-type: none"> Aimed at promoting the integration, harmonisation, coordination and alignment of a range of economic strategies across provincial and municipal levels of government, with the objective of achieving higher growth rates and shared growth. 	<ul style="list-style-type: none"> Strengthen municipal IDPs (to foster a shared focus on key developmental priorities and accelerate service delivery)
<p>Strategic Pathway 4: Integrated planning, implementation and coordination of social development, inclusion and cohesion strategies</p> <ul style="list-style-type: none"> Aimed at promoting integrated social development, cohesion across spheres of government and ensure a relatively even development so as to reverse urban core/periphery inequality. 	<ul style="list-style-type: none"> Align the provincial social development strategy Consolidate local social development strategies in line with the province's. Effectively implement the 20 priority township projects. Develop strategic responses to the macro social report relevant to Gauteng.
<p>Strategic Pathway 5: Improved coordination, collective decision making, and resource sharing across departments and municipalities.</p> <ul style="list-style-type: none"> Aimed at developing the governance and operational structures to drive the GCR. 	<ul style="list-style-type: none"> Develop a governance model for the GCR and determine possible institutional framework to govern the city region. Determine and consolidate the means to realise a metropolitan system of governance Finalise the Powers and Functions project Develop a strategic spatial coalition framework to engage and involve civil society in the decision making process.
<p>Strategic Pathway 6: Branding and communicating the Gauteng City-Region</p>	<ul style="list-style-type: none"> Consolidate the Gauteng branding strategy

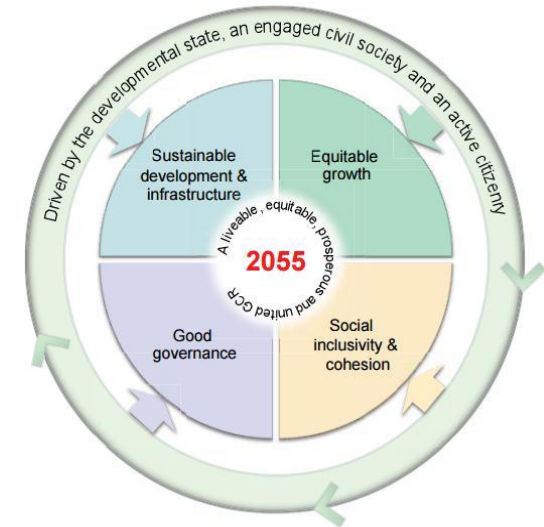
STRATEGIC PATHWAYS	PROJECTS IN SUPPORT OF PATHWAYS
<ul style="list-style-type: none"> The aim is to create a common framework for the branding of Gauteng in line with GCR objectives and broaden awareness of the perspective amongst all stakeholders and the public. 	<ul style="list-style-type: none"> Further development and implementation of the GCR communication strategy. Facilitate ongoing interaction with stakeholders on the GCR at provincial and local level Embed the GCR perspective among public service managers and public servants at local and provincial level
<p>Strategic Pathway 7: Benchmarking, monitoring and evaluation</p> <ul style="list-style-type: none"> Measure progress against the province's declared intention to build a globally competitive city region. Compare progress with selected city regions elsewhere in the world 	<ul style="list-style-type: none"> Development of a set of robust and viable indicators and benchmarks for the GCR. Build human capital to manage the above.
<p>Strategic Pathway 8: Mobilise high level "international" initiatives to enhance socio-economic growth and leave a global long lasting impression on the GCR.</p> <ul style="list-style-type: none"> The aim is to utilise specific global events hosted in Gauteng as a trajectory for global competitiveness. 	<ul style="list-style-type: none"> Fast track the extension of the Gautrain, development, implementation of all transport plans and strategies as part of transport infrastructure development and ensure their alignment to the GCR perspective.
<p>Strategic Pathway 9: GCR long term planning</p> <ul style="list-style-type: none"> A strategic vision for the GCR by 2030. Determine the "Ideal" GCR by the year 2030 at various levels, but mainly: the institutional framework; human capital; and the quality of life. 	<ul style="list-style-type: none"> Alignment of provincial and local government strategies over a long-term period. (e.g. 30 years) Develop and implement the GCR Academy to further consolidate the Human technical capital. Finalise the review and strategy of the local government organisation and capacity of the state.

STRATEGIC PATHWAYS	PROJECTS IN SUPPORT OF PATHWAYS
	<ul style="list-style-type: none"> Alignment of long term municipal plans to the GCR 30 year plan.
<p>Strategic Pathway 10: Alignment of strategies within the GCR perspective</p> <ul style="list-style-type: none"> The aim is to align priority areas as identified within the GCR perspective. 	<ul style="list-style-type: none"> Contextualise the following strategies within the GCR short and long term vision: <ul style="list-style-type: none"> Safety and security Transport infrastructure and authorities Integrated Safety and Transport System Sustainable human settlements Investment and tourism promotion Infrastructure provision Environment and sustainability
<p>Strategic Pathway 11: GCR Technical Steering Committee</p>	<ul style="list-style-type: none"> Develop a core group of officials across select departments and municipalities to manage the daily technical programme of the GCR. This technical committee will serve as the technical feeder to the PCF Technical Committee

Diagram 4 depicts the Gauteng Vision 2055 concept. It comprises the following:

- The central ring reflects the **vision** for 2055, namely-
 - The creation of a 'liveable, equitable, prosperous and united GCR'.

Diagram 4: Gauteng Vision 2055 Concept



- The intermediate circle represents the **ideals** strived for, with delivery envisaged as staggered across the short, medium and long-term. These ideals are intricately inter-related, with causality viewed as complex and situation-specific, rather than being linear in nature. The ideals are:
 - Sustainable development and infrastructure.
 - Equitable growth.
 - Social inclusivity and cohesion; and
 - Good governance.
- The outermost ring represents the **drivers** viewed as necessary to create momentum for, and support achievement of, the four defined ideals and ultimately, the vision for the GCR of 2055. These drivers are:
 - The developmental state;
 - An engaged civil society; and

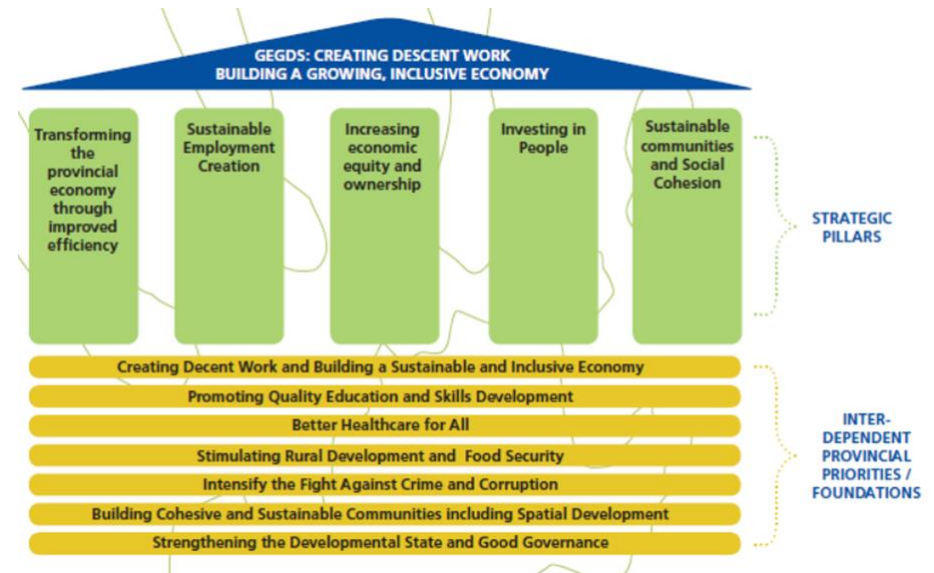
- An active citizenry.

2.2.2.2 Gauteng Employment, Growth and Development Strategy 2009 - 2014

The Gauteng Employment, Growth and Development Strategy for 2009-2014 (GEGDS) outlines a set of strategic choices and programmes that will build towards a **strong and sustainable Gauteng economy** in which all can access economic opportunities and enjoy **decent work**, within the overall agenda to build a strong and **inclusive** economy.

Diagram 5 is a schematic representation of the GEGDS, comprising a vision, five pillars and seven strategic priorities.

Diagram 5: Schematic representation of the Gauteng Employment, Growth and Development Strategy



The GEGDS recognizes that Gauteng's economy was originally based on the mining sector, but over the last century has transformed to produce strongly-growing manufacturing, trade and finance sectors. Today, Gauteng is predominantly a tertiary economy, with some of the strongest and most advanced financial and business institutions globally, and a trade sector that is unparalleled in Africa, serving the needs of both local citizens and international visitors. While tertiary industries predominate, the province also has a large manufacturing base, producing a wide range of goods from basic steel products through to advanced mining machinery, automotive and aerospace outputs.

The envisaged growth path for Gauteng necessitates **profound structural changes** in the provincial economy, to an endogenous economic growth trajectory that is based primarily on innovation, green growth and inclusivity. The **five strategic pillars** shown on Diagram 5 are put forward in support of the structural changes.

The strategic pillars are supported by **seven drivers** that will have a very large transversal impact over a range of pillars (not shown on the diagram).

These are:

- Green Economy and Sustainable Energy Usage;
- Innovation and the Knowledge Economy;
- Infrastructure – strategic, socio-economic and bulk;
- Green Jobs;
- Community-led local economic development;
- Skills Development and Capacity Building; and
- Spatial Planning.

The GEGDS also highlights initiatives that are essential in the *short- and medium-term* of which the pilot projects focusing on green jobs and green technology investment in the areas of energy efficiency, waste management and rural agricultural development and food security are the most relevant to the Sedibeng SDF.

In *the medium- to long term* the GEGDS aims to address the structural challenges of the economy through initiatives that will shift it onto the

endogenous growth path outlined above. Key initiatives that are relevant to the Sedibeng DM include:

- An active industrial and sectoral development strategy that promotes and encourages the development, investment and support of various sectors:
- Increased strategic (sector specific), socio-economic and bulk infrastructure investment, encouraging infrastructure-led growth and effective spatial planning that consolidates the economy.
- Address the backlogs in service delivery (especially in rural and outlying areas, townships and informal settlements of the province) therefore stimulating the entrepreneurial spirit at community level.
- Continued investment in public employment programmes, acting as an employment safety-net or and employment guarantee.
- Enterprise development by focusing on financial and non-financial support to SMMEs and Cooperatives also facilitated through Community-led local economic development.
- Strategic procurement approach to encourage ownership, increase equity and support localisation.
- Improved access to efficient, cost-effective quality healthcare to ensure a productive labour force.
- Increased community safety which is fostered through adequate infrastructure provision.
- Rural and agricultural development with special emphasis being placed on food security which through some of the green technologies, can play a vital role in creating employment while building up economic activities in communities.

2.2.2.3 Gauteng Transformation, Modernisation and Re-industrialisation Strategy (TMR) 2014

The Gauteng Transformation, Modernisation and Re-industrialisation Strategy (TMR) is a strategic roadmap towards an integrated city-region characterised by social cohesion and economic inclusion. The strategy identifies the apartheid space economy and human settlements patterns as key structural challenges.

The TMR strategy proposes **ten pillars** which will ensure integrated, socially cohesive and economically inclusive development. The ten pillars are:

1. **Radical economic transformation.** Revitalize and mainstream the township economy through the key economic sectors of finance, automotive industry, manufacturing, information and communication technology (ICT), tourism, pharmaceuticals, creative industries, construction and real estate.
2. **Decisive spatial transformation.** Planned and integrated urban development which will enable more integrated and sustainable human settlements and communities that are inclusive and diverse.
3. **Modernise the public service.** Radically change the way government works to put people at the centre.
4. **Accelerate social transformation.** Raise the living standards and achieve quality of life for all people - improve education and health care, provide social protection for the vulnerable, eradicate poverty and build social cohesion and solidarity.
5. **Re-industrialise Gauteng** as our country's economic hub. Infrastructure development, specifically the massive rollout of transport infrastructure, will be used to revitalize and modernize old industries.
6. **Modernise the economy.** Create decent jobs and achieve economic inclusion by bringing township entrepreneurs and SMMEs into the mainstream economy, and promote the finance, automotive industry, manufacturing, ICT, tourism, pharmaceutical, creative industry, construction and real estate sectors.
7. **Modernise public transport and other infrastructure.** Public transport will be used to make Gauteng look different through the development of the Aerotropolis and OR Tambo Special Economic Zone. Particular attention will be given to the West Rand and Sedibeng regions respectively in order to revitalize their economies and connect them to the economic centres of the Gauteng city-region.
8. **Modernise human settlements and urban development.** New post-apartheid cities will be a combination of modern public transport modes, integrated and sustainable human settlements that are socially and economically inclusive and promote urban green development. Particular attention will be given in this regard to the West Rand and Sedibeng Regions. The renewal of old towns and inner-city regeneration will be a key focal point. In existing human settlements, the focus will be to invest in the renewal of townships, especially the twenty five old townships and old informal settlements that have been neglected – in this regard Evaton was identified.

9. **Taking a lead in Africa's new industrial revolution.** Gauteng holds the key to strengthening economic trade and partnerships with African and Brics countries, being the fourth biggest economy in the continent.
10. **Transform the state and governance.** Specific attention will be given to eradicating corruption.

The TMR sets the goal to reconfigure the Gauteng City Region's space and economy along **five development corridors** that have distinct industries and different comparative advantages:

- The **Central Development Corridor** - anchored around the City of Joburg as the hub of finance, services, ICT and pharmaceutical industries;
- The **Eastern Development Corridor**- anchored around the economy of the Ekurhuleni Metro as the hub of manufacturing, logistics and transport industries;
- The **Northern Development Corridor** - anchored around Tshwane as our nation's administrative Capital City and the hub of the automotive sector, research, development, innovation and the knowledge-based economy;
- The **Western Corridor** encompassing the economy of the current West Rand district and the creation of new industries, new economic nodes and new cities;
- The **Southern Corridor** encompassing the economy of the Sedibeng district and the creation of new industries, and sustainable human settlements, promotion of agriculture and tourism.

Provincial government intends making three macro interventions jointly with municipalities and the private sector to change the space and structure of the economy of Gauteng and to address unemployment, poverty and inequality. Each of these macro interventions will be supported by specific projects, with the projects relevant to the Sedibeng DM listed in **Table 5** below:

Table 5: Transformation, Modernisation and Re-industrialisation Interventions and Projects

MACRO INTERVENTIONS/GAME CHANGERS	PROJECTS RELEVANT TO THE SEDIBENG DISTRICT
Energy Mix and Gauteng Green Agenda	<ul style="list-style-type: none"> • Waste to energy projects (CoJ, West Rand & Sedibeng), feasibility studies have been done.
Township Economy Revitalisation	<ul style="list-style-type: none"> • Steel fabrication hub
ICT and broadband connectivity for the GCR	<ul style="list-style-type: none"> • Broadband Networks in (GBN, Sedibeng, CoJ and Tshwane)
Spatial Transport Transformation	<ul style="list-style-type: none"> • Bus rapid transport systems – extension to Sedibeng DM. • Gauteng freight and logistics hubs – possible further hubs in Sedibeng.
Agritropolis	<ul style="list-style-type: none"> • Upgrading of the Vereeniging Market, including in Midvaal • Agro-processing facilities • Upgrade road and rail links
Sustainable human settlements	<ul style="list-style-type: none"> • Mega human settlements – Boiketlong in Emfuleni LM (15 000 units), Kwazenzele in Lesedi LM (1 794)
New nodes identified in the Gauteng City Region initiative	<ul style="list-style-type: none"> • River City • Gauteng Highlands • Savanna City • ArcelorMittal, housing developments

2.2.2.4 Gauteng Growth Management Perspective 2014

The Gauteng Growth Management Perspective (GMP) was formulated to deal with urban growth and urbanisation in a pro-active manner, in order to achieve the Gauteng 2055 Vision of a liveable, equitable, prosperous and united GCR. Growth Management deals specifically with the manner in which physical growth is directed to specific locations and environments. The main rationale is the benefits that can be realised through sustainable and efficient urban growth.

The GMP puts forward the following policy directives for spatial planning in the province:

- The unrestricted outward growth of urban areas in Gauteng must be addressed in order to contain the development footprint in the long term. The focus should be on internal spatial restructuring rather than horizontal expansion.
- An urban edge together with a strong environmental management framework is considered the most effective tool to convey and establish the policy intent of restricting urban sprawl. As such, an urban edge should be reintroduced in the review of the Gauteng Spatial Development Framework. An urban edge can however never succeed as a stand-alone growth management tool and must form part of a comprehensive approach to growth management.
- The provincial urban edge must be demarcated in such a way that it makes provision for approximately 20-years' peripheral growth in terms of the targets set for suburban/low priority growth. The provincial urban

edge should therefore only be amended under exceptional circumstances.

- Spatial planning and development management in the province should focus on the establishment of a polycentric regional spatial structure. The majority (ideally around 40%) of new development should be consolidated and focused around major nodes and public transport corridors. A strong polycentric model as opposed to a blanket compact development model allows for a variety of residential typologies in the province yet reverses the balance in favour of higher density, concentrated and integrated development as opposed to the current suburban development pattern. Centrality for the purpose of higher density residential development should therefore be seen as centrality in relation to nodes and corridors rather than centrality in relation to the overall urban footprint in the province.
- Spatial restructuring in line with the polycentric model should follow an incremental or phased approach whereby development is focused around a small number of priority nodes and corridors in order to create a functional network density that will allow for the establishment of agglomeration advantages and desired population thresholds around these key spatial elements. Provincial and municipal spatial development frameworks should therefore clearly indicate the phasing of development proposals.

2.2.2.5 Gauteng Provincial Spatial Development Framework 2016

The Gauteng Spatial Development Framework (SDF) envisages Gauteng in 2030 is an integrated, connected space that provides for the needs of all who are born in or drawn to the province.

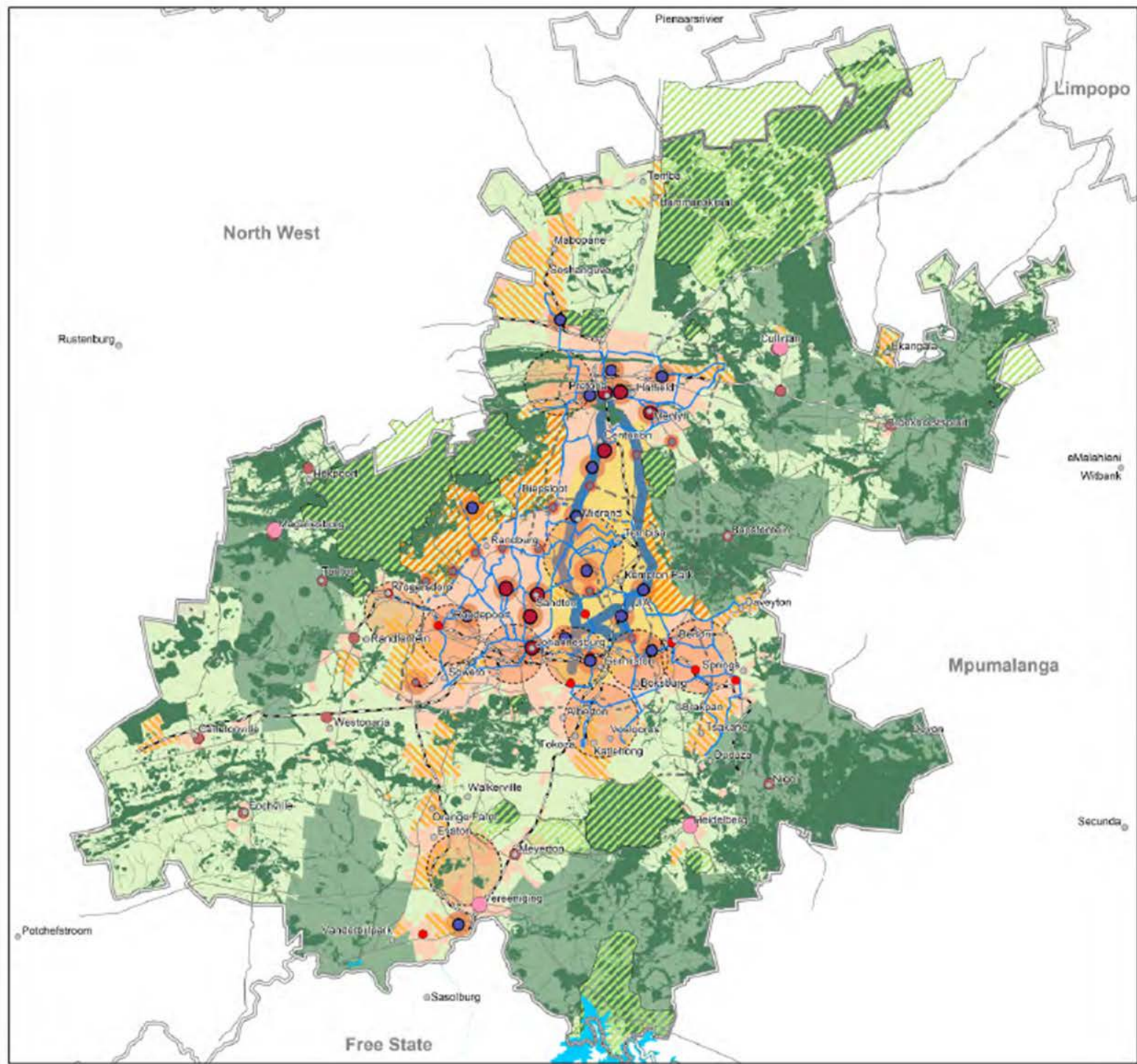
The GSDF 2030 builds on the concept of the GMP and aspires to establish a balanced, polycentric spatial network, with strong and resilient nodes enabling mutually beneficial exchanges of goods and services, and movement of people – refer to **Figure 5** in the GSDF 2030. To support the establishment of this polycentric form, **four spatial development strategies** are to be followed:

1. Capitalising on proximity, by directing higher densities closer to economic nodes and public transport networks, and improving conditions in areas closer to economic opportunities, to ensure even greater benefits for the people and economy of these areas.
2. Managing new settlement development, to prioritise infill development and densification, rather than expanding residential development outwards, so new settlements are functional and integrated units of the polycentric provincial network and based not only on the availability of land.
3. Building an economic network, through a system of high-order nodes and activity corridors, developing economic clusters that benefit from synergies and unlock the advantages of agglomeration.
4. Creating a viable and productive hinterland, by protecting valuable resources and high potential agricultural land from harmful development, and managing water resources fugally and effectively.

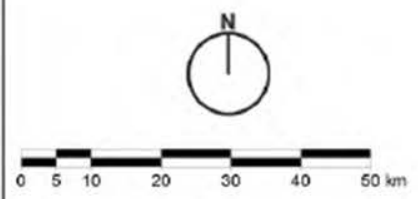
Ten high-priority provincial **spatial development proposals** are outlined, that should be followed through in terms of the Sedibeng SDF formulation:

1. Intensify nodes, public transport routes and stations, to optimise the benefits of nodes and public transport routes in polycentric networks.
2. Strengthen, maintain and enhance nodes as identified by each municipality to ensure that development takes place within the nodes.
3. Promote spatial integration and township regeneration through the use of land banking and government land assets, and support for urban hubs.
4. Manage municipal urban growth by enforcing urban growth boundaries to reduce sprawl, manage infrastructure expenditure and ensure better socio-economic integration.
5. Expand and integrate municipal bus rapid transit (BRT) networks to achieve greater connectivity between major nodes and settlements with low levels of economic activity.
6. Enhance major road and rail networks, to ensure greater connectivity and a balanced provincial spatial network.
7. Provide multi-pronged sustained support to outlying residential areas including human capital development, mobility support and local economic development programmes.

Gauteng Spatial Development Framework, 2030



- Legend**
- Gauteng Hinterland
 - Consolidation Zone
 - Priority Intensification and Integration Zone
 - Urban Reserves
 - Provincial Activity Corridor
 - Spatial Integration and Regeneration Priorities
 - Township Regeneration
 - Agri-Hubs
 - EMF Zone 3 High Rural Control Zone
 - Tourism
 - Existing Strategic Roads
 - Proposed GSRN Priorities
 - Rail Network Existing
 - Rail Network Proposed
 - BRT Networks Planned
 - BRT Networks Proposed Extension
 - Major Mixed-Use Nodes
 - Central Business District
 - Major Employment Nodes
 - Possible Major Mixed-Use Node (Linked to Future Gautrain Stations)
 - Secondary Node
 - Tourism Towns



8. Strengthen and enhance agricultural production and agro-processing to optimise the use of high-value agricultural land in the province, create jobs, grow the economy and improve food security.
9. Actively manage and protect the environment and eco-systems, including rehabilitating degraded areas and exploring legislating a provincial green belt.
10. Improve and optimise provincial tourism opportunities, through directing tourism-related activities to identified tourism areas, and creating strong links between tourism towns and surrounding eco-tourism opportunities.

To realise the specific provincial spatial, economic and social objectives, **two instruments** are proposed that will be used to coordinate government action, target public investment and crowd in private sector investment.

These are:

- *spatial development coordination* (coordinating, aligning and harmonising infrastructure and social investment spending by provincial departments and municipalities in the province, and providing spatial certainty for national investments with the Gauteng City-Region); and
- *spatial targeting* (prioritising specific spatial areas or localities for investment and spending by both State and non-State actors in order to achieve spatial justice and economic efficiency).

What is clear from the SDF (**Figures 6 and 7**) is that the Sedibeng District does not form part of the core development area in Gauteng and will thus have to focus on **integration and linkages** to strengthen its position in the GCR. A large section of the study area is demarcated as a high rural control zone in terms of the Environmental Management Framework. Township

regeneration should be a high priority in terms of spatial and infrastructure interventions with the focus being on the integration and upgrading of former townships to achieve socio-economic integration. In terms of the economic hinterland, small farms, agri-processing, agri-hubs and rural enterprise support should be promoted.

The GSDF has identified Vereeniging, Vanderbijlpark and Sebokeng in the Emfuleni LM as key urban development nodes of provincial significance.

These nodes are to be linked via movement networks such as rail and road. Emfuleni major road and rail infrastructure are well developed; these traverse the area and are as follows:

- The N1 linking Pretoria with the Free State continuing to Cape Town to the south
- The K178 linking Vereeniging with the N1 and the North West Province to the west
- The K53 linking Vereeniging in the south with Johannesburg in the north
- The K59 linking Vereeniging with De Deur, Walkerville and Johannesburg to the north
- The rail line that links Vereeniging and Johannesburg to the north.

The National Development Plan (NDP) and the Gauteng Spatial Development Framework (GSDF) have identified the N3 corridor as one of the main economic corridors in the country with a huge potential economic spinoff. The Lesedi SDF has also identified an “Economic Corridor” (the

Figure 6: Gauteng Spatial Development Framework

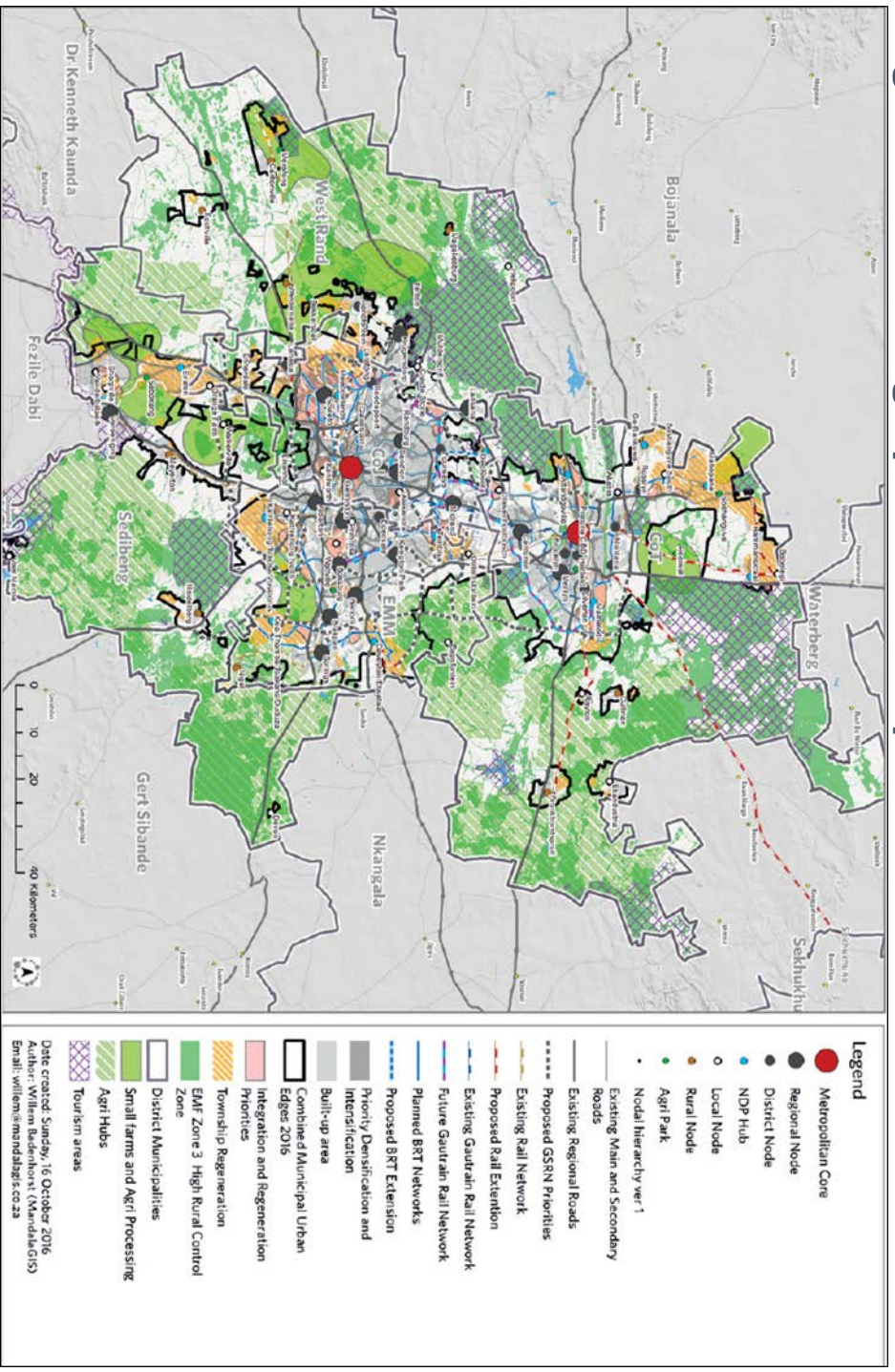
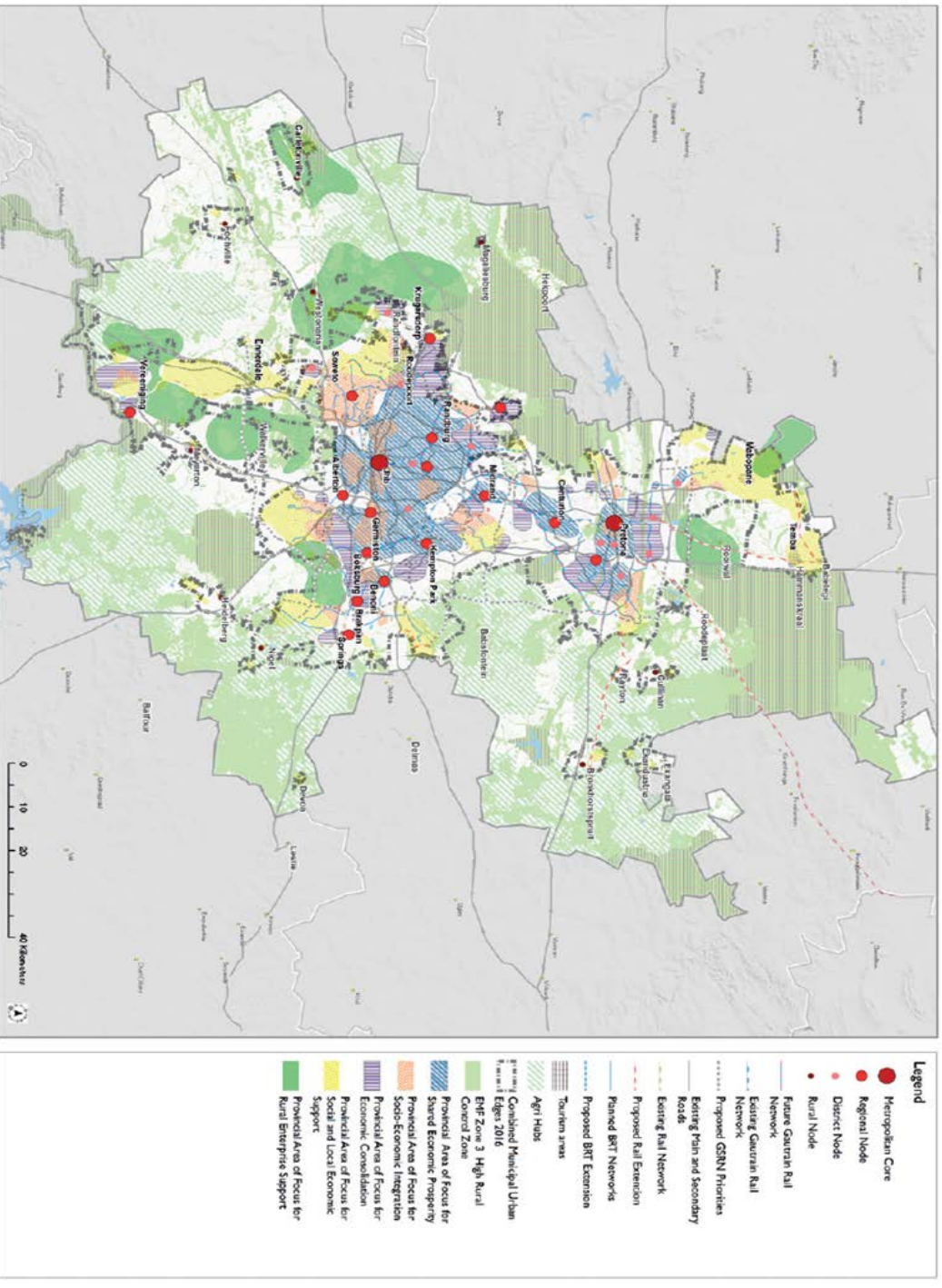


Figure 7: SDF and Provincial Area of Focus



subject of the Lesedi Nodal & Corridor Study 2009) and a “Tourism Corridor” along the R42.

The Gauteng Spatial Development Framework has identified the **importance of the R59 corridor** to link Johannesburg, Ekurhuleni, Meyerton and Vereeniging. The close proximity of Johannesburg to Midvaal, linked by the R59, R82, M61 and N1, has contributed to the development of residential areas in the north of Midvaal as dormitory areas for people working in Johannesburg. Recently industrial/commercial areas have also developed in the northern part of the Midvaal Municipality adjacent to the R59 route, which takes advantage of the accessibility, low land costs and proximity to the Johannesburg, Tshwane and Ekurhuleni Metropolitan areas. Areas of strategic development are mainly focusing on future development along the R59 corridor, Henley-on-Klip, Vaal Marina/Mamello, De Deur, Walkerville and Savannah City. In addition, the densification of existing urban areas and emerging areas such as Riversdale is a key priority for the Municipality.

2.2.2.6 Gauteng Provincial Environmental Management Framework 2014

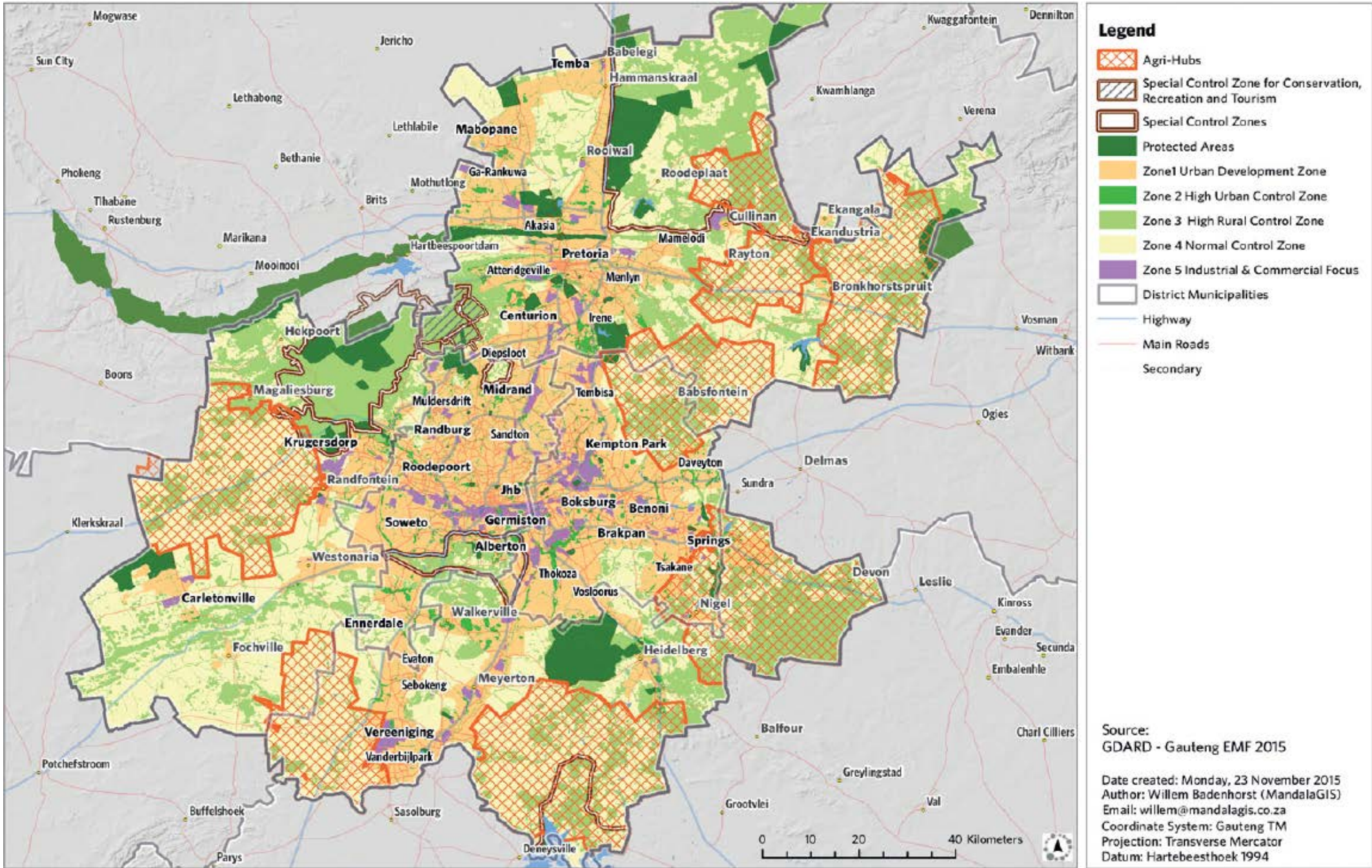
The Gauteng Provincial Environmental Management Framework (EMF) is a legal instrument in terms of the Environmental Management Framework Regulations, 2010. The purpose of the regulations is to assist environmental impact management including Environmental Impact Assessment (EIA) processes, spatial planning and sustainable development with the main objectives being as follow:

- To make it efficient for urban development (including associated service infrastructure) to occur in defined selected areas with lower environmental concerns and high development demand to help facilitate the implementation GMP, 2014;
- To facilitate the optimal use of current industrial, mining land and other suitable derelict land for the development of non-polluting industrial and large commercial developments;
- To protect Critical Biodiversity Areas (CBAs) within urban and rural environments;
- To ensure the proper integration Ecological Support Areas (ESAs) into rural land use change and development;
- To use ESAs as defined in municipal bioregional plans in spatial planning of urban open space corridors and links within urban areas; and
- To focus on the sustainability of development through the implementation of initiatives such as:
 - energy efficiency programmes, plans and designs;
 - waste minimisation, re-use and recycling;
 - green infrastructure in urban areas; and
 - Sustainable Drainage Systems (SuDS).

Figure 8 depicts the main proposals of the Gauteng EMF, including Agri-Hubs. Of relevance to the Sedibeng District is the following:

- The only Protected Areas or High Urban Control Zones (Zone 2) in the study area is the Suikerbosrand Nature Reserve between Meyerton and Heidelberg.

Figure 8: Gauteng Environmental Management Framework



- The existing developed areas are earmarked as Zone 1 Urban Development Zones, where urban activities are streamlined (exempt from environmental assessment requirements), and infill and densification are promoted with the aim of minimising urban sprawl into rural areas.
- Large sections of the study area are earmarked as Zone 4 Normal Control Zone (outside the urban edge), where agricultural uses outside the urban development zone are protected.
- In the central parts of the study area there are areas earmarked as Zone 3 High Rural Control Zones, where sensitive areas should be protected.
- There are three large areas set aside for Agri-Hubs, where more sustainable and productive agricultural activities should be established. These are located to the east of Vanderbijlpark, between Vereeniging and Heidelberg and to the north-east of Heidelberg.

2.2.2.7 Gauteng Climate Change Response Strategy 2011

The Gauteng Department of Agriculture and Rural Development (GDARD) led the process of developing the Gauteng Climate Change Response Strategy (GCCRS) and Action Plan. The strategy addresses the problem of climate change in two ways:

- To reduce the amount of GHGs (Greenhouse Gases) released into the atmosphere, through the following **mitigation strategies**:
 - Industry, Commerce and Mining -
 - Cleaner Production Initiatives.
 - Transport -

- CNG Fuel alternative.
- Energy supply –
 - Solar energy.
- Residential and Public buildings -
 - Energy efficient and safe cook stoves
 - Energy efficiency in public buildings
 - Energy efficient low cost housing.
- Waste Management -
 - Waste Recycling, Reduction and Reuse.
- To develop an **adaptation strategy and action plan** focusing on the following:
 - Water: Develop and maintain efficient and secure water management systems.
 - Urban development and infrastructure: Regulation and implementation of land-use planning and spatial development.
 - Agriculture and food security: Promoting urban agriculture and food gardens.

2.2.2.8 Gauteng 25-Year Integrated Transport Strategy 2013

The Gauteng Integrated Transport Master Plan (GITMP25) provides a framework for integrated transport planning over the next 25 years, with the objective of achieving a world-class and sustainable transport system that supports Gauteng's economic, social and cultural, and environmental goals. The plan is for development to take place along the identified priority public transport and road networks, with a focus on densification, the development

of nodes and the promotion of transit-oriented development (TOD) in line with the following ten interventions:

- Subsidised housing provision within urban core areas.
- Facilitation of local economic development outside the urban core.
- Land-use densification in support of public transport.
- Reinforcement of the passenger rail network as the backbone of the system.
- Extension of the integrated rapid and road-based public transport networks.
- Capacity-building in the transport industry.
- Strengthening of intermodal freight hubs.
- Travel demand management.
- Mainstreaming of non-motorised transport.
- Continued province-wide mobility.

Figures 9.1 and 9.2 depicts the GITMP25. It strengthens the polycentric nodal concept put forward in terms of the GMS and the Provincial SDF. It does not make any proposals for the extension of transport networks beyond the southern boundaries of Gauteng. It does however show that the Sedibeng DM area is **well-connected** to the rest of Gauteng via the road and rail network. It is especially the **rail network** that could play a significant role in strengthening the DM's position in the GCR, through both commuter rail services and freight rail services.

Public transport is mainly concentrated along the N1 functional corridor around Orange Farm, Evaton and Sebokeng towards Vanderbijlpark.

Figure 9.1: Integrated Transport Master Plan 2025 – Class 1 and 2 Roads

Gauteng SDF 2015: Integrated Transport Master Plan 2025 - Class 1 & 2 Roads

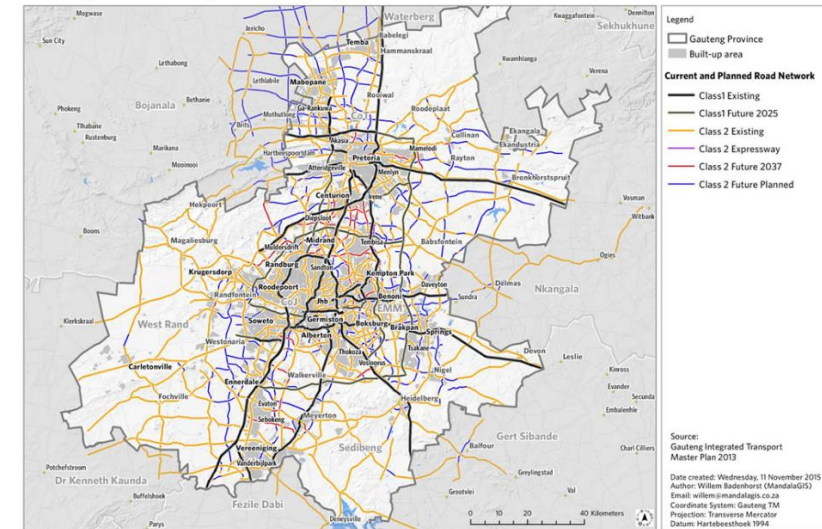
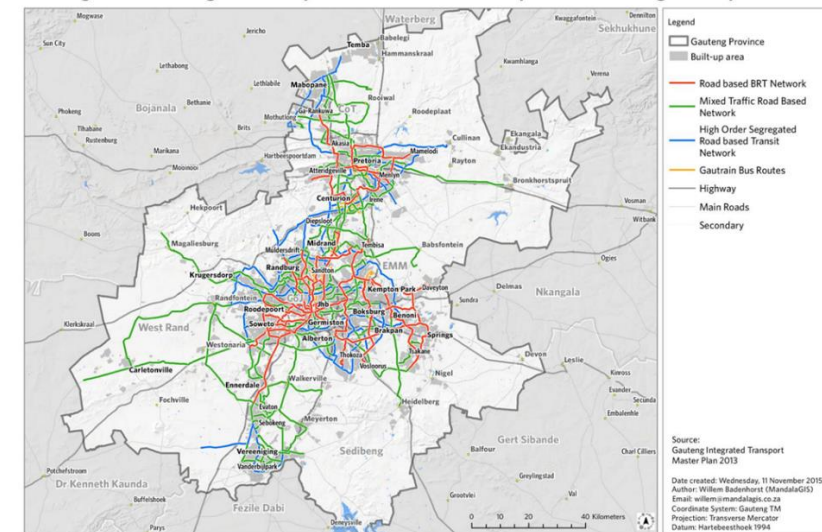


Figure 9.2: Integrated Transport Master Plan 2025 – Proposed Bus Passenger Transport

Gauteng SDF 2015: Integrated Transport Master Plan 2025 - Proposed Bus Passenger Transport



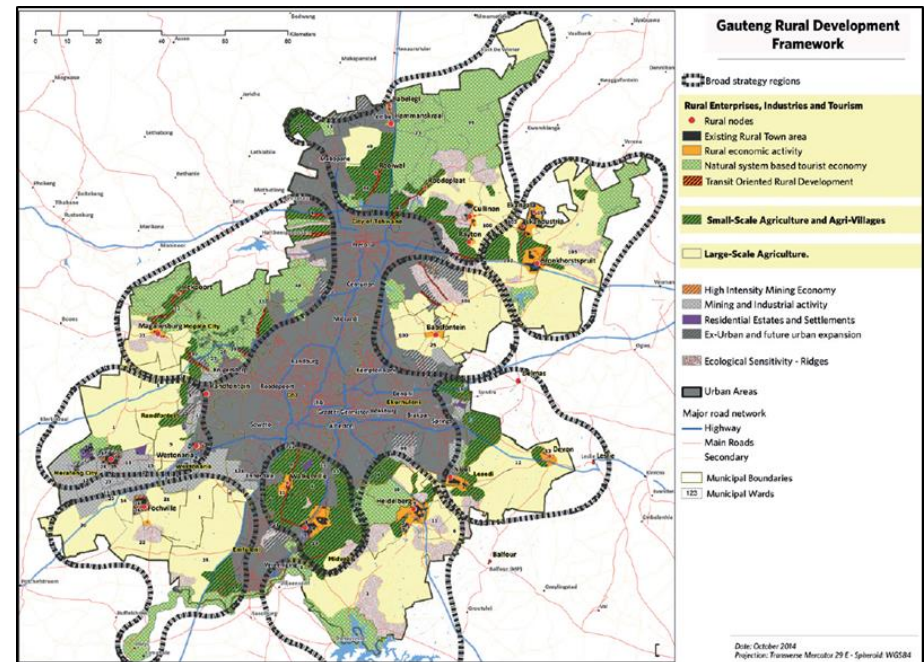
2.2.2.9 Gauteng Rural Development Plan 2015

The Gauteng Rural Development Plan (GRDP) is the first integrated, strategic plan prepared for rural areas in the province.

The plan proposes the development of nine rural regions in Gauteng that are, in many cases, connected to parts of neighbouring provinces (refer to **Figure 10**). The GRDP developed the following spatial development concepts to guide development in rural areas:

- The ‘rural capital web’ provides (like its urban counterpart) an indication of how and in which sequence public and private sector investment would ideally be undertaken in rural areas.
- Transit-oriented rural development’ entails optimising the interaction between transport (notably public transport) and land use in stations and on properties adjacent to or adjoining such routes.
- ‘Small-scale agriculture and agri-villages’ are rural settlements where inhabitants have access to enough land to be able to undertake small-scale agricultural/farming activities, but typically rely on income from other sources in nearby towns or larger urban areas.
- ‘Large-scale agriculture’ is land explicitly for agriculture/farming. Settlements take the form of houses/homesteads and associated structures for the farmers (who may be farming in a single or a cooperative arrangement) and their families.

Figure 10: Gauteng Rural Development Framework



- ‘Rural enterprises, industries and tourism’ refers to land on which a diverse range of economic activities takes place. These activities are based on the unique rural attributes/qualities of the land, nearby farming activities and proximity to towns and larger urban areas for markets and customers (or tourists).

Four rural regions were identified in the Sedibeng DM where small-scale agriculture and agri-villages and large scale agriculture should be promoted.

2.2.2.10 Provincial Mega Human Settlements

To strengthen the five provincial corridors identified in the Gauteng Spatial Development Framework, the Gauteng Department of Human Settlement launched the Housing Mega Projects, a R100-billion investment that aims to deliver more than 800 000 houses within 30 residential developments spread across the various development corridors. The 'Mega Projects: Clusters and New Cities' policy represents a shift in housing policy away from the RDP housing model (which is considered inefficient) towards large-scale integrated human settlements. **Table 6** below lists the 19 Mega Projects identified in Gauteng Province while the location of these projects are indicated in **Figure 11**.

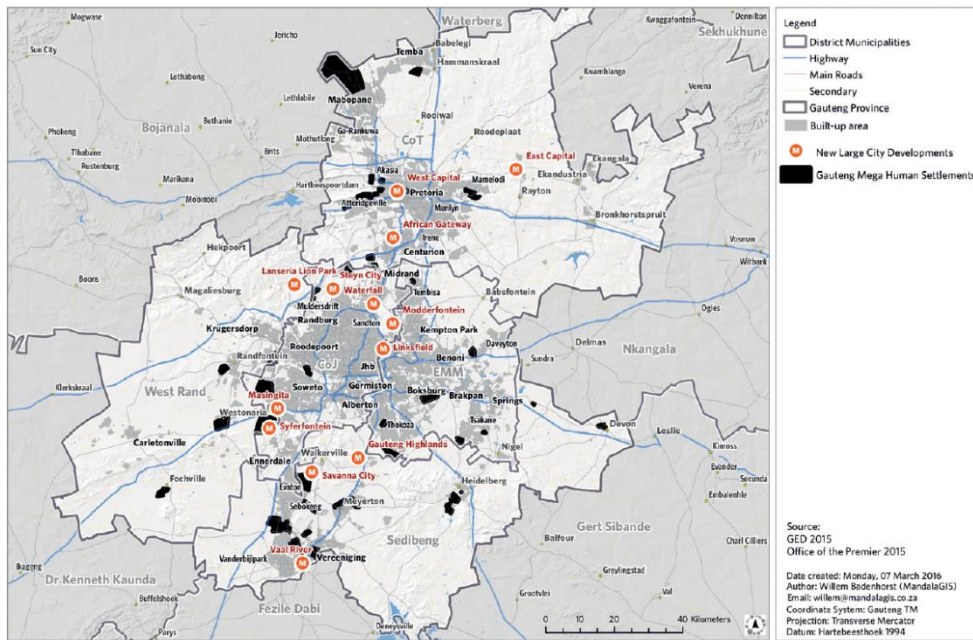
Table 6: Gauteng Mega Housing Projects

	PROJECT NAME	LOCATION	NUMBER OF UNITS
1.	Alexandra	Alexandra	30 800
2.	Boiketlong	Sebokeng	15 000
3.	Cullinan/Refilwe	Cullinan	5 185
4.	Daggafontein	Springs	15 511
5.	Goudrand (DRD)	Roodepoort	13 194
6.	Helderwyk	Brakpan	12 954
7.	John Dube	Duduza/Nigel	10 265
8.	Kwazenzele	Lesedi/Heidelberg	1 794
9.	Lanseria Airport	Lanseria	50 000
10.	Leratong City	Leratong (Kagiso)	15 000
11.	Mapleton	Vosloorus	21 141
12.	Montrose City	Randfontein	13 792
13.	Nelmapius	Centurion	12 950
14.	Park City	Bronkhorstspuit	11 000
15.	Stinkwater	Hammanskraal	9518

	PROJECT NAME	LOCATION	NUMBER OF UNITS
16.	Tswaing	Eersterust	12 334
17.	Varkenslaagte	Khutsong/Carletonville	12 491
18.	Western Mega Project	Randfontein	18 000
19.	Witpoortjie	Roodepoort	5 300
	Subtotal – Sedibeng		16 794
	Total		286 229

The projects highlighted in grey are the two priority projects which are located within the Sedibeng DM area: Boiketlong in Sebokeng and Kwazenzele in Lesedi. Out of the total of nearly 286 229 housing units to be developed in Gauteng, 16 794 will be located in the SDM study area and specifically in Boiketlong (15 000) and Kwazenzele (1794 units).

Savannah City and Sicelo are also highlighted in Midvaal LM as are the Vereeniging CBD in Emfuleni and Ratanda and Impumelelo/ Devon in Lesedi.

Figure 11: Mega Human Settlements and other large developments

2.2.2.11 Gauteng City-Region Integrated Infrastructure Master Plan 2030

The Gauteng City-Region Integrated Infrastructure Master Plan 2030 (IIMP) builds onto the foundation set by the NDP and the GCR's programme of Transformation, Modernisation and Reindustrialisation, aiming to:

- Develop economic potential in individual corridors;
- Ensure growth and opportunities are equitably distributed across the GCR;
- Deliver housing and economic opportunities where most needed to realise radical spatial and economic transformation;

- Ensure infrastructure efficiency through coordinated planning, prioritisation and timing of delivery; and
- Unlock human capital in a dynamic, innovative, competitive and connected city region.

It identified the following strategic projects that not only address a specific development need or issue, but also act as catalyst to development in the areas where they are located:

- Lesotho Highlands Phase 2, ensuring long-term water security for the region.
- The Sedibeng, Zuurbekom and Lanseria regional sanitation scheme.
- The development of new freight and logistics hubs to strengthen the development potential of the Aerotropolis around the OR Tambo International Airport and further afield.
- Gautrain Phase 2, entailing a new rail link from Soweto to Mamelodi.
- Full roll-out and integration of BRT systems.
- Completion of an outer freight ring to support the decentralisation of freight hubs and unlock development potential in the Aerotropolis.
- The Passenger Rail Agency of South Africa (Prasa) upgrades of 19 stations, commissioning of a new urban fleet and the construction of new railway lines.
- The roll-out of a Gauteng e-government programme to modernise access to government services
- The construction of the three district hospitals of Soshanguve, Kyalami and Lillian Ngoyi.
- Full conversion of all schools to smart schools.

- The support of township enterprises through the construction and upgrading of infrastructure.
- The restructuring of the City of Johannesburg through the development of high density transport corridors and the improvement of the Rea Vaya BRT.
- The redevelopment of the western centre of the City of Tshwane (the West Capital).
- The development of a new economic node, the Syferfontein/N12 Corridor on the West Rand.
- The development of a sustainable node along the Vaal River, to revitalise the Sedibeng District Municipality's economy.

2.2.2.12 Synthesis

Table 7 shows the relevant proposals for the Sedibeng District resulting from key national objectives. This is a summary of the proposals forthcoming from the national and provincial perspectives. It should be read in conjunction with **Table 1** (NDP Objectives and Actions) and **Table 5** (Alignment of policies and legislation to National Objectives), and follows the national aspects through to municipal level. Implementation of these proposals will ensure that the golden thread of national ideals will be followed through into the Sedibeng District.

Table 7: Proposals for Sedibeng DM SDF originating from National, Provincial and District Policies and Legislation

CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA			
NATIONAL DEVELOPMENT PLAN Our Future Make it Work: OBJECTIVES AND ACTIONS	NATIONAL LEGISLATION AND POLICIES APPLICABLE TO THE SEDIBENG DM SDF	PROVINCIAL AND DISTRICT LEGISLATION AND POLICIES APPLICABLE TO THE SEDIBENG DM SDF	SPECIFIC IMPLICATIONS FOR THE SEDIBENG DM SDF
Economy and Employment	<ul style="list-style-type: none"> • Agricultural Policy Action Plan (APAP) • Industrial Policy Action Plan (IPAP) • Regional Industrial Development Strategy (RIDS) • National Infrastructure Development Plan (NIDP) – Strategic Infrastructure Projects (SIP) • National Transport Master Plan (NATMAP) • Integrated Resource Plan for Electricity (IRP) 	<ul style="list-style-type: none"> • Gauteng 2055 • Gauteng Global City Region (GCR) • Gauteng Employment, Growth and Development Strategy (GEGDS) • Transformation, Modernisation and Re-industrialisation Strategy (TMR) 	<ul style="list-style-type: none"> • NDP: Sedibeng is earmarked as a job intervention zone to counteract decline in the mining industry. • APAP: Strengthen the agricultural sector in support of this policy. • SIP 11: Invest in Agri-logistics, rural infrastructure and tourism infrastructure. • IPAP “Green” and energy-saving, industries; Agro-processing, linked to food security and food pricing imperatives; Creative and cultural industries linked to tourism in the Province. • RIDS: Build on mining and agricultural potential. • NATMAP: Explore opportunities to benefit from the various transnational corridors. • IRP: Explore opportunities to benefit from the Solar Corridor. • GCR: Strengthen physical and economic integration. • GEDS: Transform the local economy in line with structural changes in the province. • TMR: Promote the Southern Corridor of Gauteng as a hub of the agri-business and agro-processing industry.
Economy Infrastructure – basic infrastructure	<ul style="list-style-type: none"> • National Infrastructure Development Plan (NIDP) – Strategic Infrastructure Projects (SIP) • Transport Master Plan (NATMAP) • Integrated Resource Plan for Electricity (IRP) 	<ul style="list-style-type: none"> • Gauteng Global City Region • Gauteng 2055 • Growth Management Perspective (GMP) • Gauteng 25-year Integrated Transport Plan (ITP) 	<ul style="list-style-type: none"> • SIP 10: Address electricity backlog. • SIP 18: Address water and sanitation backlog. • SIP 7: Integrated urban space and public transport. • GSDF: Strengthen integration and linkages with the Global City Region. • 25ITP: Promote public transport and optimise the use of rail for commuter and freight use

		<ul style="list-style-type: none"> • City-Region Integrated Infrastructure Master Plan (IIMP) 	
Environmental Sustainability and Resilience	<ul style="list-style-type: none"> • National Freshwater Ecosystems Priority Areas 2011 • National Biodiversity Strategy and Action Plan 2005 • National Biodiversity Assessment 2011 • Control of Development Affecting National Forests 2009 	<ul style="list-style-type: none"> • Gauteng Environmental Management Framework (EMF) • Gauteng Climate Change Response Strategy (CCRS) 	<ul style="list-style-type: none"> • EMF: protect the high rural control zone demarcated in the GSDF (Suikerbosrant). • CCRS: Implement climate change mitigation measures. • Incorporate environmental legislation, policy and guidelines into the SDF and local land use schemes.
Integrated and Inclusive Rural Economy	<ul style="list-style-type: none"> • National Comprehensive Rural Development Programme (CRDP) • Agricultural Policy Action Plan (APAP) • National Infrastructure Development Plan (NIDP) – Strategic Infrastructure Projects (SIP) 	<ul style="list-style-type: none"> • Gauteng Rural Development Plan (RDP) 	<ul style="list-style-type: none"> • CRDP – implement the Pro-active Land Acquisition Projects • APAP: Agrarian Transformation, Rural Development, Land Reform • SIP 11: Agri-logistics, rural infrastructure and tourism infrastructure. • RDP: Promote small-scale agriculture and agri-villages and protect large scale agriculture.
Positioning South Africa in the Region and the World – economy, BRICS	<ul style="list-style-type: none"> • Industrial Policy Action Plan (IPAP) 	<ul style="list-style-type: none"> • Gauteng Transformation, Modernisation and Re-industrialisation Strategy (TMRS) 	<ul style="list-style-type: none"> • TMR: Promote the Southern Corridor of Gauteng as a hub of the agri-business and agro-processing industry. • Align with national and provincial legislation, policies and projects in IDP formulation.
Transforming Human Settlements	<ul style="list-style-type: none"> • Development of Sustainable Human Settlements (Breaking New Ground) • Neighbourhood Development Grant (NDPG) 	<ul style="list-style-type: none"> • Employment, Growth and Development Strategy (GEGDS) • Mega Human Settlements 	<ul style="list-style-type: none"> • NDP: Upgrade all informal settlements by 2030. • NDPG: Implement projects in priority areas. • Fast track development of Mega Human Settlements in Mega City areas. • TMR: Prioritise the development of agri-parks on the periphery of urban settlements and give young people the opportunity to farm.

			<ul style="list-style-type: none"> • GMP: direct growth towards the Urban Consolidation Zone
Improving Education, Training and Innovation		<ul style="list-style-type: none"> • Employment, Growth and Development Strategy (GEGDS) 	<ul style="list-style-type: none"> • Align with national and provincial legislation, policies and projects in IDP formulation.
Promoting Health Care for All		<ul style="list-style-type: none"> • Employment, Growth and Development Strategy (GEGDS) 	<ul style="list-style-type: none"> • Align with national and provincial legislation, policies and projects in IDP formulation.
Social Protection (social welfare)		<ul style="list-style-type: none"> • Employment, Growth and Development Strategy (GEGDS) 	<ul style="list-style-type: none"> • Align with national and provincial legislation, policies and projects in IDP formulation.
Building Safer Communities (policing)		<ul style="list-style-type: none"> • Employment, Growth and Development Strategy (GEGDS) 	<ul style="list-style-type: none"> • Align with national and provincial legislation, policies and projects in IDP formulation.
Building a Capable and Developmental State (institutional)	<ul style="list-style-type: none"> • Municipal Systems Act • Municipal Structures Act • Spatial Land Use Management Act (SPLUMA) 	<ul style="list-style-type: none"> • Transformation, Modernisation and Re-industrialisation Strategy (TMR) 	<ul style="list-style-type: none"> • Align with national and provincial legislation, policies and projects in IDP and SDF formulation. • Iterative process – feed up into national and provincial departments
Fighting Corruption (institutional)		<ul style="list-style-type: none"> • Transformation, Modernisation and Re-industrialisation Strategy (TMR) 	<ul style="list-style-type: none"> • Align with national and provincial legislation, policies and projects in IDP formulation.
Nation Building and Social Cohesion – social compact	<ul style="list-style-type: none"> • Municipal Systems Act • Spatial Land Use Management Act (SPLUMA) 	<ul style="list-style-type: none"> • Transformation, Modernisation and Re-industrialisation Strategy (TMR) 	<ul style="list-style-type: none"> • Public participation in Sedibeng District IDP and SDF processes.

2.3 DISTRICT CONTEXT

2.3.1 West Rand District SDF

The West Rand District SDF as illustrated on **Figure 12** comprise the following important directives applicable to the Sedibeng District area:

- Protect the areas of high biodiversity around the ridges in the southern parts of the RWC municipality.
- Two important Agricultural Hubs in the south-eastern and north-western parts of the municipality.
- Two primary nodes around the CBDs of Randfontein and Westonaria respectively.
- Several Strategic Development Areas/ Priority Housing Development Areas around Randfontein and Westonaria respectively.
- The Syferfontein Mega Project area and secondary node along route N12 at the border with City of Joburg (Lenasia).
- Proposed promotion of industrial/ commercial activities along route N12.
- Rehabilitation of several strategically located mine dumps in the municipal area.

2.3.2 City of Joburg Metropolitan Spatial Development Framework 2040

The SDF for Johannesburg 2040 is a city wide spatial policy document premised on spatial transformation, defined through the principles of equity, justice, resilience, sustainability and urban efficiency which it seeks to translate into a development policy.

The spatial vision of the SDF 2040 is a compact polycentric city. The Inner City represents the strong urban core linked by efficient public transport to dense, mixed use (residential and commercial) sub-centres, and situated within a protected and integrated natural environment as graphically illustrated on **Figure 13**.

Of relevance to the Sedibeng District is the Orange Farm, Stetford, Ennerdale and Sweetwaters cluster of low income housing along route N1 and the Klip River open space area bordering Sedibeng to the north.

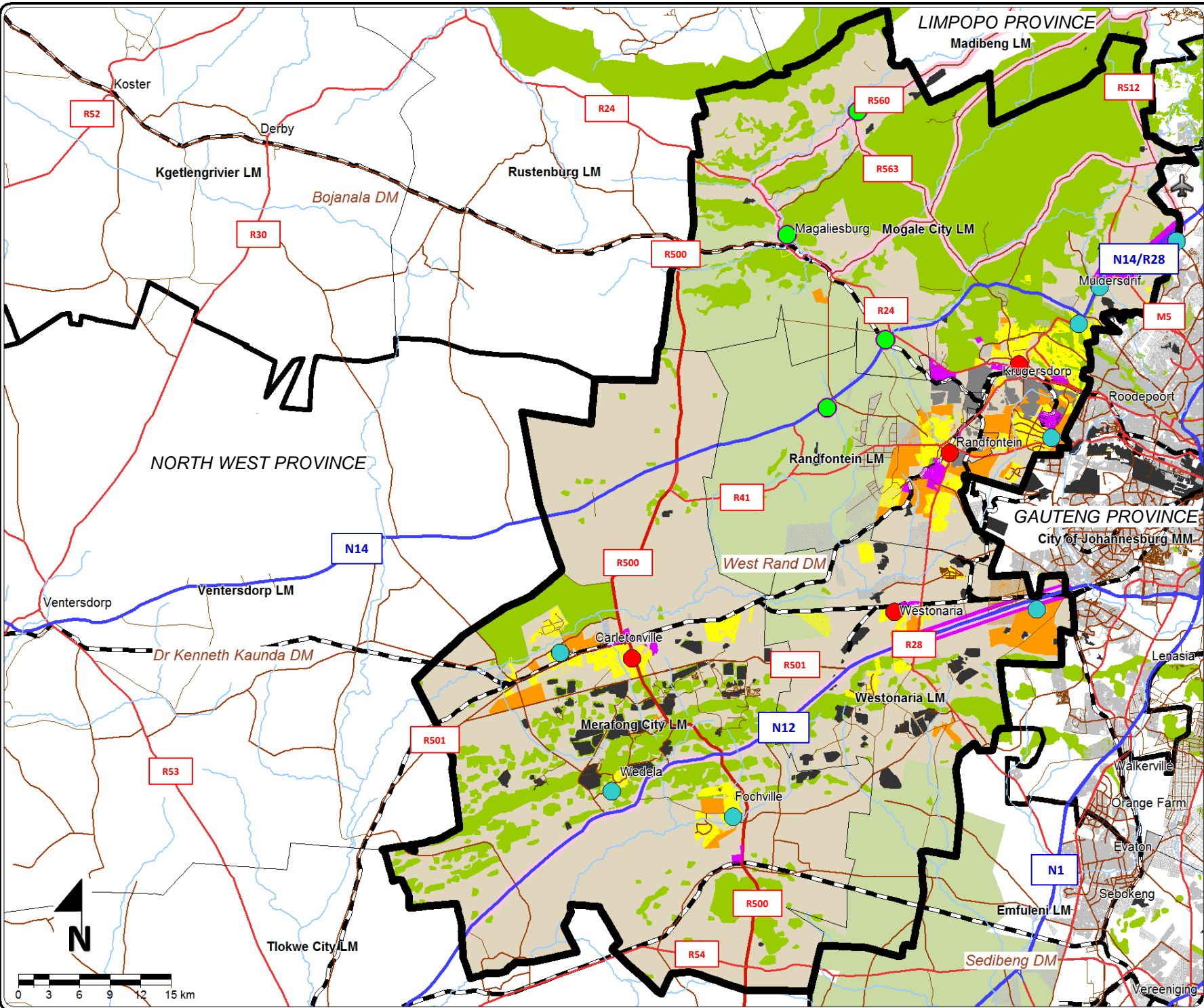
2.3.3 Ekurhuleni City

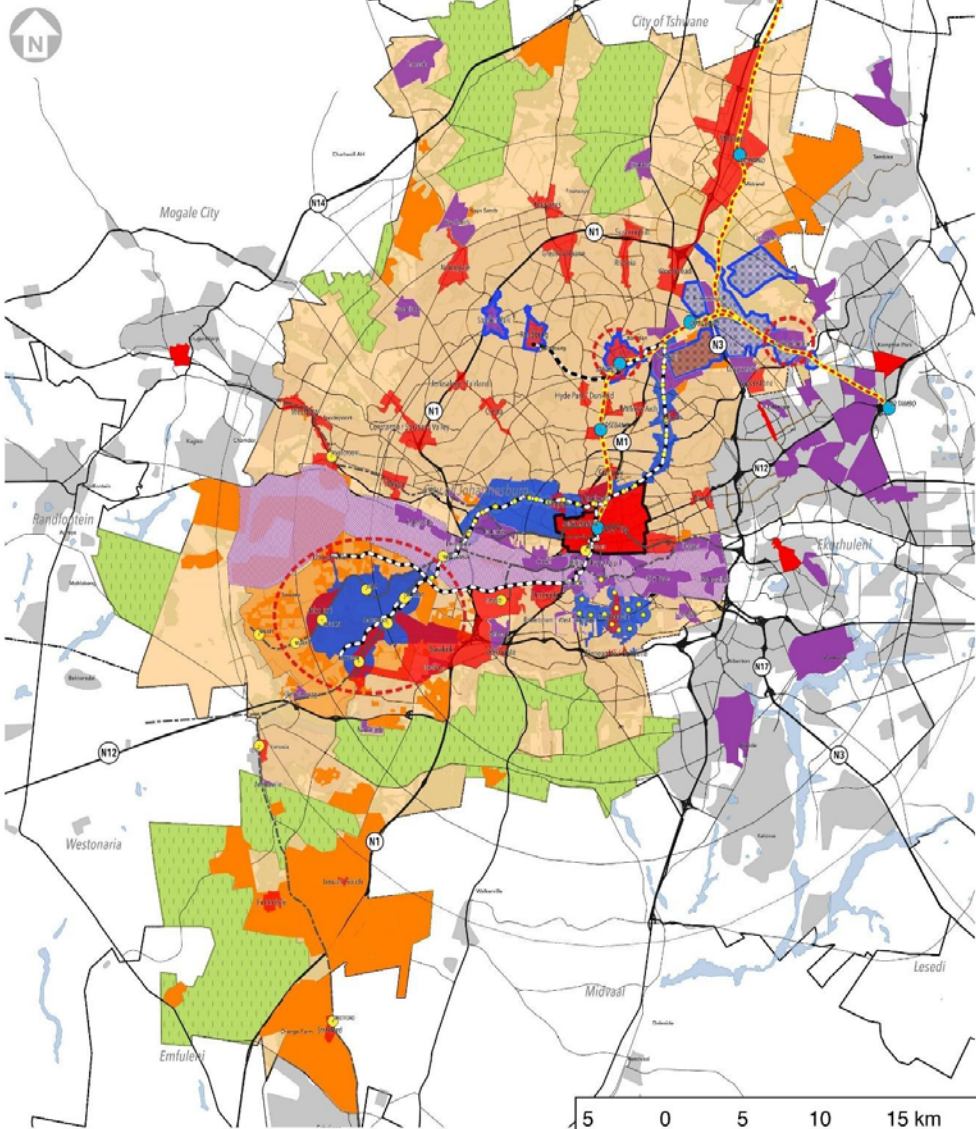
Figure 14 shows the Ekurhuleni SDF which represent the area bordering Sedibeng District to the north-east. The most important features in this regard are the Katorus-Palm Ridge complex growing towards the south towards the Waterval node in Midvaal LM (along route R59), and the southward expansion of Kwatsadusa in the vicinity of Heidelberg-Lesedi.

WEST RAND DISTRICT MUNICIPALITY Spatial Development Framework

LEGEND

-  District Municipality
-  Local Municipality
-  Urban Footprint
-  Agricultural Holdings
-  Protected Areas / Ridges
-  Agricultural Hubs
-  Extensive Agriculture
-  Mining
-  Mine Dump
-  Rehabilitation Project
-  Industrial
-  Strategic Development Areas
-  Rivers
-  Primary Nodes
-  Secondary Nodes
-  Tertiary / Rural Nodes
-  Highway
-  Primary
-  Secondary
-  Rail
-  Tourism Corridors





Spatial Framework

INTEGRATED TRANSPORT NETWORK

- Railway Stations
- Gautrain Stations (Current Network)
- BRT Nodes
- TOD Precincts
- Gautrain Line (Current Network) copy
- Gautrain Line (Potential Future Link) copy
- Railway Lines
- BRT Backbone

ECONOMIC BACKBONE

- Principal Metropolitan Sub-centre
- Inner City (Metropolitan Core)
- Urban Nodal Areas
- Industrial Nodes
- Mining Belt (Mixed use Area)
- PUBLIC TRANSPORT BACKBONE**
- Empire Perth / Louis Botha CoF
- Turffontein CoF
- Soweto CoF
- Randburg - OR Tambo Corridor Elements

CONSOLIDATION ZONE

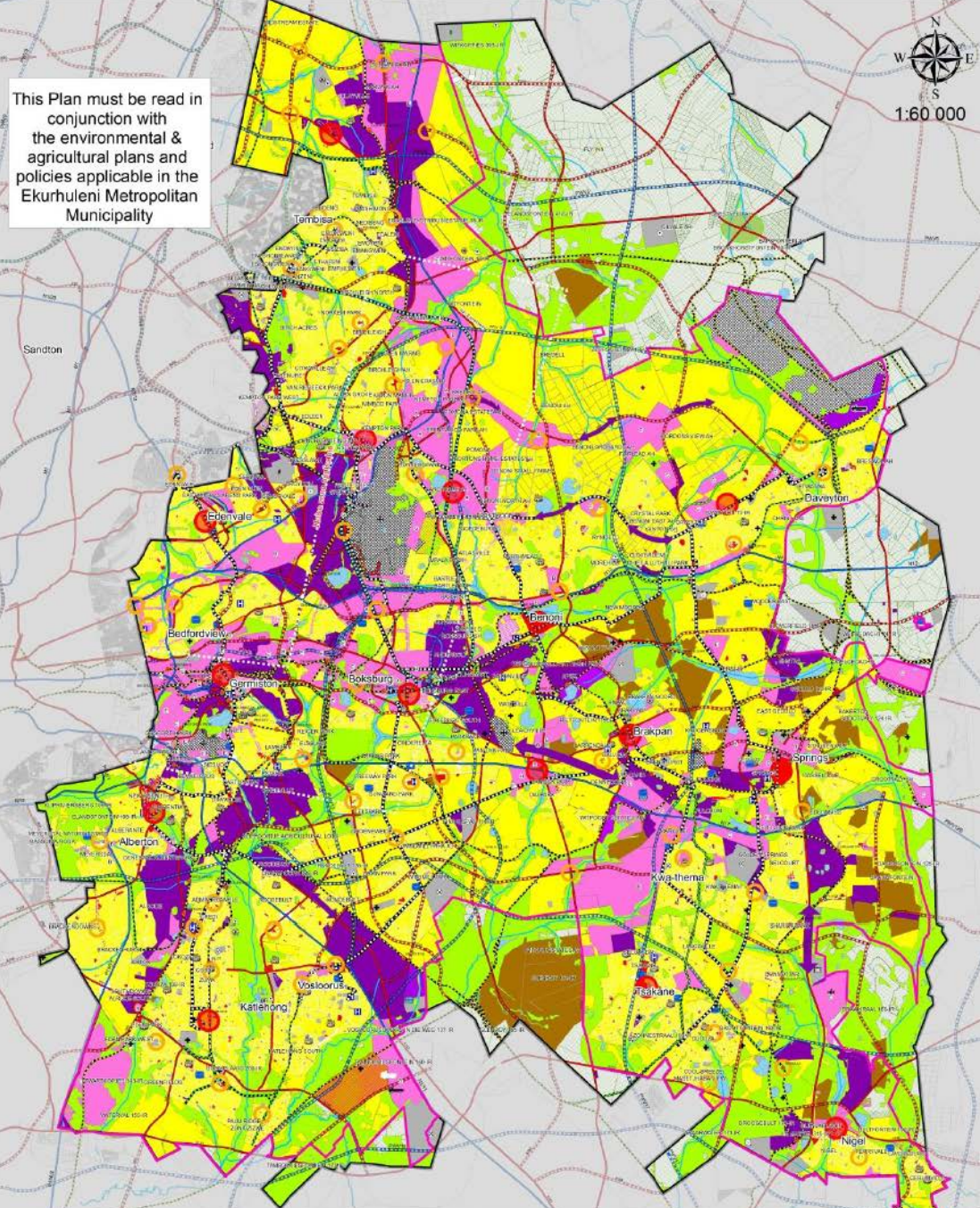
- Consolidation Zone
- Soweto
- Deprivation Areas

NATURAL STRUCTURE

- Wetlands and Waterbodies
- C-Plan Area Coverage
- Area beyond UDB
- Gauteng Built-up Areas
- COJ Boundary



This Plan must be read in conjunction with the environmental & agricultural plans and policies applicable in the Ekurhuleni Metropolitan Municipality



Metropolitan Spatial Development Framework 2015

Legend

Class 1 Gauteng Existing	Urban Development	Transportation Amenities, Public and Social Services	Primary Nodes	Agricultural Services Node	Rand Water	Proposed Inland Port
Class 2 Gauteng Planned	Business	Waste Treatment	Secondary Nodes	Military Base	Reservoir	Logistics Hub
Class 2 Gauteng Existing	Industrial	Hospitals	Open Space	SABS	Sewer Works	Urban Development Boundary
BRT	Mixed Use	ATNS	Parks	Power Station	Sport Stadium	Airport Noise Zone Area
Gautrain Existing	Mining	Depot	Rivers	Cemetery	Dumping Site	Corridor Links
Proposed Rail	Agriculture	Airports		Prison		



2.3.4 Nkangala District Municipality

The NDM borders the Sedibeng District to the north-east, and specifically the Victor Khanye LM centred around Delmas Town which accommodates a number of prominent agro industries (refer to **Figure 15**).

2.3.5 Gert Sibande District Municipality

The GSDM borders Sedibeng to the east (**Figure 16**) via the Govan Mbeki LM which holds the Secunda petrochemical cluster about 30 kilometres to the east along route N17, and Dipaliseng which is primarily focused around agricultural activity at Balfour and Greylingstad.

2.3.6 Fezile Dabi District Municipality

The main features of the Fezile Dabi District (**Figure 17**) which are relevant to the Sedibeng District Municipality are the Sasolburg petrochemical cluster located to the south of Emfuleni, as well as the Vaal River/ Dam which it shares as municipal (and provincial border), and which includes tourism destinations such as Parys and Deneysville.

The rural parts of this district are extensively utilised for agricultural purposes.

2.3.7 Dr Kenneth Kaunda District Municipality

The Dr Kennet Kaunda District Municipality borders Sedibeng to the south-east in an area dominated by agricultural activity between Vereeniging and Potchefstroom (**Figure 18**). There is no strong functional relationship between the two towns.

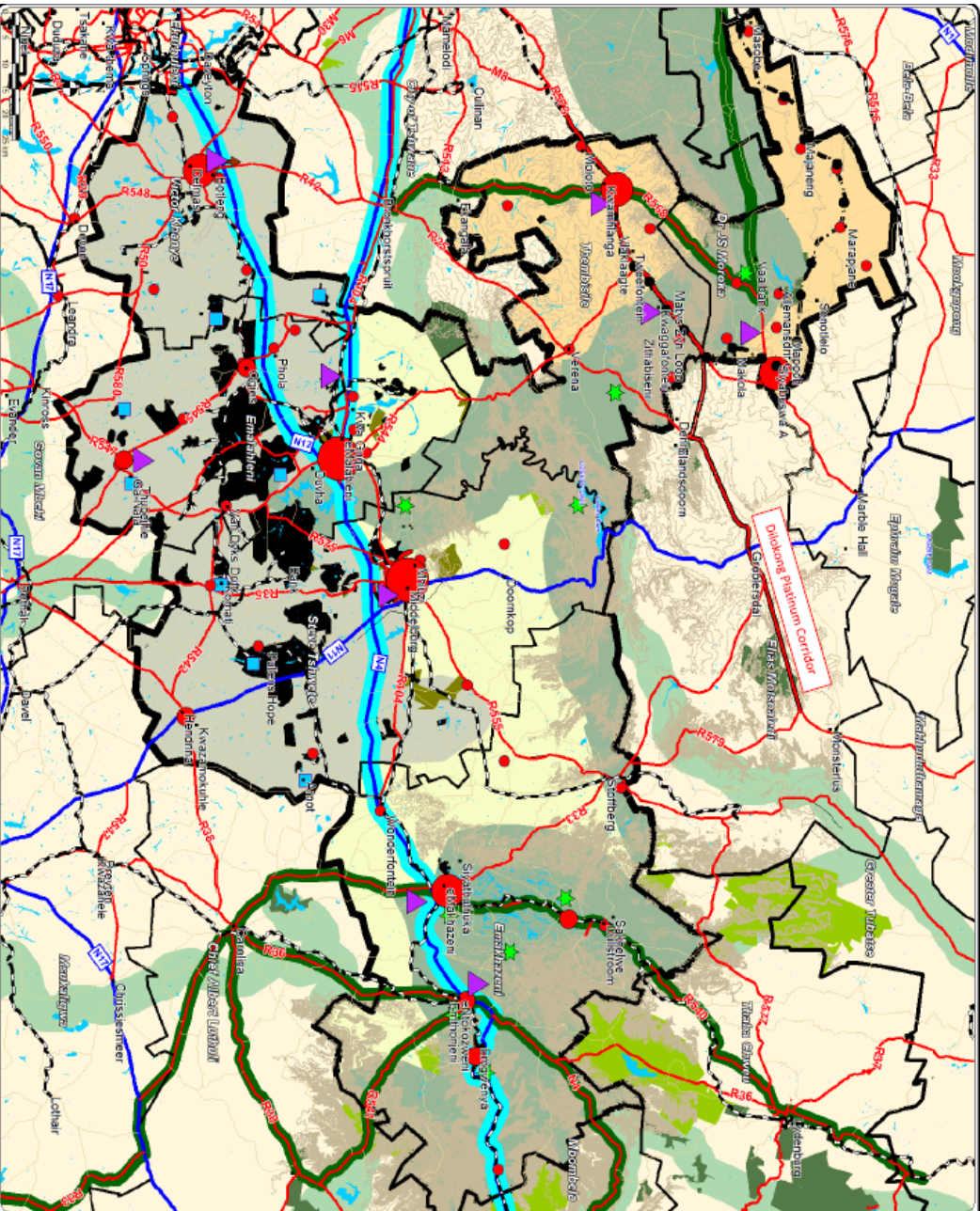
3. SEDIBENG DISTRICT ISSUES AND VISION


3.1 IDP RELATED PRIORITY ISSUES

The Sedibeng District Municipality is committed to the alignment the district's plans in realization of the National Development Plan Vision 2030, Gauteng TMR approach and Sedibeng Growth Development Strategy (GDS1, 2 and 3). By commitment the SDM have set for itself the following goals based on the challenges being faced in the District:

- Reinventing the Economy;
- Renewing Sedibeng communities;
- Reviving a Sustainable Environment;
- Reintegrating the region with its surrounds;
- Releasing Human Potential;
- Good and Financially Sustainable Governance; and
- Vibrant Democracy.

Long term catalytic projects which are called **Southern Corridor Projects** have been identified in partnership with both Sedibeng District Municipality

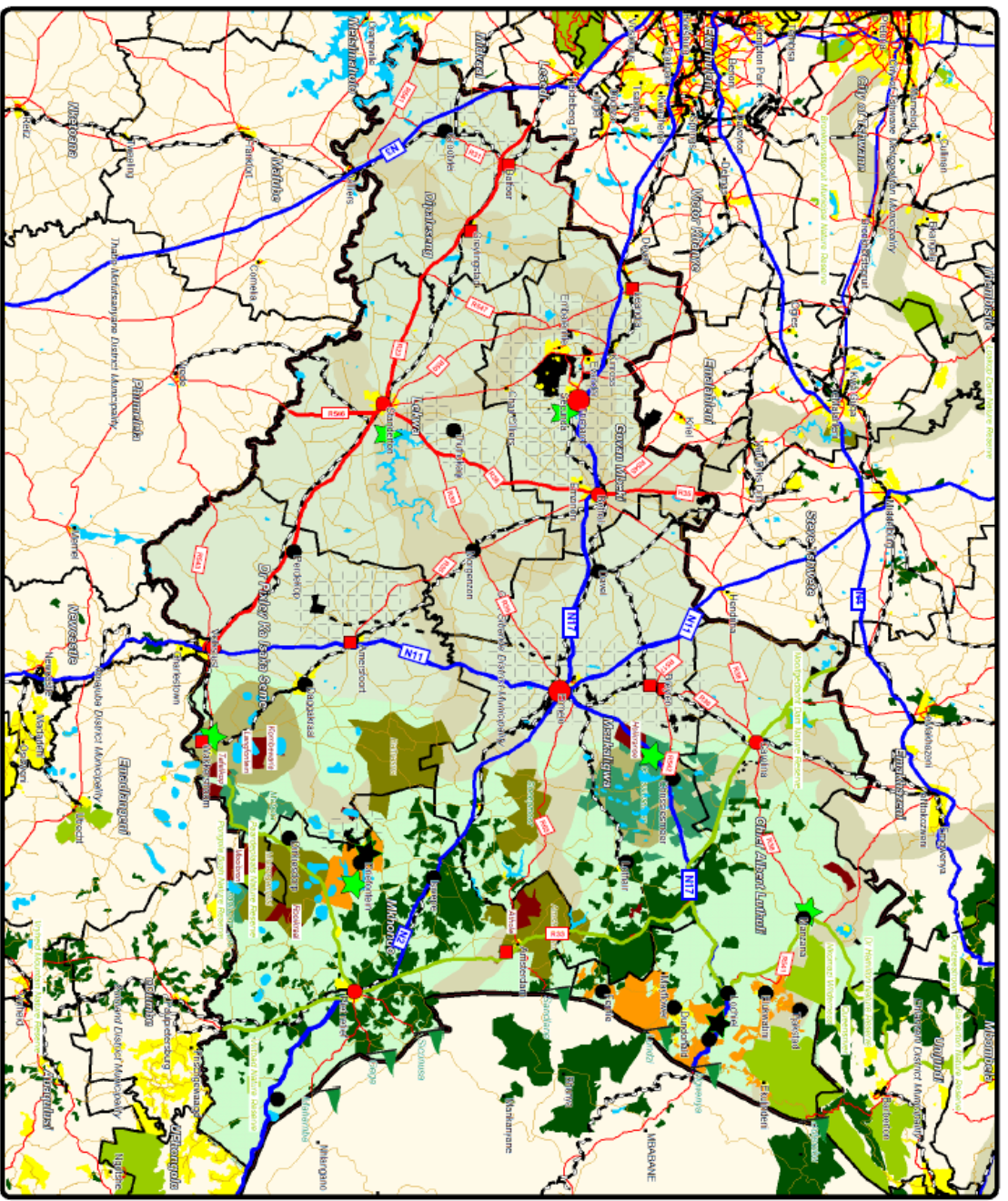





NKANGALA DISTRICT MUNICIPALITY

Spatial Development Framework

- Primary Order Centre
- Secondary Order Centre
- Tertiary Order Centre
- Rural Nodes
- Mining
- Mining and Agriculture
- Small Scale Farming and CRDP
- Ecological Corridors
- Extensive Agriculture
- Eco / Agri Tourism
- Forestry
- ★ Tourism Anchors
- ★ Tourism Corridors
- ★ Major Development Corridors
- ★ N4 Maputo Corridor
- ★ National Roads
- ★ Main Roads
- ★ Secondary Roads
- Railways
- Proposed Molofo Railway
- Proposed Molofo Stations
- Proposed Nkangala International Airport
- Industrial Nodes
- Power Stations

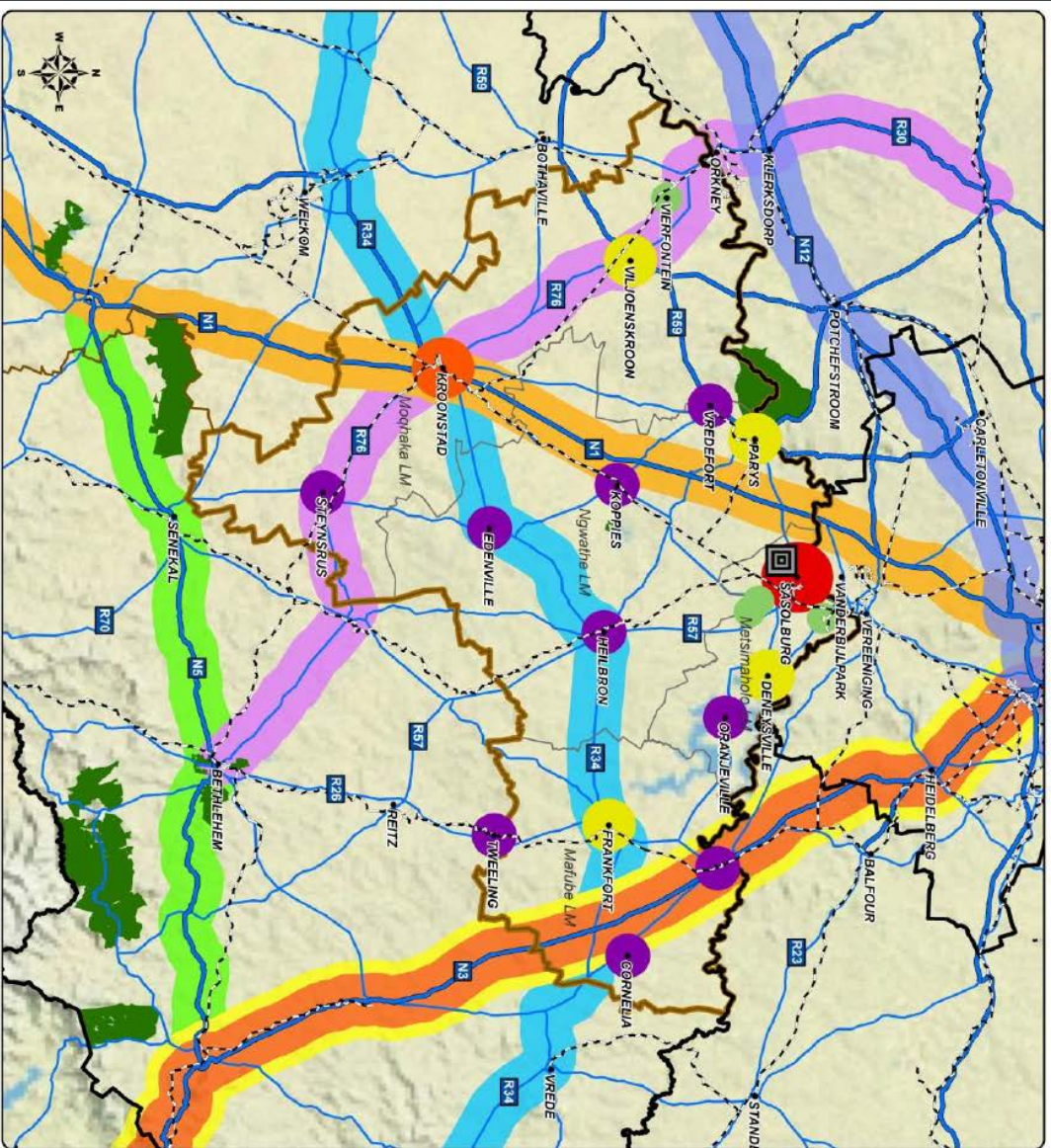




Gert Sibande District Municipality

Spatial Development Framework

- Primary/Secondary Nodes
- Tertiary Nodes
- Rural Nodes
- Name Reserves / Conservation Areas
- Proposed Conservation Areas
- Protected Environment
- Ecological Corridors
- Biodiversity
- Environmental Conservation Nodes
- Forestry Areas
- Agricultural
- Environmental Heritage Sites *
- ★ Tourism Anchors
- ★ CRDP Priority
- Mining Activities
- Proposed Rail Link
- Dams
- Residential
- Service Upgrade Priority Areas
- National Roads
- Main Roads
- Secondary Roads
- Railways



FEZILE DABI DM
Rural Development Plan

LEGEND

- Towns
- Sasolburg Development Node
- Railways
- Major Roads
- Main Roads
- Local Municipalities
- Fezile Dabi DM
- District Municipalities
- Provinces
- Protected / Conservation Areas
- N12 Corridor
- Competitiveness Corridor
- N1 Corridor
- N3 Durban-Gauteng Corridor
- N5 Tourism Corridor
- R34 Corridor
- R76/R30 Corridor

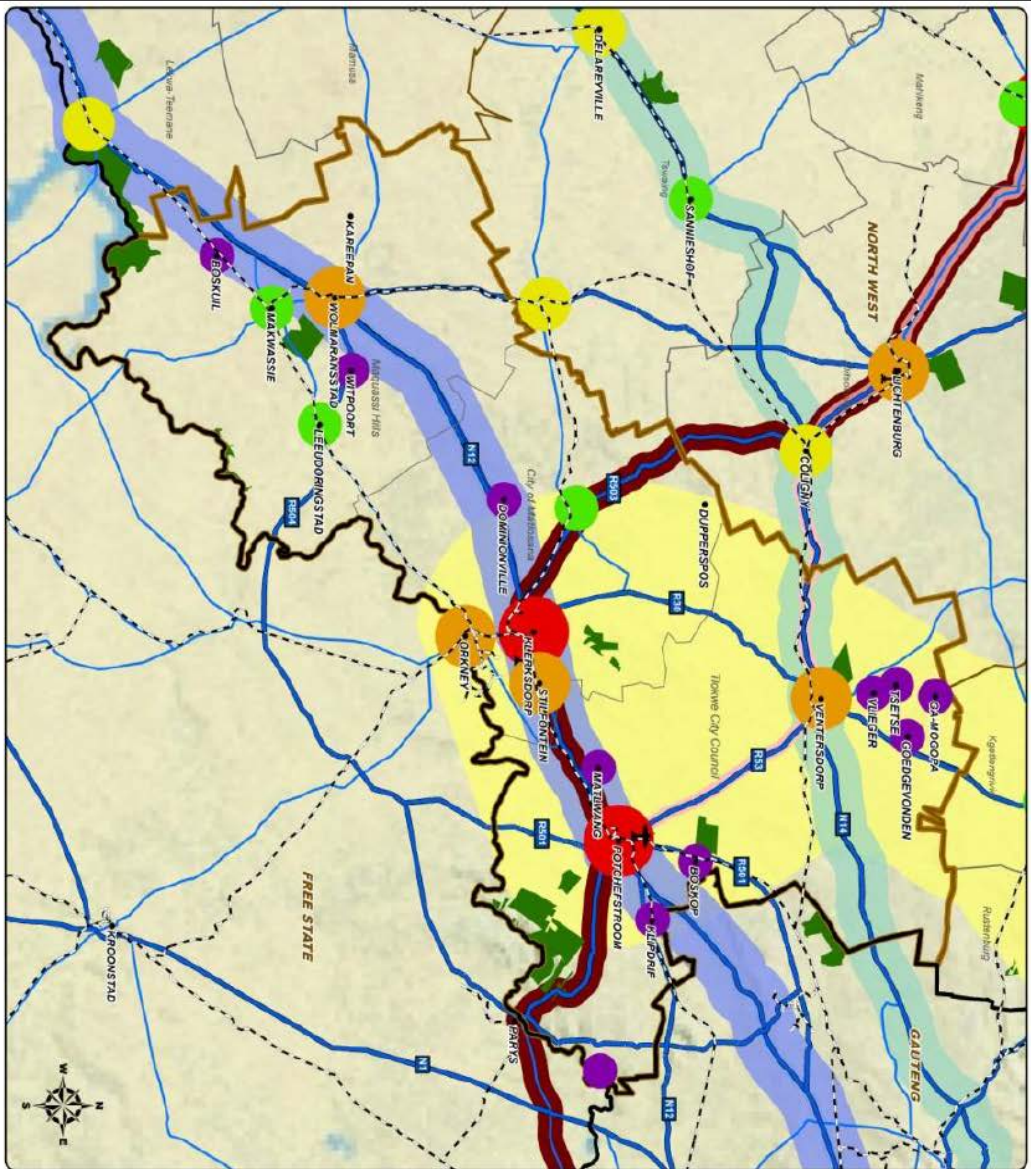
NODAL HIERARCHY

- Primary
- Secondary
- Tertiary
- 4th Order
- Villages

Date : August 2016
Projection: WGS84 TM31
Source: Free State SDF 2014

0 12.5 25 50 75 Km

17



DR. KENNETH KAUNDA DM
Rural Development Plan

LEGEND

- Towns
- Airfields
- International Airports
- Railways
- Major Roads
- Main Roads
- Local Municipalities
- Kenneth Kaunda DM
- District Municipalities
- Provincial Boundaries
- Protected Areas
- Eastern Development Belt

HIERARCHY

- Primary Nodes
- Secondary Nodes
- Tertiary Nodes
- Fourth Order Nodes
- Rural

CORRIDORS

- N4
- N12
- R505/N14/R53
- New National Corridor Road

Date : June 2016
Projection: WGS84 TM31
Source: MWPSPF 2015

0 10 20 40 60 Km

18

and Local Municipalities. From the fourteen projects identified, three (3) have been selected as key catalysts to effect change in the immediate future within the SDM.

The following table demonstrates the selected immediate priority projects:

Name	Impact	Location
Sedibeng Regional Sewer Scheme	Unlock residential and industrial development in the region and surrounding	Sedibeng Region
Sedibeng Fresh Produce Market	Provide food security and support local farmers. The market is located between the Johannesburg and Bloemfontein markets therefore it has the potential to serve communities situated between those two	Vereeniging
Sedibeng Government Precinct	Centralise services of all three tiers of Government as part of Urban Regeneration.	Vereeniging CBD

The flagship projects are cross cutting initiatives aimed at putting the development of the region on a new trajectory. In this way, the district is most likely to deliver towards the realization of the NDP and TMR Pillars and exceed on delivering on the 2016 election mandate. Some of these flagship projects will be led by a collaboration of the municipality though Public Private Partnership initiatives.

The most important aims of these flagships are the following:

- Creation of jobs, investments and promote tourism in the region
- Revitalise an attractive image for the region through Vaal 21 initiative
- Create wealth for the region

- Promote Heritage through commemorative events
- Improve transport infrastructure and;
- Encourage private investment

Table 8 (overleaf) comprise the comprehensive list of projects identified as part of the Southern Corridor initiative:

Table 8: Comprehensive List of Projects Identified as part of the Southern Corridor Initiative

PROGRAMME	PROJECT NAME	LOCATION	OWNER	PROGRESS
AGRITROPOLIS	1. Agritropolis Strategy	District-wide	GDARD	Feasibility Study Required
	2. Doornkuil Precinct- Agri- City, Agricultural college	Midvaal	Midvaal LM- Land belongs to Sedibeng District	Full feasibility required.
	3. Vereeniging Fresh Produce market	Emfuleni	GDARD	Operations
	4. De Deur rural node- precinct plan- Agro processing farm	Midvaal	Midvaal LM/ GDARD	Additional grant funding required or PPP to solicit feasibility studies
	5. Langzeekoegat Precinct- Agri village	Lesedi	DRDLR	Implementation
	6. Agro-processing plant	Lesedi	Lesedi LM	Feasibility required
	7. Devon Tannery- Agro- processing of cattle hides	Lesedi	Lesedi LM/ GDARD	Implementation
GREEN ECONOMY	8. Natural gas hub	District-wide	Department of Energy/ Sedibeng	Feasibility required
	9. Waste to power plant: Renewable energy (proposed \$ 500 million plant)	Lesedi	Earth Sea Corporation Energy	Implementation
AGRO-TOURISM	10. Waterfront precinct- Waterfront developments	District-wide	Sedibeng District	Feasibility required
	11. Sharpeville and Vereeniging Precinct Framework	Emfuleni	Emfuleni LM	Implementation
	12. Vaal rehabilitation	District-wide	Sedibeng District	EMP development
	13. Recreation megacity- precinct in Sharpeville	Emfuleni	Sedibeng District	Planning stage
GOVERNMENT PRECINCT/ VAAL 21	14. Government precinct incl. CBD revitalization	Emfuleni	Sedibeng District	Conclusion of PPP process with National Treasury
	15. Vaal River City development	Emfuleni	Private Developer-Steyn	The VRC & Sharpeville Ext 2 Projects have been submitted to Human Settlements, to form part of Provinces Mega Projects. Opportunity of Phase 3 being brought into the Precinct with the Linking of the Vereeniging CBD, through the "Old Refractories Site".

PROGRAMME	PROJECT NAME	LOCATION	OWNER	PROGRESS
				The Sharpeville Memorial Precinct & the Vaal University, through the Pedestrian & Cyclist link through the Green Belts, then from these precincts, into the Vanderbijlpark CBD.
R59 CORRIDOR	16. Eight (8) nodes identified	Midvaal	Midvaal LM	Bulk water and sewer to be unlocked to enable implementation
	17. The Grace development/ Gauteng highlands- incl Joziwood studios	Midvaal	Private development	Finalisation of Sewer capacity, SLA and DHS Agreement
	18. Klipriver business park	Midvaal	Sedibeng District	Implementation of Next phases depended on sewer and water availability
URBAN RENEWAL FRAMEWORK	19. Old Vereeniging hospital- upgrade & re-use	Emfuleni	GDHS/ Emfuleni LM	Implementation
	20. Vanderbijlpark Urban Renewal Strategy	Emfuleni	Emfuleni LM	Feasibility study to be concluded
REVITALISATION PROGRAMME-	21. Bophelong secondary node	Emfuleni	NDPG and DBSA	Planning stage
	22. Ratanda Precinct Development	Lesedi	NDPG	Feasibility study required
SICELO PRECINCT	23. SiceLO Precinct plan- Meyerton CBD link, commercial & housing developments	Midvaal	Midvaal LM	Full feasibility required
E-GOVERNMENT	24. Optic fibre project- incl Free Wi-Fi, Smart schools	District-wide	Gauteng E- Government	Implementation of Free Wi-Fi and Smart payment systems
WAREHOUSING , LIGHT INDUSTRIAL & OFFICE PARKS	25. Heidelberg Extension	Lesedi	Lesedi LM/ Marble Gold	Unlocking future phases
	26. Warehouse Port	Lesedi	Private Development- Tecino Investment	SDP approvals
	27. Warehouse Park- Industrial Township	Lesedi	Private Development- Tecino Investment	SDP approvals
	28. Office Park	Lesedi	Private Development- Tecino	SDP approvals
	29. Extreme Park, service centre (Kwa	Lesedi	Private Development- Tecino	SDP approvals
	30. Shopping centre, Life Style cafe and	Lesedi	Private Development- Tecino	SDP approvals
	31. Light industrial hub-Kwa Zenzele	Lesedi	Corobrik/ Lesedi LM	SDP approvals
	32. Bulk liquid Terminal- for Transnet & Bulk fuel storage	Lesedi	Transnet	Implementation

PROGRAMME	PROJECT NAME	LOCATION	OWNER	PROGRESS
	33. Bulk Liquid Terminal – Vopak - Reatile	Lesedi	Vopak - Reatile	Implementation
WASTE WATER TREATMENT PROGRAMME	34. Sedibeng Waste Water Treatment Works incl Sebokeng WWTW	District-Wide	Rand Water	Implementation
	35. Leeuwkuil WWTP	Emfuleni	Rand Water	Implementation
	36. Rietspruit Sewer line	Midvaal	Randwater	Implementation
INDUSTRIALISATION PROGRAMME	37. Ash dump beneficiation	Emfuleni	Emfuleni LM	Implementation: Land will be availed to accommodate the future growth of the river city
	38. Iron and steel beneficiation	District-wide	Sedibeng district/ GDED	Feasibility required and Government decision on Arcelor Mittal
	39. Building materials supply	District-wide	Sedibeng district/ GDED	Feasibility required
	40. Vaal Logistics Hub	Emfuleni	Emfuleni LM/GIFA	To be presented at the Steering Committee
ROADS UPGRADING PROGRAMME	41. K154 upgrade	Midvaal	GDRT	Completion of the remaining sections
	42. R82 Upgrade	Midvaal	GDRT	Next phase to commence
SOCIAL INFRASTRUCTURE PROGRAMME	43. Savannah City	Midvaal	Private development- Basil Read/ GDHS	Roll out of support services (schools, clinics) Resolving of bulk sewer line Upgrading of Sedibeng Sewer Works
	44. Doornkuil regional cemetery	Midvaal	Midvaal LM/ Sedibeng District	Feasibility required
	45. Regional training hospital	Midvaal	Midvaal LM/ Sedibeng District	Feasibility required
	46. Sanitas Hospital	Lesedi	Meigui	Implementation
Note:				
<ul style="list-style-type: none"> The projects highlighted in yellow have been identified as the three projects with the highest priority for the Sedibeng DM. Detailed planning has already been completed for the projects in bold and the detailed plans are available on the Sedibeng DM website. 				

4. SPATIAL ANALYSIS AND SYNTHESIS

4.1 INSTITUTIONAL FEATURES

Figure 19 depicts the areas of jurisdiction as well as the number of wards in each of the three municipalities within the Sedibeng District. It also indicates the size of each of the three local municipalities with the total size of the Sedibeng District being 418 900 ha.

Emfuleni LM comprise a total of 44 wards and it covers about 96 900 ha of land representing 23% of the SDM.

Midvaal LM only holds 15 wards but it covers an area of about 173 000 ha of land which is 41% of the SDM area.

Lesedi LM has 13 wards covering a total area of 149 000 ha and which accounts for 36% of the SDM area of jurisdiction.

Figure 20 shows the cadastral structure of the SDM. It is evident that the bulk of the SDM comprise farm portions (7369 farms/ 372 154 ha) which represent about 88.3% of the total SDM area.

Agricultural holdings occur extensively in the central parts of the SDM from west of Bophelong northwards up to Apple Orchards and the Walkerville Fruit Farms in the northern extents. The 9281 agricultural holdings cover an area of about 24 074 ha (5.7% of SDM).

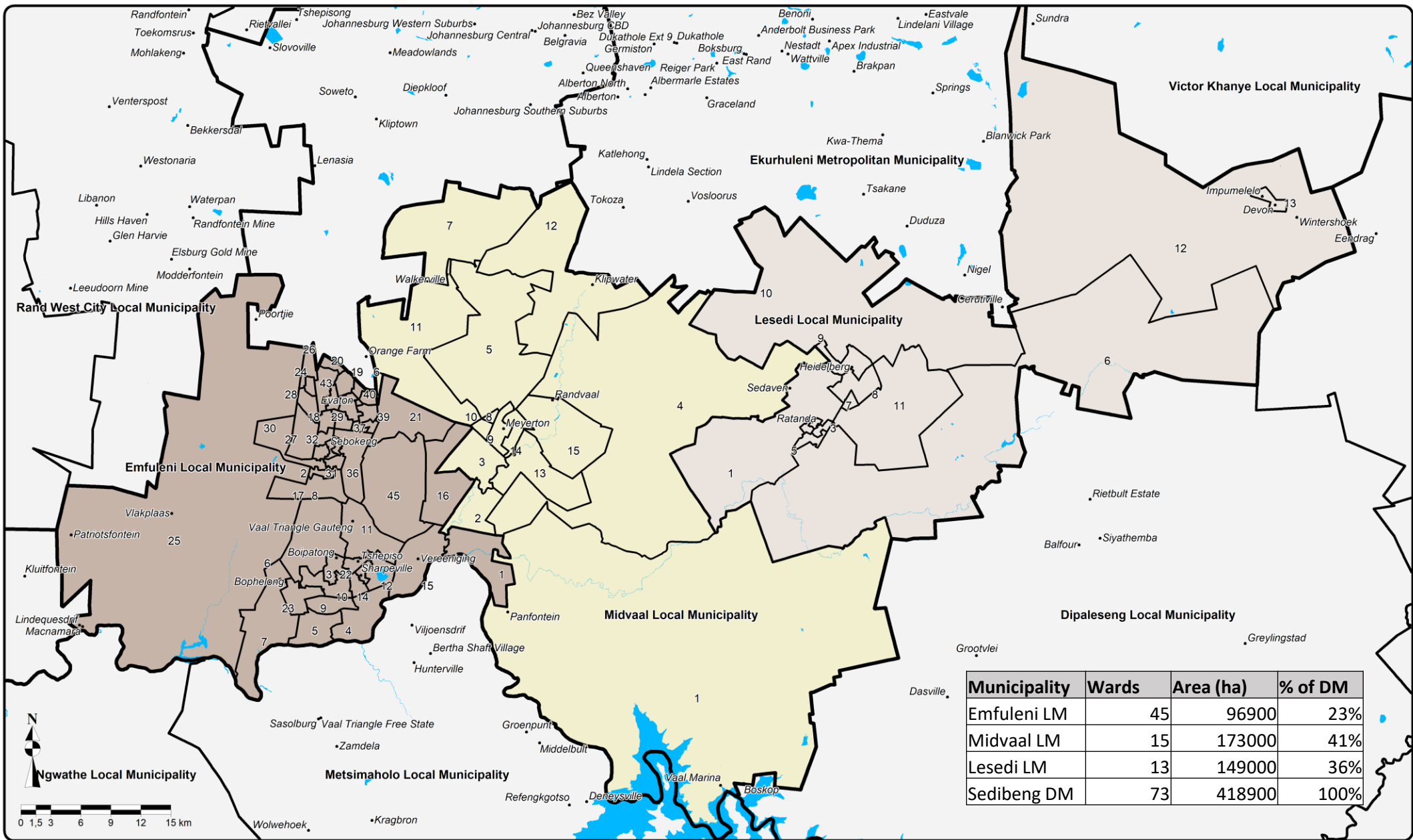
Formal townships comprise around 215 306 individual erven which collectively cover an area of about 25 552 ha of land representing 6% of the total land area of the SDM.

4.1.1 Population

The **Gauteng Province** population (2016) is estimated at 13,39 million people of which Sedibeng District represents about 7.5% (957 529 people) (refer to **Diagram 6**). It is evident that the total population of the Sedibeng District increased from 916 484 in 2011, to 957 529 in 2016 – an increment of 41 045 individuals. The population growth rate of the Sedibeng District for this period (2011-2016) was 0.9%. The total Sedibeng District Population represents 295 294 households, with an average household size of 3.2 persons per household.

Within the Sedibeng District it is evident that the highest population increment during the period 2011 to 2016 was recorded in the Midvaal LM which increased by 16 311 individuals from 2011 to 2016. This is followed by Lesedi LM which increased with 12 952 individuals over the same period, whilst the Emfuleni LM population increased with 11 782 individuals from 2011 to 2016 (refer to Diagram 6).

Emfuleni LM represents 76.6% of the Sedibeng District population, with the Lesedi LM and Midvaal LM both at 11.7%. The vast majority (more than 700 000 people) of the total Emfuleni LM population live in the township areas of Sebokeng and Evaton.



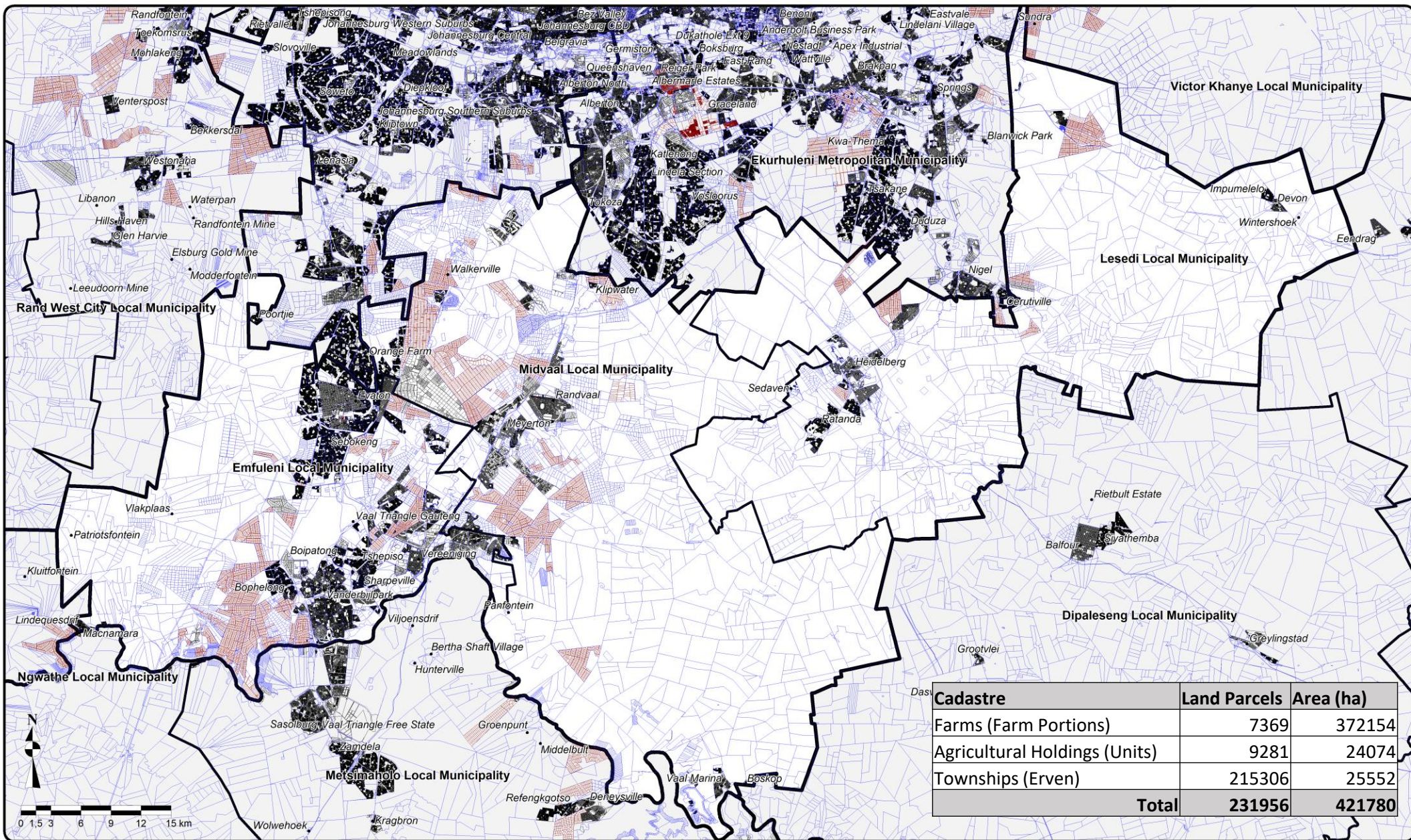
Municipality	Wards	Area (ha)	% of DM
Emfuleni LM	45	96900	23%
Midvaal LM	15	173000	41%
Lesedi LM	13	149000	36%
Sedibeng DM	73	418900	100%

SEDIBENG DISTRICT MUNICIPALITY SDF - INSTITUTIONAL

- Lesedi LM
- Midvaal LM
- Emfuleni LM
- Ward Boundaries

— Dams and Rivers





Cadastre	Land Parcels	Area (ha)
Farms (Farm Portions)	7369	372154
Agricultural Holdings (Units)	9281	24074
Townships (Erven)	215306	25552
Total	231956	421780

SEDIBENG DISTRICT MUNICIPALITY SDF – CADASTRAL STRUCTURE

- Erven (Formal Townships)
- Agricultural Holdings
- Farm Portions



Gauteng Province:
District/Local Municipalities

GP Province 2016

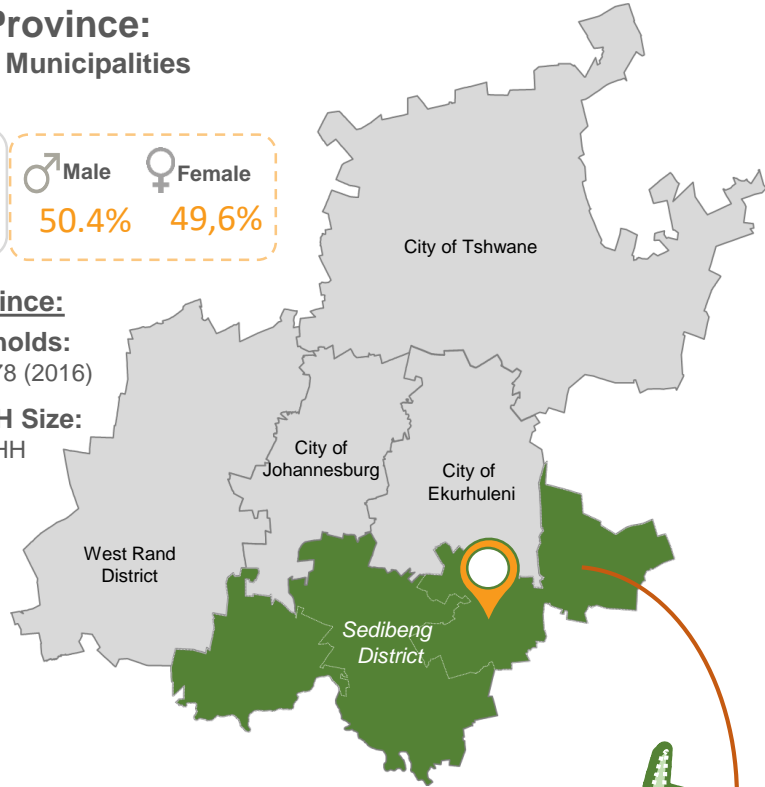
♂ Male 50.4% ♀ Female 49.6%

Gauteng Province:

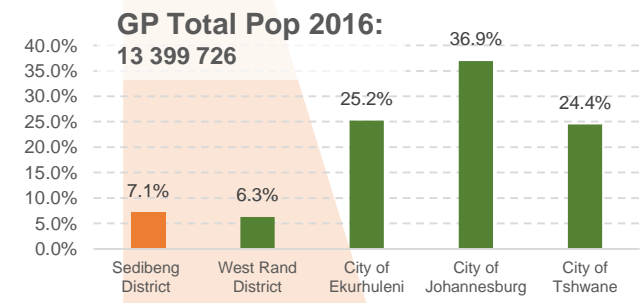
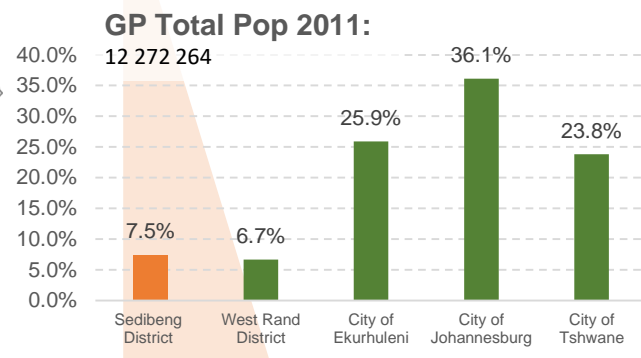


Households:
4 564 578 (2016)

Avg. HH Size:
2,9 per/HH



Total Population Gauteng Province



GP Population Growth:
2011-2016

2011: 12 272 264

2016: 13 399 726

1 127 462

GP Growth Rate
2011-2016

1.9%

Growth in DM's: 2011-2016

District	2011-2016
Sedibeng District	41 045
West Rand District	17 599
City of Ekurhuleni	200 634
City of Johannesburg	514 520
City of Tshwane	353 664
Gauteng	1 127 462

Sedibeng District:
Local Municipalities

Sedibeng DM:



Households:
295 294 (2016)

Avg. HH Size:
3.2 per/HH



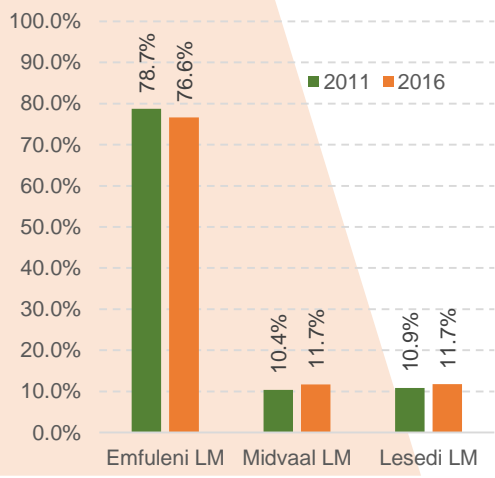
Sedibeng DM 2016

♂ Male 50% ♀ Female 50%

Sedibeng Growth Rate
2011-2016

0.9%

Sedibeng Total Pop 2011-2016:



Sedibeng Population Growth:
2011-2016

2011: 916 484

2016: 957 529

41 045

Growth in LM's: 2011-2016

LM	2011-2016
Emfuleni LM	11 782
Midvaal LM	16 311
Lesedi LM	12 952
Sedibeng District	41 045

The population density of the Sedibeng District as a whole is approximately 198 people per km².

4.1.2 Age and Gender Profile

The Sedibeng DM gender profile reflects a balanced male (50%) to female (50%) distribution. The Sedibeng DM Age and Gender Profile (population pyramid) depicted on **Diagram 7** indicates a large child and school attending aged population segment (aged 0 to 19) representing 33% of the total Sedibeng DM population. This is followed by a substantive young adult and working population (aged 20 to 60) representing 57% of the total Sedibeng DM population. It is evident that the Sedibeng DM population have a shorter life expectancy, with the population segment aged 60+ representing a mere 10% of the total resident population. The Local Municipalities age and gender profiles indicate similar trends as to the district.

4.1.3 Education Profile

The level of education (refer Diagram 2) obtained by most people within the Sedibeng DM is a *Secondary School* level of education (55.8% - 2016). It is evident that the secondary school level of education increased from 54.4% in 2011 to 55.8% in 2016. Positively the level of no schooling decreased from 14.8% in 2011 to 11.6% in 2016. In addition, tertiary education (diploma and / or a degree) increased from 7.6% in 2011 to 8.6% in 2016.

In this regard Midvaal scores the highest (10.5%) followed by Emfuleni (8.4%) and then Lesedi (7.7%).

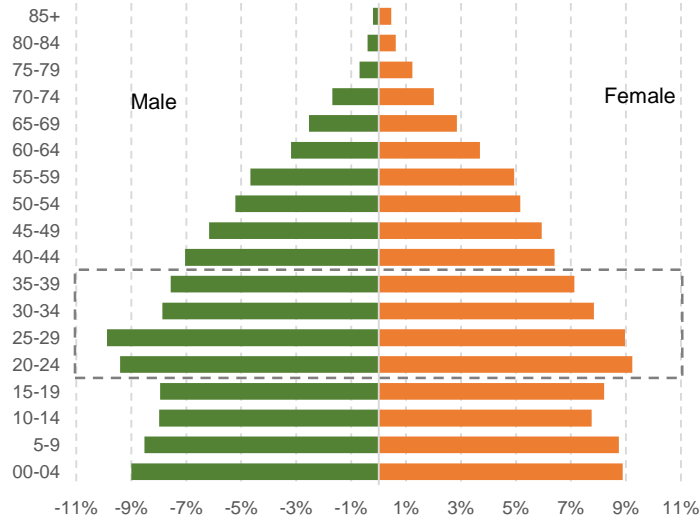
From the 2016 Community Survey, it is evident that 29.5% of learners spend less than 15 minutes to get to educational institution, and 52.0% spend between 15 and 30 minutes to get to educational institution. Furthermore, 56.0% of learners walk to the school / education facility they attend.

The following section provides an indication of the Sedibeng DM level of development in terms of the Human Development Index, the Gini Coefficient, which is the measure of inequality, number of people below the food poverty line and the percentage of people living in poverty (refer to **Diagram 8**). This information was sourced from the Sedibeng IDP (2018/19).

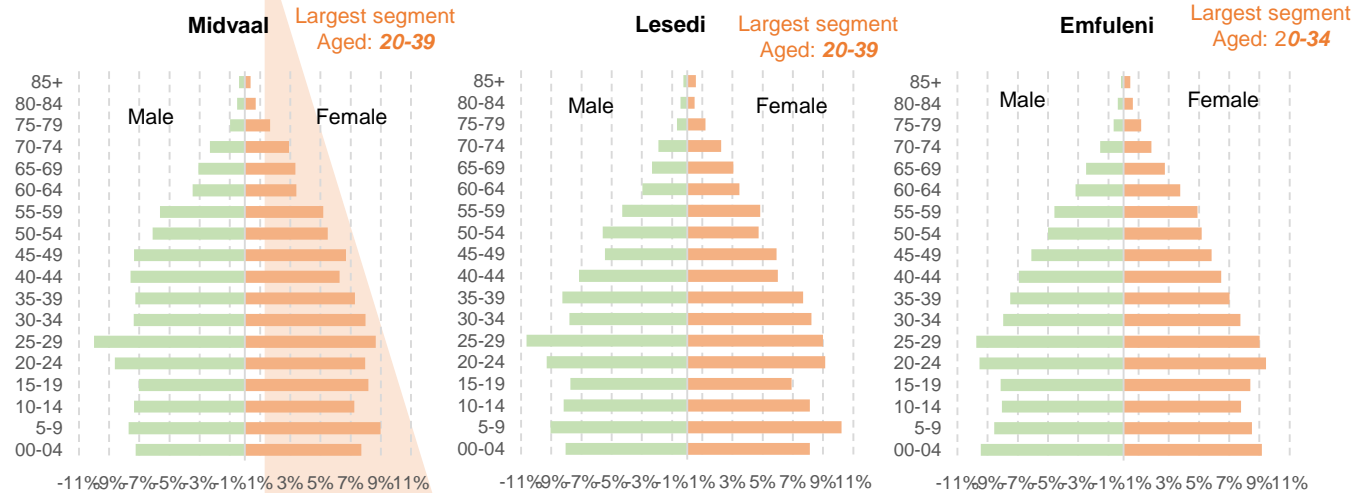
4.1.4 Human Development Index

The Human Development Index (HDI) is a composite, relative index that attempts to quantify the extent of human development of a community. It is based on measures of life expectancy, literacy and income. It is thus seen as a measure of people's ability to live a long and healthy life, to communicate, to participate in the life of the community and to have sufficient resources to obtain a decent living. The HDI can assume a maximum level of 1, indicating a high level of human development, and a minimum value of 0, indicating no human development.

Sedibeng DM Age & Gender Profile 2016



LM's Age Profile 2016



Largest segment of the Sedibeng DM population is Aged: 20-39 (42%)

Male

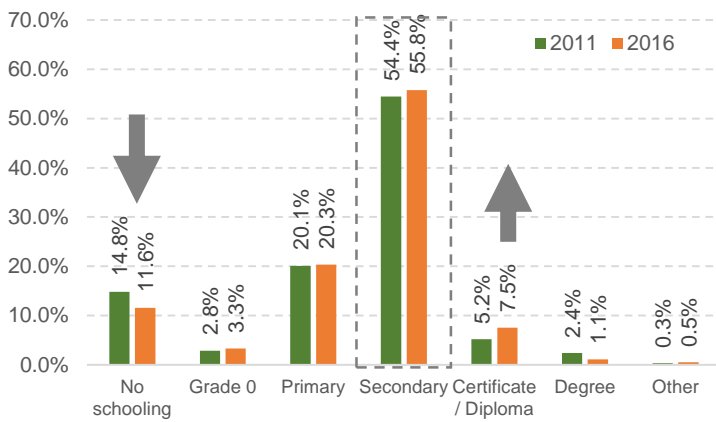
50%

Female

50%

Sedibeng DM Education Profile 2011-2016

Highest Tertiary Education 2011-2016:



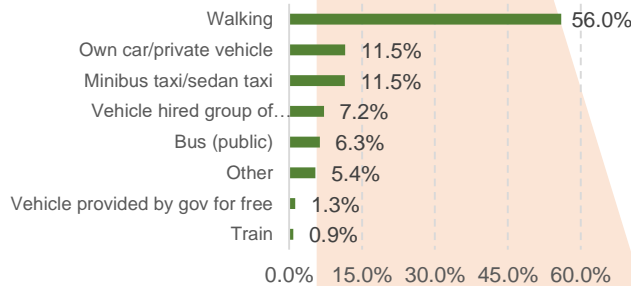
No Schooling

Decreased: 3.3%

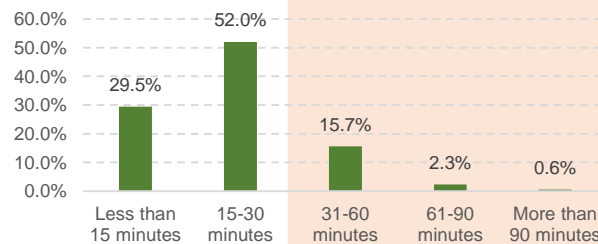
Certificate / Diploma

Increased: 2.3%

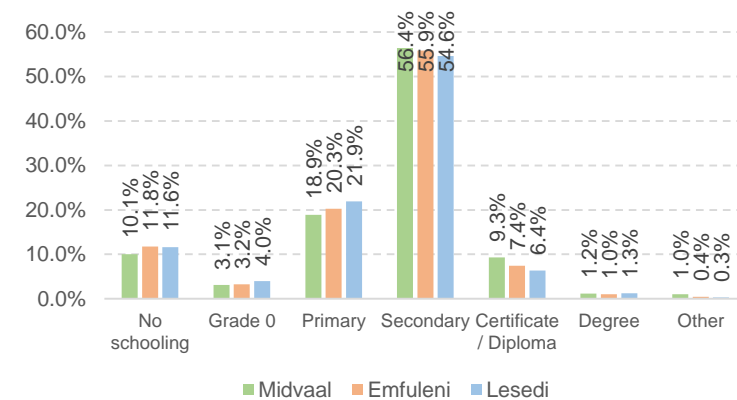
SDM Mode of transport to school / education facility (2016):



SDM Time taken to get to educational institution (2016):



Highest Tertiary Education LM's 2016:



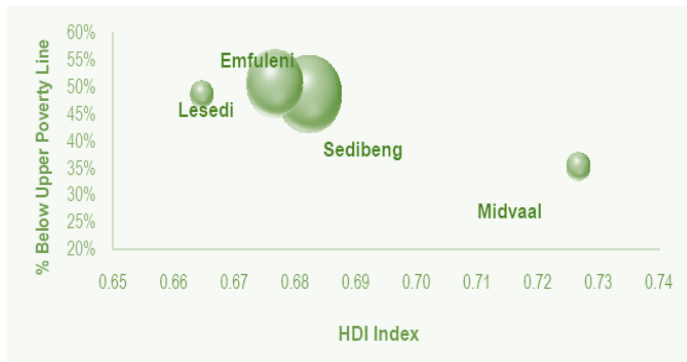
Midvaal LM
Highest number of Certificate / Diploma

9.3%

Emfuleni LM
Highest number of No Schooling

11,8%

Poverty and HDI: 2016



Midvaal LM has the highest HDI

Lesedi LM has the lowest HDI

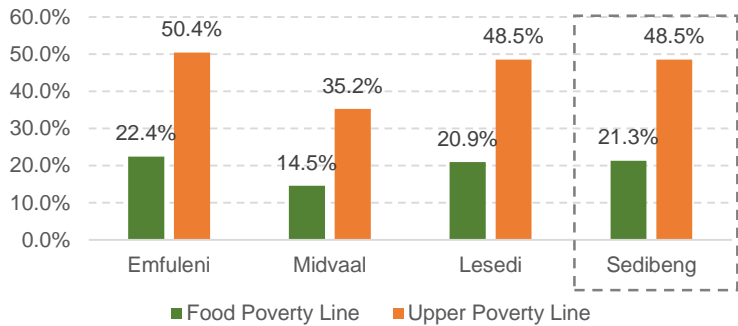
IHS Markit, 2017

Note: The bubble size shows the Per Capita Income

Measures of Poverty in 2016



< R758 per month

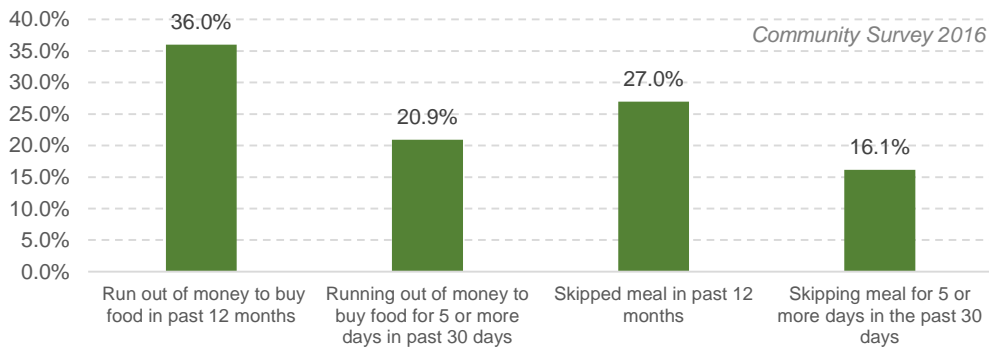


Sedibeng DM Below FPL

21,3%

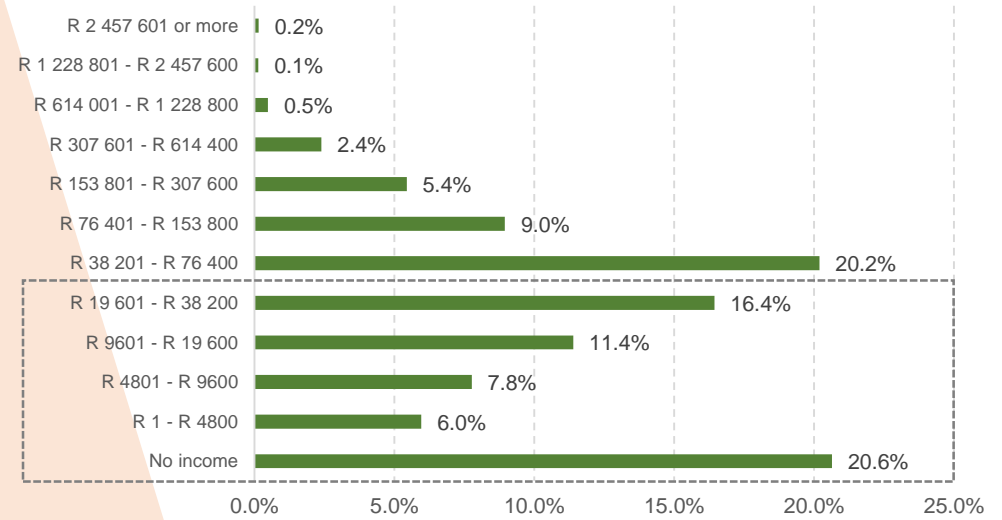
IHS Markit, 2017

Sedibeng Community Survey 2016: Food Security



Community Survey 2016

Sedibeng DM Annual Household Income: 2011 (%)



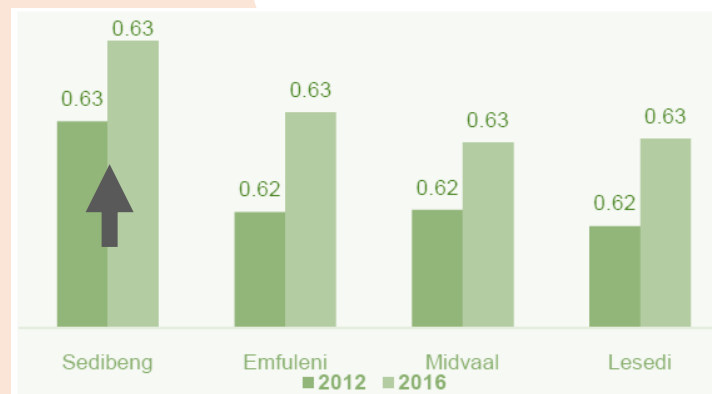
Stats SA Census 2011



< R3 500 per month Housing Subsidy

62,2%

Gini Coefficient, 2012 & 2016



Sedibeng DM Income Inequality Increased 2012-2016

IHS Markit, 2017

Diagram 8 (Poverty and HDI in 2016) shows the link between poverty and the HDI for the Sedibeng district and its local municipalities. Although there is a negative relationship between the two indicators, Midvaal has the highest level of development and the smallest share of the population living below the upper poverty line.

4.1.5 Food Poverty Line

The Measures of Poverty in 2016 expands on poverty measures by showing the two extremes, those living below the food poverty line and those below the upper poverty line. Stats SA uses the figure of 2,100 calories per day as it is the United Nations threshold for the minimum daily energy requirement for someone living in an emergency situation. People living below this poverty line are considered to live in “extreme poverty”, as they are not able to afford to eat enough food to meet their basic physical needs. In 2017, the lower-bound poverty line was adjusted up to R758 per person per month and the upper-bound poverty line was adjusted up to R1 138 per person per month.

When using the food poverty line, the district and its regions tend to show relative lower proportions of residents in poverty. However, the upper poverty line shows a relatively higher share of the region’s population still living in poverty. As indicated in Diagram 8, 48.5% of the Sedibeng DM population live below the upper poverty line. In terms of Food Security, 36.0% of the population indicated that they ran out of money to buy food in the past 12 months.

4.1.6 Household Income and Gini Coefficient

Household Income is a good indication of the number of households within the municipal area qualifying for housing subsidies. In line with the Gauteng housing subsidy assistance programme, households earning a monthly household income (before deductions) less than R3 500 can apply. From Diagram 9 it is evident that 62.2% of the households earn less than R3 183 per month, thus qualifying for a housing subsidy.

The Gini Coefficient in 2012 & 2016 indicates the level of income inequality as measured by the Gini coefficient for Sedibeng and its locals. Diagram 3 shows that income inequality increased in all the municipalities between 2012 and 2016. Gauteng’s specific initiatives to reduce the levels of inequality include the township economic revitalization and infrastructure investment programmes.

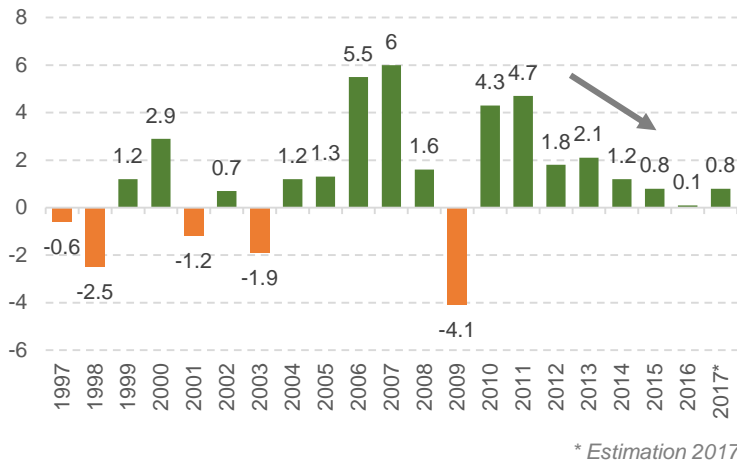
4.2 REGIONAL ECONOMIC PROFILE

This section focuses on the economic performance, its drivers, employment and regional strengths and weaknesses of the Sedibeng district and its local municipalities (refer to **Diagram 9**).

4.2.1 Annual Growth in GDP-R

The Annual Growth in GDP-R for Sedibeng, as indicated in Diagram 9 shows the growth rate of GDP-R from 1997 to 2016, with an estimate for

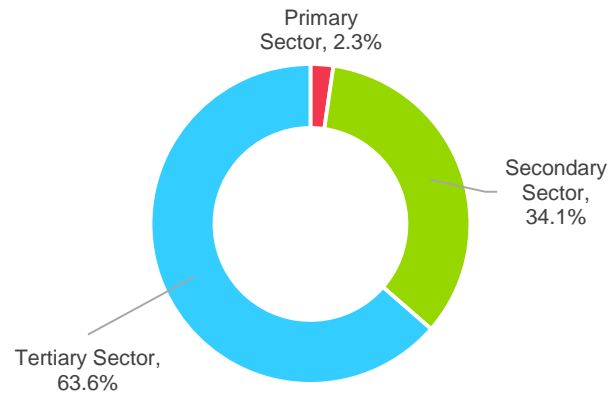
Annual Growth in GDP-R for Sedibeng



Sedibeng DM Annual Growth

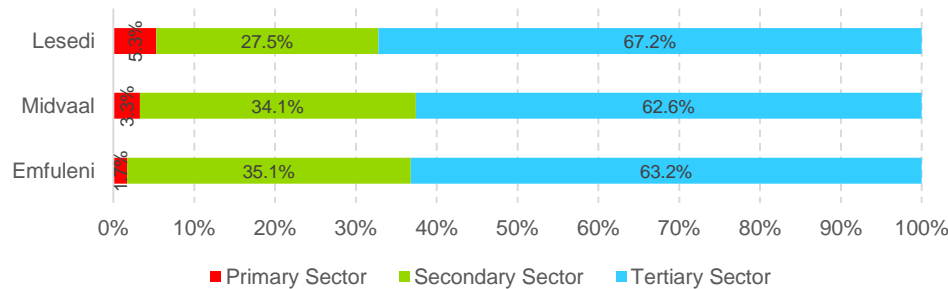
Gradual Decline from 2011, with an estimated increase in 2017

Sectoral Contribution to GVA-R in 2016

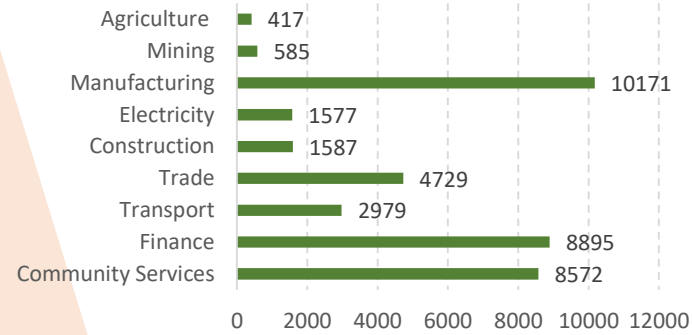


Sedibeng DM tertiary sector:

- Finance & Business Services,
- Trade & Retail,
- Government Services,
- Transport



Broad Economic Sectors contribution to GVA-R in 2016



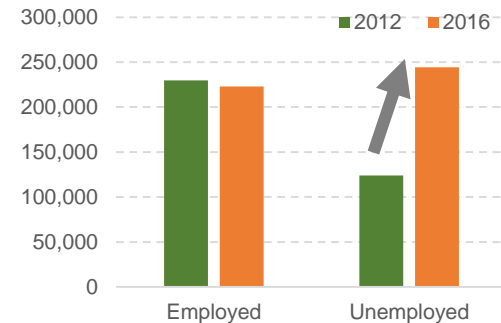
Sedibeng DM main Economic GVA-R sectors:

- Manufacturing
- Finance
- Community Services

Labour Market 2012-2016

Employment Decreased:

6 826 job opportunities

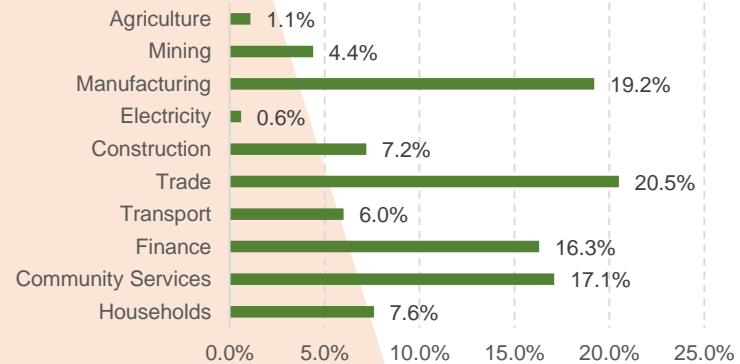


Unemployment Increased:

120 218
SDM: 50,7%

ELM: 54,5%
MLM: 43,6%
LLM: 32,2%

Percentage Employment Contribution per Economic Sector in 2016



Sedibeng DM main Employment sectors:

- Trade
- Manufacturing
- Community Services
- Finance

2017 for the Sedibeng district municipality. The district's GDP-R growth rate has been on a slowdown since 2011. In the succeeding years, growth gradually declined in each year, up to its lowest point of 0.1 per cent in 2016. However, in 2017 it was estimated to recover to 0.8 per cent.

4.2.2 Sectoral Contribution to GVA-R in 2016

The Sedibeng DM tertiary sector, which includes finance and business services, trade and retail, government services, and transport, accounts for most economic activity (63.6%) within the district. This is followed by the secondary sector (34.1%) which comprises of manufacturing, electricity and construction, and the primary sector (2.3%), which includes agriculture and mining. The local municipalities are characterised by a similar sectoral contribution profile.

The Sedibeng DM has a significant manufacturing presence, with a share of 32% of total GVA-R. Due to its focus on manufacturing, the district is vulnerable to issues common to the country as a whole, such as electricity supply constraints and labour unrest. At 16% and 15% respectively, finance and community services also account for a large portion of the Sedibeng district economy.

Despite being significantly smaller, at an estimated R5.2 million in 2016, the economy of Lesedi has a strong agricultural presence. Its real contribution to the municipality's GVA in that year was estimated at R315 million accounting for 5.1% of economic activity, compared to R136 million in

Midvaal (2.2%) and R327 million (0.9%) in Emfuleni. Economic activity in Emfuleni is dominated by manufacturing. At R16.9 billion, it accounts for 36.5% of the municipality's GVA-R and 87% of the Sedibeng district's total manufacturing output.

4.2.3 Labour Market

As indicated in **Table 9** and Diagram 9, the Sedibeng Labour Market had a working age population of 612 237 people in 2012 which grew to 633 774 people by 2016. In 2016 a total of 222 796 people were employed, 244 263 were unemployed and 166 715 were not economically active, thus resulting in an unemployment rate of 50.7%. The absorption rate stood at 37.1% in 2016 and the labour force participation rate was at 73.7%, which has increased from 57.8% in 2012.

Unemployment still poses a challenge in the district as the number of people unemployed increased between 2012 and 2016. The unemployment rate 2016 in Emfuleni was 54.5%, 32.2% in Lesedi and 43.6% in the Midvaal LM. Midvaal recorded the largest employment gains (2 061) between 2012 and 2016.

Table 9: Labour Market

		Sedibeng	Emfuleni	Midvaal	Lesedi
Population (15-64)	2012	612 337	480 580	65 597	66 159
	2016	633 774	489 331	71 754	72 688
Labour Force	2012	353 668	284 923	42 957	25 788
	2016	467 059	374 138	54 481	38 440
Unemployment	2012	124 045	104 384	8 384	11 268
	2016	244 263	203 120	17 857	23 286
Employment	2012	229 622	180 539	34 563	14 520
	2016	222 796	171 017	36 625	15 154
Not Economically Active	2012	258 669	195 657	22 641	40 371
	2016	166 715	115 194	17 273	34 248
Rates (%)					
Unemployment	2012	32.4%	35.1%	18.8%	27.6%
	2016	50.7%	54.5%	32.2%	43.6%
Employment/Population Ratio	2012	25.3%	25.4%	35.9%	14.6%
	2016	23.2%	23.1%	34.1%	13.6%
Labour Force Participation Rate	2012	57.8%	59.3%	65.5%	39.0%
	2016	73.7%	76.5%	75.9%	52.9%

Source: Sedibeng DM IDP 18/19, IHS Markit, 2017

Diagram 10 (Percentage Employment Contribution per Economic Sector in 2016) shows aggregated sectoral employment for 2016. In 2016, the trade sector overtook manufacturing (which was at 21% in 2014) as the largest contributor to employment. Trade employs a share of 20.5% and manufacturing employs 19.2% in 2016.

4.2.4 Sectoral Trend (GDP)

The 2015 MCKINSEY Global Institute in South Africa predicates achievement of new economic direction for South African on the FIVE BOLD PRIORITIES for Inclusive Growth in South Africa, which are popularly known as the Big 5 namely;

- Advanced Manufacturing,
- Infrastructure Productivity;
- Natural Gas;
- Service export; and
- Raw and Processed Agriculture

The Sedibeng economy finds resonance with all 5 of those priorities since its economy will **remain dominated in the medium to long term by the steel and manufacturing sector** taking into consideration the efforts and drive through DTI tariffs programme to protect our industry. So this makes **manufacturing a key component of Reindustrialisation drive** of this economy and this requires the creation/ building and or resuscitation foundries of small components manufacturing, product simulation, digital manufacturing and plastic as well as polymer, location of Chemcity and taking advantage of Sasol just across the river to fit in with 'Advanced manufacturing' mentioned in the Big 5 .

- The **regional sewer scheme** and building of other **strategic economic assets and Infrastructure** form a cornerstone of a city with a clear vision to maximise movement and ease movement of people, goods

and services as well as cost of doing business in the region competitive and this will find expression in the Reintegration of the region with the rest of the Gauteng.

- **Water** is a strategic asset that could be effectively and efficiently utilised to drive economic growth and diversification of this economy to explore unchartered/ new economic opportunities built around the **water and the frontier of the passing river**.
- South Africa has no natural gas, but **Gauteng is a strategic location for storage and use of natural gas** from whatever sources and already the Sedibeng region is a **home of bulk petroleum liquid storage** all the way from Durban- more than 500km, in Lesedi Local Municipality.
- The **service industry** presents real possibility for diversification and capture overflow from Central Corridor saturation in the service sector and this sector continue to play a central as well as strategic role in any economy. We have service industry products and going forward, we should better package region's offering in this regard.
- The fifth priorities is on **raw and processed agricultural products** and this is one area we are endowed most when it comes to land, medium enterprises for Agro- processing and the export potential this industry can offer for our economy.

During the State of the Province Address (SOPA) 2014, the Gauteng Provincial Government re-emphasised that the Gauteng City Region should be an integrated and globally competitive region. This means building cities that complement one another in creating functional economies. The purpose

of the SEIDP is to develop a plan that would provide strategic direction in ensuring that Sedibeng is integrated into the Gauteng City Region.

The rationale for Sedibeng EIDP is to address the structural, industrialisation and other economic development challenges of the Southern Corridor in an integrated approach which emphasises partnerships between government and the private sector to contend with the challenges of under-development and fragmented planning. The Southern Corridor encompassing the economy of the SDM and the creation of new industries, new economic nodes and new cities.

The SEIDP identified five strategic industry plans, namely:

1. The Sedibeng Transport and Logistic Hub;
2. The Sedibeng Building Equipment and Supply Hub;
3. The Sedibeng Iron and Steel Beneficiation Cluster;
4. The Sedibeng Green Economy and Agropolis; and
5. The Sedibeng Tourism City.

In terms of agriculture the following industry plans have a link with agriculture, namely:

- Sedibeng Transport and Logistic Hub which would assist in linking the province to agricultural and mining regions, as well as urban centres and ports; and
- In order to grow the economy of the Sedibeng, a main focus should be the Green Economy, specifically through establishing the SDM as an Agropolis. This would assist the SDM to move away from an over

reliance on the steel industry and become more involved in the agricultural industry. Establishing the SDM as an Agropolis, includes all aspect of farming and agro-processing.

4.3 NATURAL ENVIRONMENT

4.3.1 Topography and Hydrology

Figure 21 illustrates the topographical and hydrological features of the SDM. Essentially it comprises five main catchment areas:

- The Rietspruit which extends from the Glen Harvie area in Rand West City from where it flows southwards through the western extents of the SDM before feeding into the Vaal River to the south.
- The Klip River which extends southwards from the CoJ mining belt whereafter the Natalspruit and Rietspruit merge with it in the vicinity of the Waterval node; from here it flows southwards parallel to the east of route R59 past Meyerton and Vereeniging before feeding into the Vaal River.
- The Blesbokspruit originates in Ekurhuleni from where it runs through the central parts of Lesedi from where it flows southwards to link up with the Boesmanspruit.
- The Boesmanspruit flows westwards from where it links up with the Blesbokspruit to become the Suikerbosrand from where it links into the Vaal River in the vicinity of Drie Riviere (Vereeniging).

Prominent ridges occur in the vicinity of Walkerville; Suikerbosrand and southwards up to the Vaal Dam; and to the south-east of Ratanda-Heidelberg towards Balfour.

4.3.2 Nature Reserves, Conservation Areas and Biodiversity

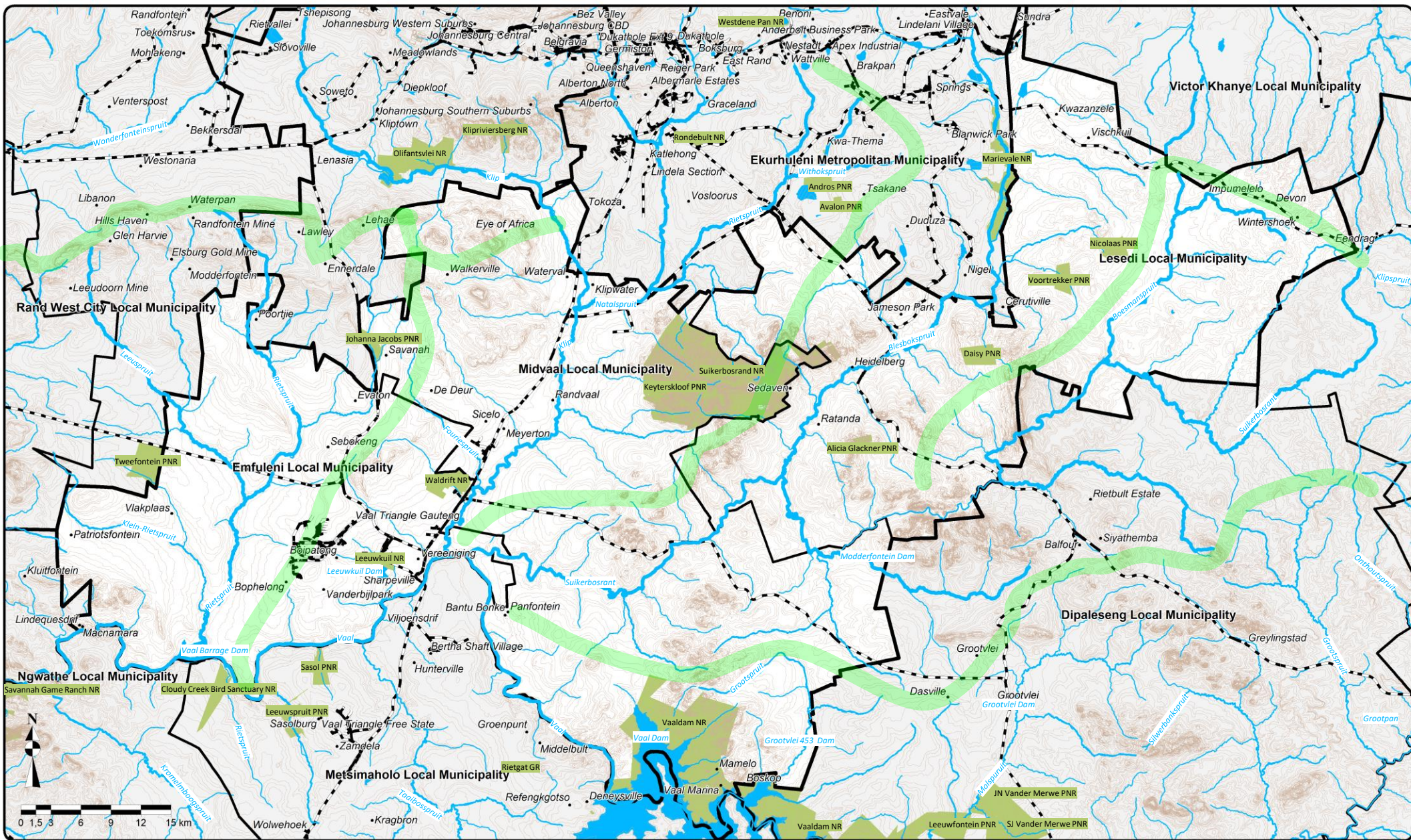
Figure 22 illustrates the spatial extent of nature reserves, conservation areas and areas of high biodiversity in the SDM area.

The most significant protected areas are the Suikerbosrand Nature Reserve in the central parts of the SDM, and the Vaal Dam Nature Reserve to the south. Several smaller nature reserves (mostly private) occur throughout the District.

Notable from Figure 22 is that Critical Biodiversity Areas 1 and 2 mostly occur along the main rivers in the SDM and around the ridges. The Critical Biodiversity Areas (CBA 1 and 2) are linked to one another via Environmental Support Areas in order to create/ maintain continuous environmental corridors which link the main terrestrial and aquatic habitats to one another (rivers, dams, ridges etc.).

4.3.3 Soil Types and Dolomitic Areas

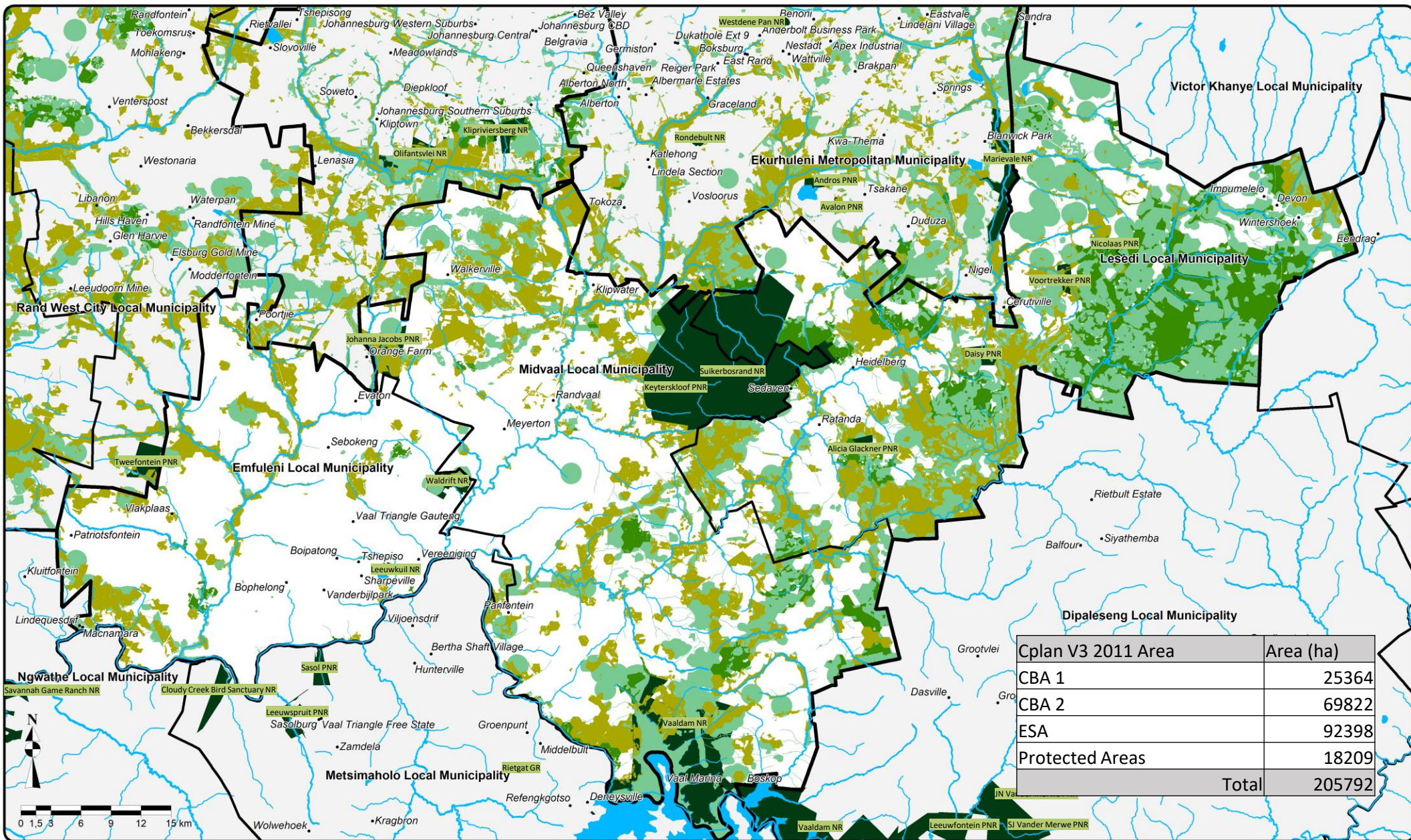
Figure 23 depicts the main soil types as well as the occurrence of dolomitic conditions throughout the municipal area. Evident from this is the following:



SEDIBENG DISTRICT MUNICIPALITY SDF – TOPOGRAPHY AND HYDROLOGY

- Protected Areas
- Dams and Rivers
- Watershed
- Contours



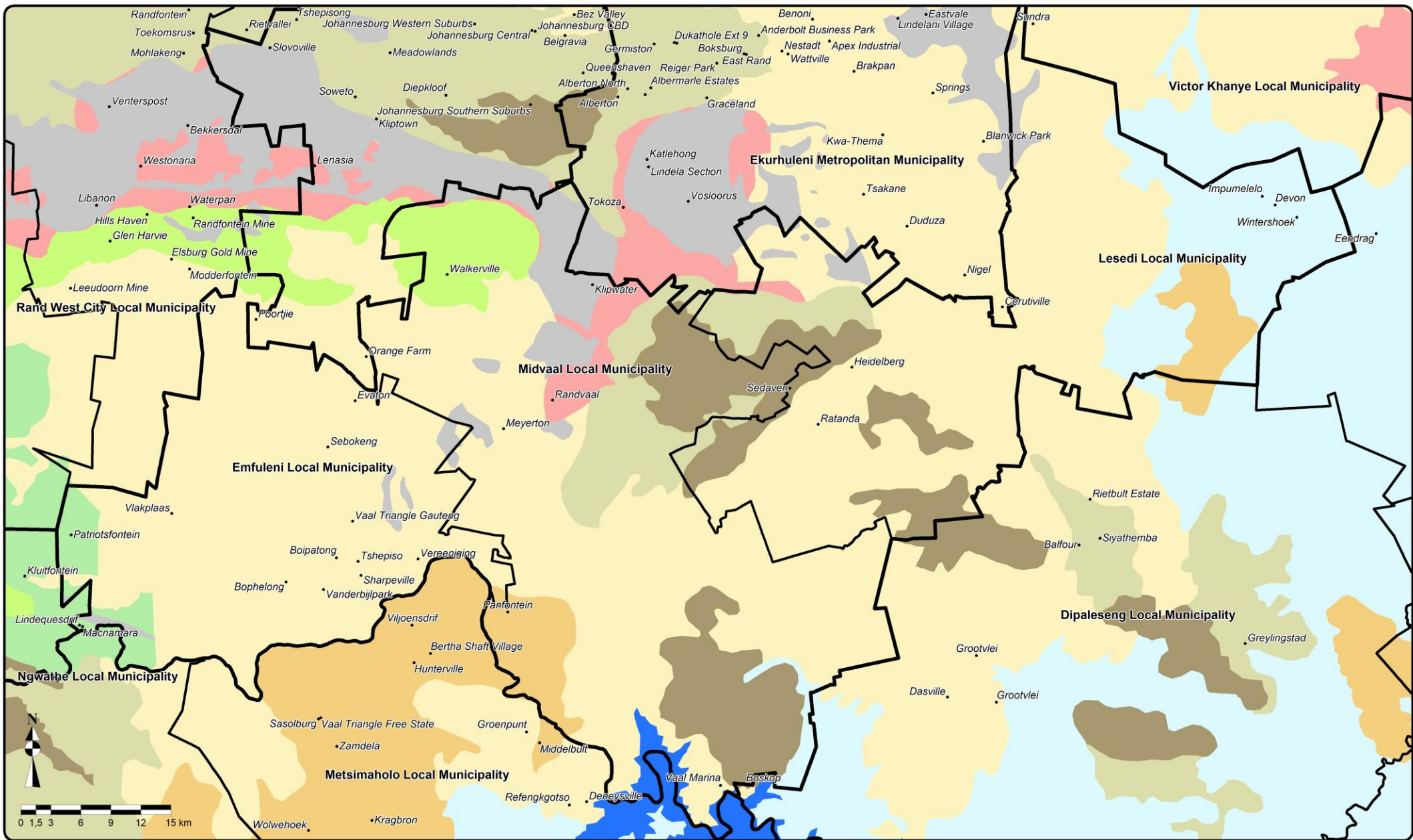


Cplan V3 2011 Area	Area (ha)
CBA 1	25364
CBA 2	69822
ESA	92398
Protected Areas	18209
Total	205792

SEDIBENG DISTRICT MUNICIPALITY SDF – CRITICAL BIODIVERSITY AREAS

- CBA 1
- CBA 2
- Ecological Support Areas
- Protected Areas
- Dams and Rivers





SEDIBENG DISTRICT MUNICIPALITY SDF – SOIL TYPE AND DOLOMITIC AREA

- Black and red, strongly structured clayey soils with high base status
- Red and yellow, massive or weakly structured soils with low to medium base status
- Red, yellow and greyish soils with low to medium base status
- Red and yellow, massive or weakly structured soils with low to medium base status

- Soils with minimal development, usually shallow on hard or weathering rock, with or without intermittent diverse soils.
- Red, massive or weakly structured soils with high base status
- Soils with a marked clay accumulation

- Rock with limited soils
- Dolomite
- Waterbodies



- There is a dolomitic cluster in the area between Meyerton Town, Klip River Business Park and Heidelberg which may impact on development.
- Shallow soils occur in Suikerbosrand and the south thereof as well as the ridges around Walkerville.
- The majority part of the SDM is underlain by red, yellow and greyish soils with low to medium base status with some clayey soils around Devon-Impumelelo.

4.4 LAND USE, SPATIAL STRUCTURE AND MOVEMENT NETWORK

4.4.1 Regional Context

The following features are notable in terms of the areas surrounding the Sedibeng District as reflected on **Figure 24**:

- Three large clusters of low income communities border the Sedibeng District to the north. These include the KwaThema-Tsakane and Duduza complex to the north-east; the Katlehong-Thokoza-Vosloorus complex in the central northern parts; and the Soweto-Ennerdale-Orange Farm complex to the north-west.
- All three these areas are located south of the Gauteng Mining Belt and it is common knowledge that the bulk of economic activity in Gauteng Province is located to the north of the mining belt as depicted on **Figure 25**. Hence, there are no areas of major economic activity bordering SDM to the north.

- To the east the SDM borders onto high potential agricultural land in Victor Khanye and Dipaliseng Local Municipality and to the west it is very similar with the agricultural activity of Rand West City and JB Marks local municipalities bordering the SDM. It should however be noted that there is extensive gold mining a few kilometres further to the north-west towards Merafong LM and to the north-east the Mpumalanga coal fields and majority of South Africa's power stations are located (Secunda, Witbank, Middelburg).
- To the south the dominant economic activity (spatially) is also agriculture, but it should be noted that the Sasol petrochemical plant is located directly adjacent to the south of Sedibeng in the Metsimaholo Local Municipality as illustrated on Figure 24.

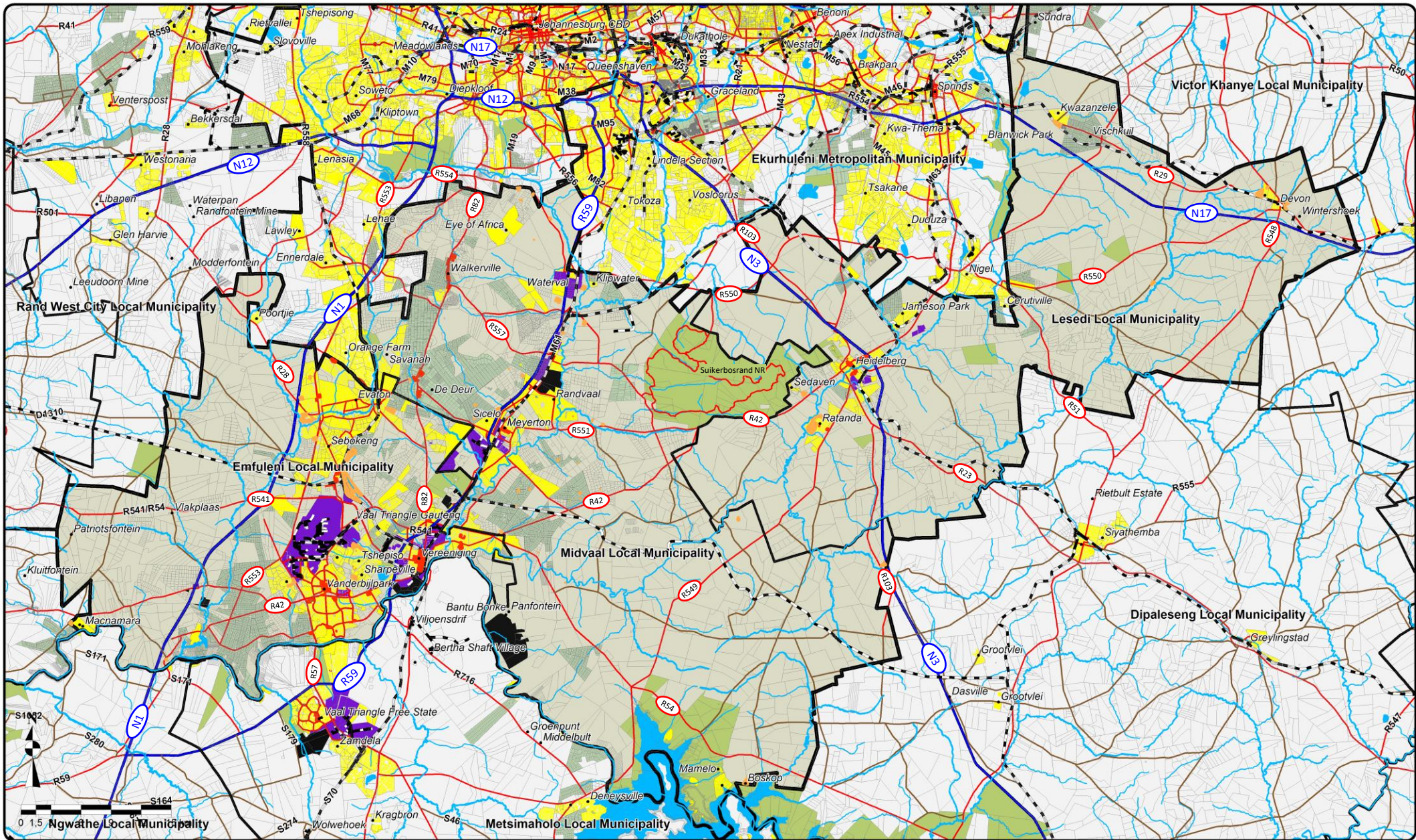
4.4.2 Local Context

Figure 24 depicts the land use composition, spatial structure and movement network of the Sedibeng District Municipality which is summarised as follow:

4.4.2.1 Movement Network

Major national and provincial roads traversing the municipal area include:

- Route N1, which is the major national north/south freeway linking Musina at the northern border of South Africa to Cape Town in the south, and which passes through the western extents of the area.



SEDIBENG DISTRICT MUNICIPALITY SDF – LAND USE AND MOVEMENT NETWORK



- | | | |
|-----------------------|-----------------|-----------------|
| Farm Cadastral | Business | National Roads |
| Towns and Settlements | Industrial | Main Roads |
| Informal Settlements | Mining | Other Roads |
| Extensive Agriculture | Protected Areas | Railways |
| Agricultural Holdings | | Dams and Rivers |

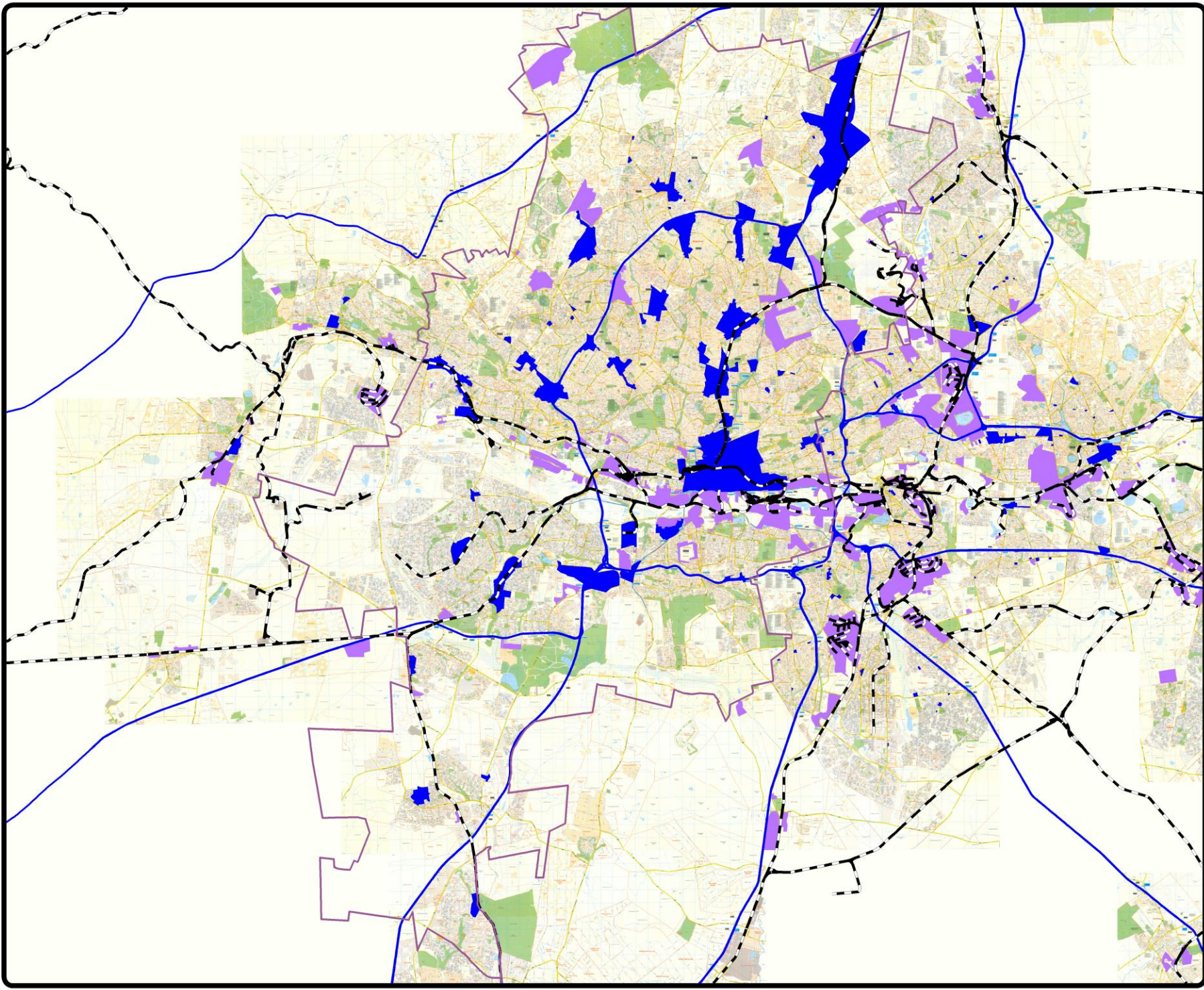




Regional Economic Context

Business Nodes and Industrial Areas

-  Business Nodes
-  Industrial Areas



- Route R553 (Golden Highway) runs parallel to the east of route N1 with the Vereeniging-Joburg commuter railway line a few kilometres to the east of route R553.
- Route R82 (the old Vereeniging-Joburg road) runs a few kilometres to the east of the commuter railway line through an area characterised by an extensive number of agricultural holdings.
- The R59 is a north/south freeway which links Vereeniging with Alberton and the N12 in Johannesburg. This route is situated in the central part of Midvaal Local Municipality area.
- Route M61 runs parallel to the east of route R59 and serves to provide access to the land uses developing along the R59 corridor. The Vereeniging-Alberton-Germiston commuter railway line runs to the east of route M61.
- Route N3 which is the major transport link between Gauteng Province and eThekweni (Durban) passes through the Sedibeng District/ Lesedi LM a few kilometres to the east of the Suikerbosrand with Heidelberg Town being the main urban area in close proximity.
- Route R103 (the old Joburg-Durban road) runs parallel along route N3 while the Joburg-Durban commuter and freight railway line also follows the same movement desire line in close proximity.
- Route N17 which is the main link between Joburg, Secunda and Swaziland and Richards Bay harbour passes through the north-eastern extents of the Sedibeng District/ Lesedi LM.
- The lower order route R29 (old road) runs parallel to the north of route N17 as is the freight railway line which runs towards the Gert Sibande District and eventually links up to the Richards Bay harbour.

Other prominent roads serving the SDM include the following:

- The R42 which runs east/west through Midvaal and links Meyerton with Heidelberg and the N17 in the Lesedi Local Municipality and to Vereeniging, Vanderbijlpark and the N1 eventually.
- The R557, an east/west route between the N1 and the Suikerbosrand Nature Reserve. This road merges with the R42 at the Nature Reserve.
- The R550, an east-west link between the N3, R59 and R82 in Midvaal and which eventually links up with Nigel and Devon to the far-east.
- The R54, which links Vaal Marina to the R82 in Vereeniging.
- R549 that links Heidelberg with Vaal Marina and the Vaal River in the south.
- R51 linking Nigel with Balfour through the central parts of Lesedi.
- R548 linking Balfour with Devon.
- R541 which links the northern extents of Vereeniging and Vanderbijlpark to one another.
- Route R57 which provides the north-south link between Vanderbijlpark and Sasolburg.

4.4.2.2 Human Settlements

Following from the above it is interesting to note that the bulk of urban activity in the Sedibeng District occur along/ in proximity of either route N1, R59, N3 or N17.

The main townships/ settlements occurring in the vicinity of route N1 are Evaton and Sebokeng which forms part of a much larger conurbation of low

income settlements which extends northwards into the CoJ area and includes Orange Farm, Sweetwaters, Ennerdale, Lawley, Unaville and Lehae and up to Soweto.

Apart from the Mittal Steel plant to the south there are no areas of significant economic activity along this corridor.

Along route R59 the major middle and high income residential areas of Vereeniging and Midvaal occur. It is important to note that it also includes low income communities from Boipatong, Sharpeville, Tshepiso and Sicelo while several significant industrial areas also exist along this corridor which links into the Gauteng industrial heartland between CoJ and Ekurhuleni to the north as illustrated on Figure 25.

Along route N3 the only urban area is Heidelberg town with the low income community of Ratanda to the south thereof and the Jameson Park agricultural holdings to the north.

Along route N17 is the Vischkuil-KwaZenzele node to the west (close to Springs), and Devon-Empumelelo node further towards the east.

Other areas representing a concentration of households and/ or economic activity are Vaal Marina-Mamello adjacent to the north of the Vaal Dam; the Bantu Bonke rural settlement near Panfontein between Vereeniging and the Vaal Dam; De Deur and Walkerville-Ohenimuri along route R82 midway between route N1 and R59; and the Eye of Africa Estate in the far northern

extents of the Midvaal area between the Waterval Node along R59 and Walkerville.

As illustrated on Figure 24 informal settlement occurs widespread throughout the Sedibeng District with the largest informal settlements being located around Bophelong, Polomiet, Sonderwater, Lybia, Waterval, Sicelo and Impumelelo.

As shown in **Table 10** below the informal settlements in the SDM totalled about 14 171 units in 2011. The total Database Demand for the SDM stood at 55 698 units of which 75% was for Emfuleni, 16% for Midvaal and 9% for Lesedi.

Table 10: Sedibeng: Summary of Housing Demand (2011)

LM	Informal Settlement	Hostels	Backyard	Rural	Housing Demand Database
Emfuleni	10 086	3 291	50 029	-	42 025
Midvaal	3 243	-	520	297	8 937
Lesedi	842	-	4 371	-	4 736
TOTAL	14 171	3 291	54 920	297	55 698

Table 11 shows the latest information available summarised as follow:

- 21 Informal settlements in Emfuleni covering an area of 455 ha and an estimated 14 152 informal structures. Total demand = 36 731.
- 36 Incidences of informal settlement in Midvaal comprising about 5269 units which also represents the Midvaal demand.
- A reported 1018 informal structures in Lesedi but demand estimated at about 14 189 units.

Table 11: Sedibeng Informal Settlements per LM and Housing Demand

Name	Area (ha)	Number	Demand
Emfuleni			
Cape Gate	12		
Chris Hani/ Bophelong	17		
Frances Informal	1		
Hlala Kwabafilevo	12		
Khayalethu	1		
New Village Ext. 2 Informal	7		
New Village	9		
Polomiet	19		
Sebokeng Unit 12 Small	7		
Sebokeng Unit 17	7		
Sebokeng Unit 12 Kanana	2		
Sebokeng Unit 20	1		
Snake Park	2		
Sonderwater	53		
Soul City	8		
Stallin	1		
Tshepiso North Ext. 3	5		
Winnie Park	5		
Lybia	14		
Sebokeng Zone 14	1		
Boipatong	271		
Subtotal	455	14 152	36 731
Midvaal			
Farm Worker Housing		112	
Eye of Africa		232	
Boitumelo		301	
Piels Farm		469	
Put Put Keylitsha		488	
Skansdam Foundry		46	
Waterval		1 304	
Bears Farm		13	
Kwa Ben		6	
Jonkers		4	
Ophir Plot 145-147		9	
Ophir Plot 92		6	
Sicelo Ext 4		1 406	
Sicelo Ext 15		1 645	
Sicelo/West of R59		3 089	
Meyerton/East of R59		184	
Mamelo		348	
Subtotal		5 269	5 269
Lesedi			
Sepiwe/Floracadia			
Ratanda Ext 2			
Ratanda Ext 3			
Ratanda Ext 5			
Impumelelo (Enkanini)			
Kwazenzele			
Subtotal		1 018	14 189
TOTAL		20 438	56 189

4.4.2.3 Business

Business activity is mainly concentrated in the Central Business Districts (CBD's) of Vereeniging, Vanderbijlpark, Meyerton and Heidelberg. Smaller scale business nodes exist within the residential fabric of neighbourhoods with some notable concentrations at Sebokeng, Evaton, De Deur, Walkerville, Ratanda, Jameson Park and at Devon.

The following townships have been selected for funding in terms of the Neighbourhood Development Partnership Programme:

- Lesedi LM: Ratanda, Impumelelo, Jameson Park and Kwazenzele;
- Midvaal LM: Sicelo and Mamello, Lakeside/ Doornkuil/ Savannah City;
- Emfuleni LM: Evaton, Beverley Hills, Evaton West, Palm Springs, Evaton North, and Evaton Small Farms, Boipatong, Bophalong, and Sebokeng (including Sebokeng Zone 3, 6, 7).

“The significant participation and meaningful inclusion of the people of the township into mainstream economy of Gauteng through their own township enterprises that are supported by the government and big business will be one of the key game changers... The townships must be self-sufficient and vibrant economic centres.” Premier David Makhura, State of the Province Address (June 2014).

Government is committed to ensure that **township economy contributes at least 30% of the Gauteng GDP by 2030**. The strategy sets out a programme of action for the next five years and beyond, illustrating how

government together with key stakeholders will take a lead in revitalising the township enterprise activities. Key partners in the delivery of the strategy will include national government and its support agencies, provincial government, local government, the corporate sector, representative and support organisations for different types and forms of enterprises.

The strategy identified the following strategic focus areas:

- Ensuring an appropriate legal and regulatory framework;
- Promoting manufacturing and productive activities;
- Economic infrastructure support and clustered enterprise development;
- Promoting entrepreneurship development;
- Financing and investment in the township economy;
- Ensuring access to markets;
- Promotion of innovation and indigenous knowledge systems;
- Establishing the social and economic value of township enterprises; and
- Making sure it happens (dedicated government focus).

4.4.2.4 Industrial

The major industrial areas within the Sedibeng District include the Mittal Steel plant close to the N1 freeway in Vanderbijlpark; the Duncanville, Leeuwkuil, Powerville and Peacehaven industrial complex around the Vereeniging CBD; Meydustrria and the Meyerton industrial area in the vicinity Meyerton CBD; the Daleside-Waterval industrial strip along route R59; and the Heidelberg and Springfield industrial areas in Heidelberg.

4.4.2.5 Mining

Mining activity within the Sedibeng District mainly occurs in the following areas as depicted on Figure 24:

- The old Glen Douglas Dolomite Mine (not operational anymore) along route R59 in the vicinity of Daleside.
- The old Asphalt Mine south of Vereeniging CBD.
- In the area around Kwazenzele-Vischkuil (coal mining).
- To the south of Bantu Bonke (Sand Quarry) along the Vaal River.

4.4.2.6 Tourism

The Sedibeng tourism area has been strategically defined with specific themes relevant to an existing tourism profile and demand, namely with respect to key events, the natural and scenic beauty of the area, including cultural and heritage related activities as illustrated on **Figure 26**.

The following key tourism icons of relevance to the province and the district were identified:

- Sharpeville and the heritage of the Struggle;
- The Vaal Dam, River and Meander;
- The Suikerbosrand Nature Reserve;
- Heidelberg (Anglo Boer War history);
- The Redan Rock Art Site and Vaal Teknorama Museum (archeological relevance).

The following tourism routes were identified:

- The **River Road Route** along the most south western edge of the Vaal River, and includes a number of inland tourism facilities, generally for leisure and recreation, most notably Stonehaven on Vaal and the Waterfront River Lodge.
- The **River Front Route** (River Casino Route) along the east of The River Road Route and runs through the southern portion of Vanderbijlpark along Beethoven Street, Hendrik Van Eck Boulevard, and Ascott on Vaal Road (intersection with R42, Barrage Road). It includes a number of inland tourism facilities, generally for leisure and recreation, most notably the Emerald Safari Resort and Casino, Emfuleni Park.
- The **Three Rivers Route** along to the east of River Front Route and runs through the southern eastern portion of Vereeniging, along General Hertzog Road and part of Mario Milani Drive. It includes a number of inland tourism generally for leisure and recreation, most notably the Riveira on Vaal Resort and Hotel, the River Square Shopping Centre, and the popular Three Rivers Hiking Trail, amongst others.
- The **Sharpeville Struggle Route** is located along the northern edge of Barrage Road (running east-west through Vanderbijlpark). It runs through three former townships, namely Sharpeville, Tshepiso and Boipatong. It includes a number of struggle-related heritage facilities and attractions, traditional community areas and facilities, restaurants and shebeens, namely, such as the Sharpeville Memorial and Exhibition

Centre, George Thabe Stadium (signing of Constitution), and the area of the Boipatong Massacre.

- The **Sebokeng Struggle Route** is located along the northern extension of Frikkie Meyer Boulevard (running north-south through Vanderbijlpark) and along Moshoeshoe Street, Joubert Street-Selbourne Road, Frederick Street, Union Road, and Sebe Street extension to Houtkop Road. It runs through a number of Zones within Sebokeng, and adjacent to Evaton. It includes a number of struggle-related heritage facilities and attractions, traditional community areas and facilities, restaurants and shebeens, such as the Sebokeng Zone 7: Night Vigil Massacre site; St Francis Roman Catholic Church (1936) and the 1984 Resolutions Site.
- The **Suikerbos Route**, which gives access to the Suikerbosrand Nature Reserve.
- The R42 Scenic Route, which links Vereeniging to Heidelberg. This route outlines the agricultural landscape with scenic quality,
- The **R23 Heidelberg Ramble**: This route is predominantly located within the town of Heidelberg and surrounds and will highlight the architectural heritage of Heidelberg, the Anglo Boer War and Concentration Camps, the history of the Jameson Raid, the old mining activity to the east of Heidelberg, amongst other attractions and activities.
- The **R54 Marina Route**: This scenic route links Vereeniging to Vaal Marina on the Vaal Dam.
- The **R550 Klip Route**: This route runs through arts and crafts, antiques and related activities.

The Walkerville Route: This route outlines agricultural activities. There are a number of related activities to walks and trails within Walkerville, that would be incorporated into the Route, including guest chalets and conferencing facilities.

Figure 26: Sedibeng District Tourism Routes



4.4.2.7 Agriculture

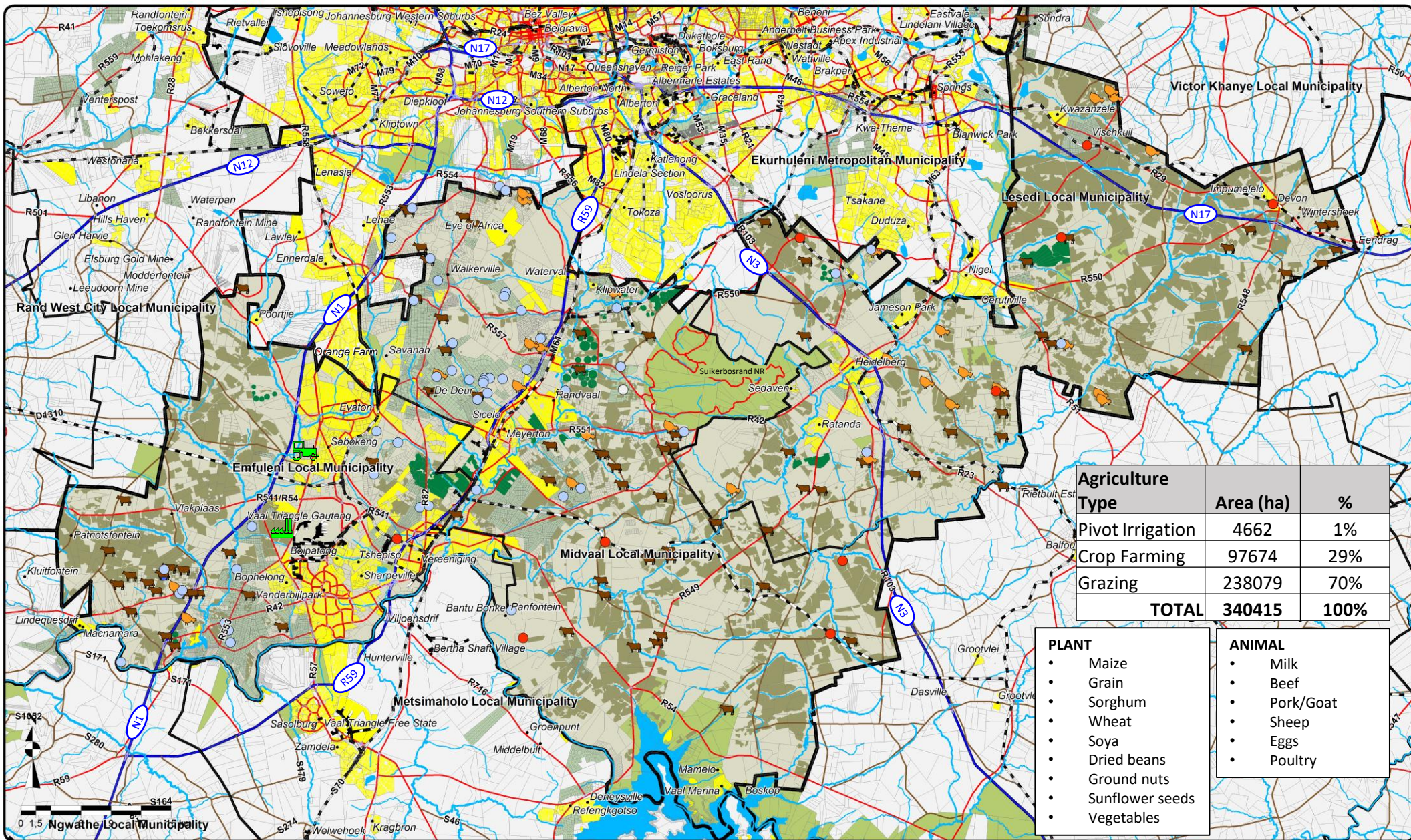
In terms of spatial extent agriculture is the dominant land use in the Sedibeng DM covering an area of about 340 418 ha of land which represents about 81% of the total district area (refer to **Figure 27**).

Approximately 97 674 ha of the SDM area is under cultivation (crop farming), 4662 ha is irrigated and about 238 079 ha is utilised for grazing.

Farmers produce a variety of commodities within each of the local municipalities, of which their performance is very dependent on climatic conditions and may fluctuate from year to year. The following list indicates the dominant commodities within the SDM:

- Maize
- Grain
- Sorghum
- Wheat
- Soya
- Dried beans
- Ground nuts
- Vegetables
- Milk
- Beef
- Pork/goat
- Mutton
- Lamb
- Eggs
- Poultry

It is evident that tunnel/ shade net farming is concentrated around route N1 in the vicinity of the Vaal River and around the Walker Fruit Farms and Homestead Apple Orchards areas in the Midvaal area.



SEDIBENG DISTRICT MUNICIPALITY SDF – AGRICULTURE

- Farm Cadastral
- Towns and Settlements
- Agricultural Holdings
- Extensive Agriculture
- Crop Farming
- Pivot Irrigation
- Chickens
- Cattle
- Silos
- Shadenet / Tunnels
- Mushroom Farming
- Rietkuil Agri Hub
- Sebokeng Agri Park (15 Farmer Production Support Units FPSUs)
- National Roads
- Main Roads
- Other Roads
- Railways
- Dams and Rivers
- Protected Areas

- PLANT**
- Maize
 - Grain
 - Sorghum
 - Wheat
 - Soya
 - Dried beans
 - Ground nuts
 - Sunflower seeds
 - Vegetables

- ANIMAL**
- Milk
 - Beef
 - Pork/Goat
 - Sheep
 - Eggs
 - Poultry



Cattle and chicken farming occur extensively throughout the municipal area with the Karan feedlot to the south-west of Heidelberg being a prominent facility. The Eskort pig abattoir is located in the Springfield industrial area in Heidelberg.

Grain silos are mainly concentrated in the rural area between Meyerton and Heidelberg (four silos), and between Heidelberg and the north-eastern border of the study area (five silos).

The Agri Park initiative was also introduced to the Sedibeng District during 2015/16.

Part of the objectives of the Agri-Park project were to identify **the four dominant** or most feasible commodities within the district. Based on the analysis, the three priority commodities identified for the Sedibeng DM include **vegetable, broiler and production**. A detailed analysis was conducted of the local, global, capital and commodity markets for each of the selected commodities.

It was proposed that the Rietkuil Agri-Hub (AH) and Sebokeng Agri-Park (AP) will be located in the Sedibeng DM.

a) Rietkuil Agri-Hub

The proposed AH in Rietkuil was chosen by DRDLR for the following locational characteristics:

- There is good road and rail connectivity (next to N1);
- There are at least ± 4 Pick n Pay food stores in the area;
- At least 11 SPAR food stores in the area;
- 28 CASP Projects in the area;
- Land Reform acquisition projects to the west of Doornkuil;
- Moderate and High potential land capability;
- Nine abattoirs in the area;
- Many land reform projects to the north west of Rietkuil;
- Four South African Grain Information Service (SAGIS) processors in the area;
- Potential vacant state land to the north and north west of the location;
- Proximity to the CRDP site to the east of Sebokeng;
- One cooperative close to the Rietkuil location;
- Close proximity to N1 national road between Gauteng and the Western Cape;
- Moderate land capability; and
- At least one fresh produce market to the east of Rietkuil.

b) Sebokeng Agri-Park

The site indicated for the Sebokeng Agri-Park is located near Sebokeng. The proposed AP in Sebokeng was chosen for the following locational characteristics by DRDLR:

- Good road and rail connectivity,
- Many PLAS projects to the west of the location,

- CASP projects and Ilima Letsema projects in the area,
- Land Reform acquisition projects to the west of Sebokeng,
- Moderate land capability,
- Fresh produce market, Miller,
- At least 11 SPAR food stores in the area,
- Good water supply in terms of rivers in the area,
- Potential vacant state land to the south and north west of the location,
- Proximity to the CRDP site to the east of Sebokeng,
- Location lies within the poorest wards (PIMD),
- Proposed location is surrounded by CASP 15 – 16 projects,
- Close proximity to N1 national road between Gauteng and the Western Cape,
- 2 RID projects to the south east of the proposed location, and
- Close proximity to the Emfuleni Regional Gateway.

“The objective of the investigation was to understand agriculture categories (i.e. poultry, crops, livestock, fisheries, etc.), establish farmers challenges (market, infrastructure and funding), level of training, mentoring and support needed and understand different commodities being produced. From the investigation it became evident that training, mentoring and support continue to be a serious challenge for the farmers. Most of the local farmers do not realise the economic potential of their farms, crops that yield high returns and are not self-sustainable”.

Midvaal Agri Strategy, 2015

4.5 COMMUNITY FACILITIES

Figure 28.1 illustrates the distribution of the 149 primary schools, 82 secondary schools, 3 intermediate and 9 combined schools in the SDM.

A number of Tertiary Education Facilities are concentrated in the Emfuleni LM as shown on **Figure 28.2**.

Figure 28.3 illustrates the spatial distribution of health facilities throughout the SDM while **Figure 28.4** depicts the distribution of police stations (14), magistrates courts (6) and fire stations (6).

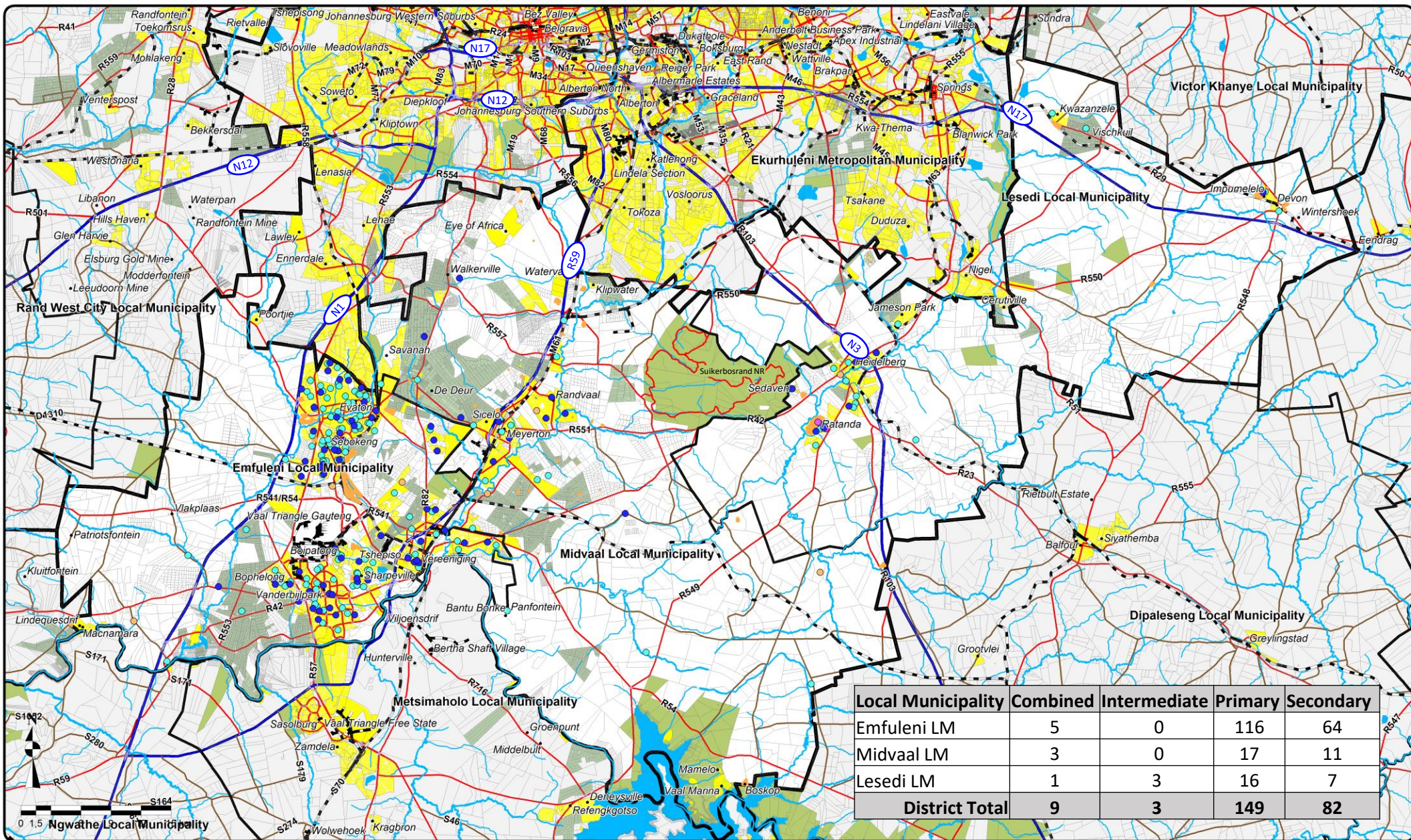
Figure 28.5 shows an extensive range of other community facilities including 45 postal outlets, 10 community halls, 13 libraries, 10 golf courses and 6 sports stadiums/ complexes.

4.6 ENGINEERING SERVICES

4.6.1 Level of Service Summary

Diagram 10 depicts the level of service provided within the Sedibeng DM as recorded in the 2016 Community Survey (StatsSA). The following can be concluded in this regard:

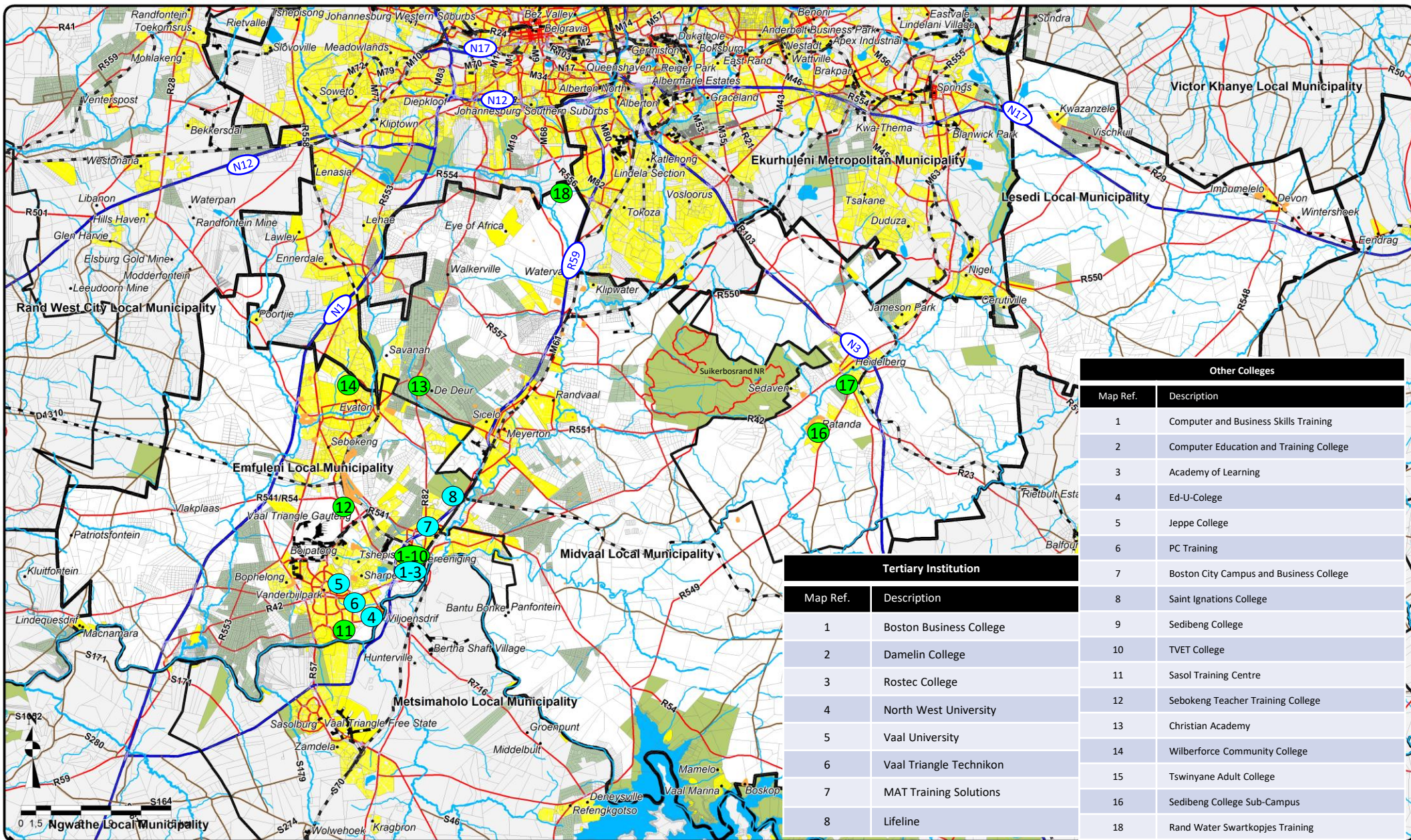
- About 93.7% of households within the Sedibeng DM receive piped water on the stand (2016).



SEDIBENG DISTRICT MUNICIPALITY SDF – EDUCATION

- Towns and Settlements
- Informal Settlements
- Protected Areas
- Dams and Rivers
- Combined School
- Intermediate School
- Primary School
- Secondary School
- National Roads
- Main Roads
- Other Roads
- Railways



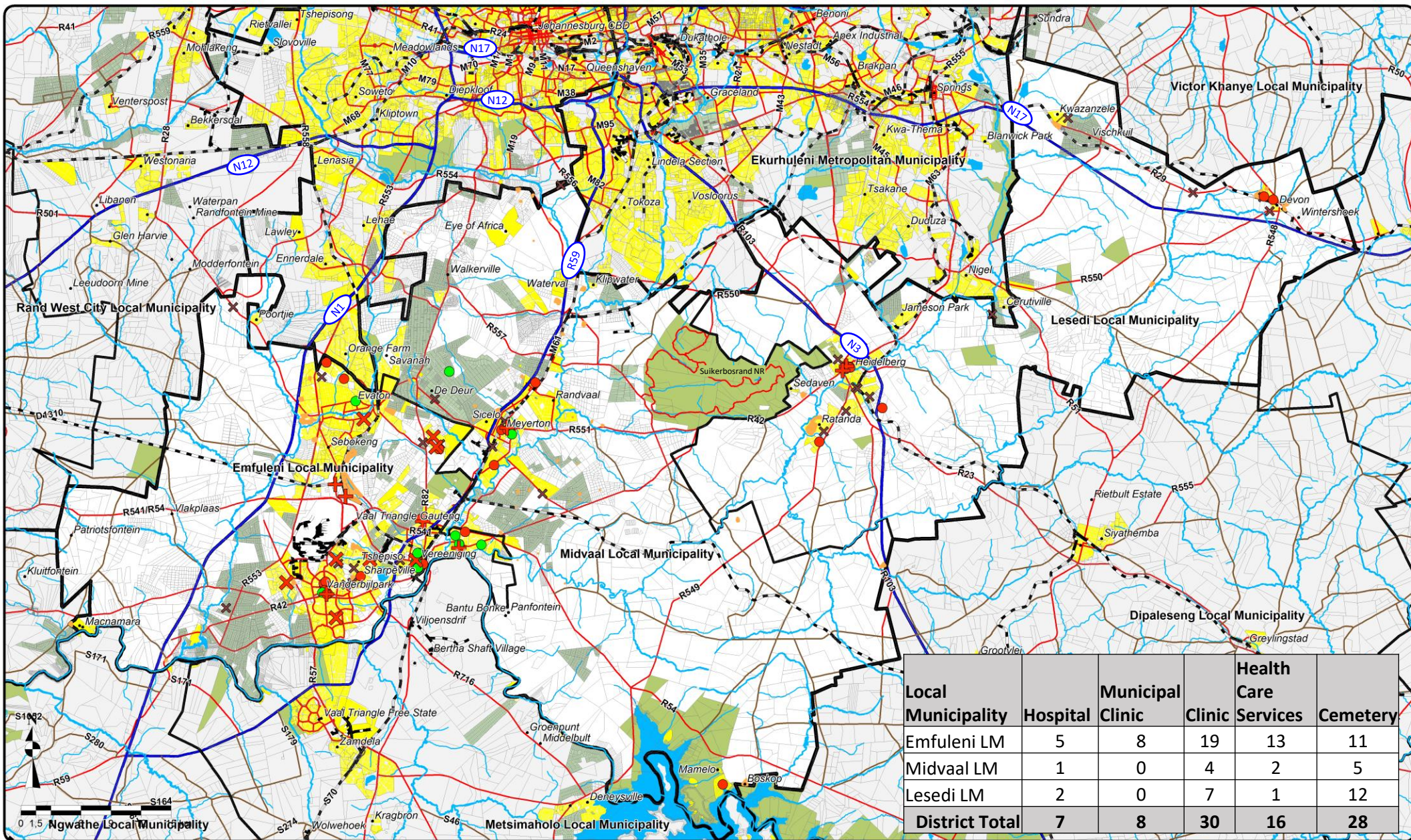


Other Colleges	
Map Ref.	Description
1	Computer and Business Skills Training
2	Computer Education and Training College
3	Academy of Learning
4	Ed-U-College
5	Jeppie College
6	PC Training
7	Boston City Campus and Business College
8	Saint Ignations College
Tertiary Institution	
Map Ref.	Description
1	Boston Business College
2	Damelin College
3	Rostec College
4	North West University
5	Vaal University
6	Vaal Triangle Technikon
7	MAT Training Solutions
8	Lifeline
9	Sedibeng College
10	TVET College
11	Sasol Training Centre
12	Sebokeng Teacher Training College
13	Christian Academy
14	Wilberforce Community College
15	Tswinyane Adult College
16	Sedibeng College Sub-Campus
18	Rand Water Swartkopjes Training

SEDIBENG DISTRICT MUNICIPALITY SDF – TERTIARY EDUCATION

- Towns and Settlements
- Informal Settlements
- Protected Areas
- Dams and Rivers
- Tertiary Institution
- Other Colleges
- National Roads
- Main Roads
- Other Roads
- Railways

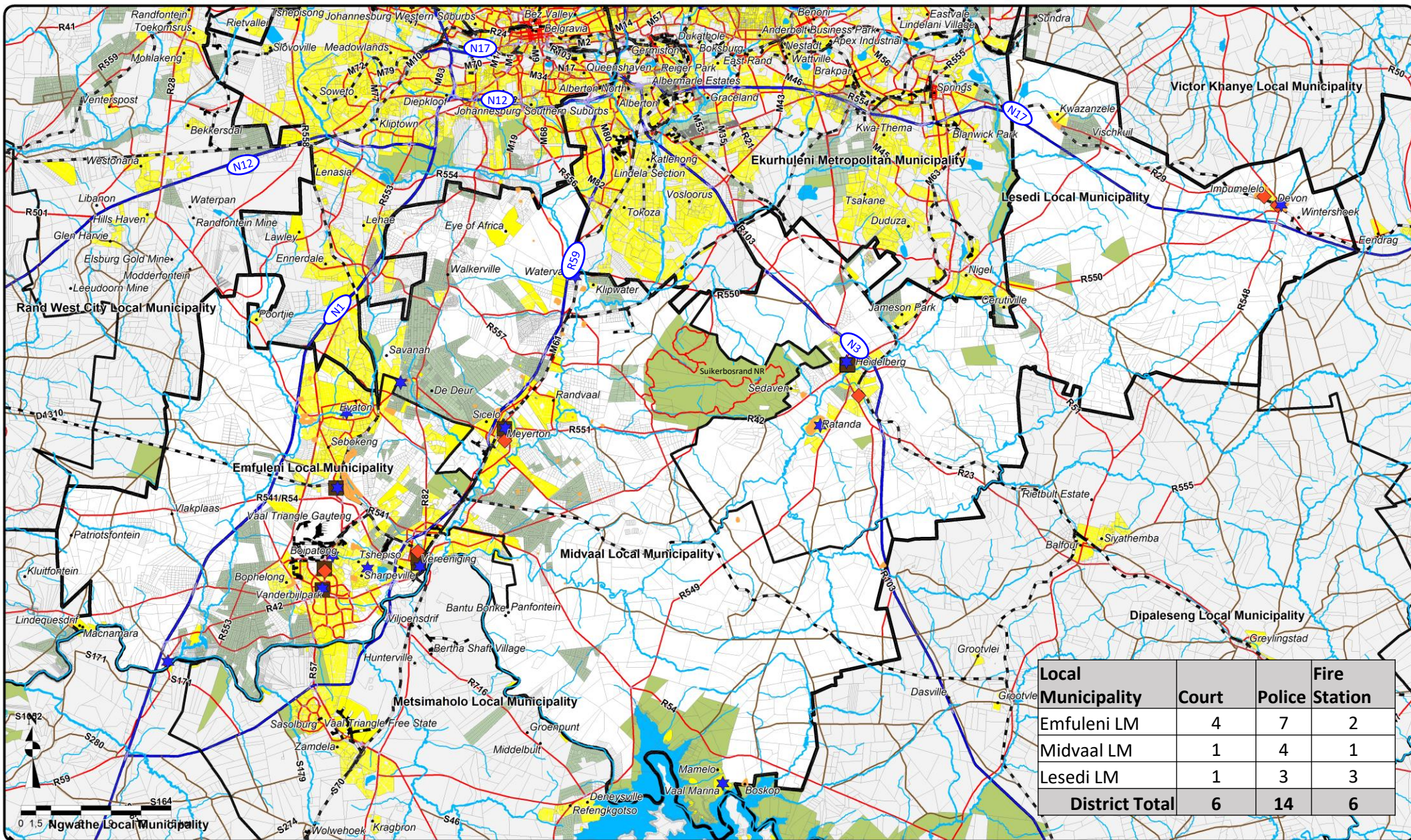




SEDIBENG DISTRICT MUNICIPALITY SDF – HEALTH SERVICES

- Towns and Settlements
- Informal Settlements
- Protected Areas
- Dams and Rivers
- + Hospital
- x Municipal Clinic
- Clinic
- Health Care Services
- x Cemetery
- National Roads
- Main Roads
- Other Roads
- Railways

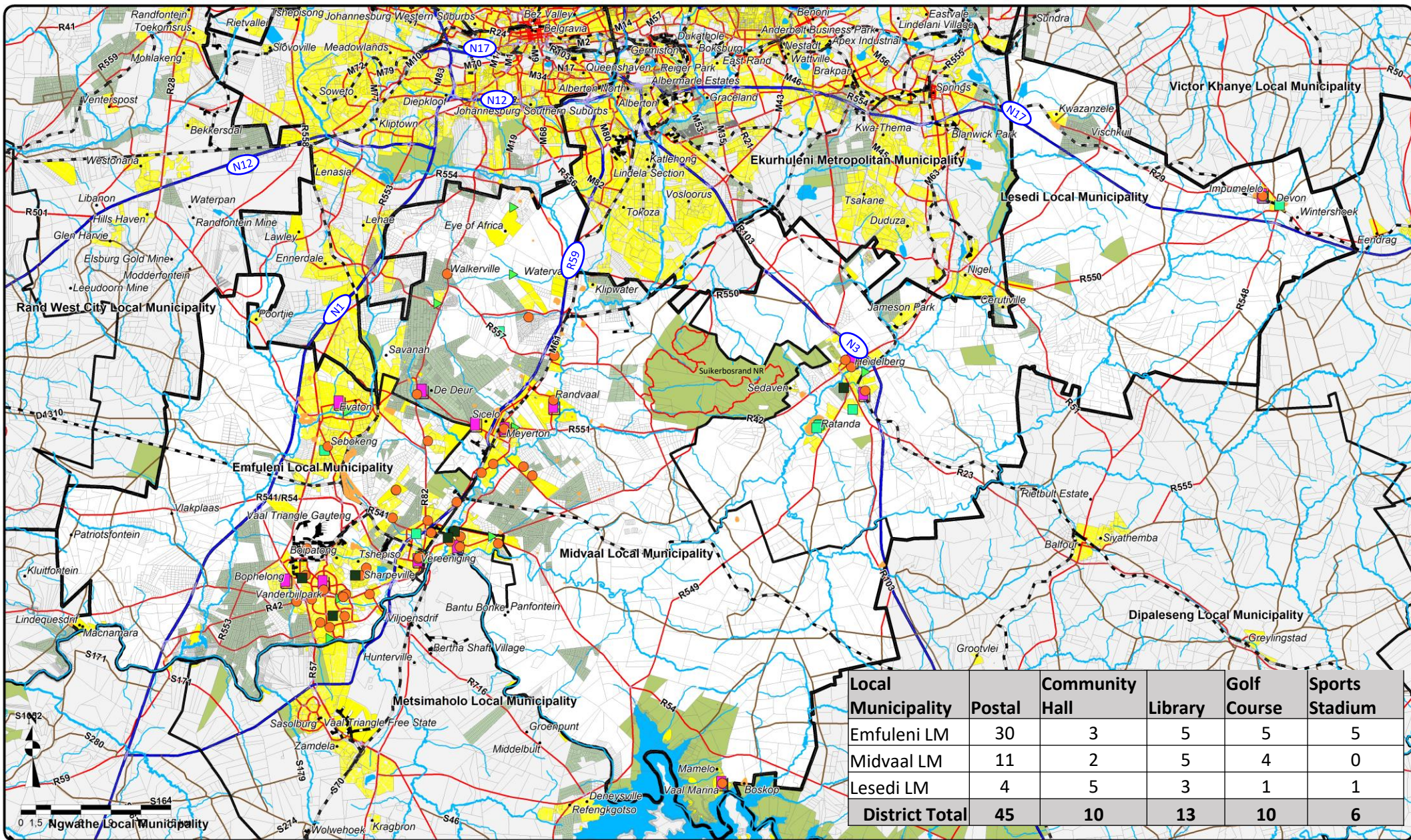




SEDIBENG DISTRICT MUNICIPALITY SDF – SAFETY AND SECURITY

- Farm Cadastral
- Towns and Settlements
- Informal Settlements
- Agricultural Holdings
- Dams / Rivers
- Court
- Fire Station
- Police
- National Roads
- Main Roads
- Other Roads
- Railways





Local Municipality	Postal	Community Hall	Library	Golf Course	Sports Stadium
Emfuleni LM	30	3	5	5	5
Midvaal LM	11	2	5	4	0
Lesedi LM	4	5	3	1	1
District Total	45	10	13	10	6

SEDIBENG DISTRICT MUNICIPALITY SDF – OTHER COMMUNITY FACILITIES

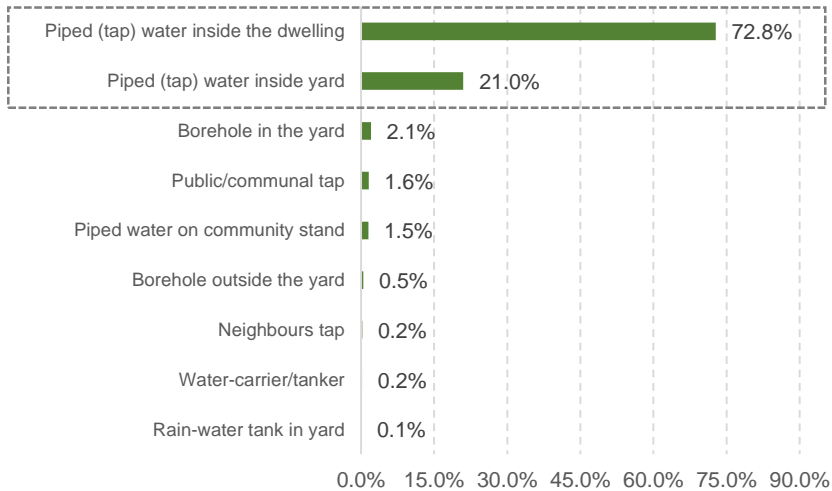
- Farm Cadastral
- Towns and Settlements
- Informal Settlements
- Agricultural Holdings
- Dams / Rivers
- Postal Services
- Community Hall
- Library
- Golf Course
- Sports Stadium
- National Roads
- Main Roads
- Other Roads
- Railways



Source of Water 2016

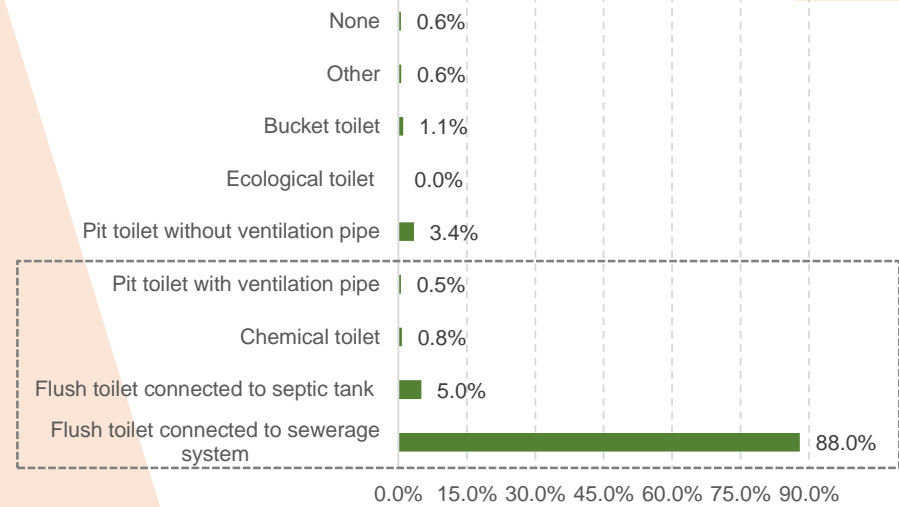
93,7% Piped Water on Stand

Main source of water for drinking 2016



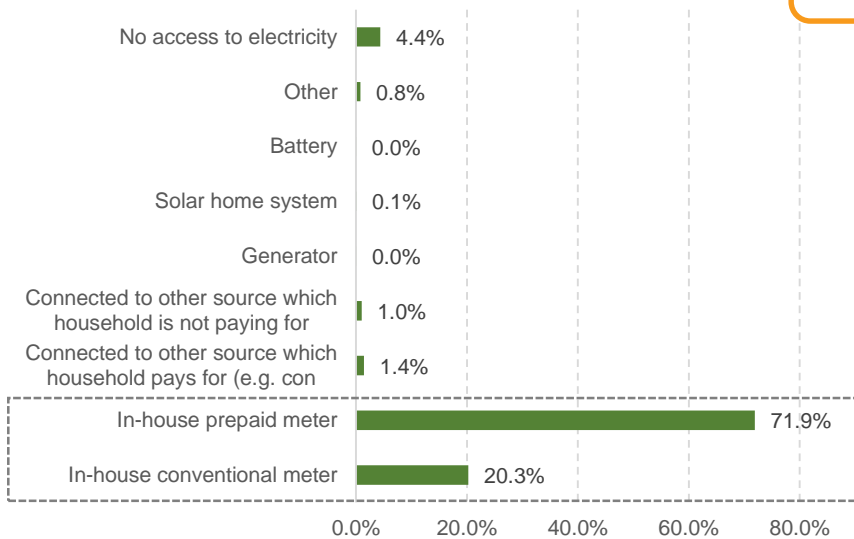
Sanitation 2016

94,3% RDP acceptable Level of Sanitation



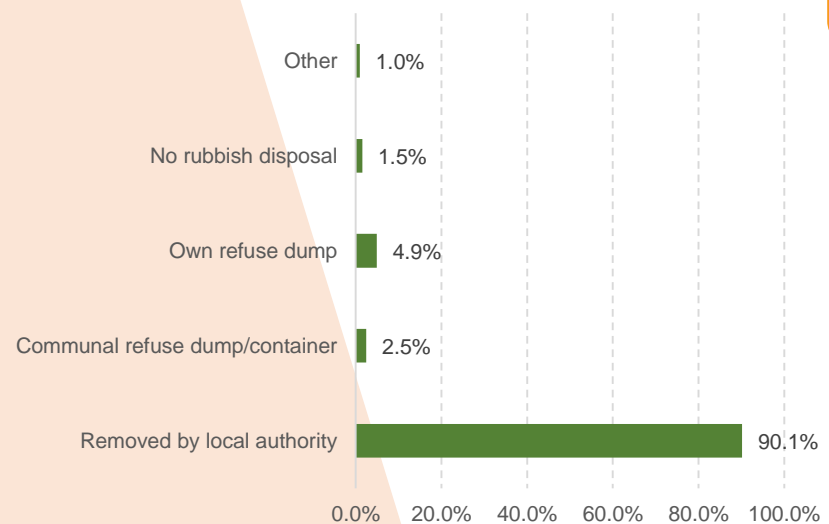
Source for Lighting 2016

92,2% In-house Electricity



Refuse Removal 2016

90,1% Refuse removed by local authority



- In terms of sanitation an estimated 94.3% of households receive sanitation services comprising either flush toilets, chemical toilets or pit toilets with ventilation.
- Diagram 10 also indicates that 92.2% of households have electricity supply within the house.
- About 90.1% of households in the Sedibeng DM have access to refuse removal services removed by the local authority.

4.6.2 Water

Rand Water supplies bulk water directly to each municipality in the district, who are responsible for local distribution.

Water reservoirs are available in Lesedi at Ratanda/ Heidelberg, Jameson Park, Devon and Vischkuil. **The current water supply is under pressure** due to in-migration of people from rural to urban areas.

Midvaal main water supply points are Meyerton, Ohenimuri and Vaal Marina and the municipality has 10 operational reservoirs as illustrated on **Figure 29**.

Emfuleni is limited to extracting up to 0.2 MI/day of water from the Vaal River whilst Rand Water supplies 205MI/day. The Emfuleni Local Municipality has nine reservoirs and a small water treatment plant.

The Emfuleni bulk water network is old and it is overworked due to the demand for potable water. The age of the networks varies between 60 -70 years across the municipal area. There are no backlogs in the supply of water connections. Additional water connections have largely been provided to informal settlement households to cope with growth of those settlements.

4.6.3 Sanitation

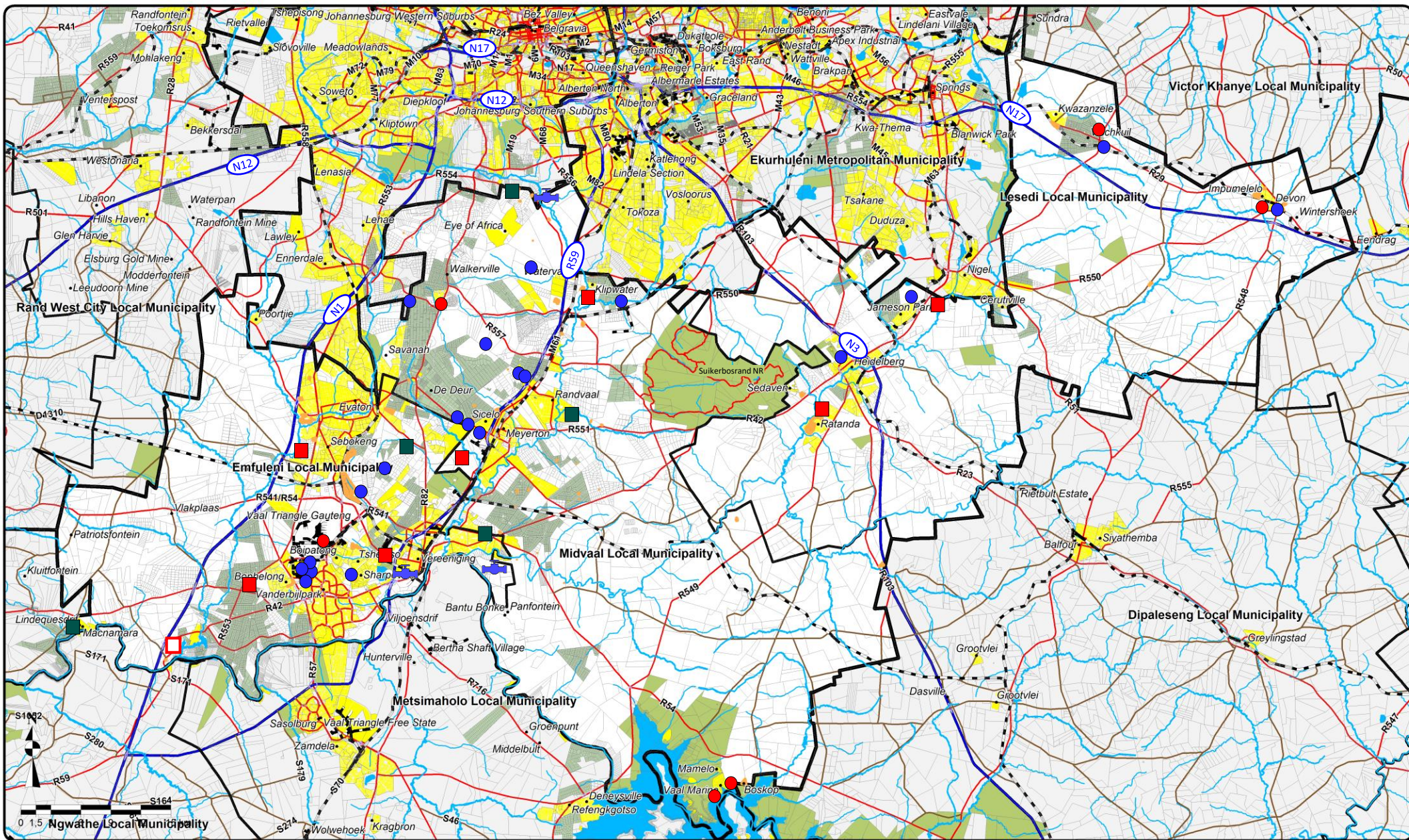
The main sewer system in Lesedi, namely the Ratanda Water Care Works (RWCW) is located at the south western end of the municipal area. The drainage area consists of several sub-basins, Bergsig, Overkruin, Heidelberg, Rensburg, Shalimar Ridge and Ratanda. Devon/Impumelelo also has waterborne sewerage systems with local compaction plants.

The Nigel WWTW is located on the border with Lesedi in the vicinity of Jameson Park.

The waste water treatments available in Midvaal include Ohenimuri, Vaal Marina and Meyerton, of which the Meyerton Treatment Works is the main facility serving the vast majority of the urban environment.

The ERWAT plant located at the Waterval Node/ Klip River Business Park to the north is used by Ekurhuleni City.

Emfuleni has three wastewater treatment works, namely, Sebokeng, Rietspruit and Leeuwkuil Wastewater Treatment Works. The Sebokeng



SEDIBENG DISTRICT MUNICIPALITY SDF – ENGINEERING SERVICES

- | | | | |
|-----------------------|--------------------------|----------------|----------------|
| Farm Cadastral | Local WWTW | Land Fill Site | National Roads |
| Towns and Settlements | WWTW | | Main Roads |
| Informal Settlements | Proposed WWTW | | Other Roads |
| Agricultural Holdings | Rand Water Pump Stations | | Railways |
| Dams / Rivers | Reservoirs | | |



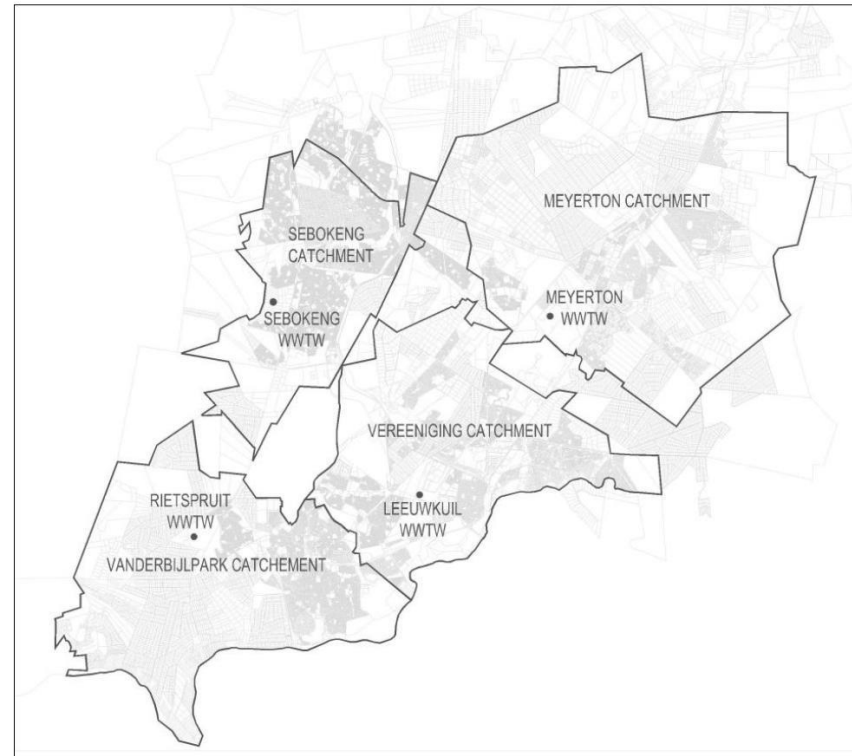
Wastewater Treatment Works is the largest in the area and has a capacity of 119Ml/day. The other two need to be upgraded and rehabilitated.

The bulk sanitation network is old and it is overworked due to the demand for sanitation services. The age of the networks varies between 60 -70 years across the Municipal area. The short-term sanitation infrastructure plans involve the rehabilitation of existing infrastructure, including sewer pump stations to minimize sewer spills. While this will give a significant improvement to overall performance, problems which could result in raw sewage spillage cannot be ruled out. Existing sanitation infrastructure has reached the end of its life-span and can only be kept operational with a high risk of sewer spills. New infrastructure needs to be constructed in order to prevent future sewer spills.

Hence, there is an urgent need to speed up the Sedibeng Regional Sewer Scheme project in order to accommodate development pressures in the district, these are for industrial, commercial and residential uses.

The Sedibeng Regional Sanitation Scheme (SRSS), as currently envisaged, consists of various components, including a new waste water works, upgrading of the current Sebokeng works, a new pump station, new rising mains and a new gravity main outfall.

This scheme will serve the Sebokeng, Vanderbijlpark, Vereeniging, and Meyerton catchments illustrated below.



The following steps are required to enable the urgent implementation of this project:

1. Secure land
2. Secure land rights and authorizations
 - Zoning
 - EIA
 - Water Use License Application
 - Heritage

3. Decide on phasing
4. Detailed design and costing of each phase
5. Secure funding for each phase
6. Appoint contractors in terms of the supply management procedures
7. Construction
8. Handover

Background to Emfuleni Sanitation Crisis

Independent Online reported last month that **only 30%** of Emfuleni's 46 pump stations were functional, and that the Department of Water and Sanitation had given the municipality a R20m grant to upgrade the stations to improve their functionality. It would seem a necessary expense, given that the newest pump station was built in 1987, despite the booming population in the area.

From the pump stations, the waste should be transported to the treatment plants. Yet the Leeuwkuil wastewater treatment plant, for example, is processing only about 15MI of raw sewage daily, despite an operating capacity of 30MI. The waste isn't reaching the treatment plants and one need only look at the water and the environment to see where it's going.

Enough money must be spent on the pump stations that move sewage to treatment plants. The municipality requires about R170m to fix the pump stations, while about R200m is needed to repair the rusted, old and leaking pipes that transport the waste. "This is just to curb the current crisis," says Oupa Nkoane, municipal manager. "We are not solving a larger infrastructure problem (with this plan).

The spillage of sewer into the Vaal River has reached such crisis proportions that government has called in the **armed forces** to help deal with the water problems in the Vaal River system, says finance minister Tito Mboweni.

Raw sewage continues to gush into the Vaal River at various points from Vereeniging to the Vaal Barrage, despite an undertaking given in mid-July by the national and provincial governments. About 150-million litres of sewage spills into the Vaal via its Rietspruit tributary every day, says environmental group Save.

The Integrated Vaal River System (IVRS), which supplies vast areas of Gauteng and the North West with drinking water, is critically important to SA, **supporting about 60% of the economy**. About **45% of the country's population** lives in the area supplied by water from the IVRS via purification and distribution utility Rand Water.

Rand Water, in consultation with DWAF, placed a **moratorium on development in the region** until the sewer system capacity is increased in size to cater for the current needs and future growth.

The proposed design capacity of the new Waste Water Treatment Works (WWTW) of the SRSS is 150 MI/day for a lifespan of 2025. The preliminary cost estimates at February 2009 is R 1.27 billion (excluding Fees and Vat) or R 1.62 billion (including Fees and Vat). The site for the proposed WWTW has been identified and approved for further technical work, e.g. geotechnical studies.

4.6.4 Energy

Electricity

From information currently available, it is evident that sufficient electrical capacity is available for current and planned developments. The Sedibeng District Municipalities' electricity is mainly supplied by Eskom, with a few areas supplied by the relevant local authorities.

Emfuleni Local Municipality is licensed to provide **electricity** in the Vanderbijlpark, Bophelong, Boipatong, Ironsyde, Eatonside, Roshnee, Rust-ter-Vaal and Vereeniging areas. Eskom has been licensed to provide electricity in the remaining areas. Between Eskom and the Municipality there is a 100% coverage of Emfuleni as far as the electricity network is concerned.

The electrical infrastructure network consists of 88/22kV and 11/6,6kV overhead power lines, 31 primary substations (88/33/22kV). Major portions of Emfuleni's distribution networks have been in service for more than 50 years and much of this network is approaching or exceeding its design life-span. As a result, the existing networks have begun to exhibit a reduction in performance reliability and even obsolete deterioration. The low level of investment in the upgrading, refurbishment and expansion of the bulk electricity infrastructure network has led to a situation where new developments can no longer be accommodated without major capital investments in bulk electricity infrastructure. This situation is aggravated by the densification of existing developments, which is placing a huge demand on the provision of electricity.

The entire Midvaal urban environment is served with electricity by the municipality while the rural parts are served by Eskom. In Lesedi LM the situation is the same with the municipality providing electricity to Heidelberg, Ratanda, Devon-Impumelelo and Kwazenele.

4.7 SYNTHESIS: SPATIAL STRUCTURING/ FORMGIVING ELEMENTS

- Sedibeng represents the Southern Corridor of the Gauteng City Region with the primary focus to be on the creation of new industries (steel fabrication), new sustainable urban and rural nodes and the promotion of agriculture (and agro industries) and tourism.
- The Southern Corridor is strategically located relative to the N1-Cape Town, N3-Durban-eThekweni and N17-Swaziland/ Richards Bay Corridors.
- The area holds significant natural features which also pose opportunities to promote tourism (Suikerbosrant, Vaal River and Vaal Dam).
- Four functional rural areas are located within the SDM within which agriculture should be promoted.
- SDM forms part of the regional economies of two metropolitan areas bordering it to the north (CoJ and Ekurhuleni) as well as the coal and electricity industries to the north-east, gold mining to the north-west and petrochemical industries at Secunda and Sasolburg to the east and south respectively.
- The SDM covers an area of about 418 900 ha of land of which 88.3% comprises farms.
- The total population stands at approximately 957 529 people growing at a rate of approximately 8000 per annum.
- Approximately 62.2% of the population (households) earn less than R3500 per month and 21.3% below the Food Poverty Line.

- Unemployment stands at approximately 50.7% with a backlog of 120 218 job opportunities.
 - Manufacturing, Finance and Community Services are the strongest sectors (GVA) while Trade contributes highest to job opportunities.
 - Agriculture is relatively strong in Lesedi and the Midvaal municipalities.
 - The SDM has a comprehensive district movement network linking all the major nodal points to one another and to the broader region.
 - There are approximately 20 438 informal structures in the SDM with a total Housing Demand of 56 189 units (based on Housing Demand Database).
 - Several larger and vibrant industrial areas drive the district economy with the proposed R59 Development Corridor and the Vaal Logistics Hub aimed at strengthening this function even more.
 - Business activity is concentrated around the CBDs of Heidelberg, Meyerton, Vereeniging and Vanderbijlpark with several smaller nodes developing in marginalised areas.
 - Mining only occurs at a very limited scale within the SDM with no prospects for significant future expansion.
 - Several tourism routes and precincts have been defined within the SDM and this sector poses significant potential for future expansion.
 - An estimated 340 418 ha of land is utilised for agricultural purposes (81% of total SDM area).
 - The dominant commodities are beef, poultry, maize and vegetables.
 - An Agri Park was identified for Sebokeng, a Rietkuil Agri Hub on the site earmarked for the logistics hub, and 15 FPSUs were proposed for SDM (no demarcation).
- The SDM holds a comprehensive range of community facilities serving the urban and rural parts of the district.
 - Water and electricity is provided at a relative satisfactory level but the bulk sewer network in the SDM needs serious upgrading with the proposed Sedibeng WWTW being the top project for implementation in the District.

5. SEDIBENG SPATIAL DEVELOPMENT FRAMEWORK

5.1 POINTS OF DEPARTURE, SPATIAL VISION AND LAND USE BUDGET

5.1.1 Points of Departure

In line with the Development Principles for spatial planning as contained in the Spatial Planning and Land Use Management Act, the Sedibeng District Spatial Development Framework seeks to achieve the following:

Spatial Sustainability:

- Create a more consolidated settlement structure in the SDM, so as to allow for the cost-effective and sustainable provision of engineering and community services and infrastructure;
- Ensure the sustainable use of land and other natural resources in the District.
- Alleviate urbanisation pressure on natural resources by putting in place growth management mechanisms to promote densification, infill and redevelopment within the urban edge.
- Mitigate existing and potential future conflicts between mining, industry, agriculture, and tourism which are the main economic sectors in the District.

Spatial Justice:

- Achieve spatial justice by way of inclusion of urban and rural communities that were previously excluded from services and facilities through processes of urban and rural restructuring and consolidation;
- Provide all communities access to economic and social resources to improve their living conditions.

Spatial Efficiency:

- Ensure the channelling of resources to areas in the SDM displaying both economic potential and development need;
- Functionally link the main service nodes / areas of greatest economic activity in the District to one another and to the regional economy of Gauteng Province and surrounding Provinces (North West, Free State and Mpumalanga);
- Enhance the development potential of existing small towns and settlements in rural parts of the District.

Spatial Resilience:

- Diversify the district economy by focusing on agriculture, tourism, industry, mining and business development.

Good Administration:

- Ensure coherent alignment between sectoral plans and development initiatives from various spheres of government, surrounding metropolitan, district and local municipalities, and among the local municipalities within the SDM.

In summary, the Sedibeng Spatial Development Framework aims to:

- facilitate the consolidation of the District's settlement structure;
- encourage functional rural-urban interaction;
- provide a framework (spatial logic) for the efficient, equitable and sustainable provision of community infrastructure and services;
- unlock the development potential of existing towns through proposals for developing industry specific economic clusters in line with the district space economy;
- enhance connectivity between the main growth centres in the district via well-developed corridors; and
- mitigate existing and potential future land use conflict(s) between industrial, mining, agriculture, and tourism development.

5.1.2 Spatial Vision

The Vision for the Sedibeng District as contained in the Sedibeng IDP (which the SDF forms part of) is confirmed as:

Building Towards a Developmental Metropolitan River City of Choice

There are two important aspects of the above Vision that have a direct bearing on the development of the Sedibeng Spatial Development Framework: Firstly, the intention to be a “**Metropolitan City**” and secondly, to be a “**River City**”.

a) Metropolitan City

The vision of being a Metropolitan City has specific spatial implications that need to be taken into account in the SDF, in particular, the requirements in terms of Section 2 of the Local Government: Municipal Structures Act, (Act 117 of 1998) which states that the following four elements have to be in place in order for an area to qualify to be a Metropolitan Municipality:

- i) Comprise an urban conurbation that has:
 - High population density
 - Intensive movement of people, goods and services
 - Extensive development (size, intensity and complexity of land use)
 - Multiple CBDs and Industrial areas
- ii) Consist of economic centres with complex diverse economies
- iii) Have a functional area suitable for integrated development planning
- iv) Characterised by economic and functional internal linkages

b) River City

The concept of a Metropolitan City focused around the “River” (in this case the Vaal River), implies a city with visual and economic orientation towards and along both banks of the Vaal River. This builds on the “Vaal 21 A River City” branding and vision that was developed some years ago.



“The ‘Vaal 21’ initiative represents a cross-border agreement between the municipalities on the southern borders of Gauteng Province (Sedibeng

District) and the northern Free State municipalities (FezileDabi District) to work together to develop a regional economy around both banks of the Vaal River”.

As explained in the Vaal 21 Initiative Report, “..... *the unifying identity and brand of the Vaal 21 has three components.*

Firstly a name. The name Vaal 21 is proposed because the word “Vaal” represents the:

- *potential of the Vaal River;*
- *rich political history of the area; and*
- *most well-known name for the area.*

The number ‘21’ represents:

- *Part of 2021 which can be a significant milestone from now to 2021;*
- *The 21st century, which is a century of doing things differently; and*
- *The 21st March 1960, which was the date of the Sharpeville Massacre.*

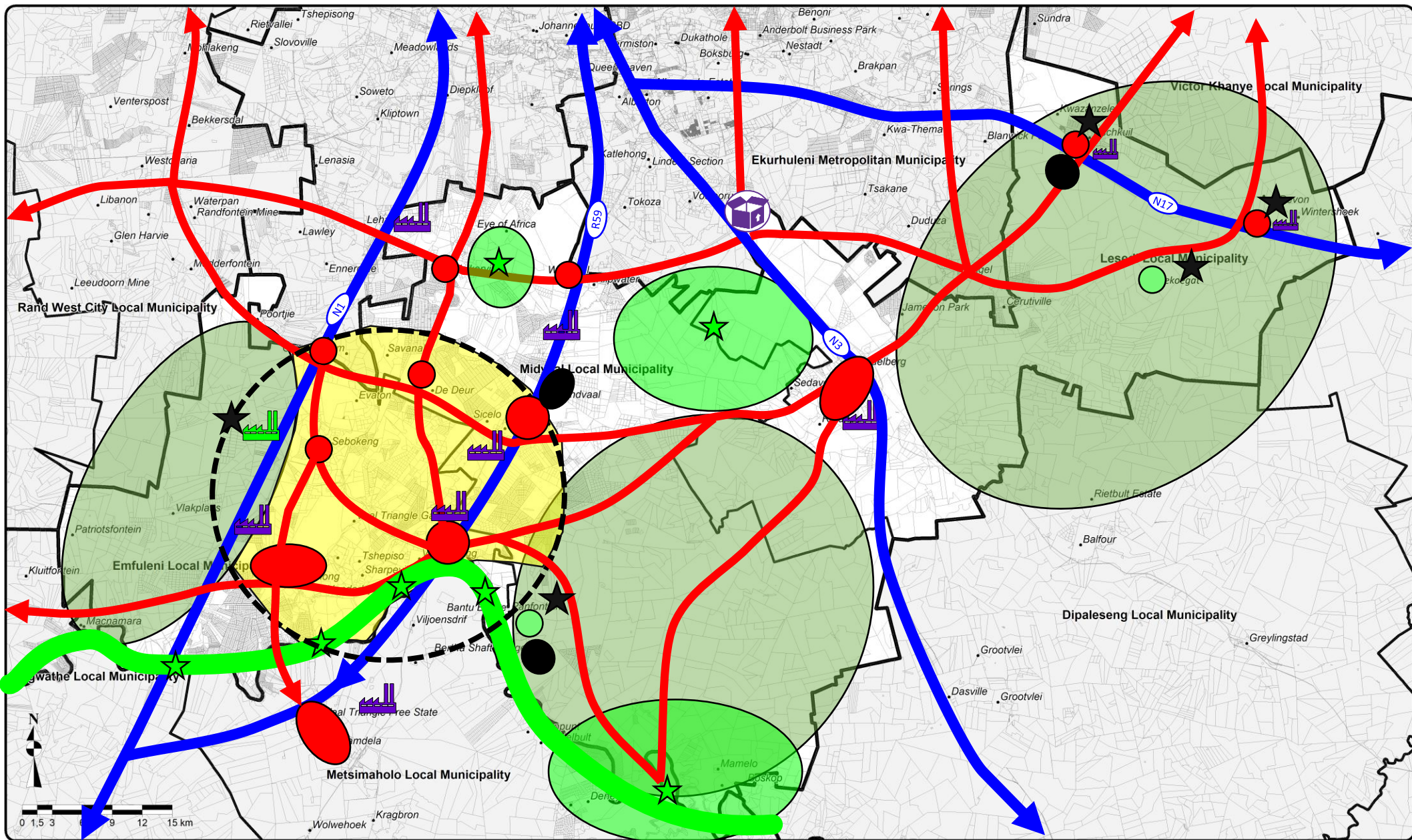
Secondly, a slogan or brand statement. The brand statement “Vaal 21: A River City” was chosen because it reflects what we would like to see in 2021.

Thirdly, a catchy logo or brand. The logo and branding on this site is the adopted brand for Vaal21. The private sector is encourage to use this brand.”

It is important that the Sedibeng SDF enhances/ incorporates the most prominent spatial elements of the Vaal 21 initiative.

Figure 30.1 depicts the SDM Vision spatially. Essentially it represents the following concepts:

- Conservation of the major environmental assets of the district including the ridges and the Vaal River system
- Structured development around the four development corridors in the district: N1, R59, N3 and N17
- Spatially targeted investment by all spheres of government in and around a number of nodes along the development corridors and in selected rural areas.
- Comprehensive supporting movement network to connect the district nodes and corridors.
- Consolidation of the urban fabric around identified nodes, and as a secondary objective, the establishment of a core urban conurbation in the southern parts of the N1 and R59 development corridors up to the Vaal River.
- Business and industrial development primarily focused along the four development corridors.
- Tourism development centered around the ridges, the Suikerbosrand Nature Reserve and at specific precincts along the Vaal River.
- Limited, well managed mining activity dictated by location of relevant mineral resources.



SEDIBENG DISTRICT MUNICIPALITY SDF – CONCEPT

- Erven (Formal Townships)
- Conservation Areas
- Rural Nodes
- Mining Precincts
- Proposed Freight Hub
- Agricultural Holdings
- Development Corridors
- Industrial Nodes
- Agricultural Precincts
- Farm Portions
- Secondary Links
- Urban Conurbation
- Agri Hub
- Local Municipality
- Business Nodes
- Tourism Precincts
- Rural Intervention Areas



- Enhanced agricultural production throughout the District with specific focus on support for emerging farmers and land reform in Rural Intervention Areas.

5.1.3 Population and Job Opportunity Projections and Land Use Budget

The following section provides a brief overview of the projected future population, households and land use requirements for the Sedibeng District Municipality and which should be catered for in the SDF.

5.1.3.1 Population and Job Opportunity Projections

Table 12.1 indicates that the Sedibeng District population is projected to increase by 267 359 people between 2016 and 2025 and an additional 154 338 people during the period 2025-2037. This brings the total incremental population for the Sedibeng District Municipality for the period 2016-2037 to about 421 697 people. This implies an annual increment of about 20 080 people in the District.

In terms of number of households it translates to an additional 161 317 households to be accommodated within Sedibeng District during the period 2016 up to 2037 at a rate of about 7681 households per annum (see **Table 12.2**).

Table 13.1 depicts the population increment per each of the three local municipalities within the SDM. The majority of the incremental population

(213 834 people) are expected to settle in the Emfuleni Municipality, while Midvaal will accommodate an additional 132 758 people.

Table 12.1: Gauteng Population Projections per Metropolitan/ District Municipality, 2011-2037

	Population			Population Increment			Incremental Population p.a.			Population Growth Rate p.a.		
	CS 2016	2025	2037	2016-2025	2025-2037	2016-2037	2016-2025	2025-2037	2016-2037	2016-2025	2025-2037	2016-2037
CoT	3,275,152	3,830,644	4,366,047	555,492	535,403	1,090,895	61,721	44,617	51,947	1.8%	1.1%	1.4%
CoJ	4,949,347	5,692,727	6,507,048	743,380	814,321	1,557,701	82,598	67,860	74,176	1.6%	1.1%	1.3%
CoE	3,379,104	4,546,936	5,303,022	1,167,832	756,087	1,923,918	129,759	63,007	91,615	3.4%	1.3%	2.2%
West Rand DM	838,594	1,046,260	1,124,467	207,666	78,207	285,873	23,074	6,517	13,613	2.5%	0.6%	1.4%
Sedibeng DM	957,529	1,224,888	1,379,226	267,359	154,338	421,697	29,707	12,861	20,081	2.8%	1.0%	1.8%
Total Gauteng	13,399,726	16,341,455	18,679,810	2,941,729	2,338,355	5,280,084	326,859	194,863	251,433	2.2%	1.1%	1.6%

Source: GITMP 25 – Year, 2013
GSPF 2030, 2016

Table 12.2: Gauteng Household Projections per Metropolitan/ District Municipality, 2011-2037

	Households			Household Increment			Incremental Households p.a.			Household Growth Rate p.a.		
	CS 2016	2025	2037	2016-2025	2025-2037	2016-2037	2016-2025	2025-2037	2016-2037	2016-2025	2025-2037	2016-2037
CoT	1,080,375	1,319,956	1,547,248	239,581	227,292	466,873	26,620	18,941	22,232	2.3%	1.3%	1.7%
CoJ	1,695,425	2,035,148	2,337,590	339,723	302,442	642,165	37,747	25,204	30,579	2.1%	1.2%	1.5%
CoE	1,202,206	1,539,839	1,825,001	337,634	285,162	622,796	37,515	23,763	29,657	2.8%	1.4%	2.0%
West Rand DM	291,280	374,513	406,836	83,233	32,322	115,556	9,248	2,694	5,503	2.8%	0.7%	1.6%
Sedibeng DM	295,294	402,187	456,611	106,893	54,424	161,317	11,877	4,535	7,682	3.5%	1.1%	2.1%
Total Gauteng	4,564,579	5,671,643	6,573,285	1,107,064	901,642	2,008,706	123,007	75,137	95,653	2.4%	1.2%	1.8%

Source: GITMP 25 – Year, 2013
GSPF 2030, 2016

Table 13.1: Sedibeng DM: Population Projections per LM, 2011-2037

	Population			Population Increment			Incremental Population p.a.			Population Growth Rate p.a.		
	CS 2016	2025	2037	2016-2025	2025-2037	2016-2037	2016-2025	2025-2037	2016-2037	2016-2025	2025-2037	2016-2037
Emfuleni	733,445	870,708	947,279	137,263	76,570	213,834	15,251	6,381	10,183	1.9%	0.7%	1.2%
Midvaal	111,612	189,137	244,370	77,525	55,233	132,758	8,614	4,603	6,322	6.0%	2.2%	3.8%
Lesedi	112,472	165,043	187,577	52,571	22,534	75,105	5,841	1,878	3,576	4.4%	1.1%	2.5%
Total Sedibeng DM	957,529	1,224,888	1,379,226	267,359	154,338	421,697	29,707	12,861	20,081	2.8%	1.0%	1.8%

Source: GITMP 25 – Year, 2013
GSPF 2030, 2016

Table 13.2: Sedibeng DM: Household Projections per LM, 2011-2037

	Households			Household Increment			Incremental Households p.a.			Household Growth Rate p.a.		
	CS 2016	2025	2037	2016-2025	2025-2037	2016-2037	2016-2025	2025-2037	2016-2037	2016-2025	2025-2037	2016-2037
Emfuleni	224,611	285,341	311,976	60,729	26,635	87,365	6,748	2,220	4,160	2.7%	0.7%	1.6%
Midvaal	36,174	67,946	89,012	31,772	21,066	52,839	3,530	1,756	2,516	7.3%	2.3%	4.4%
Lesedi	34,509	48,900	55,622	14,392	6,722	21,114	1,599	560	1,005	3.9%	1.1%	2.3%
Total Sedibeng DM	295,294	402,187	456,611	106,893	54,424	161,317	11,877	4,535	7,682	3.5%	1.1%	2.1%

Source: GITMP 25 – Year, 2013
GSPF 2030, 2016

Table 14: Sedibeng DM: Estimated number of workers

	Formal Workers			Increment			Increment p.a.			% growth p.a.		
	2016	2025	2037	2016-2025	2025-2037	2016-2037	2016-2025	2025-2037	2016-2037	2016-2025	2025-2037	2016-2037
Emfuleni	180,000	206,080	223,876	26,080	17,795	43,876	2,898	1,483	2,089	1.5%	0.7%	1.0%
Midvaal	60,000	91,258	147,609	31,258	56,351	87,609	3,473	4,696	4,172	4.8%	4.1%	4.4%
Lesedi	33,000	42,624	53,684	9,624	11,060	20,684	1,069	922	985	2.9%	1.9%	2.3%
Total Sedibeng DM	273,000	339,962	425,168	66,962	85,207	152,168	7,440	7,101	7,246	2.5%	1.9%	2.1%

Source: GITMP 25 – Year, 2013

The Lesedi Local Municipality has a significantly lower incremental population of 75 105 people during the period 2016-2037.

Similarly, the projected incremental households between 2016 and 2037 for Emfuleni stands at approximately 87 365, Midvaal about 52 839, and Lesedi an estimated 21 114 (**Table 13.2**).

Table 14 depicts the estimated number of workers/ job opportunities to be established within the Sedibeng District Municipality during the period 2016 up to 2037. This is based on detailed growth scenarios formulated for Gauteng Province and the district/ metropolitan municipalities when the Gauteng Integrated Transport Master Plan (GITMP) was compiled.

From this it is evident that the projected additional SDM job opportunities between 2016 and 2037 stands at approximately 152 168. The majority of these job opportunities (87 609) are located in Midvaal Local Municipality while Emfuleni has a projected increment of 43 876 job opportunities and Lesedi about 20 684 job opportunities up to 2037. This implies an annual increment of approximately 7246 job opportunities in the district. The reason for the significant growth in the Midvaal municipal area is related to the large industrial/ commercial areas earmarked along the R59 development corridor between Vereeniging and Alberton which is located in the Midvaal municipal area.

5.1.3.2 Sedibeng District Land Use Budget

Table 15 highlights the land use budget for the Sedibeng District for the period 2016 up to 2025. It indicates that the incremental population of 267 359 people during this period will be accommodated in 106 893 housing units for which approximately 4515 ha of land would be required.

About 2451 ha of the total land area is required for high income, about 1257 ha for the middle income, and the low income land requirement is approximately 807 ha.

An estimated 152 ha would be required to accommodate the potential 454 511m² of additional retail space and 76 ha for the 227 255m² of office space.

Furthermore, approximately 213 ha would be required for educational facilities, 9 ha for health, 6 ha for safety and security purposes and 19 ha for social and cultural purposes. An additional 134 ha would be required for sports and recreational facilities while streets will collectively cover approximately 1639 ha of land.

The table then also highlights that the total number of hectares of land required to accommodate the incremental population in Sedibeng between 2016 and 2025 is about 6762 ha.

Table 15: Sedibeng DM: Incremental Land Use Budget, 2016-2025 (including Backlog)

Facilities	Backlog /Demand2018		Increment 2016-2025								Increment and Backlog (2016-2025)		
	TOTAL		Emfuleni		Midvaal		Lesedi		TOTAL		Requirement		
	number	ha	number	ha	number	ha	number	ha	number	ha	number	ha	%
Number of Units	56,189	1,124	60,729	2,264	31,772	1,683	14,392	567	106,893	4,515	163,082	5,639	65%
High Income (@800m ²)	-	-	12,041	963	15,366	1,229	3,231	258	30,637	2,451	30,637	2,451	19%
Medium Income (@350m ²)	-	-	21,823	764	8,387	294	5,712	200	35,921	1,257	35,921	1,257	22%
Low Income (@200m ²)	56,189	1,124	26,866	537	8,020	160	5,450	109	40,336	807	96,525	1,930	59%
Population	184,897		137,263		77,525		52,571		267,359		452,256		
Nett residential Density	50		27		19		25		24		29		
Business (m²)	55,469	18	233,348	77.8	131,792	43.9	89,371	29.8	454,511	152	509,980	170	2%
Offices (floor area in m²)	5,547	2	116,674	38.9	65,896	22.0	44,686	14.9	227,255	76	232,802	78	1%
Education		147		109.4		61.8		41.9		213		361	4%
Small Crèche	77	2	57	1.1	32	0.6	22	0.4	111	2	188	4	
ECD Hub and Care Centre	9	1	7	0.7	4	0.4	3	0.3	13	1	23	2	
Primary (including Grade R)	26	74	20	54.9	11	31.0	8	21.0	38	107	65	181	
Secondary	15	71	11	52.7	6	29.8	4	20.2	21	103	36	174	
Health Services		6		4.6		2.6		1.8		9		15	0%
Primary Health Clinic	8	2	6	1.1	3	0.6	2	0.4	11	2	19	4	
Community Health Centre	3	5	2	3.4	1	1.9	1	1.3	4	7	8	11	
Safety and Security		4		3.0		1.7		1.1		6		10	0%
Police	3	3	2	2.3	1	1.3	1	0.9	4	4	8	8	
Fire Station	3	1	2	0.7	1	0.4	1	0.3	4	1	8	2	
Social /Cultural		13		9.7		5.5		3.7		19		32	0%
Local Library	9	0	7	0.3	4	0.2	3	0.1	13	1	23	1	
Worship Centre	62	9	46	6.9	26	3.9	18	2.6	89	13	151	23	
Post Office/ICT Access Point	18	1	14	0.7	8	0.4	5	0.3	27	1	45	2	
Communtiy Hall (medium)	12	2	9	1.8	5	1.0	4	0.7	18	4	30	6	
Sports and Recreation		92		68.6		38.8		26.3		134		226	3%
Sports Facilities and Parks		55		41.18		23.26		15.77		80	-	136	
Regional Parks		37		27.45		15.50		10.51		53	-	90	
Industrial		0								0		0	0%
Streets		450		824.4		595.0		219.8		1,639		2,090	24%
TOTAL		1,858		3,401		2,454		907		6,762		8,619	100%
%		22%		39%		28%		11%		78%		100%	
Gross Density	30		18		13		16		16		19		

If however, the existing backlog of 56 189 units are also to be accommodated it would require an additional 1858 ha of land for urbanisation purposes which would bring the total land size required for the period 2016 to 2025 to about 8619 ha of land as shown at the bottom of the second last column.

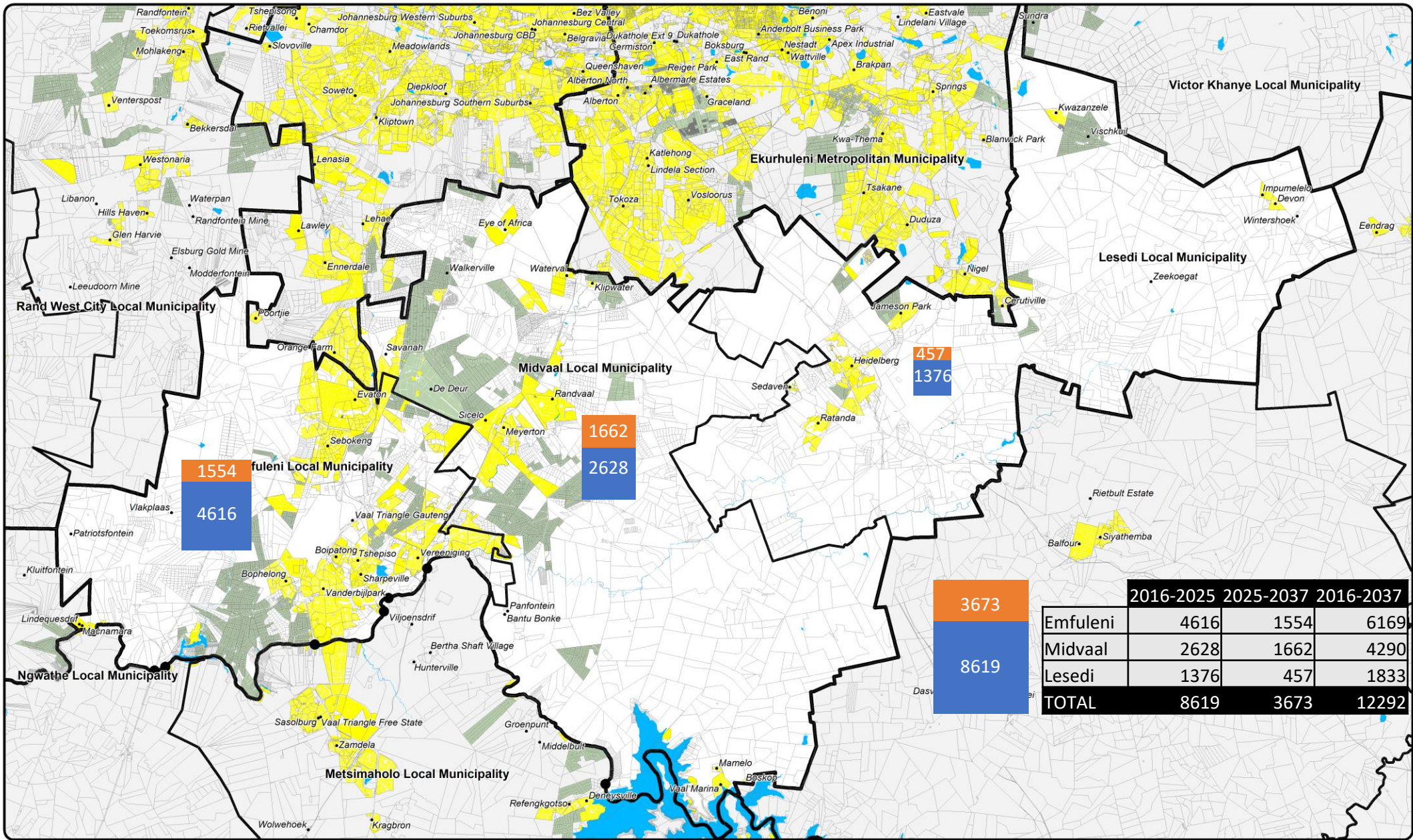
Table 16 depicts the same information for the period 2025 up to 2037. What is evident from this is that for this period an additional 3673 ha of land would be required for urbanisation purposes with about 1554 ha being located in the Emfuleni Municipality, 1662 ha in Midvaal and 457 ha in the Lesedi Local Municipality.

It is also interesting to note that the incremental population would be able to sustain approximately 262 374m² of retail/ business floor space and an additional 131 187m² of office floor space.

Table 17 depicts the total incremental land use budget for the Sedibeng District for the period 2016 up to 2037. This indicates that a total of 6946 ha of land is required to accommodate the 161 317 households. The total size of retail to be added stands at approximately 716 884m² (requiring 239 ha of land) and 358 442m² of office space (requiring about 119 ha of land). The total land size required for expansion of the urban footprint in the SDM between 2016 and 2037 stands at 10 434 ha of land of which the bulk (4954 ha) are to be allocated in the Emfuleni Municipality, 4117 ha in Midvaal and 1363 ha in the Lesedi Local Municipality.

Table 18 reflects the same information but the 1858 ha required to accommodate the existing housing backlog was added to the total which brings the total incremental land required for urbanisation in the SDM, including backlog and increment, to about 12 292 ha of land. This includes 4954 ha in Emfuleni, 4117 ha in Midvaal and 1363 ha in Lesedi LM.

Figure 30.2 graphically illustrates the size of land (at scale) required per municipality in the Sedibeng District based on the land use budget summarized in Table 18.



SEDIBENG DISTRICT MUNICIPALITY SDF – LAND USE BUDGET (GROWTH AND BACKLOG)

- Cadastral
- Urban Footprint
- Agricultural Holdings
- Dams/Rivers

Area
in ha

2025-2037
2016-2025

} Land Use size required for urbanization



Table 16: Sedibeng DM: Incremental Land Use Budget, 2025-2037

Facilities	Increment 2025-2037								
	Emfuleni		Midvaal		Lesedi		TOTAL		
	number	ha	number	ha	number	ha	number	ha	%
Number of Units	26,635	1,003	21,066	1,134	6,722	295	54,424	2,431	66%
High Income (@800m ²)	6,317	505	10,120	810	1,953	156	18,390	1,471	34%
Medium Income (@350m ²)	6,082	213	7,012	245	2,871	101	15,965	559	29%
Low Income (@200m ²)	14,236	285	3,934	79	1,897	38	20,068	401	37%
Population	76,570		55,233		22,534		154,338		
Nett residential Density	27		19		23		22		
Business (m²)	130,169	43.4	93,897	31.3	38,308	12.8	262,374	87	2%
Offices (floor area in m²)	65,085	21.7	46,948	15.6	19,154	6.4	131,187	44	1%
Education		61.1		44.0		18.0		123	3%
Small Crèche	32	0.6	23	0.5	9	0.2	64	1	
ECD Hub and Care Centre	4	0.4	3	0.3	1	0.1	8	1	
Primary (including Grade R)	11	30.6	8	22.1	3	9.0	22	62	
Secondary	6	29.4	4	21.2	2	8.7	12	59	
Health Services		2.6		1.8		0.8		5	0%
Primary Health Clinic	3	0.6	2	0.5	1	0.2	6	1	
Community Health Centre	1	1.9	1	1.4	0	0.6	3	4	
Safety and Security		1.7		1.2		0.5		3	0%
Police	1	1.3	1	0.9	0	0.4	3	3	
Fire Station	1	0.4	1	0.3	0	0.1	3	1	
Social /Cultural		5.4		3.9		1.6		11	0%
Local Library	4	0.2	3	0.1	1	0.1	8	0	
Worship Centre	26	3.8	18	2.8	8	1.1	51	8	
Post Office/ICT Access Point	8	0.4	6	0.3	2	0.1	15	1	
Communtiy Hall (medium)	5	1.0	4	0.7	2	0.3	10	2	
Sports and Recreation		38.3		27.6		11.3		77	2%
Sports Facilities and Parks		22.97		16.57		6.76		46	
Regional Parks		15.31		11.05		4.51		31	
Industrial								0	0%
Streets		376.6		403.0		110.7		890	24%
TOTAL		1,554		1,662		457		3,673	100%
Gross Density	17		13		15		15		

Table 17: Sedibeng DM: Incremental Land Use Budget, 2016-2037 (including Backlog)

Facilities	Increment 2016-2037								
	Emfuleni		Midvaal		Lesedi		TOTAL		
	number	ha	number	ha	number	ha	number	ha	%
Number of Units	87,365	3,267	52,839	2,817	21,114	862	161,317	6,946	67%
High Income (@800m ²)	18,357	1,469	25,486	2,039	5,184	415	49,027	3,922	30%
Medium Income (@350m ²)	27,905	977	15,398	539	8,583	300	51,886	1,816	32%
Low Income (@200m ²)	41,103	822	11,954	239	7,347	147	60,404	1,208	37%
Population	213,834		132,758		75,105		421,697		
Nett residential Density	27		19		24		23		
Business (m²)	363,517	121.2	225,689	75.2	127,679	42.6	716,884	239	2%
Offices (floor area in m²)	181,759	60.6	112,844	37.6	63,839	21.3	358,442	119	1%
Education		170.5		105.9		59.9		336	3%
Small Crèche	89	1.8	55	1.1	31	0.6	176	4	
ECD Hub and Care Centre	11	1.1	7	0.7	4	0.4	21	2	
Primary (including Grade R)	31	85.5	19	53.1	11	30.0	60	169	
Secondary	17	82.1	11	51.0	6	28.8	34	162	
Health Services		7.1		4.4		2.5		14	0%
Primary Health Clinic	9	1.8	6	1.1	3	0.6	18	4	
Community Health Centre	4	5.3	2	3.3	1	1.9	7	11	
Safety and Security		4.6		2.9		1.6		9	0%
Police	4	3.6	2	2.2	1	1.3	7	7	
Fire Station	4	1.1	2	0.7	1	0.4	7	2	
Social /Cultural		15.1		9.4		5.3		30	0%
Local Library	11	0.5	7	0.3	4	0.2	21	1	
Worship Centre	71	10.7	44	6.6	25	3.8	141	21	
Post Office/ICT Access Point	21	1.1	13	0.7	8	0.4	42	2	
Communty Hall (medium)	14	2.9	9	1.8	5	1.0	28	6	
Sports and Recreation		106.9		66.4		37.6		211	2%
Sports Facilities and Parks		64.15		39.83		22.53		127	
Regional Parks		42.77		26.55		15.02		84	
Industrial								0	0%
Streets		1,201		998		330		2,530	24%
TOTAL		4,954		4,117		1,363		10,434	100%

Table 18: Sedibeng DM: Incremental Land Use Budget, 2016-2037 (including Backlog)

Facilities	Backlog /Demand2018		Increment 2016-2037									Increment and Backlog (2016-2037)		
	TOTAL		Emfuleni		Midvaal		Lesedi		TOTAL			Requirement		
	number	ha	number	ha	number	ha	number	ha	number	ha	%	number	ha	%
Number of Units	56,189	1,124	87,365	3,267	52,839	2,817	21,114	862	161,317	6,946	67%	217,506	8,070	66%
High Income (@800m²)	-	-	18,357	1,469	25,486	2,039	5,184	415	49,027	3,922	30%	49,027	3,922	23%
Medium Income (@350m²)	-	-	27,905	977	15,398	539	8,583	300	51,886	1,816	32%	51,886	1,816	24%
Low Income (@200m²)	56,189	1,124	41,103	822	11,954	239	7,347	147	60,404	1,208	37%	116,593	2,332	54%
Population	184,897		213,834		132,758		75,105		421,697			606,594		
Net residential Density	50		27		19		24		23			27		
Business (m²)	55,469	18	363,517	121.2	225,689	75.2	127,679	42.6	716,884	239	2%	772,354	257	2%
Offices (floor area in m²)	5,547	2	181,759	60.6	112,844	37.6	63,839	21.3	358,442	119	1%	363,989	121	1%
Education		147		170.5		105.9		59.9		336	3%		484	4%
Small Crèche	77	2	89	1.8	55	1.1	31	0.6	176	4		253	5	
ECD Hub and Care Centre	9	1	11	1.1	7	0.7	4	0.4	21	2		30	3	
Primary (including Grade R)	26	74	31	85.5	19	53.1	11	30.0	60	169		87	243	
Secondary	15	71	17	82.1	11	51.0	6	28.8	34	162		49	233	
Health Services		6		7.1		4.4		2.5		14	0%		20	0%
Primary Health Clinic	8	2	9	1.8	6	1.1	3	0.6	18	4		25	5	
Community Health Centre	3	5	4	5.3	2	3.3	1	1.9	7	11		10	15	
Safety and Security		4		4.6		2.9		1.6		9	0%		13	0%
Police	3	3	4	3.6	2	2.2	1	1.3	7	7		10	10	
Fire Station	3	1	4	1.1	2	0.7	1	0.4	7	2		10	3	
Social /Cultural		13		15.1		9.4		5.3		30	0%		43	0%
Local Library	9	0	11	0.5	7	0.3	4	0.2	21	1		30	2	
Worship Centre	62	9	71	10.7	44	6.6	25	3.8	141	21		202	30	
Post Office/ICT Access Point	18	1	21	1.1	13	0.7	8	0.4	42	2		61	3	
Communtiy Hall (medium)	12	2	14	2.9	9	1.8	5	1.0	28	6		40	8	
Sports and Recreation		92		106.9		66.4		37.6		211	2%		303	2%
Sports Facilities and Parks		55		64.15		39.83		22.53		127		-	182	
Regional Parks		37		42.77		26.55		15.02		84		-	121	
Industrial		0								0	0%		0	0%
Streets		450		1,201		998		330		2,530	24%		2,980	24%
TOTAL		1,858		4,954		4,117		1,363		10,434	100%		12,292	100%
Gross Density	30		18		13		15		15			18		

5.1.4 Development Principles

With the Points of Departure, Spatial Vision and Projected Land Use Budget in place, it is important to define a set of Development Principles which collectively provides the spatial logic/ development rationale towards the future development of the Sedibeng District. These development principles are inter-related i.e. they inform one another, and they incrementally/ collectively define the Spatial Development Framework for the Sedibeng District Municipality as discussed in section 5.2 of this document.

Principle 1: Effective environmental and land use management to achieve a sustainable equilibrium between ecosystem and biodiversity conservation, and urban related development within the District.

Principle 2: Enhanced spatial efficiency through a defined range of urban and rural nodes in the district around which to consolidate economic development and infrastructure investment (spatial targeting).

Principle 3: Enhancement of four Strategic Development Corridors supplemented by an extensive local transport network providing linkages between urban and rural nodes.

Principle 4: Consolidation of the urban structure of the District around the nodal points by way of infill development and densification in identified Priority Housing Development Areas (PHDAs).

Principle 5: Consolidate community facilities at urban and rural nodal points to enhance “one-stop” access to such facilities for the community, and to contribute towards creating “critical mass” required to stimulate local economic development.

Principle 6: Enhance business activities (formal and informal) at each of the identified nodal points in the Sedibeng District and incorporate informal/ emerging business activities into Thusong Centres and modal transfer facilities.

Principle 7: Concentrate industrial and agro-processing activities at the higher order nodes or along the major development corridors in the District where infrastructure is available.

Principle 8: Optimally utilise the mining potential in the District in such a way that a sustainable balance is maintained between mining, agriculture and the natural environment.

Principle 9: Promote the commercial farming activities throughout the District; establishment of the Agri Park concept in the district, and compile Community Based Rural Development Plans for identified Rural Intervention Areas.

Principle 10: Utilise the existing natural, cultural-historic and man-made resources towards development of Tourism Precincts and Corridors throughout the District.

Principle 11: Ensure that all communities (urban and rural) have access in the district, priority housing development areas earmarked for residential development, and communities with excessive service backlogs.

Principle 12: Implement a district-wide Growth Management Strategy to ensure spatial manifestation of the SDF Development Principles.

5.2 DEVELOPMENT FRAMEWORK

5.2.1 Principle 1: Effective environmental and land use management to achieve a sustainable equilibrium between ecosystem and biodiversity conservation, and urban related development within the District.

i) Environmental Management Policy/ Guidelines

The management and maintenance of the natural environment is a key element towards the future sustainable development of

Vulnerability to environmental degradation, resource scarcity and climatic shocks must be reduced. Ecological systems should be protected and replenished. – NDP

the Sedibeng District Municipality. The urban and rural communities are dependent on environmental resources located within the District for income generation and their own existence. It is thus of critical importance that a balance be achieved between development and associated utilisation of

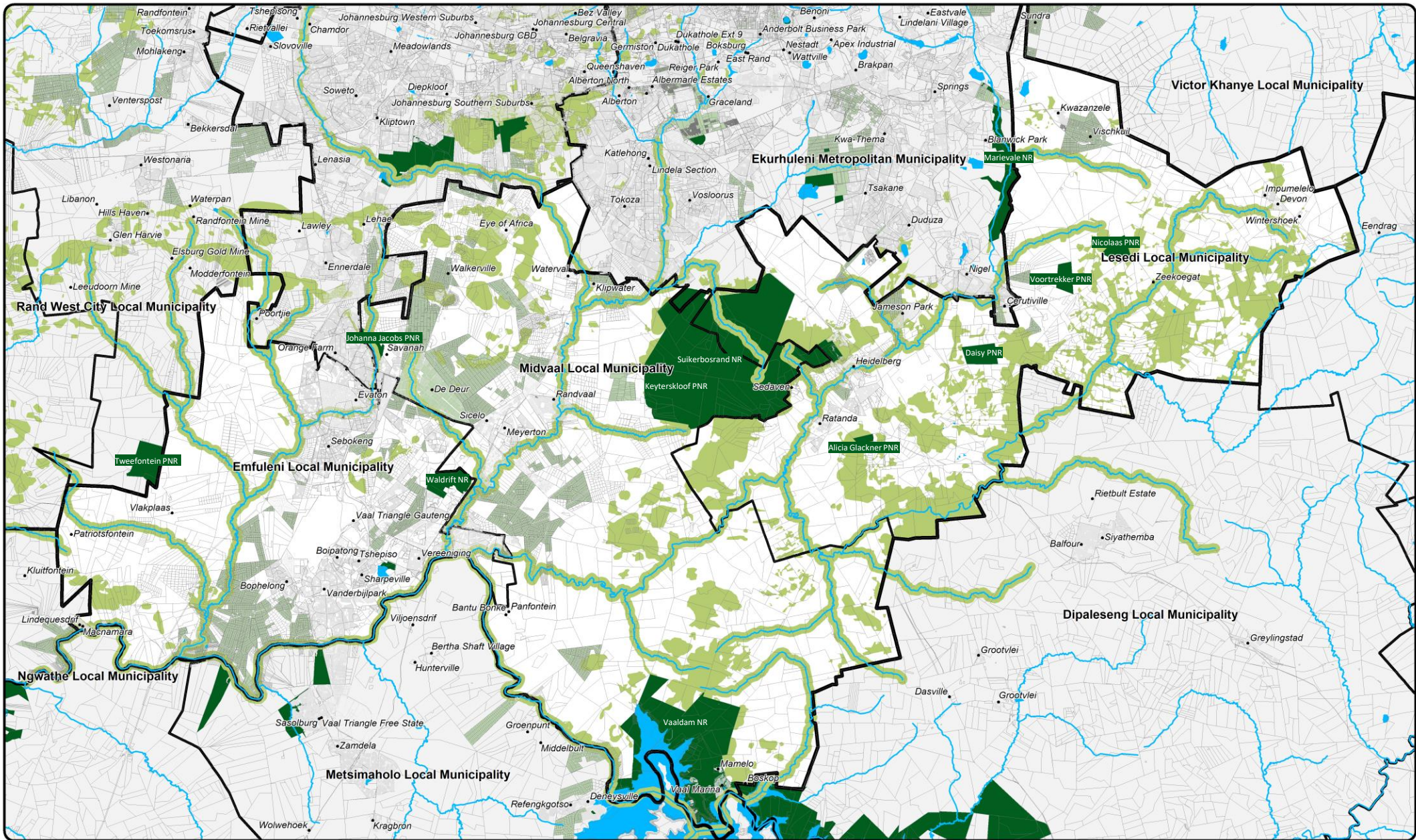
resources, and the permanent conservation of certain environmental features within the District.

Figure 31.1 illustrates the proposed regional open space system for the Sedibeng District Municipality. Essentially it comprises all the proclaimed nature reserves; the areas of Critical Biodiversity (CBA 1 and 2); as well as Environmental Support Areas (ESA 1 and 2) as identified in the Gauteng C-Plan as depicted on Figure 22 in this report. This network is connected via the river drainage systems as well as the ridges running through the district area to create an extensive network of functional ecological corridors as illustrated on Figure 31.1.

The most sensitive areas relating to the natural environment include the northern and central more mountainous parts of the district area around Walkerville and Suikerbosrant; the main drainage systems running through the District with the (Vaal River) being the most prominent; and the high potential agricultural land in the north-eastern, central and western parts of the District. Apart from general protection, the functional linkage of these features by way of ecological corridors in order to facilitate movement of fauna and flora, is also of critical importance.

At a more detailed scale, the following principles should also be adopted towards extending and integrating the open space system into the urban fabric of each of the municipalities in the Sedibeng District:

- The protected natural areas must be formally proclaimed and linked to the network of open spaces;



SEDIBENG DISTRICT MUNICIPALITY SDF – PRINCIPLE 1: REGIONAL OPEN SPACE SYSTEM

- Cadastral
- Nature Reserve
- Open Space System
- Dams/Rivers



- Open space areas within the urban footprint should be developed to ensure functionality and safety for users;
- Residential suburbs and economic activity areas (CBD/ Industrial Areas) should be greened and made aesthetically pleasing and linked to the broader network of open spaces;
- Major recreational parks and facilities form part of the network of open spaces and should be easily accessible by public transport.

The proposed regional open space system should be an integral part of municipal resource conservation, biodiversity protection, strategic land use planning and land use management processes. In this regard it is recommended that the regional open space network as depicted on Figure 31.1 be used as an overlay zone to inform decisions relating to land use rights and township applications in all parts of the SDM and Local Municipalities.

The development guidelines and directives per Biodiversity Category as summarised in **Table 19** should be utilized in the evaluation of individual applications to ensure that areas of high biodiversity are sufficiently protected from urbanisation pressures in line with the directives provided.

The SDM should also ensure that all land use planning and development applications take the underlying geology into account (i.e. geology, slope, risk of mass movement, expansive soils, sinkholes, undermining etc.). This is specifically applicable to areas within the SDM dolomitic footprint as illustrated on Figure 23 in this report. There is a detailed risk assessment

available in GIS format for certain parts of the Sedibeng District e.g. around Skansdam along route R59 in Midvaal LM. In summary:

- Future land use planning on land underlain by dolomite must be undertaken according to current best practice, as stipulated in the SANS 10400 and SANS 1936.
- Site specific investigations are recommended for all developments contemplated on dolomite land, regardless of the regional risk classification.
- No new residential development should be permitted in the Inherent Risk Classes 6, 7 or 8 areas.

However, it is advised that the poor risk characterisation is verified through limited dolomite stability investigations to ensure that valuable land is not sterilised unnecessarily.

Table 19: Sedibeng Biodiversity Plan Guidelines

Category on the CBA Map	Description	Land Management Objective	Land Management Recommendations	Compatible Land Use	Incompatible Land Use
Protected Areas	Formal Protected Areas and Protected Areas pending declaration under NEMPA.	Maintain natural land. Rehabilitate degraded areas to a natural or near natural state, and manage for no further degradation.	Maintain or obtain formal conservation protection.	Conservation and associated activities.	All other land uses.
Critical Biodiversity Areas (1)	Areas required to be maintained in a natural or near natural state to meet targets for biodiversity pattern (features) or ecological processes.	Maintain natural land and ecological processes. Rehabilitate degraded areas to a natural or near natural state, and manage for no further degradation.	Obtain formal conservation protection where possible. Implement appropriate zoning to avoid net loss of intact habitat or intensification of land use.	Conservation and associated activities. Extensive game farming and ecotourism operations with strict control on environmental impacts and carrying capacities, where overall there is a net biodiversity gain. Extensive Livestock Production with strict control on environmental impacts and carrying capacities. Urban Open Space Systems.	Urban land uses including Residential (including golf estates, rural residential, resorts), Business, Mining and Industrial; Infrastructure (roads, power lines, pipelines). Intensive Animal Production (all types including dairy farming associates with confinement, imported foodstuffs, and improved/ irrigated pastures). Arable Agriculture (forestry, dry land and irrigated cropping). Small holdings.
Critical Biodiversity Area (2)	Cultivated landscapes which retain importance for supporting threatened species	Maintain current agricultural activities. Ensure that land use is not intensified and that activities are managed to minimise impact on threatened species.	Avoid conversion of agricultural land to more intensive land uses which may have a negative impact on threatened species or ecological processes.	Current agricultural practices including arable agriculture, intensive and extensive animal production, as well as game and ecotourism operations, as long as these are managed in a way to ensure populations of threatened species are maintained and the ecological processes which support them are not impacted.	Urban land uses including Residential (including golf estates, rural residential, resorts), Business, Mining and Industrial; Infrastructure (roads, power lines, pipelines). More intensive agricultural processes than currently undertaken on site.

Category on the CBA Map	Description	Land Management Objective	Land Management Recommendations	Compatible Land Use	Incompatible Land Use
Ecological Support Areas (1)	Natural, near natural and degraded areas required to be maintained in an ecologically functional state to support Critical Biodiversity Areas.	Maintain ecological processes.	Implement appropriate zoning and land management guidelines to avoid impacting ecological processes. Avoid intensification of land use.	Conservation and associated activities. Extensive game farming and eco-tourism operations. Extensive Livestock Production. Urban Open Space Systems. Low density rural residential, smallholdings or resorts where development design and overall development densities allow maintenance of ecological functioning.	Urban land uses including Residential (including golf estates), Business, Mining and Industrial; Infrastructure (roads, power lines, pipelines). Intensive Animal Production (all types including dairy farming associated with confinement, imported foodstuffs, and improved/ irrigated pastures). Arable Agriculture (forestry, dry land and irrigated cropping). Note: Certain elements of these activities could be allowed subject to detailed impact assessment to ensure that developments were designed to maintain overall ecological functioning of ESAs.
Ecological Support Areas (2)	Areas with no natural habitat which retain potential importance for supporting ecological processes.	Avoid additional impacts on ecological processes.	Avoid intensification of land use, which may result in additional impact on ecological processes.	Existing activities (e.g. arable agriculture) should be maintained, but where possible a transition to less intensive land uses should be favoured.	Any land use or activity which results in additional impacts on ecological functioning, mostly associated with the intensification of land use in these areas (e.g. Change of floodplain from arable agriculture to an urban land use or from recreational fields and parks to urban).

Supplementary to the above, the Land Use Decision Support (LUDS) Tool developed by SANBI should be used to assist environmental practitioners in the SDM and the three local municipalities to make informed environmental decisions. The LUDS Tool extracts the most important biodiversity planning information for an area from national and regional spatial datasets, thereby facilitating local deliberations and decision-making processes when assessing the possible impacts of development or land-use changes.

The LUDS tool has been designed as a series of three steps, which use the BGIS website and its online maps. Each step links to background information and specific instructions as summarised in the info box below:

Sedibeng LUDS Tool
LUDS Step 1: Find the appropriate BGIS online map (LUDS map) for the municipality
<p>This step is done in the BGIS website's Municipal Biodiversity Information Index.</p> <ul style="list-style-type: none"> ■ Open the Municipal Biodiversity Information Index by clicking on the "Municipal" tab on the BGIS website. ■ Click on one of South Africa's nine provinces on the map. ■ Select a municipality by either clicking on the province map or selecting from the box below it. ■ Links which launches the appropriate BGIS online map for Land Use Decision Support (LUDS map) in your selected municipality may be found either under "Map Tools" in the left hand column or "Land Use Decision support" in the main text.

LUDS Step 2: Select an area for analysis

This step must be completed in LUDS map for the specific municipality selected in LUDS Step 1.

- Click on the "Land Use Decision Support (LUDS)" tab on the tool bar.
- Click on the "LUDS Tool" button to initialise the tool which will open in a left hand information pane of the map viewer.
- The tool guides user on how to zoom and pan to the area on the map he/she wishes to analyse.
- Using one of the analysis mark-up tools the user can then draw the analysis area on the map.

LUDS Step 3: Produce a LUDS report

This step is mostly automated and takes place as a continuation of LUDS Step 2 in the LUDS map:

- The map automatically zooms into the analysis area drawn.
- User will be asked to supply BGIS login email address and a few details about the envisaged development.
- System then analyses the analysis area against a set of pre-defined national and regional layers that coincide spatially with that location.
- The results of the analysis are then incorporated into a PDF file which on completion can be downloaded.
- User can create a map PDF by using the "Print map" tool.

ii) Institutional Arrangements

It is proposed that a proper Environmental Management Procedure/Unit be put in place within the Sedibeng District in order to ensure the long term efficient management of the environment. The activities of this unit need to

be coordinated and structured by way of the guidelines of an Environmental Management Plan compiled for the entire District to ensure that only appropriate land uses be allowed in accordance with the relevant biodiversity category as summarised in Table 19 in this report.

5.2.2 Principle 2: Enhanced spatial efficiency through a defined range of urban and rural nodes in the district around which to consolidate economic development and infrastructure investment (spatial targeting).

i) Nodal Hierarchy and Rationale

As noted under Principle 1 above the SLM area of jurisdiction comprises a wealth of environmental and cultural-historic resources which need to be protected as the foundation of the municipality's future economic well-being. In order to minimize the impact on these resources it is essential that human settlement and economic activities be consolidated around a number of strategically located nodal points within the district (**Figure 31.2**), thereby minimizing the urban footprint as far as possible.

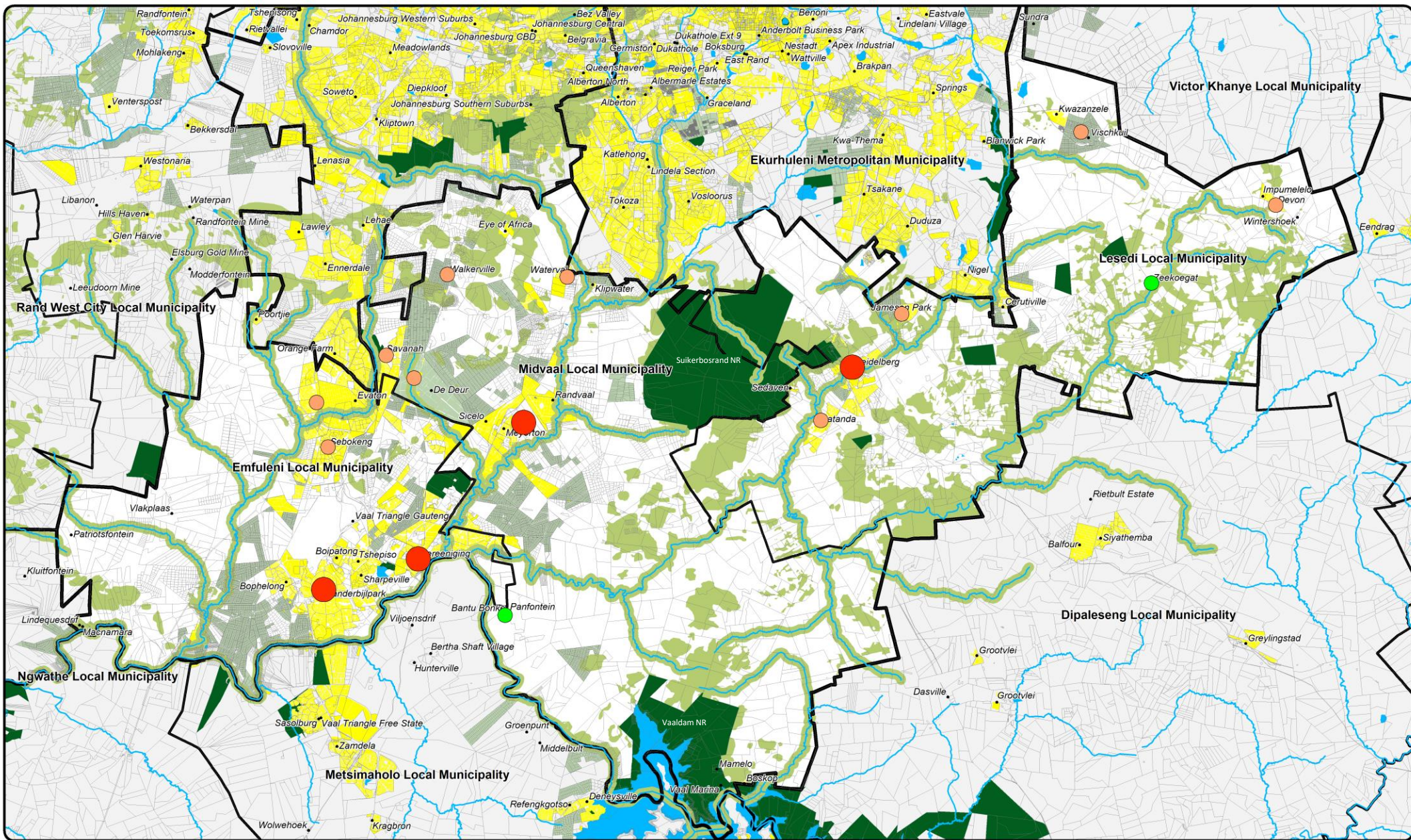
These nodal points should comprise a diverse range of urban land uses including housing, community facilities, economic activities (job opportunities), basic engineering services like water, sanitation and electricity, a comprehensive movement network and local open space system.

The size, function and associated range of land uses/ activities provided by the nodes would differ based on factors such as historic development, location, economic potential and environmental constraints.

The urban fabric within nodal points should generally be compact in order to facilitate social and economic integration; to promote efficient and sustainable service delivery; and to create the "critical mass" required to stimulate local economic development within walking distance from where people reside.

These nodal points need to be the focal points for social and economic investment (spatial targeting) by all spheres of government as well as the private sector in order to optimise the collective impact of spending at these points over an extended period of time. Consolidating the urban fabric around these nodal points should result in high density, mixed uses which not only enhance the viability of the public transport system, but also optimise the operational and financial efficiency of engineering and social infrastructure and services provided in these areas. Furthermore it significantly reduces travel costs/ distances within the urban area which is a major benefit to the poor.

Table 20 depicts the proposed hierarchy of Activity Nodes (Settlements) within the SLM area as spatially depicted on Figure 31.2.



SEDIBENG DISTRICT MUNICIPALITY SDF – PRINCIPLE 2: NODAL HIERARCHY

- Cadastral
- Urban Footprint
- Agricultural Holdings
- Nature Reserve
- Open Space System
- Dams/Rivers
- Primary Node
- Secondary Node
- Rural Node



Table 20: Sedibeng District Priority Nodal Hierarchy**Primary Nodes**

- Vereeniging
- Vanderbijlpark
- Meyerton
- Heidelberg

Secondary Nodes

- Sebokeng
- Evaton
- De Deur
- Walkerville
- Savannah City
- Waterval
- Ratanda
- Jameson Park
- Devon/ Impumelelo
- Kwazenzele/ Vischkuil

Rural Nodes

- Langzeekoegat
- Bantu Bonke

Vanderbijlpark, Vereeniging, Meyerton and Heidelberg towns fulfil the function of primary activity nodes, offering the highest order and widest range of goods and services to other towns and settlements as well as the rural parts of the District. These are also represented as nodes in provincial context in terms of the Gauteng SDF.

The secondary nodes are all in the process of development serving local/ surrounding communities. Some of these nodes are located at strategic

intersections e.g. Sebokeng and De Deur, while others represent activity nodes along development corridors e.g. Walkerville and the Waterval node.

Savannah City is a new emerging node along the broader N1 corridor in the southern parts of Gauteng while the Evaton node is proposed in order to stimulate some local economic activity in

A strategy should be developed to enhance the developmental role of small towns in rural economies, with a focus on economic viability, sustaining public services, skills development, the green agenda and connecting infrastructure. - NDP

this residential area and to provide a range of convenience goods and services to local residents.

The secondary nodes above, together with Vanderbijlpark, Vereeniging and Meyerton primary nodes, represent the master framework of a future urban conurbation to be established in line with the Sedibeng Vision.

The Ratanda and Jameson Park nodes in Lesedi LM are also intended to perform a similar function by functionally consolidating with Heidelberg (the primary node). Devon/ Impumelelo and Kwazenzele/ Vischkuil are the other two secondary nodes in the SDM.

The two rural nodes in the SDM include Bantu Bonke in the Midvaal LM area and Langzeekoegat in the Lesedi LM – both of which are classified as agri-villages.

Info Box: Spatial Targeting Towards Promoting Nodal Development

The development of a node takes place over time and is based on an incremental growth process guided by a number of strategic investments by various spheres of government within and around a strategically selected spatial point in order to stimulate local economic development activity. The ultimate goal is the **establishment of a sustainable activity node, comprising a number of community facilities and services, and which is supplemented by a range of economic activities located in close proximity.**

The key to the success of nodal development is rooted in the principle of focused and deliberate government investment spending to ensure that these areas develop to provide an extensive range of community facilities, and in the case of rural areas, becoming the spatial focal points of agriculturally driven LED interventions and land reform initiatives. By doing so lower order nodal points possess the inherent potential to act as spatial points within a larger space-economy around which the critical mass required to initiate formal and informal local economic development can occur.

A key benefit derived from nodal development is that it becomes more cost efficient to provide the full range of engineering services to these points (urban and rural) as these are utilised for a number of purposes including economic, social, as well as residential development. Thus, by being conducive to focused infrastructure spending, the collective benefits derived from investments made by various spheres of government far out-weigh the individual contributions made. Furthermore, the development of urban and rural nodes requires inter-governmental co-operation, which is seen as critical to promoting sustainable and integrated rural development.

5.2.3 Principle 3: Enhancement of four Strategic Development Corridors supplemented by an extensive local transport network providing linkages between urban and rural nodes.

The four corridors (N1, R59, N3 and N17) represent the most significant structuring element in the Sedibeng District, hence the emphasis on creating

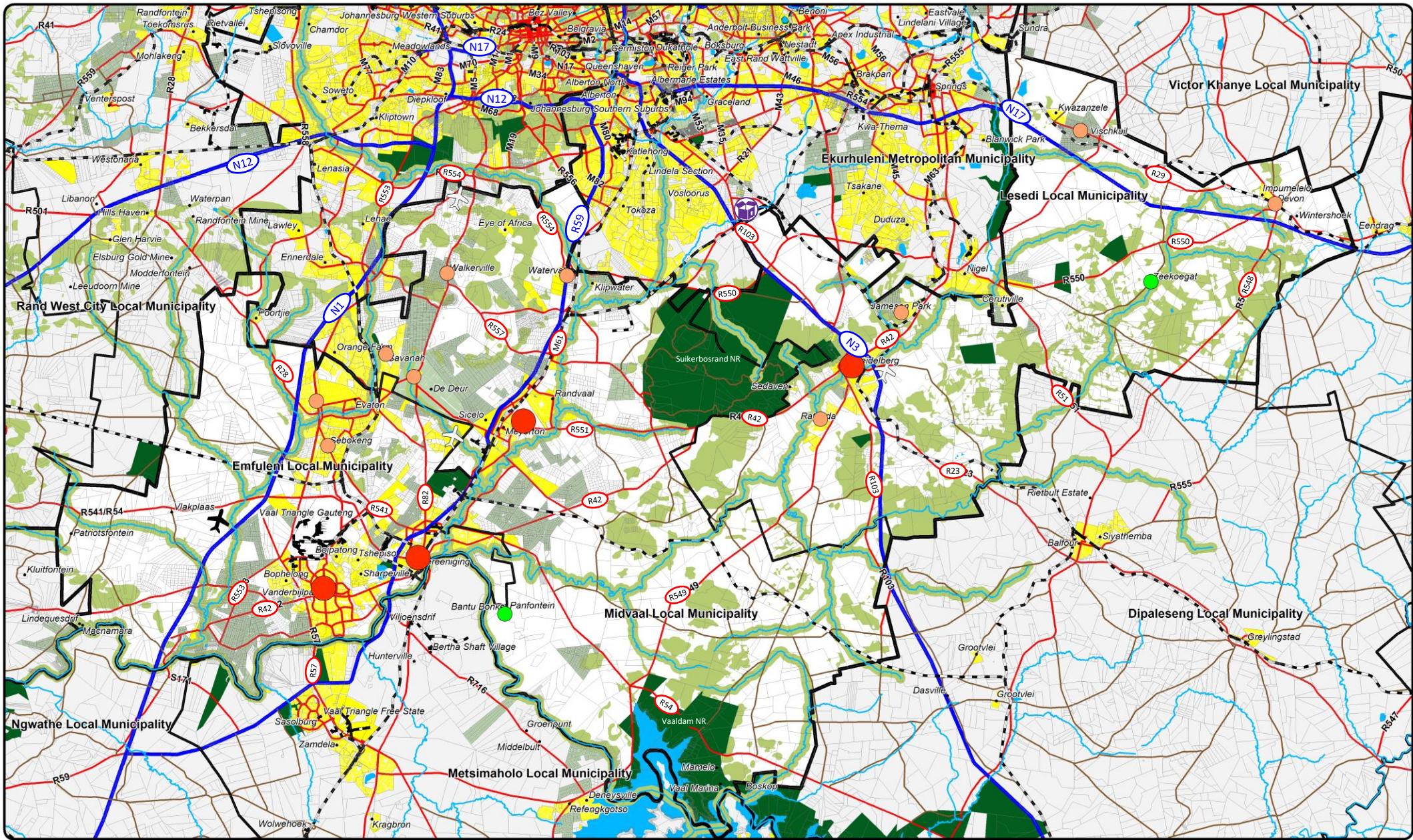
activity nodes and supporting transport infrastructure along/ around each of these.

As illustrated on **Figure 31.3** the main objective with the SDM transport network is to ensure that all the nodes in the district are linked to one another and to the surrounding regional economy via the four regional/ national corridors traversing the district.

Shifting settlement patterns should be investigated to align public investment in infrastructure and services with these trends, and to develop appropriate systems of land tenure and growth management. Special attention must be given to areas of densification along transport corridors. - NDP

Activities capitalising on the economic opportunities associated with these corridors should be encouraged to locate adjacent to the corridors. This could include intensive agriculture, agro-processing and hospitality uses. The significance of the railway lines in the District in terms of export opportunities to the Maputo, Richards Bay and Durban harbours should also be promoted.

This network also forms the basis of the public transport network in the district and in principle all nodal points should be provided with modal transfer facilities to facilitate movement of commuters in all parts of the SDM.



SEDIBENG DISTRICT MUNICIPALITY SDF – PRINCIPLE 3: TRANSPORT NETWORK

- | | | | |
|-----------------------|---------------------------|------------------|------------------------------------|
| Cadastral | Dams | National Roads | Airfield |
| Urban Footprint | Strategic River Crossings | Main Roads | Proposed Tambo Springs Freight Hub |
| Agricultural Holdings | Primary Node | Other Roads | Railways |
| Nature Reserve | Secondary Node | Proposed Airport | |
| Open Space System | Rural Node | | |



The details of the movement network as depicted on Figure 31.3 are briefly summarised as follow:

- The N1 Corridor, N3 Corridor, N17 Corridor and the R59 Corridor hold significant opportunities, in terms of local and regional economic spin-offs for the Sedibeng District area. Development of economic activities should be deliberately directed towards these corridors.
- Route R553, together with the Vereeniging-Joburg commuter railway line, supports land uses along the N1 corridor and extends from Bophelong in the south up to Soweto and Joburg CBD to the north.
- Route R82 opens up development opportunities in the hinterland between route N1 and R59 and supports development at Walkerville, Savannah City, De Deur, Sonland Park and right up to Vereeniging CBD (all part of the envisaged Sedibeng urban conurbation).
- Route R554/ M61, together with the Vereeniging-Germiston commuter railway line, serve the land uses along the R59 corridor.
- Route R103/ R23, together with the Joburg-Durban railway line, supplement the N3 corridor past Heidelberg.
- Route R29, together with the Joburg-Richards Bay railway line, provide regional access to Kwazenzele and Devon/ Impumelelo along the N17 corridor.

Important routes linking the four radial corridors traversing the SDM include the following (refer to **Figure 31.4**):

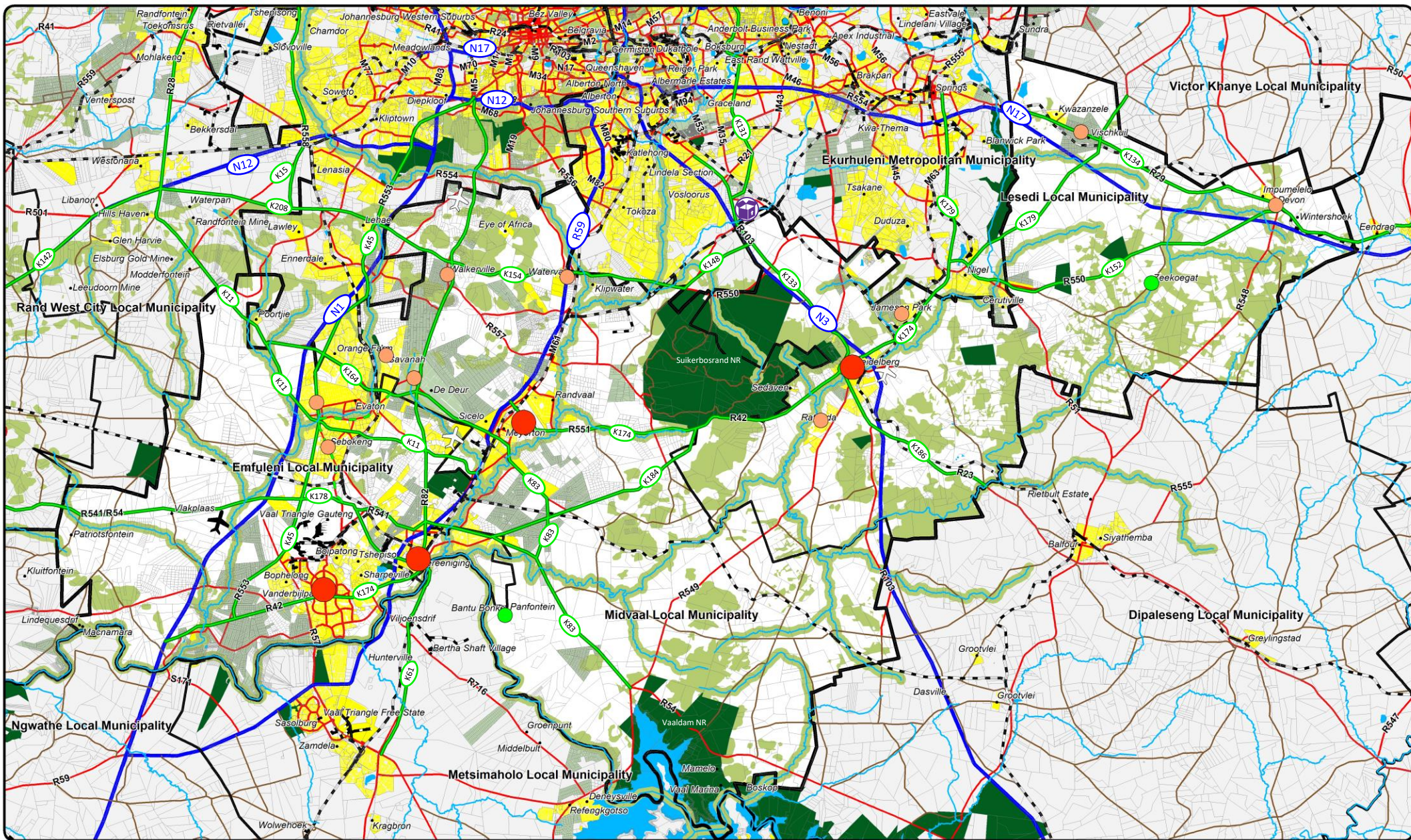
- Future route K154/ K208 which will provide a link from Westonaria through Walkerville and the Waterval Node eastwards from where it

could link up with the proposed Tambo Springs Freight Hub via K133, and then K131 (Rondebult Road) towards OR Tambo Airport.

- Route K164 which could act as a functional extension of existing route R28/ K11 between Evaton, Orange Farm and Savannah City towards De Deur and up to Meyerton CBD along the R59 corridor.
- Route K11 linking Evaton/ Sebokeng to Meydustria along the R59 corridor and which would “open up” the central Aeroval area for development.
- K178 linking the proposed Sedibeng Airport and future logistics hub to the main industrial areas in Vereeniging and from there along route K184 towards Heidelberg.
- K174 linking N1, Vanderbijlpark CBD and Vereeniging CBD to one another and to the R59 corridor.
- K174 extending eastwards from Meyerton towards Heidelberg/ N3, and from there north-eastwards to link up with Springs (via K179), Kwazenzele-Vischkuil (via K179) and Devon-Impumelelo (via K152).

Rail Network: The eastern railway network as depicted on **Figure 31.5a** is mainly used for freight and long distance commuting services, but it is important to note that there are railway stations at all the major nodes in the area (Heidelberg, Kaydale, Jameson Park, Devon and Endicott/ Vischkuil) which could be utilised more optimally.

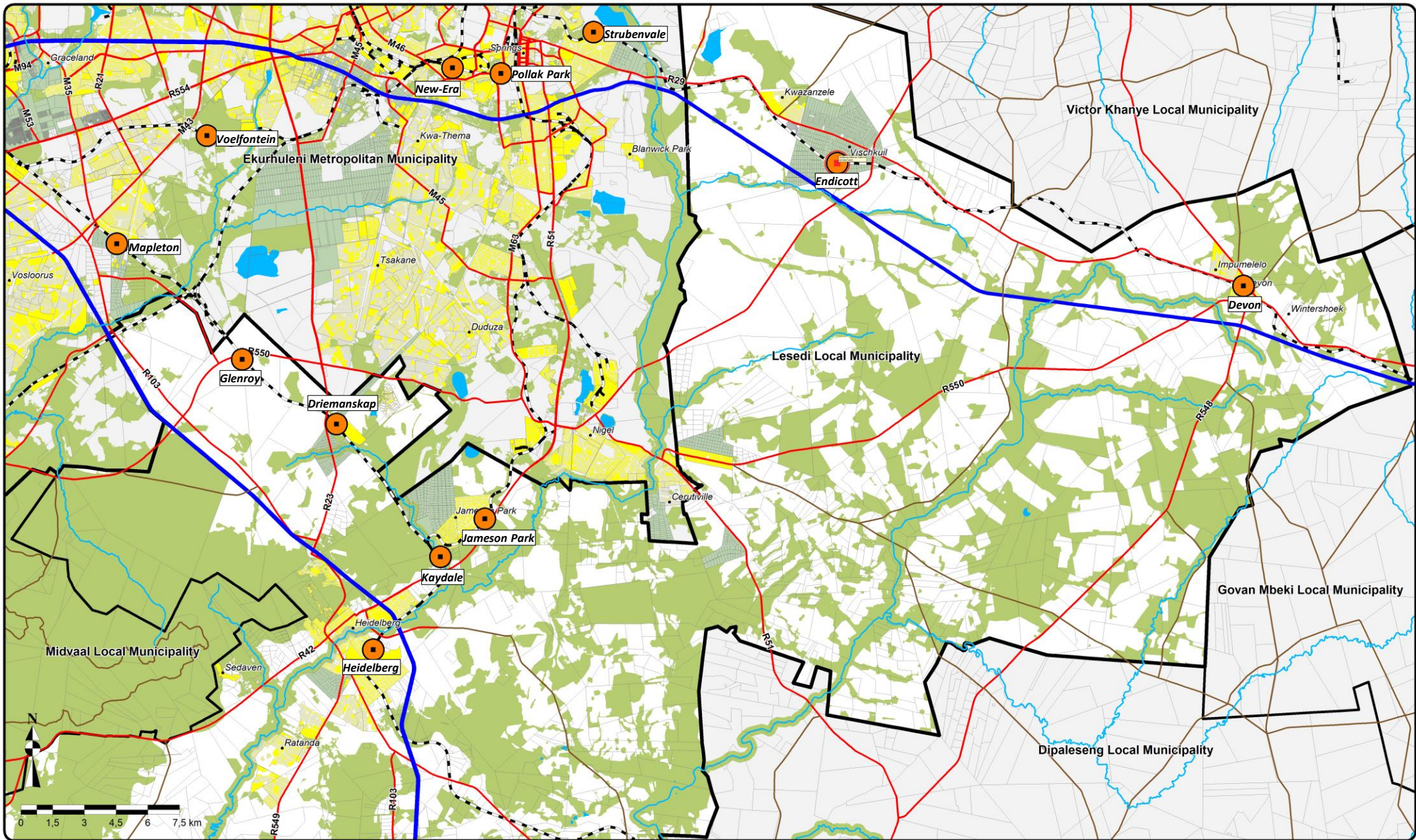
The Vereeniging-Joburg Rail Corridor as depicted on **Figure 31.5b** comprise about eight railway stations between Vereeniging and Stretford which serves several future Priority Housing Development Areas. The



SEDIBENG DISTRICT MUNICIPALITY SDF – PRIORITY STRATEGIC ROAD NETWORK

- | | | | |
|-----------------------|----------------|---------------------------------|------------------------------------|
| Cadastral | Dams | National Roads | Proposed Airport |
| Urban Footprint | Primary Node | Main Roads | Airfield |
| Agricultural Holdings | Secondary Node | Other Roads | Proposed Tambo Springs Freight Hub |
| Nature Reserve | Rural Node | Priority Strategic Road Network | |
| Open Space System | | Railways | |

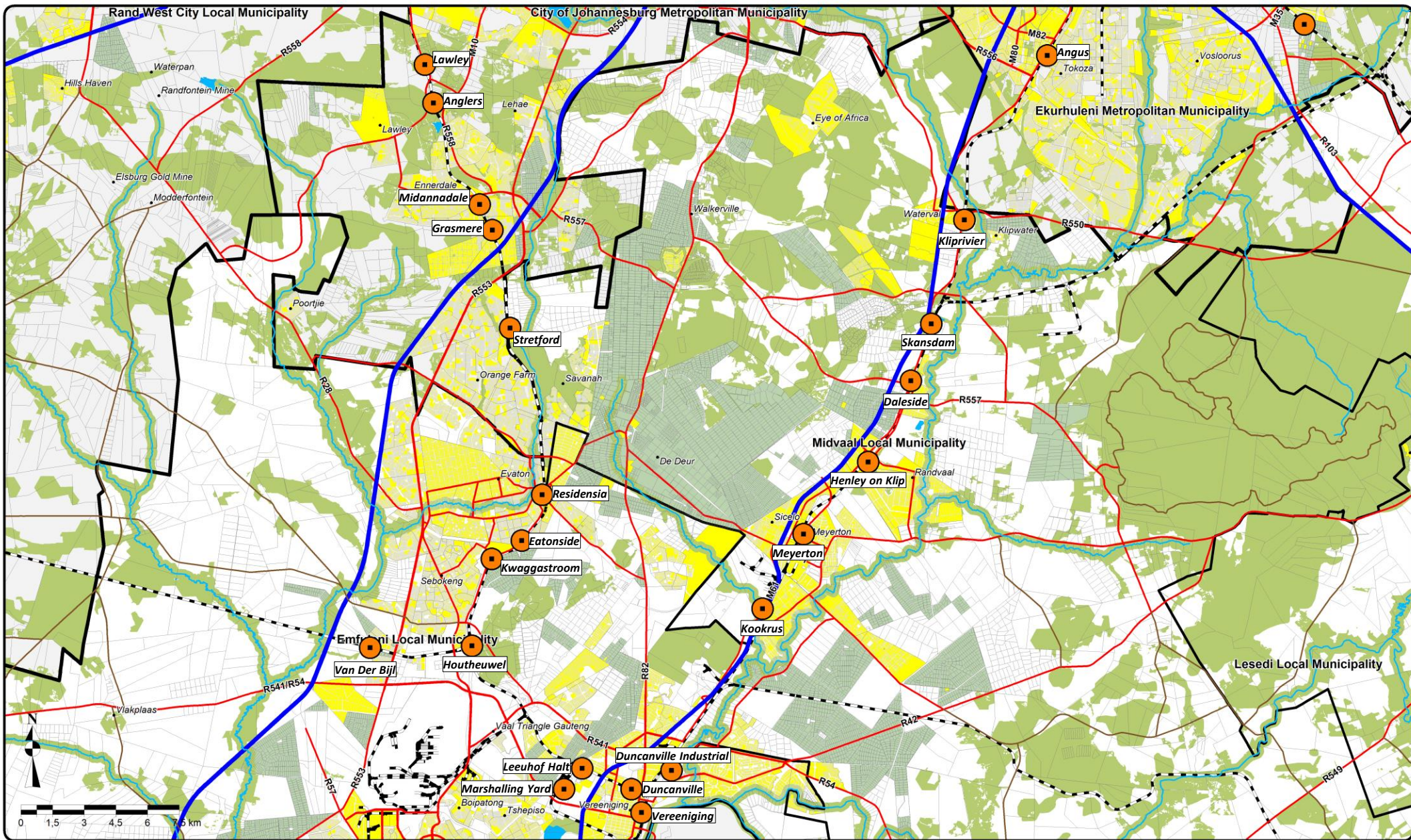




SEDIBENG DISTRICT MUNICIPALITY SDF – RAIL NETWORK (EAST)

- | | | |
|---------------------------------------|-----------------|----------------|
| Cadastral | Railway Station | National Roads |
| Urban Footprint | 500m Radius | Main Roads |
| Agricultural Holdings | | Other Roads |
| Protected Areas/Ridges/
Open Space | | Railways |





SEDIBENG DISTRICT MUNICIPALITY SDF – RAIL NETWORK (WEST)

- | | | |
|---------------------------------------|-----------------|----------------|
| Cadastral | Railway Station | National Roads |
| Urban Footprint | 500m Radius | Main Roads |
| Agricultural Holdings | | Other Roads |
| Protected Areas/Ridges/
Open Space | | Railways |



Vereeniging-Alberton railway line has seven railway stations between Vereeniging and Kliprivier. Future urban development should be consolidated around these railway stations by way of Transit Orientated Development.

Info Box

Transit Oriented Development (TOD) is defined as a unique mix of land uses located at a high density within a predetermined walking radius of a railway station. TODs are purposely designed to facilitate access to the railway stations and so increase the use of the public transportation systems. Thereby land use and transportation integration can be achieved. TOD programmes seek to create high-quality living and working environments, to improve station access, to implement local land use plans, and to increase tax revenue. It also offers the possibility of enhanced utilisation volume, particularly during off-peak and to reverse-flow riders.

The intention is to develop high density, mixed use areas around the existing/ proposed railway stations along the Sedibeng District commuter rail network and to incorporate the concept of Multi Purpose Community Centres (Social Services), residential (including subsidised housing) development, as well as commercial, retail and even light industrial uses in these developments. The number of people residing within or in close proximity to these TOD's will then create a "critical mass" to sustain the economic and social activities within the area, and will thus promote Local Economic Development (LED).

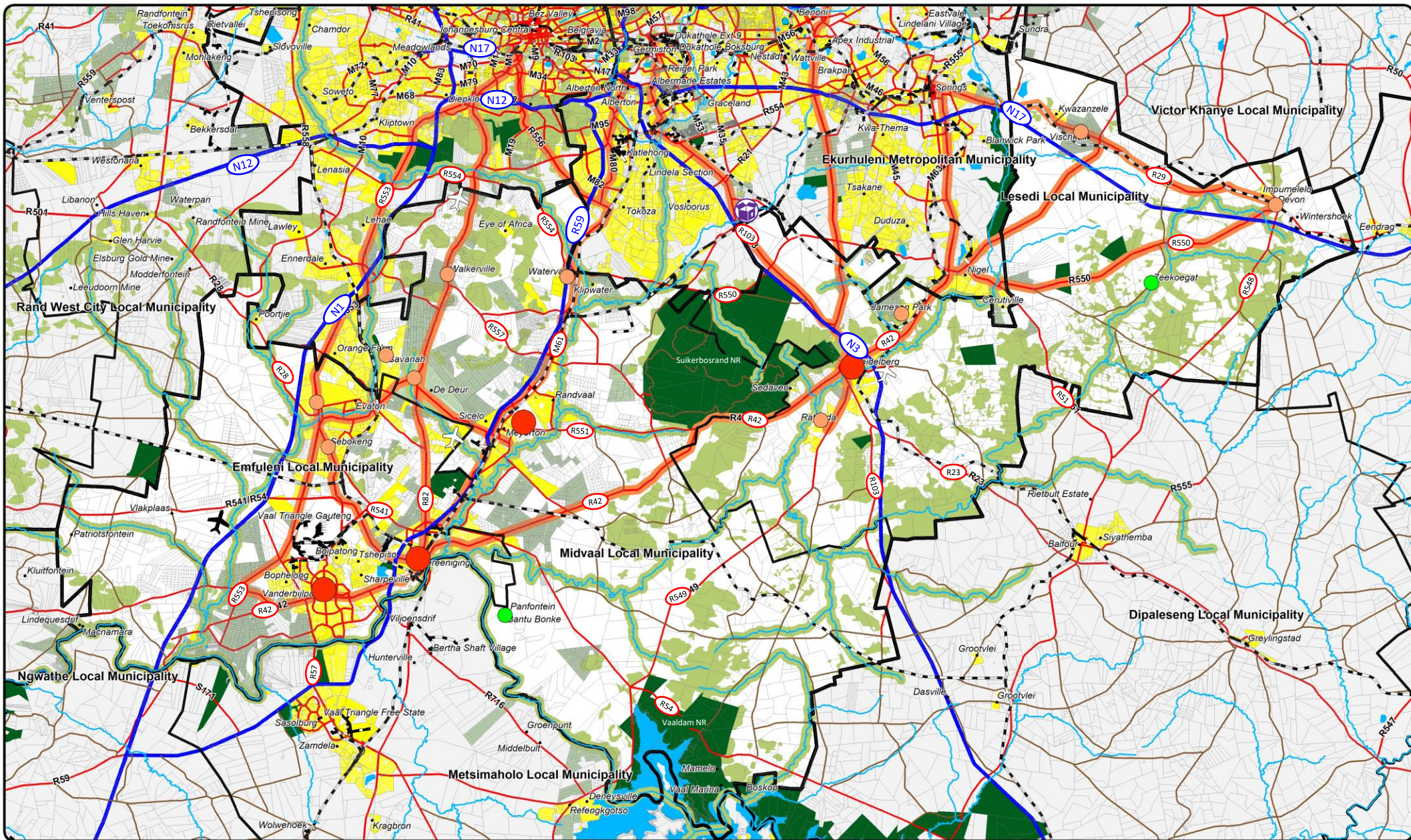
If successfully implemented, this concept could dramatically change the face of human settlements in the Sedibeng District, and enhance the long term social and economic sustainability of these areas significantly as it will lead to the following:

- Improved safety in terms of daily commuting;
- Shorter travelling times and thus better quality of life;
- Increased productivity due to shorter travelling times;
- Urban restructuring and urban renewal;
- Improved service delivery, both in terms of social and engineering services;
- Local economic development and job creation.

Importantly, government (national, provincial and local) and parastatal owned land could be used as a growth management tool, because it presents Council with opportunities to implement strategic and catalytic projects. It is thus vital that the identification of such land pockets by prioritised, and that a Plan of Action be tabled for each.

Public Transport: The priority district public transport network comprise all the commuter railway lines and stations highlighted above as well as the road network indicated on **Figure 31.6** which includes the following main links between the nodes in the central urban conurbation:

- R553 (Golden Highway) from Bophelong past Sebokeng and Evaton towards Joburg.



SEDIBENG DISTRICT MUNICIPALITY SDF – PRINCIPLE 3: PRIORITY PUBLIC TRANSPORT NETWORK

- | | | | |
|-----------------------|---------------------------|-----------------------------------|------------------------------------|
| Cadastral | Dams | National Roads | Proposed Airport |
| Urban Footprint | Strategic River Crossings | Main Roads | Airfield |
| Agricultural Holdings | Primary Node | Other Roads | Proposed Tambo Springs Freight Hub |
| Nature Reserve | Secondary Node | Priority Public Transport Network | |
| Open Space System | Rural Node | Railways | |



- R82 from Vereeniging to De Deur, Savannah City and Walkerville towards Joburg.
- M61 from Meyerton northwards up to Waterval and further towards Alberton and Germiston.
- R551 east-west link between Evaton, Sebokeng, De Deur and Meyerton.
- R541 from Vereeniging to Sebokeng.
- R42 between Bophelong, Vanderbijlpark, Vereeniging and towards Heidelberg and Springs.
- R549 between Ratanda and Heidelberg.
- R103 and Snake Road towards Alberton and Benoni-Brakpan respectively.
- Routes R550, and R29 between Heidelberg, Devon and Kwazenzele.

These routes must accommodate buses and taxis in a safe manner, providing lay-byes, parking bays and even separate lanes where possible and/or necessary, together with sheltered pick-up and drop-off points. In this manner, movement between nodal points is facilitated, and the Priority Transport Network strengthened.

A public transport facility should include at least a formal taxi rank with canopies and ablution facilities and must accommodate taxi, bus, and metered taxi vehicles. An informal trade area may be added as the 'feet' increase, and should be catered for in the design. The facilities must be convenient (paved surfaces, signage) and safe (lighting, bins).

Air: The only significant airfields in the region are located at Vereeniging, Tedderfield, Bophelong and at Heidelberg and it is recommended that, as part of strengthening external linkages, more support be given to the enhancement of the regional function/ status of these small airfields.

In line with the proposal contained in the Emfuleni SDF it is recommended that a new Sedibeng Airport be planned/developed to the west of route N1 in the vicinity of the N1-K178 intersection close to the proposed new logistics hub and the Arcelor Mittal Steel plant.

5.2.4 Principle 4: Consolidation of the urban structure of the District around the nodal points by way of infill development and densification in identified Priority Housing Development Areas (PHDAs).

i) Locational Considerations

Development Principles 1 to 3 defined the proposed future SDM spatial structure and approach towards nodal and corridor development in the District at regional scale.

Prevent further state support for housing in poorly located areas and prioritise development in inner cities and around transport hubs, corridors and economic nodes. – NDP

It is, however, important that the District also focuses on development patterns at local level in order to ensure urban restructuring in the various

towns and settlements within the District as contemplated in the Norms and Principles of SPLUMA.

Each of the towns within the District still carries the spatial legacy of the previous political dispensation, with various communities being segregated from one another and denied efficient access to economic opportunities and social services. In view of the above, local authorities within the Sedibeng District need to ensure that the spatial imbalances of the past are corrected and that people are located closer to places of work and economic opportunities.

It is thus essential that each of the towns and settlements within the District be developed in a manner aimed at consolidating the urban form, limiting further expansion by way of the introduction of an urban edge/urban development boundary, and by so doing correcting the development patterns of the past.

Shift housing funding away from building single houses to supporting the development of a wide variety of housing types with different tenure arrangements (including affordable rental and social housing).

All the Municipal Spatial Development Frameworks in the SDM support this principle, but it is important that development is in line with these guidelines. It is furthermore advised that land acquisition processes target land located within the respective Priority Housing Development Areas.

Housing, and more specifically subsidised housing, is a very powerful instrument at the disposal of government to influence development patterns in and around towns, and to give effect to the spatial restructuring objectives of municipalities.

Encourage housing development as part of a mix of activities and land-use types.

It is critically important that these housing units be developed strictly in accordance with the spatial guidelines provided in the local SDF's, and more specifically in the Priority Housing Development Areas identified on these plans as these areas comply with the development principles contained in SPLUMA.

Strengthen the link between public transportation and land use management with the introduction of incentives and regulations to support compact mixed-use development within walking distance of transit stops and prioritise higher density housing along transit routes. - NDP

ii) Sustainable Human Settlements

In order to enhance the overall sustainability of human settlements within the SDM, each township should be developed in accordance with Smart Growth Principles as summarised below:

SMART GROWTH PRINCIPLES

- Provide for a mix of different kinds of land uses, e.g. residential, retail, business, and recreational opportunities.
- Create well-designed, compact neighbourhoods where the different activities are in close proximity to each other.
- Provide a variety of transportation choices, including private, public and non-motorised transport opportunities that are safe.
- Create a variety of housing opportunities, i.e. in terms of function, form and affordability.
- Encourage growth in existing communities through infrastructure upgrade, urban renewal, new amenities and densification.
- Preserve open spaces, natural beauty, and environmentally sensitive areas.
- Protect and enhance agricultural lands and secure these as a productive land base for food security, employment, etc.
- Utilise smarter and cheaper infrastructure and green buildings and promote renewable and sustainable technologies.
- Foster a unique neighbourhood identity building on the unique and diverse characteristics of each community.
- Nature engaged citizens through residential, work, and play areas.
- Engaged citizens to participate in community life and decision-making.

iii) Priority Housing Programmes

Furthermore, and in line with the guidelines provided in the Sedibeng Sustainable Human Settlement Plan, the following housing programmes should be favoured in the Priority Housing Development Areas located in the urban and rural parts of the District respectively:

a) Urban Areas

- **Land Acquisition** with a focus on acquiring land located within Priority Housing Development Areas;

- **IRDP** projects on land suitable for mixed income development, including GAP market housing and rental stock;
 - **Upgrading of Informal Settlements** in areas where the location of an existing informal settlement complies with the principles of spatial justice, sustainability and efficiency and/or these settlements are located within the existing urban footprint or an identified Priority Housing Development Area;
 - **Social Housing and Community Residential Units** close to economic activity areas like commercial areas or Central Business Districts, or in areas earmarked for urban renewal;
 - **Inclusionary Housing** projects driven by the private sector and which comprises both bonded and subsidised housing, and which caters for full ownership and rental stock.
- #### b) Rural Areas
- **Upgrading of Informal Settlements, IRDP, Farm Worker Housing Assistance and Peoples Housing Programmes (PHP)** within the rural fabric in the Rural Intervention Areas in the District with emphasis on areas closest to rural nodes in order to add to the “critical mass” required to sustain economic activity in these areas.

iv) Priority Housing Development Areas

Figure 31.7 depicts the spatial distribution and extent of the existing Priority Housing Priority Housing Development Areas identified by each of the three local municipalities in the SDM. Table 21 also depicts the list of projects identified for these areas with the numbers allocated to the projects referring to the location of the projects as depicted on Figure 31.7. It is evident from Table 21 that the land identified is sufficient to develop about 79 317 houses. There is thus no reason for housing projects to be developed on poorly located land which perpetuate the Apartheid patterns of human settlement in the SDM. Subsequently, these Priority Housing Development Areas are incorporated into the Sedibeng SDF as illustrated.

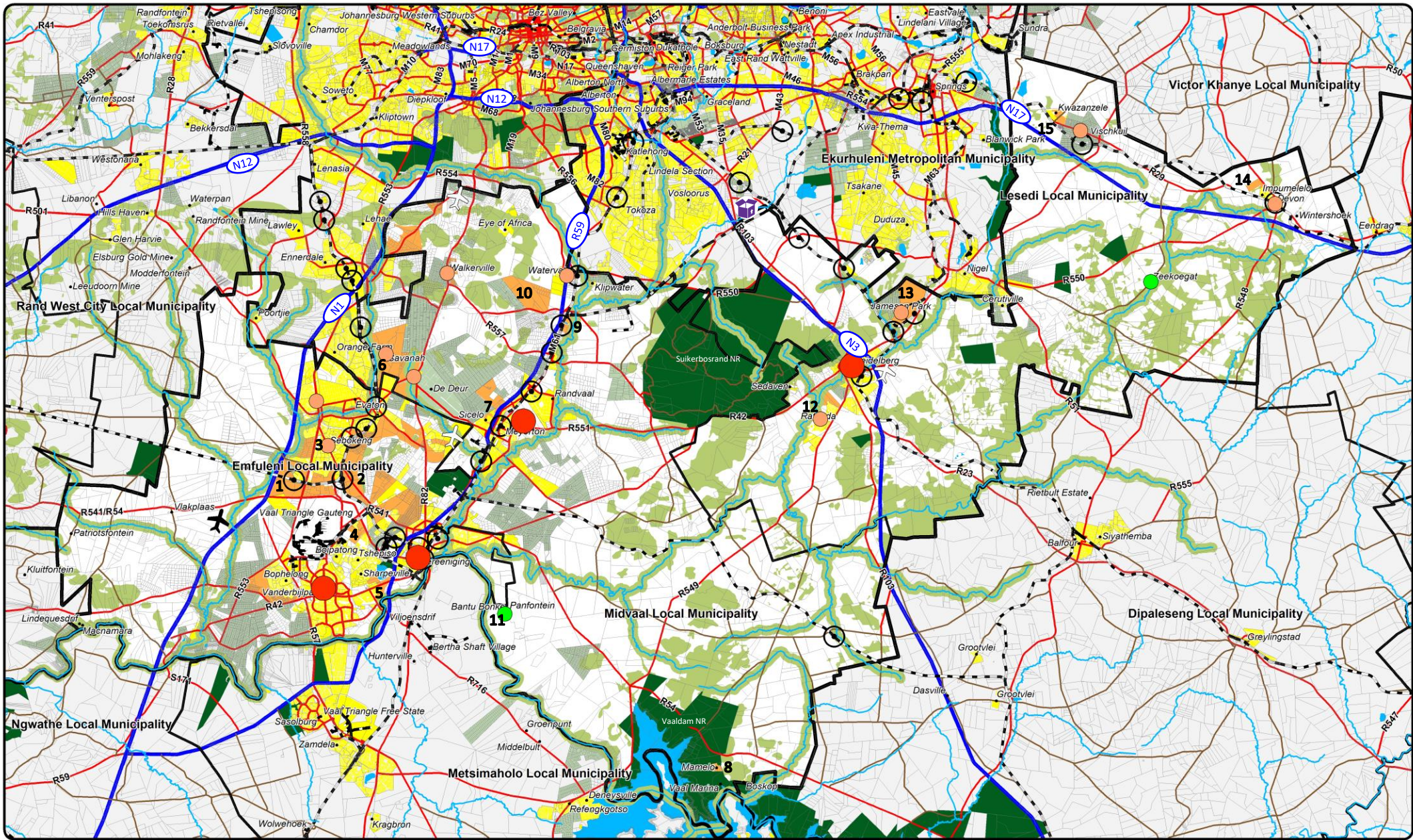
- *Incentivise new private housing developments to include a proportion of affordable housing.*
- *Support the growth of housing in the gap market by addressing obstacles in supply (lack of serviced land and delays in regulatory approval) and demand (provision of affordable loans by financial institutions).- NDP*

Table 21: Sedibeng DM: Priority Housing Development Areas

Nr	Name	Location	Area (ha)	Number of Units
Emfuleni LM				
1	Cyferpan	Sebokeng		2,000
1	Golden Gardens	Sebokeng		4,161
1	Johandeo Phase 2	Sebokeng		14,500
1	Westside Park	Sebokeng		1,462
2	Lethabong	Sebokeng		341
2	Lethabong Ext 1	Sebokeng		2,390
2	Lethabong Ext 2	Sebokeng		2,885
3	Sebokeng Ext 28	Sebokeng		4,010
3	Sebokeng Ext 30,31,32	Sebokeng		3,136
4	Powerville Ext 4	Sharpville		189
4	Powerville Ext 5 & 6	Sharpville		856
4	Sharpville Ext 2	Sharpville		n.a.
4	Tsipeso Ext 4,5 & 6	Sharpville		2,528
5	Vaal River City	Vereeniging		n.a.
	Subtotal Emfuleni LM			38,458
Midvaal LM				
6	Savannah City	Midvaal West		5,517
6	Savannah Res 3	Midvaal West		2,635
7	Sicelo Two Blocks	Midvaal Central		842
7	Sicelo Erf 78	Midvaal Central		660
7	Sicelo Erf 72	Midvaal Central		700
7	Sicelo Erf 56	Midvaal Central		700
7	Sicelo Erf 188	Midvaal Central		338
7	Sicelo Erf 175	Midvaal Central		204
7	Sicelo Langkuil	Midvaal Central		9,732
8	Mamello Phase 1	Midvaal South		565
8	Mamello Phase 2	Midvaal South		271
8	Mamello Phase 3	Midvaal South		156
9	Skansdam	Midvaal Central		3,500
10	The Grace	Midvaal Central		850
11	Panfontein Agri Village	Midvaal South		500
	Subtotal Midvaal LM			27,169
Lesedi LM				
12	Obed Nkosi	Heidelberg		6,000
13	Kaydale /Jameson Park	Jameson Park		2,290
14	Impumelelo Phase 3	Devon		1,000
14	Impumelelo Phase 4	Devon		2,400
15	Kwazenzele Phase 2	Vischkuil		2,000
	Subtotal Midvaal LM			13,690
	Total Sedibeng DM			79,317

Source: Emfuleni LM SDF 2017-2025, Urban Dynamics Gauteng, September 2017
 Participatory Based Planning Support for 36 Informal Settlements in Midvaal, Plan Associates, November 2018
 Lesedi LM SDF, Black Balance, January 2016





SEDIBENG DISTRICT MUNICIPALITY SDF – PRIORITY HOUSING DEVELOPMENT AREAS

- | | | | |
|-----------------------|------------------------------------|---------------------------------|------------------------------------|
| Cadastral | Dams | National Roads | Proposed Airport |
| Urban Footprint | Priority Housing Development Areas | Main Roads | Airfield |
| Agricultural Holdings | | Other Roads | Proposed Tambo Springs Freight Hub |
| Nature Reserve | | Railways | |
| Open Space System | | Railway Station with 1km radius | |



From Figure 31.7 it is evident the bulk of the land identified for residential purposes is located along the N1 corridor area, including areas around Bophelong (no projects yet); Sebokeng (numbers 1, 2 and 3); Boipatong and Sharpeville (numbers 4 and 5); Savannah City (mixed income) (number 6); and De Deur and Elandsfontein to the far-north which have been earmarked for future development but no projects identified as yet.

Along the R59 corridor the main areas identified are around Sicelo (number 7); Skansdam (number 9); and The Grace (mixed income) near Waterfal (number 10).

Further to the south along route R82 in Vereeniging are some areas (Sonland Park and Unitas Park) earmarked for middle to high income development. From the above it is evident that large parts of the envisaged urban conurbation between the N1 and R59 corridors have already been developed and/ or are earmarked for development over the next few decades.

Mamello (number 8) forms part of the development cluster around the Vaal Dam while Obed Nkosi (number 12) represents large infill development between Ratanda and Heidelberg. Jameson Park (number 13) also contributes towards residential consolidation around Heidelberg while Impumelelo (number 14) and Kwazenzele (number 15) are intended to strengthen the two secondary nodes along the N17 corridor.

In conclusion, all large scale human settlement projects in the SDM area should be located in the Priority Housing Development Areas as part of an endeavour to consolidate the municipal urban fabric at identified nodes. This approach also provides strategic direction in terms of priority areas for the expansion of engineering services and provision of community facilities over the next few decades.

5.2.5 Principle 5: Consolidate community facilities at urban and rural nodal points to enhance “one-stop” access to such facilities for the community, and to contribute towards creating “critical mass” required to stimulate local economic development.

The fragmented settlement structure of the Sedibeng District has resulted in both a lack of, and the need for costly duplication of essential social services/ community facilities and engineering infrastructure. In principle, the objective is to provide a full range of social services/ community facilities within a reasonable distance of all communities (urban and rural) in the Municipality. These services need to be consolidated/ clustered together in precincts/ buildings (Thusong Centres) for maximum efficiency as there are spin-off benefits to be derived from such consolidation such as enhanced access to services; increased economic potential (“critical mass”) in surrounding areas; and greater sense of “community identity” around such centres.

It is thus proposed that a full range of social services/ community facilities be incrementally provided at all identified nodal points in the SDM as depicted on Figure 31.2. The level of services provided needs to be in line with the proposed nodal hierarchy (i.e. higher order community facilities like hospitals, magistrates courts, tertiary education facilities etc. located at the four primary nodes: Vereeniging, Vanderbijlpark, Meyerton and Heidelberg.

Public funding should therefore be directed towards the development of public infrastructure and public spaces that would significantly improve the quality of life of poor communities who cannot afford private amenities. - NDP

Lower order facilities like primary schools, clinics etc. should be provided more extensively in all neighbourhoods – preferably in close proximity to neighbourhood business nodes. In this manner, all communities in the District will be served with at least a basic range of social infrastructure in a Thusong Centre format within a convenient/reasonable distance from surrounding places of residence.

Public works programmes should be tailored to community building and local needs in at least four broad areas: a) the economy of social care, b) green infrastructure, c) cultural services, and d) public facilities such as schools, clinics, roads, parks, community centres and libraries. - NDP

In the two rural nodes some of the facilities could even be in the form of mobile services e.g. clinic, library etc.

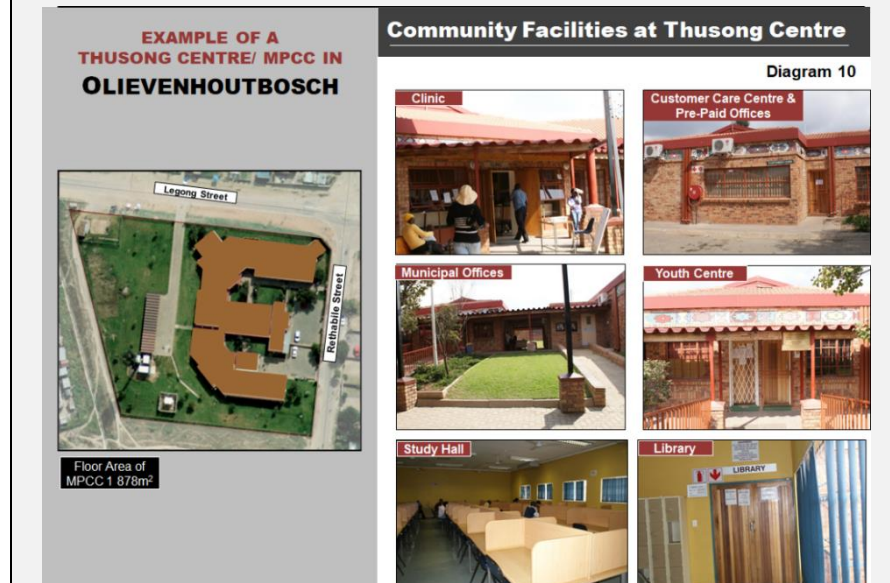
The establishment of such one-stop service centres in the SDM area holds the following advantages:

- Provides a one stop comprehensive service to members from surrounding communities which are in many cases very poor and cannot afford multiple trips.
- It promotes nodal development which is conducive to targeted infrastructure spending, local economic development and corridor development.
- Consolidates human settlement around nodal points and protect valuable agricultural land from urbanisation pressures.
- Provides guidance for the development and provision of engineering services.
- Indicates where to provide tarred road infrastructure and multi-modal transport facilities.
- Basic services are provided by government in a financially sustainable manner.
- Provides a platform for entrepreneurship and small business development (LED).
- Provides government with a platform from which to develop ICT in rural areas, as well as rural energy centres.
- Supports the rural nodal concept as contained in the Comprehensive Rural Development Plan and the National Development Plan.

INFORMATION BOX: INCREMENTAL DEVELOPMENT OF A THUSONG CENTRE/ MPCC

Essentially, a Thusong Centre is “a focal point at which a comprehensive range of essential services can be obtained by people living in its vicinity”. The key to the success of Thusong Centre development is rooted in the principle of focused and deliberate government investment spending within and around a strategically selected spatial point, to ensure that these centres develop to provide an extensive range of community facilities. Such points are typically major intersections, and/or consolidated with existing cluster(s) of business activity and social services. A good example of a Thusong Centre/ MPCC in Olievenhoutbosch is depicted on **Diagram 11**.

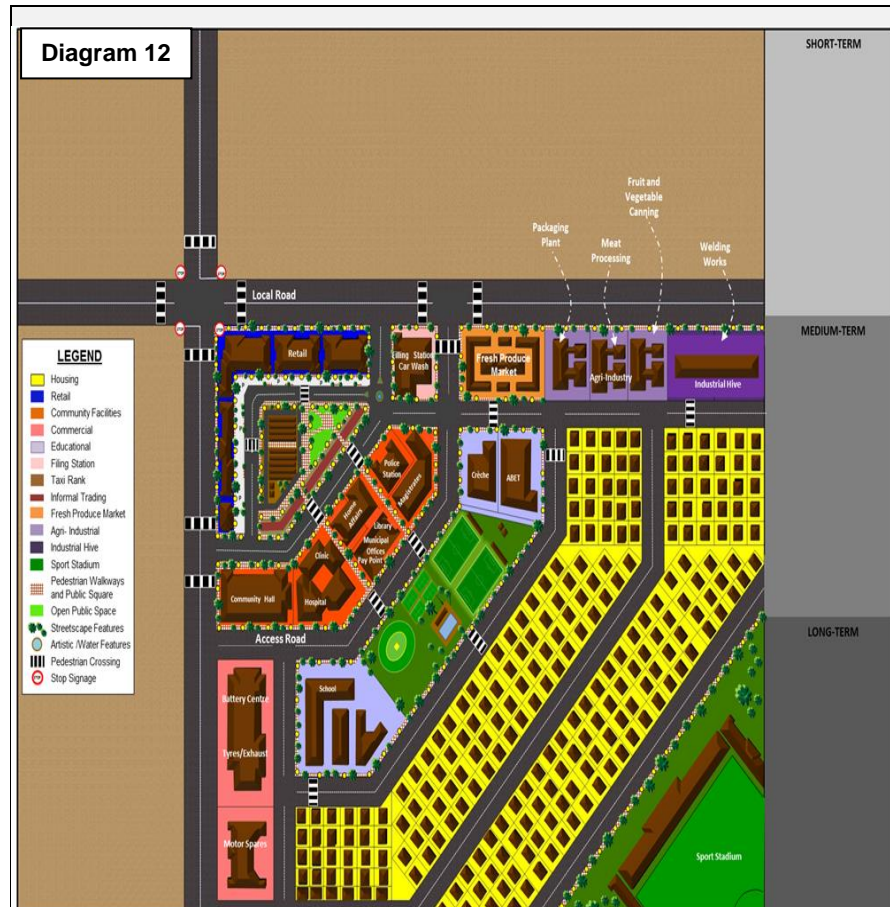
Diagram 11: Example of a Thusong Centre/ MPCC in Olievenhoutbosch



The development of a Thusong Centre takes place over time and is based on an incremental growth process guided and stimulated by a number of strategic investments by various spheres of government (i.e. public investment). This process is, however, not limited to a single building as noted in the example above, but can also relate to the incremental development of a broader precinct (refer to **Diagram 12**).

Very briefly, the first step in the physical development of a Thusong Centre could be the establishment of a community hall which is utilised for a variety of functions, including serving as a SASSA pay-out point by the end of the month; accommodating the mobile clinic once a week; serving as an ABET centre during certain times of the week; etc. Because of the concentration of people at the community hall during the week, a formal/informal public transport facility may establish which, in turn, attracts informal trade.

As the Thusong Centre develops, a greater variety of more permanent community facilities may be added by various spheres of government, including a clinic, post office, and police station.



With the increased intensity of activity and visitors at the precinct, the initial informal trade at the public transport facility can transform into some formal retail activities. Low and medium density residential development should be developed in close proximity around the node which not only enhances the viability of existing community facilities, but also strengthens

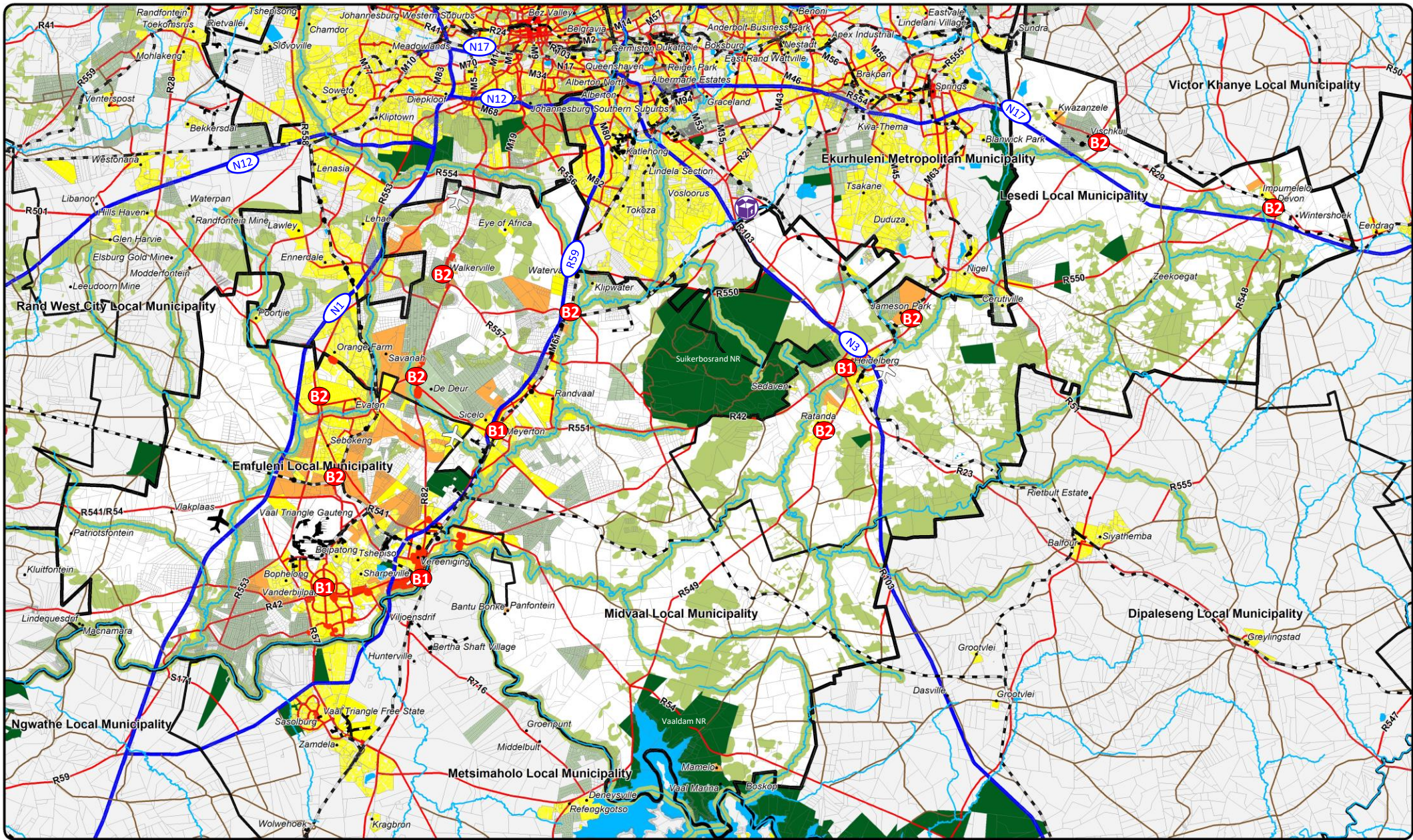
the capacity for local economic development as the “critical mass” in the precinct increases.

Associated with the residential development follows the establishment of educational facilities like a crèche, primary school and sports fields. Over a period of time the node expands incrementally, and as more functions and associated residential activities are added, it may eventually also accommodate specialised services like adult education (FET colleges and ABET centres), some commercial activities like hardware stores and even light service industries.

5.2.7 Principle 6: Enhance business activities (formal and informal) at each of the identified nodal points in the Sedibeng District and incorporate informal/ emerging business activities into Thusong Centres and modal transfer facilities.

Figure 31.8 depicts the proposed two tier Business Node Hierarchy for SDM. It comprises the Central Business District (B1) of Vereeniging, Vanderbijlpark, Meyerton and Heidelberg and the lower order Regional Business Nodes (B2) which are intended to serve the second order activity nodes in the district and surrounding rural communities. Business nodes play an important role in serving the retail and office needs of communities, but also represent significant opportunities for economic development and job creation to the informal sector in the District.

These areas should be treated as special precincts requiring dedicated management in order to prevent urban decay and/or the excessive relocation of economic activities to decentralised business nodes.



SEDIBENG DISTRICT MUNICIPALITY SDF – BUSINESS

- | | | | |
|-----------------------|------------------------------------|-----------------|------------------------------------|
| Cadastral | Dams | National Roads | Proposed Airport |
| Urban Footprint | Priority Housing Development Areas | Main Roads | Airfield |
| Agricultural Holdings | Business Areas | Other Roads | Proposed Tambo Springs Freight Hub |
| Nature Reserve | CBDs | Railways | |
| Open Space System | Regional Business | Railway Station | |



Decentralised nodes normally establish closer to the middle and higher income residential areas of towns along mobility routes. In most instances this is to the detriment of low income communities as it leads to urban decay in the Central Business Districts which are the most accessible business nodes to these communities (public transport users).

Apart from these larger CBDs, lower order business activity (in terms of scale and range of activities) should be supported at each of the Secondary Nodes by way of Regional Business nodes as depicted on Figure 31.8.

The more detailed layout plans in all Priority Housing Development Areas will identify the location and extent of additional smaller Neighbourhood Nodes to be developed in each of these areas in future (not identified at District SDF level).

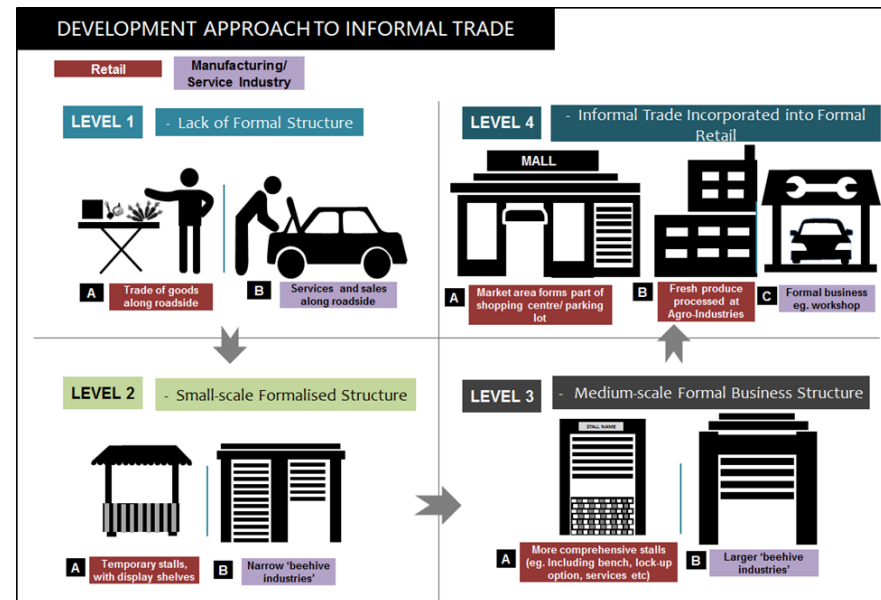
It is important that, at design phase, sufficient land be earmarked for business/retail purposes in each of the proposed Regional Nodes, and particularly the land parcels which enjoy the most exposure to regional traffic and passing 'feet'. Initial informal trade will give way to more formal activities in the same location as the node develops and grows.

It is therefore recommended that a developmental approach towards informal trade be followed – which is as much about minimising barriers to entry into this sector for the unemployed as it is about assisting people in this group to grow their enterprise.

Hence a variety of formalised informal trading structures should be encouraged at strategic locations within business areas/ CBD's close to community facilities (Thusong Centres), public transport facilities and public open spaces.

Informal trading, skills training of informal traders, and proper management and regulation of designated informal trade areas should be dealt with as a consolidated programme aimed at economic empowerment of the poor in Sedibeng District assisting informal traders to continuously "upscale" towards and within the formal economy as illustrated on **Diagram 13** below and explained in the accompanying information box.

Diagram 13: Development Approach to Informal Trade



Information Box 2: Informal Trade and Empowerment Upscaling

- **Level 1**

Informal trading business in a form of selling perishable or non-perishable goods, and informal motor repair businesses are being conducted without adequate formalised informal structures. Note that this is typically the character of the informal sector in the business areas of all towns/ villages in Limpopo Province.

- **Level 2**

Formalised informal trading structures in this level are very basic. Level 2a structures are temporary and may be placed along pedestrian movement desire lines where space is limited. Level 2b structures are more permanent in nature, and may be utilised by small emerging service industries.

- **Level 3**

The structures at Level 3 are permanent and typically larger in size when compared with 'level 1' informal trading structures. Level 3a includes features such as lock-up roller doors for over-night storage, and may include water sanitation services shared between traders. This allows for more comprehensive retail activities including food preparations and/ or service industries such as electronic repair services, internet cafes, kiosk, motor repairs services and welding works.

- **Level 4**

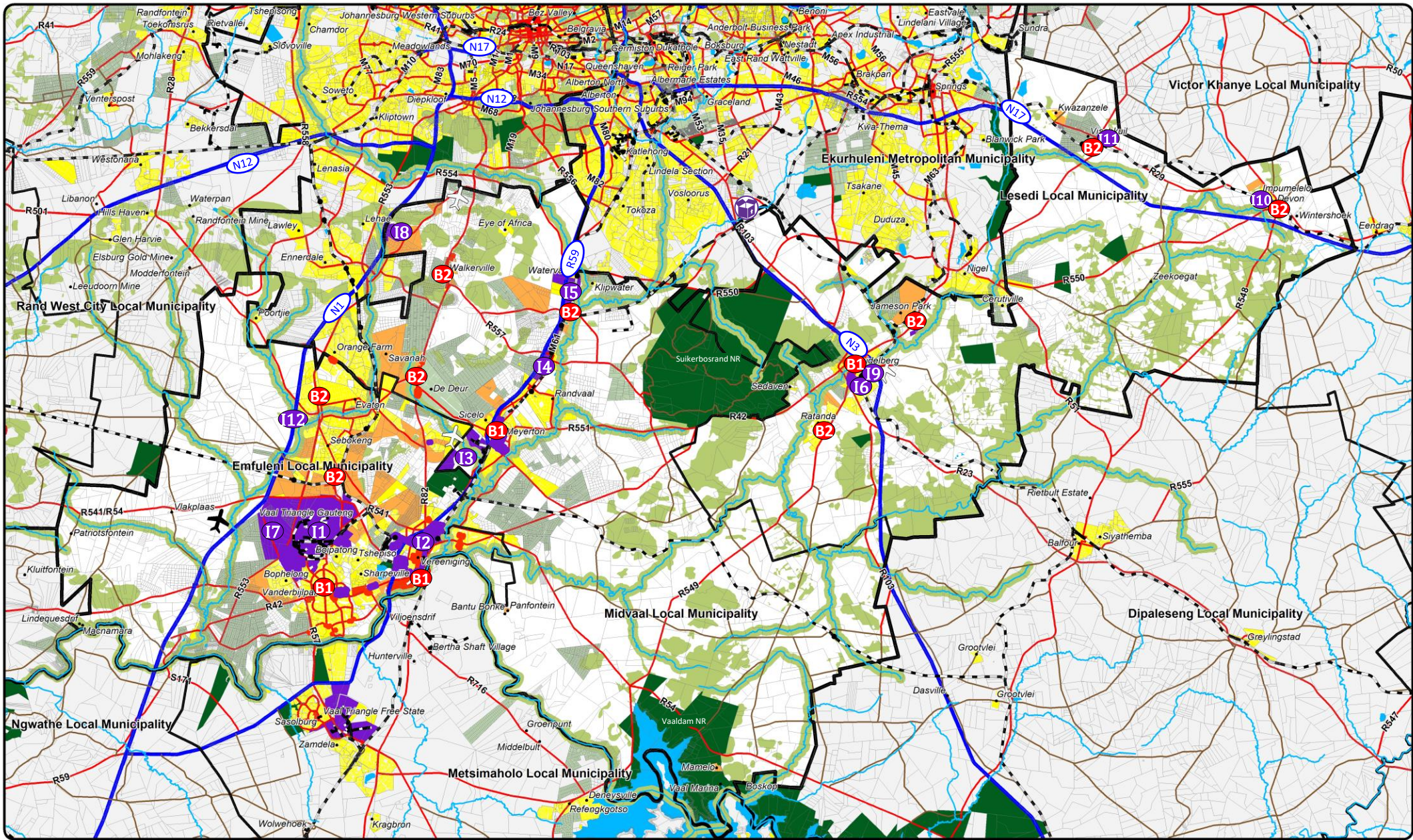
Level 4 provides that informal traders be incorporated into the formal economy (as illustrated on **Diagram 15**) by way of providing permanent and formalised informal trading structures as part of a shopping centre or business incubation centre.

Following from the above, it is vital that provision be made – both physically and institutionally – for a variety of entrepreneurial activities at all nodes. Initiatives to encourage and support entrepreneurship may include, amongst others, a variety of trade stalls at strategic locations (such as along major pedestrian movement lines of public transport transfer facilities) within nodes and at major tourism destinations, business incubators, beehive industries etc.

5.2.8 Principle 7: Concentrate industrial and agro-processing activities at the higher order nodes or along the major development corridors in the District where infrastructure is available.

The following industrial development objectives should inform/guide future industrial development in the Sedibeng District as depicted on **Figure 31.9:**

- Strengthen the functionality and performance of existing industrial nodes at Duncanville and Powerville (I1), Mittal Steel (I2), Meydustria (I3), Daleside (I4), Waterval (I5) and Heidelberg-Springfield (I6).
- Diversify the existing industrial base of the industrial nodes and unlock local resources by developing/ expanding industrial activity where potential exists – especially along the N1 corridor in the vicinity of Mittal Steel as part of the Emfuleni Logistics Hub (I7) - also see information box; at the Elandsfontein interchange north of Savannah City (I8) in the long term; and at Heidelberg Showgrounds (I9) as a logistics centre along N3 corridor.
- Exploit the opportunities offered by the existing strong agricultural base by encouraging development of agro-processing and related



SEDIBENG DISTRICT MUNICIPALITY SDF – INDUSTRIAL

- | | | | |
|-----------------------|------------------------------------|-----------------|------------------------------------|
| Cadastral | Dams | National Roads | Proposed Airport |
| Urban Footprint | Priority Housing Development Areas | Main Roads | Airfield |
| Agricultural Holdings | Business Areas | Other Roads | Proposed Tambo Springs Freight Hub |
| Nature Reserve | Industrial Areas | Railways | |
| Open Space System | | Railway Station | |



downstream activities and industries around the Devon/ Impumelelo (I10) and Kwazenzele (I11) rural node with functional linkages to the higher order agro industries located at Delmas (Victor Khanye) to the north-east and to Heidelberg-N3 corridor to the south.

- Initiate the proposed Agri Hub (I12) at Sebokeng.
- Strengthen existing agglomeration advantages which would contribute to the establishment of sustainable clusters.
- Contribute to industry related skills development and capacity building of the local labour force and contribute to SMME development.
- Promote the incorporation of green industries/technology in all industrial areas.
- Ensure availability/flexibility of engineering services and related infrastructure serving industrial areas.

Emfuleni Logistics Hub and Airport (I7)

The aim of the Logistical Hub is to be a catalyst for public and private sector investments in Emfuleni to accelerate economic growth and employment creation in the Vaal region. Emfuleni Local Municipality has reached an agreement with a number of other role players, such as Transnet, Arcelor Mittal and the Gauteng Department of Economic Development, that a logistical hub in Emfuleni be considered as an important flagship projects within the Vaal region. The Gauteng Provincial Government will need to designate the proposed Logistical Hub a Special Economic Zones (SEZ) to increase the potential of this Hub being realized. The potential components of the Logistics Hub include a Transnet container depot, an Industrial Development Zone, an airport, warehouses and storage facilities, and Intelligence Information Infrastructure.

The proposed Vaal Logistical Hub is expected to provide OR Tambo with a suitable regional logistic facility to the mutual benefit of both Emfuleni and Ekurhuleni Municipalities. In addition, the logistical hub will contribute in improving burdening transport costs and traffic congestions, make Emfuleni more attractive to local and foreign investments, and create employment opportunities which may have otherwise not been realized. Other potential benefits include:

- It will attract new investment, economic development to the Vaal region;
- It will diversify and grow the Vaal economy;
- It will create job opportunities that will address unemployment in the Vaal region;
- It will afford local people to participate in the economy through business partnering, business establishment, training, and skills development;
- It will create a greater demand for Arcelor Mittal's manufacturing output;
- The location of the Logistics Hub at Arcelor Mittal will help minimize the transport cost of materials;
- It will create various opportunities for BBBEEE and SMME's within the Vaal region; and
- Kick-start downstream manufacturing in Emfuleni.

Emfuleni proposes the development of a regional Airport within Emfuleni. The aim of this airport is to supplement the Logistics Hub proposed above, and to relieve the OR Tambo International Airport and Rand Airport from the growth constraints they are experiencing. Estimates show that the OR Tambo International Airport and Rand Airport are experiencing cargo and passenger growth rates that are unlikely to be satisfied by the future expansion plans of these airports. These expansion plans cannot be amended due to land and infrastructural

constraints surrounding these airports. These constraints present an opportunity for the development of a regional airport in Emfuleni to capture some of the growth potential experienced by the mentioned airports.

The location of the proposed regional airport in Emfuleni is critical as it is expected to provide infrastructural support and enhance business viability to the proposed Logistical Hub.

5.2.9 Principle 8: Optimally utilise the mining potential in the District in such a way that a sustainable balance is maintained between mining, agriculture and the natural environment.

Mining is a temporary land use which contributes to the economy for a limited period of time. Therefore measures need to be put in place to ensure that the agricultural and tourism potential of mining areas are restored once the mining activities are terminated.

Enhanced mining activities contribute to job creation for poor, unskilled workers. Hence the limited mining activity/ potential present in the SDM should be optimally utilised where available (see **Figure 31.10**). A challenge facing the mining sector, and the District in general, is a shortage in electricity supply which will negatively affect both the mining and industrial activities in the area.

Note that although mining is not managed at municipal level, the District must aim to ensure that mining activities do not compromise the long term

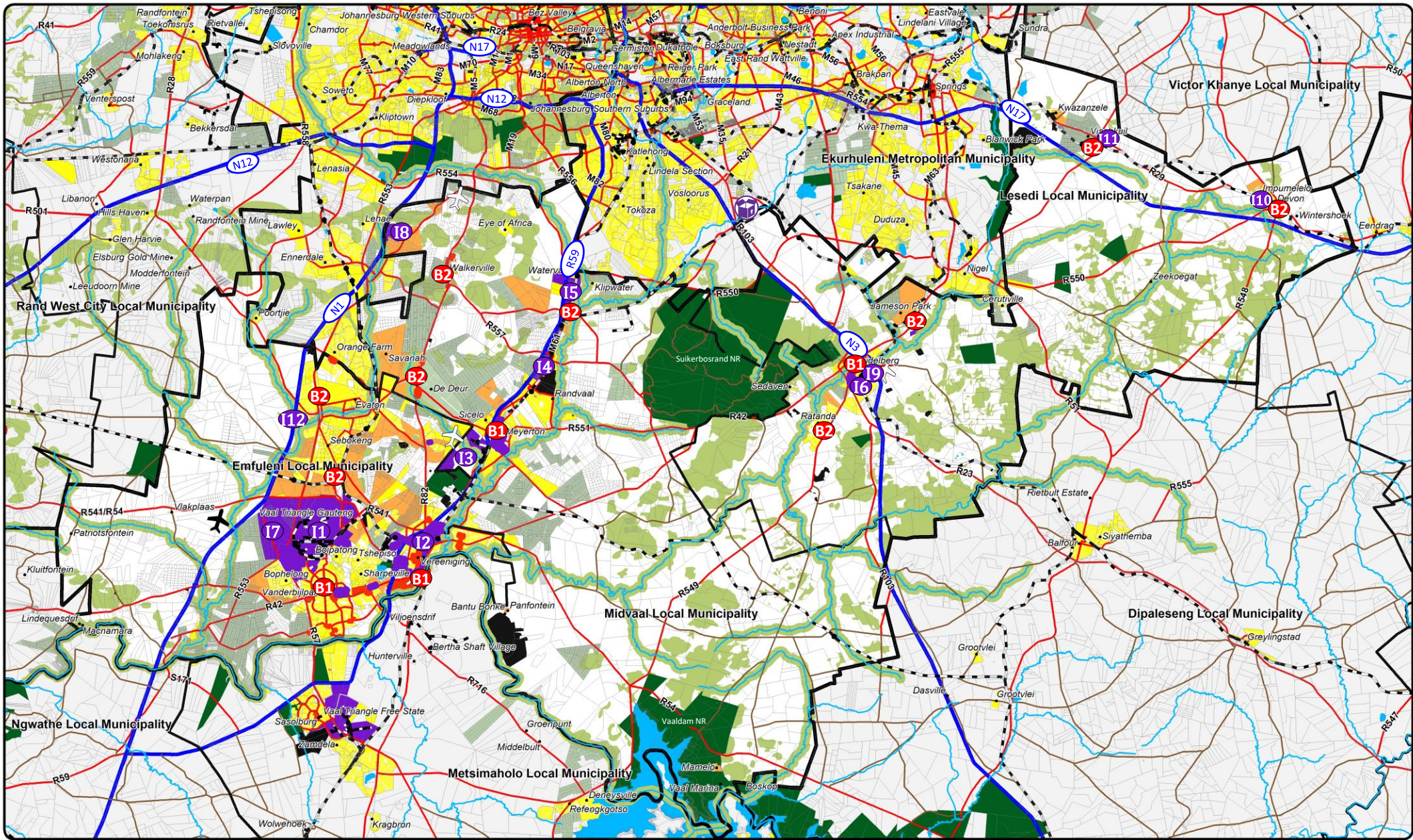
sustainability of the natural environment (and therefore the local tourism industry). Particular attention has to be given to proper management to ensure that mines do not waste and/ or pollute groundwater sources.

It is suggested that the proposed Environmental Task Team to be established by the Sedibeng District (refer to Principle 1) continuously:

- Monitor spatial trends and the extent of mining/prospecting license applications in the District and to provide written comment/inputs to these to the Department of Mineral Affairs – especially where it encroaches onto high potential agricultural land and/or areas of high biodiversity; and
- Monitor and oversee the implementation of mining rehabilitation processes/programmes prescribed for mines in the District.

5.2.10 Principle 9: Promote the commercial farming activities throughout the District; establishment of the Agri Park concept in the district, and compile Community Based Rural Development Plans for identified Rural Intervention Areas.

Agriculture is an important economic activity in the Sedibeng District which should be protected and enhanced through the development of downstream activities such as agri-processing which add value to produce and create significant numbers of job opportunities.



SEDIBENG DISTRICT MUNICIPALITY SDF – MINING

- | | | | |
|-----------------------|------------------------------------|-----------------|------------------------------------|
| Cadastral | Dams | National Roads | Proposed Airport |
| Urban Footprint | Priority Housing Development Areas | Main Roads | Airfield |
| Agricultural Holdings | Business Areas | Other Roads | Proposed Tambo Springs Freight Hub |
| Nature Reserve | Industrial Areas | Railways | |
| Open Space System | Mining Areas | Railway Station | |



As illustrated on Figure 27 in this report, the north-eastern, central and south-western parts of the District comprise extensive farming, specifically in the form of crop farming, and a range of livestock activities.

Agricultural production should be prioritised to boost job creation and local economic development, which will gradually develop a sustainable competitive industry. Programmes providing technical, marketing and financial support would strengthen local producers, reduce vulnerability to external shocks and reduce transportation costs, while increasing local jobs and incomes. - NDP

The main commodities produced in the District are:

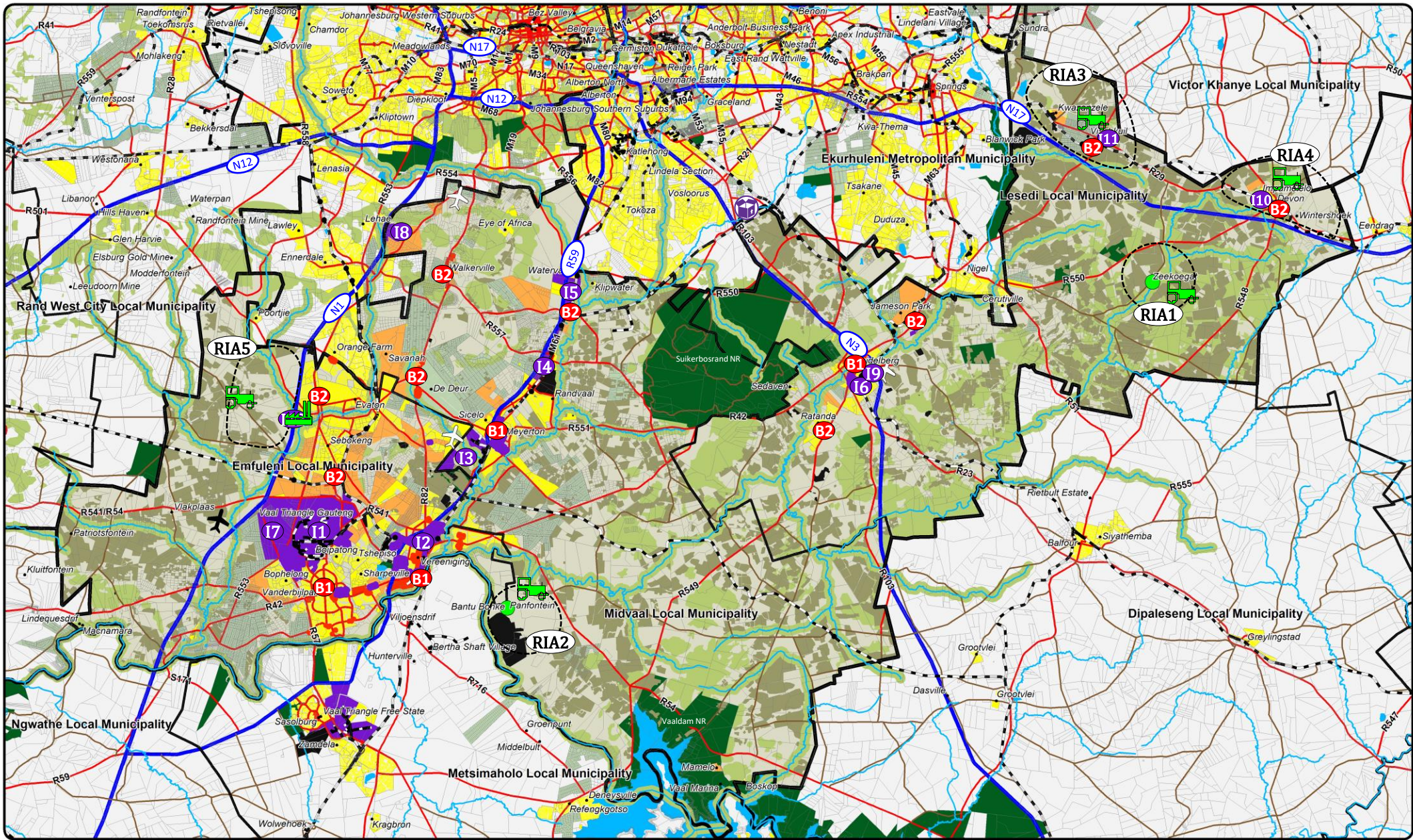
- Soya, Dried Beans and Ground Nuts
- Sunflower Seeds
- Vegetables
- Eggs/ Broilers
- Beef and Milk
- Pork/ Goat
- Sheep
- Maize, Sorghum, Grain and Wheat.

In line with information available at present it is recommended that the following areas as illustrated on **Figure 31.11** be earmarked as potential Rural Intervention Areas (RIA) in terms of National Outcome 7 (Rural Development) objectives:

- The existing Langzeekoegat area as a potential Agri Village.

- The existing Bantu Bonke/Panfontein area as a potential Agri Village.
- The broader Kwazenzele-Vischkuil precinct which comprises a large “rural poor” population amid an area of high agricultural potential.
- The broader Devon-Impumelelo precinct which comprises a large “rural poor” population amid an area of high agricultural potential.
- The agricultural area to the west of the N1 corridor in the vicinity of the proposed Rietkuil Agri Hub as part of the proposed Sebokeng Agri Park.

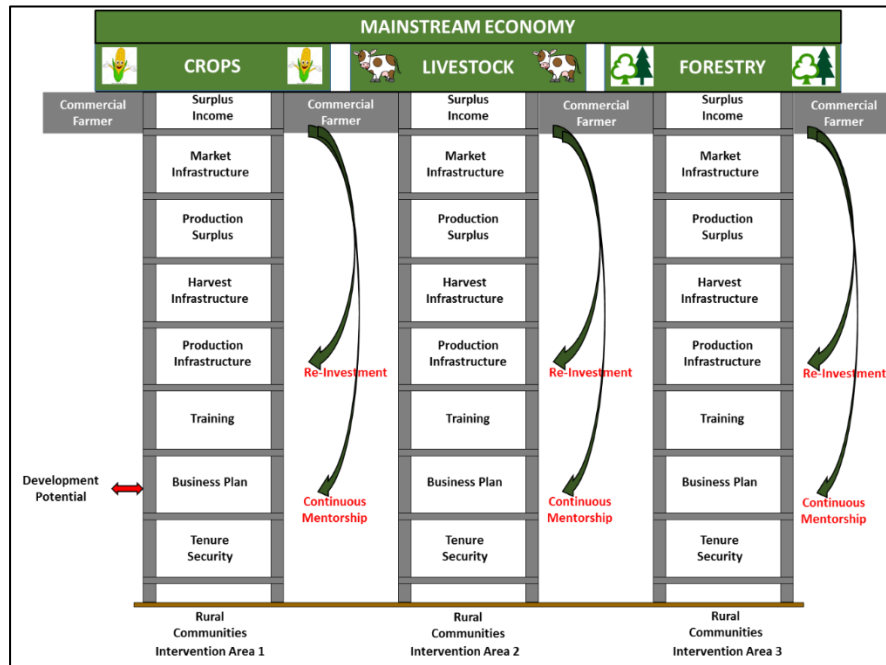
The Sedibeng District should use these areas of significant agricultural and commercial potential (and need) to support emerging farmers/small scale farmers to establish themselves as commercial farmers by way of the following measures as illustrated on **Diagram 14** below:



SEDIBENG DISTRICT MUNICIPALITY SDF – AGRICULTURE

- | | | | | |
|-----------------------|------------------------------------|----------------------------------|-----------------|------------------------------------|
| Cadastral | Dams | Extensive Agriculture | National Roads | Proposed Airport |
| Urban Footprint | Priority Housing Development Areas | Cultivated Land | Main Roads | Airfield |
| Agricultural Holdings | Business Areas | Agri Village | Other Roads | Proposed Tambo Springs Freight Hub |
| Nature Reserve | Industrial Areas | Agri Hub | Railways | |
| Open Space System | Mining Areas | Proposed Rural Intervention Area | Railway Station | |



Diagram 14: Emerging Farmer Ladder to Mainstream Economy

- Increasing land availability and tenure security for agricultural purposes through prioritised processing of Land Reform processes in these areas.
- Exploiting the opportunities offered by the high potential agricultural land identified within each area.
- Significantly increasing the yield per hectare (relative to extensive farming) and therefore providing more affordable food to the consumer (especially local communities).

- Providing training support to emerging and small-scale farmers (via Local Service Centres/Extension Services), and ensuring that appropriate skills development takes place in line with the most appropriate farming activities in different Intervention Areas.
- Encouraging the use of different crops and new planting, harvesting and processing techniques.
- Supporting a variety of farming concepts including extensive commercial farming, small scale commercial farming, intensive Vertical Farming/Controlled Environment Farming, and agro processing industries (especially around the Agri Hub at Rietkuil).
- Providing production and harvesting infrastructure in order to create production surplus in all rural areas.
- Increasing job creation in rural areas through labour-intensive agricultural projects and extending the agriculture value chain by way of agro-industries and agro-tourism within rural intervention areas.

The surplus income generated assist emerging farmers to become part of the mainstream economy as shown on Diagram 14.

Controlled Environment Agriculture is a technology-based approach toward food production including hydroponics, aquaculture, and aquaponics. The aim of CEA is to provide protection and maintain optimal growing conditions throughout the development of the crop which takes place within an enclosed growing structure such as a greenhouse or

building. CEA optimises the use of resources such as water, energy, space, capital and labour.

Vertical Farming is the practice of producing food in vertically stacked layers, such as in a skyscraper, used warehouse, or shipping container. The modern ideas of vertical farming use indoor farming techniques and controlled-environment agriculture (CEA) technology, where all environmental factors can be controlled. These facilities utilise artificial control of light, environmental control (humidity, temperature, gases) and fertigation. Some vertical farms use techniques similar to greenhouses, where natural sunlight can be augmented with artificial lighting and metal reflectors.

“We believe strongly that vertical farming can be a driver for sustainability in cities, but it’s a young emerging industry with a very green face, focused on growing local, pesticide-free food, using less water, and creating potentially green jobs”. (Henry Gordon-Smith, vice chair of AVF).

It is proposed that a detailed Rural Development Plan be compiled for each of the five Rural Intervention Areas to guide and inform the future development of these areas.

The Rural Development Plans/ Strategies need to be compiled in close consultation with all local stakeholders and beneficiaries, including relevant organizations/representatives and the relevant municipal officials as all these parties need to take co-ownership of the plan once it is completed, and ensure development which is consistent with the proposals contained in the plan.

It is important that such Rural Precinct Plan be compiled at an appropriate level of detail to ensure that there is clarity as to exactly what needs to happen on each cadastral entity in the area, and that it addresses all the elements highlighted in the proposed Comprehensive Rural Development Model illustrated on **Diagram 15**.

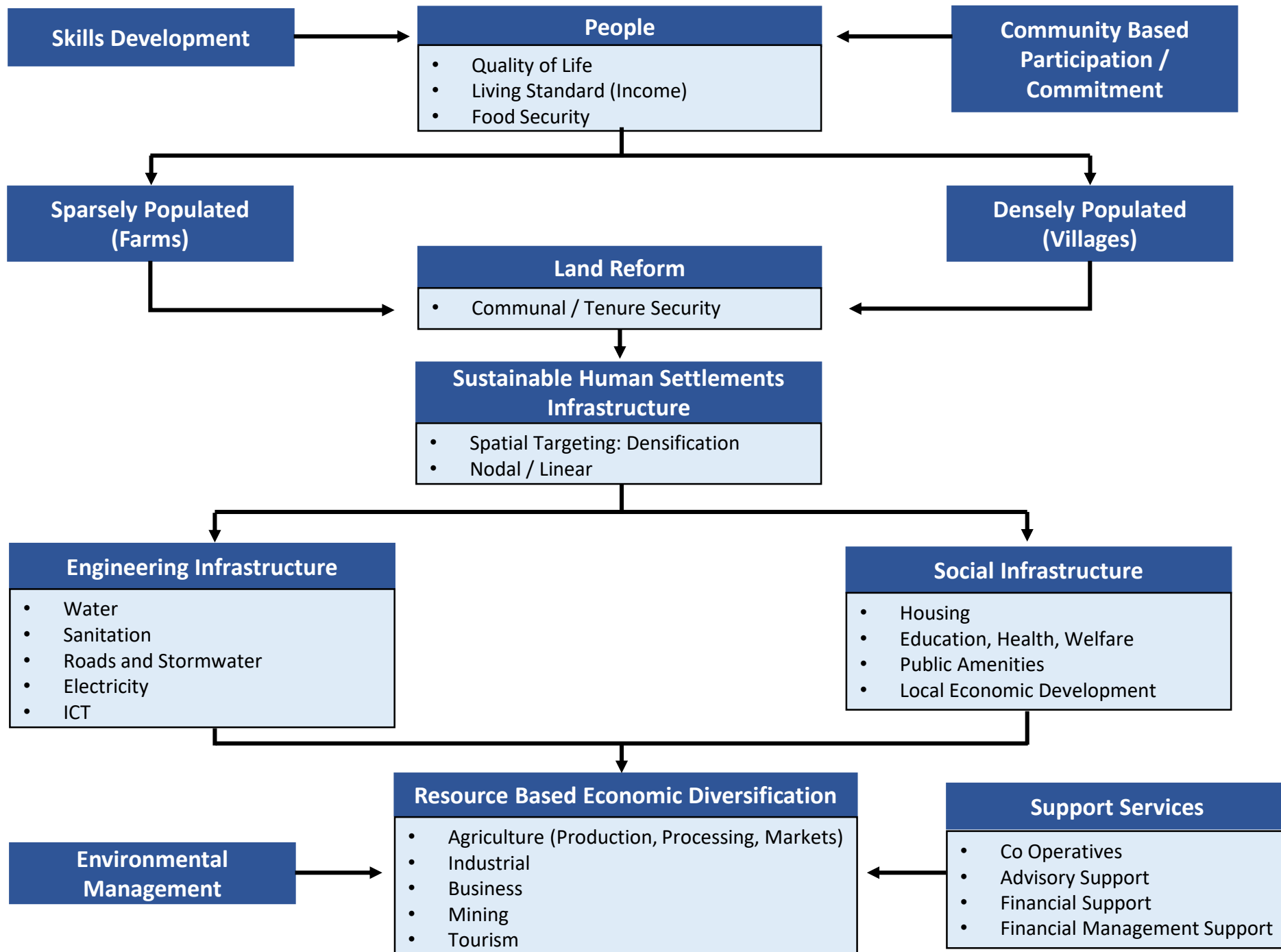
In cases where Land Reform initiatives are underway in such area, special attention also needs to be paid to the way in which beneficiaries are to be accommodated/ incorporated into the area. Beneficiaries may be individuals e.g. emerging commercial farmers having been allocated land to farm on, or it may be larger communities that need to be established in a sustainable manner.

In the case of individual farmers, the Rural Precinct Plan needs to indicate how/ where these farmers will fit into the broader area and how their farming activities can/ should be aligned with surrounding, well established commercial farmers.

As far as sustainable human settlement is concerned the provision of proper social infrastructure like housing and public amenities/ community facilities like schools, clinics, police stations, libraries etc. is paramount. These need to be clustered in line with the national Thusong Centre concept which could act as catalyst to local economic development. (Refer to Principle 5).

Engineering infrastructure is firstly required to meet the basic domestic needs of residents in the settlement. Secondly, engineering infrastructure

Diagram 15: Sustainable Rural Development Components



INSTITUTIONAL SUPPORT : CO OPERATIVE GOVERNANCE

should unlock the economic development potential of the rural area which is key to the long term sustainability of the area.

The next objective is to ensure that all economic potential related to agriculture, industry, forestry, tourism or mining is identified and a strategy be devised to optimise the benefits to be derived from these for the community. Amongst others, the strategy needs to address the following:

- Provision of sufficient economic infrastructure to facilitate production, storage and processing of commodities relevant to the area.
- Education and skills development, advisory support and mentorship, as well as financial management support to local stakeholders.
- To ensure that markets are locally available and accessible: Urban Rural Market Centres/ FPSU's etc.

Apart from government involvement in the above three aspects, the private sector, including commercial farmers and/ or organised business (mining, forestry, industrial and tourism companies etc.) could also play a significant support role to the emerging entrepreneurs in Rural Intervention Areas.

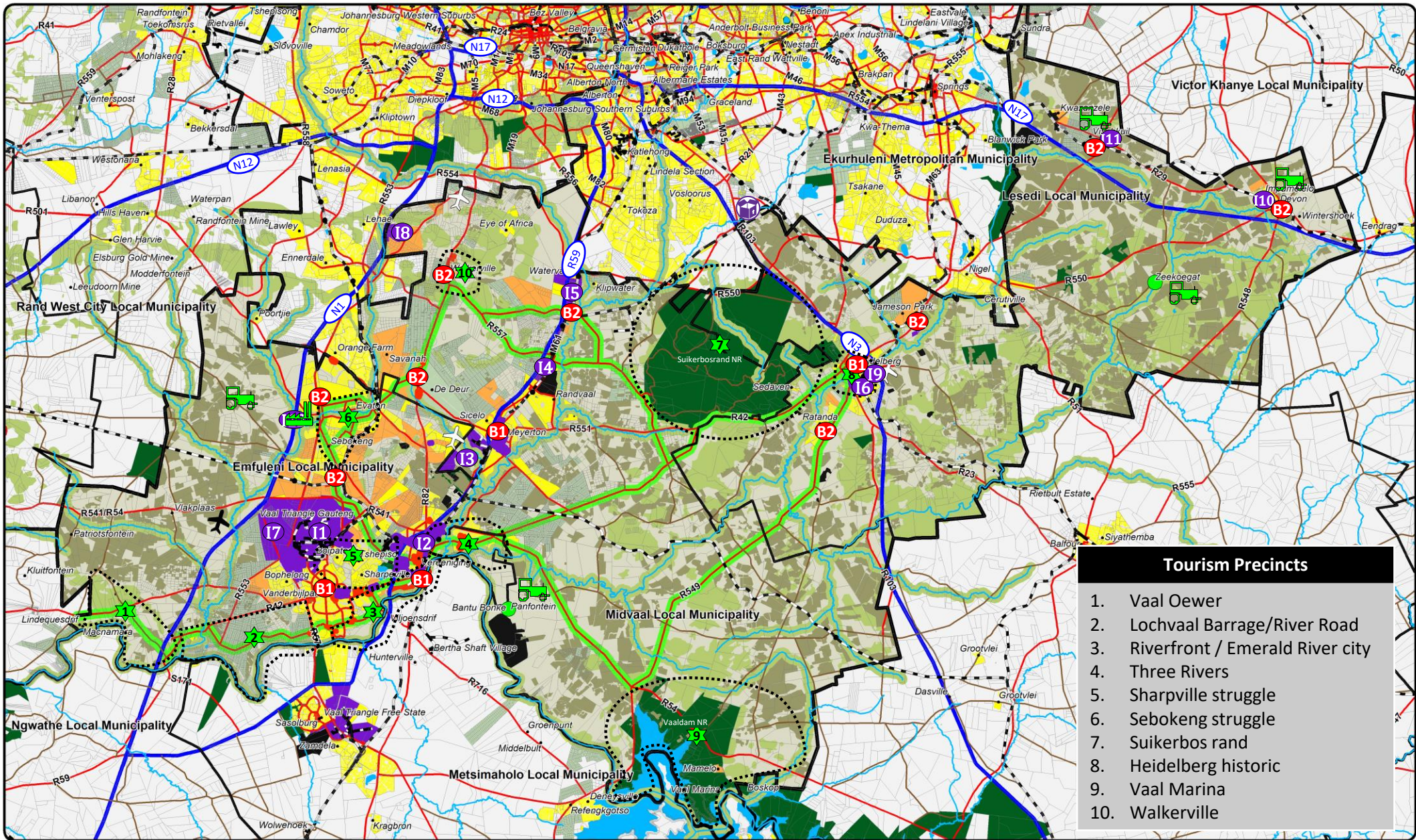
Through successful implementation of the above approach a sustainable livelihood is ensured to all communities in Rural Intervention Areas and they become part of the mainstream rural and urban economy of the region.

5.2.11 Principle 10: Utilise the existing natural, cultural-historic and man-made resources towards the development of Tourism Precincts and Tourism Corridors throughout the District.

The proposed objectives towards tourism development in the Sedibeng District are as follow:

- Focused (prioritised) tourism development growing from the core of the Vaal River, Vaal Dam NR and the Suikerbosrand NR as anchors from where the benefits of the tourism economy are spread across the district;
- To diversify the current tourism base through providing for various types of tourism such as agri-tourism, eco-and educational tourism, cultural-historic tourism and adventure tourism etc.
- Providing tourists with safe, high quality and authentic experiences and service excellence;
- Growing both overnight and day visitor numbers and visitor yields in all the Tourism Precincts;
- Promote public and private sector collaboration in developing tourism services and facilities;
- Responsible tourism ensuring environmental and economic sustainability and benefits for all.

Figure 31.12 illustrates the identified functional tourism precincts and the priority tourism routes to be promoted as such in the Sedibeng District. It includes the following priority precincts:



- Tourism Precincts**
1. Vaal Oewer
 2. Lochvaal Barrage/River Road
 3. Riverfront / Emerald River city
 4. Three Rivers
 5. Sharpville struggle
 6. Sebokeng struggle
 7. Suikerbos rand
 8. Heidelberg historic
 9. Vaal Marina
 10. Walkerville

SEDIBENG DISTRICT MUNICIPALITY SDF – TOURISM

Cadastral	Dams	Extensive Agriculture	National Roads	Proposed Airport	Priority Tourism Routes
Urban Footprint	Priority Housing Development Areas	Cultivated Land	Main Roads	Airfield	
Agricultural Holdings	Business Areas	Agri Village	Other Roads	Proposed Tambo Springs	
Protected Areas/Ridges/ Open Space	Industrial Areas	Agri Hub	Railways	Freight Hub	
	Mining Areas		Railway Station	Tourism Precinct	



- Precinct 1: Vaal Oewer located to the west of route N1.
- Precinct 2: River Road which includes the Lochvaal/Barrage area.
- Precinct 3: River City comprising, amongst others the Emerald Casino.
- Precinct 4: Three Rivers where Vaal -, Klip and Suikerbosrand Rivers converge.
- Precinct 5: Sharpeville Struggle Cultural-Historic.
- Precinct 6: Sebokeng-Evaton Struggle Cultural-Historic.
- Precinct 7: Suikerbosrand Nature Reserve.
- Precinct 8: Heidelberg Cultural-Historic.
- Precinct 9: Vaal Marina and Vaal Dam Nature Reserve.
- Precinct 10: Walkerville Cultural-Historic and Scenic.

Signage and branding of the tourism precincts and routes illustrated on Figure 31.12 are important first steps towards establishing these concepts in the minds of local stakeholders and visitors/ tourists to the Sedibeng area.

5.2.12 Principle 11: Ensure that all communities (urban and rural) have access to at least the minimum levels of service as enshrined in the Constitution and to direct infrastructure investment towards the activity nodes in the district, priority housing development areas earmarked for residential development, and communities with excessive service backlogs.

Engineering services is a critical element towards the establishment of sustainable human settlements and facilitating economic development and job creation.

Access to adequate housing, reliable electricity, safe water supplies, accessible public transport and hygienic and dignified sanitation facilities remains a daily challenge for many South Africans, particularly in poor rural and peri-urban communities. - NDP

Hence, infrastructure investment within the SDM should be primarily directed towards serving the identified urban and rural nodes within the district.

Infrastructure unlocks the development potential of rural areas. Appropriate levels, form and location are important, given that infrastructure investment is less cost effective in lower density areas with small economies. - NDP

More specifically, the land use proposals and Priority Housing Development Areas identified in these nodes should inform the future Capital Investment Framework for various engineering services e.g. water, sanitation, electricity and roads and stormwater.

The District should pay attention to providing sufficient infrastructure capacity at all the nodal points in order to ensure that it can facilitate and enhance the processes of local economic development and service delivery at these areas. The key challenge is to create a balance in terms of improving services in both the **emerging nodal areas** and at the **existing, well established nodal points** in the district simultaneously. This should

be done in accordance with an unbiased Infrastructure Prioritisation Model for the Sedibeng District as a whole based on the following principles:

- Focus on large scale improvement/incremental upgrading of services in areas with the most prominent backlogs in the district which includes the former “township” areas of all towns in the SDM;
- Allocate funding towards provision of engineering services in Priority Housing Development Areas earmarked to be the focus of all new housing projects in the District; and
- Continuously maintain and upgrade engineering services in economic activity areas including CBD’s and industrial areas of towns to promote economic development and job creation.

The District, together with local municipalities, should thus continue to endeavour to expand its formal water, sanitation and electricity networks and refuse collection system in order to eventually reach and serve all rural and urban communities within the municipal area to at least RDP level (as per the NDP guidelines).

All Infrastructure Master Plans in Sedibeng District should be based on supporting the nodal development concept/ system proposed for the District, and specifically also the long term vision of a functional urban conurbation between the N1 and R59 development corridors as depicted on **Figure 31.13**. The same principle applies to the broader Heidelberg node, Devon-Impumelelo and Kwazenzele-Vischkuil.

At a more detailed level, settlements (existing and new) in the District should be designed in accordance with the principles and standards set out in the CSIR’s ‘Red Book’: ‘Guidelines for Human Settlement Planning and Design’ in order to ensure innovative and affordable utilisation of solar energy, rain- and stormwater harvesting, composting toilets and recycling opportunities.

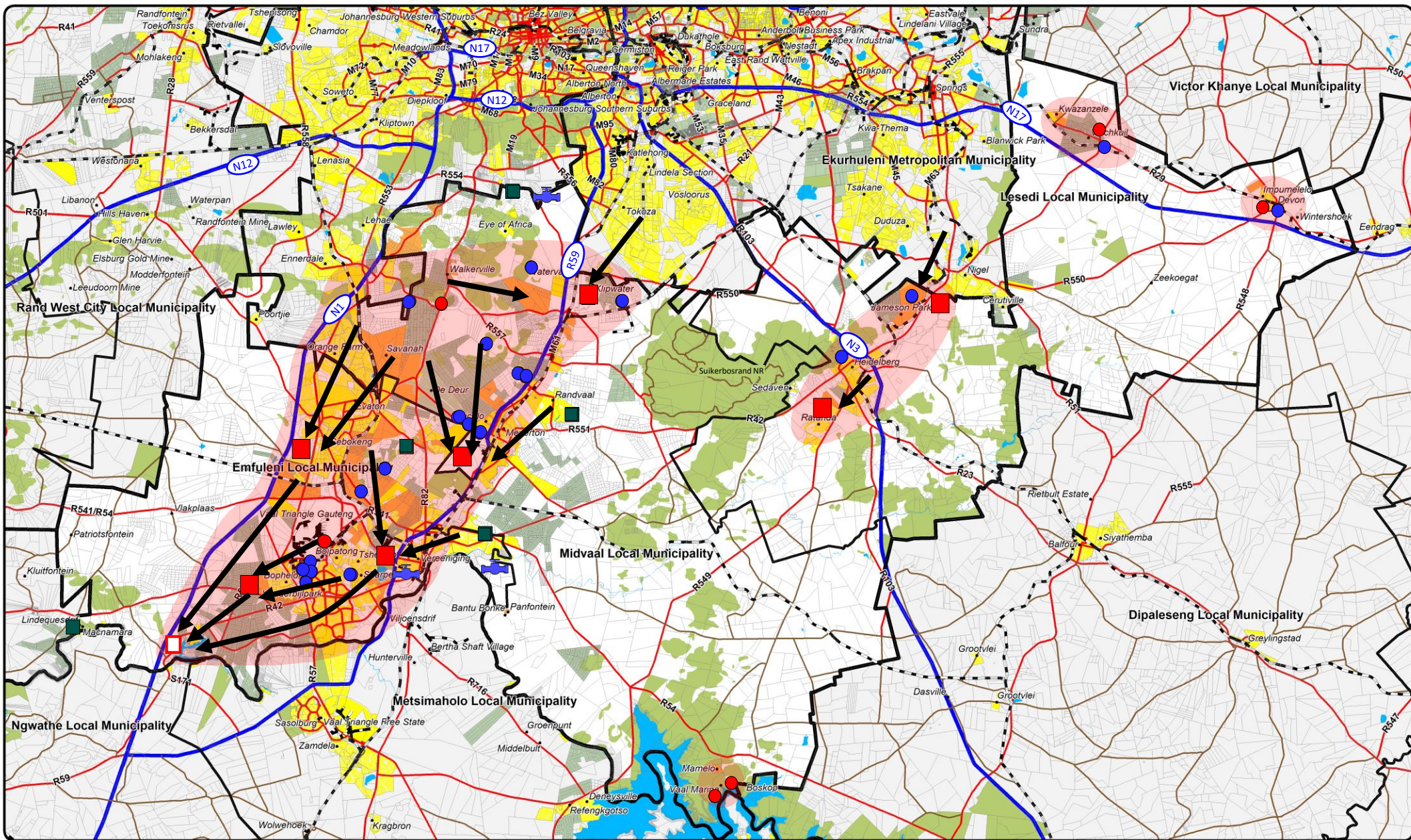
Furthermore, in line with the Smart City/ Smart Growth concept as illustrated on **Diagram 16** (overleaf), engineering services within the SDM should focus on the following important transitions over the short to medium term:

Water

- Have more stringent water conservation and demand-management initiatives;
- Increase water-use efficiency and equitable distribution through appropriate incentives;
- Develop available groundwater resources;
- Adopt more widely the re-use of wastewater effluent as standard practice;
- Adopt large-scale desalination option to resolve inevitable water shortages;
- Improve monitoring and reporting to ensure best practice and standards in water and wastewater management.

Energy

- Promote and enable energy efficiency and demand side management;
- Promote the development of renewable energy plants in the district;

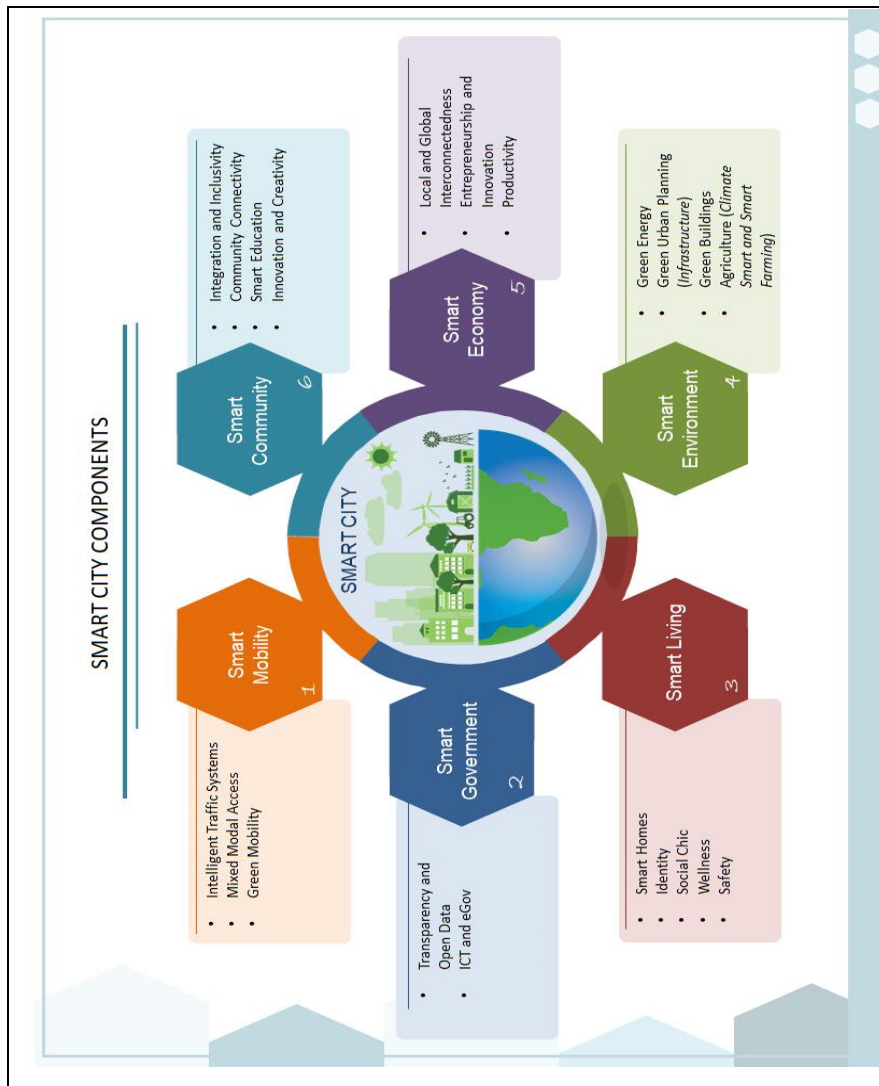


SEDIBENG DISTRICT MUNICIPALITY SDF – ENGINEERING SERVICES FUNCTIONAL AREAS

- | | | | |
|-----------------------|--------------------------|-------------------------------------|----------------|
| Towns and Settlements | Local WWTW | Land Fill Site | National Roads |
| Informal Settlements | WWTW | Engineering Service Functional Area | Main Roads |
| Agricultural Holdings | Proposed WWTW | Reservoirs | Other Roads |
| Protected Area | Rand Water Pump Stations | Railways | |
| Dams / Rivers | | | |



Diagram 16: Smart City Concept



- Enhance the universal access to clean, renewable energy services.

Transport

- Invest in public transport and non-motorised transport (NMT) infrastructure;
- Promote and enable low carbon transportation and shift transport patterns to reduce reliance on liquid fuels.

Waste

- Innovate in the waste sector to reduce waste volumes and to increase recycling and re-use;
- Introduce waste-to-energy initiatives in the longer term;
- Invest in clean technology and value adding to waste.

Information and Communication Technology

- Establish a strong broadband infrastructure network to ensure efficient communications and internet services;
- Use Information and Communications Technology as a means to enhance each of the six Smart City components as illustrated in the diagram overleaf.

What is a Smart City?

A **Smart City** primarily uses **information and communication technologies (ICT)** to enhance quality, performance and interactivity of urban services, to reduce costs and resource consumption and to improve contact between citizens and government. It connects human capital, social capital and ICT infrastructure in order to address public

issues, achieve a sustainable development and increase the quality of life of citizens.

Smart city applications are developed with the goal of improving the management of urban flows and allowing for real time responses to challenges. A smart city may therefore be more prepared to respond to challenges than one with a simple 'transactional' relationship with its citizens.

Smart Mobility aims to provide an on-demand mobility system that would allow customers to choose among *motorised public and private* transport modes and / or *non-motorised transport modes* to assemble the fastest or cheapest way of getting anywhere they need to go at any time. It includes new mobile technologies and intuitive apps which integrate public transportation, better infrastructure, and car sharing.

Smart Government entails the use of innovative policies, business models, and technology to address the financial, environmental, and service challenges facing public sector organizations. It relies on open and accessible consolidated information systems and communication networks from which the public becomes better informed about whether the government is performing and conforming to highest ethical standards.

Smart Communities are strategic, purposeful, and resourceful. They are driven by long-term commitments to safeguard their natural resources and economic opportunities for future generations, and preserving the beauty, vitality, and equity of the region. These communities protect their ecological assets from destruction or degradation, promote renewable energy solutions, and practice sustainable development.

Smart Living is fueled by the rise of devices and objects connected to the internet – wearables, home appliances, fashion accessories etc. Internet-connected appliances that communicate with one another, more efficient energy usage and cloud-enhanced home security are just some of the developments that consumers are starting to enjoy.

Advances in technology, such as mobile and GPS-enabled devices, live data sensors, and big data, have created a foundation for governments to develop better services, foster accountability, and increase transparency. When disaster incidents strike, critical information exchange across departmental, municipal, and jurisdictional lines expedites communication to at-risk populations and hastens their evacuation from harm's way. It tracks disasters in real-time, locate medical resources, align logistics, coordinate response teams, and automatically publish updated maps that keep the media and public informed. Similarly, GIS highlight recurring crime hot spot locations, and help deploy critical resources to the right place at the right time.

Real-time monitoring tools are used to regulate infrastructure and manage natural and manmade threats like vandalism/ theft.

A **Smart Environment** aims to provide more efficient urban structure, buildings and energy.

A compact city characterised by medium and high density mixed use environments which are designed around efficient multi modal public transport systems.

Careful building design to reduce heat loads, maximise natural light and promote the circulation of fresh air and installation of solar heaters and water harvesting infrastructure.

Green energy generated from natural sources: solar power, wind power, hydropower, geothermal energy, biomass and biofuels.

Monitoring and controlling operations of **urban and rural infrastructures** like bridges, railway tracks, on- and offshore- wind-farms and it can also be used for **scheduling repair and maintenance** activities.

Smart Economies are largely the result of the influence of ICT applications on all aspects of urban economy, which in turn changes the land-use system. Main Economic Sectors influenced by Smart Technology include:

- Banking and Finance
- Education and Research
- ICT, Mobile and Telecommunications
- Travel, Tourism and Transportation
- Healthcare and Social Welfare
- National Security and Defense
- Retail and Distribution
- Energy and Utilities

5.2.12 Principle 12: Implement a district-wide Growth Management Strategy to ensure spatial manifestation of the SDF Development Principles.

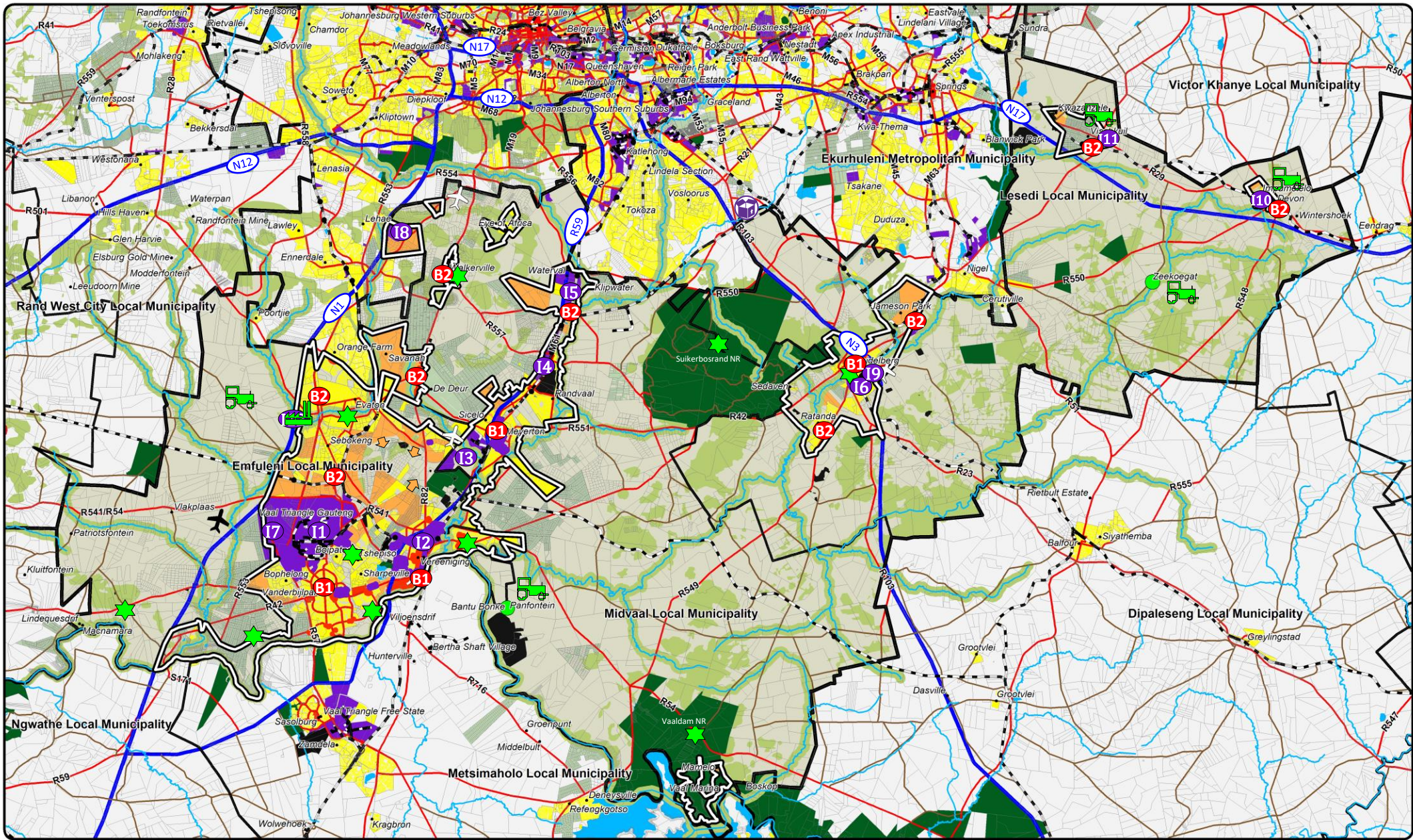
Figure 32 represents the Composite Sedibeng District SDF based on the eleven principles highlighted in sections 5.2.1 to 5.2.11 above. The last principle (Principle 12) deals with the implementation of the SDF which calls for active Growth Management.

i) Defining Growth Management

Growth management is an approach widely used internationally to ensure that growth in population and the economy is supported by the necessary services and infrastructure and at the same time meet spatial and socio-economic objectives of towns and cities. In the case of the Sedibeng District Municipality the Growth Management Strategy needs to go a step further, by incorporating important interventions that are critical for a sustainable future, and the establishment of the area as a future metropolitan authority.

The Growth Management Strategy has to provide a way forward in dealing with issues such as the disjuncture between government goals and market driven development; disjuncture between growth and service capacity with reference to water, sanitation, electricity and roads infrastructure which affect living standards and the quality of life of ordinary citizens; the critical need for urban restructuring and consolidation in order to make public transport viable; and allowing and managing sustainable development in a sensitive natural environment.

There is no doubt that the SDM has to adopt a new, uniform pre-active approach for development across all its local municipalities if it wants to achieve long term sustainability for all. The present situation is highly



SEDIBENG DISTRICT MUNICIPALITY SDF – COMPOSITE

- | | | | | |
|-----------------------|------------------------------------|----------------------------------|-----------------|----------------------------|
| Urban Footprint | Dams | Business Areas | National Roads | Proposed Airport |
| Agricultural Holdings | Primary Node | Industrial Areas | Main Roads | Airfield |
| Agriculture | Secondary Node | Mining Areas | Other Roads | Proposed Freight Hub |
| Nature Reserve | Rural Node | Agri Hub | Railways | Tourism Precinct |
| Open Space System | Priority Housing Development Areas | Proposed Rural Intervention Area | Railway Station | Urban Development Boundary |



strained and haphazard, and it can only be alleviated if investment is aligned, focused and prioritised. The District Growth Management Strategy should set out to achieve this and if properly implemented, then the following outcomes can be expected:

- Prioritisation, clear targeting and programming of capital expenditure across the three LM's;
- A strong link between public transport (especially rail) and residential and business development;
- A change in the way development applications are dealt with, as developments will be subject to a range of new mechanisms to influence patterns and pace of development within the District;
- A strong emphasis on the reduction of demand in respect of services; and
- Land assimilation/reform for the public good and the location of new housing aligned to these spatial priorities.

If the Sedibeng District fails to implement changes and continues with 'business-as-usual', then the following outcomes are inevitable:

- Increased intensity and frequency of infrastructure problems (including electricity, water, sanitation, road/traffic congestion etc.);
- Growing public discontent as development is not supported by base infrastructure (inclusive of social amenities such as schools and clinics);

- Unattained growth targets as infrastructure bottlenecks constrain development and resources are spread randomly and in an ad-hoc manner;
- Non-viable investment in new public transportation systems as requisite densification and land use mixes along and around these public transportation corridors are lacking.

Hence it is recommended that the SDM compile and implement a comprehensive Growth Management Strategy for the entire district area (including all three the Local Municipalities).

ii) Strategic Objectives

At the core of the Growth Management Strategy of the SDM should be the following strategic objectives:

- Determine priority areas for short-medium term investment and allocation of future development rights;
- Re-direct the respective capital investment programmes of the SDM Service Departments to address the short-term problem areas and strategic priority areas;
- Limit future development rights in infrastructure problem areas within the district until backlogs have been addressed;
- Identify priority investment areas (e.g. Priority Housing Development Areas) for the public and private sector, specifically in respect of municipal infrastructure;

- Introduce development conditions that are congruent with global best-practice standards relating to resource efficiency (Smart Growth);
- Introduce development obligations relating to the full spectrum of inclusionary housing (i.e. subsidized housing, bonded, rental / social housing) in identified priority areas;
- Apply a package of incentives to promote and facilitate development that subscribes to the socio-economic and spatial imperatives of the municipality in priority areas (especially around public transport corridors);
- Establish monitoring and evaluation mechanisms to review the status of the infrastructure problem areas and the limitations placed on these areas.

iii) **Critical Success Factors**

There are a few critical success factors upon which the Growth Management Strategy will depend -

- A comprehensive and regular updated spatial information system including continuous market trend assessment across the District;
- Full suite of financial incentives / mechanisms aligned with rates policy to support projects which will bring about:
 - Significant economic development and job creation,
 - Projects complying with the criteria of governments Breaking New Ground (BNG) Policy and Inclusionary Housing Policy; and
 - Projects which enhance viability of public transport corridors.

- Institutional support and arrangements in terms of the following:
 - High-level strategic decision-making based on the Growth Management Strategy;
 - Long-term political endorsement and commitment of the principles fundamental to the Growth Management Strategy;
 - The municipal IDP and Budget allocations for the Sedibeng District area based on the principles of the Growth Management Strategy;
 - Alignment with national and provincial policy frameworks.

Finally, it is recognised that the SDM cannot achieve its goals in isolation and indeed needs the private sector to buy into the Sedibeng Growth Management Strategy so that it can assist the District in this process. It is therefore important to structure demand management tools and incentive packages in such a way that they effectively benefit the developers and future residents.

iv) **Growth Management Instruments/Tools**

The Sedibeng Growth Management Strategy should be based on the application of a series of internationally acclaimed Growth Management Tools as part of the more comprehensive Strategy towards guiding and directing growth and development. Such tools could include the following:

- **Comprehensive Plan:** The Comprehensive Plan is a document composed of written goals and policies as well as maps used to guide the type, location, and quantity of development in a

community over a 10 or 20- year period based on existing conditions and future hopes. This plan is strategic in nature and should include goals for economic growth and how it can be contained within existing areas or areas designated for growth. Such plans can be compiled at regional (metropolitan) level as well as at local (precinct) level.

- **Threshold Public Service Standards:** These guidance standards are incorporated into a community's comprehensive plan specifying the level of public services that must be provided for different types of development. Service levels can be set for schools, water, sewer, roads, transport, libraries, and parks. Proposed development that will result in non-maintenance of these standards can be denied approval. The Sedibeng Water Services Development Plan, Electricity Master Plan, Integrated Transport Plan and Waste Management Plan are typical examples of documents which should specify the minimum service levels required in the various parts of the district.
- **Fiscal Impact Analysis:** This refers to the SDM conducting a study of the projected short and long-term costs and revenues associated with new development in a community. It can be used to evaluate the most appropriate time and place for development to occur based on using existing utilities and rate of development. In essence this is thus a Cost-Benefit Model which supports a cost effective, incremental approach towards urban expansion.

- **Land Use and Infrastructure Coordination:** This strategy requires development to occur in areas already served by existing bulk service networks or areas planned to be served by such networks in order to prevent leapfrog development and continuous demands for service extensions.
- **Enterprise Zones/Revitalisation Areas (Brownfields):** These are programmes intended to promote economic development and/or redevelopment in needy and rundown areas with the use of tax incentives, regulatory waivers, infrastructure improvements, and urban revitalisation. The NDPG initiative for nodes like Sebokeng, Evaton and Ratanda and the Vereeniging CBD Urban Renewal Tax Incentive are typical examples of this concept.
- **Strategic Development Areas:** These are strategically located vacant areas designated for growth by the local authority. The area is chosen due to its strategic location, the services available in the area, and/or because of local zoning regulations or comprehensive plans. These areas are used as priority funding areas and can represent both infill development and urban expansion. The Priority Housing Development Areas identified across the three municipalities and which have been incorporated into the District SDF are typical examples of Strategic Development Areas.

- Focused Economic Development in Growth Areas (Targeted Zones):** As expansion of the urban area is an inevitable outcome of a growing society, it becomes important to encourage economic growth to occur in focused areas. Rapid development is financially draining to all spheres of government. Unchecked and uncoordinated economic growth can lead to increased congestion, pollution, overcrowding, loss of open space, as well as poorly planned community spaces. The objective should thus be to direct economic growth towards areas specifically designated for this purpose (activity nodes) and then to properly provide the infrastructure required to maintain these areas/nodes. This approach also supports the implementation of proper public transportation as these nodes represent clear destinations around which to design a public transport system.

The Sedibeng SDF identified several major industrial areas, four Central Business Districts and nine Secondary Activity Nodes – all of which are strategically located in urban areas, and/or along the major transport routes. The public transport network was also designed to serve all these areas and connect the areas to one another.

- Zoning:** Zoning clauses specify written requirements and standards for permitted uses of buildings, the height and size of buildings, the size of yards, parking and signs and fences, among others. The purpose is to separate land uses that are seen as incompatible. The

separation of uses aids growth management by separating uses such as agricultural from residential and industrial.

There is a Land Use Management System (LUMS) in place for each of the three local municipalities which perform all the functions referred to above. It is important to link/align the municipal LUMS to the Municipal Spatial Development Framework (by way of a Linkage Plan as referred to in the Spatial Planning and Land use Management Act) in order for these planning tools to supplement and support one another as part of the broader district Growth Management Strategy.

- Bulk Service Contributions:** Bulk Service Contributions are a cost assessment imposed against new development in order to generate revenue to fund or recover the costs of reasonable service improvements necessitated by the development. This tool must be imposed carefully to balance the competing demands presented when dealing with the pros and cons of new development. Obligations imposed during subdivision review, generally require developers to fund, build, and dedicate for public use, basic facilities required by future residents of the new developments. In cases/areas where development applications are in line with the spatial and phasing objectives of the SDM and Local Municipalities, developers should receive some form of discount on Bulk Service Contributions payable and vice versa.

- **Incentives:** The creation of incentives and concession packages is one of the most important methods that can be used by the Sedibeng municipalities to attract new investment, which can be efficiently and innovatively applied to initiate development in focus areas. Municipalities should, however, ensure that incentive packages be linked with the local economic development objectives of the specific area. Incentive and concession packages that could be considered can include:
 - **Rates and Taxes Incentives.** It is possible for municipalities to provide incentives to new investors in terms of a redemption on rates and taxes, service charge reduction on electricity consumption, water consumption, etc. The Urban Renewal Tax Incentive for certain CBD areas in South Africa is an example of this mechanism.
 - **Infrastructure.** These concessions often involve the provision of serviced industrial and commercial sites or special efforts to develop infrastructure and services in selected areas in accordance with the needs of potential investors. The Special Economic Zone (SEZ) is based on the provision and/or improvement of infrastructure in certain areas in order to stimulate economic development.
 - **Land and buildings.** This incentive package may involve the sale, transfer or rental of land, buildings and other facilities owned by the municipality.

- **Regulatory reform.** These concessions involve efforts by the municipality to reduce constraining regulation and zoning that may limit potential development. This also involves facilitating prompt decision-making procedures, such as the approval of building plans, rezoning applications, etc.
- **Finance.** These incentives may take on the form of special grants, access to start-up capital, bridging finance, loan guarantees and the underwriting of risks.

■ **Transit (Public Transport) Orientated Development**

As noted earlier in this document Transport Orientated Development (TOD) is a unique mix of land uses located at a high density within a walking radius of a railway station or a major public transport node like a bus terminus, or a modal transfer facility. TODs are purposely designed to facilitate access to the transit stations/nodes and so increase the use of the public transportation systems. TODs are therefore designed to achieve land use and transportation integration within corridors.

Among their goals, TOD programmes seek to create high-quality living and working environments and improve station access. For transit agencies, TOD programmes offer the possibility of enhanced ridership. In inner-city transit areas, TOD programmes attract private investment, improve the quality of the environment and provide new or expanded employment opportunities. For developers, TOD programmes offer opportunities to build

near public transport facilities and take advantage of supportive land use regulations as well as favourable business demographics.

There is a new awareness that public transport orientated planning makes economic sense:

- Public transport investment has twice the economic benefit to a city/town of highway investment.
- Public transport can enable a city to use market forces to build up densities near stations where most services are located, thus creating more efficient sub-centres and minimising sprawl.
- Public transport enables a city to be more corridor orientated where it is easier to provide infrastructure.

From the above it should be evident that the Development Principles contained in the Sedibeng Spatial Development Framework provide the basis for the implementation of a much more comprehensive and sophisticated Growth Management Strategy to be applied in the area in order to ensure the long term sustainable development of the District.

6. IMPLEMENTATION FRAMEWORK

6.1 Sectoral Alignment

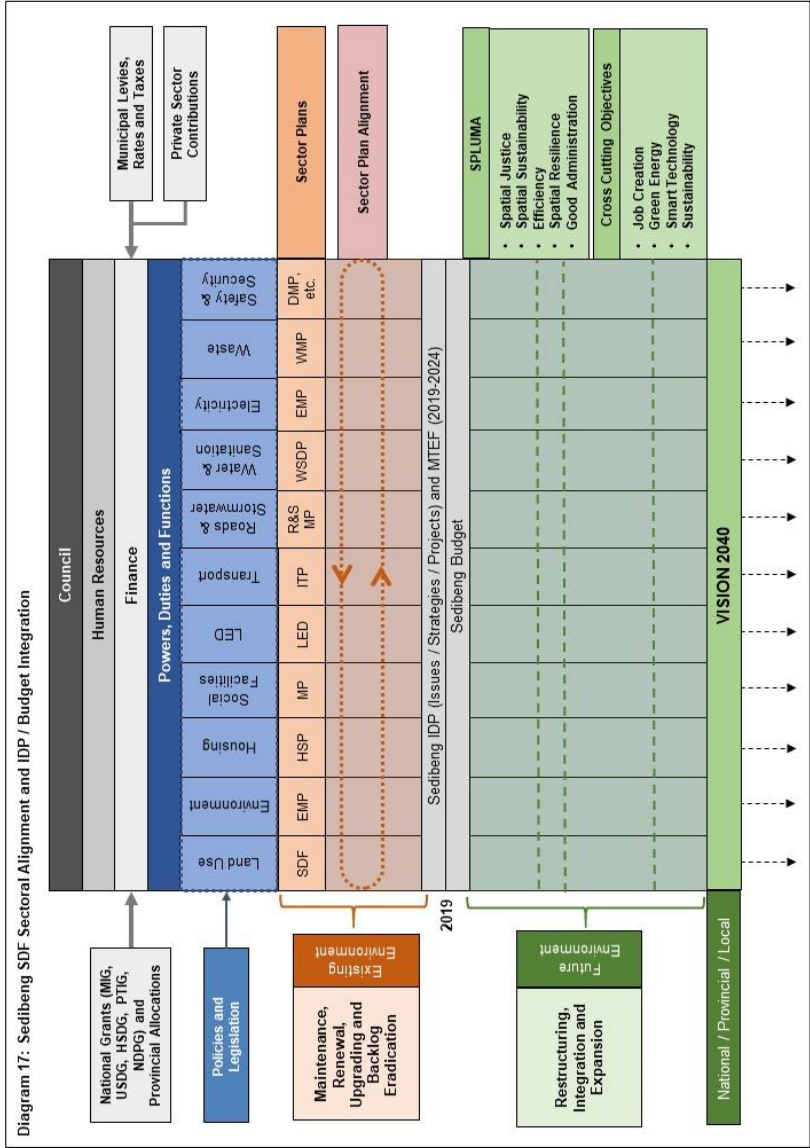
This section comprises some proposals regarding the implementation of the proposed Sedibeng District SDF.

Diagram 17 (overleaf) illustrates the context of the Sedibeng SDF within the broader municipal institutional environment which is briefly summarized as follow:

- The Sedibeng District Municipality (and Local Municipalities) each has a set of legally mandated powers, duties and functions assigned to it in terms of the provisions of the Municipal Structures Act.
- Council Officials represent the human resources required to perform/execute these powers, duties and functions while Councillors (Political Representatives) need to oversee such activities.
- The funding required to perform the powers, duties and functions is acquired from a number of sources as indicated on Diagram 24, including national and provincial government grant allocations, municipal rates and taxes and private sector contributions.
- The powers, duties and functions of a municipality translate into a number of development sectors/departments like land use, transport, housing, environment, engineering services, economic development etc. within the municipality. Most of these sectors are guided by sector plans to be compiled in line with sector specific policies and / or legislation. For example, an Integrated Transport Plan (ITP) is

compiled in terms of the requirements of the National Land Transport Act and a Water Services Development Plan (WSDP) in terms of the Water Services Act.

- Sector Plans deal with the existing environment within the municipality (status quo), and the planned/proposed future environment (3, 5, 10 years or longer into the future).
- It is however essential that these sector plans are all based on a common Vision for the municipal area. Such Vision is normally based on/derived from the National Vision (NDP), a Provincial Vision (Gauteng 2030) and/or District/Municipal Vision documents.
- The Municipal Spatial Development Framework (SDF) represents the Spatial Vision for the municipal area and it serves to provide guidance in this regard to all the other sectors as well.
- When the SDF is compiled it is informed by all the other sectors e.g. the Environmental Management Plan may indicate all areas to be earmarked for conservation in the SDF, or the Water Services Development Plan which indicates the areas most suitable or unsuitable to provide engineering services etc.
- Based on inputs received during the Situational Analysis, the SDF then earmarks different areas in the municipality for different future land uses e.g. the future open space system; the Priority Housing Development Areas, economic activity areas, areas for future community facilities etc.
- When the sector plans are revised in future, these are based on the proposed location, extent and nature of land uses proposed in the municipal SDF. This process is referred to as sectoral alignment.



- In this way it is ensured that all projects identified by the various sector plans (and incorporated in the Municipal IDP, MTEF and Budget) are spatially aligned with each other and that all infrastructure investment within the municipality is consistently well aligned and congruent with the broader development vision as captured in the Spatial Development Framework of the municipality.
- Collective sectoral investment in the correct areas within a municipality over an extended period of time will inevitably result in enhanced spatial justice, efficiency, sustainability and resilience, and effectively represents good administration – the five principles of SPLUMA.
- Lastly there are also some cross-cutting themes that need to be addressed by all sectors within the municipality. These include secondary objectives such as job creation, the green agenda, smart technology and overall sustainability enhancement.

6.2 Capital Investment/Implementation Programme

Following from the Spatial Analysis and Synthesis and the Spatial Development Framework contained in this document, the projects/ initiatives which are deemed critical towards the sustainable future development of the Sedibeng District were identified. These projects/ initiatives are listed in **Table 22** as part of a Capital Investment Framework derived directly from the proposed Sedibeng SDF.



Table 22: Priority Initiatives/Projects following from the Sedibeng SDF

Priority Action/Project	Responsibility	Cost	Priority		
			Short	Med	Long
Development Principle 1: Environment					
- Establishment of District Environmental Management Unit.	• SDM	In-house/ Operational	✓		
- Compilation of a District Environmental Management Framework.	• SDM	R700 000	✓		
- Coordination/alignment with GDACE and local municipalities i.t.o of Land Use Applications and implementation of LUDS Tool.	• SDM	In-house/ Operational	✓	✓	✓
- Rehabilitation of Vaal River Ecosystem	• SDM/ELM/ Provincial/ National	Operation	✓	✓	✓
Development Principle 2: Nodal Hierarchy					
- Establish nodal hierarchy concept in SDM and align infrastructure development and funding allocation accordingly (spatial targeting)	• SDM • Local Municipalities • Provincial/ National Government	Operational	✓	✓	✓
- Compile Precinct Plans for priority nodal points	• SDM	R300 000/ node	✓	✓	✓
- Implement Urban Renewal Strategy for Vaal River City Initiative.	• SDM • ELM	Multiple Cost Elements	✓	✓	✓
Development Principle 3: Transportation					
- Prioritise proposed route construction/upgrading programme. (K154, K164)	• SDM • LMs • Gautrans	T.B.D.	✓	✓	✓
- Align SDM Public Transport Network Guidelines with District SDF.	• SANRAL • PRASA	In-house/ Operational	✓		
- Upgrade major bus/taxi ranks in nodal areas.		T.B.D.	✓		
- Compile Rail Precinct Plan for TOD stations in Urban Conurbation Area (10 Stations)		R800 000	✓		

Priority Action/Project	Responsibility	Cost	Priority		
			Short	Med	Long
Development Principle 4: Sustainable Human Settlement					
- Update SDM Sustainable Human Settlement Plan.	• SDM/LM's • Gauteng Dept. of Human Settlements	Continuous	✓	✓	✓
- Pre-actively prepare PHDA's for development in line with Table 21 Priorities and SHS Plan		Continuous	✓	✓	✓
- Focus on Social Housing opportunities in nodal Precinct Plans and TODs.		Continuous	✓	✓	✓
Development Principle 5: Community Facilities / Thusong Centre Development					
- Conduct a district wide Community Facility Audit and compile a Thusong Centre Precinct Plan and Implementation Strategy/Programme for each of the Urban/Rural Nodes per local municipality.	SDM	R1 200 000	✓		
- All provincial and national service departments to align their capital investment programmes in accordance with the Thusong Centre Strategy at identified Nodes.	SDM IDP Technical Committee and Representative Forum	Annual Departmental Allocations (Gauteng Province)	✓	✓	✓
Development Principle 6: Business Areas Development					
- Facilitate Informal Trade Upscaling by way of a District Policy	• SDM/LMs	R300 000	✓		
- Compile CBD/Small Town Revitalisation Strategies in Devon and Vischkuil	• SDM/LMs	R200 000 per Nodal Plan	✓	✓	✓
- Implementation of Vereeniging CBD Government Precinct Plan	• SDM/ Emfuleni	T.B.D	✓	✓	
- Implement Heidelberg CBD Plan	• SDM/Lesedi	T.B.D	✓	✓	
- Implement Midvaal CBD Plan	• SDM/Midvaal	T.B.D	✓	✓	
- Compile Upgrading Plan for Vanderbijlpark CBD	• Emfuleni • Lesedi	R500 000	✓		

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Priority Action/Project	Responsibility	Cost	Priority		
			Short	Med	Long
Development Principle 7: Industry					
- Compile Precinct Plans for N1 and N3 Logistics Hubs.	<ul style="list-style-type: none"> SDM Emfuleni Lesedi 	R500 000/ corridor	✓		
- Implement Sebokeng Agri Hub Business Plan.	<ul style="list-style-type: none"> SDM/GEDA/DRDLR 	T.B.D	✓	✓	✓
Development Principle 8: Mining					
- Monitor mining license applications (and comment on these) in line with the requirements of the proposed Sedibeng Environmental Management Plan (EMP) – also see Development Principle 1.	<ul style="list-style-type: none"> SDM/GDART 	In-house	✓	✓	✓
- Liaise with mining houses regarding rehabilitation of old dumps in Lesedi.	<ul style="list-style-type: none"> SDM/Mining Houses / Lesedi LM 	In-house	✓	✓	✓
Development Principle 9: Agriculture					
- Protect high potential agricultural areas.	<ul style="list-style-type: none"> SDM/GDART 	In-house	✓	✓	✓
- Precinct Plans for five Rural Intervention Areas	<ul style="list-style-type: none"> SDM/DRDLR 	R500 000/ RIA	✓		
- Establish Institutional Structure to assist small/emerging farmers.	<ul style="list-style-type: none"> DRDLR 	In-house	✓		
- Facilitate establishment of agro industries at Rietkuil, Devon and Kwazenzele	<ul style="list-style-type: none"> SDM/DRDLR/ GEDA 	In-house	✓	✓	✓
Development Principle 10: Tourism					
- Formalise SDM Tourism Route Network.		In-house	✓		
- Implement Tourism Branding and Signage Strategy.	<ul style="list-style-type: none"> SDM/LMs/ Gautrans/ Sanral 	T.B.D	✓	✓	✓
- Establish/maintain Institutional Structure to monitor/facilitate tourism development per Functional Area	<ul style="list-style-type: none"> SDM/GEDA/ GDAR/LM/ Private Sector 	In-house	✓	✓	✓
- Maintain the Public Space in Tourism Focus Areas	<ul style="list-style-type: none"> SDM/LMs 	In-house	✓	✓	✓

Priority Action/Project	Responsibility	Cost	Priority		
			Short	Med	Long
Development 11: Engineering Service Infrastructure					
- Allocate dedicated funding for water, sanitation and electricity infrastructure to: <ul style="list-style-type: none"> the Service Upgrading Priority Areas to achieve minimum levels of service; in Priority Housing Development Areas earmarked for large scale mixed development in order to facilitate integration of communities; and Nodal Areas /Corridors to promote economic development and job creation. 	SDM/ Municipalities/ COGTA	Annual Allocations per Allocation Model	✓	✓	✓
- Align Engineering Services Sector Plans with Sedibeng SDF	<ul style="list-style-type: none"> SDM/LM's 	T.B.D	✓		
- Facilitate urgent implementation of Sedibeng Regional Sewer System	<ul style="list-style-type: none"> SDM/GEDA/ GOTP 	T.B.D	✓	✓	✓
Development Principle 12: Growth Management					
- Confirm/Formalise Consolidated District Urban Edge.	<ul style="list-style-type: none"> SDM/LM's 	In-house	✓	✓	✓
- Formulate Comprehensive District Growth Management Strategy.	<ul style="list-style-type: none"> SDM/LM' 	R600 000	✓		
- Establish Centralized District GIS System for Monitoring Purposes	<ul style="list-style-type: none"> SDM/LMs 	R1,8 million	✓	✓	✓

As noted in Section 6.1 above the next step would be for these projects/actions to be incorporated into the Objectives, Strategies and Projects of the various Sector Departments as contained in the Sedibeng IDP. (Refer to **Diagram 18**) For example, the proposed environmental projects/ actions emanating from the SDF should feed into the Objectives, Strategies and Projects under the Environmental and Health Services in the District IDP, from where the projects can be incorporated into the budgeting process of the District Municipality.

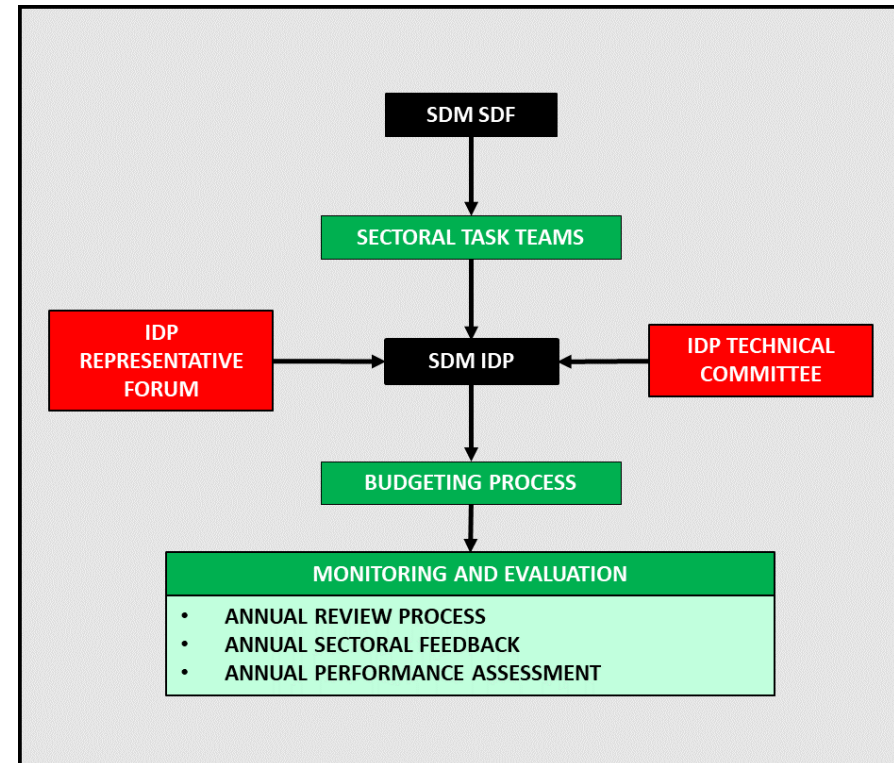
It is important to note that the SDM SDF forms part of the Integrated Development Plan of the District Municipality (in line with section 26(e) of the Municipal Systems Act) and that it does not represent a parallel process thereto. Many of the projects following from the SDF may already be listed in the Sedibeng IDP, but the SDF may serve to better illustrate the strategic significance and/or spatial logic of such a project.

In essence, the SDF incorporates, aligns, and integrates various sectoral issues, and highlights the functional relationship between various elements e.g. the importance of the construction of a certain sections of road to unlock the development potential of specific areas between the N1 and R59 Corridors.

Another important aspect to consider is the fact that a SDF does not entail the compilation of a number of sectoral studies as part of the process. Instead, it rather focuses on capturing the findings and recommendations of

various sectoral studies, and superimposing these spatially over each other in order to assess the collective impact these may have on the area.

Diagram 18: Sedibeng DM SDF Implementation Strategy



Hence, in this way the SDF provides a multi-sectoral, integrated perspective on future development in the District. Having identified the important projects/ initiatives to be implemented following from the SDF, it is important for SDM officials to continuously monitor whether these projects/ initiatives

are being incorporated into the relevant development Objectives, Strategies and Projects in the IDP of the Municipality, and that these projects are appropriately prioritised in the budgeting process, from where implementation will follow.

This is a continuous process which should be followed as part of the annual IDP Review process, and should also be dealt with as part of the annual Sedibeng District Municipalities Performance Management Assessment.

In conclusion, the following general actions should be taken to ensure the successful implementation of the proposed Spatial Development Framework:

- Through the **IDP Review Process** ensure that the District's IDP Programmes are aligned with, and adhere to the spatial proposals, guidelines and principles advocated by the SDF.
- **Engineering Services** should ensure that:
 - The bulk of its capital expenditure is focused on infrastructure development and service delivery within the proposed nodes, priority housing areas. The reason being, that these areas not only serve to indicate where the greatest need for infrastructure spending could possibly be in the future, but also indicate where the municipality would receive the best value for money spent on infrastructure development and service provision; and
 - The strategic road linkages be established through entering into discussions with the South African National Roads Agency (SANRAL) and Gautrans.
- The **Human Settlement Department** should ensure that the bulk of the subsidised housing stock is provided for within the Priority Housing Development Areas. This will help to consolidate the Municipality's urban/ rural structure.
- The department responsible for **social services** should ensure that all community facilities and services are provided for within the proposed nodes and preferably consolidate.
- The departments responsible for **conservation, tourism and economic development** should ensure that a balance is kept between conservation activities and tourism, agricultural, industrial and mining development.
- The **Finance Department** should on an annual basis, evaluate whether or not the Municipality is spending the bulk of its capital within the proposed key focus areas – i.e. the proposed corridors, nodes, Industrial Hubs, PHDAs and the Agri Hub.
- The department responsible for **land use planning** should:
 - Launch a capacity building programme aimed at establishing a “paradigm shift” amongst all service providers and stakeholders (politicians and officials of all spheres of government) towards a “principle based” planning and management approach for the District. This would ensure that unnecessary political pressure(s) does not derail the collective actions needed to restructure the spatially fragmented and unsustainable spatial structure of Municipalities within the SDM area.

- Ensure that each Local Spatial Development Framework process in the SDM focuses on the following two aspects:
 - a) Incorporating the District Directives as contained in the District SDF into the Local Spatial Development Frameworks; and
 - b) Compiling more detailed Precinct Plans for each town/settlement in the District which are aligned with the Development Principles as contained in the Spatial Planning and Land Use Management Act (SPLUMA).