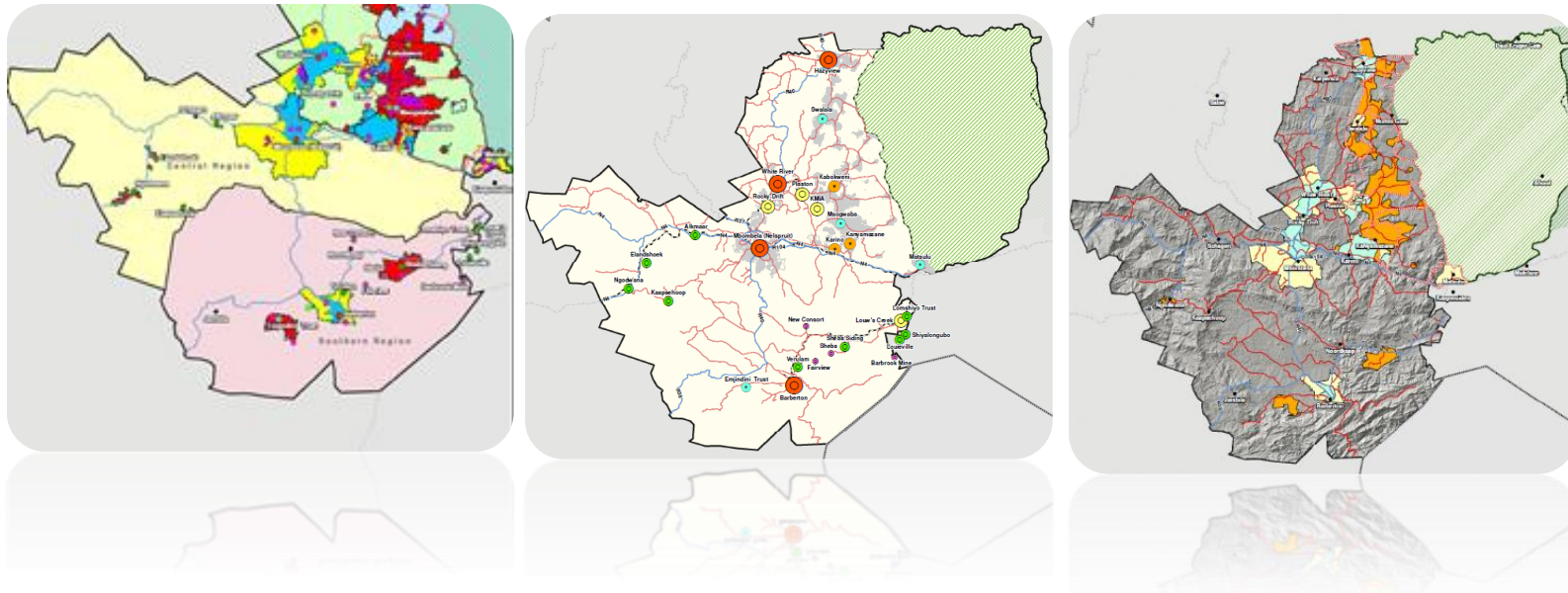


THE CITY OF MBOMBELA LOCAL MUNICIPALITY



Spatial Development Framework Review 2018 Working Document



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GLOSSARY OF TERMS

(1) Affordable Housing:

A dwelling where the total costs do not exceed 30% of a household's gross income including taxes and insurance for owners, and utility costs¹ (definition from the Gauteng Draft Inclusionary Housing Bill).

(2) Compact Polycentricity:

An urban structure that is characterized by a dense urban core interlinked by efficient transit networks to dense complementary sub-centres.

(3) Consolidation Zone:

Areas defined in this SDF as focus of urban consolidation, infrastructure maintenance, controlled growth, urban management, addressing backlogs (in housing, social and hard infrastructure) and structural positioning for medium to longer term growth. These are usually the marginalised areas located in the far east of the municipality where there is a backlog of services.

(4) Densification:

A process of development that intensifies urban land use within the area.

(5) Development Corridor:

Not to be confused with a transit corridor. A demarcated area along public transit routes in which high intensity, mixed use and mixed income development is promoted. For example, the Corridors of Freedom

(6) Engineering Infrastructure:

Engineered services such as roads, electricity, water, sewers and storm water systems. Sometimes referred to as 'hard services'.

(7) Node:

A well-defined and legible urban environment where highly accessible, mixed and compatible land uses are concentrated and serviced.

(8) Population Density:

The number of people in a given area, calculated as people per km²

(9) Precinct Plan:

A development plan and guidelines for a localised area, taking directive from higher order plans (SDF's, Vision 2030, NDP, etc).

(10) Residential Density:

The number of housing units in a given area, calculated as dwelling units per hectare (Du/ha) and calculated per erf.

(11) Social Infrastructure:

Assets that accommodate social services, such as schools, libraries, clinics and public facilities. Sometimes referred to as 'soft' services or infrastructure.

(12) Spatial Discontinuity:

A spatial disruption in the urban structure and logic.

(13) Spatial Inequality:

Unequal access to urban opportunities as a result of spatial distribution.

(14) Sprawl:

A development pattern that disperses development versus focusing/ concentrating it.

(15) Transformation Zone:

Areas defined in this SDF where capital investment is prioritised for future urban intensification and expansion, as they have the capacity to trigger positive effects on a city-wide scale. Transformation Zones also indicate areas where the development of detailed spatial plans, where they don't exist already, will be prioritised.

ABBREVIATION & ACRONYMS

ASGISA: Accelerated and Shared Growth Initiative for South Africa

CRDP: Comprehensive Rural Development Plan

COM: City of Mbombela

DCGTA: Department of Cooperative Governance and Traditional Affairs

DEDET: Department of Economic Development, Environment and Tourism

DARDLA: Department of Agriculture, Rural Development and Land Administration

DWA: Department of Water Affairs

EPWP: Expanded Public Works Programme

IUDF: Integrated Urban Development Framework

IDP: Integrated Development Plan

ICT: Information Communication Technology

ISDF: Integrated Spatial Development Framework

KMIA: Kruger Mpumalanga International Airport

LED: Local Economic Development

LRAD: Land-Re-distribution for Agricultural Development

LUMS: Land Use Management System

MLM: Mbombela Local Municipality
MPCC: Multi Purpose Community Centre (Thusong Service Centre)
MMC: Member of the Mayoral Committee
MTPA: Mpumalanga Tourism and Parks Agency
NDP: National Development Plan
NSDP: National Spatial Development Perspective
SDF: Spatial Development Framework
SPLUMA: Spatial Planning and Land Use Management Act

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 FOREWORD BY EXECUTIVE MAYOR

In the final document

1.2 BACKGROUND

The Municipal Demarcations Board has approved the amalgamation of the former Mbombela and Umjindi Local Municipalities following the request from the Minister of Cooperative Governance that the boundaries of dysfunctional and non-viable municipalities be re-determined with a view to optimising the financial viability of these municipalities.

The amalgamation of these two municipalities necessitates the need for the review and consolidation of the Spatial Development Frameworks in order to form one Spatial Development Framework (SDF) which covers the entire extent of the new municipality.

The enactment of the Spatial Planning and Land Use Management Act (SPLUMA) in 2013, introduced a new planning regime, which also presents the necessity for the reviewed and consolidated Spatial Development Framework to cover the entire municipal area and give effect to the current national spatial planning legislation and policies.

The City of Mbombela (COM) has therefore appointed the Strategic Programmes and Projects Support Unit (SPPSU) to undertake the review of the existing SDF's and preparation of a detailed new SDF which covers the entire extent of its newly declared municipal area.

1.3 LEGAL REQUIREMENTS

Since the mid-1990s, spatial planning has become an integral part of development aimed at redressing the imbalances of the past in South Africa. The Constitution (Schedule 4 Part B) bestows this responsibility on local municipalities. The

formulation of the Spatial Development Framework will be primarily instigated by the following legislation and policy:

- Chapter 4 of the Spatial Planning and Land Use Management Act, 2013; (SPLUMA)
- Chapter 5, Section 26(e) of the Local Government: Municipal Systems Act, 2000; (MSA)
- Chapter 2, Section 4 of the Local Government: Municipal Planning and Performance Management Regulations, 2001; and
- Chapter 2 of the Mbombela By-Law on Spatial Planning and Land Use Management, 2015.

All of the above-mentioned legislation stipulate the extensive introduction to the purpose and role of SDFs, focus, general requirements, content and expectations which are applicable to the preparations of SDFs. The MSA stipulates that one of the core components of municipality's Integrated Development Plan (IDP) is "a spatial development framework which must include the provision of basic guidelines for a land use management system for the municipality".

1.4 GOALS AND OBJECTIVES OF THE SDF

As per the terms of reference the main objective of the project is to review the COM SDF in order to ensure that it gives effect to the following:

- Compliance with the requirements set out in Chapter 4 Part E of SPLUMA
- Give effect to the development principles contained in Chapter 2 of SPLUMA including:
 - I. Spatial Sustainability;
 - II. Efficiency;
 - III. Spatial Resilience; and
 - IV. Good Administration.
- Compliance with the provisions of the MSA and the Municipal Planning and Performance Management Regulations, 2001 as provided for in the SDF guidelines is mandatory.
- Compliance with the provisions of the Municipal Spatial Planning and Land Use Management By-law regarding the procedures and content for the preparation, review and amendment of a municipal SDF is mandatory.

- Establish a strong link between spatial planning proposals and economic potential of the Municipality.

According to the Comprehensive SDF Guidelines the purpose of a municipal SDF is to guide all decisions of a municipality relating to the use, development and planning of land and should have the following key objectives:

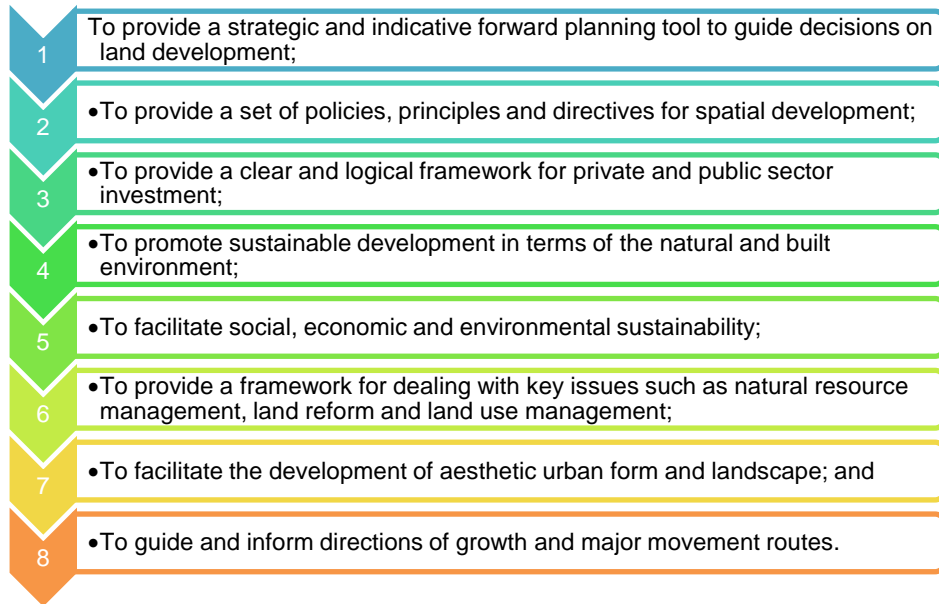


Diagram 1: Key Objectives of an SDF
Source: Derived from SDF Guidelines

1.5 PUBLIC PARTICIPATION AND STAKEHOLDER ENGAGEMENT

A thorough and comprehensive public participation process is critical for the successful preparation of the SDF. The public participation process is in line with the draft Stakeholder Participation Policy for Mbombela Local Municipality, prepared in terms of the MSA (Act 32 of 2000) and the White Paper on Local Government (1998).

The SDF was compiled through the following public participation framework:

To be insetered on completion of public participation processes

- Representation from:
 - City Planning and Development Services
 - Technical Services
 - Office of the Municipal Manager
 - Local Economic Development (LED)
 - Tourism & Trade
 - Corporate Strategy
 - Office of the Executive Mayor

(b) Strategic Programmes and Projects Support Unit (SPPSU)

1.5.2 Project Steering Committee and Intergovernmental Steering Committee

The project Steering Committee consists of representatives of the Project Management Team and the following Sector Departments which form part of the Intergovernmental Steering Committee:

- Mpumalanga Office of the Premier
- Mpumalanga Community Safety, Security and Liaison
- Mpumalanga Co-operative Governance and Traditional Affairs
- Mpumalanga Economic Development, Environmental and Tourism
- Mpumalanga Education
- Mpumalanga Health and Social Development
- Mpumalanga Human Settlements
- Mpumalanga Department of Public Works, Roads and Transport
- Mpumalanga Department of Agriculture, Forestry and Fisheries
- Mpumalanga Department Mineral Resources
- Mpumalanga Department of Water Affairs
- Mpumalanga Department of Rural Development and Land Reform
- Department of Rural Development and Land Reform
- Ehlanzeni District Municipality
- Eskom
- South African National Biodiversity Institute Ehlanzeni Region

1.5.3 Municipal Interested and Affected Parties (I & AP):

- Lowveld Chamber of Business & Tourism
- Rates Payers Association
- National African Federation Chamber of Commerce (NAFCOC)
- Farmers Associations
- Sembcorp Silulumanzi
- Bushbuckridge Water Board

1.5.4 Traditional Authorities

- Gutshwa Traditional Authority;
- Lomshiyo Traditional Authority;
- Masoyi Traditional Authority;
- Mbuyane Traditional Authority;
- Mdluli Traditional Authority;
- Mpakeni Traditional Authority;
- Msogwaba Traditional Authority;
- Nkambeni Traditional Authority.
- Kgarudi Traditional Authority.
- Emjndini Traditional Authority.

1.6 LINK BETWEEN IDP, SDF AND LUMS

In terms of Section 20 of SPLUMA, the SDF is still recognised as part of the IDP, which in terms of the MSA has a varied set of criteria for what an SDF should entail. In terms of Section 20(2) the municipal spatial development framework must be prepared as part of a municipality’s integrated development plan in accordance with the provisions of the Municipal Systems Act.

Section 26 of the MSA indicates that an IDP must reflect a spatial development framework at an equivalent spatial scale to the other components of the IDP. There are therefore strong legislative links between a municipality’s SDF and the resource allocation component of the IDP. The figure below indicates the relationship between the IDP, SDF and LUMS.

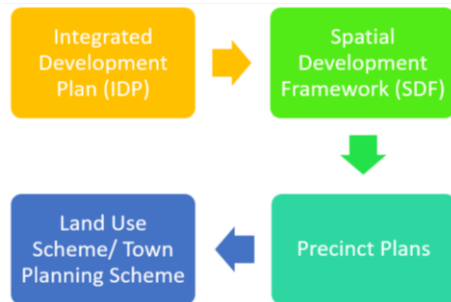


Diagram 2: Link between IDP, SDF and LUMS

In terms of the MSA the SDF is an indicative plan intended to show desired patterns of land use, directions for future growth, indicate the alignment of urban edges and depict special development areas. The impact of the SDF is limited to provide policy to guide and inform land development and management. It does not change or confer real rights on land.

Section 24 of SPLUMA stipulates that a municipality must after public consultation, adopt and approve a single land use scheme for its entire area which must give effect to the municipal spatial development framework and integrated development plan. The land use scheme must give effect to and be consistent with the municipal SDF and determine the use and development of land within the municipal area.

For the SDF to achieve its objectives, it requires the Land Use Management System (town planning scheme or land use scheme) to act as a management tool to implement the strategic plans prescribed by the SDF. In other words, the relationship between the SDF and LUMS is generally that the LUMS will ensure that land uses on the ground are in accordance with the proposals of the SDF.

1.7 SDF REVIEW PLANNING PROCESS

The planning process for reviewing the SDF consists of the following phases:

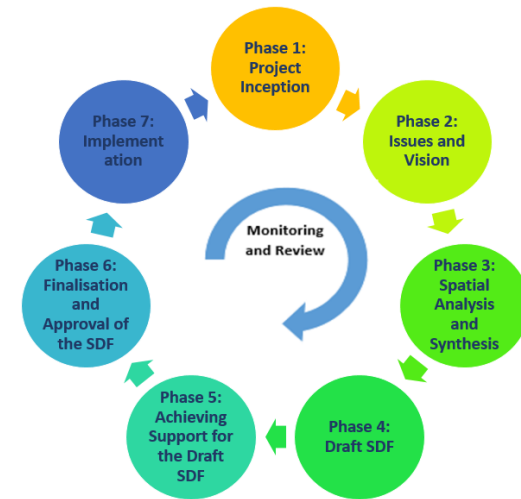


Diagram 3: SDF review phases

Phase 1: Project inception

This phase involves the initial start-up of the project, finalising institutional and political support structures, agreement on the scope of work and the completion of the project plan and inception report.

Phase 2: Issues and Vision

This phase consists of four (4) components:

- Synthesis of the legislative and policy context through considering relevant national and provincial policy directives
- Involve sector departments through discussions on relevant sector plans and policies
- Outlining the spatial directives emanating from the national, provincial and municipal policy review
- Holding an initial discussion with the municipality and other stakeholders on the key spatial issues that need to be addressed

Phase 3: Spatial Analysis and Synthesis

This phase involves the review of the most recent IDP as well as relevant municipal sector plans and surrounding sector in terms of the identified strategic focus and key challenges; analysis of the biophysical environment; analysis of socio-economic environment and the analysis of the built environment.

Phase 4: Draft SDF

This phase entails moving towards the vision aspired through the formulation of a conceptual framework based on the synthesis of the key challenges. This phase also involves the development of spatial strategies which support the spatial concept and are in line with the vision for the municipal area, the development of more detailed proposals for settlements and combining these elements into a composite SDF map and SDF report.

Phase 5: Achieving Support for the Draft SDF

This phase is the stakeholder engagement phase which entails the following:

- Facilitating and convening a specialist discussion and/or focus group meetings to discuss the key sectoral and area based strategies and proposals of the draft SDF.
- Convening a Project Management Team Meeting to discuss project progress and programme.
- Advertising and making the draft SDF publicly available for comments through publishing the draft SDF online and public facilities.

Phase 6: Finalisation and Approval of the SDF

This phase involves refining, updating and finalizing the draft SDF based on stakeholder engagement, preparing a summary brochure, pamphlets or posters of key spatial proposals contained within the SDF report and submission of the final SDF report to council for approval.

Phase 7: Implementation

The implementation phase involves the following key elements:

- Supporting policies: Which entails developing a set of policies that will support the implementation of the spatial proposals as contained within the SDF
- Supporting guidelines: Development of a set of guidelines that will support the implementation of the spatial proposals as contained within the SDF

- Capital Investment Framework: Development of a capital investment framework that identifies priorities, institutional arrangements and implementation requirements

1.8 DOCUMENT STRUCTURE

The SDF document consists of 7 chapters and the purpose of each chapter are briefly discussed below:

Chapter 1: Background and Introduction

This chapter confirms the legitimacy of a SDF, its planning horizon, how it links between the IDP and LUMS, the objectives of the SDF and the institutional framework within which the SDF is compiled.

Chapter 2: Municipal Contextual Overview

A contextual overview familiarises the user of the document with City of Mbombela Local Municipality, its locality, administrative areas, general statistics, and comparative advantages to neighbouring municipalities, its pressing needs and investment priorities.

Chapter 3: Policy Context and Vision Directives

Chapter 3 provides an overview of key policy directives from the relevant strategic policy and legislative frameworks which currently constitutes the national, provincial and local planning agenda that have bearing on the SDF of the City of Mbombela.

A spatial vision which underscores the IDP Vision, identifies IDP strategic Focus Areas and encapsulate the major concerns and opportunities within the city is also developed in chapter 3.

Chapter 4: Spatial Challenges and Opportunities

Chapter 4 provides a strategic spatial analysis in terms of the 3 themes namely; biophysical, socio-economic and built environment analysis. It reveals the factors that influence where and how people settle and organize themselves in space.

This chapter also identifies and synthesises key challenges in terms of what needs to be redressed, addressed and mitigated as well as key opportunities arising.

Important aspects covered in this chapter include the status of Mbombela's natural capital base, population characteristics, travel patterns, migration trends, land ownership and reform, settlement patterns, hierarchy and role of settlements, areas experiencing development pressure, anticipated urban land use demand, vacant land audit, infrastructure and services.

Chapter 5: Spatial Proposals

Chapter 5 develops strategic frameworks for focus areas identified in the Desired Spatial Pattern.

The purpose of these frameworks is to guide development towards certain areas or to steer development away from certain areas.

Chapter 6: Spatial Framework Proposal

Chapter 6 identifies how the spatial form of Mbombela should be shaped to achieve its Spatial Vision and to give effect to the Spatial Principles adopted.

The purpose of Chapter 6 is to:

- Reiterate the structuring elements that dictate the location of development and direction of growth in the municipality (Chapters 3 and 4),
- Develop a Conceptual Framework showcasing basic planning principles,
- Formulate key spatial strategies to assist Mbombela to achieve its spatial vision,
- Develop the Desired Spatial Pattern, being a composite plan of the key spatial strategies.

Chapter 7: Implementation Framework

The purpose of this chapter is to be to provide an overview of the strategic investment focus and how it links back to the spatial strategy and provide an implementation framework comprising of policies, guidelines, and the Capital Expenditure Framework.

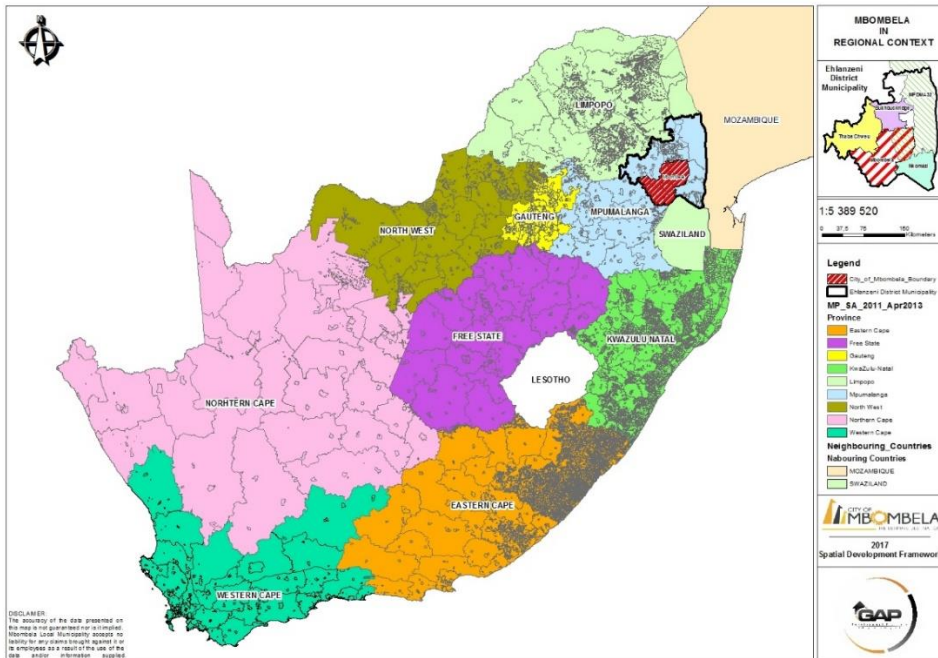
2. CHAPTER 2: MUNICIPAL OVERVIEW

2.1 CONTEXTUAL OVERVIEW

A contextual overview familiarises the user of the document with Mbombela Local Municipality with respect to its locality, administrative areas, general statistics, comparative advantages to neighbouring municipalities, pressing needs and investment priorities.

2.1.1 National and Provincial Context

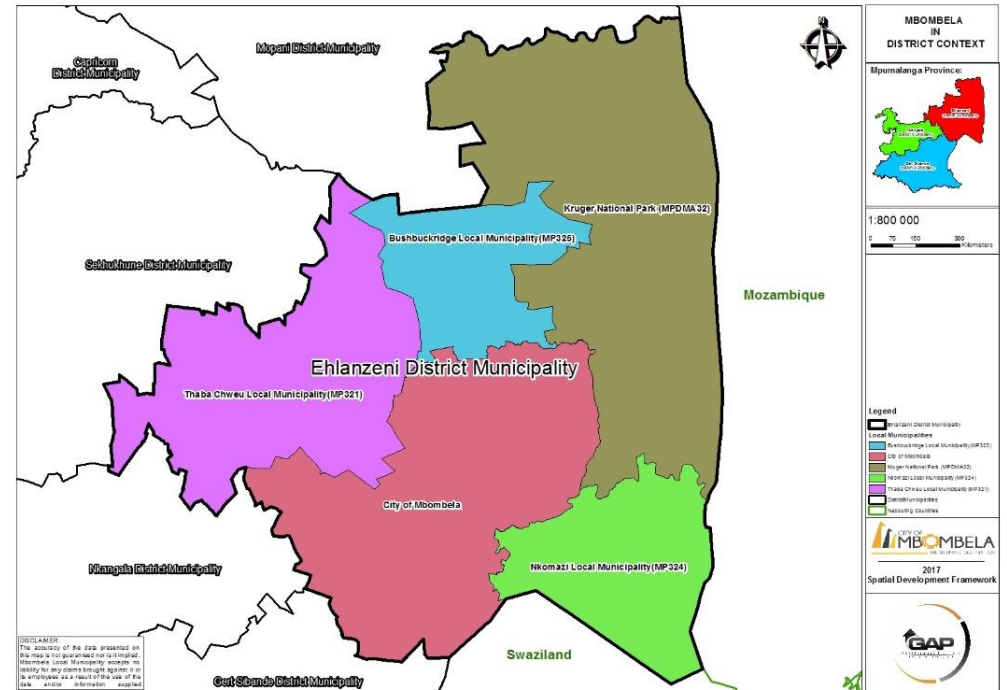
The City of Mbombela is located on the north-east of South Africa in the province of Mpumalanga.



Map 1: COM National and Provincial Context

2.1.2 District Context

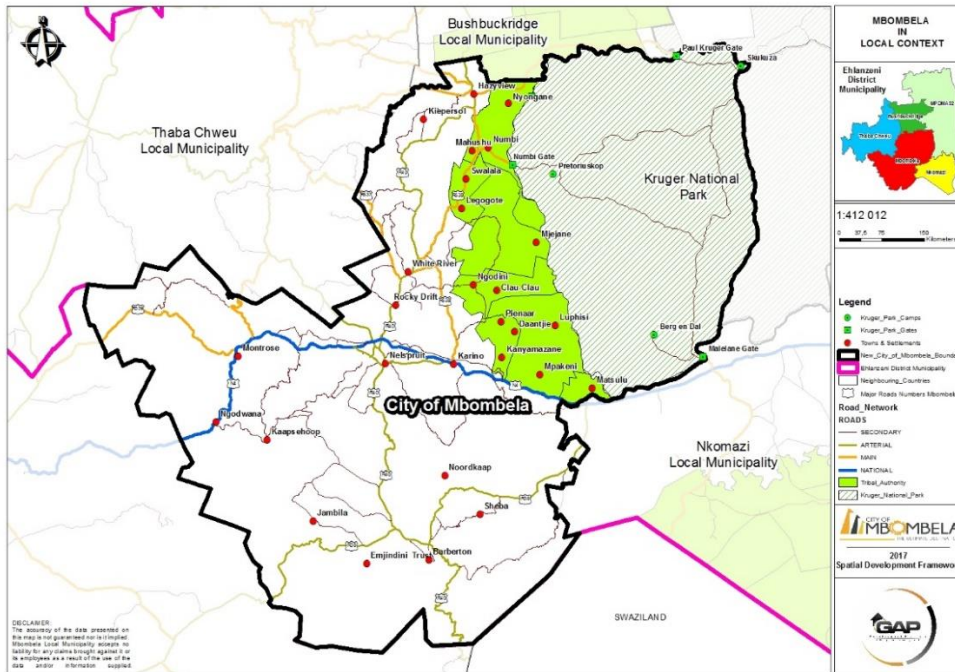
The municipality is located within the Ehlanzeni District Municipality, which is situated in the north-eastern part of Mpumalanga. The Ehlanzeni District Municipality is one of 3 district municipalities constituting Mpumalanga Province as indicated in the figure below.



Map 2: COM District Context

2.1.3 Local Context

The City of Mbombela was formed as a result of the amalgamation of the former Mbombela and Umjindi Local Municipalities and is one of the 4 local municipalities situated within the Ehlanzeni District Municipality. The City of Mbombela is bordered by Swaziland to the south-east.



Map 3: COM Local Context

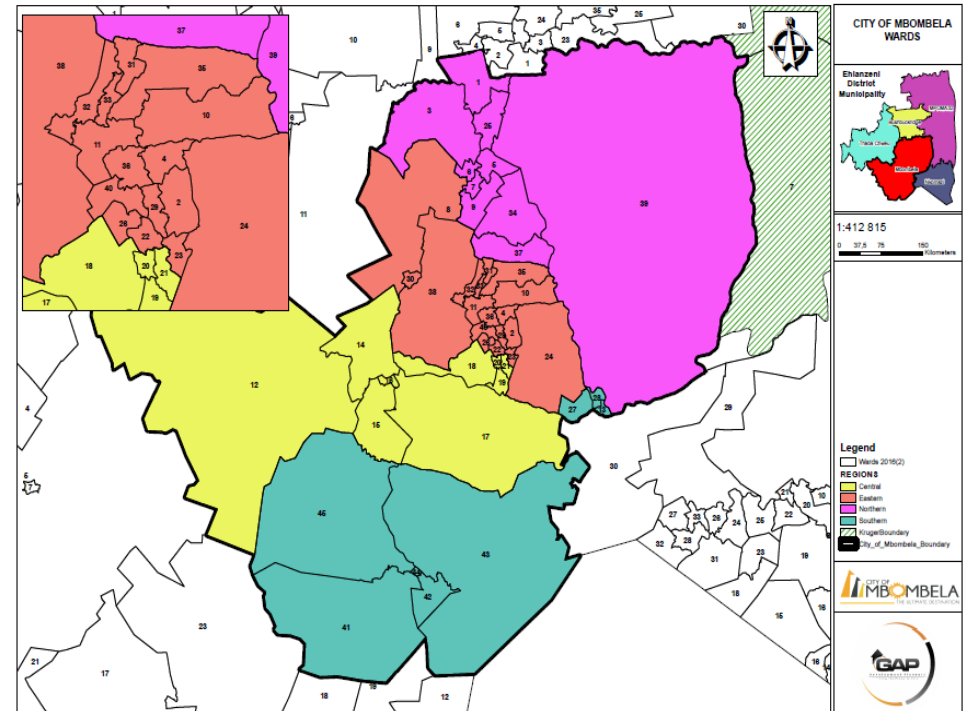
2.1.4 Municipal Regions and Wards

The municipality is divided into four (4) regions namely, Northern Region, Eastern Region, Central Region and the Southern Region. These municipal regions are based on the latest ward delineation and the amalgamation of the former Umjindi and Mbombela. The municipality consists of 45 wards and the wards for each region are summarized in the table below:

Table 1: COM regions and wards

No.	Municipal Regions	Wards
1	Central Region (Mbombela, Kanyamazane, Pienaar, Daantjie, Nelsville, Mataffin, Elandshoek)	12,14,15,16,17, 2, 4, 22, 23, 24, 26, 29 & 40, 18, 19, 20, 21,

2	Northern Region (Hazyview)	1, 3, 5, 6, 7, 8, 9, 25, 37 & 39
3	Eastern Region (Nsikazi, White river, Kabokweni, Malekutu)	10,11,30, 38, 31,32,33, 34, 35,36
4	Southern Region (Barberton, Lows creek, Matsulu)	13, 27, 28, 41, 42, 43, 44 & 45



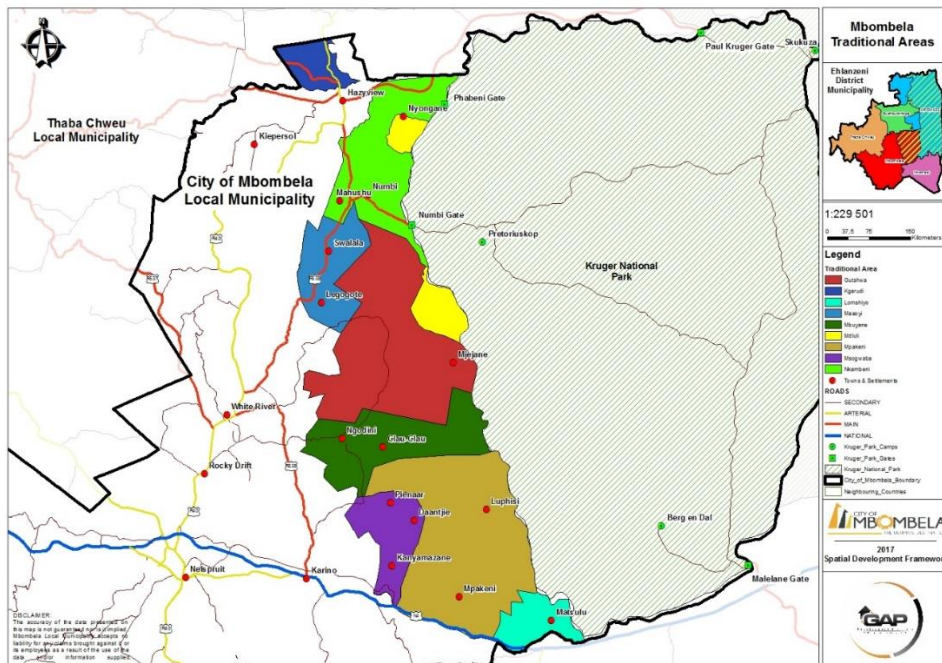
Map 4: COM Ward and Region Boundaries

2.1.5 Traditional Authorities

The Municipality consist of 10 Traditional Authorities Sited in the Southern, Northern and Eastern Regions as follows:

- Gutshwa Traditional Authority
- Lomshiyo Traditional Authority

- Masoyi Traditional Authority
- Mbuyane Traditional Authority
- Mdluli Traditional Authority
- Mpakeni Traditional Authority
- Msogwaba Traditional Authority
- Nkambeni Traditional Authority
- Kgarudi Traditional Authority
- Emjindini Traditional Authority



Map 5: COM Traditional Authority Areas

2.2 CITY OF MBOMBELA PROFILE

According to Community Survey 2016 results which is based on the 2016 municipal boundaries, the Mbombela municipal area had a total population of 695 913. This population constitutes 39.6% of the entire population of Ehlanzeni District. Between 2011 and 2016, an annual population growth rate of 1.2% was observed within the

municipal area. The number of households is estimated to be 182 028. A brief profile of the City of Mbombela is presented in the table here under:

Table 2: COM Profile

Area of Jurisdiction	7139 km ²
Population	695 913
Population Density	0.92 people\ha
Population Growth Rate	1.2% (between 2011 and 2016)
No of Households	182 028
Human Development Index (HDI) (district)	0.483
Urban Nodes	Mbombela, White River, Rocky Drift, Matsulu, Kanyamazane, Kabokweni, Hazyview, Barberton
Traditional Authorities	10
Wards	45
Operating Budget	R2.800 billion
Capital Budget	R631 million.
Total Budget	R2.213 billion

COM has high-quality infrastructure which includes an international airport (KMIA), Mbombela Soccer Stadium, University of Mpumalanga Main Campus, Provincial offices, railway links to Zimbabwe, Mozambique, Swaziland and the rest of South Africa as well as the N4 Maputo Corridor between Gauteng and the deep-sea port of Maputo.

2.3 CITY OF MBOMBELA CURRENT SITUATION (DIAGNOSTIC STUDY)

Against the backdrop of the national and provincial policy frameworks including the National Development Plan and the Integrated Urban Development Framework, as well as against the successful cities frameworks, a comprehensive diagnostic study

under the vision 2030 strategy was undertaken to appreciate the current situation, assess the development dynamics and identify the key implications for change.

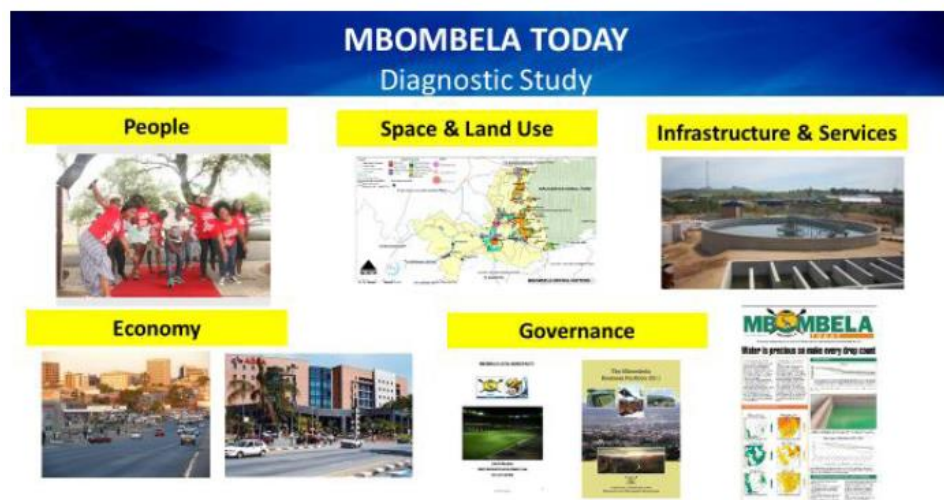


Figure 1: COM Vision 2030 Diagnostic Themes

Source: COM Vision 2030 Diagnostic Report

The key issues identified from the diagnostic study can be briefly summarized as follows:

(a) The people – demographics

The current population of the COM is estimated at 729 464 (this is the combined number for the former Mbombela and Umjindi local municipalities projected from 2010 to 2015). The challenges lie in the levels of skill and qualifications of the population which are fairly low. This will pose a serious problem for the future economic trajectory as skills will have to be built to suit the economic path and in the short-term skills will have to be brought in from skilled areas. COM's population growth of 2.11% per annum is unsatisfactory when compared to the average economic growth of 1% between 1995 and 2013. This means that the population has been growing poorer and it undermines the future of the city.

(b) Space and Land Use (Spatial Transformation)

The current spatial structure of the City of Mbombela as a whole is highly inequitable and inefficient with many settlements dislocated from the economic centres. The larger portion of COM's population live in peri-urban and rural areas. About 70% of the people live within communal areas on the eastern axis of the City which is far from the economic centres.

(c) The Economy & City Performance (Investment, Economic Growth and Employment)

One of the most critical issues for the COM is job creation and low economic growth. According to the 2011 Census data unemployment is at 28% and the economy has been growing at a relatively low rate.

(d) Delivery of Services and Infrastructure

All services require infrastructure in order to be delivered. The current infrastructure is limited and unable to service all citizens. The available infrastructure is old and requires upgrading. In the meantime, some citizens have to survive on the fringes of society and many are reduced to beggars or appropriate services for themselves without permission, acting outside the law. This undermines sustainability and legitimacy of the municipality.

2.4 PRESSING NEEDS AND PRIORITY ISSUES

In terms of the IDP 2011-2016 and the Mbombela Strategic Risk Assessment Report 2011, the pressing needs for the COM are summarized as follows:

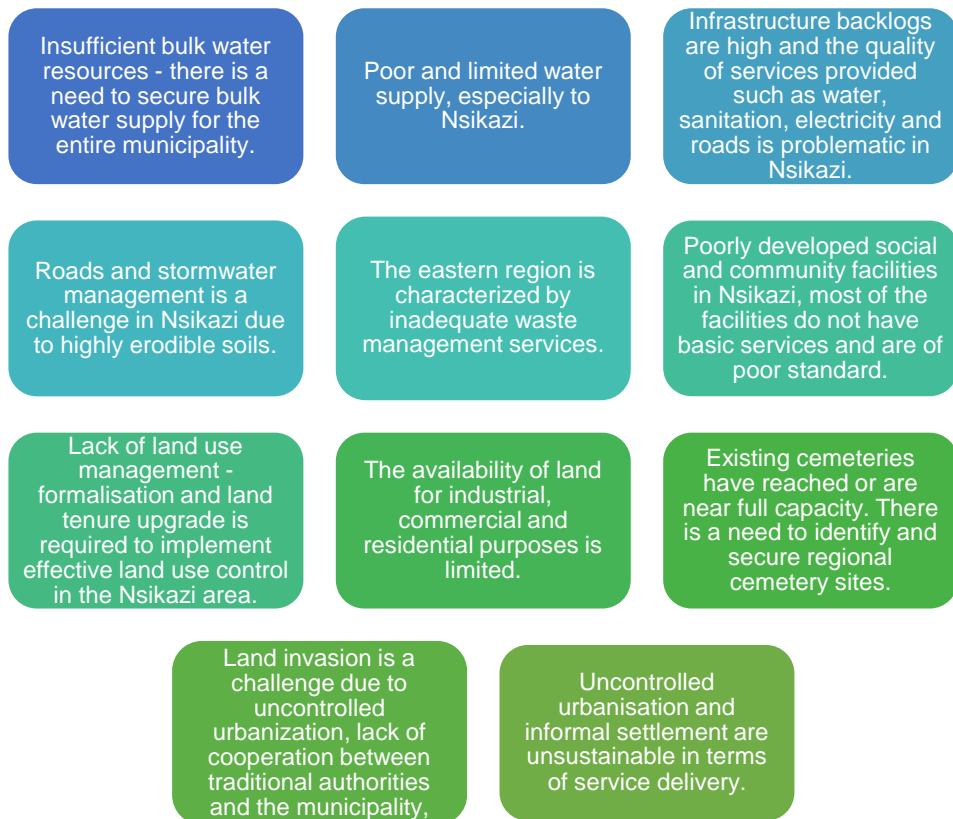


Diagram 4: Pressing needs in COM

2.4 DEVELOPMENT PRIORITIES

This section seeks to uncover whether there is a link between the pressing needs identified above and development priorities identified in the draft IDP 2017-2022 and the Consolidated Budget and Medium-Term Revenue and Expenditure Framework 2016/2017 – 2018/2019

The COM has identified fourteen (14) development priorities in the IDP 2017-2022:

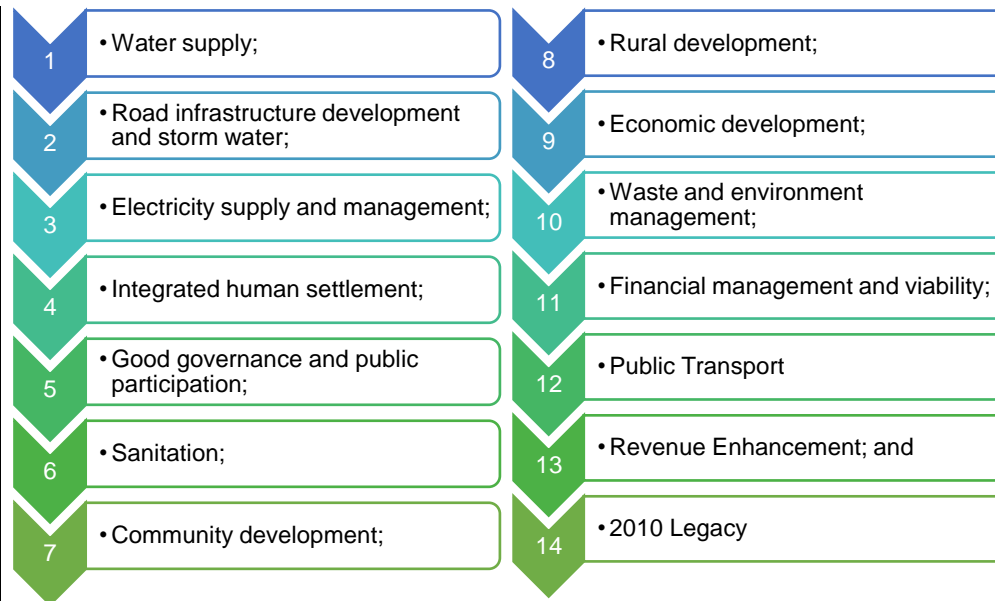


Diagram 5: COM fourteen (14) development priorities

2.4 MUNICIPAL SPENDING AND INVESTMENT PRIORITIES

This section seeks to uncover whether there is a link between the pressing needs and the development priorities identified above with the municipal spending & investment priorities identified in the 2016/2017 – 2018/2019 Consolidated Budget and Medium-Term Revenue and Expenditure Framework (MTREF). The approved total budget of the City of Mbombela will amount to R3 427 billion in 2016/2017 financial year and increases over the medium-term to R3 723 billion in 2018/2019 financial year. The total budget of R3 427 billion for 2016/2017 financial year encompasses of operating expenditure budget of R2 676 billion and capital expenditure budget of R751 million.

Table 3: Development priorities budget allocation

MUNICIPAL PRIORITY	Sum of 2016/2017 BUDGET ESTIMATE	Sum 2017/2018 BUDGET FORECAST	Sum of 2018/2019 BUDGET FORECAST	Total medium-term budget	% Allocation
Community Development	R 52 911 830	R 80 702 804	R 88 195 955	R 221 810 589	10.02
Economic Development	R 49 424 035	R 57 418 965	R 47 843 061	R 154 686 061	6.99
Electricity supply management	R 23 498 485	R 12 466 526	R 112 360	R 36 077 371	1.63
Financial management	R 11 824 124	R 13 000 000	R 9 490 800	R 34 314 924	1.55
Good Governance and Institutional Development	R 27 070 500	R 30 156 401	R 44 316 908	R 101 543 809	4.59
Integrated Human Settlement	R 2 000 000	R 3 000 000	R 4 000 000	R 9 000 000	0.41
Public Transport	R 146 115 599	R 135 500 000	R 143 400 000	R 425 015 599	19.20
Revenue Enhancement	R 7 601 254	R 10 834 831	R 4 158 552	R 22 594 637	1.02
Roads and Storm Water Management	R 131 852 667	R 104 500 000	R 101 356 807	R 337 709 474	15.26
Sanitation	R 43 065 152	R 29 041 171	R 30 333 826	R 102 440 149	4.63
Waste and Environment Management	R 7 650 000	R 15 470 567	R 21 411 726	R 44 532 293	2.01
Water Supply	R 248 705729	R 257 327 517	R 217 825 970	R 723 859 216	32,70
Total	R 751 719 375	R 749 418 782	R 712 445 965	R 2 213 584 122	100.00

Source: Medium Term Revenue and Expenditure Framework 2016/2017

3. CHAPTER 3: POLICY CONTEXT AND VISION DIRECTIVES

The SDF for COM represent the key spatial policy position for the municipality. Therefore, it should reflect the intent and principles of broader spatial policy and legislative initiatives in other spheres of government. This chapter provides a summary overview and analysis of key policy directives from the relevant strategic policy and legislative framework which currently constitute the national, provincial and local planning agenda.

3.1 LEGISLATIVE FRAMEWORK

The key pieces of legislation that have been reviewed and have a bearing on the SDF of Mbombela include but are not limited to the following:

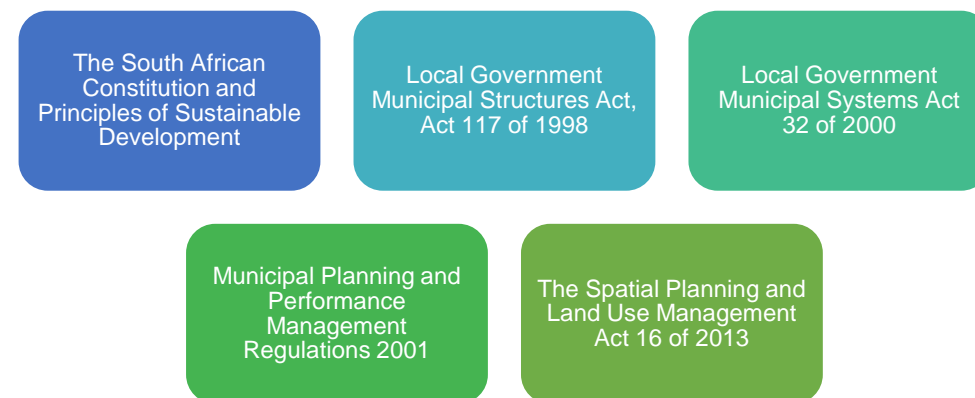


Diagram 6: Key legislation that has a bearing on the SDF of Mbombela

3.1.1 The Constitution of the Republic of South Africa 1996 (Act 108 of 1996)

Part of the Constitution is dedicated to defining the role and function of government at national, provincial and local level.

Part B of Schedule 4 identifies municipal planning as a local governmental matter. Aspects influencing spatial planning are local tourism, municipal airports, municipal health services, and municipal public transport, water and sanitation services.

Part B of Schedule 5 does not specifically mention any planning function but identifies the aspects of cemeteries, municipal parks and recreation, public places, municipal roads, traffic and parking, which have an influence on spatial planning.

3.1.2 Local Government Municipal Structures Act (Act 117 of 1998)

The Municipal Structures Act, 1998 (MSA) assigns and divides powers to and between district and local municipalities.

The MSA requires that local municipalities “must seek to achieve integrated, sustainable and equitable social and economic development of its area as a whole”. Powers and functions assigned to Local Municipalities includes, inter alia:

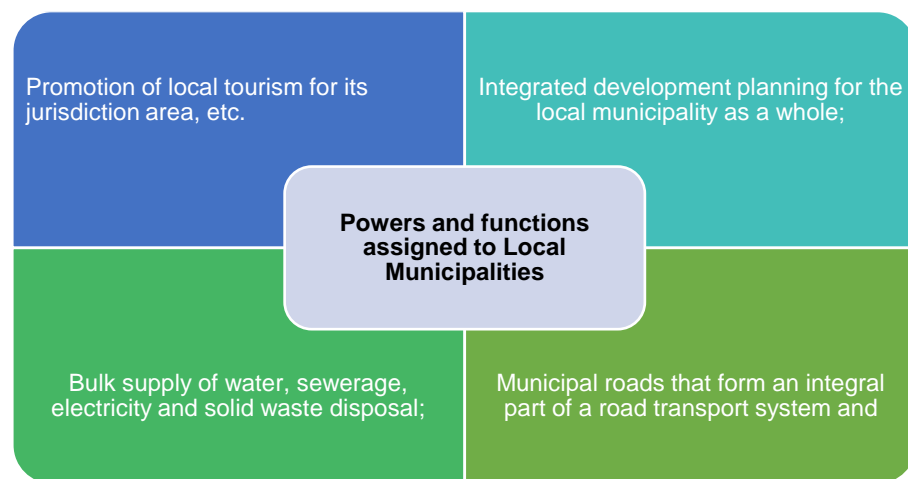


Diagram 7: Powers and functions assigned to Local Municipalities

The aforementioned powers and exercising of such powers by the City of Mbombela have an impact on the spatial development pattern of the local municipal area and district municipal area. Horizontal (between local municipalities) and vertical alignment (between district and local municipalities) are therefore essential in reviewing the SDF.

3.1.3 Local Government Municipal Systems Act (Act 32 of 2000)

The Local Government Municipal Systems Act (MSA) first introduced the concept of the Municipal Spatial Development Frameworks as a component of the mandatory Integrated Development Plan (IDP) that every municipality must adopt.

Section 26(e) of the MSA stipulates that the local municipality should prepare a SDF which must include basic guidelines for a Land Use Management System (LUMS) as part of the IDP. The SDF shall act as a forward plan that illustrates the intended nature of spatial development and shall take precedence over any other plan approved by the Municipality. Furthermore, the SDF shall be the first point of reference for decision-makers when seeking guidance on specific land development issues.

In 2001 the Minister of Provincial and Local Government issued the Local Government Municipal Planning and Performance Management Regulations. In terms of Section 4 of the Regulations the SDF is required to:

- Set out objectives that reflect desired spatial form of the municipality;
- Contain strategies and policies regarding the manner in which to achieve the objectives which must:
- Indicate the desired pattern of land use and
- Indicate the direction of growth;
- Provide strategic guidance in respect to location and nature of development;
- Set out basic guidelines for a land use management system;
- Set out a capital investment framework for development programmes;
- Incorporate a strategic assessment of the environmental impact of land within the municipality;
- Identify programmes and projects for development of land within the municipality;
- Be aligned with neighbouring municipal SDF's;
- Provide visual representation of the desired spatial form which:
 - must indicate areas in which the intensity of land development:

- could be either increased or reduced;
- must indicate desired and undesired utilisation of land in an area;
- indicate conservation of both the built and natural environment;
- must indicate where public and private land development and infrastructure investment should take place;
- may delineate the urban edge;
- must identify areas where strategic intervention is required; and
- must indicate where priority spending is required.

3.1.4 The Spatial Planning and Land Use Management Act (Act 16 of 2013)

The Spatial Planning and Land Use Management Act, 2013 (SPLUMA) is a framework act for all spatial planning and land use management legislation in South Africa. It seeks to promote consistency and uniformity in procedures and decision-making. Other objectives include addressing historical spatial imbalances and the integration of the principles of sustainable development into land use and planning regulatory tools and legislative instruments.

SPLUMA requires national, provincial, and municipal spheres of government to prepare SDF's that establish a clear vision which must be developed through a thorough inventory analysis based on national spatial principles and local long-term development goals and plans.

Chapter 4 Part E of SPLUMA sets out the focus and general requirements that must guide the preparation and compilation of the municipal SDF. Section 21 sets out the general components of municipal SDF. These provisions require that municipal SDFs must:

- Give effect to the development principles and applicable norms and standards set out in Chapter 2;
- Include a written and spatial representation of a five-year spatial development plan for the spatial form of the municipality;
- Include a longer term spatial development vision statement which includes a desired spatial growth and development pattern for the next 10 to 20 years;
- Identify current and future significant structuring and restructure elements including economic nodes, development corridors, etc.;
- Include population growth estimates for the next five years;

- Include estimates of the demand for housing units across different socio-economic categories;
- Include estimates of economic activity and employment trends;
- Identify, quantify and provide locations requirements of engineering infrastructure and services provision for existing and future development needs;
- Identify the designated areas where national or provincial inclusionary housing policy may be applicable;
- Include strategic assessment of the environmental pressure and opportunities within the municipal area;
- Identify the designation of areas in the municipality where incremental upgrading approaches to development and regulations will be applicable;
- Identify the designation of area in which more detailed local plans must be developed and shortened land use development procedures may be applicable;
- Provide the spatial expression of the coordination, alignment and integration of sectoral policies of all municipal departments;
- Determine a capital expenditure framework for the municipality's development programmes, depicted spatially; and
- Determine the purpose, desired impact and structure of the land use management scheme to apply in that municipal area including an implementation plan.

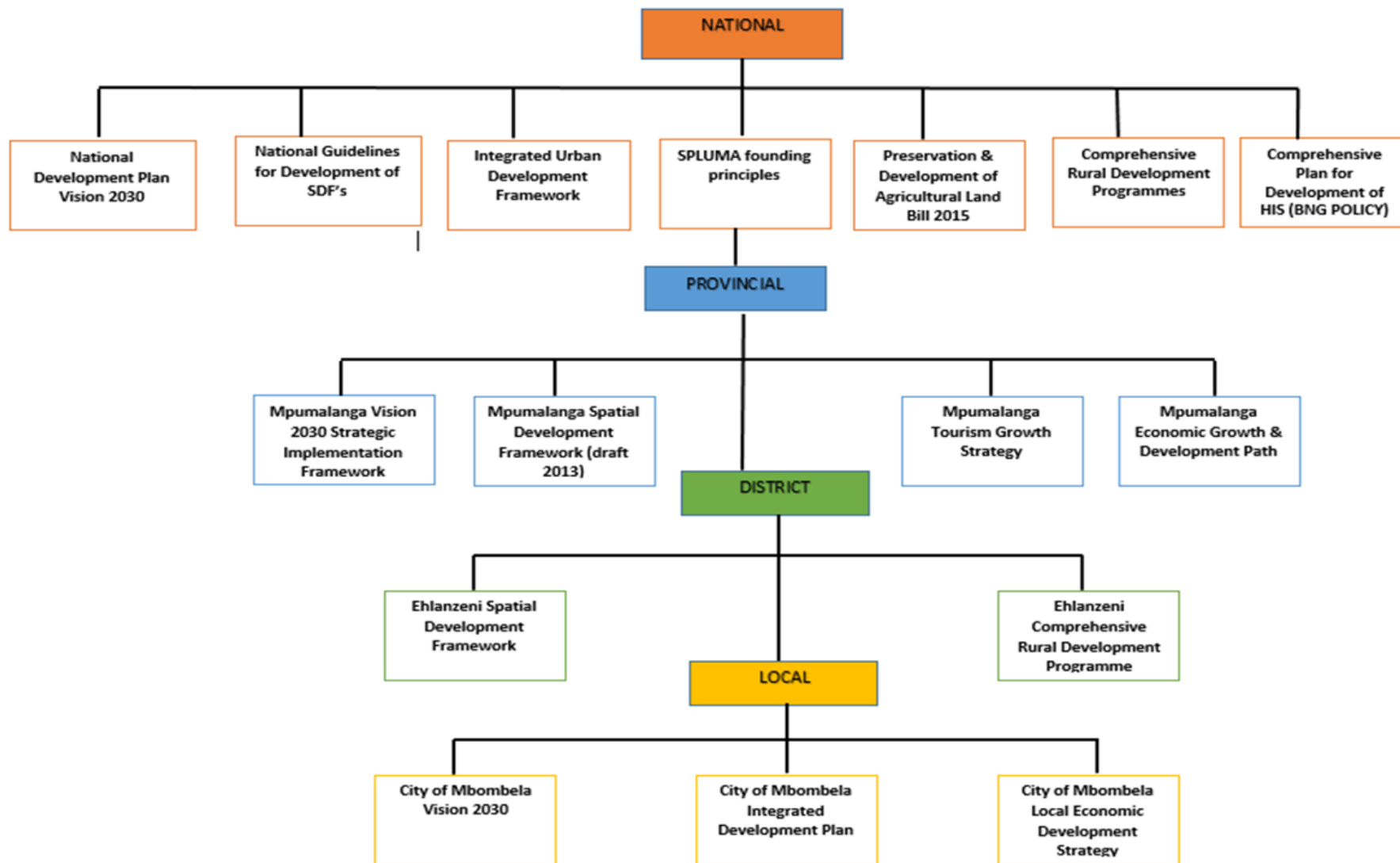


Diagram 8: Policy Alignment

3.2 NATIONAL POLICY OBJECTIVES

The City of Mbombela Spatial Development Framework must align with the following key national policies and strategies:

3.2.1 The National Development Plan - Vision 2030

The National Development Plan 2030 provides a policy framework that looks beyond current constraints confronting the nation to the transformation imperatives that are needed to support accelerated economic growth over the next 20 to 30 years, focussing specifically on addressing poverty and reducing inequality.

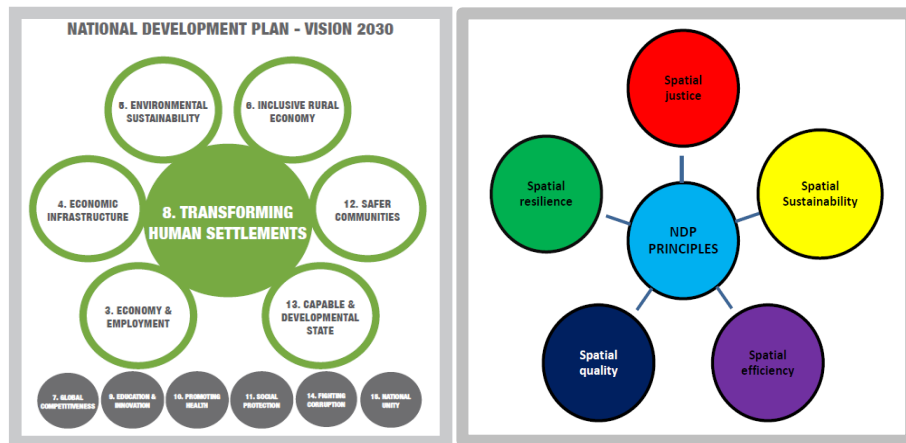


Figure 2: The key spatial directive chapters & principles of the NDP

Source: SDF guidelines

A number of key spatial principles are outlined in Chapter 8 of the NDP, 'Sustainable Human Settlements'. They included spatial justice, spatial resilience, spatial sustainability, spatial efficiency and spatial quality.

Of specific reference to the SDF review are the NDP's human settlement targets, as set out in Chapter 8, focuses on transforming human settlements and the national space economy. They include: more people living closer to their places of work; better quality public transport; and more jobs in proximity to townships.

To achieve these targets the NDP advocates strong measures to prevent further development of housing in marginal places, increased urban densities to support public transport, incentivising economic activity in and adjacent to townships; and engaging the private sector in the gap housing market. Chapter 8, which focuses on the country's spatial planning system, requires that:

- all municipal and provincial SDFs are translated into 'spatial contracts that are binding across national, provincial and local governments';
- the current planning system should 'actively support the development of plans that cross municipal and even provincial boundaries', especially to deal with biodiversity protection, climate-change adaptation, tourism and transportation; and
- every municipality should have an 'explicit spatial restructuring strategy' which must include the identification of 'priority precincts for spatial restructuring'.

3.2.2 National Guidelines for the Development of Provincial, Regional and Municipal Spatial Development Frameworks, 2015

With the enactment of the Spatial Planning and Land Use Management Act (SPLUMA) in 2013, a new planning regime was introduced in South Africa.

The SDF guidelines take its point of departure from SPLUMA's requirements and stipulations for the preparation of SDFs while aiming to incorporate SPLUMA's founding spatial principles into the SDF preparation process. The guidelines serve to clarify the roles and responsibilities of the City of Mbombela in the preparation and review of its SDF.

The guidelines also align the preparation of different kinds of SDFs with achievement of the National Development Plan's (NDP) spatial outcomes. In addition, they provide a framework for evaluating the effectiveness of SDFs as a spatial transformation instrument.

3.2.3 The Integrated Urban Development Framework

The IUDF marks a New Deal for South African cities and towns. It sets a policy framework to guide the development of inclusive, resilient and liveable urban

settlements, while addressing the unique conditions and challenges facing South Africa's cities and towns. It advocates the effective management of urbanisation so that the increasing concentration of an economically active population translates into higher levels of economic activity, greater productivity and higher rates of growth, thereby transforming our South African cities into engines of growth.

The IUDF's overall outcome is spatial transformation which marks a New Deal for South African cities and towns, by steering urban growth towards a sustainable growth model of compact, connected and coordinated cities and towns. To achieve this transformative vision, the following four overall strategic goals are introduced:

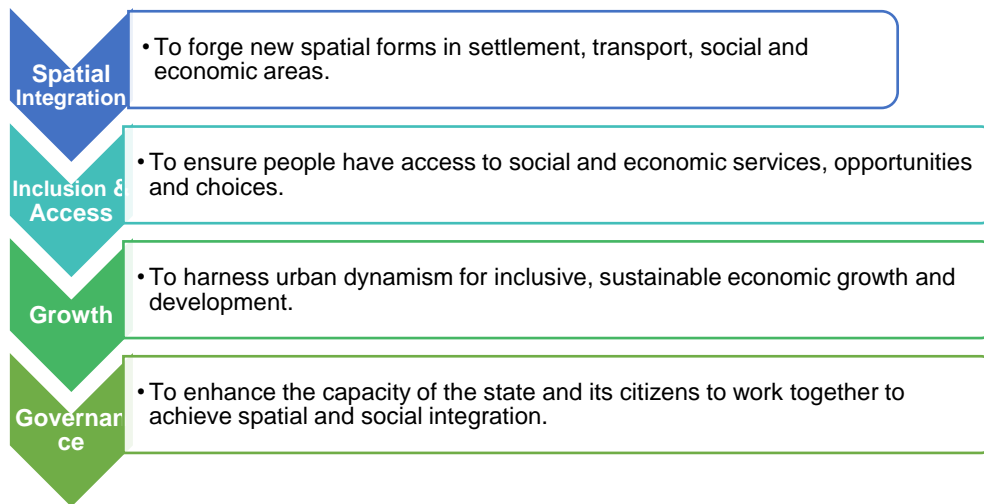


Diagram 10: IUDF Strategic Goals

Source: *Integrated Urban Development Framework*

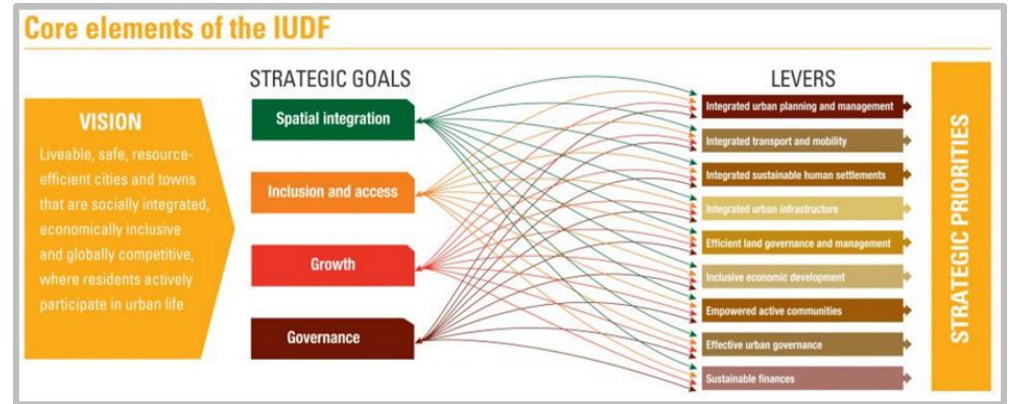


Figure 3: Vision and core elements of the Integrated UDF

Source: *Integrated Urban Development Framework*

These strategic goals inform the priority objectives of the following nine policy levers:

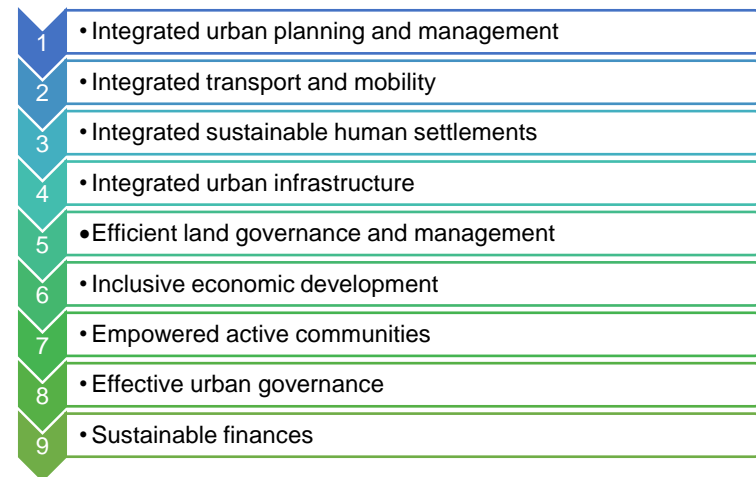


Diagram 11: IUDF Policy Levers

Source: *Integrated Urban Development Framework*

These policy levers are premised on the understanding that (1) integrated urban planning forms the basis for achieving integrated urban development, which follows a specific sequence of urban policy actions: (2) integrated transport that informs (3) targeted investments into integrated human settlements, underpinned by (4) integrated infrastructure network systems and (5) efficient land governance, which all together can trigger (6) economic diversification and inclusion, and (7) empowered communities; all of the above will demand effective (8) governance and (9) financial reform to enable and sustain these policy actions. The levers thus seek to address in combination the structural drivers that maintain the status quo.

3.2.4 SPLUMA Founding Principles

Chapter 2 of SPLUMA sets out the development principles that must guide the preparation, adoption and implementation of any spatial development framework, policy or by-law concerning spatial planning and the development or use of land. SPLUMA reinforces and unifies the NDP's vision and policies in respect of using spatial planning mechanisms to eliminate poverty and inequality while creating conditions for inclusive growth by seeking to foster a high-employment economy that delivers on social and spatial cohesion.

The five founding principles as set out in Section 7 (a) to (e) of SPLUMA that apply throughout the country and to all SDFs scales:



Diagram 12: SPLUMA Spatial Planning Principles

Source: SPLUMA

- **Spatial Justice:** past spatial and other development imbalances must be redressed through improved access to and use of land by disadvantaged communities and persons.
- **Spatial Sustainability:** spatial planning and land use management systems must promote the principles of socio-economic and environmental sustainability through; encouraging the protection of prime and unique agricultural land; promoting land development in locations that are sustainable and limit urban sprawl; consider all current and future costs to

all parties involved in the provision of infrastructure and social services so as to ensure for the creation of viable communities.

- **Efficiency:** land development must optimise the use of existing resources and the accompanying infrastructure, while development application procedures and timeframes must be efficient and streamlined in order to promote growth and employment.
- **Spatial Resilience:** securing communities and livelihoods from spatial dimensions of socio-economic and environmental shocks through mitigation and adaptability that is accommodated by flexibility in spatial plans, policies and land use management systems.
- **Good Administration:** all spheres of government must ensure an integrated approach to land use and land development and all departments must provide their sector inputs and comply with prescribed requirements during the preparation or amendment of SDFs. This principle is the fulcrum of this framework largely because implementation of the spatial planning vision and objectives is not only highly dependent upon a strong coordinating role of central government, but is also predicated upon good governance mechanisms, incorporating meaningful consultations and coordination with a view to achieving the desired outcomes across the various planning spheres and domains.

3.2.4 The Preservation and Development of Agricultural Land Draft Bill, 2015

The Department of Agriculture, Forestry and Fisheries has introduced a draft bill for Preservation and Development of Agricultural Land. The purpose of the Draft Preservation and Development of Agricultural Land Bill is to promote the preservation and sustainable development of agricultural land in South Africa. The Draft Bill also aims to provide for the demarcation of protected agricultural areas and to introduce measures to discourage land use changes from agriculture to other forms of development.

Section 3 of the Bill require that planning authorities including municipalities to designate agricultural land as defined in this Act; ensure that agricultural land is protected against negative impacts from adjacent non-agricultural land uses and adhere to and ensure that farming systems are viable and resilient; in accordance

with the demarcations and guidelines developed by the Minister and or MEC, as amended from time to time.

3.2.4 Comprehensive Rural Development Programme

The vision of the Comprehensive Rural Development Programme (CRDP) is to create vibrant, equitable and sustainable rural communities with a view to contributing to the redistribution of 30% of the country's agricultural land; improving food security of the rural poor; creation of business opportunities, decongesting and rehabilitation of over-crowded former homeland areas; and expanding opportunities for women, youth, people with disabilities and older persons who stay in rural areas.

The first leg of the strategy is to ensure that economic and social infrastructure development takes place in South Africa's rural communities. This will be done through a proactive strategy of upgrading infrastructure, some of which would also serve as a tool of social transformation, by providing roads, electricity, water and telecommunications to support sustainable economic development.

Types of projects and priorities cited include, but are not limited to the following:

1. Agrarian transformation:

- Livestock farming and related value chain development (exploring all possible species for food and economic activity); and
- Cropping and related value chain development (exploring all possible species, especially indigenous plants, for food economic activity).

2. Rural development:

- The establishment of business initiatives, agro-industries, cooperatives, cultural initiatives and vibrant local markets in rural settings;
- The empowerment of rural communities, especially women and the youth, through facilitating and mediating strong organisational and institutional capabilities and abilities to take full charge of their collective destiny;
- Capacity building initiatives, where rural communities are trained in technical skills, combining them with indigenous knowledge to

mitigate community vulnerability to, especially climate change, soil erosion, adverse weather conditions and natural disasters, hunger and food insecurity; and

- Revitalisation and revamping of old, and the creation of new economic, social and information communication infrastructure and public amenities and facilities in villages and small rural towns.
- The CRDP holds perhaps the most promise for rural areas in that it has clearly defined principles of intervention and support from which areas like Mbombela are eligible to benefit.

3.2.5 Comprehensive Plan for the Development of Integrated Sustainable Human Settlements (Breaking New Ground/BNG) 2004

The focus of the BNG policy is to change the delivery of housing at scale, to ensure that housing delivery results in the creation of sustainable human settlements.

Within the broader vision, the department aims at achieving the following specific objectives:



Diagram 13: Breaking New Ground Objectives

Source: BNG Policy 2004

3.3 PROVINCIAL POLICY OBJECTIVES

The City of Mbombela SDF must align with the following key provincial policies and strategies:

3.3.1 Mpumalanga Vision 2030 Strategic Implementation Framework

The Mpumalanga Vision 2030 Strategic Implementation Framework (2013-2030) is established as a direct implementation response to the National Development Plan Vision 2030. It seeks to present and affirm the province's approach towards realising the adopted and articulated national vision and development plan. The decision to develop a long term strategic implementation framework emanates from the desire within the Mpumalanga Provincial Government to ensure that the Province and other stakeholders work with common purpose for the development of the province and all of its constitutive geographical areas. The Mpumalanga Vision 2030 proposes the following nine (9) key drivers for spatial development which will transform the spatial pattern of the province through integrated, socially cohesive and economically inclusive development:

Key Driver 1	• Corridor and Nodal Development
Key Driver 2	• Business, Commercial and Industrial Development
Key Driver 3	• Tourism Development
Key Driver 4	• Forestry Development
Key Driver 5	• Agricultural Development
Key Driver 6	• Mining and Energy Related Development
Key Driver 7	• Urban Development
Key Driver 8	• Rural Development
Key Driver 9	• Environmental Management and Conservation

Diagram 14: Mpumalanga Vision 2030 Key Drivers for Spatial Development

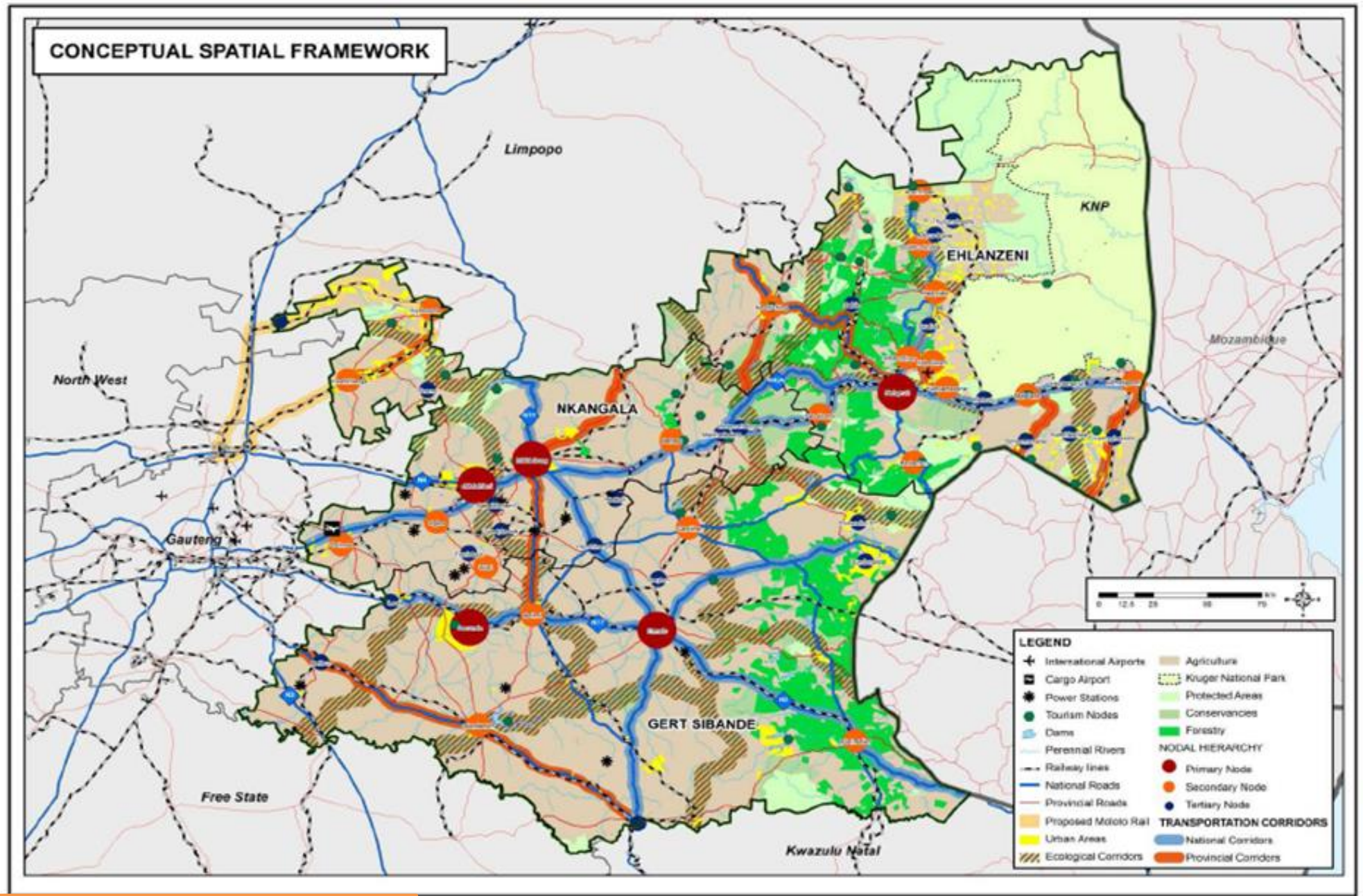
3.3.2 Mpumalanga Spatial Development Framework

The Mpumalanga Spatial Development Framework (MSDF) is an indicative framework that promotes, clarifies and refines the spatial development principles and development priorities supported by the relevant policies and legislations such as the National Development Plan and the Mpumalanga Vision 2030 and define the desired spatial form of Mpumalanga.

The MSDFs aim is to guide specific decision regarding the spatial development and arrangement, within and between settlements, and to guide investment and development spending. A set of interrelated strategic development objectives provide the foundation for the spatial development strategies for Mpumalanga supporting the Spatial Indicative Framework. Ten strategic objectives were identified providing Strategic Focus Areas (Areas of Intervention on provincial, district and local level).

Strategic Objective 1	• Capitalise on the regional spatial development initiatives
Strategic Objective 2	• Focus development on development corridors and nodes
Strategic Objective 3	• Protect biodiversity and agricultural resources
Strategic Objective 4	• Economic development and job creation supporting and guiding the spatial development pattern of Mpumalanga
Strategic Objective 5	• Accommodating urbanisation within the province
Strategic Objective 6	• The integration of the historically disadvantaged communities into a functional nodal and settlement pattern
Strategic Objective 7	• Tenure Upgrading
Strategic Objective 8	• Promote the development of rural areas that can support sustainable economic, social and engineering infrastructure
Strategic Objective 9	• Infrastructure Investment
Strategic Objective 10	• The development of Metropolitan Areas

Diagram 15: MSDF Strategic Focus Areas



Map 6: Mpumalanga Spatial Development

3.3.3 Mpumalanga Tourism Growth Strategy

The aim of the strategy is to elaborate a framework to guide tourism initiatives and development. The ultimate objective is to attain sustainable benefits for the people of Mpumalanga by creating additional economic activity.

The strategy proposes the implementation of the following ten initiatives:



Diagram 16: Mpumalanga Tourism Growth Strategy Initiatives

The implementation of the above initiatives is expected to increase spending in the province from international and domestic tourists and to create new job opportunities in the tourism sector.

The foundations of Mpumalanga's diversified tourism product (wildlife & nature tourism, activity & adventure tourism, resort tourism, sports tourism, residential tourism, conference & meetings, leisure/entertainment, industrial & township tourism, coupled with the increasing interest in the Province's cultural heritage) were initiated in 2007 with a ten year tourism growth strategy and plan.

The foundations of this plan impact on Mbombela in the following manner:



Diagram 17: The Impact of the 10-year Tourism Growth Strategy on Mbombela

3.3.4 Mpumalanga Economic Growth and Development Path

The primary objective of the Mpumalanga Economic Growth and Development Path (MEGDP) is to foster economic growth that creates jobs, reduce poverty and inequality in the Province. The growth path is anchored on a number of parameters including sector development, Inclusive & shared growth, spatial distribution, regional integration, sustainable human development and environmental sustainability.

The Growth path identifies five job drivers and the above-mentioned opportunities will take advantage of the potential of new approaches in the jobs drivers.

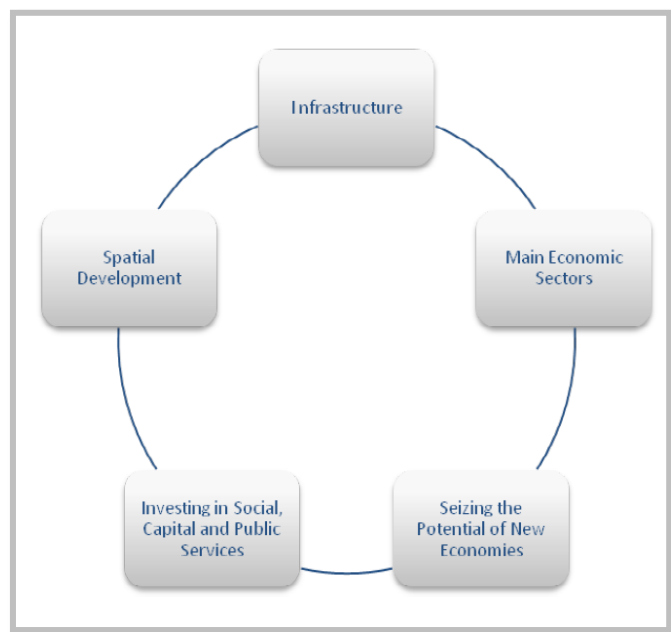


Figure 4: Mpumalanga Growth Path Job drivers

Source: Mpumalanga Economic Growth Path 2011

Spatial development and infrastructure development are identified as one of the job drivers which the Spatial Development Framework should recognise.

3.4 DISTRICT POLICY OBJECTIVES

3.4.1 Ehlanzeni Spatial Development Framework 2010 Review

The Ehlanzeni District SDF makes specific proposals for its five local municipalities. To ensure vertical alignment (between district and local municipalities) it is imperative that the following proposals for former Mbombela and former Umjindi be considered: **(See Plan: Ehlanzeni Spatial Development Framework)**

1. The provision of a system of activity nodes to accommodate regional and sub-regional growth:

Table 4: Activity Nodes to Accommodate Growth

Proposed nodes	Focus area
Regional Activity Node	Mbombela CBD, Riverside Park, Mbombela Industrial areas;
1st Order Activity Node	White river, Hazyview, Swalala, Barberton CBD,
2nd Order Activity Centres	Matsulu, Kanyamazane, Daantjie, Msogwaba and Kabokweni, Emjindini CBD
Specialist Activity Centres	Rocky Drift, Karino, Plaston, KMIA, Ngodwana, Mbombela Greenbelt and the Mataffin Precinct, Barberton Industrial.

2. The concentration of development within transportation, activity corridors, spines and streets

Table 5: Development Concentration

Proposed corridors	Focus area
--------------------	------------

Maputo Transportation Corridor	Maputo railway line and the N4, all developments need to support the status thereof as transportation corridor.
Barberton-Mbombela-White River Activity Corridor	Along the R40 – supports activity and mobility along the route.
Eastern Activity Corridor	The corridor includes the majority of settlements within the Nsikazi area and the following activity nodes and spines are provided: Kanyamazane CBD; Msogwaba Activity Spine; Kabokweni CBD and Industrial Area; Swalala (Future Activity Centre); and Hazyview CBD These nodes need to form the nucleus areas to which catalytic development projects are directed.
Karino-KMIA-Plaston Activity Corridor	The corridor is supported by the R538 road which connects the following specialised activity centres: Karino Industrial/Commercial centre; Kruger Mpumalanga Airport and Industrial/Commercial Area; and Plaston-Industrial/Commercial Centre It is imperative that the mobility function of the R538 be protected.

3. Integration of the Barberton-Mbombela-White River Activity Corridor, the Karino-KMIA Plaston Activity Corridor and Eastern Development Corridor:

- The provision of **vibrant and sustainable activity centres** within the Eastern Activity Corridor integrating economic and employment opportunities within these areas.
- The provision of **affordable housing** within Mbombela–White River Activity Corridor to enable all people to live nearer to their place of work promoting social integration.

- The provision of **economic opportunities** for historically disadvantaged individuals within the Barberton-Mbombela–White River Activity Corridor.
- The enhancement of **public transportation** and the mobility function of link roads between the corridors.

- 4. Urban edges** are provided to concentrate development within development corridors, namely the Barberton-Mbombela-White River Activity Corridor and the Eastern Activity Corridor. Growth within settlements that are not located within corridors needs to be limited to the boundaries of these settlements.
- 5. Existing Fully-Serviced Urban Areas** - emphasis should be on the maintenance of engineering and social infrastructure for Mbombela, White River, Hazyview and Barberton. Densification initiatives in selected areas should be promoted which includes densification of residential developments within Activity Nodes and Centres or as an extension of activity nodes and centres promoting transportation mixed land use development principles.
- 6. Service Upgrading Priority Areas** – the Southern, Eastern and Northern regions should be emphasised for capital expenditure and operational programmes towards upgrading the services and facilities in these areas.
- 7. Urban Infill Zones** – this needs to strengthen and support and be integrated into the Activity Corridor and the development thereof be driven by the availability of infrastructure and the need to provide catalytic projects to ensure social and economic integration.
- 8. Focus Areas for Land Reform** – Tenure upgrading within the majority of settlements within the Southern, Eastern and Northern regions needs to be attended to in terms of a tenure upgrading programme. Precinct Development Plans need to be developed prior to undertaking tenure upgrading projects. Settlements in terms of land restitution need to conform to the development principles of the Spatial Development Framework.

9. The Rural Hinterland – these areas are earmarked to be used for two main purposes, namely commercial agriculture and forestry. Other uses include the following:

- Agri- and forestry villages including Mataffin, Boschkop, Mayfern , Elandshoek and Lows creek
- Road related purposes including accommodation and vehicle related services;
- Eco-tourism;
- Low density residential areas;
- Rural residential areas including the historically disadvantaged communities of Southern, Eastern and Northern regions involved in subsistence farming activities;
- Industrial concentrations such as canning factories, and sawmills;
- Regional services (cemeteries, waste sites, reservoirs, electricity lines); and
- Other uses such as quarries, mining etc.

10. Transportation – strategies are proposed to address transportation issues such as modal interchanges in all activity nodes and activity centres, affordable basic access to transportation and the transportation needs of passengers at the KMIA.

11. Airports – the KMIA needs to provide for an array of ancillary and complementary functions to the airport such as an Industrial Development Zone and the Mbombela Airport will complement the KMIA as a local airport.

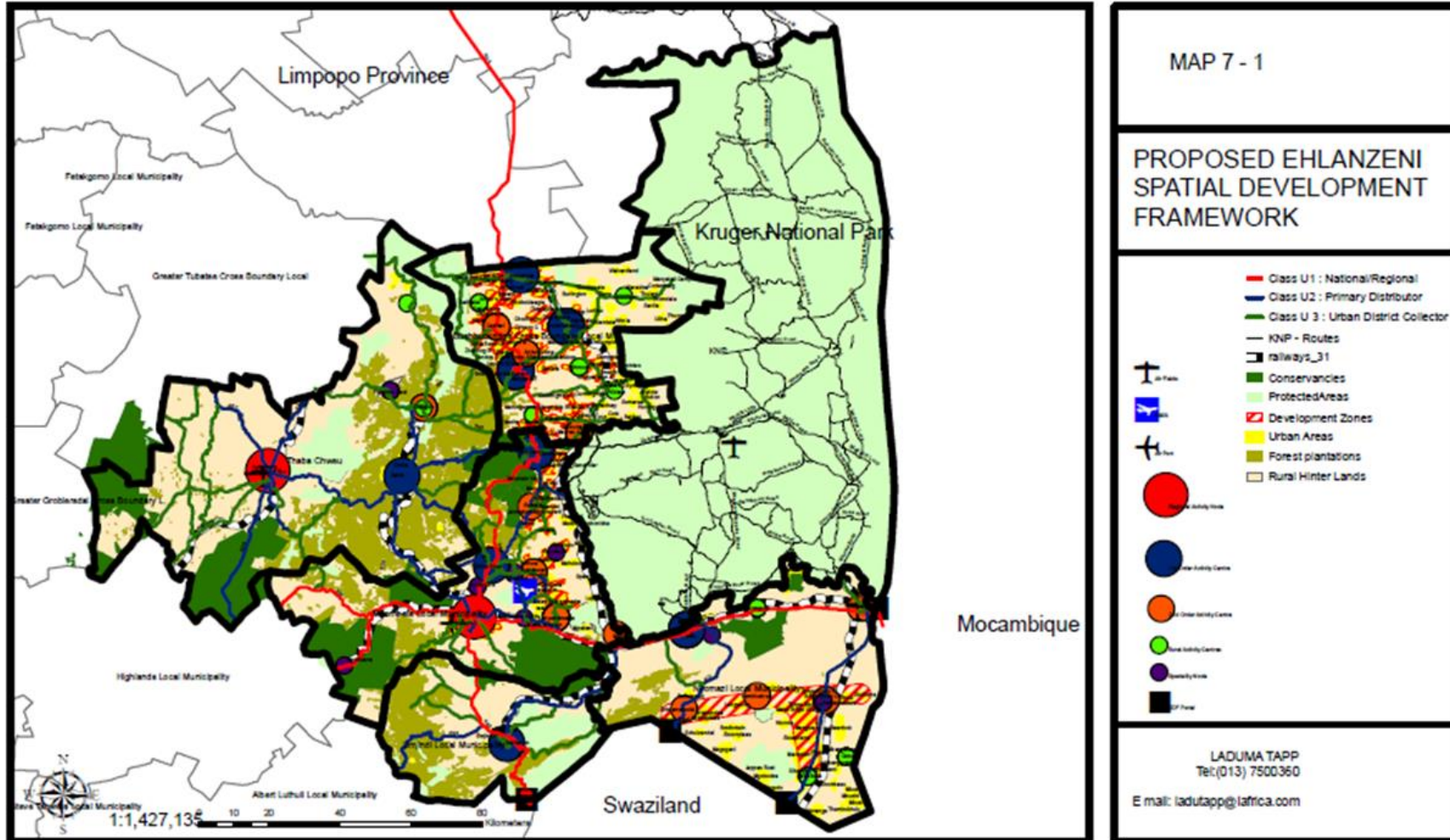
12. Tourism Nodes – include the Hall’s Gateway, Casterbridge/Kingdoms of Africa and Perry’s Bridge nodes. Expansion to these nodes to specialise in the provision of tourists and highway related functions should be encouraged. The tourism nodes should be accessible to tourist’s routes and may include cultural centres and specialised commercial nodes at Matsulu, Karino and Hazyview. Other Tourism Clusters Include:

- Tourism Biodiversity Corridor (TBC) Spatial Development Initiative between Swaziland and Mpumalanga

- The listing of the potential World Heritage Site for the Barberton Mountain lands area by the SA National World Heritage Committee and now awaiting the development of a funding proposal.
- The Songimvelo-Malolotja Trans-Frontier Conservation Area (TFCA), which would form the core of a future World heritage Site.
- Biodiversity supported by the underdeveloped and underutilized provincial nature reserves Songimvelo, Mountainlands and Barberton Nature Reserves and other Nature Reserves within Umjindi.

13. Housing – needs to provide for the full array of subsidy-linked mass housing schemes, middle income housing and social housing. The development of social housing schemes is a priority of Mbombela Municipality and a number of focus areas/sites for such developments need to be identified.

EHLANZENI DISTRICT MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK REVIEW 2010



Map 7: Ehlazeni SDF MAP

3.5 LOCAL POLICY OBJECTIVES

The City of Mbombela SDF must align with the following key local policies and strategies:

3.5.1 City of Mbombela Vision 2030

The Municipality has a long term plan known as Mbombela Vision 2030 which will provide a comprehensive overview of the alignment and cascading of the goals and targets set in the National Development Plan.

The plan also serves as a gateway development strategy document that will take advantage of the location of the City of Mbombela. It is envisaged that the process will draw on the background studies that have either been done by the municipality or the provincial government. Once it has been approved, all key municipal strategic plans such as IDP, SDF, Budget and other sector plans will be informed by the plan. The plan together with the SDF will serve as the key strategic documents that will guide and inform the future development of the municipality.

The Mbombela Vision 203 is a strategy and plan to respond strategically and decisively to growth and development dynamics. The Vision 2030 aims to achieve the following:

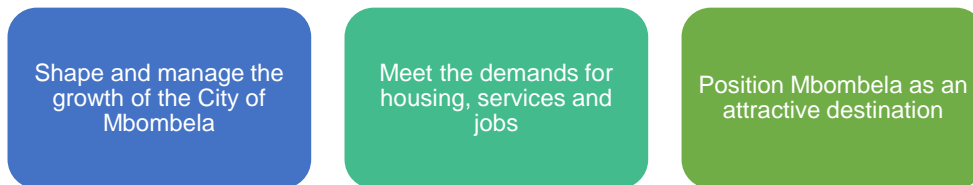


Diagram 18: Vision 2030 aims

The City of Mbombela will thus be the best City in South Africa by 2030 for living, working, playing and investing. This goal will be achieved in a systematic way by simultaneously pursuing 4 interrelated strategic objectives identified by analysing the gaps highlighted in the diagnostic process and the aspirations contained in the

desired future. The strategic objectives are Spatial Transformation, Economic Growth, Service Provision and Governance as set out below:

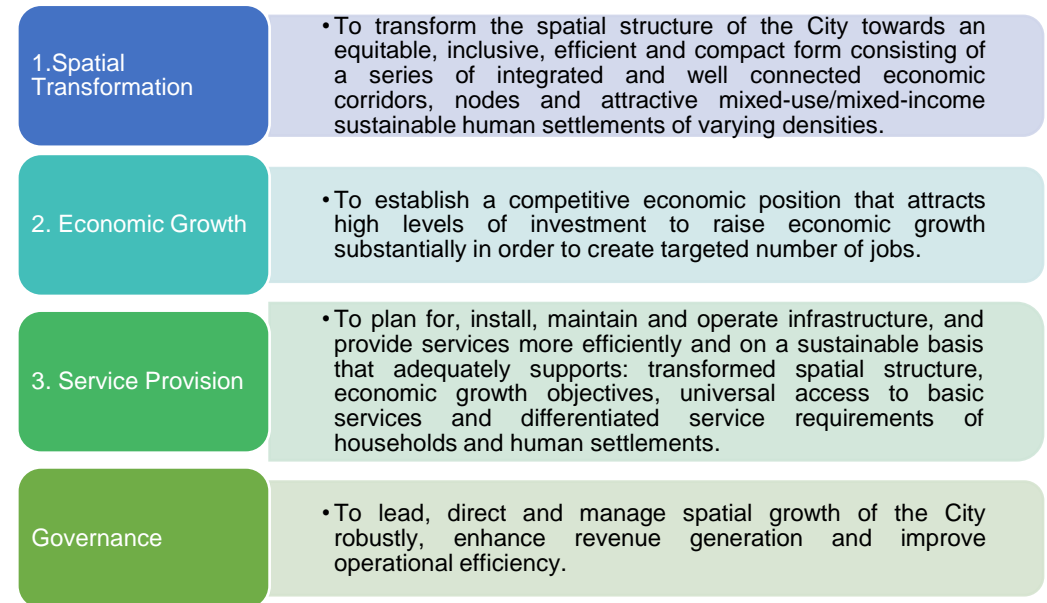


Diagram 19: Vision 2030 Strategic Objectives

3.5.2 City of Mbombela Integrated Development Plan

Section 25 of the Municipal Systems Act, 32 of 2000 requires that each municipal council must within a prescribed period after the start of its elected term adopt a single, inclusive and strategic plan, commonly known as Integrated Development Plan (IDP). The IDP must guide and inform all planning, development, budgeting decisions of the municipality.

The MSA also requires that each municipality develop a Spatial Development Framework as a core component of the IDP and that provides spatial representation of the IDP. The City of Mbombela's 2017-2022 IDP is crafted under the following mission statement:

“Together in partnership spatially transforming the city, providing effective local governance and rendering competitive municipal services and sustainable development for living, working, investing and leisure”

The Mbombela IDP has identified the following development objectives to be implemented over the 5 year period:



Diagram 20: Mbombela IDP development objectives

Source IDP 2017-2022

The City of Mbombela SDF must therefore give spatial representation in achieving the above development objectives of the SDF.

3.5.3 City of Mbombela LED Strategy

Local economic development is an ongoing process, rather than a single project or a series of steps to follow. It involves identifying and using local resources, ideas and skills to stimulate economic growth and development. The City of Mbombela has therefore developed a Local Economic Development Strategy. The aim of LED is to create employment opportunities for local residents, alleviate poverty and redistribute resources and opportunities to the benefit of all local residents.

The Mbombela LED Strategy has been formulated under the following mission statement:

“Together in partnership, stimulating economic development by providing efficient service delivery, meeting the needs of local communities and creating an enabling environment for business development, economic growth and employment creation”.

The following five development objectives have been identified for LED in Mbombela Local Municipality in order to achieve the above mission of the LED Strategy.



Diagram 21: LED development objectives for Mbombela Local Municipality

Source: Mbombela LED Strategy 2015

Each of these Development Objectives has identified unique projects in order to achieve the development objectives.

3.6 OTHER INITIATIVES

This section outlines other initiatives, besides government policies discussed above, that impact on City of Mbombela Municipality.

3.6.1 Maputo Development Corridor Spatial Development Initiative (SDI)

The “Spatial Development Initiatives (SDI) programme is an interdepartmental investment strategy led by the National Department of Trade and Industry (DTI) and Department of Transport (DoT) and involves strategic initiatives by government aimed at the following:

- Crowding in of investment: this investment (including financial, technical and institutional resources) cannot only be made by the public sector and its parastatals agencies, but must also make sense for the private sector.
- Public-Private partnerships (PPPs)
- Inherent economic potential
- Rapid planning and delivery
- Restructuring the apartheid space economy
- Generating sustainable employment
- Maximising private sector investment
- Exploiting SA’s under-utilised location and economic advantages.

There are a number of these initiatives being pursued by national, provincial and local government in South Africa. The **Maputo Development Corridor (MDC)** is the most advanced and the best known of the SDI’s. The Maputo Development Corridor focuses on the N4 route stretching from Witbank to Recano Garcia in Mozambique. The Corridor programme is more than just the construction of the road and includes the following key infrastructural projects:

- The railway line;
- Telecommunications;
- Dredging the harbour and upgrading port facilities; and
- The gas pipe lines.

The Department of Economic Development, Environment and Tourism (DEDET) identified projects within a 100km (50km on either side) buffer along the N4 road. The projects located in Mbombela are:

- Agri-processing – Hazyview, White River
- Tourism – International Convention Centre in Mbombela
- Infrastructural – Mbombela Stadium & KMIA industrial park and upgrade

3.6.2 The Mbombela-Phalaborwa Spatial Development Initiative

The Mbombela-Phalaborwa SDI aims to create better access between the port of Maputo and the mining town of Phalaborwa in the Limpopo Province. The main road, the R40, links Phalaborwa with Mbombela and provides opportunities for supporting agriculture and tourism.

The following incentives support the SDI:

- The Bushbuckridge Local Municipality has been declared as an Integrated Sustainable Rural Development Programme (ISRDP) node, which prioritises the area for special development and funding from National Government.
- The Kruger to Canyon Biosphere Reserve, which links the Blyde River Canyon with the Kruger National Park. The desire state of the K2C is based on the following principles:
 - Protection of sensitive biological environments, physical environments and water catchment areas; and
 - Promotion of business and industrial developments focussing on tourism.

4 CHAPTER 4: SPATIAL CHALLENGES AND OPPORTUNITIES

There are numerous factors that influence where and how people settle and organise themselves in space. The following structuring elements impact directly on the formation and development of settlements in South Africa:

- Environmental factors such as resources, climate, landforms (topography) and water features i.e. agriculture, availability of minerals and metals, and rivers.
- Spatial characteristics and location of, for example the distance between activities, i.e. where people stay and where they work.
- Other factors including cultural factors, economies of scale, political and socio-economic systems.

The spatial analysis is unpacked under the following headings:

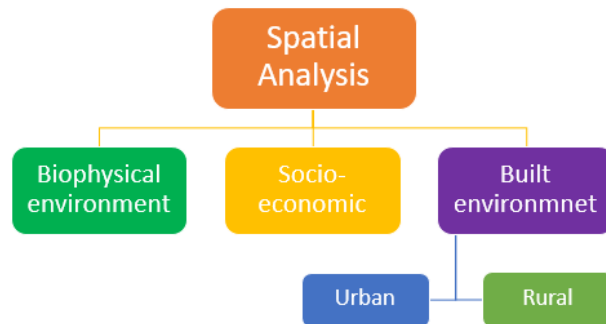


Diagram 22: Spatial Analysis

Source: Self Constructed (2017)

4.1 BIOPHYSICAL ANALYSIS

The purpose of this section is to analyse biodiversity priorities and accompanying guidelines to inform land-use planning, environmental assessment and

authorisations, and natural resource management by a range of sectors whose policies and decisions impact on biodiversity. NEMA requires that all organs of state take biodiversity considerations into account in their decision-making. The following biophysical elements in Mbombela are discussed in this section:

- Biodiversity & Ecosystem
- Topography
- Geology
- Economic Geology
- Agriculture
- Hydrology
- Climate
- Land Landscape and Sense of Place

4.1.1 Biodiversity & Ecosystems

The Critical Biodiversity Areas (CBAs) map for the City of Mbombela was produced using the Mpumalanga Biodiversity Conservation Plan (MBCP), a spatial plan that groups the province's biodiversity assets into six conservation categories based on the measured distribution of hundreds of biodiversity and ecological features throughout the province.

Biodiversity Category	Description
Critical Biodiversity Areas (CBAs)	These are areas that are required to meet biodiversity targets, and where development is restricted to low-impact land uses. There is very little flexibility for development in this category. CBA categories are divided into terrestrial and aquatic ecosystems as the methods of analysis were very different and land use guidelines will differ significantly.
Ecological Support Areas	ESAs are areas not essential for meeting biodiversity targets, but that play an important role in supporting the functioning of CBAs and for delivering ecosystem services. There is generally more flexibility in this category and a

greater range of land uses over wider areas is allowed, subject to a permitting process that ensures the underlying biodiversity objectives are not compromised. ESA categories are divided into terrestrial and aquatic ecosystems as the methods of analysis were very different and land use guidelines will differ significantly.

Heavily Moderately Modified or MA are areas that have been modified by human activity so that they are no longer natural, and are not considered as contributing to the biodiversity of the area. However, these areas still provide limited biodiversity and ecological infrastructural functions, even if they are never prioritised for conservation action. Such areas have the fewest restrictions in terms of land uses, although authorisation is still required for high-impact land uses. Within the Modified category, a distinction is made for those areas that were once modified, but have since been abandoned and allowed to recover somewhat. Although they do not have anything close to their original biodiversity, they can provide significant ecosystem services.

Other Natural Areas ONAs are areas that have not been identified as a priority in the current systematic biodiversity plan, but retain most of their natural character and perform a range of biodiversity and ecological infrastructural functions. Although they have not been prioritised for biodiversity, they are still an important part of the natural ecosystem. These areas have the greatest flexibility for land use, but some authorisation will be required for high-impact land uses

Protected Areas Protected Areas (PAs) are those areas that are already proclaimed under some legislation, including stewardship sites.

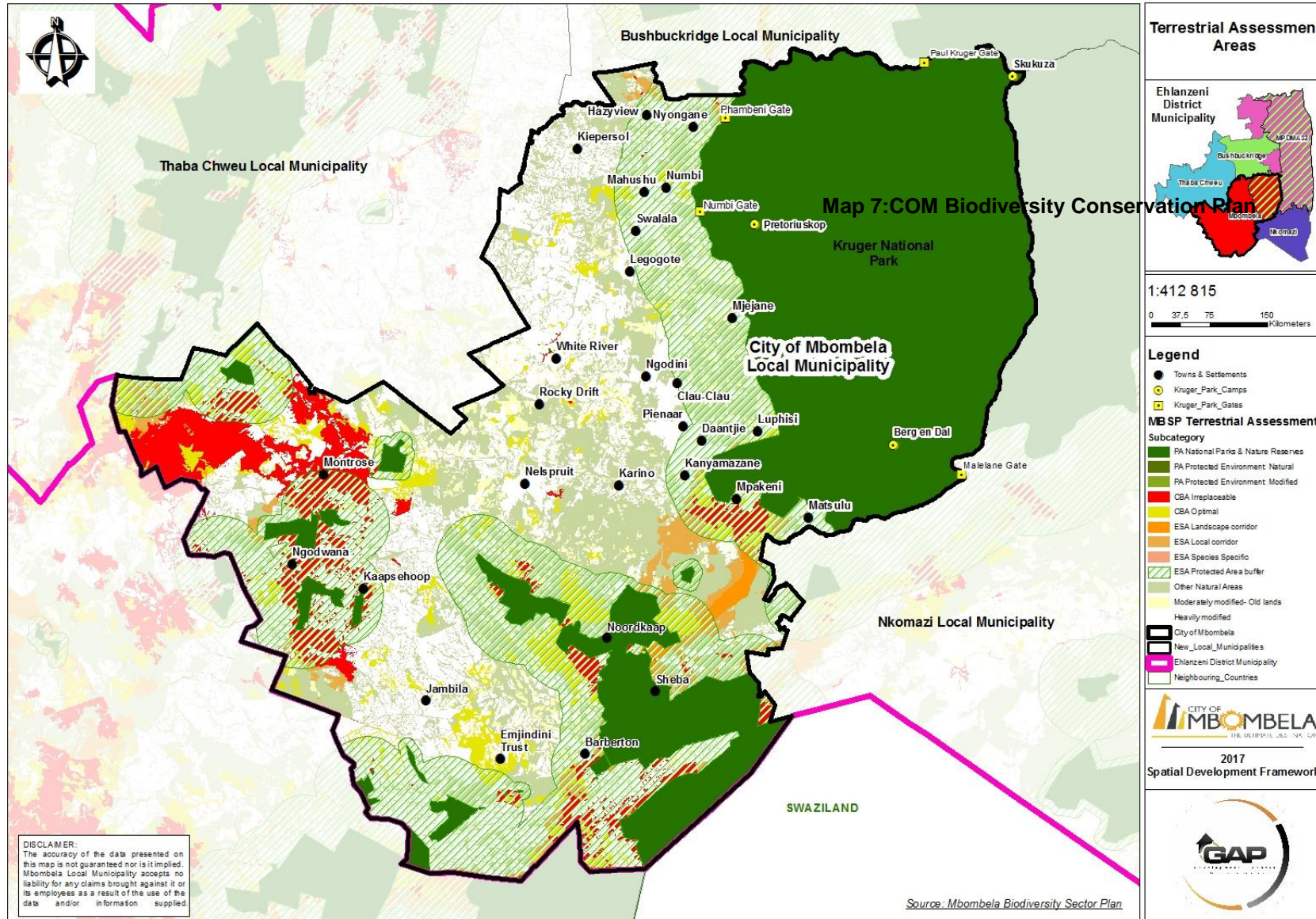
The MBCP for Mpumalanga was superimposed on the municipal area. The categories and areas covered by each category are summarized in the table below and indicated in Map 8: Terrestrial and Aquatic Biodiversity Assessment.

Table 6: Extent of Biodiversity Categories for COM

Subcategory	Area (ha)
CBA Irreplaceable	47640.670457
CBA Optimal	39809.660356
ESA Landscape Corridor	4565.523329
ESA Local Corridor	22169.732169
ESA Protected Area buffer	674413.798157
Heavily modified	205999.622506
Moderately modified	26763.482157
Other Natural Areas	180203.0821
PA National Parks & Nature Reserves	1263988.783979

Evident from the biodiversity as summarized in the table above and illustrated on the map below are the following revelations:

- Protected areas – see next section for more detail.
- Irreplaceable areas mainly include the Crocodile Gorge and western escarpment areas stretching from Elandshoek to Kaapsehoop, with a few patches scattered in Schoemanskloof and Mpakeni. In the southern region irreplaceable areas stretches across the songimvelo-mountainlands-barberton nature reserves.
- CBA optimal areas are predominantly found in Mpakeni, Noordkaap and Umjindini Trust with patches scattered around the entire municipal area.
- Landscape and local corridors are predominant in the area between Mpakeni and Noordkaap and Sheba.



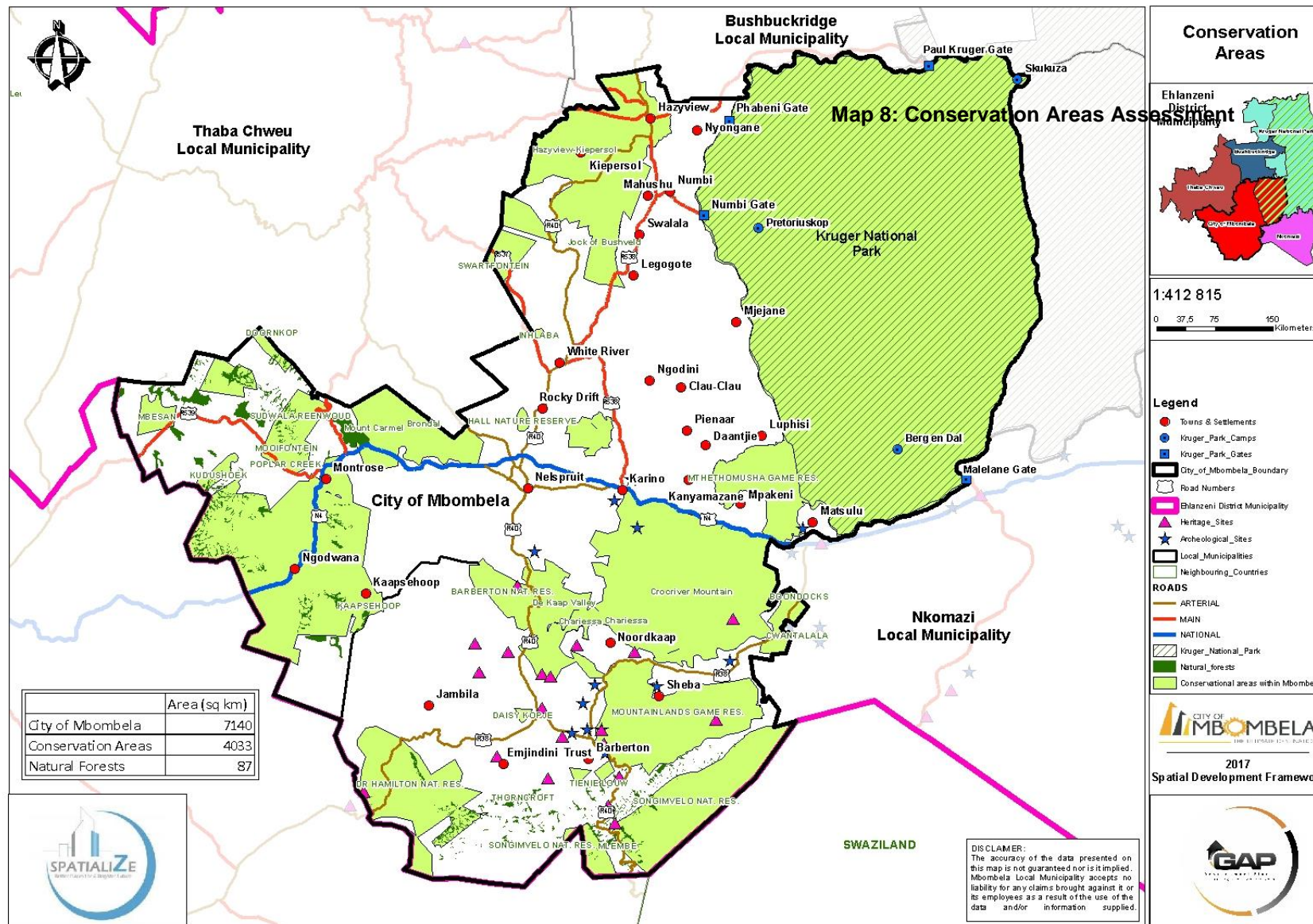
Map 8: COM Biodiversity Conservation

Category	Site Type	Name	
Protected Areas	Forest Nature Reserve	Nelshoogte Nature Reserve Blouswaelvlakte Reserve Dr Hamilton Nature Reserve Ngodwanakloof Reserve Queensriver Reserve Starvation Creek Nature Reserve Wonderkloof Nature Reserve Nelsberg Reserve	
	Nature Reserve	Barberton Nature Reserve; Songimvelo Game Reserve; Cythna Letty Nature Reserve Ida Doyer Private Nature Reserve Mthethomusha Nature Reserve Sabie Sands Private Nature Reserve Thorncroft Nature Reserve Tinie Louw Nature Reserve Barberton Private Nature Reserve Dombeya Private Nature Reserve Nelspruit Nature Reserve White River Rotary Bird Sanctuary White River Valley Private Nature Reserve	Paranie Private Nature Reserve Paranie Private Nature Reserve Red Arces Private Nature Reserve Stenson Estate Private Nature Reserve Uitkyk Private Nature Reserve Umhloti Nature Reserve Vischspruit Private Nature Reserve Vlakplaats Private Nature Reserve White River Nature Reserve
	National Park	Kruger National Park	
Conservation Areas	Botanical Garden	Nelspruit Botanical Garden	

4.1.2 Conservation and Protected Areas

The Department of Environmental Affairs (DEA) maintains a spatial database on Protected Areas and Conservation Areas. The database contains information related to protected areas – areas set aside primarily for nature and biodiversity, as well as conservation areas – areas of conservation importance where other land uses may also be permitted. DEA has identified the following as major areas on environmental protection and conservation within the boundaries of the City of Mbombela:

Table 7: Conservation and Protected Areas



Map 9: Conservation Areas Assessment

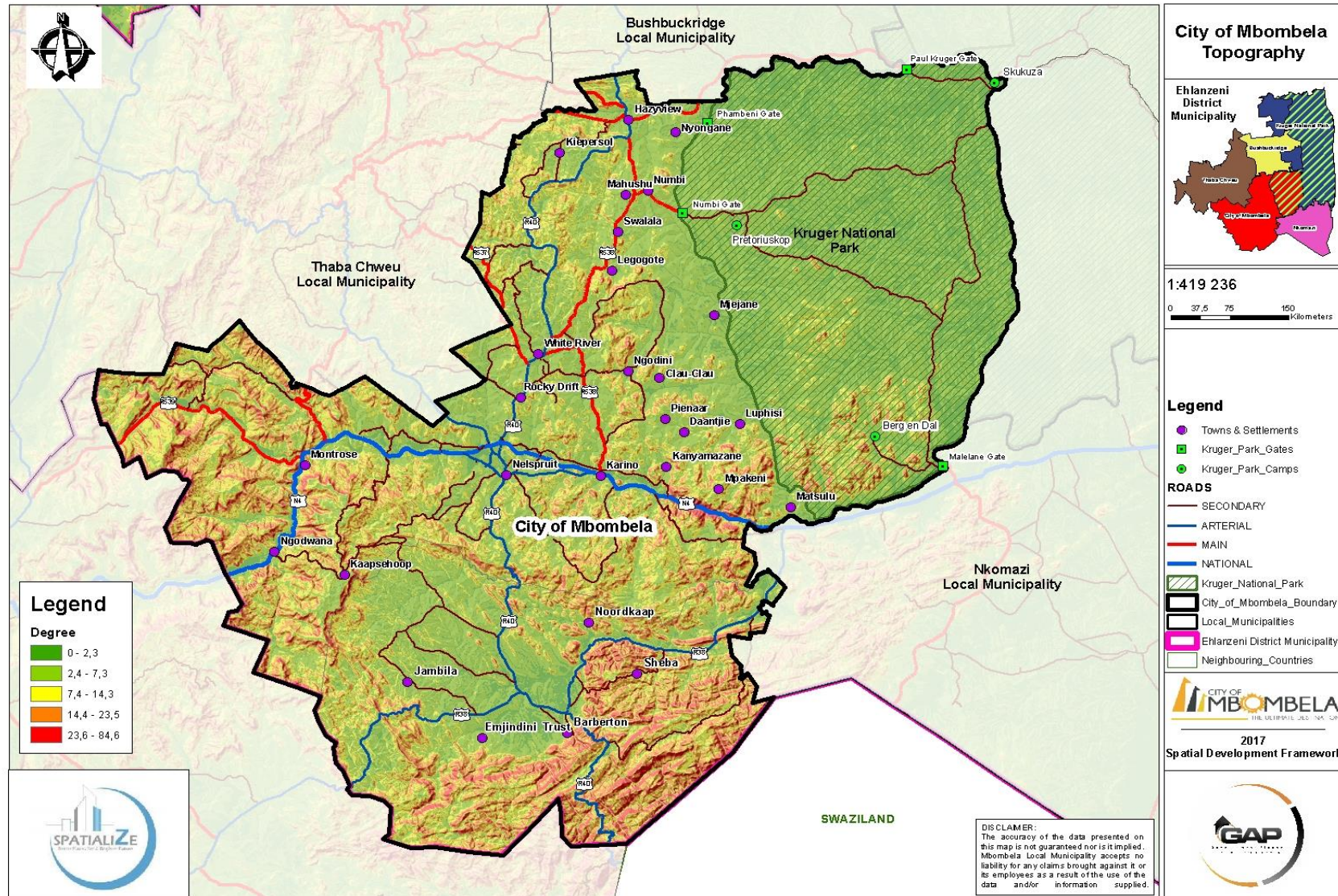
4.1.3 Topography

CoM lies on the eastern edge of the Drakensberg Mountain range. The area can be divided into three distinct physiographic regions based on the north-south orientation of the Drakensburg Mountain range, namely:

- Highveld,
- Escarpment and
- Lowveld.

The topography ranges from mountainous areas in the western & southern parts to gently sloping areas in the eastern parts and some parts of the south. The area falls from a height of approximately 1200m above sea level in the southern-western part to 350m in the north-eastern parts.

A slope analysis, based on slope data received from the National Department of Agriculture, Forestry and Fisheries, presents areas with slopes that vary between 2% (level to very gently slope) and 23 % (steep slopes). Accordingly, most of the municipality consists of steep slopes.

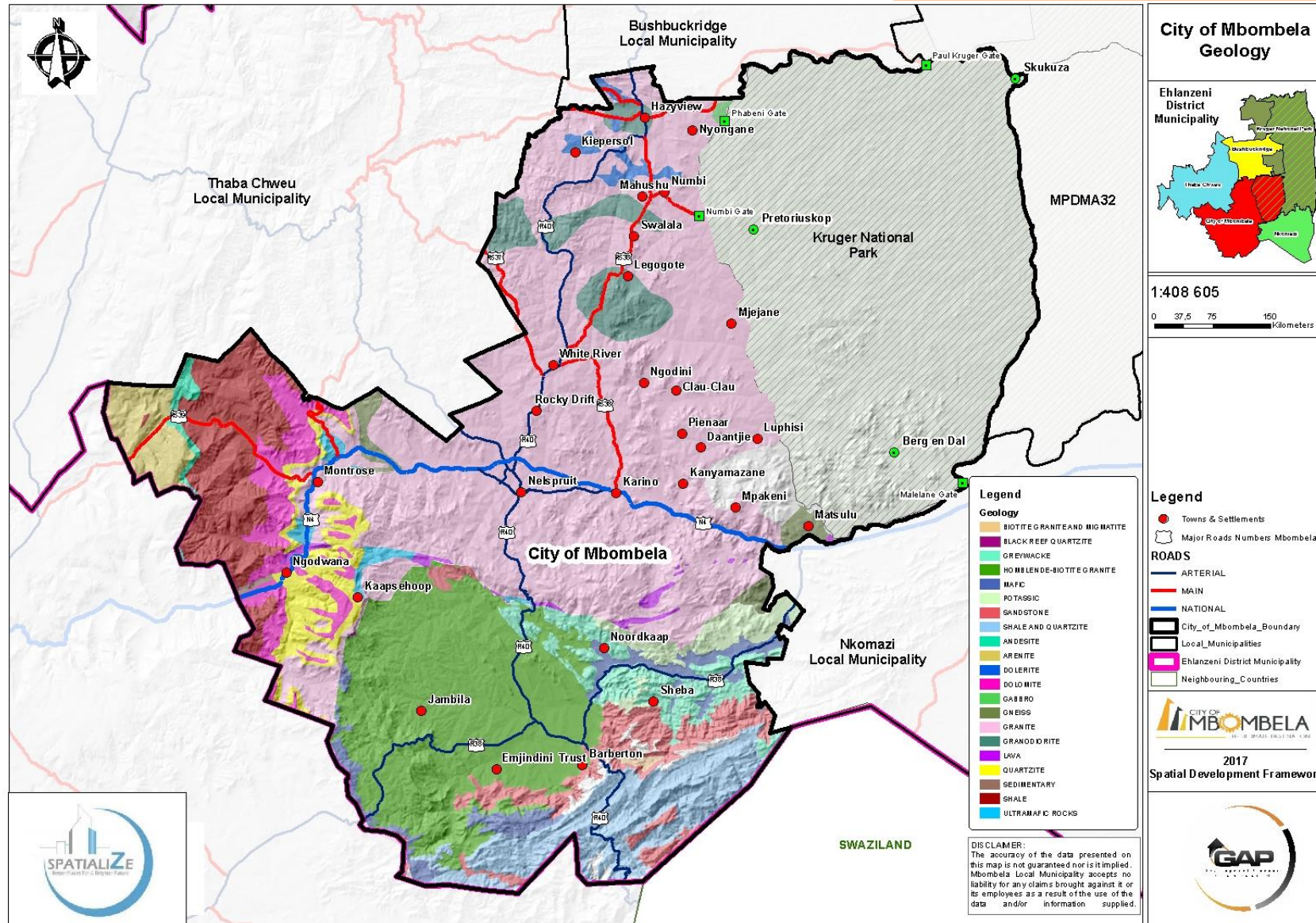


Map 10: Slope Analysis

4.1.4 Geology

The geology types occurring in the City of Mbombela municipal area can be summarised as follows:

- A large portion of the municipality is underlined with the Granite Group which covers most of the central, eastern and northern regions.
- The southern region (former Umjindi) is mostly covered with the Gabbro Group, coupled with the Shale & Quartzite, Sandstone, Greywacke and Mafic Groups.
- Highly permeable and erodible, colluvial sands and residual soils overlay the granitic bedrock (Potassic Gneiss and Migmatite) in the Kanyamazane area.
- The western part has a variety of geology groups including Shale,
- Dolomite, Quartzite, Andesite, Ultramafic rocks and Gneiss. Dolomite rocks give rise to caustic features, the most notable in Mbombela is the 1.8km long Sudwala Caves. Hazyview is underlain by Granodiorite and Matsulu is underlain by Gneiss.



Map 10: COM Geology

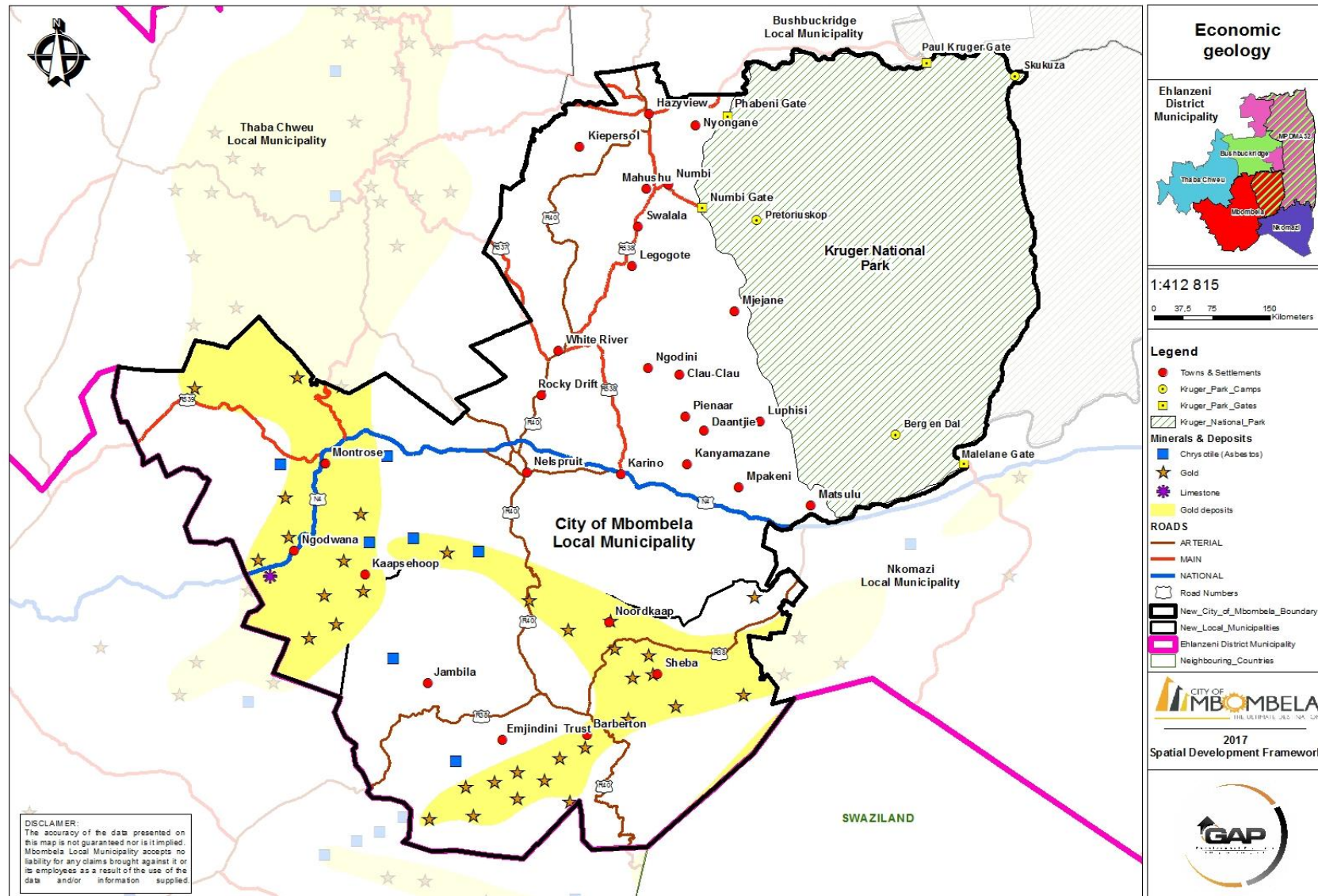
4.1.5 Economic Geology

Economic geology is concerned with earth materials that can be used for economic and/or industrial purposes. These include precious and base metals, non-metallic mineral, construction grade stone, petroleum minerals, coal and water.

Minerals and metal deposits deriving from the geology groups in CoM include gold, chrysotile (asbestos) and limestone, mainly located within the southern region (former Umjindi) and along the escarpment in the western part.

The central, northern and eastern sections of the municipality do not contain any minerals worthy of exploitation. CoM has limited mining resources worthy of driving the economy as compared to other municipalities within Mpumalanga that have gold and coal mines.

SPATIAL DEVELOPMENT FRAMEWORK



Map 11: Economic Geology

4.1.6 Agriculture

Increased pressure on agricultural land for use other than agriculture makes it very important to protect especially high potential agricultural land for the exclusive use by agriculture. This is especially important if one takes into consideration the harsh environmental conditions of the country and the fact that only about 4 % of the country's land is regarded as high potential agricultural land.

The National Department of Agriculture, Forestry and Fisheries developed an Agricultural Land Capability system for the whole of South Africa. The agricultural land capability system and applicability thereof to CoM is briefly discussed below.

Agricultural Land Capability

Spatial economic planning, from a dry-land agricultural production perspective, is subjected to the capability and suitability of the natural environment to sustain adapted production systems. Land capability provides a framework that combines soil, terrain and climate factors to assess the most intensive long-term use of land for rain-fed agriculture and at the same time indicate the permanent limitations associated with the different land-use classes.

Agricultural land capability is the total suitability for use, in an ecologically sustainable way, for crops, for grazing, for woodland and for wildlife. The land capability groups and applicable land use options are indicated in the table below:

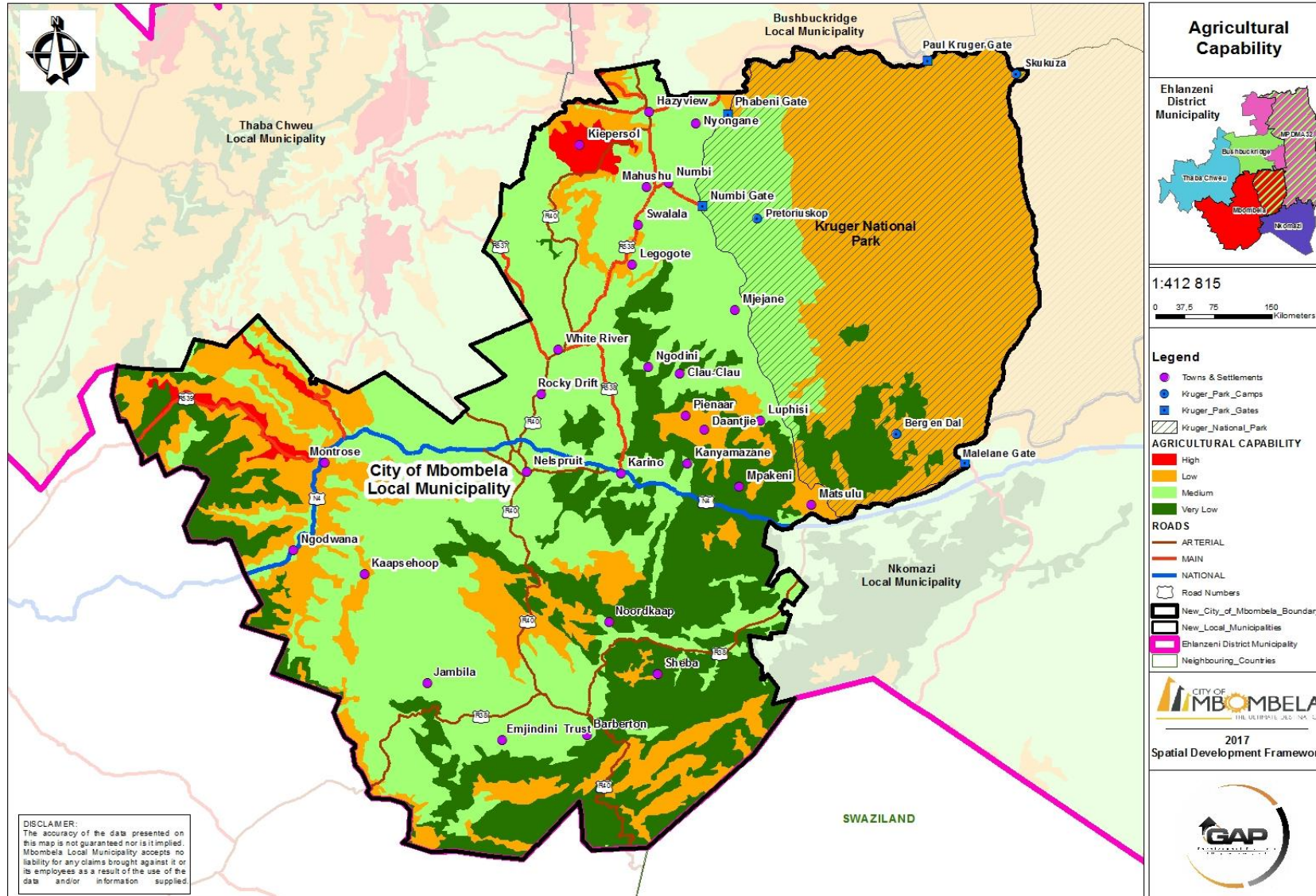
Table 8: Land Use Options per Capability Group

Land Capability Group	Land Use Options
Arable	Wildlife, forestry, light grazing, moderate grazing, intensive grazing, poorly adapted cultivation, moderately well adapted cultivation, intensive well adapted cultivation, very intensive, well adapted cultivation.
Grazing	Wildlife, forestry, light grazing, moderate grazing.
Wildlife	Wildlife

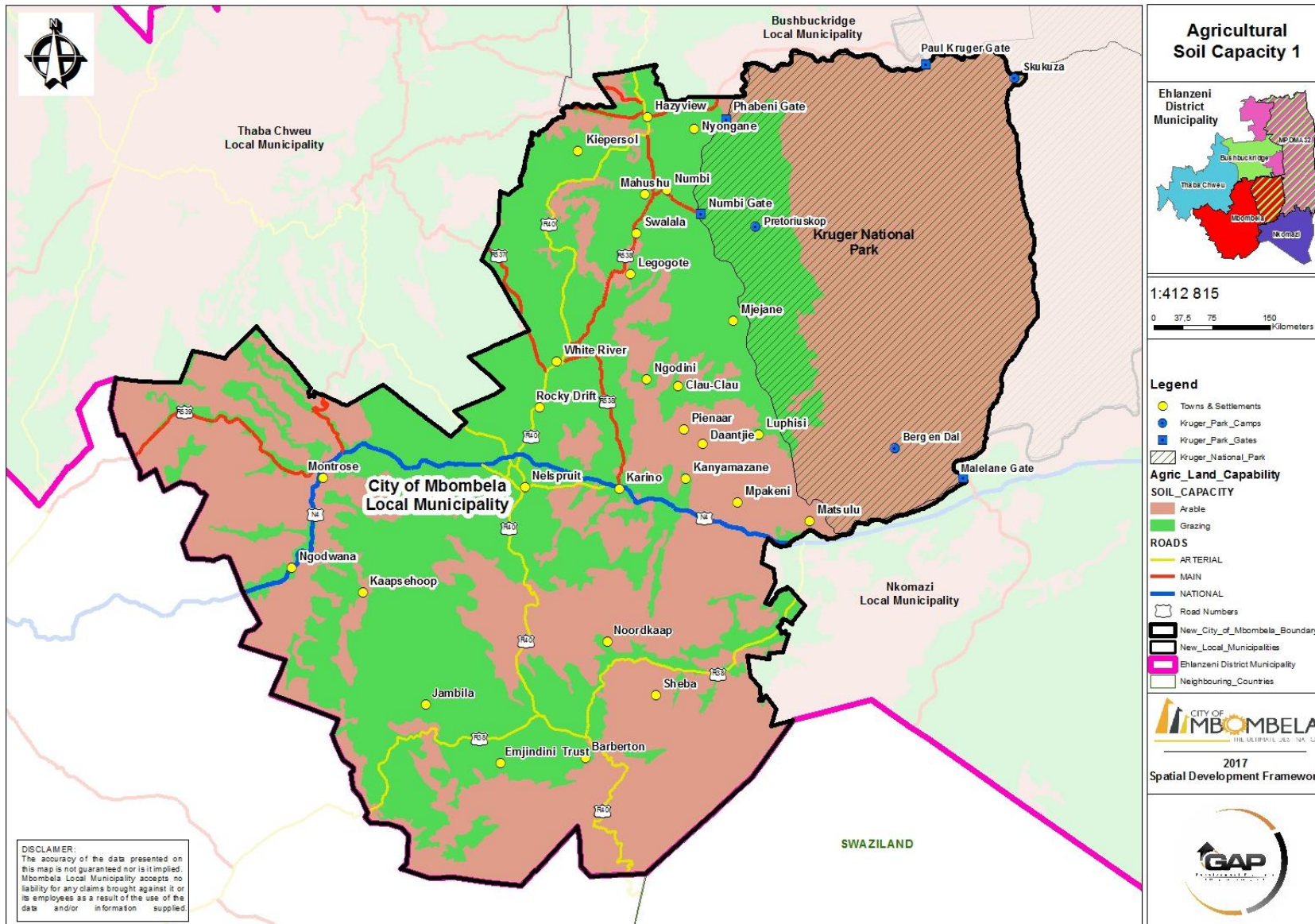
Source: After Smith, 1998

Accordingly, the following agricultural land capability categories in CoM are noted:

- Approximately half of the municipal area consists of arable land which occurs in most parts of the southern region, along the escapement in the western parts of the municipality. Within the eastern settlement, arable land underlies in areas around Legogote, stretching down to areas around Mpakeni and Matsulu.
- Approximately half of the municipal area consist of grazing land which stretches across the areas around Nelspruit, Karino, White River, Hazyview and Mjejane down to Luphisi.
- Agricultural land capability is also categorised into high, medium, low and very low. Accordingly the following is noted:
 - **High:** Land with a high agricultural capability is located at Kiepersol to the north, along the Crocodile River and its tributary to the west and in the areas around Kiepersol.
 - **Medium:** The larger extent of the municipality contains land with a medium agricultural capability.
 - **Low:** Land with a low agricultural capability is located in the Kruger National Park, Schoemanskloof, Ngodwana, at Pienaar, Matsulu, Daantjie, north-east of Legogote, Hilltop areas along the R40, and the western & southern escarpments of the municipality.
 - **Very Low:** The land with a very low agricultural capability coincides with the mountainous areas.



Map 12: Agricultural Land Capability



Map 13: Agricultural Soil Capacity

4.1.7 Hydrology

The City of Mbombela is situated within four sub-catchments that's constitutes the main Nkomati River catchment area. The four major sub-catchments are the following:

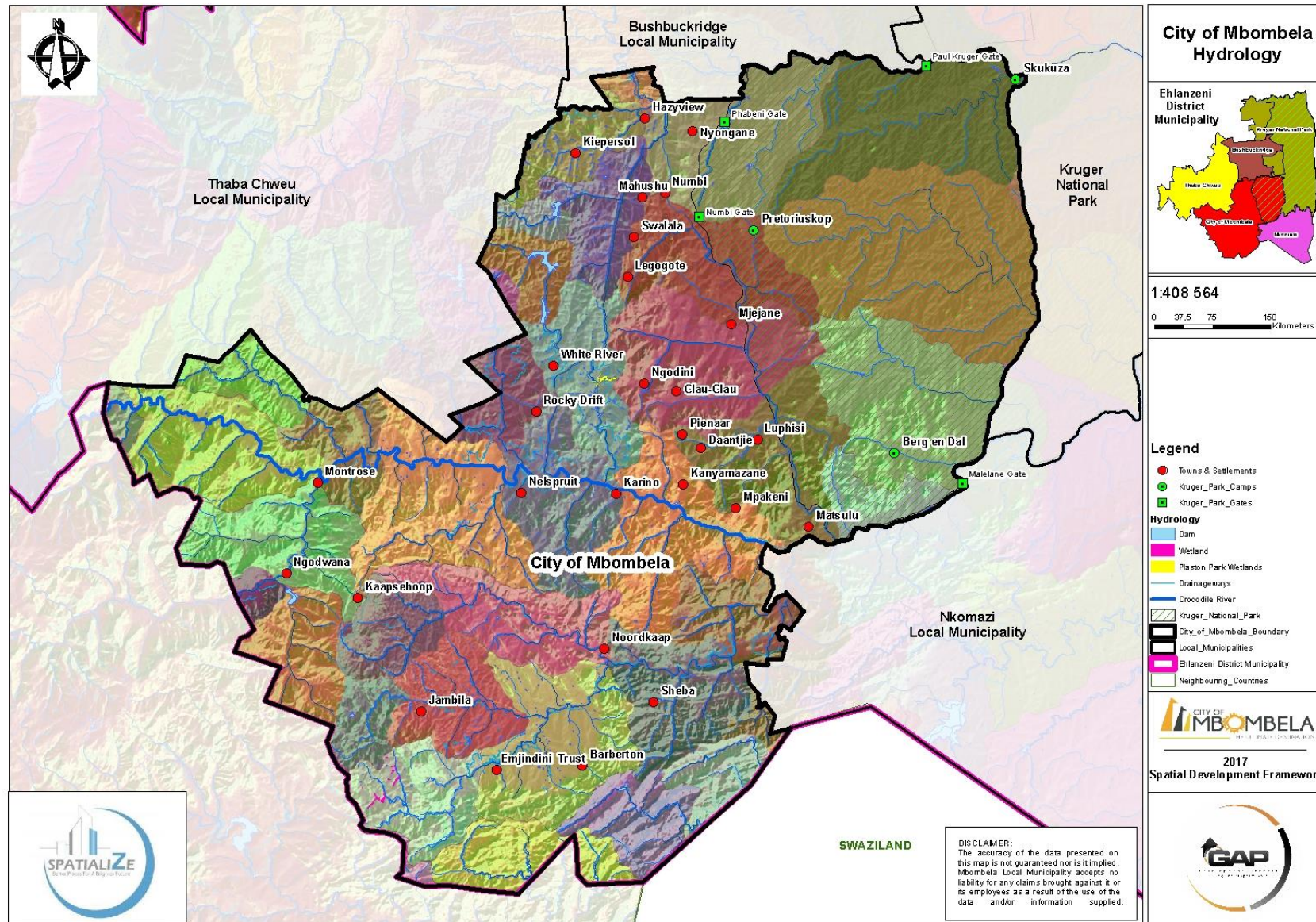
- Crocodile River catchment area
- Sabie-Sand catchment area
- Noordkaap River catchment area and the
- Suidkaap River catchment area

The Crocodile River runs in a west-east direction across the middle of the municipality and the Sabie River runs in a west-east direction along the northern boundary of the municipality.

The Elands River, running south-east to north-west, is the main tributary flowing into the Crocodile River. The North Sand River, running north-south, is the main tributary flowing into the Sabie River.

The southern region of CoM disposes of the Noordkaap River, the Suidkaap River, Queen's and Fig Tree Creek feeding the Kaap River, the Mtsoli River and Mlumati River, flowing towards the Indian Ocean. The catchments of the rivers determine the respective landscapes for tourism, timber growing and agriculture.

The main dams in CoM include: Longmere; Ngodwana; Da Gama; Klipkopje; Primkop and Shiylongubo Dam.



Map 14: COM Water Bodies and Hydrology

4.1.8 Climate Change

The Intergovernmental Panel on Climate Change (IPCC) (IPCC, 2014) defines climate change as a change in global or regional climate patterns, whether due to natural variability or as a result of human activity. What this means is that whether due to natural or human activities, climate (weather conditions in an area over a period of time) is changing. However, the latest science indicates that this change has been accelerated through anthropogenic (human) activities. This includes the increased release of greenhouse gases (notably carbon dioxide (CO₂)) into the atmosphere. These gases work like a greenhouse by trapping the heat from the sun in our atmosphere, resulting in warmer temperatures.

(a) Climate Change in CoM

Southern Africa has been identified as a region that will become increasingly vulnerable to the impacts of climate change (DEA, 2013). South Africa is likely to experience temperature increases almost double the global average which means that the risks and impacts are amplified (DEA, 2013).

As a result, the CoM will largely be impacted by higher temperatures and changes to precipitation patterns (climate change variables). Climate changes that could be experienced within the CoM include:

- More frequent heat waves,
- Increased drought frequency,
- Increased humidity,
- Increased flooding events,
- More intense rainfall events and
- An increase in tropical diseases.

These changes could have a major impact on the municipality's ability to provide basic services and meet the needs of the population, such as: water supply, disaster management, public health, electricity supply, waste and sanitation, food security, human settlements and local economic development. As a result of these changes and challenges, some key economic activities that drive the CoM economy are at risk from the effects of climate change. These include: agriculture, tourism, forestry, industry, transportation and commerce.

(b) CoM's Response on Climate Change

CoM has embarked upon the development of a Climate Change Policy, Strategy and Implementation Plan to inform and guide the fulfilment and appropriate and meaningful response to the challenges of climate change. The intention of the policy and strategy is to guide the CoM's future responsive actions to manage climate change risks. This includes the planning and management of future development within the municipality, current and future sectoral activities, and facilitating green investments.

(c) CoM's Average Winter and Summer Temperatures

Most parts of the municipality have an average summer temperature of 23.60°C and this includes places such as Nelspruit, White River, Hazyview, Barberton and other areas in the eastern parts of the municipality. Matsulu, Luphisis and Lowsckereek & surroundings are the paces with high summer temperatures averaging at 260 Lower summer's temperatures are evident in the western and southern escarpments of the municipality in places such as Kaapsehoop, Ngodwana, Baberton, and Jambila.

Most parts of the municipality have winter temperatures averaging between 140 – 170

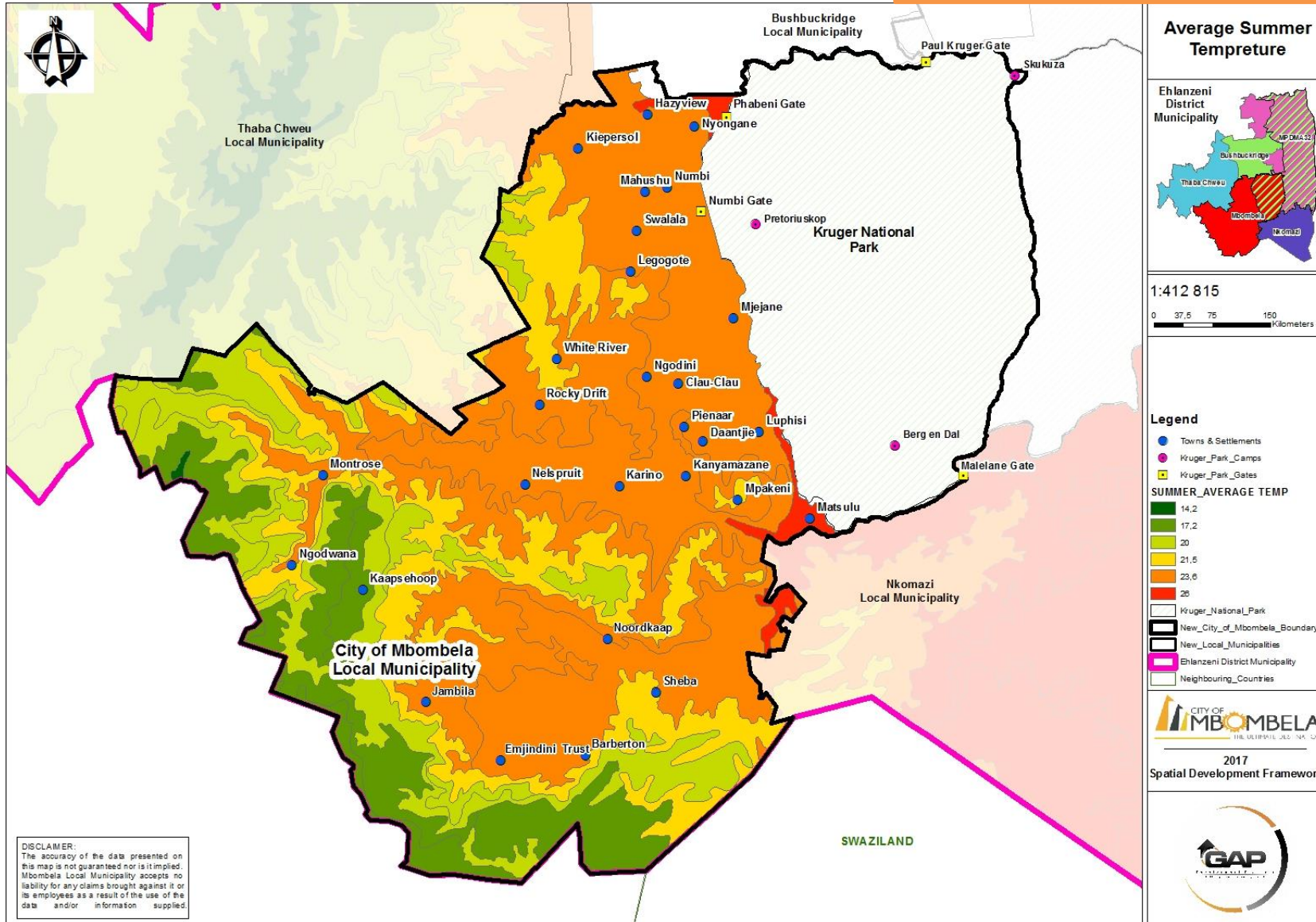
CoM's Annual Rainfall

The geographic distribution of rainfall in CoM is depicted in the map below and the following is noted:

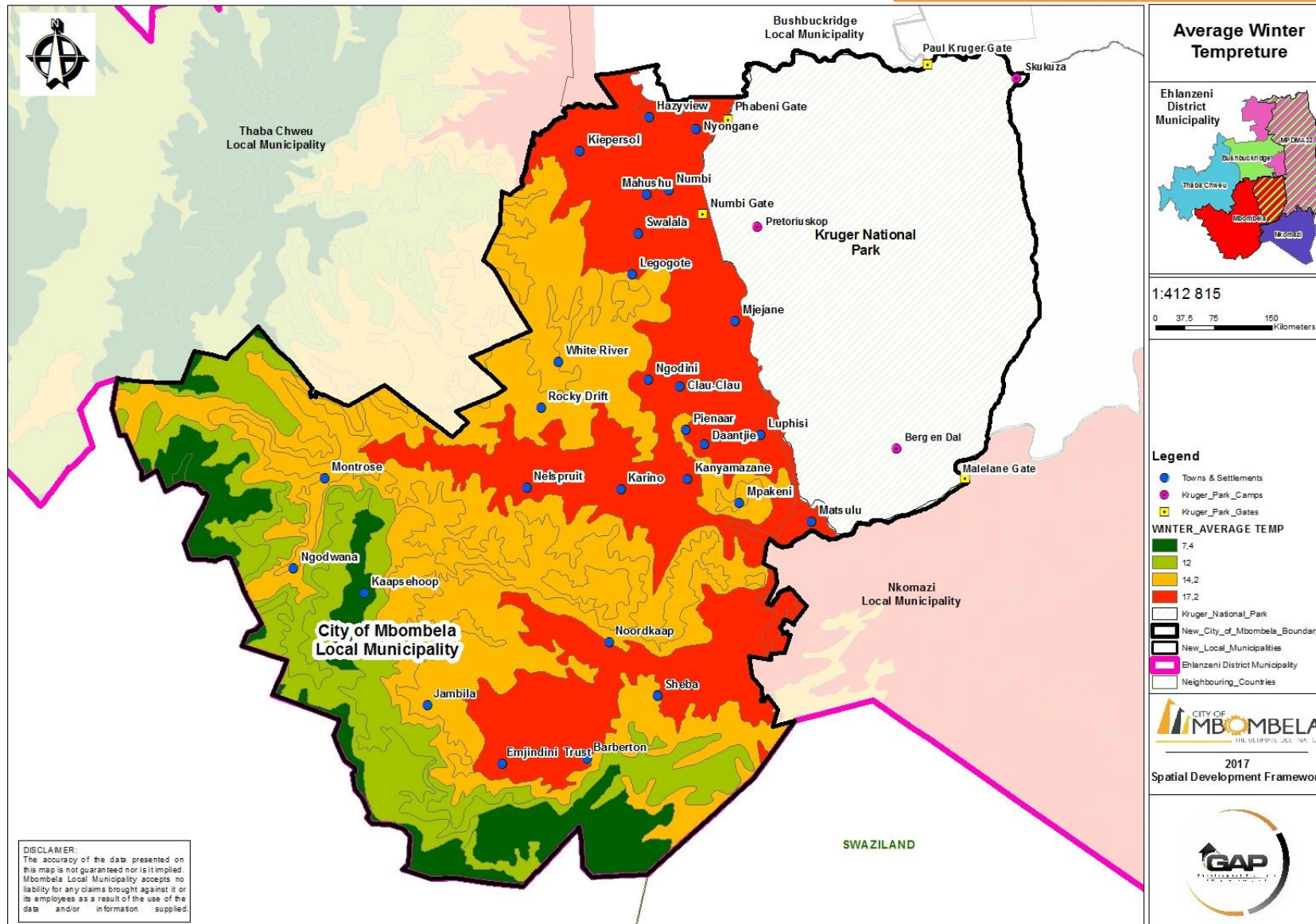
The highest rainfall (1104-1400>mm) is recorded in the areas surrounding Ngodwana, Kaapsehoop, Elandshoek to the west, some parts of the southern escarpment and north-west of White River town.

The eastern areas receive the lowest annual rainfall between 400–600mm.

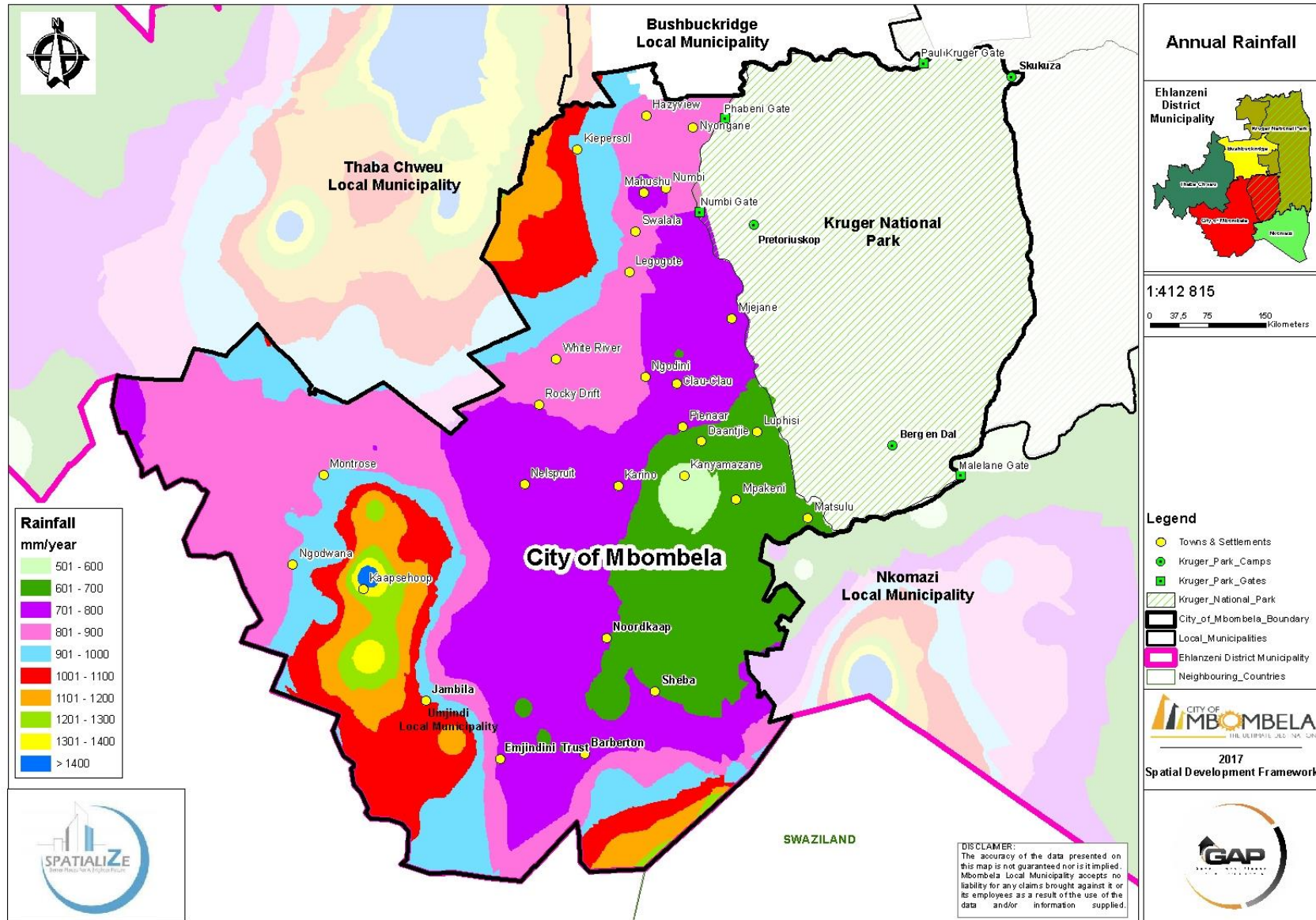
SPATIAL DEVELOPMENT FRAMEWORK



Map 15: Summer Temperatures



Map 16: Winter Temperatures



Map 17: Annual Rainfall

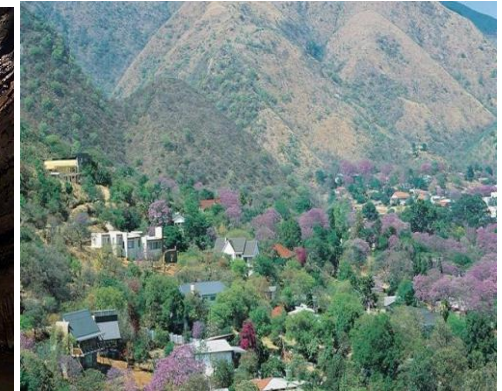
4.1.9 Land Landscape and Sense of Place

CoM is situated within the Lowveld region in the fertile valley of the Crocodile River and acts as the gateway to Mpumalanga and the Kruger National Park. With abundant sunshine, moderate sub-tropical climate, lush landscape, and a host of nearby attractions, CoM is an ideal base to explore Mpumalanga.

Mbombela (previously Nelspruit) is the capital of the Mpumalanga province. Mbombela is the SiSwati word for 'a lot of people together in a small space'. CoM accommodates the majority of SiSwati speaking population. The city serves as a gateway to some of the best eco- and adventure activities in Southern Africa and, with its moderate climate, becomes the preferred tourist destination all year round. Its subtropical fruits (like mangoes, avocados, oranges, lemons, litchis and bananas) are a huge drawcard for visitors, and during springtime the blossoms of orange trees can be smelt kilometres away.

CoM has a strong identity and charter that is deeply felt by the local inhabitants and by many visitors mainly because of its tourism destination and proximity to nearby countries such as Swaziland & Mozambique. It's a gateway to Kruger National Park, home to elephants, zebras, rhinos and other wildlife. The city's Lowveld National Botanical Garden features a man-made rainforest. Northwest are the prehistoric Sudwala Caves, with unusual rock formations. South, Umhloti Nature Reserve contains the Jane Goodall Institute's Chimp Eden sanctuary.

CoM is situated within the Lowveld region in the fertile valley of the Crocodile River and acts as the gateway to Mpumalanga and the Kruger National Park. With abundant sunshine, moderate sub-tropical climate, lush landscape, and a host of nearby attractions, CoM is an ideal base to explore Mpumalanga.



4.2 SOCIO-ECONOMIC ENVIRONMENT

The socio-economic environment reflects the relationship between population requirements and the natural resource base. In other words, the distribution of the population is directly influenced by the bio-physical environment.

From a growth management perspective, the critical challenge moving forward is threefold. The city needs to concurrently meet the backlog of those living in poverty and unsatisfactory living conditions; accommodate projected (or indeed unforeseen) population increases; and maintain and continually adapt (for greater inclusion and accessibility) those parts of the city that are performing well.

This section gives a brief description of the following socio-economic elements in the City of Mbombela:

4.2.1 Population Size & Growth

According to the Community Survey 2016 conducted by STATSSA the current population of the City of Mbombela is estimated to be **695 913**. This population constitutes 39.6% of the entire population of Ehlanzeni District.

Table 9: Total Population

	2011	2016	2030	Growth Rate
Total Population	655 950	695 913	965 877	2.4%

Source: Statistics South Africa

The City of Mbombela has recorded an annual population growth rate of 2.3% per annum between 2001 and 2011 (Stats SA, 2011). However between 2011 and 2016 an annual population growth rate of 1.2% was observed. The projected population of the City for the year 2030 is estimated to be **956 877**.

4.2.2 Population Distribution

The larger portion of Mbombela's population live in peri-urban and rural areas. About 75% of the people live within communal areas on the eastern axis of the City which is far from the economic centres.

4.2.3 Age and Gender Composition

Table 10 below illustrate the age and gender composition of the City.

Table 10: Age and Gender Composition

Description		2011	%	2016	%
Age Composition	0 - 4	73227	11.16	85580	12.34
	5 - 9	59700	9.10	72570	10.47
	10-14	61143	9.32	64958	9.37
	15 - 19	66603	10.15	61567	8.88
	20 - 24	73182	11.16	66692	9.62
	25 - 29	70578	10.76	70971	10.24
	30 - 34	52383	7.99	59663	8.60
	35 - 39	45831	6.99	50329	7.26
	40 - 44	36840	5.62	40935	5.90
	45 - 49	31968	4.87	34118	4.92
	50 - 54	23577	3.59	24703	3.56
	55 - 59	19578	2.98	18416	2.66
	60 - 64	13710	2.09	15646	2.26
	65 - 69	8997	1.37	10351	1.49
	70 - 74	7686	1.17	7739	1.12
	75 - 79	4560	0.70	4309	0.62
80 - 84	3444	0.53	2476	0.36	
85+	2943	0.45	2344	0.34	
Gender Composition	Total	655 950	100	693367	100
	Female				51
	Male				49

Source: Statistics South Africa

According to the above table it's evident that the City of Mbombela has a fairly young population, with 61% of the population being 29 years and below as per the 2016 Community Survey data. The age group between 15-64 years is classified as predominantly economic active and represents 64% of the total population.

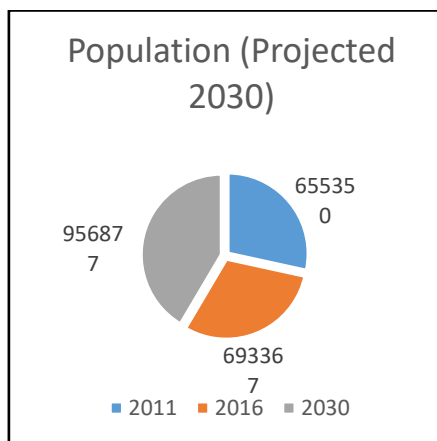
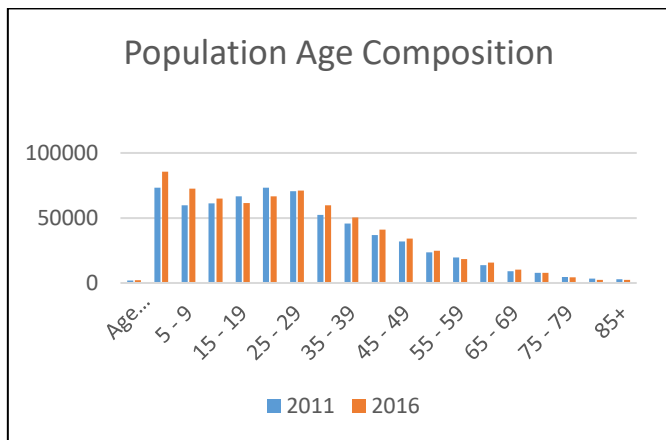


Chart 1: Population and Age Composition

With regard to sex composition, the Mbombela municipal are has seen females being in majority since Census 1996 to the most recent Community Survey conducted in 2016. This has also been quantified by the sex ratios. There have been fluctuations in sex ration between the three Censuses. In 2001, the sex ratio was 93 males for every 100 females. This increased to 96 in 2011 and then further up to 98 males per 100 females in 2016.

4.2.4 Race Profile

Table 11 illustrates that the black population constitutes the largest segment (96%) of the City of Mbombela’s population followed by the white population (2.69%). The coloured and Indian population groups represent a small segment of the total population.

Table 11: Race Profile

Race	2011	%	2016	%
Black	587 310	89%	667 827	95.96%
White	57 986	9%	18 695	2.69%
Colored	6 904	1%	6 535	0.94%
Indian	4 902	0.7%	2 855	0.41%
Other	1 237	0.3%	n.a	n.a
Total		100%		100%

Source: Statistics South Africa

4.2.5 Income Profile

Household income is used as one of the main poverty indicators in South Africa. Social support and subsidy systems are often based on household income parameters. When comparing household income, it is important to discount the impact of inflation. The figures in the table below were adjusted to 2011 Rand values.

Table 12: Income Profile

Income group (Rands)	2001	%	2011	%	
<1200	45 957	33%	62 167	34%	↑
1 200 – 2 000	37 574	27%	28 503	16%	↓
2 000 – 5 000	18 356	13%	34 379	19%	↑
5000 – 10 000	17 104	12%	25 674	14%	↑
10 000 – 20 000	9 198	7%	16 898	9%	↑
20 000 – 50 000	9 380	7%	10 516	6%	↓
>50 000	1 553	1%	3 591	2%	↑
Total	139 102	100%	181 782	100%	

Source: Statistics South Africa

- An increase from 33% in 2001 to 34% in 2011 in the number of households with no income.
- 50% of the total population earned below the poverty line in 2011, which decreased from 60% in 2001.

Although there is some evidence across the census and some surveys that quality of life is improving across the city region, the fact that the wealthy have got richer at a faster rate than lower income groups, has driven inequality.

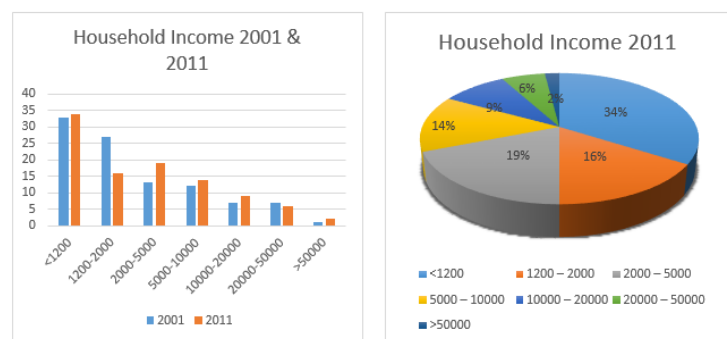


Chart 2: Household Income

4.2.6 Education Levels

Table 13 below indicates the education levels of the City of Mbombela between 2011 and 2016. The challenges lie in the levels of skill and qualifications of the population which are fairly low. This will pose a serious problem for the future economic trajectory as skills will have to be built to suit the economic path and in the short-term skills will have to be brought in from skilled areas.

Table 13: Education Levels

Education Levels	2011		2016	
	Figure	%	Figure	%
Grade 0	21063	3.69%	12942	18.81%
Grade 1 / Sub A	17922	3.14%	29146	4.24%
Grade 2 / Sub B	17715	3.10%	20107	2.92%
Grade 3 / Std 1/ABET 1Kha Ri Gude;SANLI	18813	3.29%	16749	2.43%
Grade 4 / Std 2	21150	3.70%	24128	3.51%
Grade 5 / Std 3/ABET 2	22470	3.93%	21634	3.14%
Grade 6 / Std 4	22791	3.99%	24419	3.55%
Grade 7 / Std 5/ ABET 3	28134	4.92%	26812	3.90%
Grade 8 / Std 6 / Form 1	38214	6.69%	23778	3.46%
Grade 9 / Std 7 / Form 2/ ABET 4	31077	5.44%	33160	4.82%
Grade 10 / Std 8 / Form 3	44169	7.73%	33240	4.83%
Grade 11 / Std 9 / Form 4	48855	8.55%	46635	6.78%
Grade 12 / Std 10 / Form 5	13513	23.65%	56164	8.16%
NTC I / N1/ NIC/ V Level 2	948	0.17%	15823	23.00%
NTC II / N2/ NIC/ V Level 3	828	0.14%	631	0.09%
NTC III /N3/ NIC/ V Level 4	1245	0.22%	444	0.06%
N4 / NTC 4	810	0.14%	944	0.14%
N5 /NTC 5	600	0.10%	1577	0.23%
N6 / NTC 6	906	0.16%	411	0.06%

Certificate with less than Grade 12 / Std 10	1038	0.18%	1225	0.18%
Diploma with less than Grade 12 / Std 10	1125	0.20%	720	0.10%
Certificate with Grade 12 / Std 10	9546	1.67%	1451	0.21%
Diploma with Grade 12 / Std 10	10914	1.91%	5631	0.82%
Higher Diploma	9054	1.58%	10050	1.46%
Post Higher Diploma Masters; Doctoral Diploma	1377	0.24%	4353	0.63%
Bachelor's Degree	6348	1.11%	2588	0.38%
Bachelor's Degree and Post graduate Diploma	2424	0.42%	6608	0.96%
Honours degree	3159	0.55%	3754	0.55%
Higher Degree Masters / PhD	1995	0.35%	1299	0.19%
Other	1188	0.21%	858	0.12%
No schooling	50475	8.83%	1782	0.26%
Total	57148	100.00	68795	100.00
	8	%	4	%

Source: Statistics South Africa

From the above table it is evident that between the year 2011 and the year 2016:

- A decrease from 8.83% in 2011 to 0.26% in 2016 in the number of person with no schooling.
- A decrease in the number of people who completed matric from 23.62% in 2011 to 8.16% in 2016.
- A decrease in the number of people who attained higher education (post grade 12) from 7.48% in 2011 to 5.19% in 2016.

4.2.7 Employment Profile

Table 14 indicates the employment status of City of Mbombela between 2001 and 2011:

- The number of employed people decreased from 38% in 2001 to 28% in 2011.
- Unemployed decreased from 22% in 2001 to 11% in 2011.

Table 14: Employment status

Employment	2001	%	2011	%	
Employed	126 687	38%	185 202	28%	↓
Unemployed	72 422	22%	72 138	11%	↓
Discouraged	19 772	6%	22 551	3.4%	↓
Not economically active	50 032	15%	155 790	23.6%	↑
< 15 years	64 510	19%	1 215	0.3%	↓
Unspecified/Other	NA	-	221 482	33.7%	↑
Total	333 424	100%	658 378	100%	

Source: Statistics South Africa

Economically active: refers to all the people aged between 15 and 64 years that are able and willing to take part in economic activities (excluding those individuals not actively looking for work, students, pensioners, housewives, etc.). The following categories are included:

- **Employed:** all individuals that are currently being employed and paid by the formal sector of the economy.
- **Unemployed:** all individuals that are actively looking for a job in the formal sector of the economy, and cannot find one.

Economically inactive: all individuals who are not actively searching for employment or those individuals that do not have the capacity to become employed such as young children.

Discouraged: a person of legal employment age who is not actively seeking employment or who does not find employment after long-term unemployment.

4.2.8 Economic Sectors

The Table 15 below discusses each economic sector and its performance in Mbombela in brief. Based on this Table, it is evident that some sectors in Mbombela contribute significantly to the local economy and have shown good growth over the last ten years

Table 15: Sectoral Contribution to GVA

Economic Sector	Contribution to GVA		
	Former Umjindi 2011	Former Mbombela 2011	Former Mbombela 2013
Primary Sectors			
Agriculture	10.0%	3.2%	4%
Mining	4.4%	2.2%	3%
Secondary Sectors			
Manufacturing	15.9%	11.5%	17%
Utilities	0.6%	0.5%	2%
Construction	3.4%	4.6%	3%
Tertiary Sectors			
Trade Sector	17.6%	23.1%	13%
Transport and Communications	10.6%	12.8%	10%
Finance and Business Services	12.8%	18.5%	22%
Community Services	24.6%	23.6%	9%
Government Services	n/a	n/a	17%
Total	100%	100%	100%

Source: Mbombela LED Strategy 2015 & Former Umjindi SDF 2014

The above table illustrates the following:

- Manufacturing, finance and business and government services are the sectors that contributed most to (GVA) in Mbombela.
- Mining only contributes 3% of the total GVA, which has increased from the previous years while Mpumalanga produces a high 17.6%. This holds opportunities for Mbombela to provide services for this growing sector in the province.
- Agriculture in Mbombela is declining as the economy moves towards providing services, but potential for growth still exist with new farming techniques being created to accommodate lack of land and weather changes.

- Agriculture makes up 10% of the Umjindi economy and mining is the smallest sector within the local and district economy contributing only 4.4% to the Umjindi Municipality.
- Manufacturing is the third largest sector within Umjindi contributing 15.9% to the economy.

An economic analysis of Mbombela revealed that the following sectors can provide an opportunity for future growth: (Source: Mbombela Local Economic Development Strategy, 2015):

Agriculture	Utilities	Construction
<ul style="list-style-type: none"> • Due to the ideal location of the municipality in terms of exports, tourism, and trade and the opportunities in this sector for employment creation, the agriculture sector has lots of potential for development. New developments such as the Fresh Produce Market will have a positive effect on the local sector by providing smaller, local farmers easier access to a market. 	<ul style="list-style-type: none"> • With new energy technologies (e.g. wind, solar); local municipalities are open to exploring innovative ways for efficient energy use. The municipality could explore and invest in energy infrastructure for short and long term. Growing this sector could also create job opportunities. 	<ul style="list-style-type: none"> • The construction sector has shown high average growth rates over the last ten years and more developments in the local municipality will expand this sector and create the potential for new employment opportunities. The building of large projects such as the Fresh Produce Market, the high court and legal chambers and the ICC provide opportunities for employment and growth of this sector.
Trade	Transport	Community Services
<ul style="list-style-type: none"> • This sector is the current strength of the economy of Mbombela and pro-active measures need to be implemented to retain the stability and future growth of this sector. 	<ul style="list-style-type: none"> • This sector is becoming increasingly important for the service orientated economy. The accessibility to the Maputo development corridor should be fully exploited. 	<ul style="list-style-type: none"> • Continued investment in SMME's, infrastructure and human capital will ensure success in this sector.

4.2.9 Employment per Sector

Table 16 below illustrate the formal employment figures for the former Umjindi and former Mbombela between 2000 and 2010.

Table 16: Employment per Sector

Area	Agriculture	Mining	Manufacturing	Utilities	Construction	Trade	Transport & Communication	Finance	Community Services	Households	Total
Former Umjindi Local Municipality	33.0 %	3.2 %	16.0 %	0.4 %	5.5 %	14.6 %	3.6 %	4.3 %	13.7 %	5.9 %	100 %
Former Mbombela Local Municipality	9.4 %	0.2 %	10.6 %	0.5 %	10.1 %	29.7 %	4.1 %	8.3 %	18.1 %	9.0 %	100 %

Source: Mbombela LED Strategy 2015 & Former Umjindi SDF 2014

- Agriculture accommodates the highest % of formal employment within Umjindi (33%), followed by manufacturing (16.0%) and Trade (14.6%) with community services at 13.7%.
- The Trade sector plays a major role as employment provider in Mbombela (29.7%), followed Community Services (18.1%) and Manufacturing at 10.6%.

According to the Mbombela Local Economic Development Strategy 2015, the sectors that contribute the most to local employment are as follows:

- Government services (22%)
- Finance and business services (17%)
- Trade and accommodation (17%)
- Community services (16%)

4.2.10 Traveling Patterns within the Municipality

Employment opportunities and economic activity is centred on the Nelspruit-Rocky Drift-White River corridor, which is the main source of private vehicle trips. The majority of the population though resides in the low-income area of Nsikazi to the east.

Commuting primarily takes place between Nsikazi and the economically well-developed western corridor of Nelspruit, Rocky Drift and White River, with the exceptions being Malelane and Barberton. Hazyview, although on a smaller scale, is another significant attractor of public transport trips considering the trips to and from Bushbuckridge.

The main origin of trips is the Nsikazi area, more specifically the areas surrounding Kabokweni, Clau Clau, Lekazi, Kanyamazane, Daantjie, Lindela and Matsulu.

In 2009 a detailed origin-destination survey was conducted at key intersections along the western edge of the Nsikazi area. The following is noted from the survey:

- Close to 60% of the Nsikazi daily commuter vehicle trips come from the north-east of Nsikazi and traverse the R536-R538, Plaston and Luphisi junctions.
- Up to 30% of the total daily commuter vehicle trips come from the south of Nsikazi and traverse the Karino junction.
- Of all daily commuter vehicle trips from Nsikazi, the following routes are the most popular:
 - 13% use the Rocky Drift-Plaston link
 - 21% use the R40
 - 29% use the Kanyamazane road going past Kamagugu and
 - 34% use the N4

4.2.11 Land Ownership

Property ownership and land tenure are key elements in land use management in that it will reveal the right that the holder of the land has and therefore the procedures the holder of the land has to follow to effect land use change.

In areas where private ownership is the predominant form of land ownership, land use regulation and tenure are two separate but linked processes. Where land is held in communal ownership, land use rights and tenure are closely linked

The majority of settlements within the northern & eastern regions are informal and characterised by inferior forms of land tenure (communal ownership), as opposed to the settlements in the western part, which are formal and provides full ownership.

Land ownership within the City of Mbombela can be broadly summarised as follows:

Table 17: Land Ownership

Ownership	Approximate Size	&
Private Land	-	-
Stale Land	-	-
Municipal Land	-	-
Total	-	-
SANPARKS (Kruger National Park)	-	-
Total	-	-

4.3 BUILT-ENVIRONMENT ANALYSIS

Spatial development of Cities is influenced by several factors which includes amongst others land ownership and access, natural elements such as topography, economic activities, natural resources and past apartheid planning laws and policies.

The spatial character of the City of Mbombela is branded by various urban and rural form consisting of urban, peri-urban, semi-urban, rural, commercial agriculture, communal agriculture, forestry areas and mining settlements grouped into different functional areas with different levels of development.

The purpose of this section is to provide a strategic overview of the built environment pressures within the COM municipal area through identifying current significant structural elements of the spatial form of the municipality under the following elements:

- Current Built Form or Settlement Patterns
- Node/Settlements roles, hierarchy & function
- Spatial structure and form
- Development pressures
- Built Heritage
- Land use and activity patterns
- Infrastructure and services
- Vacant land audit

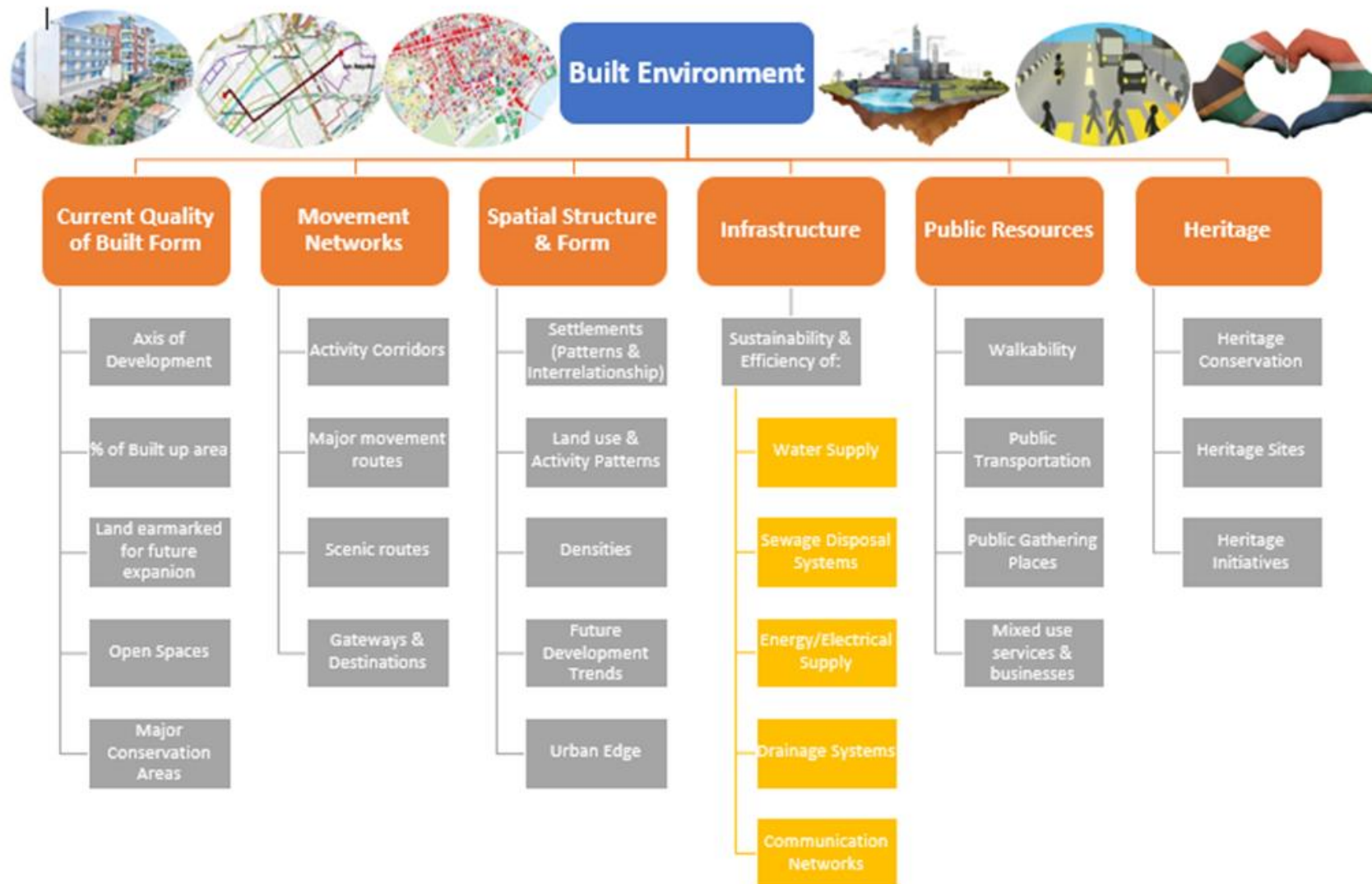


Diagram 23: Built Environment

4.3.1 Current Quality of the Built Form

(a) Development Axis

The COM municipal area is characterised by four axes of development patterns of strategic importance spread across all regions of the municipality being:

The Eastern Development Axis

The Eastern Development Axis consist of a broad belt of urban and semi urban settlements, stretching from Hazyview in the northern region to Kanyamazane in the eastern region. This development axis is characterized by the majority of settlements that exist within the eastern and northern regions of the municipality.

Settlements within this development axis are characterized by a lack of economic and social opportunities, extraordinary long distances between residence and work/shopping places and insecure forms of land tenure. These settlements are inefficient in terms of engineering service delivery, inconvenient in terms of long travelling distances and high reliance on public transport.

The settlements are rapidly growing towards each other in an unplanned, informal and uncoordinated manner with the result being the formation of a continuous urban agglomeration with little remaining open space.

Mbombela – White River Development Axis

The Nelspruit–White River Development corridor is provided along Road P9-2 (R40), which include Nelspruit CBD, the Nelspruit industrial cum commercial areas, Riverside Park industrial area, Riverside Mall, the Provincial Government office complex, Rocky Drift and White River. The residential areas of Nelspruit and White River are also included. Settlements in the western part have opposite characteristics to the settlements in the east. Rigid town planning schemes, assured zonings that provide for definite land uses within certain zones, control development in these areas. Due to the uniformity

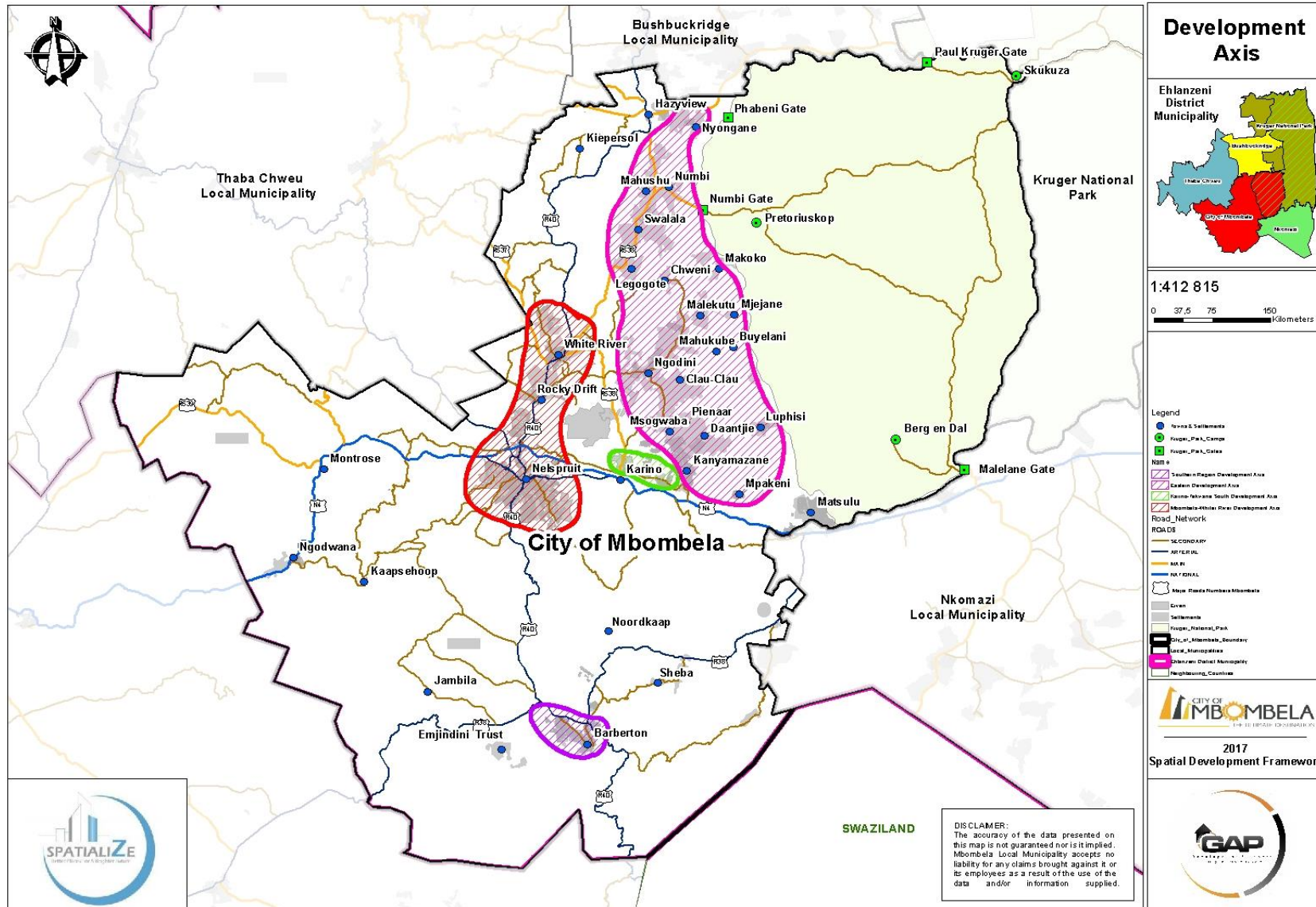
provided by these zonings a set standard of development is achieved in terms of scale and quality.

Karino – Tekwane South Development Axis

The Karino – Tekwane South development axis is provided along the Kanyamazane Road (D2296) and forms an anchor point for the growing urban expansion area of the City of Mbombela. The Karino – Tekwane development axis came as a result of a trickledown effect associated with the development of the Karino Life Style Estate and the unavailability of strategic land for residential development around the Nelspruit area. The Karino – Tekwane development axis is characterised by ongoing residential, commercial, institutional and other urban development, as well as the proposed Mega Urban Hub.

Southern Region Development Axis

The Sothern Region Development Axis is characterised by the Barberton / Emjindini as major urban development node within the area consisting of various business centre and residential areas with a disparate settlement pattern. Development within this region has been very limited however pockets of urban & semi urban development including continues residential development have occurred over the years in the areas around Phumula and Emjindini Ext 12 towards Selapi along the R40 & R38 corridors.



Map 19: COM Development Axis

(b) Open Spaces

The City of Mbombela Open Space is predicated on geophysical features, natural resources and cultural landscapes which also accommodates the associated Cores and Buffers. Therefore, the City of Mbombela Open Space is characterised by the following different types of open spaces:

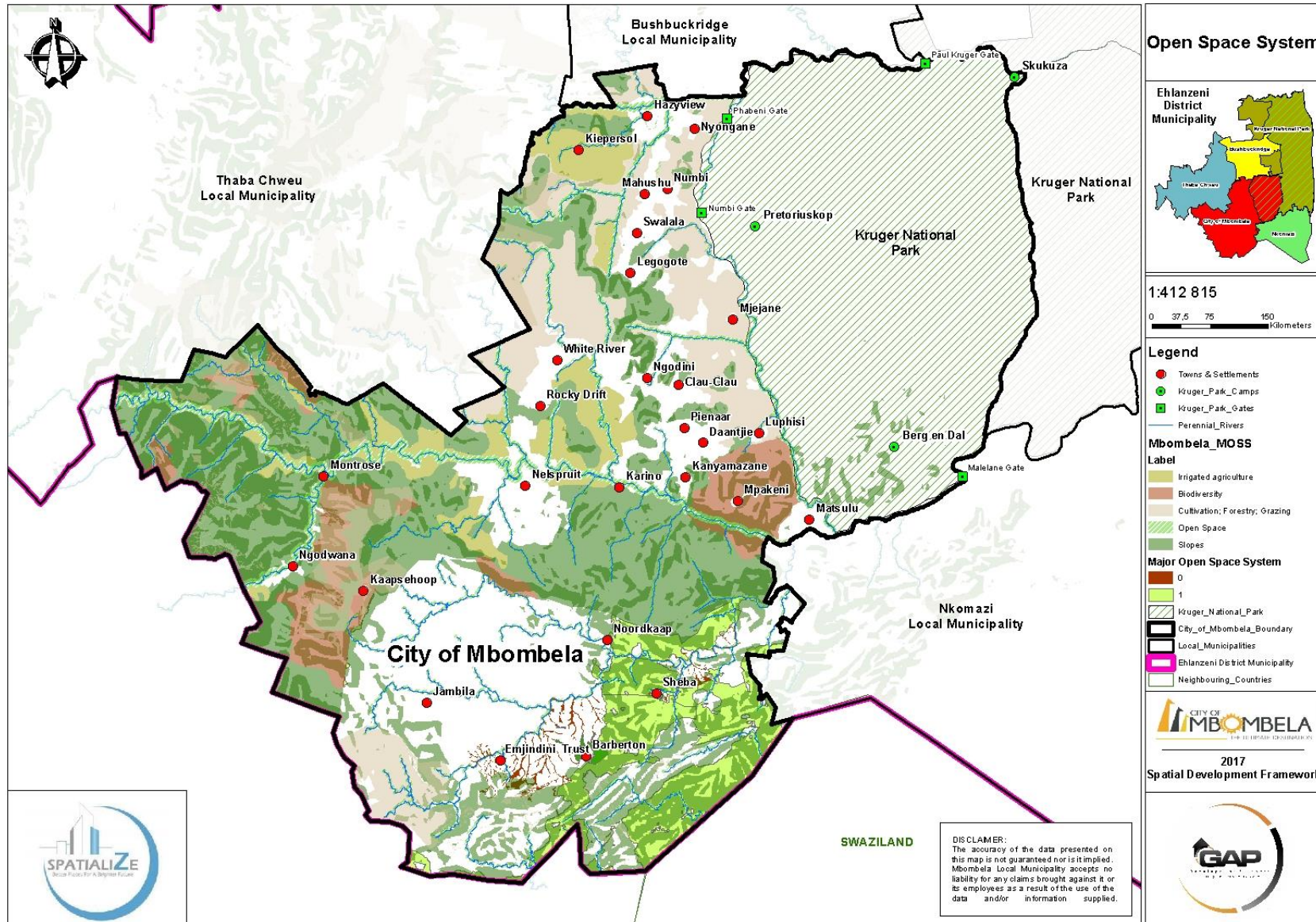
- Biodiversity Areas;
- River Corridors;
- Ridges & Mountainous Areas;
- Natural Heritage Sites;
- Public Parks; and
- Nature Reserves

Some of the above-mentioned types of open spaces are being compromised due to uncontrolled developments and informal settlements.

(c) Major Conservation Areas

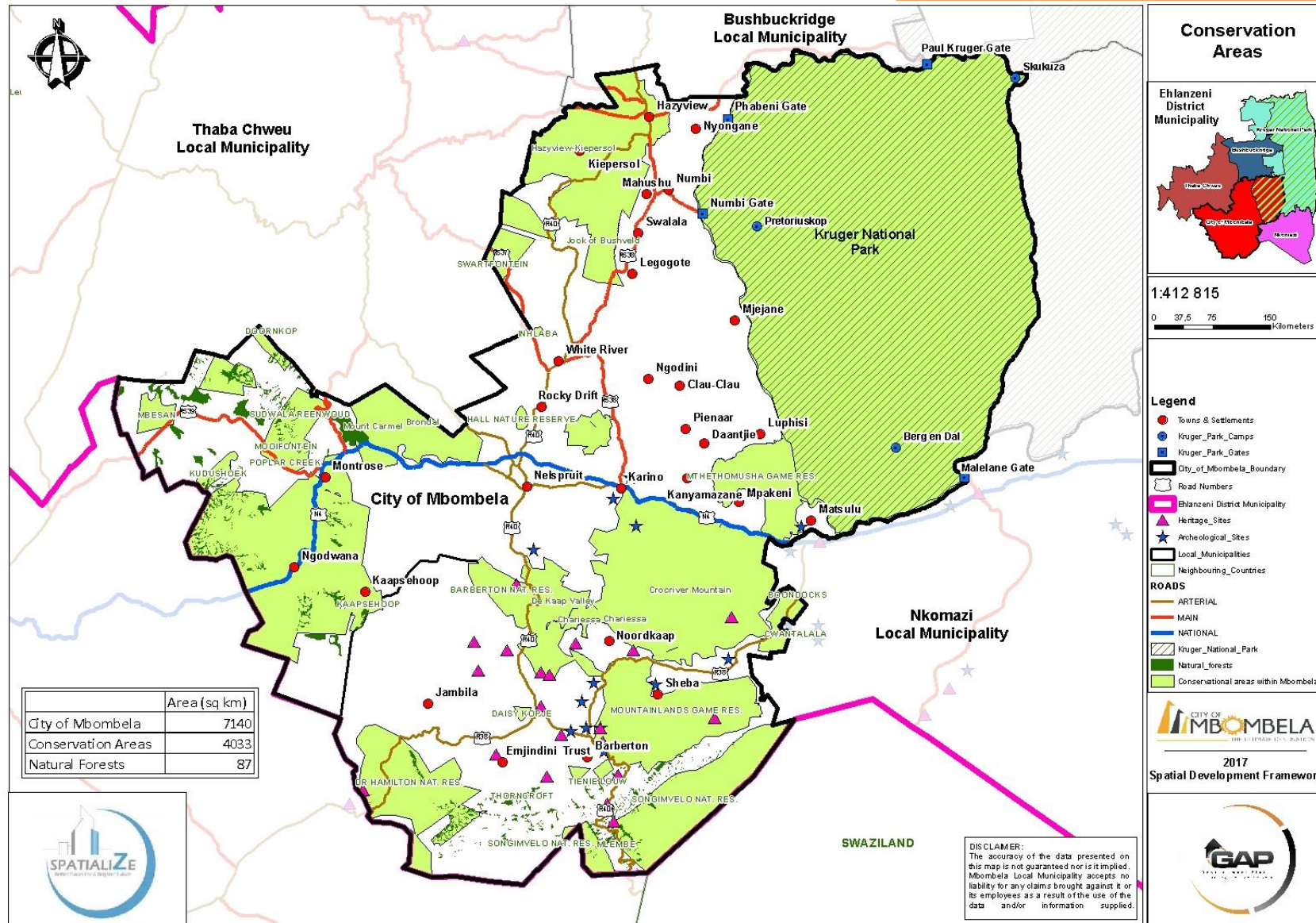
The Department of Environmental Affairs (DEA) maintains a spatial database on Protected Areas and Conservation Areas. The database contains information related to protected areas – areas set aside primarily for nature and biodiversity, as well as conservation areas – areas of conservation importance where other land uses may also be permitted. DEA has identified the following as major areas on environmental protection and conservation within the boundaries of the City of Mbombela:

SPATIAL DEVELOPMENT FRAMEWORK



Map 20: COM Open Spaces

SPATIAL DEVELOPMENT FRAMEWORK



Map 21: Major Conservation Areas

4.3.2 Movement Networks and Transportation

Movement networks have several aspects. The diagram below illustrates the 4 broad aspects of movement networks.

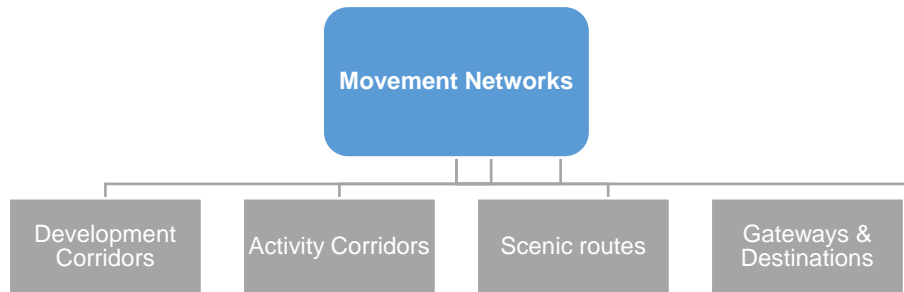


Diagram 24: Movement Networks Components

(a) Development Corridors

Development corridors are integrated networks of infrastructure within a geographical area designed to stimulate economic development. Corridors may be developed within a country or between countries.

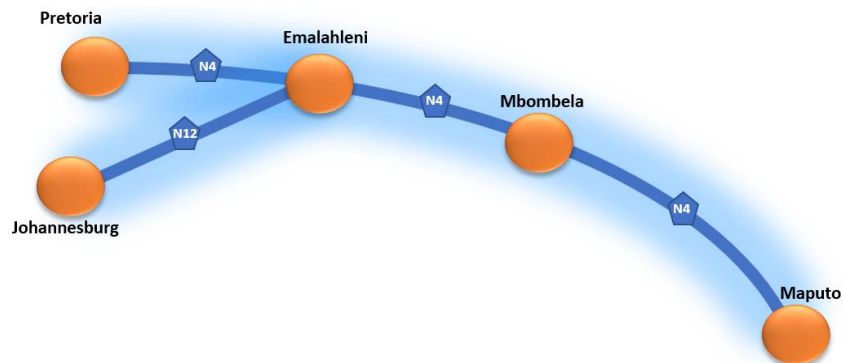


Figure 5: Development Corridors

(b) Activity Corridors

An area of generally higher intensity urban use or land suitable for intensification, parallel to and on both sides of an activity spine, and includes any associated higher order transportation routes such as railway lines and through roads.

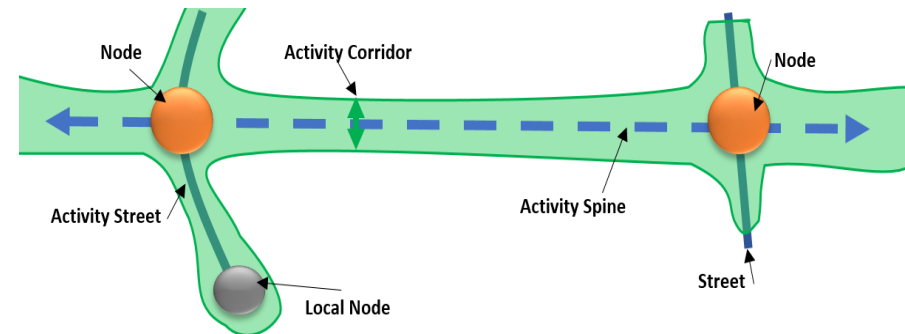


Figure 6: Activity Corridors and Nodes

Existing Corridors within City of Mbombela

- Nzikazi activity corridor
- Tekwane/Msogwaba activity corridor
- Nelspruit/White River activity corridor
- Karino/KMIA/Plaston activity corridor
- N4 transportation corridor

Existing Nodes within the City of Mbombela

The table below indicates the existing nodes within the City of Mbombela sorted in terms of its order:

Table 18: Existing Nodes in COM

Order	Existing Nodes
Regional activity node:	Nelspruit
1st Order activity node	Hazyview White River Kanyamazane Barberton
2nd Order activity node	Swalala Kabokweni Msogwaba Matsulu
Specialty node	Rocky Drift Plaston KMIA Karino
Rural service centers	Elandshoek Kaapsehoop Alkmaar

4.2.3 Spatial Structure and Form

The current spatial structure of the City of Mbombela is dictated by various spatial structuring elements and settlement status (hierarchy) with associated economic base. The spatial structure that currently defines the City of Mbombela can be summarised in terms of the following dominate elements:

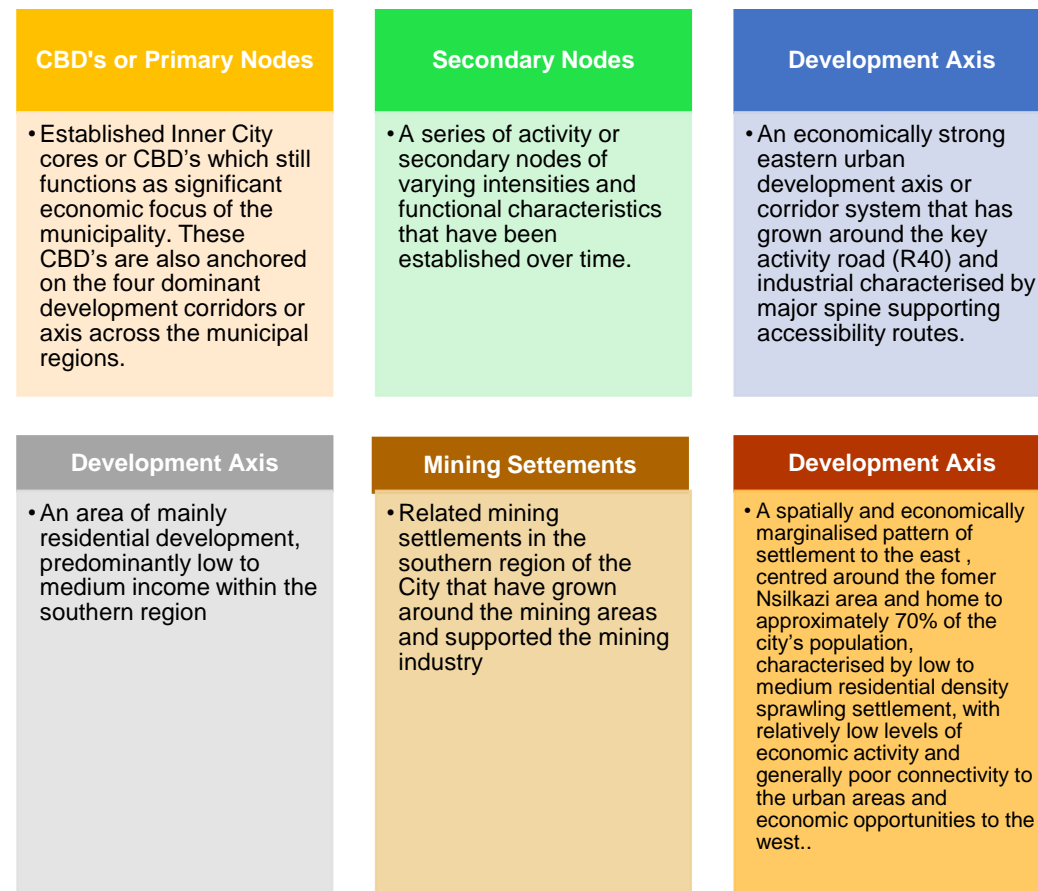


Diagram 25: Current Spatial Structuring Elements

(a) Settlements patterns & interrelationship

Urban and rural development is dictated by the settlement status (hierarchy and role / function) and its economic base. The settlements that currently defines the municipality can be categorised as follows:

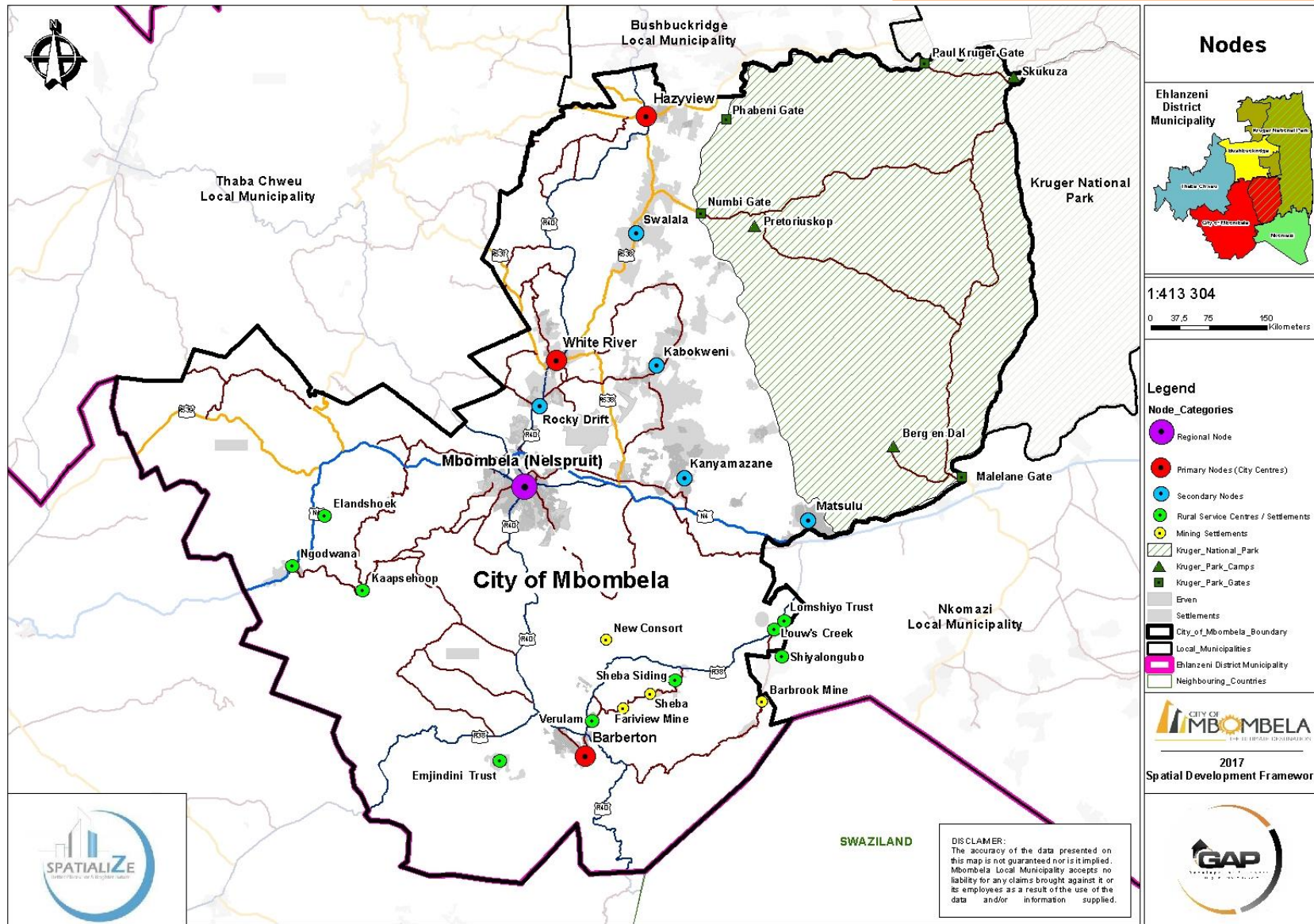
- Central Business Districts (Primary municipal nodes)
- Secondary Nodes
- Mining Settlements
- Rural settlements and rural service centres

The roles and functions of the above settlements are summarised in the below table.

Table 19: Roles & Functions of Nodes /Settlements

Node / Settlement Type	Name	Role & Function
Primary Node (City Centres)	Nelspruit	Nelspruit is the capital city for Mpumalanga and regional economic hub for the southern parts of Mozambique, the northern parts of Swaziland and the Lowveld Region.
	White River	White River fulfils a sub-regional role with respect to services and retail facilities, however an important residential, tourism and agricultural centre.
	Barberton	Barberton/ Emjindini is the major urban development node within the southern area consisting of business centres and residential areas, providing services to the mining settlements.
	Hazyview	Hazyview is an important agricultural and tourism centre serving the northern areas of Mbombela and southern areas of Bushbuckridge.
Secondary Nodes	Rockydrift	Rocky Drift currently performs the function of a regional industrial centre.
	Kabokweni	These nodes have a limited economic base providing a variety of social, retail, personal services and service industries to the mainly dormitory settlements surrounding them.
	Kanyamazane	
	Matsulu	
Swalala	Swalala is predominantly residential with commercial activities clustered along the P17/6 mobility road.	
Mining Settlements	Fairview	These are mining settlements in the southern region of the City that have grown over the
	Sheba	

	New Consort Barbrook	years characterised with residential settlements around the mining areas and supporting the mining industry.
Rural Centres	Service Ngodwana	Ngodwana is a private settlement that evolved around the forestry industry. The settlement includes the Sappi factory, associated housing and ancillary services.
	Elandshoek	Elandshoek provides housing, mainly to the people associated with the forestry industry.
	Kaapsehoop	Kaapsehoop is mainly residential with a strong tourism component.
	Sheba Siding	The role and function of these settlements is to provide shelter within the rural context and are supported by subsistence crop production and livestock farming with no economic base. These rural communities depend on nearby service centres where they can access day-to-day services.
	Louw's Creek	
	Emjindini Trust	
	Lomshiyo Trust	
Verulam	These rural communities depend on nearby service centres where they can access day-to-day services.	
Shiyalongubo		



Map 22: Major Nodes

(b) Settlements Interrelationship and Connectivity

Evident from the above table are the following realities:

- Nelspruit is the most important settlement within the hierarchy of settlements as it provides the majority of central functions and has the greatest sphere of influence. Nelspruit has a high dependence on surrounding areas for resource inputs.
- White River, Hazyview and Barberton performs a secondary role to Nelspruit as employment centre and residential area and fulfil a sub-regional role with respect to the provision of central functions. These nodes depend on Nelspruit for specialised goods and services.
- The main economic activity in the eastern areas is taking place at Kanyamazane CBD, Kabokweni and Matsulu. Commercial activities in Swalala, Msogwaba and Daantjie are located along the main routes. These areas are characterised by low levels of formal local economic activity and high dependence on higher order settlements for specialised goods and services.
- A number of rural villages in the eastern part are supported by subsistence crop production and livestock farming with no economic base. These rural communities depend on nearby service centres where they can access day-to-day services.

Rocky Drift is the third largest employment area after Nelspruit and White River performing the function of a regional industrial node. Rocky Drift is lacking central functions other than industrial.

Ngodwana, Kaapsehoop and Elandshoek depend on Nelspruit for a larger variety of functions and services.

Table 21: indicates the shortest road connections between the nodes in the municipal area. The main roads and secondary roads in the area are in a relatively good condition.

Table 20: Distance between Development Nodes

	Nelspruit	Rocky Drift	White River	Hazyview	Barberton	Kanyamazane	Msogwaba	Kabokweni	Swalala	Matsulu
Nelspruit		13	20	66	45	29	29	30	42	43
Rocky Drift	13		7	53	56	34	29	17	29	55
White River	20	7		46	64	34	29	18	23	62
Hazyview	66	53	46		109	66	75	64	15	83
Barberton	45	56	64	109		71	73	73	85	63
Kanyamazane	29	34	34	66	71		5	17	51	24
Msogwaba	29	29	29	75	73	5		10	52	29
Kabokweni	30	17	18	64	73	17	10		40	51
Swalala	42	29	23	15	85	51	29	40		85
Matsulu	43	55	62	83	63	24	29	51	85	
Total Km	317	293	303	577	639	331	308	320	422	492

(Source: Adapted from Land Use Transportation Strategy, 2010)

The following is evident from the table:

- Msogwaba, Rocky Drift, White River and Kabokweni, has the highest degree of accessibility. The comparative advantage of these nodes in terms of accessibility needs to be exploited to make the largest impact on decreasing trip distance, time and cost.
- Nelspruit and Kanyamazane also has a moderate degree of accessibility. These nodes however have a comparative advantage in terms of accessibility to the N4.
- Hazyview, Swalala, Barberton and Matsulu are relatively inaccessible.

(c) Broader Land Use Activities

The land use patterns of urban and rural areas are mostly influenced by diverse set of factors, which includes climate, topography, and resource base in the area such as minerals, soils, etc. The broader land use patterns that occur within the City of Mbombela are categorized into natural elements, primary economic activities and human settlements as indicated in the tables below.

Table 21: Land cover 1990 and 2014: Natural Elements

Land cover category	Extent of cover 2014 (ha)
Bare Rock and Soil (erosion dongas, sheet, & natural)	1801
Degraded (Forest & Wood Land, Bushland, Unimproved natural grass land)	14949
Forest (Indigenous)	10500
Improved Grass Land	229
Thicket, Bushland, Bush Clumps, High Fynbos	323027
Unimproved (natural) Grassland	49407
Waterbodies	2407
Wetlands	417
Woodland	140943

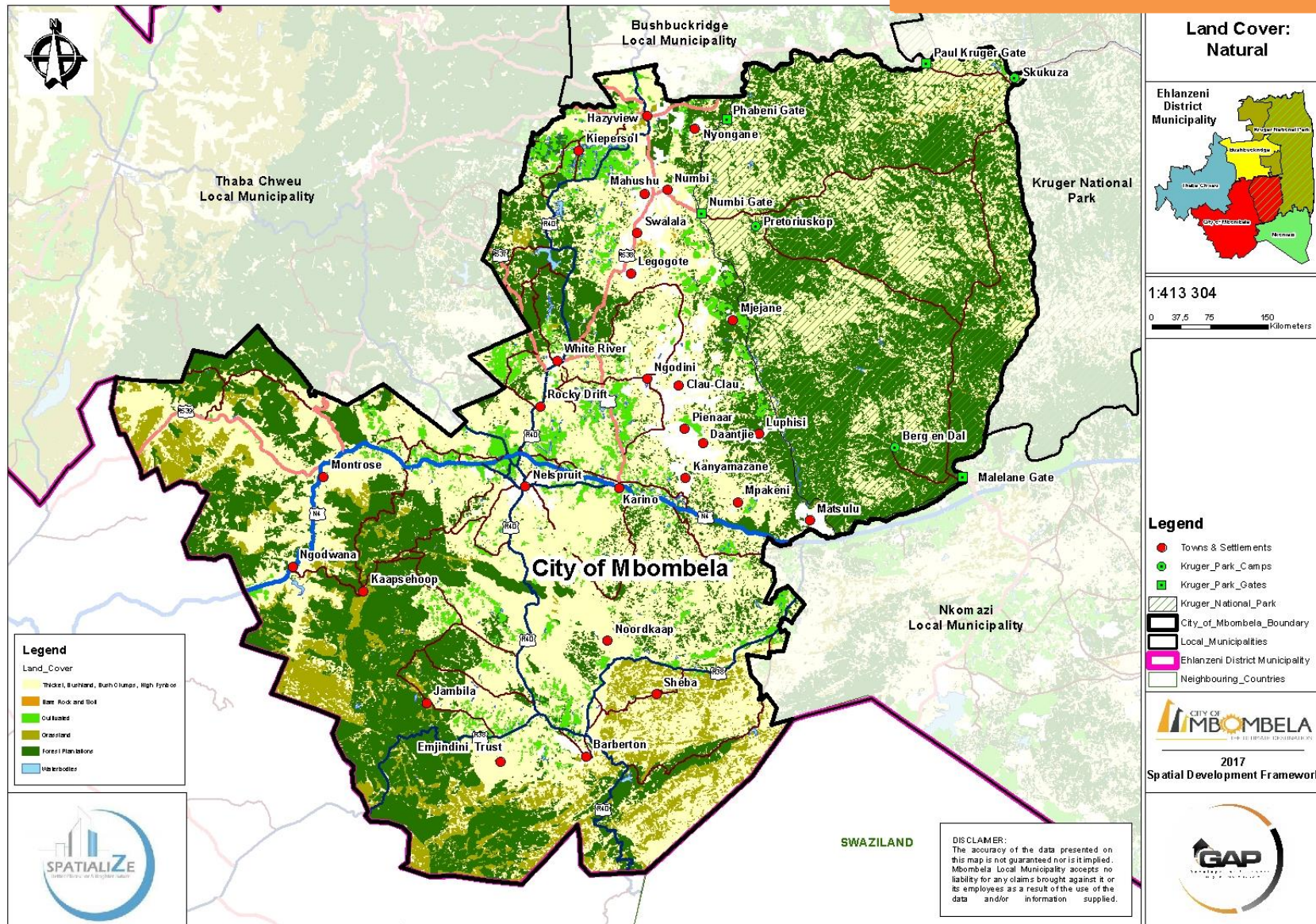
Table 22: Land cover 1990 and 2014: Primary Economic Activities

Land cover category	Extent of cover 2014 (ha)
Cultivated, permanent, commercial, irrigated	9143
Cultivated, permanent, commercial sugarcane	4098
Cultivated, temporary, commercial, dryland	7632
Cultivated, temporary, commercial, irrigated	11855
Cultivated, temporary, subsistence, dryland	2361
Cultivated, temporary, subsistence, irrigated	2055
Forests & Plantations	109237
Mining	351

Table 23: Land cover 1990 and 2014: Human Settlements

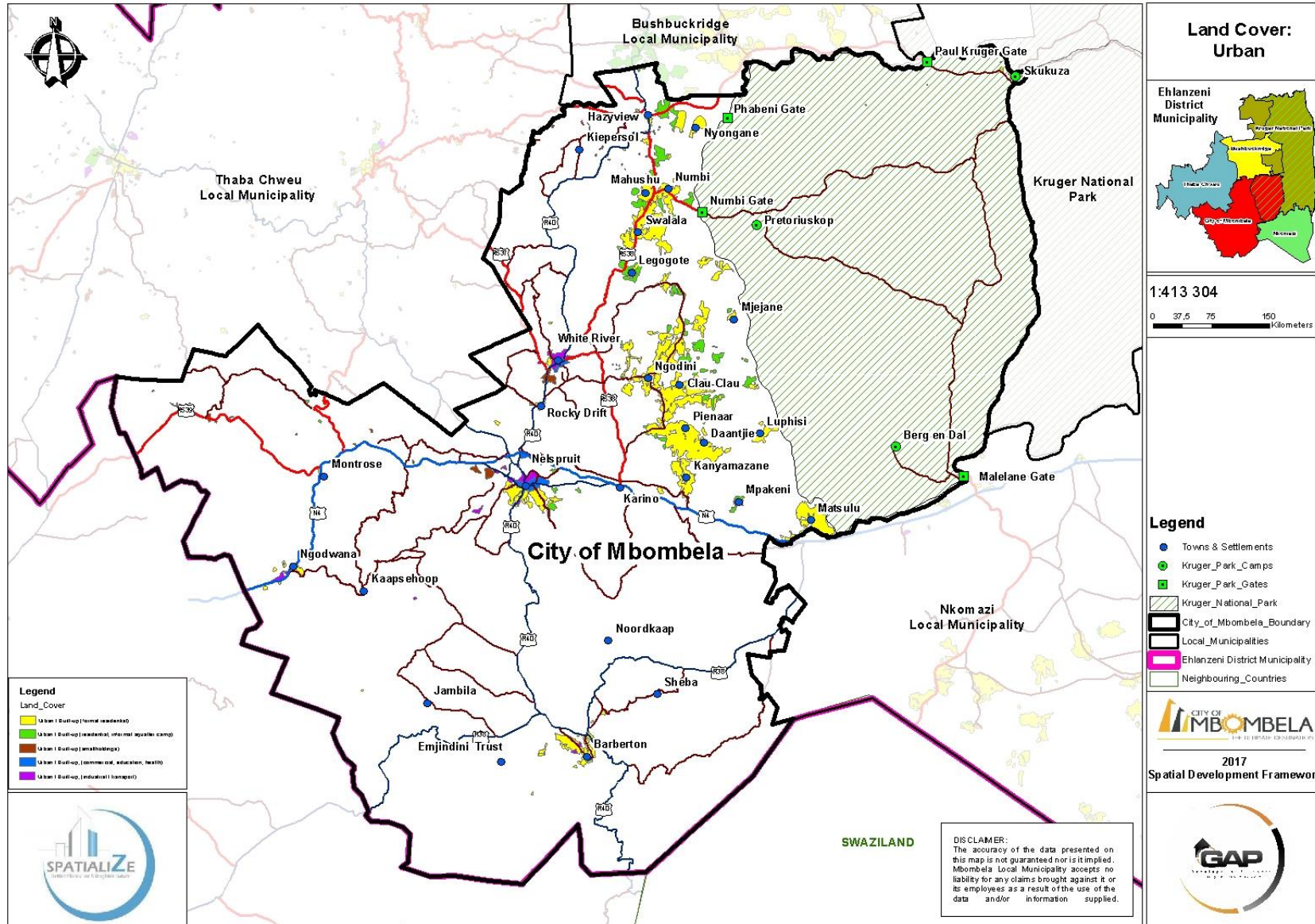
Land cover category	Extent of cover 2014 (ha)
Urban built-up (residential)	1570
Urban (residential, formal suburbs)	1441
Urban (residential, formal township)	14280
Urban (residential, informal township)	1031
Urban (rural cluster)	2420
Urban (smallholdings, thicket, bushland)	623
Urban (smallholdings, woodland)	79
Urban (commercial, education, health, IT)	673
Urban Industrial & Transport	893
Other	581

SPATIAL DEVELOPMENT FRAMEWORK



Map 23: Land Cover (Natural)

SPATIAL DEVELOPMENT FRAMEWORK



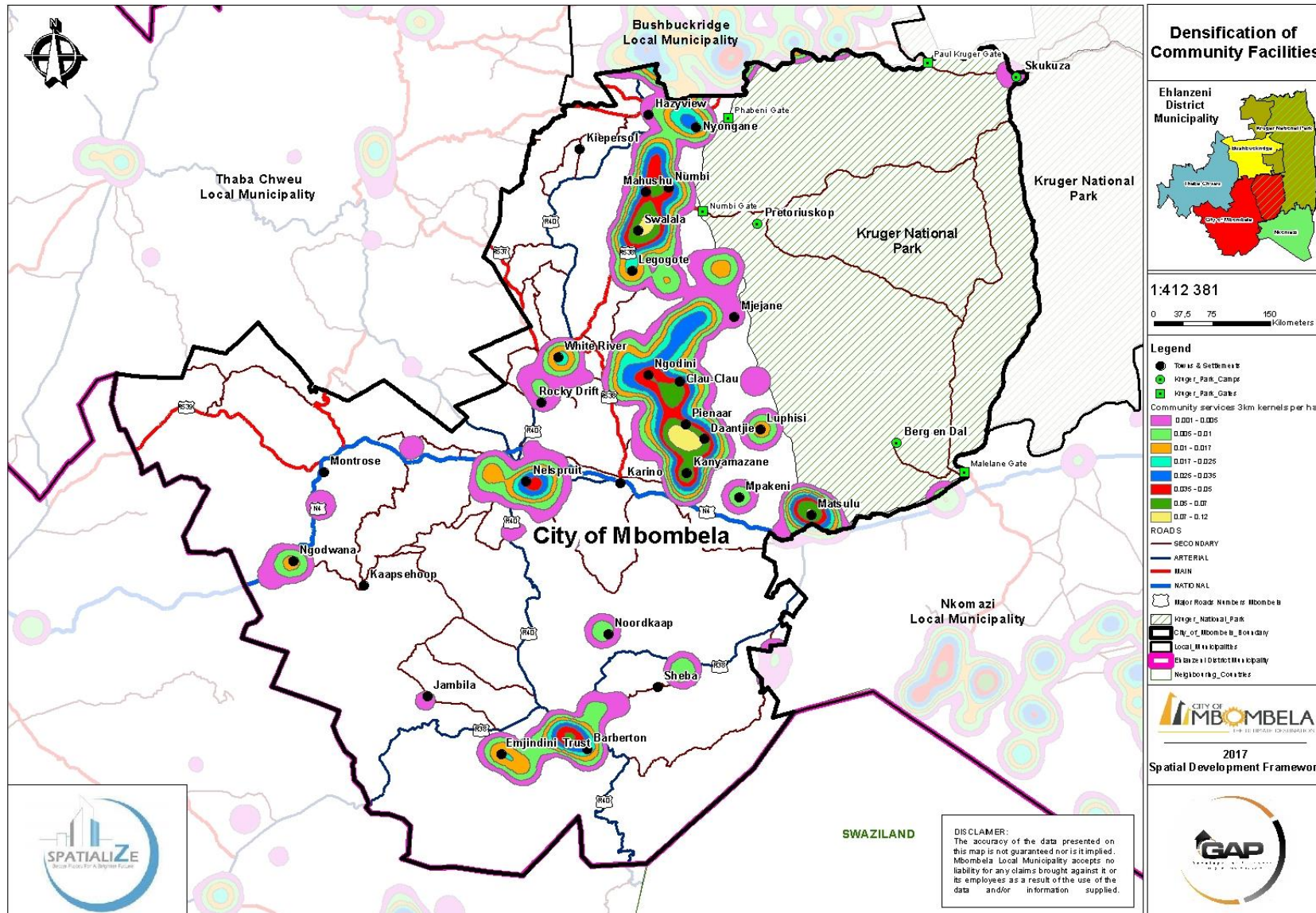
Map 24: Land Cover (Built-Up)

(d) Densities

A 3km Kernel Analysis was conducted to determine the densities of social amenities and businesses within 3 km representing access to social infrastructure and commercial jobs as well as the number of people who live within the 3km distance (see Map 25-27). The results can be summarised as follows:

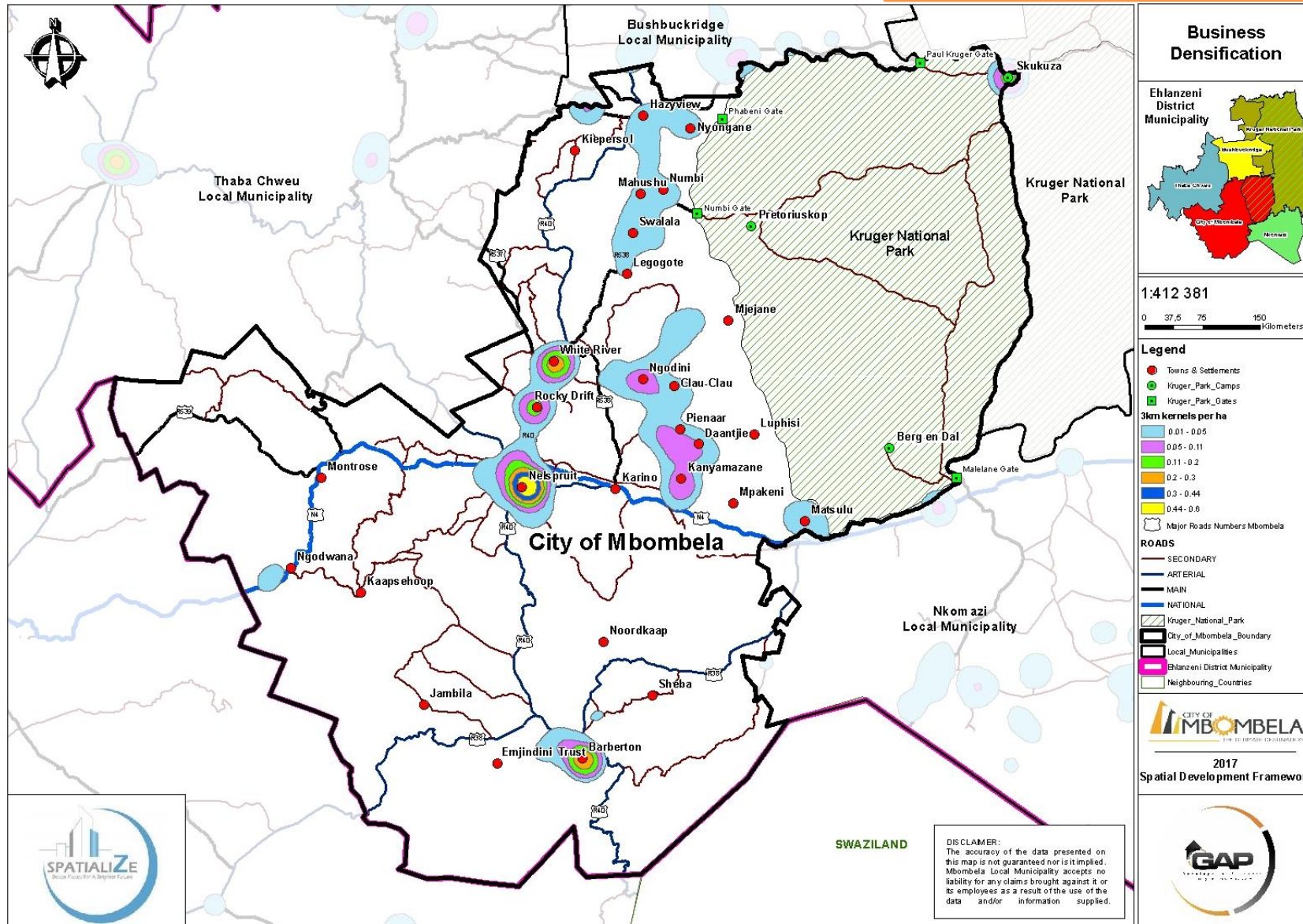
- Most of the community facilities are concentrated in Nelspruit, Kanyamazane, White River, Kabokweni, Hazyview, Mahushu, Swalala and Barberton.
- Majority of Businesses are concentrated in Nelspruit, Rockydirft, Whiteriver and Barberton.
- The majority of the population is concentrated in the eastern part of the municipality, in areas such as Matsulu, Kabokweni, Kanyamazane, Mahushu, Swalala, and Legogote

SPATIAL DEVELOPMENT FRAMEWORK



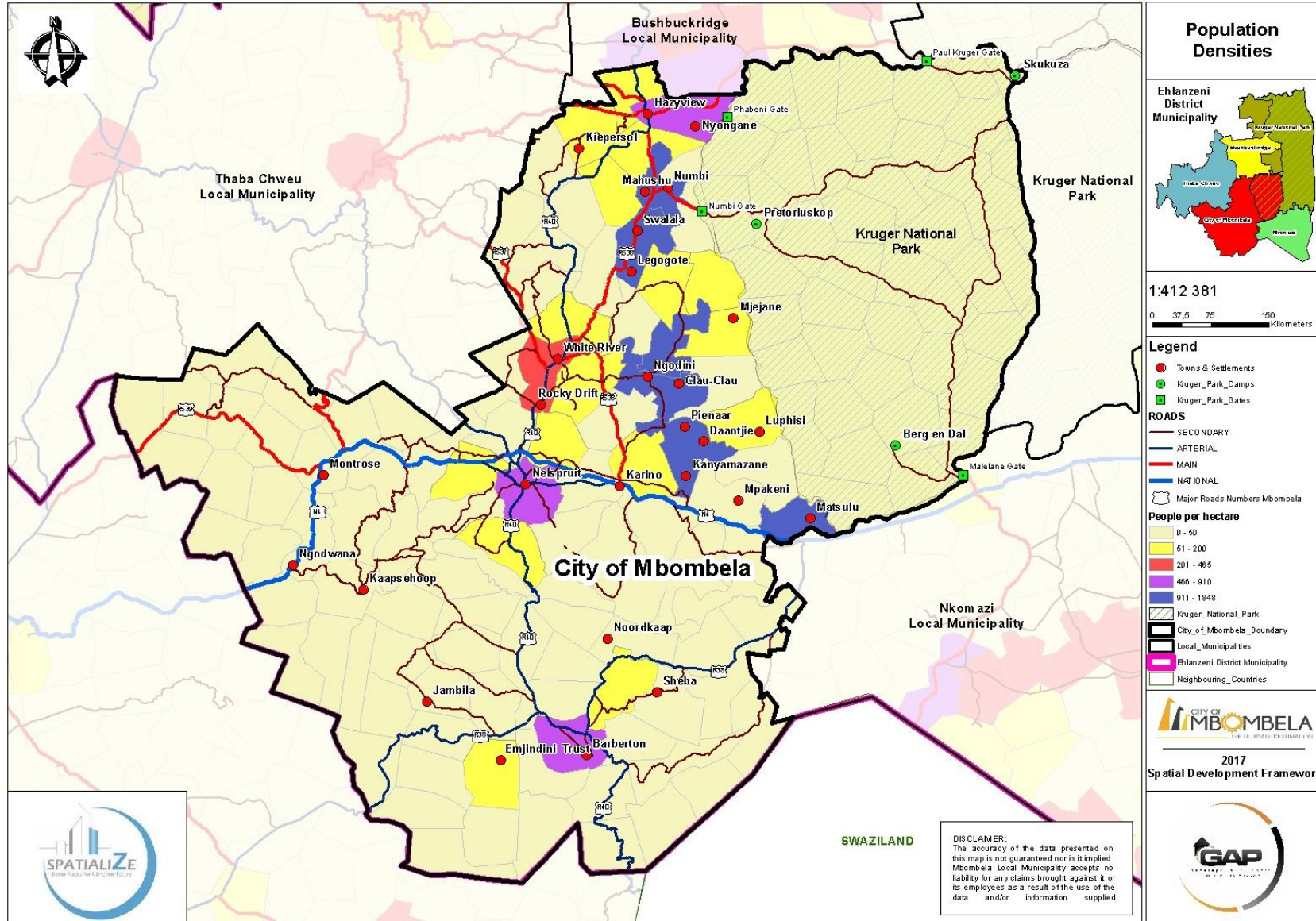
Map 25: 3km Kernels Community Facilities Densities

SPATIAL DEVELOPMENT FRAMEWORK



Map 26: 3km Kernels Business Facilities Densities

SPATIAL DEVELOPMENT FRAMEWORK



Map 27: COM Population Density

(e) Development Pressure and Future Development Trends

Over the years the City of Mbombela has grown considerably due its status as a Capital City and Provincial Administration of Mpumalanga. With the recent amalgamation of the former Umjindi and Former Mbombela Local Municipalities, the City is expected to grow rapidly and heading towards a Metropolitan Status.

The growth of the City resulted in demand for urban land around the main economic centres, i.e. White River, Nelspruit, Hazyview and Barberton. Development pressure within the municipality is eminent in the following Axes of Development:

(1) Mbombela – White River Development Axis:

- Business and commercial development along the R40,
- The provision of affordable housing nearer to places of employment,
- The provision of roads and engineering infrastructure

(2) The Eastern Development Axis:

- The unmanaged influx of people into the area,
- Unstructured settlement patterns,
- The lack of employment within proximity of residential areas,
- Urban and rural decay,
- Disparate provision of social, economic and engineering infrastructure,
- A poorly developed roads and transportation system.

(3) Karino – Tekwane South Development Axis

- Urban expansion area of the City of Mbombela.
- Ongoing residential, commercial, institution and other urban development.

(4) Southern Region Development Axis

The Southern Region Development Axis is characterised by the Barberton / Emjindini as a major urban development node within the area consisting of various business centre and residential areas.

Development Applications

Recently submitted and approved land development applications (from year 2012 to date) give an indication of the development pressures in the municipality. The majority of applications for rezoning are clustered in and around economic centres such as Barberton, Nelspruit, Rocky drift, White River, Hazyview and other expansion areas such as Nelspruit extension, Riverside Park extension 24, Sonheuwel Township and West Acres extension 17.

This can be ascribed to the proximity of existing social and engineering infrastructure, economies of scale, employment opportunities, good access and visual exposure.

An investigation of land development applications for township establishment, mainly submitted to City of Mbombela Local Municipality indicate that the majority of these applications are clustered around White River farm portions, Karino area, Tekwane area, Boschrand Heights and South of the Nelspruit CBD.

Land development in the eastern areas is mainly funded by the public sector focussing on the delivery of houses and associated social and engineering infrastructure. It is imperative that tenure issues be resolved, settlements be formalised and registered in order to attract private sector investment.

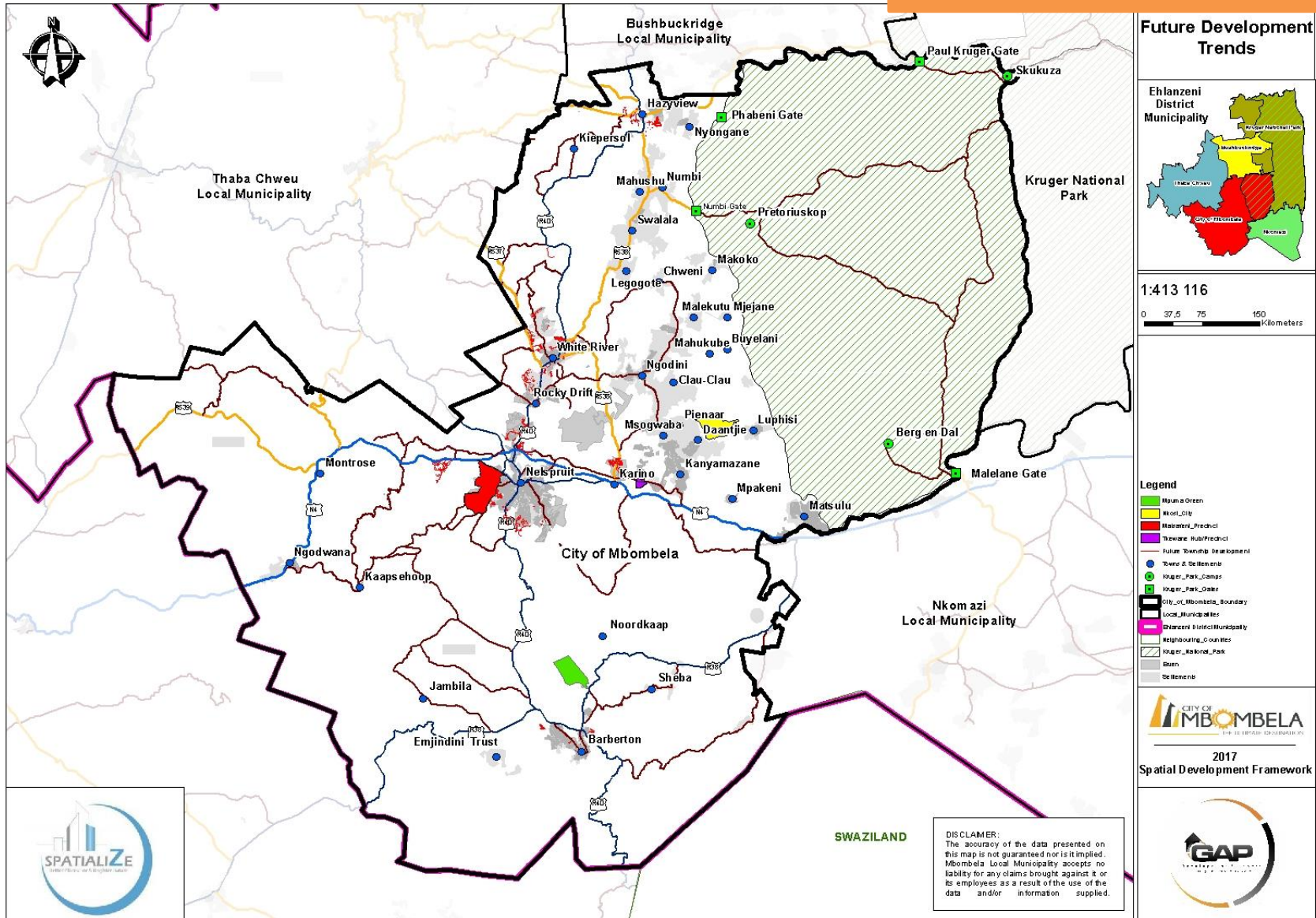
Future Development Trends

The future development trends of the municipality emanates from the future township developments as indicated as well as the proposed future roads according to the roads master plan of the municipality. The City of Mbombela has identified the following new development areas which will play a vital role for future development of the municipality.

- Tekwane Mega Urban Hub
- Nkosi City
- Mataffin Stadium Precinct
- Northern Areas Development
- Plaston Park Precinct
- KMIA Hub
- Rocky Drift – Dingwell

- Mpumagreen
- Kgarudi

SPATIAL DEVELOPMENT FRAMEWORK



Map 28: Future Development Trends

Anticipated Land Use Demand

The purpose of this section is to determine the demand for industrial, trade and office space within the municipal area.

(1) Industrial Space Demand

- Increasing industrialisation, brought about by increased population growth and development, leads to more and more land being required for this use.
- The Rocky Drift industrial/commercial node has experienced significant growth over the past few years as it is ideally situated to provide for the overspill activities from Nelspruit, as well as White River.
- Riverside Park industrial/commercial node has experienced significant growth over the past few years accommodating commercial, warehouses, retail, offices, motor related land uses and industrial developments.
- However some of the southern region (former Umjindi) has experienced a significant decline over the past few year in terms of industrial development. Table 24: indicates the anticipated industrial space demand for 2020 and 2030, given a scenario of higher future growth due to improved economic conditions in the market area.

Table 24: Industrial Space Demand

Cumulative additional demand	2020	2030
Finance and Insurance (m ² GLA)	103 230	182 842
Business services (m ² GLA)	615 659	909 718
Total Mbombela	718 889 (±72ha)	1 092 560 (±110ha)

Source: Mbombela Corridor Modelling Market Study, 2010

Note: Land required for office space if a Floor Area Ratio (FAR) of 0.7 is applied is 102ha in 2020 and 157ha in 2030.

(2) Office Space Demand

Table 25: indicates the anticipated office space demand for 2020 and 2030, given a scenario of higher future growth due to improved economic conditions in the market area.

Table 25: Office Space Demand

Cumulative additional demand	2020	2030
Finance and Insurance (m ² GLA)	103 230	182 842
Business services (m ² GLA)	615 659	909 718
Total Mbombela	718 889 (±72ha)	1 092 560 (±110ha)

Source: Mbombela Corridor Modelling Market Study, 2010

Note: Land required for office space if a Floor Area Ratio (FAR) of 0.7 is applied is 102ha in 2020 and 157ha in 2030

(3) Trade Space Demand

- Informal trade is an important economic sector, especially in the eastern parts, as it provides employment and livelihoods to a significant percentage of the people living in these areas.
- The informal sector will remain an important sector in Mbombela, but an increasing number of people are supporting the formal retail sector, evident in the retail developments in Kabokweni, Kanyamazane as well as the facilities planned at Msogwaba and the upgrade of retail facilities in Matsulu.
- Table 26: indicates the anticipated trade space demand for 2020 and 2030, given a scenario of higher future growth due to improved economic conditions in the market area.

Table 26: Trade Space Demand

Cumulative additional demand	2020	2030
Wholesale and retail trade (m ² GLA)	429 276	672 853
Catering and accommodation(m ² GLA)	402 977	622 910
Total Mbombela	832 253 (±83ha)	1 295 763 (±130ha)

Source: Mbombela Corridor Modelling Market Study, 2010

Note: Land required for trade space if a Floor Area Ratio (FAR) of 0.7 is applied is 118ha in 2020 and 186ha in 2030.

4.3.4 Infrastructure and Services

One of the main aims of the Spatial Development Framework is to provide a platform for increasing access to infrastructure and services within the municipal area and optimising the existing infrastructure. The strategic planning of infrastructure, (water, storm water, sewerage and electricity) will need to be elaborated on in special studies that are based on the spatial proposals of the SDF.

(a) Water Infrastructure and Services

Water supply, infrastructure and access to water are briefly discussed below:

Access to Water:

Water services have been a very high priority in services delivery strategies over the past two decades. It is one of the key Millennium Goals adopted in 2000, which stated that countries should aim to halve the proportion of people without access to safe drinking water and basic sanitation by 2015. In terms of these goals, at least 50% of households should have access to at least basic services.

The table below compares the 2001 to 2016 trends with respect to access to water by households.

Table 27: Access to Water

		Full	Intermediate	Basic	Below Basic	None	Total
2001	Total	27 998	41 778	16 722	30 247	7 175	127 257
	%	22,00 %	32,83 %	13,14 %	23,77 %	8,26 %	100 %
2011	Total	68 582	50 797	14 888	10 580	37 063	181 910
	%	37,70 %	27,92 %	8,18 %	5,82 %	20,37 %	100 %

Source: Stats SA

The following trends are noted based on the table above:

- The number of households with full access to water services has increased from 22% in 2001 to 38% in 2011;
- The number of households with basic access to water services has decreased from 13% in 2001 to 8% in 2011; and
- The number of household with no access to water services has increased from 8% in 2001 to 20% in 2011

Water Resources and Infrastructure

Water Resources

The City of Mbombela Local Municipality relies on run-of-river abstractions from the Crocodile, Sabie, Suid Kaap and Lomati Rivers as well as the yield of the Witklip, Klipkopjes, Lomati and Longmere dams. The total available water resources, including estimated yields are indicated in the table below:

Table 28: Water Resources

Resources	Yield available within COM (million m ³ /annum)
Ngodwana Dam	21.1
Witklip Dam	0.8
Klipkopjes/Longmere Dam	10.1
Primkop Dam	12
Crocodile farm dams	36.2
Crocodile run-of-river	95.2
Sub-total	175.4
Dam Gama	9.5
Sabie farm dams	22.8
Sabie run-of-river	15.5
Sub-total	47.8
Lomati Dam	6.46
Lomati run-of-river	48.92
Suid Kaap run-of-river
Sub-total	55.38
Total	278.58

Source: Water Services Plan 2010

Water Scheme Areas

Table 29 below indicates the different water supply schemes, capacity of the water treatment works and the priority need for water within the City of Mbombela Municipal area. It should be noted that the water treatment works have no space capacity available for future development.

Table 29: Water Infrastructure

Water scheme	Water priority	Water need	Water treatment works	Design Capacity	Capacity available (%)
Nsikazi North Scheme	High		Nyongane WTW	15MI/day	0
Nsikazi South Scheme	High		New Kanyamazane and Old Kanyamazane WTW	60MI/day (new) 4MI/day (old)	0
Matsulu	Medium		Matsulu WTW	6MI/day	0
Hazyview			Hazyview WTW	2.9MI/day	0
Nelspruit	High		Nelspruit WTW and Old Nelspruit WTW	54MI/day (new) 8MI/day (old)	0
White River	High		Whiter River WTW and White River Country Estate WTW	9.12MI/day 1MI/day (WRCE)	0
Elandshoek	Low		Elandshoek WTW	-	0
Sappi Ngodwana	High		New Ngodwana WTW and old WTW	4.5MI/day (new) 0.5MI/day (old)	0
			Karino	1.8MI/day	0
			Primkop	1MI/day	
Barberton	Medium		Suid Kaap WTW Rimers Creek WTW	4.7 MI/day 16.6MI/day	0
Sheba Siding	Medium		Sheba Siding WTS	0.2ML/day	0
Kamadakwa	High				0
Shiyalongubo	Low				0
Rural Umjindi	Low				0

Source: Department of Water Affairs

Water Infrastructure

The water infrastructure and services within COM is operated by the water & sanitation municipal department, Sembcorp Silulumanzi and Rand Water. The below map outlines all the available water infrastructure within the municipal area.

In the Sembcorp Silulumanzi supply area, infrastructure is generally in a healthy state. The Mbombela supply area is generally not bad, except for the Nsikazi supply area.

The status of Nsikazi infrastructure is as follows:

- Bulk infrastructure is in a fair condition, however upgrading is required.
- Already operating above capacity to meet current actual water demand.
- Link infrastructure is in a fair condition, however upgrading is required.
- Reticulation is not good and characterized with numerous informal connections.

Priority needs to be given to replacing ageing supply infrastructure to ensure accurate management of services supplied can be monitored. Water leaks are abnormally high (66.2%) and exceed current norms for the industry. Maintenance budgets need to address current needs to ensure accurate future water and sanitation forecasts.

Current Water Services Backlog and Future Water Requirements

Currently, the demand already outstrips the supply of water in the basin and this is mainly due to competitive water users such as, commercial agriculture, forestry planation, mining and industrial use etc. The current water backlog is summarized in the table below

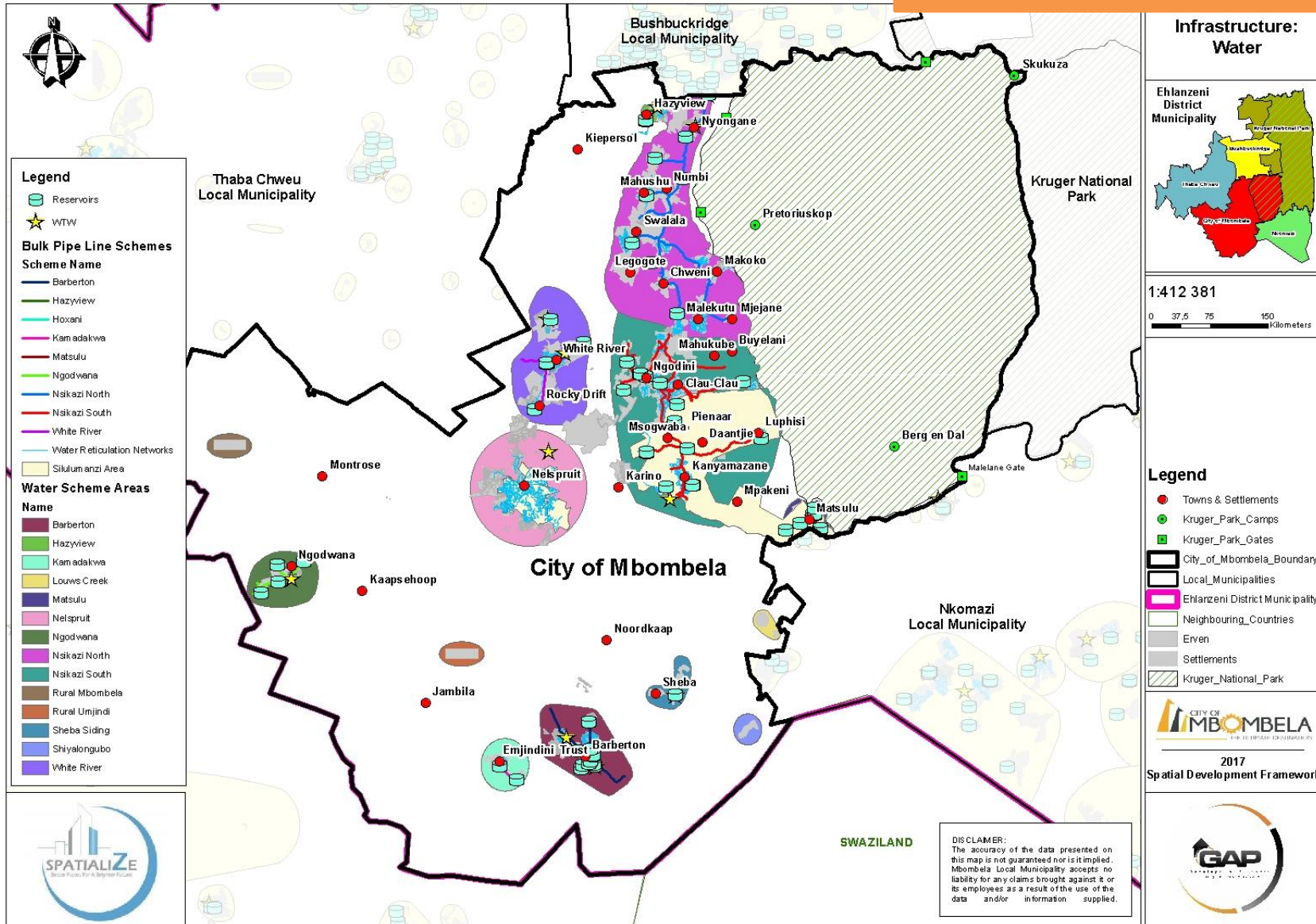
Table 30: Water Services Backlog

	Water supply (Households)	Water supply (kilo-litres/day)
Households with Basic Water services	68,252	41,115
Basic Water Services Backlog	113,504	68,108
Total	182,029	109,217

Source: Mbombela Vision 2030

It is evident that the municipality is faced with a severe backlog of water services, particularly in the most remote communities within the municipal area. Currently the municipality's budget is dominated by bulk water and reticulation projects. Areas that are mostly affected by the water services backlog includes Nsikazi North, Nsikazi South, Emjindini Rural, Hazyview, Matsulu, Phumulani and Kabokweni.

SPATIAL DEVELOPMENT FRAMEWORK



Map 29: COM Water Infrastructure

(b) Sanitation Infrastructure and Services

Sanitation provision and associated infrastructure are briefly described below.

Access to Sanitation

Access to appropriate sanitation services is a very high health priority. Although sanitation services received a high priority from government, there are always challenges and this service did not achieve the same level of success as improved access to water. The table below compares the 2011 and 2016 trends with respect to access to sanitation services by households.

Table 31: Access to Sanitation

Sanitation Type	2011				2016			
	Former Mbombela	Former Umjindi	Sum	%	Former Mbombela	Former Umjindi	Sum	%
Flush toilet connected to a public sewerage system	45957	12060		32%	130873	42075	172948	26%
Flush toilet connected to a septic tank or conservancy tank	6309	567		4%	21213	1502	22715	3%
Chemical toilet	2382	108		1%	39174	397	39571	6%
Pit latrine/toilet with ventilation pipe	21501	633		12%	132067	2219	134286	20%
Pit latrine/toilet without ventilation pipe	70500	4884		42%	250053	19429	269482	40%
Ecological toilet (e.g. urine diversion; enviroloo; etc.)	1239	117		1%	8380	2040	10420	2%
Bucket toilet (collected by municipality)	45957	12060		32%	173	-	173	0%
Bucket toilet (emptied by household)	-	-	-	-	7708	-	7708	1%
Other	2262	354		1%	11939	523	12462	2%
None	11625	846		7%	-	-	-	-
Total							669765	100%

The table above compares the 2011 to 2016 trends with respect to access to sanitation by households. The following trends are noted:

- The bucket system has been eradicated

- Households with flush toilets decreased from 32% in 2011 to 26% in 2016, this might be due to the continued increase in the number of informal households / settlements.
- Pit latrine/toilet with ventilation pipe has increased from 12% in 2011 to 20% in 2016
- Pit latrine/toilet without ventilation pipe has decreased from 42% in 2011 to 40% in 2016

Sanitation Infrastructure

Sanitation infrastructure (bulk and internal reticulation) is focussed in and around the towns of Matsulu, Kanyamazane, Nelspruit, Kabokweni, White River, Rocky Drift, Hazyview, Ngodwana, Tekwane and Barberton.

10 Waste water treatment works are located in Mbombela, the location and design capacity are indicated in the table below: (See Plan: Sanitation infrastructure)

Table 32: Waste Water & Sanitation Infrastructure

No	Waste water treatment works	Sanitation Scheme Name	Design Capacity – Hydraulic Load (MI/day)	Capacity available for development (%)	Description of Physical condition
1	Matsulu	Matsulu	6 MI/day		Good
2	Kanyamazane	Nsikazi South	12 MI/day		Good
3	Barberton	Barberton	5.8 MI/day		
4	Nelspruit	Kingstonvale	26 MI/day		Good
5	Kabokweni	Nsikazi South	13.65 MI/day (new) 3.38 MI/day (old)		Good
6	White River	White River	3 MI/day		Good
7	Rocky Drift	White River	1.25 MI/day		Good
8	Hazyview	Hazyview	0.7 MI/day		Good
9	Sappi Ngodwana	Ngodwana	0.7 MI/day		Good
10	Tekwane	Nsinkazi South	0.15		Good

Source: Statistics South Africa

Current Sanitation Services Backlog and Future Sanitation Requirements

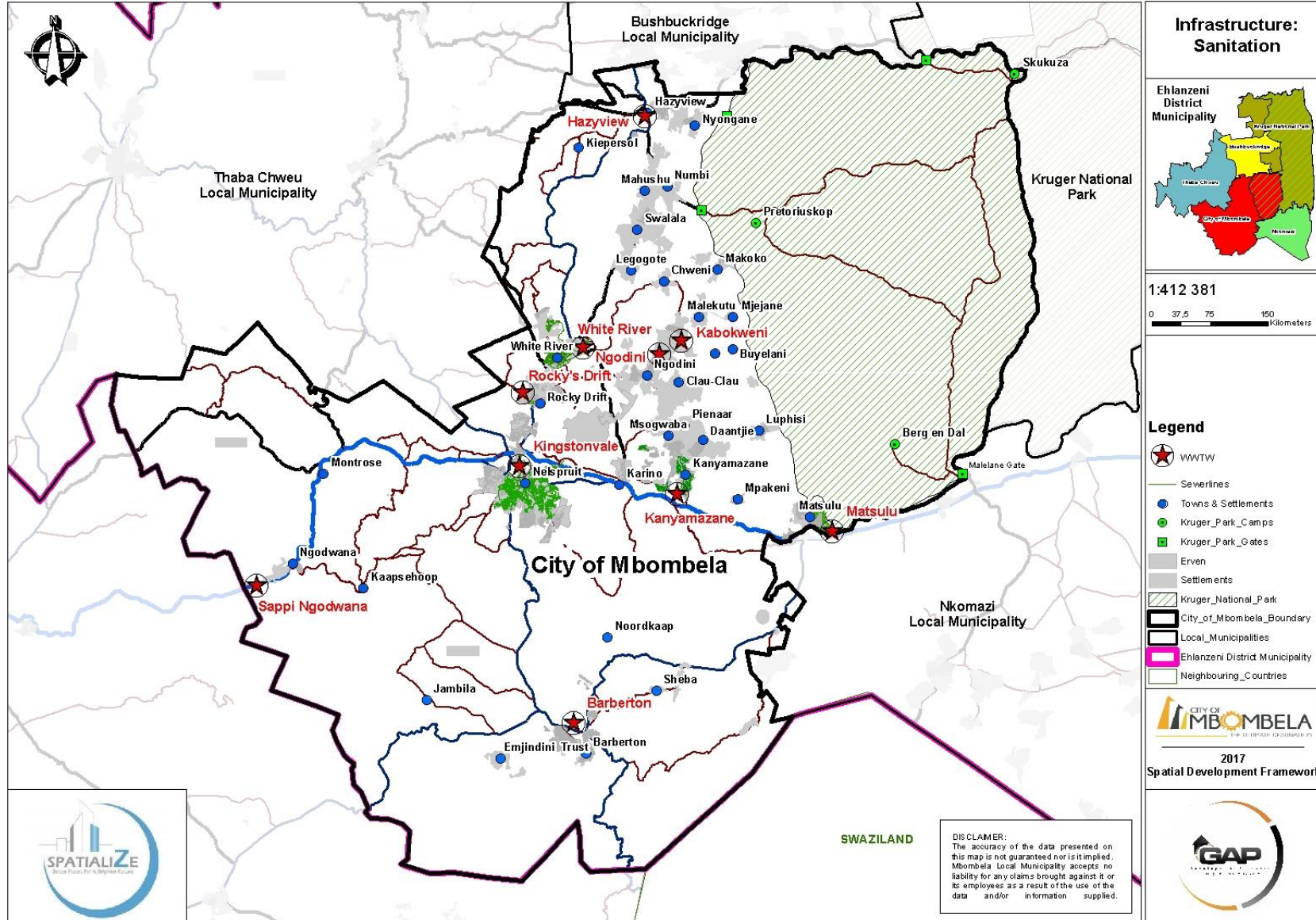
While it is indisputable that the Municipality is not faring very well in the provision of sanitation services, it should also be noted that the pace at which the number of households is growing is another contributing factor towards improving the service access. The current sanitation backlog is summarised in the table below

Table 33: Sanitation Services Backlog

	Sewer Flow (Housing Units)	Sewer Flow (Kilo-litres/day)
Houses with Basic Sanitation services	58,016	40,611
Basic Sanitation Services backlog	124,013	86,809
	182,029	127,420

Source: Mbombela Vision 2030

The City of Mbombela Vision 2030 Strategy has estimated the number of households to be 275, 965 in the year 2030, which will require 93, 956 Kilo-litres/day of sewer flow capacity.



Map 30: COM Sanitation & Sewer Infrastructure

(c) Solid Waste Management

Solid waste management and refuse removal are important for health and environmental considerations. The available waste management infrastructure and access to refuse removal are discussed briefly below:

Access to Refuse Removal

The City of Mbombela Local Municipality, provided refuse removal services to domestic, commercial and general industrial waste properties. The table below compares the 2011 and 2016 trends with respect to access to refuse removal and waste management:

Removal Service	Former Mbombela	Former Umjindi	Sum	%	Former Mbombela	Former Umjindi	sum	%
Removed by local authority/private company/community members at least once a week	143099	44088	187187	27%	47574	13227	60801	34%
Removed by local authority/private company/community members less often than once a week	5706	7071	12777	2%	2019	381	2400	1%
Communal refuse dump	17943	28	17971	3%	2751	276	3027	2%
Communal container/central collection point	613	29	642	0%	96450	4788	101238	56%
Own refuse dump	430846	17456	448302	65%	11613	804	12417	7%
Dump or leave rubbish anywhere (no rubbish disposal)	22344	2538	24882	4%	1365	90	1455	1%
Total	620551	71210	691761	100%	161772	6339	181338	100%

Table 34: Access to Refuse Removal

Source: Statistics South Africa

- Refuse removal for at least once a week has increased from 24% in 2011 to 34% in 2016.
- Refuse removal less often than once a week has decreased from 2% in 2011 to 1% in 2016.
- Dumping or leaving rubbish anywhere has decreased from 4% in 2011 to 1% in 2016.

Waste Management Infrastructure

The concern regarding the lack of infrastructure is a problem common to most municipalities in South Africa, with CoM as no exception. There is currently insufficient equipment for the collection of waste and the machinery that is available is prone to frequent breakdowns, which is further compounded by insufficient maintenance and/or prolonged periods that these vehicles spend while awaiting to be serviced at the Municipal Workshop and other service providers.

Landfill Sites

COM currently has four operational solid waste landfill sites. The status of each is briefly discussed below: (See Plan: Landfill sites).

Table 35: Landfill Sites

Landfill Site	Permit	Estimated Life Span	Proposal / Recommendation
Tekwane West Central Disposal Site	Yes	25 years	Improve operations and maintain infrastructure at the various landfills (Hazyview – while operational, Tekwane Central and Barberton).
Hazyview landfill	No	3 years	Improve operations and maintain infrastructure at the various landfills (Hazyview – while operational, Tekwane Central and Barberton). Establish transfer stations at Hazyview landfill (once closed and rehabilitated).
Mbombela landfill	Yes	-	Improve operations and maintain infrastructure at the various operational landfills to comply with permit / license conditions.

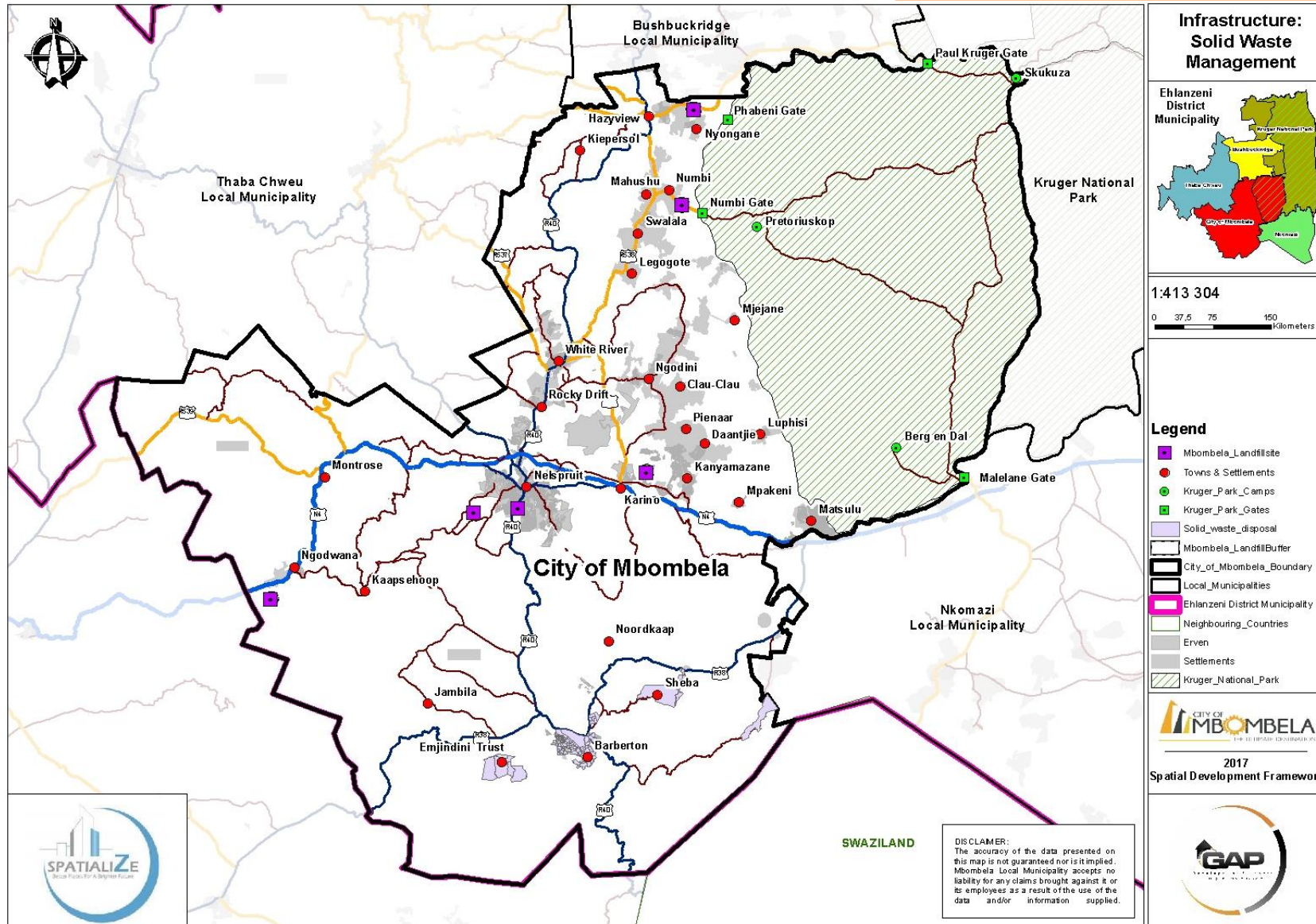
Barberton landfill	-	-	Upgrade the existing Barberton landfill site and a new disposal area established adjacent to the existing site to cater for future disposal requirements. Investigate the feasibility to close the Barberton landfill site in the medium to long term and establish a transfer station on the closed site.
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Various gaps and needs have been identified in terms of the collection, cleansing and transportation of waste. They are listed below:

- Refuse collection is currently limited to urban and semi-urban centers and there is limited to no collection in the rural areas.
- Within the urban centers collection and cleansing is limited to suburbs and, in a few cases, parts of the townships.
- There is little or no collection of waste in the informal settlements and rural areas.
- Poor and inadequate equipment and materials for refuse collection. Residential serviced areas in the City of Mbombela utilizes 85 liter bins with black bags as receptacles for waste collection. Residents must supply their own black bags and 85 liter bins. 6m³ bins, 4.2 m³ bins, 240 liter bins and 30 m³ are also used for business/industrial waste collection and are supplied by the Municipality.
- Although all people must have equitable access to services, there are still imbalances in access to waste management services as only 27% of households in the Mbombela Local Municipal area receive refuse removal services, while 65.3% of households in the Umjindi Local Municipal area receive a refuse removal service.
- In most of the Municipality public refuse drop facilities are very limited or inadequate and are concentrated in the affluent areas.
- Transportation vehicles are old, while others have new vehicles but not enough to cater for the area of responsibility.
- The following actions can be implemented to address the identified gaps:

- Expand waste collection to all areas of the Municipality, and to all new developments.
- Provide facilities for waste storage to households.
- Introduce and, where available, enhance street clean-up campaigns in high-density townships as well as informal areas and rural areas.
- Establish waste transfer stations in all areas of the Municipality.
- Purchase new vehicles appropriate for waste collection for the Municipality.

SPATIAL DEVELOPMENT FRAMEWORK



Map 31: COM Solid Waste Infrastructure

(d) Energy / Electrical Supply

Although electricity does not have the same implications for health as water and sanitation, access to electricity is very important for general development and especially education. Access to electricity was therefore always a high priority. The table below shows how access to electricity has changed since 2011. This table is based on access to lighting from the 2011 census figures and the 2016 community survey results.

Table 36: Access to Electricity

Type of Energy	2011			
	Former Mbombela	Former Umjindi	Total	%
Electricity	145920	15273	161193	88.89%
Gas	423	57	480	0.26%
Paraffin	2283	402	2685	1.48%
Candles (not a valid option)	12216	3693	15909	8.77%
Solar	462	57	519	0.29%
Other			0	0.00%
None	471	75	546	0.30%
Total	161775	19557	181332	100.00%
2016				
Former Mbombela	Former Umjindi	Total	%	
602815	64187	667002	96.35%	
210	-	210	0.03%	
2167	85	2252	0.33%	
13926	6438	20364	2.94%	
73	90	163	0.02%	
1330	344	1674	0.24%	
594	16	610	0.09%	
621115	71160	692275	100.00%	

Source: Statistics South Africa

The above table reveals that the number of households with access to Electricity has increased from 89% in 2011 to 96% in 2016, with a significant decrease to the number of households that use gas, paraffin, candles and other forms of energy.

Electricity Service Providers

The Electrical services within the municipal area is operated and maintained by City of Mbombela and Eskom, see further details in the following paragraphs.

City of Mbombela:

The Energy Department of CoM delivers electrical engineering services to most of the urban areas within the four regions within the City of Mbombela municipal area. The notable exception is Hazyview where Eskom supplies electricity to most of the bulk users. Where applicable, in the Eskom areas, CoM installs and maintains the street and high mast lights. The drawback for CoM is that the street and area lights are not metered and thus this service is rendered without any financial compensation to CoM.

The long term goal of the Energy Department of CoM is to grow their electricity supply base and reduce the number of Eskom intake points. Reducing the number of intake points enable the CoM to purchase electricity at a lower cost that will result in significant savings.

Eskom:

Eskom supplies electricity to mainly the rural areas within the CoM municipal area. Where Eskom supplies electricity to the end users, Eskom does not supply any street or high mast lights.

Electrical Infrastructure Services

- The Electrical/Energy Infrastructure services in the municipal sphere can be summarised as follows:
- Intake points (bulk supply points) from Eskom (132/11kV, 132/22kV, 132/33kV substations);
- Distribution Substations (132/11kV, 22/11kV);

- Overhead Distribution Lines (132kV, 22kV and 11kV lines);
- Switching Stations (22kV, 11kV);
- Electrical reticulation (22kV, 11kV, 420V)
- Street and high mast lighting;

Electricity Demand Forecast

The aim of the demand forecast is to determine the present and future electricity requirements. It takes the current demand, service backlogs, projected population growth and capacity from the proposed co-generation plants into account.

Due to the new housing developments and backlog projects, it is predicted that the electricity demand from the CoM will grow from a base load of 125MW to 346MW in 2030. The average growth rate per annum over the period until 2030 is 7.5%.

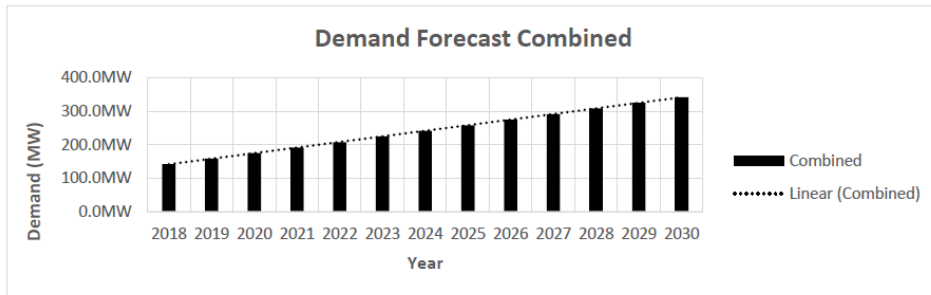
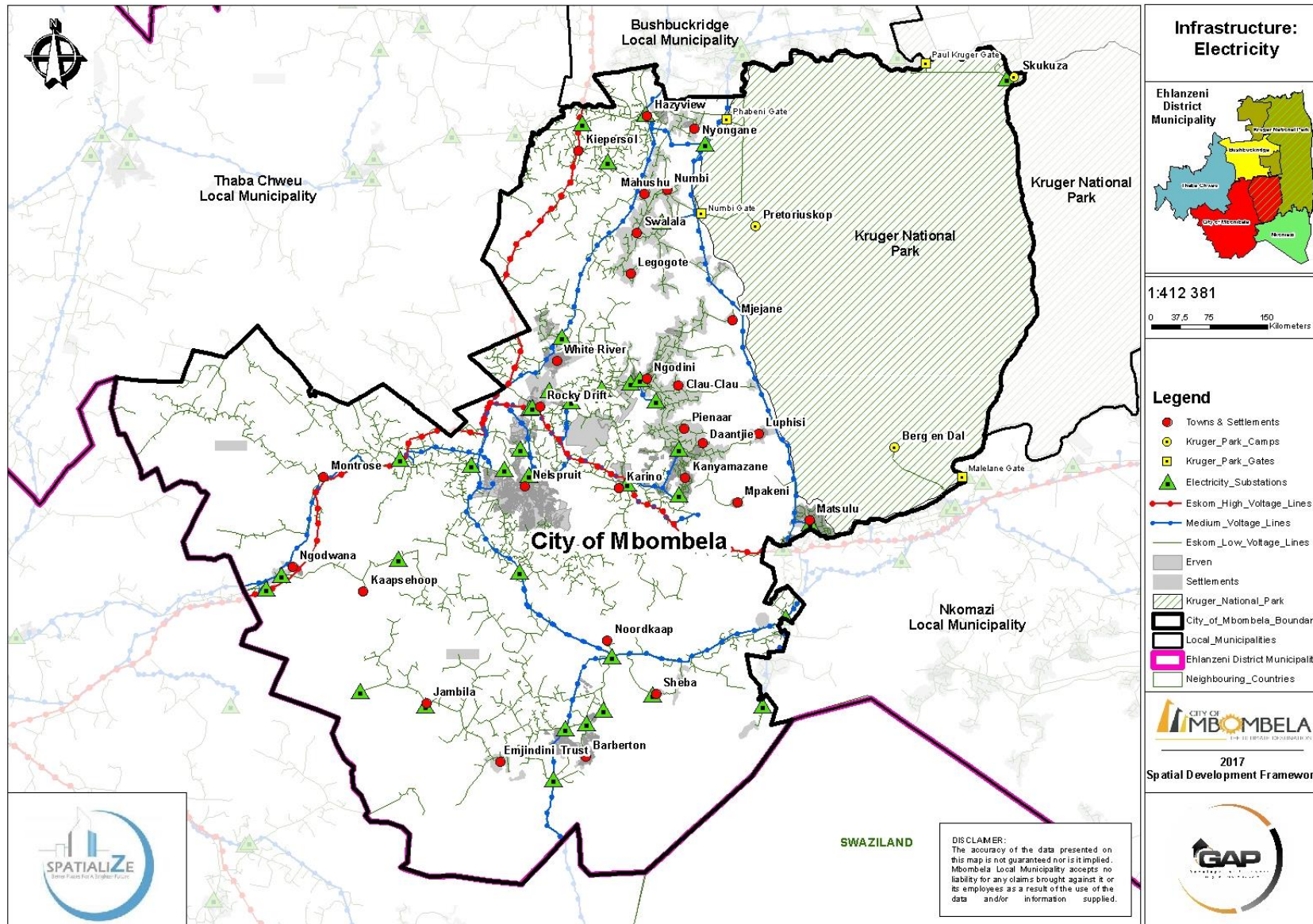


Figure 7: Electricity Demand Forecast



Map 32: COM Electrical Infrastructure

(e) Roads, Storm Water and Public Transport

Roads

The City of Mbombela road network consists mainly of national, provincial and district roads. The following table provides an overview of the ownership, surface type, road classification, as well as the proposed future roads within the municipal area, as per the roads master plan.

- The N4 runs on an east-west axis through the Nelspruit CBD forming the backbone of the Maputo Development Corridor, providing direct access to the economic nodes of Ngodwana Sappi and Nelspruit. It passes the settlements of Tekwane, Kanyamazane and Matsulu south of the Crocodile River.
- The R40 serves as the main north-south connection between Barberton, Nelspruit, Rocky Drift and White River, and is a major corridor for vehicular traffic during and outside peak hours.
- The R38 serves as another main connection between Badplaas, Barberton, Sheba Siding, Lows creek and Matsulu (via N4)
- D636 (Airport Road) west of the low income areas of Kanyamazane/Tekwane, Daantjie/ Msogwaba, Dwaleni, Kabokweni, and Phatwa.
- P17/6 (White River – Hazyview) is in the process of reconstruction, providing direct access to Legogote, Jerusalem, Phola, Mahushu, Nkambeni and Hazyview.
- D2296 and D1732 providing access to Kanyamazane and Msogwaba/Daantjie, respectively.
- D1411 providing a circular route through Kabokweni, Ngodini, Nkohlakalu, Gutswakop, Gutshwa, Chweni, from D636.
- P258/1 providing internal accessibility through Daantjie, Msogwaba and Zwelisha.
- The D725 provides an important link between the R40 and the D2296, and eventually the R538.
- The D2689 from Kabokweni and the Luphisi Road (D1723) support these major links.
- District roads serving the other isolated settlements.

Table 37: Road Ownership

Ownership	Kilometres
CoM	3925.19
National	294.26
Nkomazi	9.40
Private	230.30
Provincial	1086.95
Total	5546.11

Storm Water

Most of the storm water infrastructure has reached its 20 year plus lifespan and failures to the infrastructure are evident. Due to the lack of funds maintenance hereof is done on a reactive and not on a preventive basis.

The large majority of the developed areas in the Nsikazi area are lacking formalised road and storm water systems. Management of stormwater is therefore problematic with the following typical challenges.

- Excessive erosion that causes roads to be impassable in many cases and a danger to road users and pedestrians, especially at night.
- Large quantities of gravel are deposited in existing drains, reducing the stormwater carrying capacity.
- Large quantities of gravel are deposited on surfaced roads creating a danger to road users.
- Residents have trouble in accessing clinics, cemeteries, churches and pay points etc.
- Learners have difficulty accessing schools.
- Regular maintenance is required to backfill drainage furrows caused by erosion and to clear gravel deposits from drains and road ways.
- Re-gravelling of un-surfaced roads is frequently required, after almost every heavy storm.
- Flooding occurs in many areas leading to damage of municipal infrastructure and to personal property; and
- Ponding of stormwater results in various health risks.

Transportation

In the recent past, in most urban areas the focus of public transportation bodies was largely the provision of basic services for low-income communities, whose travel choice does not extend to walking, cycling or driving to their destination. Accordingly, public transport services in CoM have been designed to serve the perceived need to assemble labour from distant suburbs and satellite low-income dormitories, at centralised work places.

Public Transport Operators:

Commuter public transport trips during peak hours are primarily serviced by buses and taxis. Bus operators account for more than 75% of all public transport peak period trips and the remainder are attributed by taxis. Metered taxis and external shuttle services operate off-peak and are not commuter type services.

- Bus operators and services

Buscor is a private bus operator and is the major public transport commuter service provider in the area. Great North Transport, the major operator in Limpopo, has about 15 busses in Mbombela. Trip distances from Nsikazi to Nelspruit vary from 20km to 45km. Long commuting distances and numerous stopping points result in many passengers standing in the busses for long periods of time during their commute.

- Taxi Operators

There are five taxi operators servicing the following areas:

Barberton Taxi Association, servicing Barberton, Umjindi and Lows creek;
Whitehazy Association, servicing Nyongane, Mahushu and Legogote;
Kabokweni Association, servicing Gutshwa, Kabokweni and Clau Clau;
Topstar Association, servicing Msogwaba, Daantjie and Lekazi; and
Matsulu Association, servicing Matsulu.

Public Transport Infrastructure:

The main bus and taxi ranks/terminals are located in White River and Nelspruit. In Nelspruit the bus and taxi ranks are located within 200m of each other, whilst in White River the ranks are located a 1000m from each other. A long distance taxi

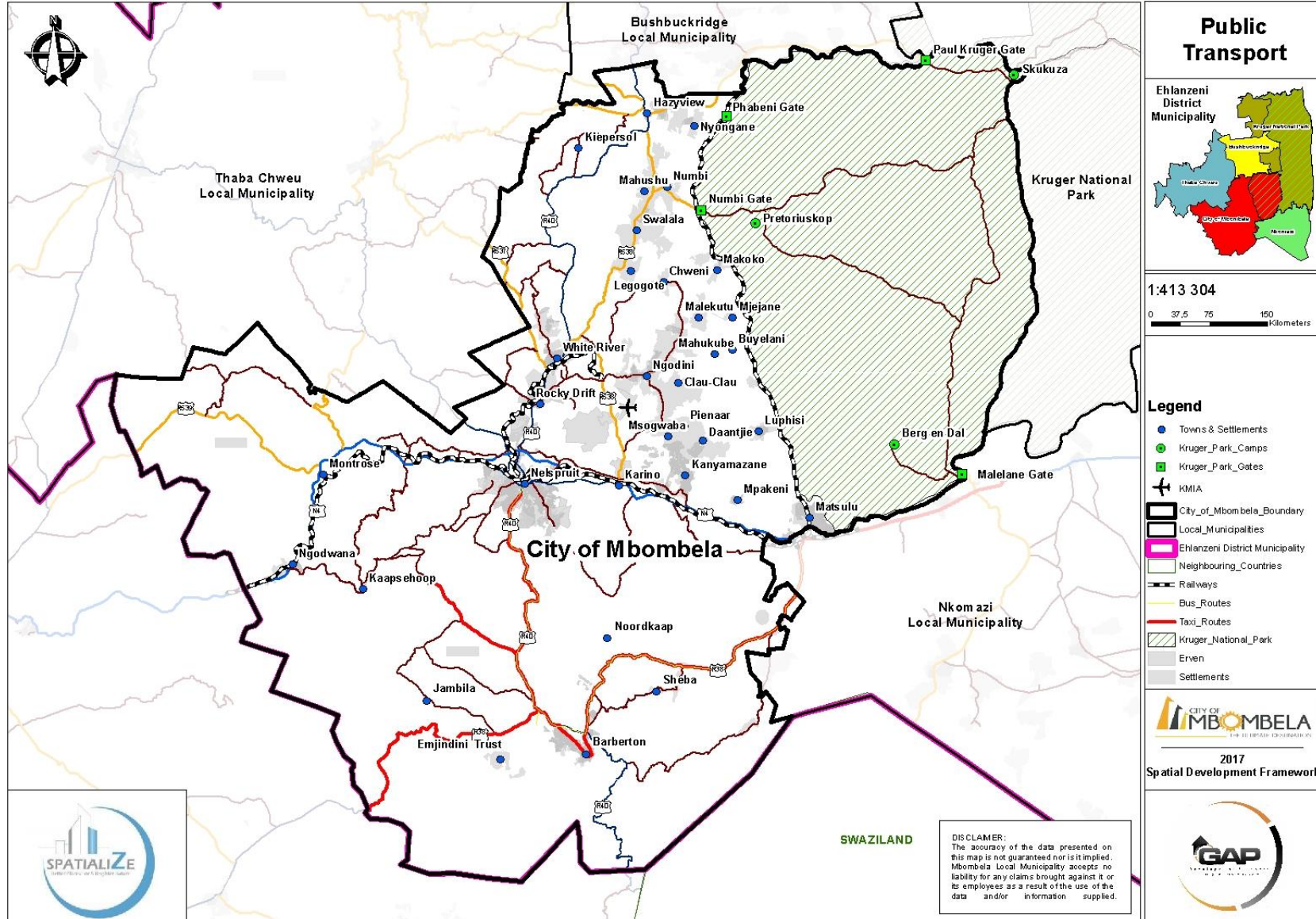
rank is located adjacent to the Nelspruit commuter rank, and a kerbside rank for distribution services in central Nelspruit is located on Bester Street.

The main taxi rank in Hazyview is located next to a shopping centre, east of the R40. The main bus rank and a secondary taxi rank are located on municipal property west of the R40. The main bus and taxi ranks are located far apart making it difficult to transfer between the two modes.

In Nsikazi there are no major bus terminals and ranks but only depots for overnight storage at Matsulu, Kabokweni, Masoyi, Daantjie and Barberton. Various taxi ranks exist within these areas for departure purposes.

Rail Services:

The rail network in Umjindi predominantly serves the industrial, mining and forestry sectors and to a lesser extent that of farming. The only passenger service in the area is a regional service between Gauteng and Komatipoort.



Map 33: Public Transport Infrastructure

4.3.5 Social Infrastructure and Community Facilities

The purpose of this section is to provide an overview of the existing / current social infrastructure and community facilities within the municipal area, and also to determine the need for social infrastructure and community facilities. The methodology used in determining the need or demand for social infrastructure included the following:

- Population and household projections to determine the number of people that need to be planned for during the planning horizon 2018-2035, based on Statistics 2011 and the 2016 Community Survey.
- These growth rates are considered as high due to increased access to medical care.
- Apply the standards contained in the “Guidelines for Human Settlement Planning and Design” (known as the Red Book) to the projected population.

The limitation of the applied methodology in determining the demand for social infrastructure and community services can be summarised as follows:

- The projections are based on two data sources only, namely Stats SA 2011 and the Community Survey 2016 and therefore are not necessarily accurate.
- Migration trends and associated population figures are difficult to determine and are not readily available.
- The threshold population for social infrastructure facilities vary substantially i.e.: 1 clinic per 5000–50 000 people and 1 community centre per 25 000-62 500 people.
- The number of existing social infrastructure facilities is not necessarily accurate.

Table 38: Social Infrastructure and Community Facilities Demand

Table 38: Social Infrastructure and Community Facilities Demand

Social Infrastructure & Community Facilities		Projected Population						Existing
		Year	2016	2020	2025	2030	2035	
		Population	693396	723905	760100	790504	818172	
		Households	206136	215206	225967	235006	243231	
		Standard	Required					Existing
Educational Facilities	Crèches	1/5000 pers	139	145	152	158	164	unknown
	Primary Schools	1/3000 pers	231	241	253	264	173	119
	Secondary Schools	1/6000 pers	116	121	127	134	136	59
	Intermediate Schools	No specs						6
	Combined Schools							18
	Tertiary Facilities							9
Hospitals							4	
Public Health Facilities	Clinics	1/5000 pers	139	145	152	158	164	52
	Community Health Centres	1/5000 pers	139	145	152	158	164	5
	Hospitals	No specs						4
Private Health Facilities	Clinics	1/5000 pers	139	145	152	158	164	1
	Police Stations	1/11000 pers	63	66	69	72	74	12
Community Services	Fire Stations	1/60 000pers	1	1	1	1	1	5
	Post Office	1/11 000 pers	63	65	69	72	74	15
	Municipal Offices	1/50 000 pers	13	14	15	16	16	8
	Libraries	1/5000 pers	139	145	152	158	164	10
	Cemeteries (Formal & Lare)	No spec						12
	Sports Facilities	No spec						unknown

Interpretation of the table above.

The above table can be interpreted as follows:

- Table _: indicates the growth rates that are used to make projections for the planning horizon 2018-2035. These growth rates are considered as high due to increased access to medical care.
- Therefore the projected population for the year 2035 is 181872 and the projected number of households for the year 2035 is estimated at 243231

For clarification purposes crèches, primary schools and clinics are used as examples:

Based on population projections and population thresholds per facility the following:

- 139 crèches are required in 2016, the existing provision is unknown and therefore the shortfall or over supply cannot be determined.
- 231 primary schools are required in 2016, the existing provision is 119 and therefore the shortfall is 112 primary schools.
- 139 clinics are required in 2016, the existing provision is 52 clinics and therefore the shortfall is 87.

Cognisance should be taken that the demand for social infrastructure facilities as determined in Table 38 is essentially a quantitative assessment, and therefore, does not achieve a qualitative assessment, which relates to the realism of meeting determined needs. Although the shortfall may be very clear, the reality of providing for the shortfall may be very different.

4.4 KEY DEVELOPMENT ISSUES AND SPATIAL IMPLICATIONS

This sections provides a synthesis of the biophysical, socio-economic and built environment analysis into key issues and identifies the associated spatial implications. This section also provides a brief overview of what needs to be redressed, addressed and mitigated in order to overcome the key spatial challenges and unlock opportunities while aiming to achieve the spatial vision.

4.4.1 Socio Economic Synthesis

According to population data from the 2001, 2011 censuses and 2016 Community Survey, CoM is continuing to grow. From 2001 to 2011 its population grew at an average of 2.3 % per annum while from 2011 to 2016 it grew on average at 1.2% per annum. The City of Mbombela Vision 2030 predicts a population of 965 877 (2.4% growth rate).

Population growth is certain, but the rate of growth is less clear. Natural growth may account for about 75% of future growth, with immigration, domestic and international, making up the rest. As a city, it is prudent to plan for higher rather than lower estimates. This should be done cautiously however, to prevent the over-investment in infrastructure that could exceed needs. With growth rates declining, the number used to model different growth scenarios for this SDF was an estimated population of 956 877 people by 2030.

The challenges faced by the of City of Mbombela as a result of continuous population growth, are summarised in the diagram below:

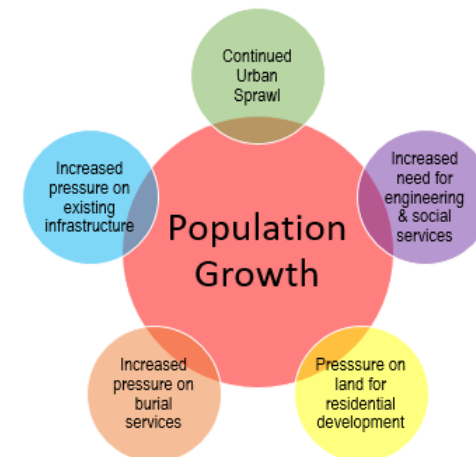


Diagram 26: Population Growth Challenges

From a growth management perspective, the critical challenge moving forward is threefold. The city needs to concurrently meet the backlog of those living in poverty

and unsatisfactory living conditions; accommodate projected (or indeed unforeseen) population increases; and maintain and continually adapt (for greater inclusion and accessibility) those parts of the city that are performing well.

CoM is a microcosm of the reality in Mpumalanga Province and is the local municipality with the highest number of employed in the province however it also records the largest number of poor in the province. CoM's economy, however, is more diverse.

The municipality's 2015 LED strategy states that it has a Tress Index of 48, with a number of sectors contributing to its overall GVA and contributes 1.25% to the national economy. However the Economic Growth of the city has been very low since the 2008 economic recession. This (in relative terms) unfavourable economic performance, is also reflected in employment statistics: despite inward migration, the City had in 2011 a higher proportion of working age people unemployed.

City Performance Indicator	Rating	Comment
Economic Performance		Can be improved
Economic Advantages		Needs to be leveraged
Per Capita Income		Can be increased
Administrative Status		Must be retained
Regional Importance		Good position
Education Infrastructure		Needs to be leveraged
Technology Intensity		Poor
Availability of Skilled Labour		Poor
Capacity for Innovation and Creativity		Poor
Multiple Business Language Skills		Poor
High Quality of Life		Can be improved, High Inequality
Urban Governance		Needs attention

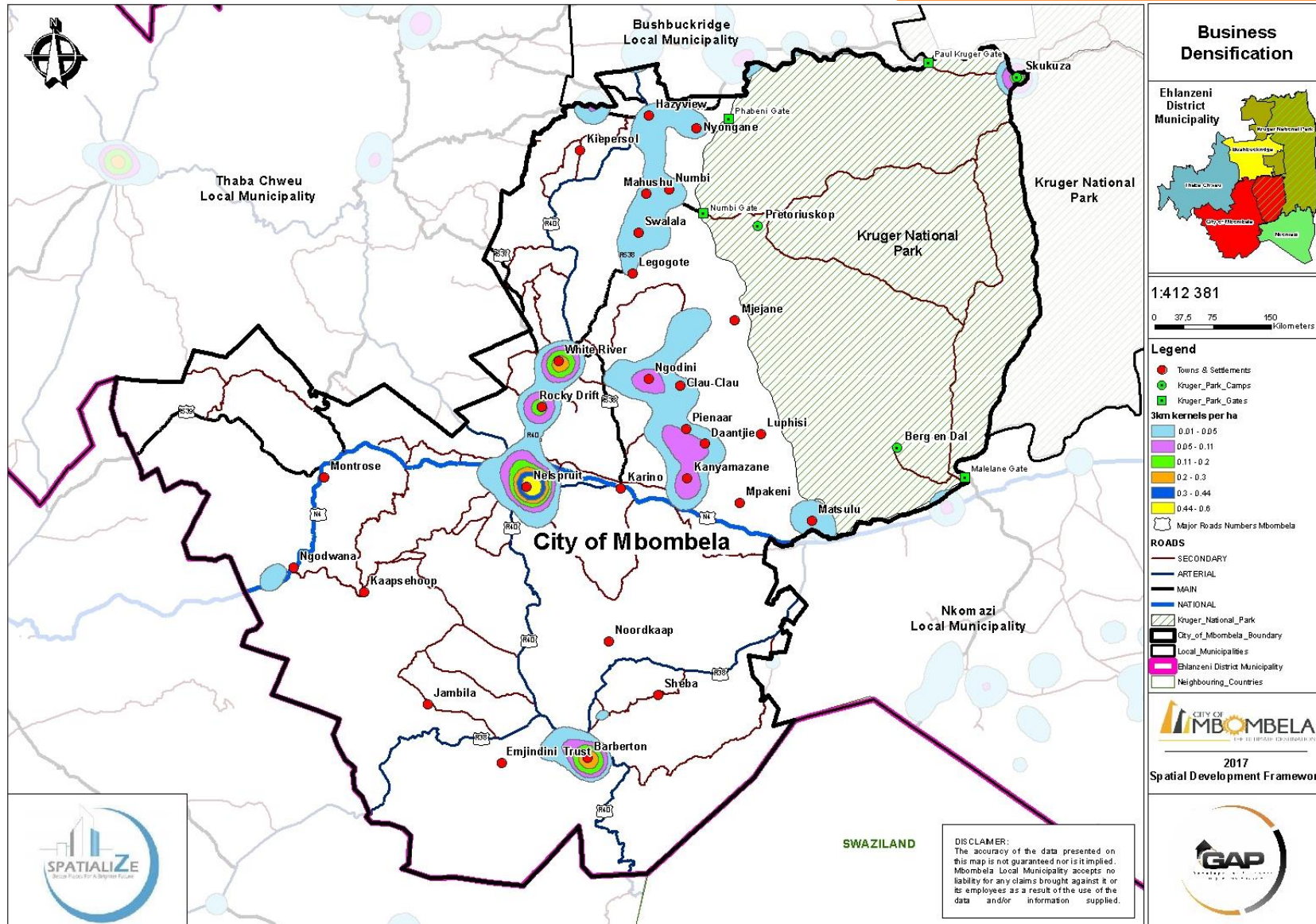
Figure 8: COM Economic Performance Indicators

The challenges also lie in the levels of skill and qualifications of the population which are fairly low. This will pose a serious problem for the future economic trajectory as skills will have to be built to suit the economic path and in the short-term skills will have to be brought in from skilled areas. The structure of output in the City's economy today is dominated by manufacturing, finance and business, agriculture and government services which are the sectors that contributed most to (GVA).

Spatial distribution of the economy

While economic indicators suggest that CoM is well placed in terms of its competitiveness, inequality in the city (specifically the spatial inequality that is apparent in its structure) is a tough reality that must be addressed.

The city economy is centred on two regions of significant economic activity. The Central Region (Nelspruit, White River, and Rockydrift nodes) and the Southern Region (Barberton node, Barberton Industrial and mining activities), which constitutes most of the city's economic output but only houses less than 25% of the city's population.



Map 35: Spatial Distribution of the Economy

In contrast the Eastern Region of the city stretching from Nyongane to Matsulu, does not contribute much to the city's economy but houses more than 75% of the city's population. The eastern parts of the city have consistently reported the highest percentage of people living in poverty. Most of the eastern parts sectoral growth dynamics remain weak when compared to other regions and have low interdependence and interconnectedness with the main economic centres in the City region and as a result attract limited economic investment and result into people having to travel long distances to access economic centres.

Apart from the sectoral structure of the economy, the spatial distribution of the urban economy has significant implications for future growth of the city. Factors such as location, connectivity, accessibility, infrastructure, diversification of activities and services, and levels of interdependence with the economic patterns of the wider city region, have a marked influence on the potential for future development.

The figure below outlines the key development issues and opportunities that the city needs to address in order to achieve the desired spatial vision and increased economic performance of the city.

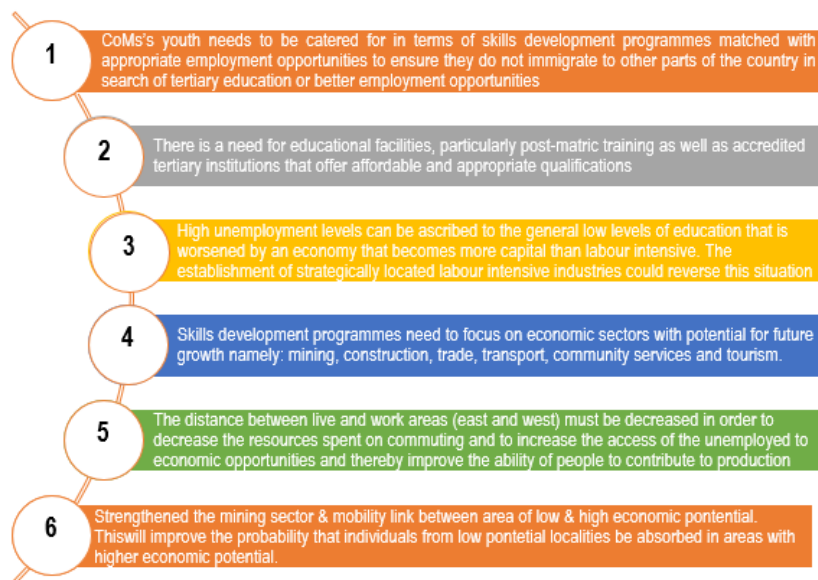


Diagram 27: Development Opportunities

4.4.2 Biophysical

The natural environment provides many vital and valuable (socially and financially) environmental services in the City of Mbombela. As such, the natural environment is not merely nice to have, but essential in the functioning of the city. If the services are lost, they will need to be replaced, at great cost (in terms of capital outlay and operating cost) by city authorities.

(a) Increasing Pressure on the Natural Environment

The natural environment within CoM is under pressure as a result of increasing population, growing informal settlements and uncontrolled influx of development with specific reference to the eastern development axis (the former Nsikazi area). There are a total of 10 reserves in the City covering only 4033 km² (57% of the municipality). This represents an adequate level of protection for the city's ecosystems, however pressure still mounts in the eastern settlements characterised by uncontrolled development and influx of people.

In response to concerns about the rapid loss and fragmentation of open space resources, the loss of protective vegetation cover, the associated loss of ecosystem goods and services, and the need to respond appropriately to development pressures, it is imperative that the SDF ensures that current open space systems and ecological resources are considered as structuring elements and assets to guide and integrate future urban development, rather than expendable land for development. This is critical in the context of climate change and the need for resilience in the future city. The following must be taken into consideration with regards to the natural environment:

Conservation areas including river systems, mountainous areas, and heritage areas with a unique biodiversity need to be linked to form a continuous open space lattice.

The open space lattice requires special interventions in order to maintain the environmental integrity as the environment is consistently threatened by the demand for land for human settlement (industrial and residential) and agricultural purposes.

(b) Topography

The topography of CoM ranges from mountainous areas in the western & southern parts to gently sloping areas in the eastern parts and some parts of the south. The area falls from a height of approximately 1200m above sea level in the southern-western part to 350m in the north-eastern parts. Therefore most parts of the municipal area is characterised by steep slopes. The following spatial implications are noted with regards to the topography of the municipality:

- Slopes greater than 20% are generally considered too steep for conventional housing and urban development.
- The provision of engineering services is expensive in areas with steep slopes.
- Environmental legislation requires the protection of granite or rocky outcrops due to the diverse and sensitive vegetation types associated with these features.
- Areas regarded not suitable for development due to topographical constraints should form part of a municipal open space system.

(c) Geology

The granite group which covers most of the central, northern and eastern parts of the municipality prohibits large exploitation of groundwater due to the physical hydraulic nature of granite aquifers. The following spatial implications of the City's geology are noted:

- Caution must be taken when developing on less ideal geological terrain with specific reference to risks and costs.
- From a geological perspective “no development areas” include areas affected by undermining, dolomite and areas where heaving clays are present.
- The dolomite band stretching from Sudwala southwards is therefore considered a “no go” area for urban development.
- Areas underlain by geology types not suitable for urban development must be excluded from development and included into a conservation zone or an open space system.

4.4.3 Built-Environment

(a) Housing Backlog

The primary concern of this SDF, and indeed many other National, Provincial and Municipal policies is the urban inequality that exists in Mbombela. While the population is growing, there is an existing housing backlog in the city: those who are informally housed in often inadequate living conditions, or those that don't have access to adequate affordable housing.

The current housing backlog is estimated at 32 000 housing units. Significant African cities such as Mbombela therefore have the vast challenge of improving the lives of those living in informal dwellings and closing the gap between rich and poor. If CoM is to become an inclusionary city, it needs to make space for the urban poor majority through planning initiatives such as densification, diversification and integration.

In looking at housing delivery, it is important to consider the housing backlog, and the distribution of household income in the city. Affordable housing should be provided proportionally to this income distribution and not for the mean or median income.

(b) Engineering Services Backlog

Service delivery is a pressing issue requiring urgent attention. The quality of life of citizens and the support required by the economy resides in the provision of services. The current infrastructure is limited and unable to service all citizens. The available infrastructure is old and requires upgrading at great cost. The current backlog in terms of engineering infrastructure is summarised in the table below.

Table 38: Basic Services Backlog

Basic Engineering Service	Number of Households	% City of Mbombela (Number of Households with Access to Service)
Households with access to piped water inside dwelling	182 028	40%
Households with flush toilet connected to sewer		26%
Households connected to Electricity		96%
Households with weekly refuse collection		34%

These backlogs are very high and the situation will become increasingly more challenging when factoring in the growth in households since 2011 and current projected demand for new households which is estimated at just over an additional 100 000 units by 2030. These new households will need to be connected to basic services and there will have to be sufficient infrastructure provisioning planned and managed.

A deeper level assessment of the municipality’s engineering infrastructure backlogs indicates that the following needs to be addressed:

- 1 Five basic service master plans need to be co-ordinated and improved.
- 2 Inclusion of all residents through universal access to services with appropriate norms and standards was a priority. A significant number of households do not experience basic services of potable water, sanitation and refuse collection.
- 3 Demand for services and the supply of services needed to be matched. The residential land housing the majority population is not fully prepared for upgrading and development consequently municipal infrastructure in the form of water reticulation networks and sewer connections as well as refuse collection systems are inadequate and in urgent need of expansions and upgrades to cope with the current backlogs and future demand.
- 4 The extension of services to all households has the potential to significantly increase the rates base of the municipality and to include all citizens in participating in the economy.

(c) Existing Spatial Structure

Spatial inequality remains a defining characteristic of the settlement pattern of CoM. The location and concentration of jobs does not match that of where people live. This job-housing mismatch significantly contributes to inequality in the city as- for many residents- access to economic opportunities is stifled by costly and distant commuting.

Some of the highest densities of housing, the ‘townships’ inherited from apartheid spatial policies, are also some of the most deprived areas in the city, with little land use diversity (mainly residential), and located far from areas of economic opportunity i.e. Matsulu . The private sector, through car-oriented developments (for example malls, gated residential estates and office parks) has further aggravated spatial segregation, i.e. Riverside Park areas.

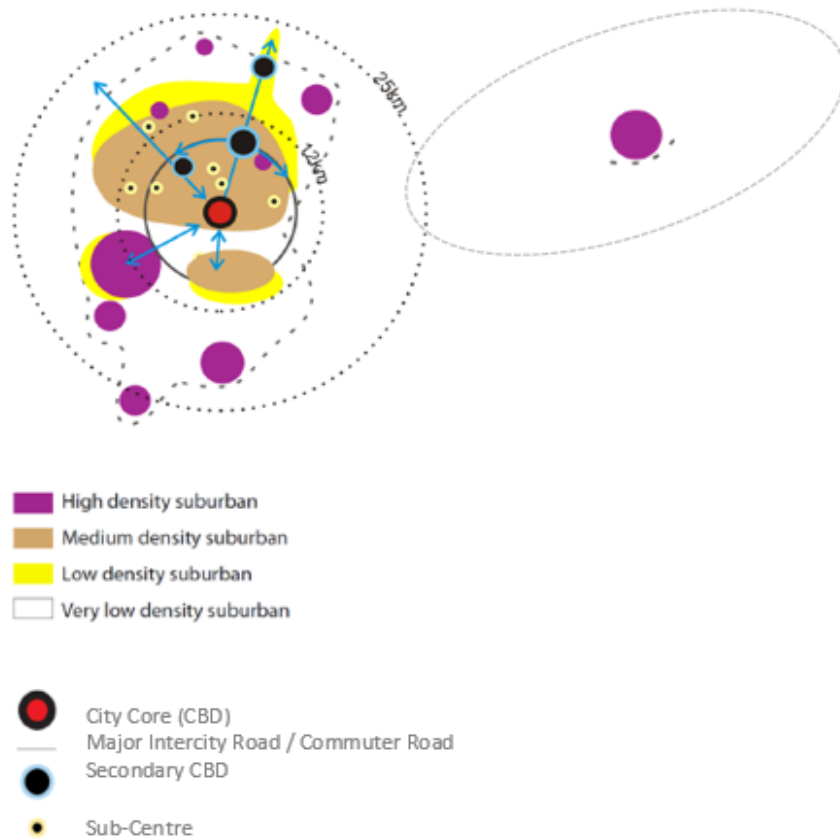


Figure 9: COM's Current Spatial Structure of Inverted Polycentricity

Post-apartheid housing delivery has arguably exacerbated apartheid spatial development patterns, by building housing in areas far from economic activity, with the availability of land being the primary logic behind their location. CoM presently displays the inverse of this polycentric urban model with separated land uses and people living far from work opportunities.

High density residential areas (the 'townships') are separated from urban economic centres and movement structures of the city. This pattern of development results in high social, economic and environmental costs.

The spatial structure that currently defines the City of Mbombela can be summarised in terms of the following dominant elements:

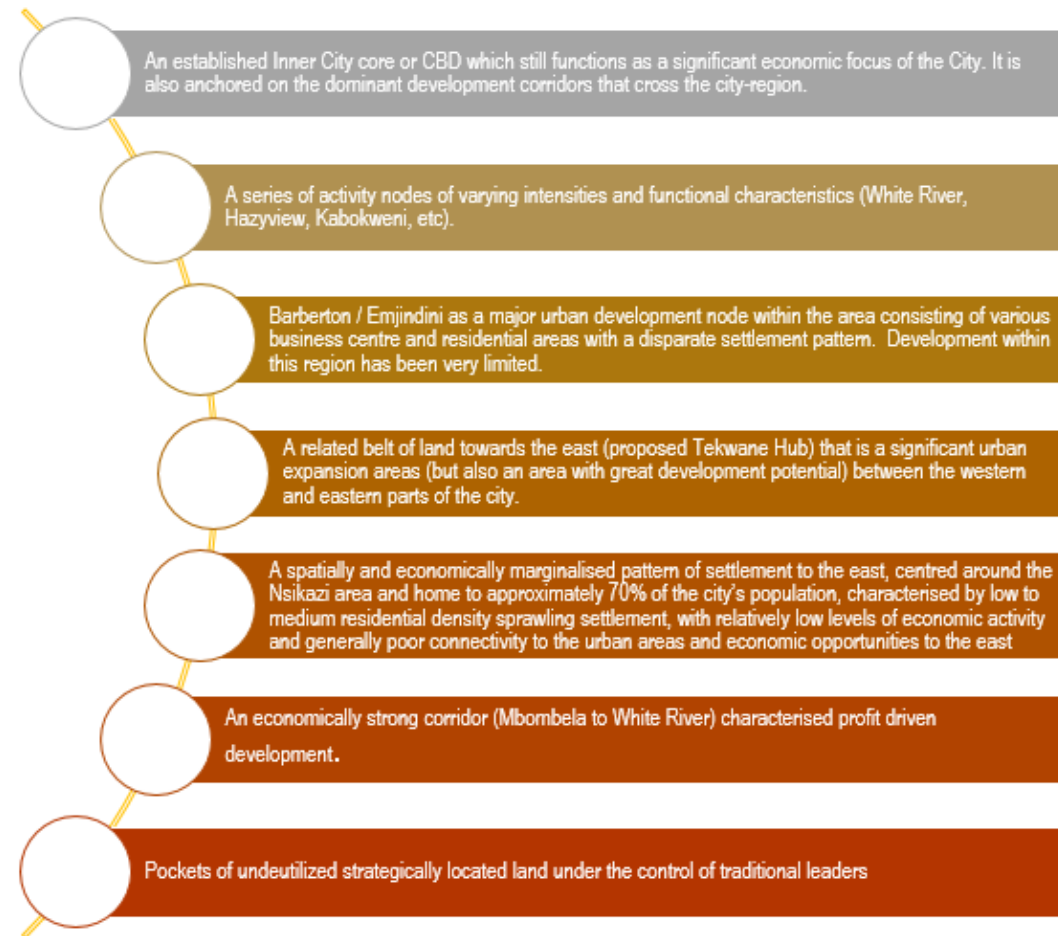


Diagram 28: Current Spatial Elements that Define COM

Short Comings of the Current City Structure

The spatial structure of the city, like most South African cities presents a number of significant challenges to future urban development processes, most notably:

- Urban sprawl and limiting densities.
- High levels of spatial inequality and a mismatch between jobs and housing.
- Fragmentation and spatial disconnection.
- Limited diversity and inefficient land use patterns.
- Increasing pressure on the natural environment.

Understanding these spatial shortcomings, the dynamics that drive them and the opportunities that exist for addressing them provide a basis for moving forward with a new transformative vision for the city.

Implications of the Prevailing Development Pattern

Population growth and spatial inequality is a reality to which the city's spatial policy and other city policies must respond. It is evident that the current spatial structure and development patterns in the city require revisiting if we are to meet our future urban challenge in a manner that is responsive to the identified policy principles of spatial justice, spatial resilience, spatial sustainability, spatial efficiency, spatial quality and spatial transformation. Although current policy seeks to address the challenges that face our city; the prevailing development pattern, that needs to be addressed, is still one of:

- Sprawl and disconnection.
- A spatial mismatch between residents and jobs.
- Monofunctional land uses with low diversity at the local scale.
- A finite and threatened natural structure with social and spatial fragmentation accentuating the divide between incomes and populations.

The current pattern of job dispersal within the city results in and exacerbates: socio-economic exclusion; poor mobility; high congestion; high energy and carbon intensity; high infrastructure costs and jeopardises urban productivity.

5 CHAPTER 5: SPATIAL PROPOSALS

The spatial proposals identifies how the spatial form of COM should be shaped to achieve its vision and to give effect to the spatial planning principles and priorities underpinned by the different spatial planning legislative requirements of the country. This chapter outlines the following components:

- Reiterates the policy guidelines for spatial development and human settlements;
- Reiterates the Structuring Elements that inform the desired spatial pattern for COM; and
- Provides the spatial vision and identifies spatial strategies for COM culminating into the COM Strategic Spatial Framework and Spatial Concept.

5.1 POLICY GUIDELINES FOR SPATIAL DEVELOPMENT

The development of the spatial proposals and settlements frameworks were informed by the following policy guidelines:

- The Spatial Planning and Land Use Management Act (SPLUMA);
- The National Housing Act, 1997 (Act No. 107 of 1997);
- The Breaking New Ground Policy (BNG);
- Integrated Urban Development Framework (IUDF); and
- Comprehensive Rural Development Programme.

These constitute the cornerstone policy and legislative framework for sustainable and balanced settlement making and spatial planning throughout the country.

Chapter 4, section (21) of SPLUMA requires that a framework, for the future development of space of the municipality, must:

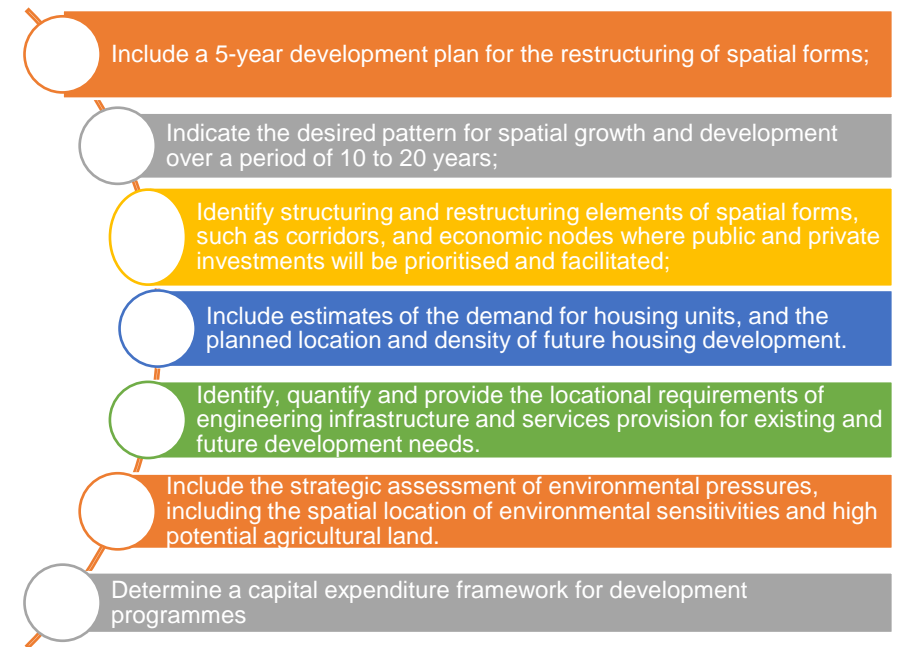


Diagram 28: Current Spatial Elements that Define COM

The Housing Act requires a Municipality to:

- Identify and designate land for housing development;
- Prevention and removal of conditions not conducive to the health and safety of the inhabitants;
- Ensure that the provision of services in respect of water, sanitation, electricity, roads, storm water drainage etc. are made in an economically efficient manner; and
- Access to adequate housing on a progressive basis (RSA, 1997).

The BNG emphasises the need for a Municipality to take the lead role in negotiating the location of housing supply, in order to facilitate spatial restructuring, and the integration between housing delivery, spatial planning, infrastructure provision, the municipal IDP and the municipal budget (RSA, 2004).

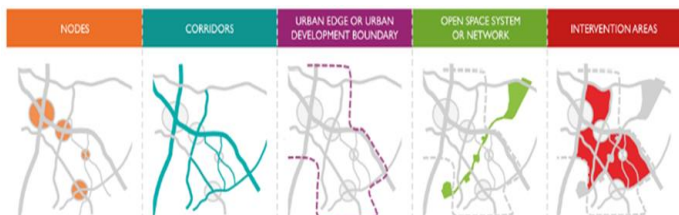
Hence, in line with the requirements of SPLUMA, the National Housing Act and the BNG document, the main goal of this section is to provide a framework for settlement development within the Municipality. Future land use/development decisions in the Municipality, including the allocation of land by Traditional Authorities, as well as capital investment decisions in terms of the IDP, should therefore be guided by this framework.

Add IUDF and CRDP

These have already been considered in the COM Vision 2030 plan which consists of a clear long term spatial development strategy that emphasises the following:

5.2 STRUCTURAL ELEMENTS

Structuring elements, to a large extent, dictate the location of development and direction of growth in a municipality.



Structuring elements that influence the spatial form of COM are as follows:

5.2.1 The Natural Environment

The open space and green system within the municipality provide a diverse range of environments which are characterised by conservation areas, recreation activities, river corridors and servitudes, watercourses, ridges, heritage sites etc. Existing natural environmental resources are economic assets as they promote liveability and viability of communities. The open space and green system should

be protected and enhanced to ensure that the ecosystems within it are able to effectively deliver services.

5.2.2 The Built-Environment

The built environment consists of a combination of various elements including the existing built-up areas, main roads, airports, settlements, etc. These are the focal areas for development:

- Improve access and level of services;
- Prevent urban sprawl;
- Encourage economies of scale; and
- Provide the critical mass.

5.2.3 Activity Nodes

Nodes are places of high accessibility which are characterised by intense concentration of mixed use activities such as retail, office, entertainment, community facilities and residential components. Such places are usually located at strategic transport interchange and should be examined in terms of their potential significance.

These nodes should be positive performing environments that are able to attract business and economic developments to these points. Well-functioning urban nodes are vibrant areas comprising shopping, work, social and cultural opportunities and public transport facilities in a high quality, safe public environment.

Furthermore, they are regarded as priority areas for densification, integration, intensification and improvement of environmental quality. There is a great need to identify a hierarchy of nodes within the metropolitan area in order to integrate the spatial structure and maximize opportunities.

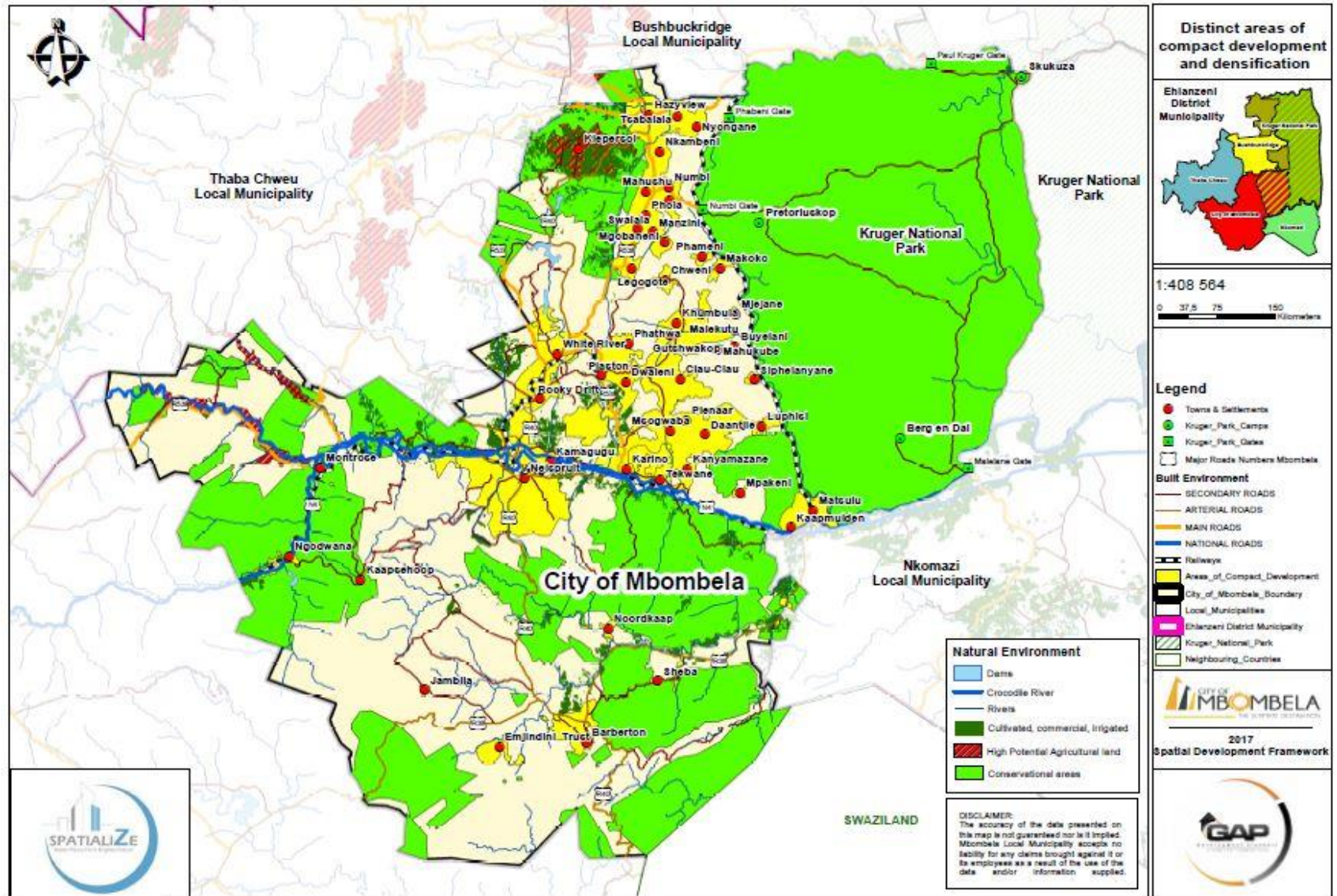
Nodes are mostly targeted for public and private investment as they can enhance economic opportunities and enable more efficient service delivery intensifying activities. Nodes are identified in terms of their function, economic use, intensity, density, walkability, public facilities and public transport.

5.2.4 Corridors and Activity Spines

Urban corridors consist of a combination of structuring elements which reinforce a hierarchy of nodes characterised by the mix of uses resulting in varying development intensity and width. However, activity spines are more focused on promoting intense concentration of mixed uses along a major transportation route.

These structuring elements are significant in maximising the objectives of restructuring and the creation of economic opportunities by intensifying various activities. Mixed used activities should be created and promoted within such structuring elements which include different modes of transport, thus minimising travelling costs and the costs of transport infrastructure by increasing accessibility to employment opportunities especially for previously disadvantaged communities.

SPATIAL DEVELOPMENT FRAMEWORK



Map 36: Structural Elements

5.3 SPATIAL VISION AND STRATEGIES

5.3.1 Spatial Vision

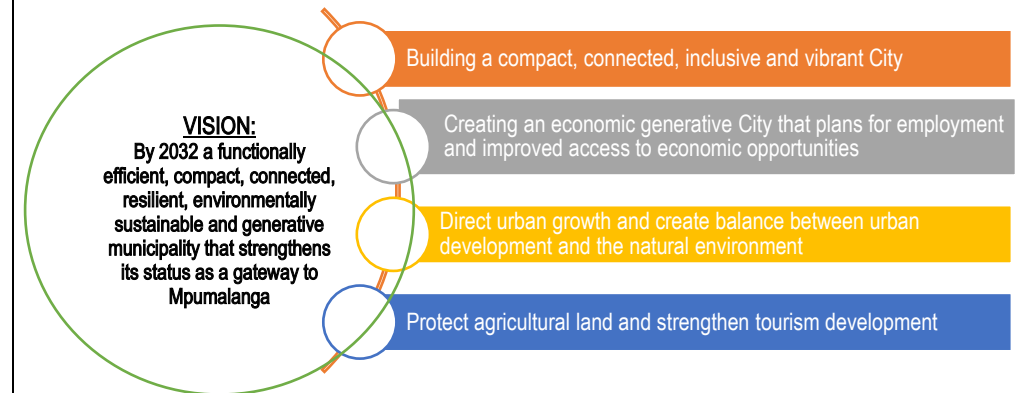
The spatial transformation of COM will require a focused shift from the apartheid legacy and spatial patterns of the past to unlock the potential of the city. The SDF translates the current municipal IDP vision, namely, “*City of Excellence, the ultimate destination*” and the current COM Vision 2030 goal namely “*To be the best City in South Africa by 2030 for living, working, playing and investing*”, to have a spatial focus.

The envisaged SDF spatial vision is to have “*by 2030 a functionally efficient, compact, connected, resilient, environmentally sustainable and generative municipality that strengthens its status as a gateway to Mpumalanga and South Africa*”.

This spatial vision aims to contribute to social stability, economic growth and development in an equitable and sustainable way as well as address the problem of rural-urban inequality.

5.3.2 Spatial Strategies

Five (5) key spatial strategies have been identified to assist the municipality to achieve its spatial vision, which is the sustainable development of its entire area of jurisdiction where people, the economy and the environment can thrive. These strategies are as follows:



(a) Strategy 1: Building a compact, connected, inclusive and vibrant City

The City must intend on building a more inclusive, integrated, compact and vibrant city that addresses the legacies of apartheid. The strategy aims to intensify urban land use through a combination of higher residential densities and centralisation, mixed land uses, and development limits outside of designated areas.

This strategy prioritises development within the existing built-up area and close to and radiating from a strong urban core, where the definition of high-density development is based primarily on the concentration of jobs, businesses and dwelling units.

A basic principle of the strategy to guide future growth and development is to view appropriate densification as the first response to meeting growth demands and to promote strategic road links and upgrades with the purposes of creating better accessibility and connectivity within the municipality.

The Strategy in Space

Building a compact, connected, inclusive and vibrant city in Mbombela can be directed and achieved through the following two interventions:

(1) Designated areas of compact integrated development and densification (see map 37)

With reference to the emerging spatial framework of the city, the following key areas exist as a basis for moving towards a more compact and integrated urban form:

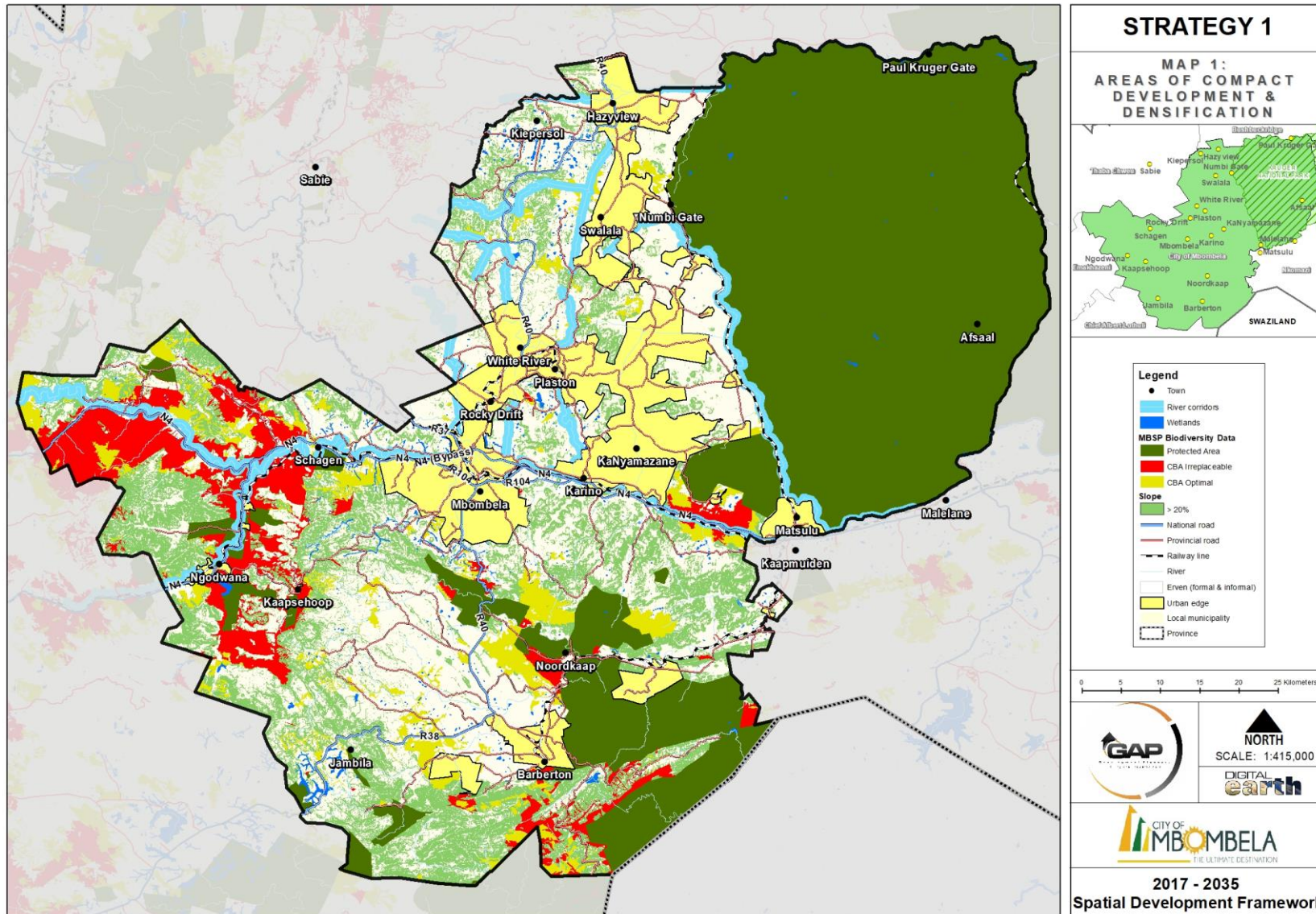
- Existing built-footprint of the municipality;
- Around key public transport facilities (existing and future);
- Around current and future mixed use and economic nodes; and
- Around existing social service facilities, including schools, healthcare and public open space.

(2) An established efficient integral movement system (see map 38)

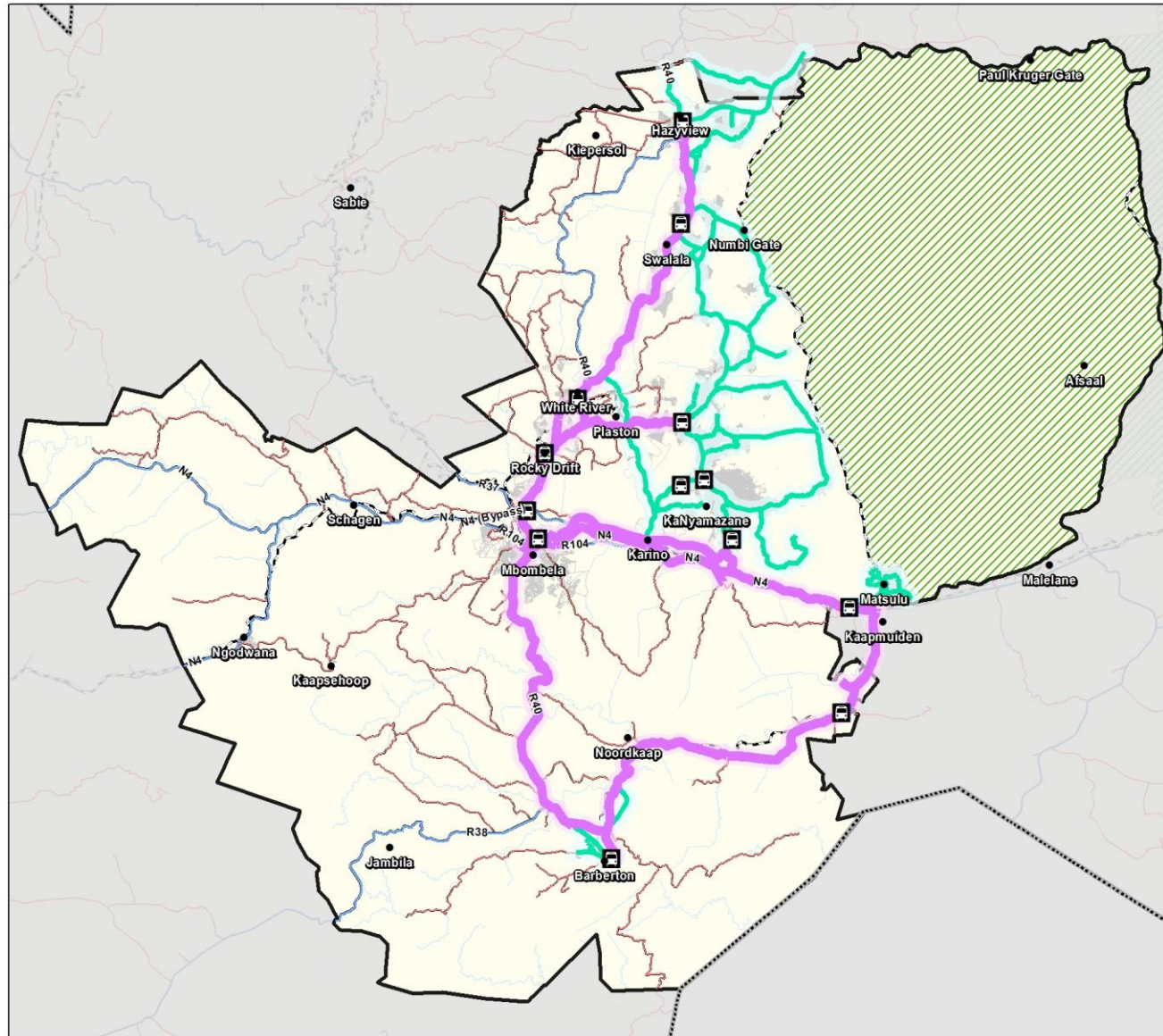
The integral movement system must be aimed at providing all residents with convenient and affordable access to the municipality's resources and amenities and improved connectivity between the eastern and western built-up areas of Mbombela and to promote spatial reconstruction and integration. This movement system must have a profound impact on spatial development patterns and accessibility, and hence on economic and social opportunity.

In line with Mbombela's Integrated Transport Plan (ITP) and Land Use Transportation Strategy (LUTS), the movement system comprises of the following interventions:

- A taxi feeder - line haul system
- Strategic Road Links:
 - Kanyamazane Western Bypass
 - Upgrade Luphisi Southern Link and Re-align Existing Luphisi Link
 - Upgrade and extension of R538
 - P166 Western Bypass
 - New Matsulu direct link with N4
 - P17/6 Bypass.
 - Upgrading and extension of R38
- Bus rapid transit system
- Commuter rail system

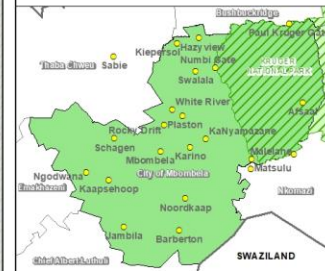


Map 37: Strategy 1.1: Areas of Compact Development & Desnsification

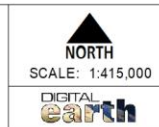
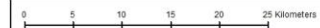


STRATEGY 1

**MAP 2:
PUBLIC TRANSPORT
ROUTES & TAXI RANKS**

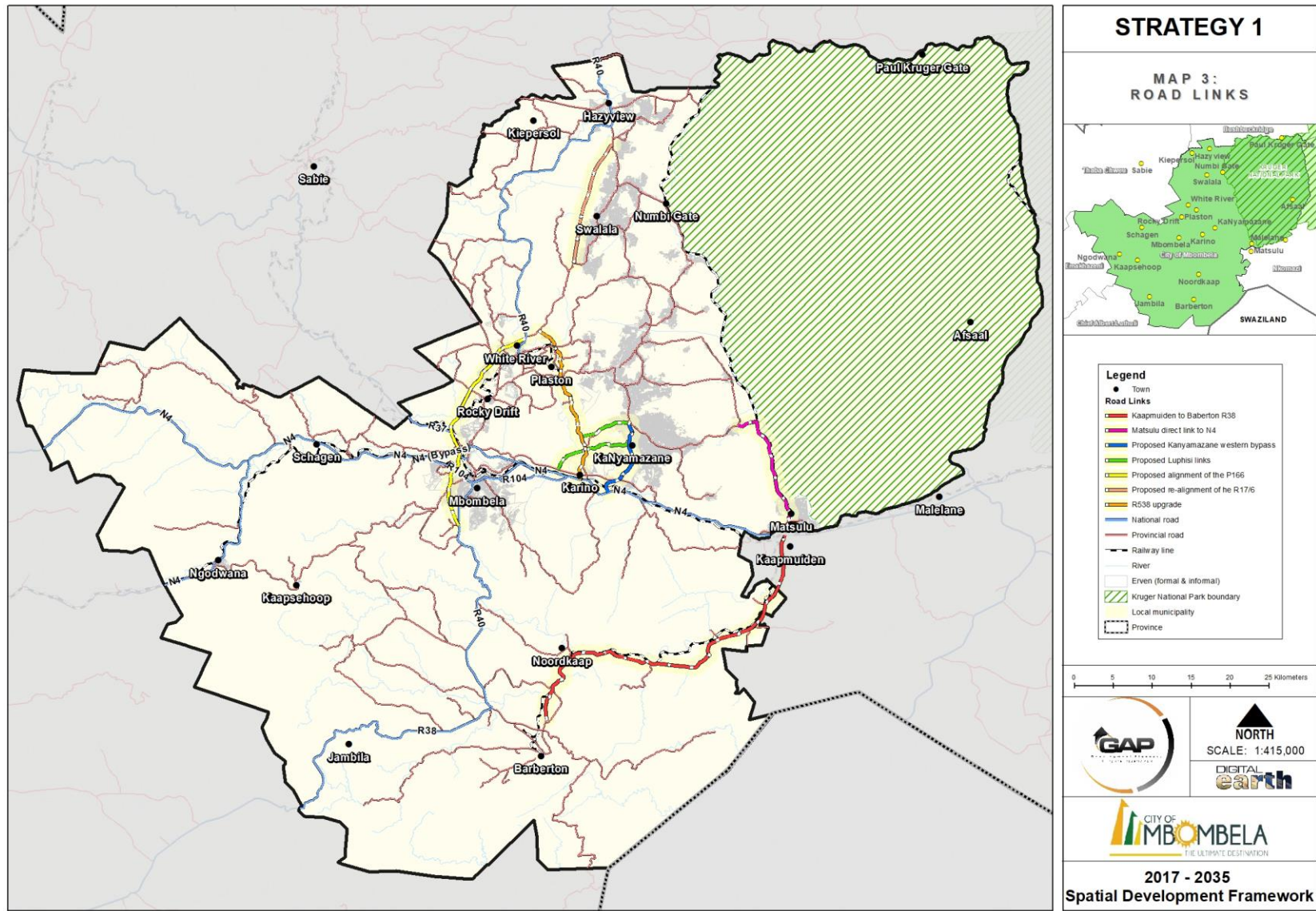


- Legend**
- Town
 - Transfer rank
 - Taxi feeder route
 - Taxi line haul route
 - National road
 - Provincial road
 - Railway line
 - River
 - Erven (formal & informal)
 - ▨ Kruger National Park boundary
 - ▭ Local municipality
 - ▭ Province

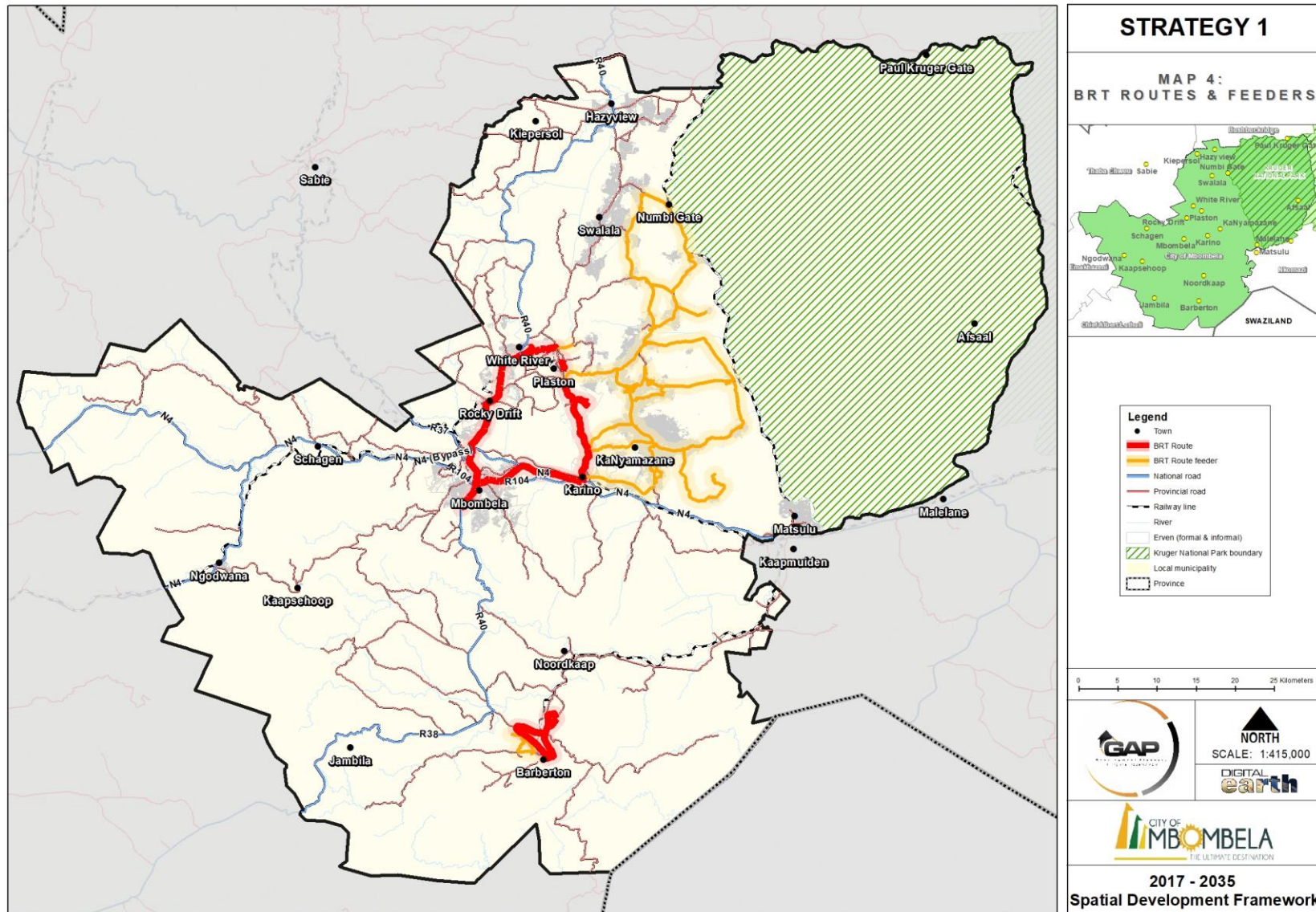


**2017 - 2035
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Map 38: Strategy 1.2: Public Transport Routes & Transfer Ranks



Map 39: Strategy 1.3: Road Links Proposals



Map 40: Strategy 1.4: BRT Routes & Feeders

(b) Strategy 2: Creating an economic generative City that plans for employment and improved access to economic opportunities by transforming and intensifying development within the economic opportunity zone.

Cities are traditionally generators of opportunity for people to build more healthy, productive and meaningful lives. The extent to which the City of Mbombela realises its spatial development goals must be directly linked to its ability to sustain employment and generating economic growth in the medium term and reduce accessibility costs for the urban poor.

The city must focus investment in areas where the potential for developing and sustaining true mixed-use and efficient urban environments is greatest. This strategy is advocating that economic activity (formal and informal) be encouraged to locate within economic opportunity zones across the municipality, related to the accessibility grid. These opportunity zones will be focal points for enabling public sector infrastructure investment (information communication technology, upgrade of roads and utility services).

The Strategy in Space

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

(1) Activity Nodes:

Nodes are places of high accessibility which are characterised by intense concentration of mixed use activities such as retail, office, entertainment, community facilities and residential components. COM is characterised by the following nodes:

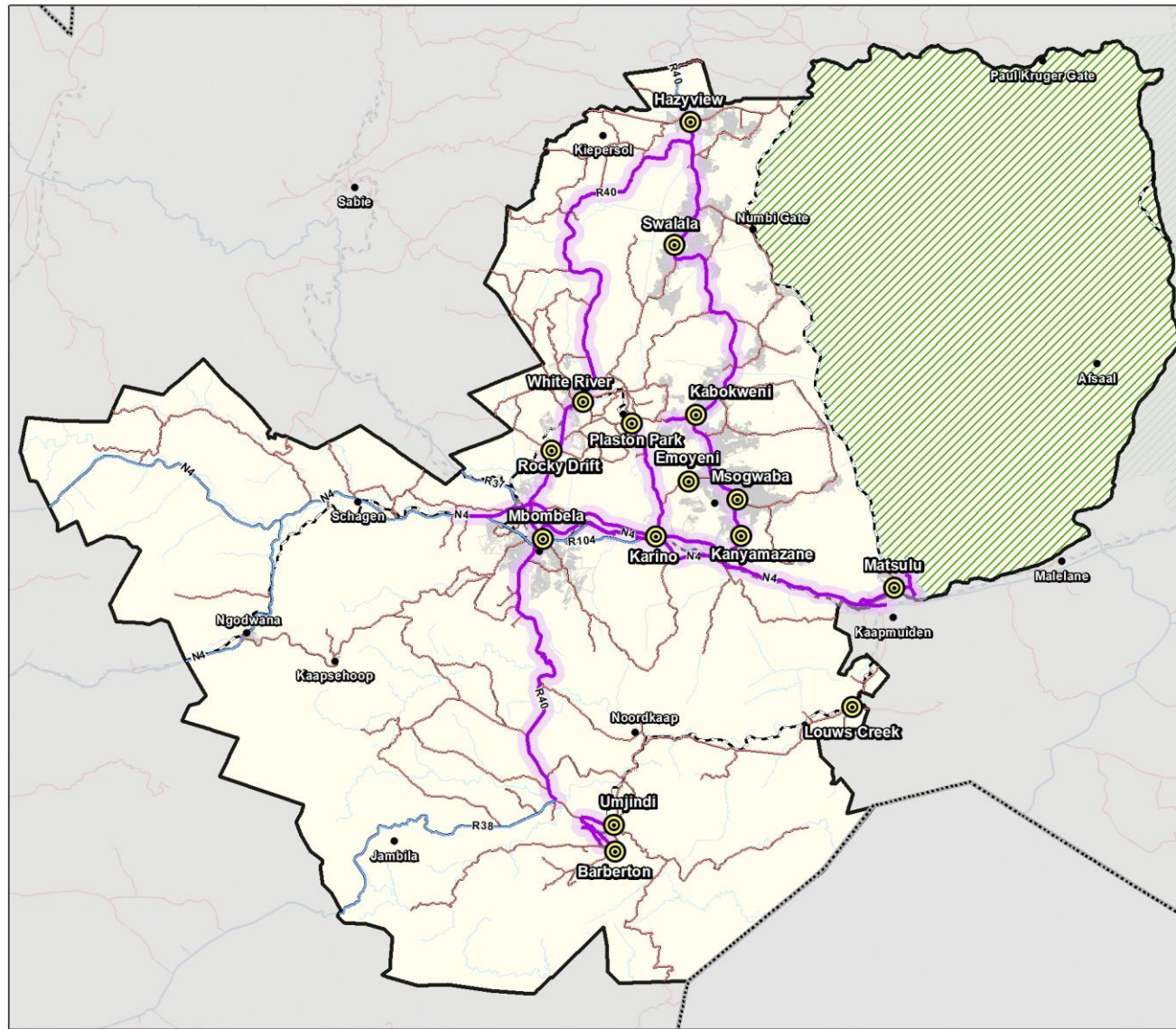
- Nelspruit CBD
- Barberton CBD
- Whiteriver, CBD
- Hazyview CBD
- Karino
- Swalala
- Rockydrift
- Lows creek
- Kanyamazane CBD
- Msogwaba CBD (proposed)

- Kabokweni CBD

(2) Corridors

Urban corridors consist of a combination of structuring elements which reinforce a hierarchy of nodes characterised by the mix of uses resulting in varying development intensity and width. However, activity spines are more focused on promoting intense concentration of mixed uses along a major transportation route. The identified corridors are as follows:

- The Tekwane-Msogwaba Activity Corridor
- R40 Transportation Corridor
- The Karino-KMIA-Plaston Activity Corridor
- Southern Region Development Corridor



STRATEGY 2

MAP 1: ACTIVITY NODES & CORRIDORS

Legend

- Town
- Economic Opportunity Node
- Economic Opportunity Corridor
- National road
- Provincial road
- Railway line
- River
- Erven (formal & informal)
- Kruger National Park boundary
- Local municipality
- Province

0 5 10 15 20 25 Kilometers

GAP

NORTH
SCALE: 1:415,000

DIGITAL earth

CITY OF MBOMBELA
THE ULTIMATE DESTINATION

2017 - 2035
Spatial Development Framework

Map 41: Strategy 2: Activity Nodes & Corridors

(c) Strategy 3: Direct Urban Growth and Create Balance Between Urban Development and the Natural Environment.

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

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

The Strategy in Space

The directing of urban growth and creating a balance between urban development and the natural environment must be based on two elements, namely: **(1) Establishing an Integrated Natural Structure** and **(2) Reinforcing the Urban Development Boundary.**

Establishing an Integrated Natural Structure

The natural environment becomes an increasingly important element in the structuring of the desired spatial pattern of the city. The critical biodiversity areas should be seen as a city asset that provides valuable infrastructure services and not merely as unused land available for development. Protecting these areas is not done for the sake of conservation alone, but to make surrounding developed parts of the city more sustainable, liveable and valuable.

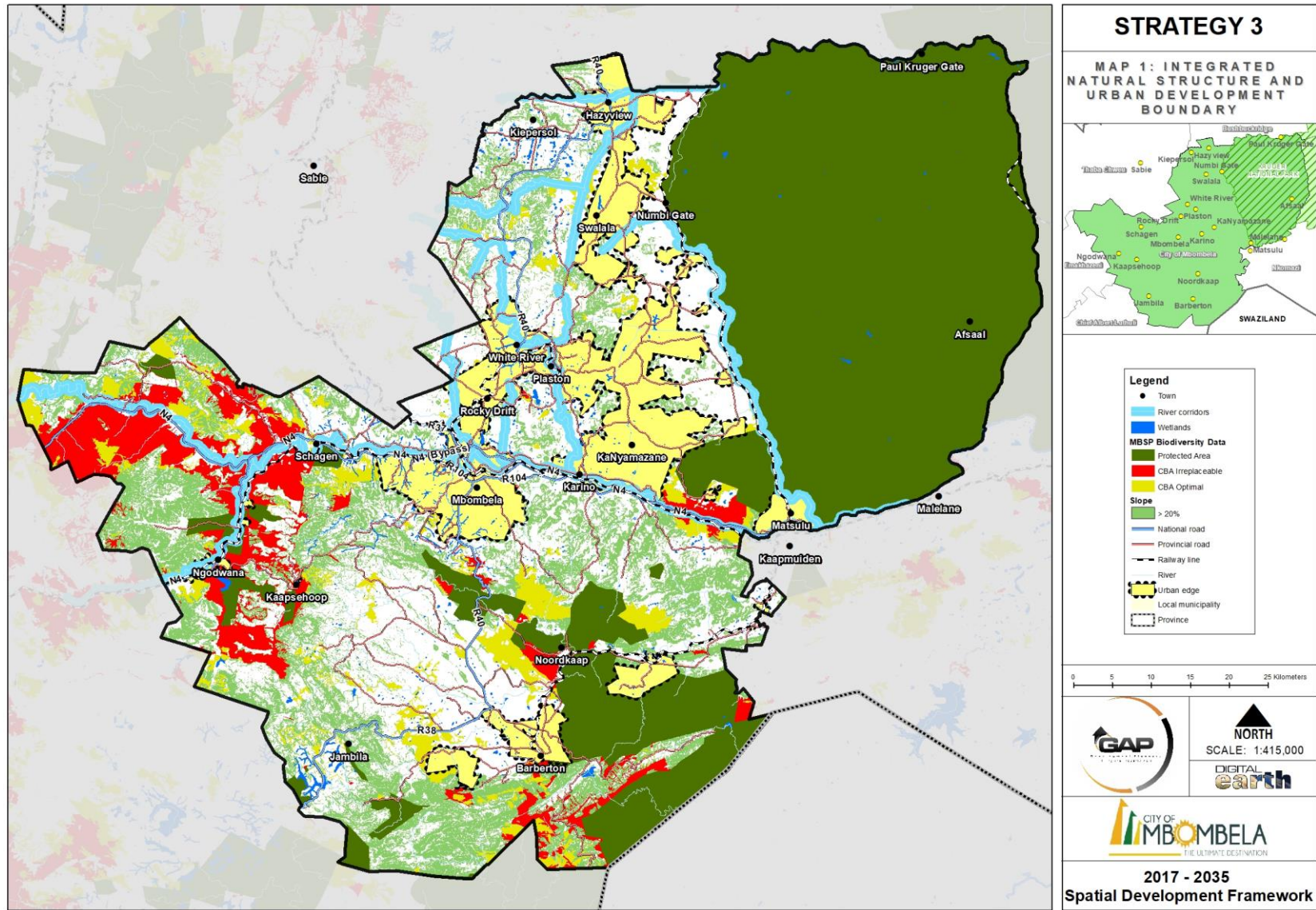
Establishing an integrated structure can be done through the mapping and protection of the following natural elements:

- Biodiversity areas (Protected Areas, Irreplaceable Areas and Ecological and Aquatic Corridors);
- River corridors;
- Ridges and mountainous areas; and
- Natural heritage sites

Reinforcing the Urban Development Boundary

One of the City's Growth Management Tools, which has been in place is the Urban Edge. An urban edge is a demarcated line and interrelated policy that serves to manage, direct and limit urban expansion. This Urban Edge was established to manage the expansion of the city's footprint, limit sprawl related infrastructure costs (capital and operational) and protect the City's ecological resources.

Land located beyond the City's Urban Edge is predominantly rural and agricultural in nature and high proportions of the City's Critical Biodiversity (CBA's) and Environmental Support Areas (ESA's) are found outside of the boundary. As such, areas falling outside of the existing Urban Edge are viewed as a focus of ecological resource protection and management, food production, low intensity social services and amenities, agricultural related investment, leisure and tourism, and green energy initiatives. The City will, therefore, limit development and infrastructure investment that is not related to such initiatives.



Map 42: Strategy 3: Intergrated Natural Structure & Urban Development Boundary

(d) Strategy 4: Protect Agricultural Land and Strengthen Tourism Development

Economic development and national food security depend on the availability of productive and fertile agricultural land, which is consistently threatened by the demand for land for residential and industrial development. The City of Mbombela needs to actively protect high potential agricultural land in accordance with the provisions of the Preservation and Development of Agricultural Land Framework Bill.

The scenic environment (natural resources), coupled with numerous attractions, rich cultural heritage and Kruger National Park, Makhonjwa Mountain lands World Heritage Site and Songimvelo Malolotja Transfrontier Conservation Area (S-M TFCA) being one of the top ten tourist attractions in South Africa, make the City a sought after destination to tourists.

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

The Strategy in Space

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

The existing and proposed tourism attractions determine the configuration of the envisaged tourism development of the municipality. Tourism areas and routes that should be linked to a broader tourism strategy in order to be strengthened include the following:

(1) Tourism Attraction Areas

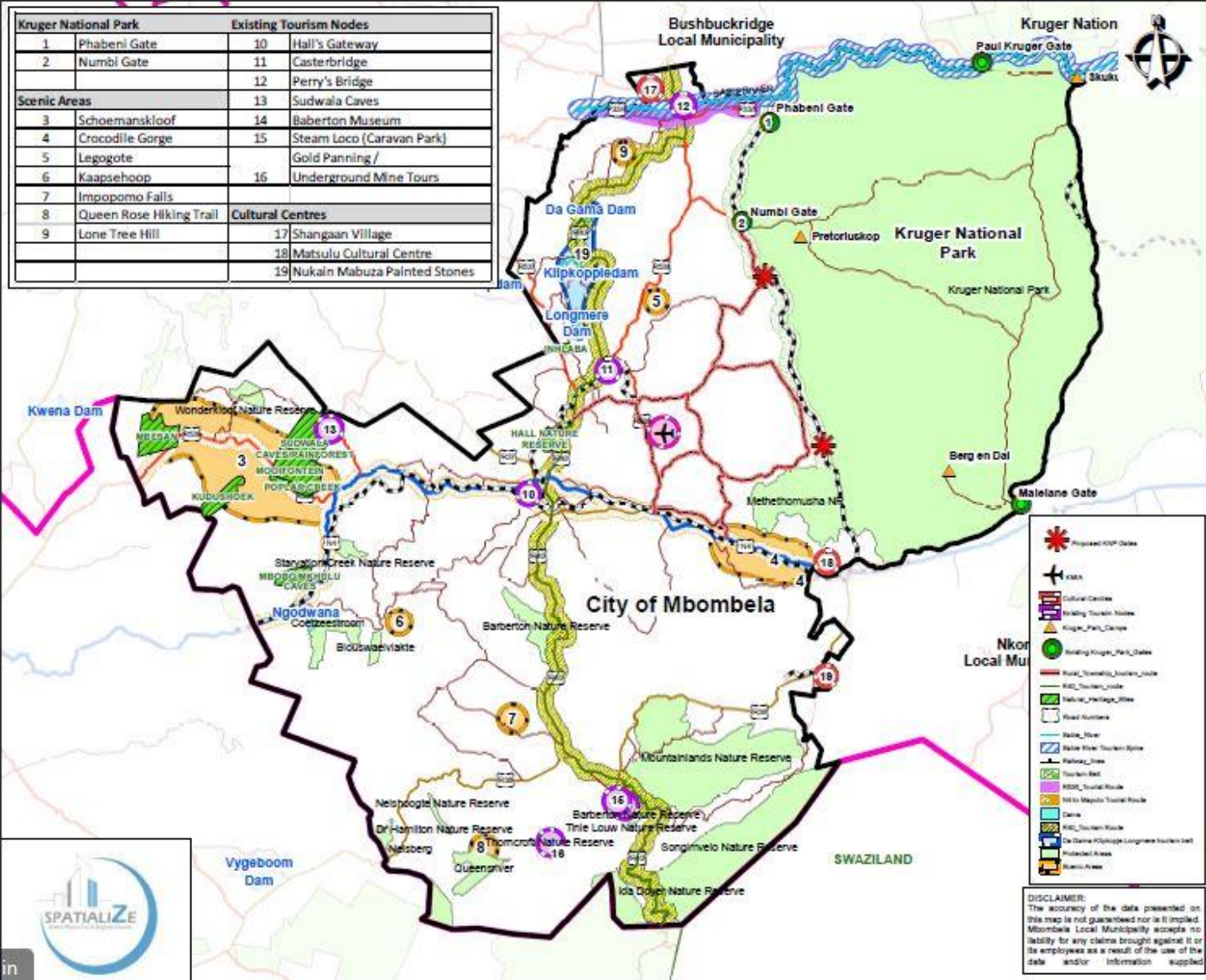
- Kruger National Park;
- The Songimvelo Malolotja Transfrontier Conservation Area;
- The Barberton Mountainlands Nature Reserve;
- The Makhonjwa Mountains World Heritage Site;
- Sudwala Caves;

- Nsikazi community tourism;
- Scenic areas;
- Existing tourism nodes;
- Heritage assets (buildings & sites); and
- Cultural Centres

(2) Tourism Accessibility

- Kruger Mpumalanga International Airport;
- The Maputo Development Corridor;
- Tourism routes; and
- Tourism railway.

Kruger National Park		Existing Tourism Nodes	
1	Phabeni Gate	10	Hall's Gateway
2	Numbi Gate	11	Casterbridge
		12	Perry's Bridge
		13	Sudwala Caves
Scenic Areas		14	Baberton Museum
3	Schoemanskloof	15	Steam Loco (Caravan Park)
4	Crocodile Gorge		Gold Panning /
5	Legogote	16	Underground Mine Tours
6	Kaapsehoop		
7	Impopomo Falls	Cultural Centres	
8	Queen Rose Hiking Trail	17	Shangaan Village
9	Lone Tree Hill	18	Matsulu Cultural Centre
		19	Nukaln Mabuza Painted Stones



- Legend**
- Road Numbers
 - Road_Network**
 - ROADS
 - SECONDARY
 - ARTERIAL
 - MAIN
 - NATIONAL
 - City_of_Mbombela_Boundary
 - Local_Municipalities
 - Ehlanzeni District Municipality
 - Neighbouring_Countries

CITY OF MBOMBELA
THE ULTIMATE DESTINATION

2017
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Map 43: Strategy 4.1: Tourism Development & Destinations

5.4 SPATIAL CONCEPTS

A new spatial transformation agenda has emerged in the planning legislation and the City has re-committed to spatial transformation in the Vision 2030 Strategy and the IDP. More specifically, it has committed the city to “employing a range of new urban development proposals and designation of property areas for development.

The municipal spatial concept for City of Mbombela is based on the four identified spatial strategies. The spatial concept and strategic framework outlines the key spatial tools used to protect both the built and natural environment and guide the direction of growth. The key spatial concept tools include:

- Protection of the Natural Environment;
- Fictional Hierarchy of Nodes;
- Corridors and Movement Networks;
- Potential for Tourism Development; and
- Development Zones.

5.4.1 Protection of the Natural Environment

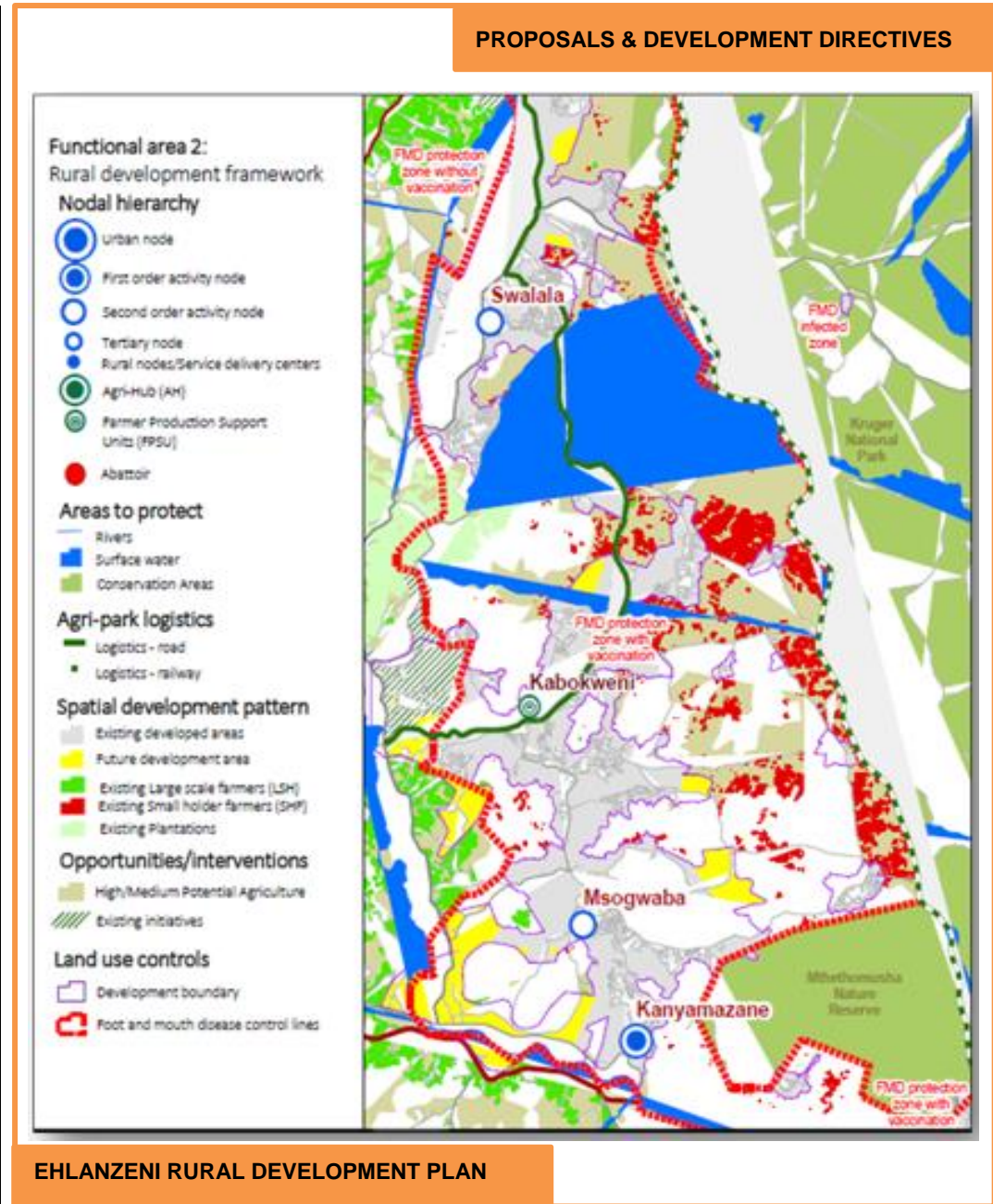
The areas within the municipality which holds land with environmental or agricultural significance and needs to be protected are illustrated on Map 24 in section 6.8. These areas are indicated as “environmental management areas” on maps within the following section and were used as one of the key overlays to inform the spatial proposals.

5.4.2 Functional Nodal Hierarchy

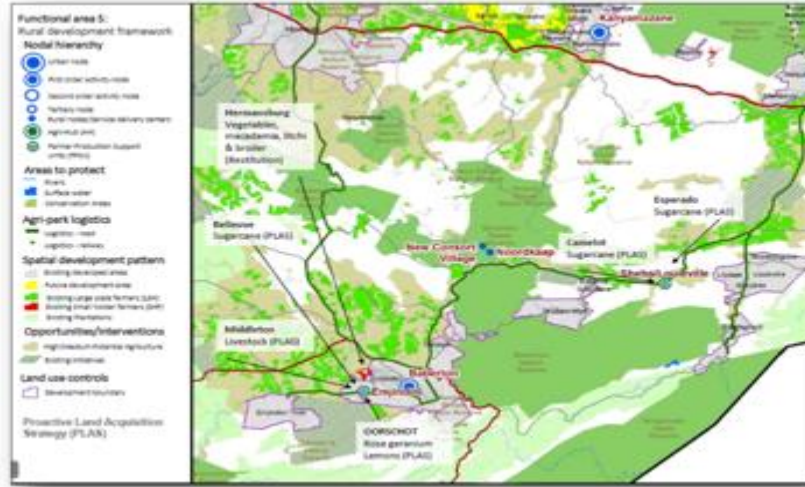
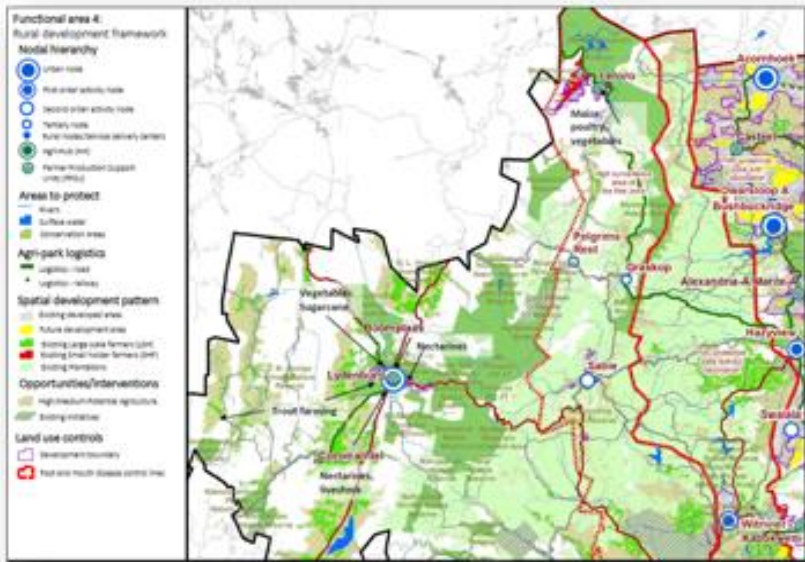
The Department of Rural Development and Land Reform together with the Ehlanzeni District Municipality have developed the Ehlanzeni Rural Development Plan 2016 with the purposes of ensuring sustainable livelihoods for those households residing in the rural areas of the Ehlanzeni District Municipality.

Furthermore, the plan is seen as a “regional spatial development framework”, and therefore the plan is not compiled for the entire district municipality, but rather for certain regions in the district. Various nodes have been identified and categorized into different hierarchies by the 2016 Ehlanzeni Rural Development Plan.

The following maps illustrates the nodes identified by the 2016 Ehlanzeni Rural Development Plan for the City of Mbombela Local Municipality:



PROPOSALS & DEVELOPMENT DIRECTIVES



Identified nodal areas within the Ehlanzeni RDP were used as a basis to identify nodes for the SDF. The RDP were used because it is one of the most recent plans concerning the municipality.

- White River, Hazyview and Barberton be moved from being 1st order activity node and be included under Urban Nodes as they are identified by the Vision 2030 strategy as areas of municipal investment priority, where spatial transformation is most achievable and are areas of co-investment between public and private sector.
- Karino be included as 1st order activity node from being a speciality node, mainly because of the growing housing development, upcoming commercial development and the highly anticipated Tekwane Urban Hub.
- Kabokweni be included as 1st order activity node, being one of the populated and growing areas within the municipality. Kabokweni forms an important node within the municipality, with it having a Hospital and a Court serving the District.

(a) Nodes for the City of Mbombela Spatial Development Framework

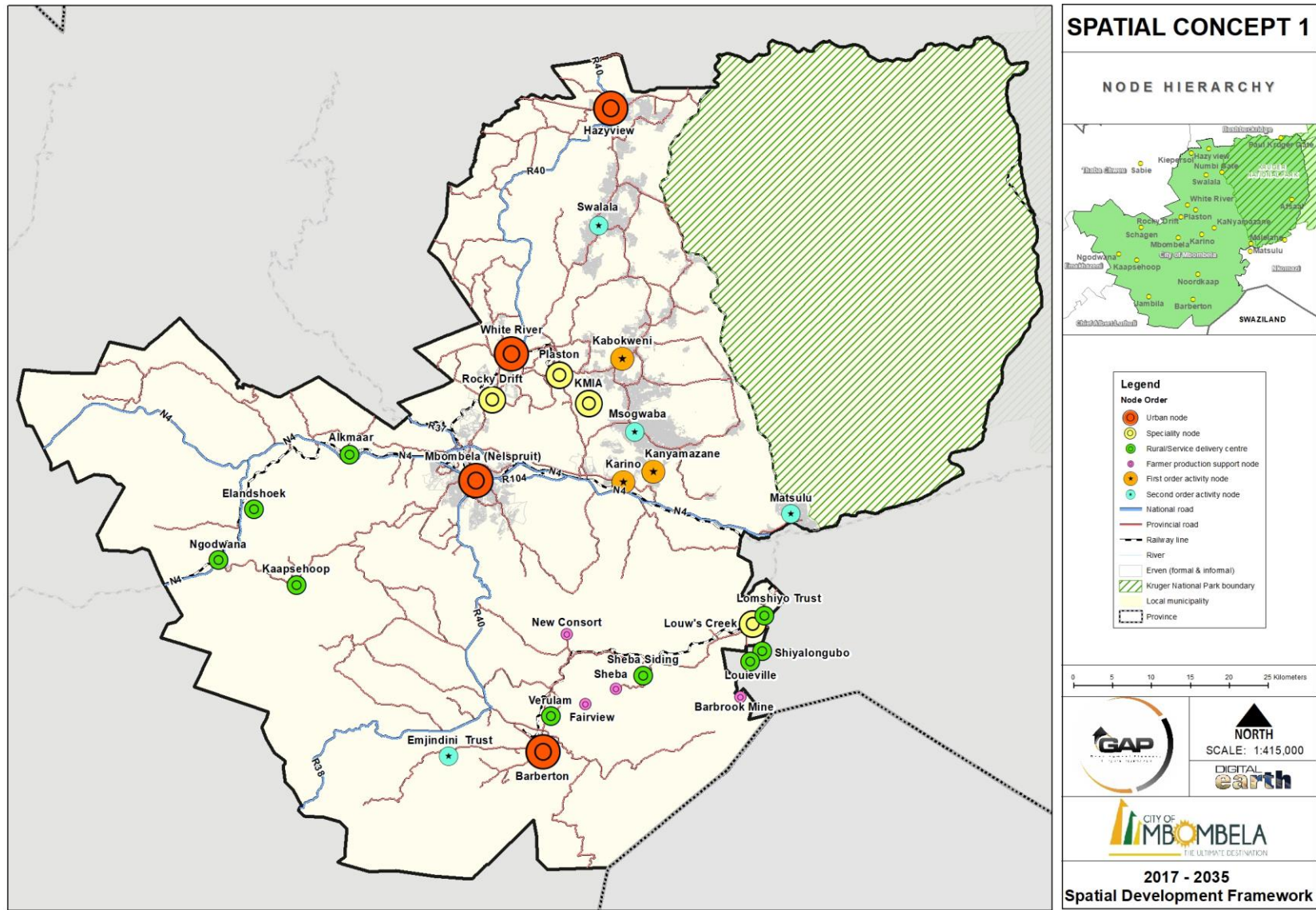
The table below summarises the newly amended nodes within the municipality:

Table 40: Nodes Classification

Nodal Order	Imperatives
	Urban Node
Mbombela (Former Nelspruit) Barberton Hazyview Whiteriver	<ul style="list-style-type: none"> • The role and functions of these Urban Nodes needs to be maintained through encouraging developments with regional functions such as University, Hospitals, Government Offices, etc. • Encourages public and private sector investment • Promote residential densification, mixed land uses and provide affordable housing opportunities.

First Order Activity Nodes	
Kanyamazane Kabokweni Karino (proposed)	<ul style="list-style-type: none"> • Its roles and functions of sub-regional activity node need to be maintained and enhanced. • Increase engineering and social infrastructure. • Promote residential densification and mixed use in selected areas. • Provide affordable housing opportunities.
Second Order Activity Nodes	
Matsulu Swalala (proposed) Msogwaba (proposed) Umjindi (proposed)	<p>These nodes need to form the focus areas to which catalyst development projects are directed providing for sustainable communities, involving:</p> <ul style="list-style-type: none"> • Urban renewal initiatives and economic regeneration, • Human resources development, • Neighbourhood development, • The upgrading and restructuring of engineering and social infrastructure, • Urban management and • Transportation and roads.
Speciality Nodes	
Rockydrift Plaston (proposed) KMIA (proposed) Lows creek (proposed)	<ul style="list-style-type: none"> • Opportunity to develop employment centres on the threshold of the Nsikazi corridor. • Target market specific per node such as tourism and industrial. • Enhance the role of Rocky Drift as a regional industrial node through upgrading engineering services.
Rural Nodes / Service Delivery Centres	
Sheba Siding Alkmaar Elandshoek Ngodwana Kaapsehoop Selapi Louieville	<p>These nodes should not be viewed as focus areas for future growth</p> <p>Prevent further expansion outside the urban edge Improve status of engineering services and social infrastructure.</p>

Sincobile	
Farmer Production Support Units	
Louieville Sheba Kabokweni	<p>These are centres of agricultural input supplies, extension support, mechanization support, local logistics support, primary produce collection, and through-put to Agri-hubs.</p>



Map 49: Spatial Concept 1: Nodal Hierarchy & Classification

5.4.3 Corridors and Movement Networks

Development corridors are broadly defined as urban areas of high-intensity (i.e. dense and diverse) nodal or 'strip' development focussed around (a combination of) rail, high-capacity road and trunk bus routes. They are characterised by a dynamic, mutually supporting relationship between land use and the movement system.

Development corridors are generally supported by a hierarchy of transport services that function as an integrated system to facilitate ease of movement for private and public transport users. Corridors within the municipality have been categorized into primary and secondary corridors.

(a) Primary Transport and Activity Corridors

The N4 Transportation Corridor:

The N4 runs on an east-west axis through the Nelspruit CBD forming the backbone of the Maputo Development Corridor, providing direct access to the economic nodes of Ngodwana Sappi and Nelspruit. It passes the settlements of Tekwane, Kanyamazane and Matsulu to the south. Another accessibility factor is that the N4 is useful for connecting the municipality to Emalahleni, Tshwane, Mozambique and Swaziland.

The R40 Transportation and Development Corridor:

The R40 is identified as a Primary Transport and Development Corridor within the municipality. The R40 provides accessibility to and from Barberton in the southern region to Hazyview in the eastern region. Amongst other accessibility factors the R40 is useful for connecting Mbombela (Capital city of Mpumalanga) and Polokwane (Capital city of Limpopo) and furthermore plays a great role in linking Mpumalanga and Swaziland.

The R40 currently acts as a movement corridor for freight, commuters and tourists and had a significant role on the development of extensive business and industrial activities in between Barberton-Mbombela-Whiteriver Nodal areas. The R40 runs along the following important areas:

- Nelspruit CBD
- Nelspruit Industrial

- Mataffin Sport and Recreation
- Baberton Industrial
- Umjindi commercial (proposed)
- Riverside Industrial Area
- Riverside Park
- Rocky Drift
- White River CBD and Industrial Node
- Fountains/Casterbridge Business and
- Commercial Node at the intersection of the P17/6 (R538 – Numbi Road) and the R40

(b) Secondary Transport and Activity Corridors

Far Eastern Region Activity Corridor:

The Far Eastern Region Activity Corridor consists of a broad strip of urban and semi urban settlements, stretching from Hazyview in the north to Kanyamazane in the south. Development within this corridor is mainly supported by a major collector road (R538), which links with the N4 at Karino, west of Tekwane. The Far Eastern Region Activity Node includes the following nodes:

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

The Mbombela – Kanyamazane Corridor.

The Mbombela – Kanyamazane Activity Corridor is provided along the Provincial Road D2296 (Kanyamazane Rd) forming the central spine of the Corridor. This road is the critical link conveying residents from the major eastern residential areas (Nsikazi) towards their places of employment mostly located in Mbombela.

Considering known development as well as the TEAS applications, the following primary developments are of note and they form part of the Corridor:

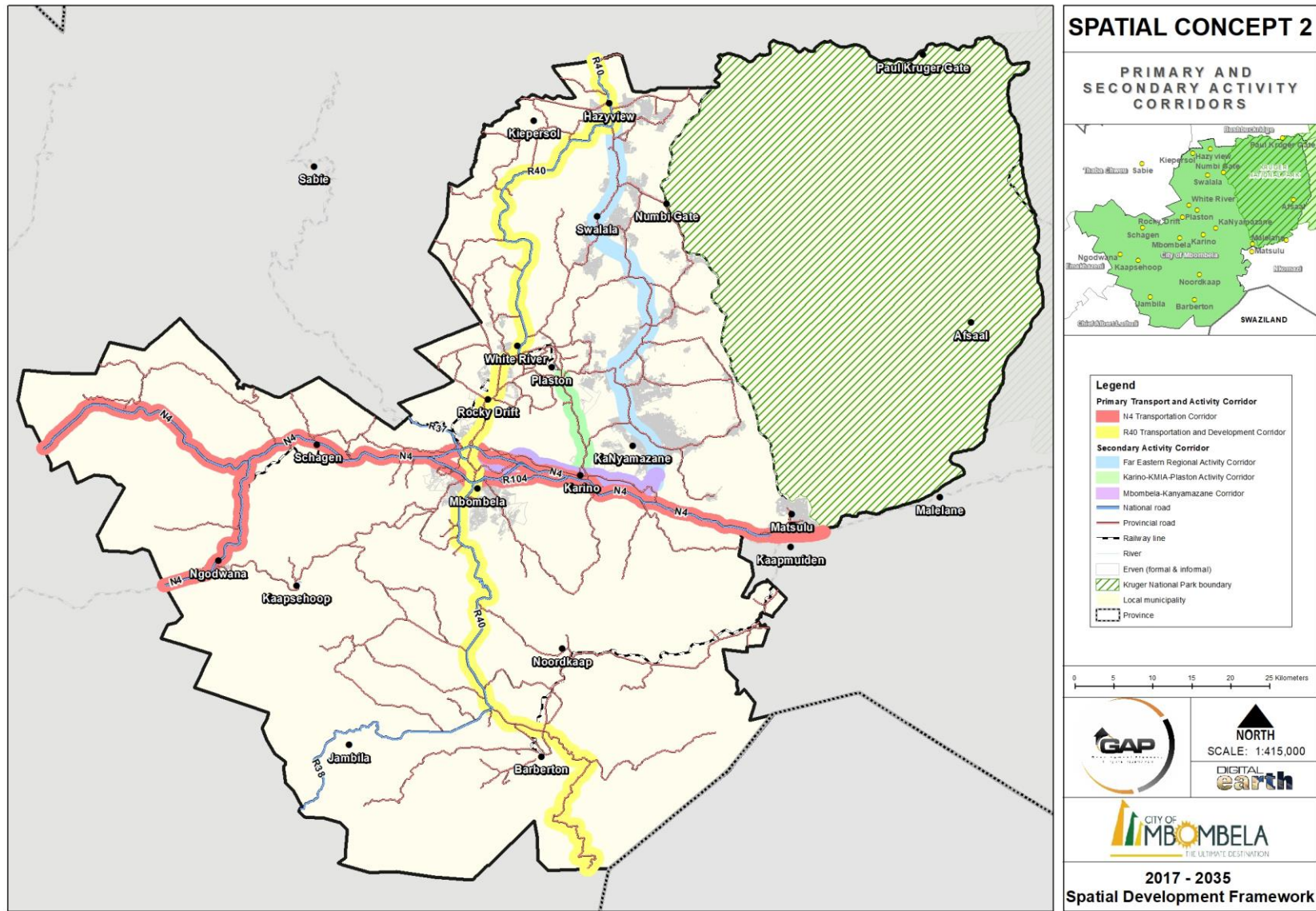
- Karino Lifestyle (south);
- Karino Meridian Private School;

- Future Karino Lifestyle (north);
- Karino Erf 5 & 6;
- Karino Ext 1;
- Emkhatsini;
- MLM Tekwane Ext 2 Housing; and
- Karino Industrial Estate

The Karino-KMIA-Plaston Activity Corridor

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

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



Map 50: Spatial Concept 2: Development Corridors Classification

5.4.5 Development Zones

Spatial transformation is based on reversing the impact of apartheid spatial planning by creating more opportunities for more people in highly connected areas. Further, it seeks to counter the creation of new low income communities on the periphery of the city and the need for the poor to spend a disproportionate amount of income on transport.

The SDF sets the guiding vision and then builds a concrete strategy for its realisation as a spatial transformation tool. On the basis of spatial transformation and growth management, three primary Development Zones / Spatial Transformation areas have been identified namely:

- Transformation Zone
- Consolidation Zone
- Urban Development Zone

Transformation Zone:

The Transformation Zone includes areas where spatial transformation is most achievable and where investment is prioritised for future urban intensification and growth. The areas within the transformation zone have the capacity to trigger positive effects on a city wide space. The transformation zone also indicates areas where the development of detailed spatial plans will be prioritised and where land use application processes will be shortened.

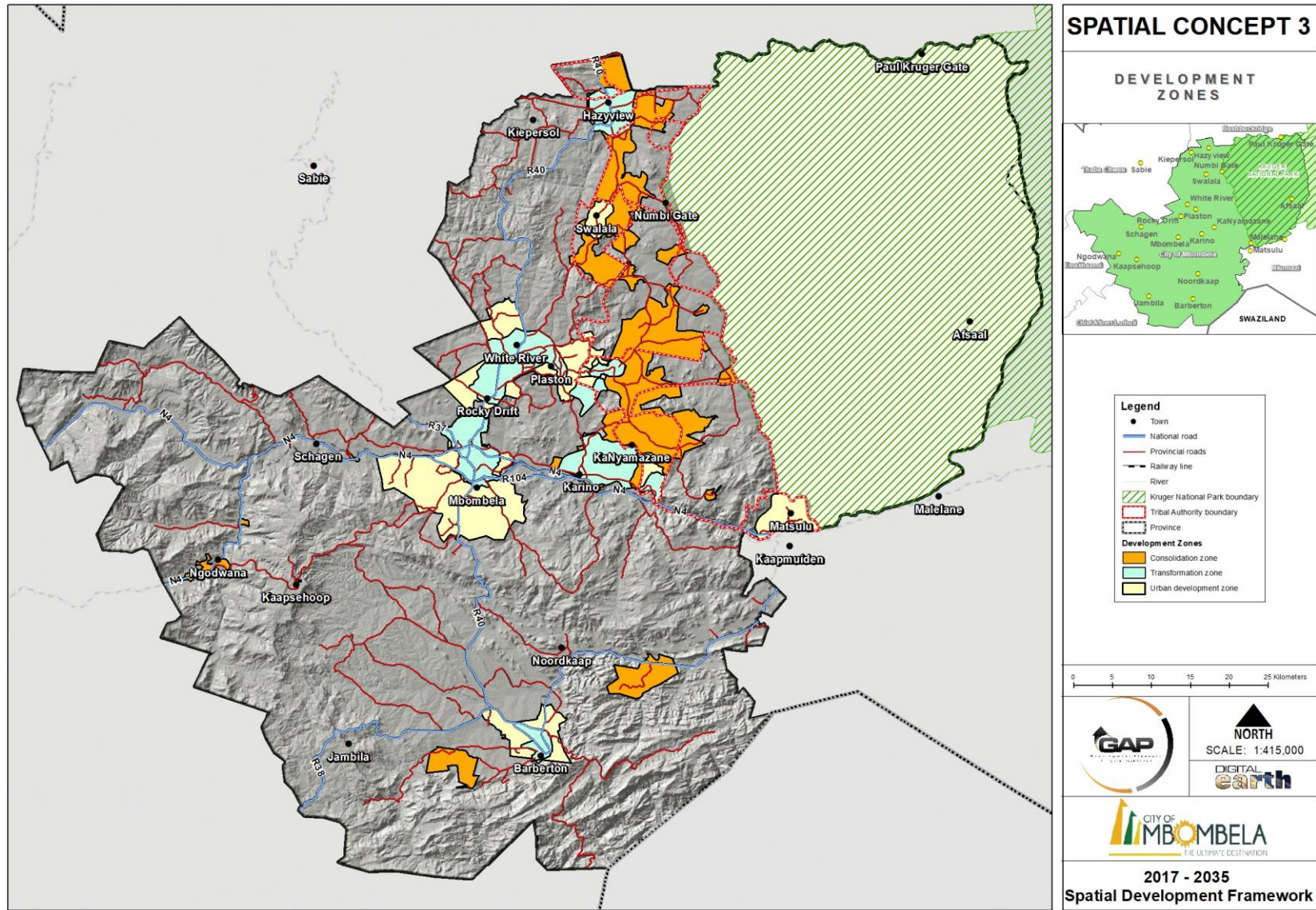
Consolidation Zone:

These areas are viewed as a focus of urban consolidation, infrastructure maintenance, controlled growth, urban management, addressing backlogs (in housing, social and hard infrastructure) and structural positioning for medium to longer term growth. The purpose is to ensure existing and future development proposals are aligned as far as possible with the broader intent of the SDF, specifically in terms of consolidating and diversifying development around existing activity nodes and public transport infrastructure. In this broad area, new development that does not require bulk infrastructure upgrades should be supported, however underserved parts of the city (informal settlements and marginalised areas) should receive investment. The focal areas are:

- **Established suburban built-up areas** with the focus of creating liveable lower to medium density suburban areas that are well-connected to areas of higher intensity through transit infrastructure, without the need for additional investment in service infrastructure.
- **Addressing Housing, Social and Hard Infrastructure:** more than 70% of the City's population is located within the consolidation zone characterised by huge deprivation and backlogs in terms of housing and social services.
- **Improving sustainability and quality of life in deprivation areas:** Many of the city's marginalised areas, including informal settlements, fall outside of the Transformation Zone defined in this SDF. This does not mean that they will not receive infrastructure investment. In these areas in the short term, efficient, affordable public transport must be introduced that connects to economic centres and in the medium to long term mixed land uses must be strategically included, to drive economic development and job creation.

Urban Development Zone:

The Urban Development Zone includes all the areas situated within the urban edge, including existing built-up areas, areas earmarked for future urban development (next 20 to 30 years) as well as undevelopable land (due to topographical, environmental or any other constraints). This zone contains the economic opportunity areas (nodes and corridors) identified in Strategy 2.



Map 51: Spatial Concept 3: Development Zones

5.4.6 Tourism Development Potential

The City of Mbombela Local Municipality consists of ample protected areas including part of the Kruger National Park, Nature Reserves and forestry areas. The municipality has abundant tourism potential, but mainly serves as a gateway to the Kruger National Park, Makhonjwa Mountains World Heritage Site and Maputo being one of the tourist destination areas.

The Municipality has supported various potential attractions and has elaborated on tourist attractions within its strategic plans. Other tourist attractions surrounding and within the municipal area of Mbombela includes the well-known Sudwala Caves, Shangan Cultural Centre, Godswindow, Lowveld Botanical Garden, Barberton Nature Reserve, Songimvelo Nature Reserve, Klipkopje, Da Gama, Longmere Dams and Montainlands Nature Reserve.

The City of Mbombela Local Municipality is currently hosting the following major tourist attraction areas within its municipal boundary:

(a) Kruger National Park:

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



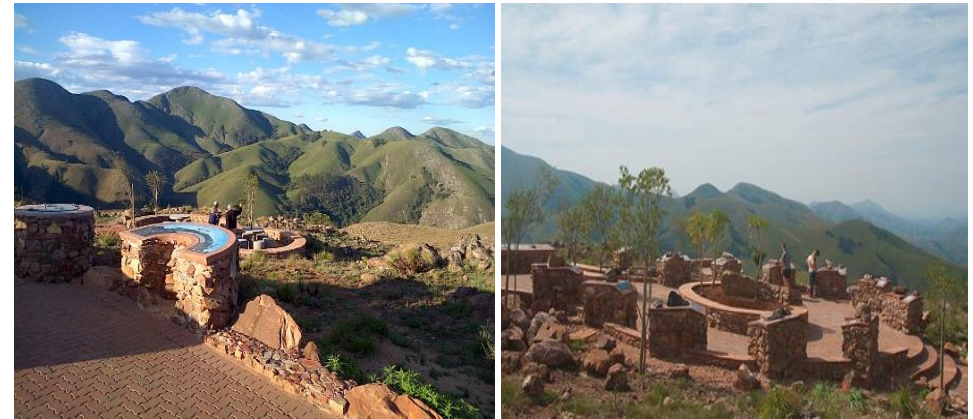
The Kruger National Park hosts a variety of activities that can be explored by tourists including:

- Guided Game Drives

- African Wildlife (The Big Five)
- Birding
- Golf
- Health Spa's
- Walking Trails
- Mountain climbing/hiking

(b) Barberton Makhonjwa Mountain Land World Heritage Site:

These mountain lands are truly unique, containing the oldest and best preserved sequence of volcanic and sedimentary rocks on earth. They have provided an unparalleled source of scientific information on the formation of the early earth from 3.6 billion years ago. Along with their exceptional geology, the area is rich in wild plants, animals and beautiful scenery. The several large and small nature reserves and panoramic beauty, provide the key elements needed for developing diverse and innovative tourism partnerships and businesses such as adventure tourism, geological activities, birding, game viewing, historical and cultural tours, hiking and off-road trails.



As a first World Heritage Site in Mpumalanga it will thus provide a major global marketing boost for tourism.

(c) Songimvelo Nature Reserve:

The Songimvelo Nature Reserve is the largest provincial game reserve in South Africa, and has the highest known plant diversity in the Mpumalanga Province. The list of more than 1400 known species range from several recently discovered

species to the last wild population of the Woolly Cycad. The broken landscapes make this reserve one of the most aesthetically attractive areas in the province.



(d) Barberton Nature Reserve:

The Barberton Nature Reserve is one of the most accessible of the Mpumalanga nature reserves and has become a popular weekend destination for many day visitors from the Barberton and Mbombela areas. The Reserve conserves a bushveld, savannah biome in scenic country just a short drive from both centres and is accessible to all types of vehicles. The reserve is home to a variety of game, including kudu, mountain rhebuck, nyala, zebra, grey duiker, impala, wildebeest and the rare red duiker. Klipspringer also occurs on the numerous rocky outcrops.



The Noordkaap River, which runs through the reserve, provides an interesting focal point. A feature known as the Barberton Sea Dam on the river attracts many visitors.

(e) Mthethomusha Nature Reserve:

An important 7 200ha reserve is situated on the south western border of the Kruger National Park. This is one of Mpumalanga’s prime conservation areas which are set to become a major game viewing destination. The land is managed by the Mpakeni community who share the proceeds from tourism.

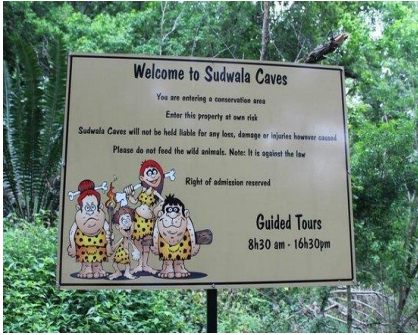


Mthethomusha is unique in that all the principal game species occur including lion, leopard, elephant, white rhino and buffalo. The reserve is also home to all the Lowveld antelope species, giraffe and zebra along with a host of smaller mammals. Over 300 bird species have been recorded with excellent sightings of the larger eagles and raptors being a special attraction.

Evidence of San occupation is recorded at a number of well-preserved rock art sites within the reserve. There is also much evidence of early Iron Age settlements.

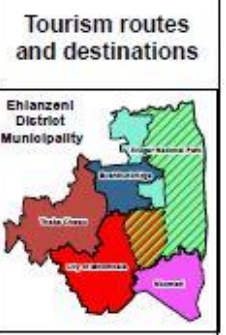
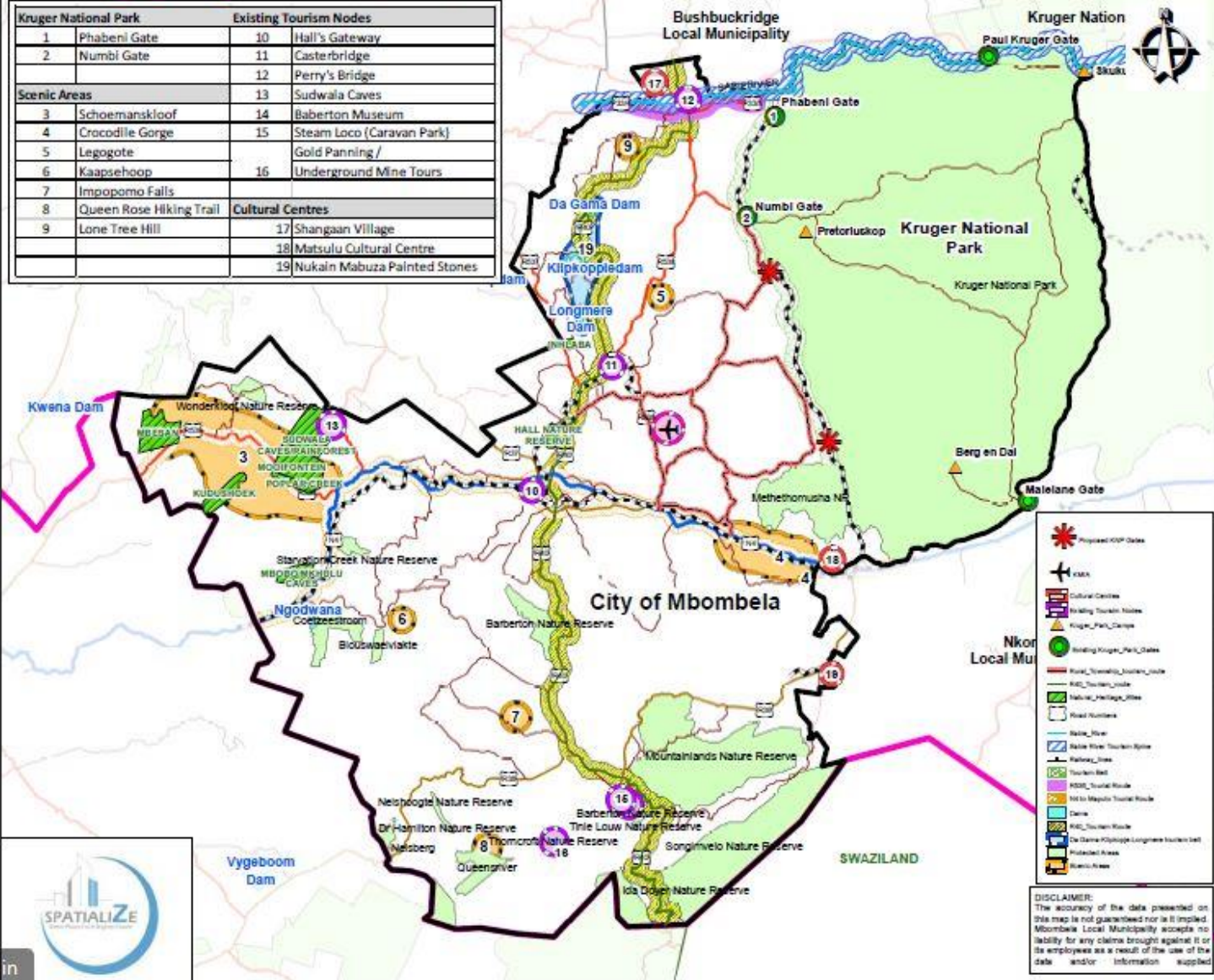
(f) Sudwala Caves:

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



SPATIAL CONCEPT

Kruger National Park		Existing Tourism Nodes	
1	Phabeni Gate	10	Hall's Gateway
2	Numbi Gate	11	Casterbridge
		12	Perry's Bridge
		13	Sudwala Caves
Scenic Areas			
3	Schoemanskloof	14	Baberton Museum
4	Crocodile Gorge	15	Steam Loco (Caravan Park)
5	Legogote		Gold Panning /
6	Kaapsehoop	16	Underground Mine Tours
7	Impopomo Falls		
8	Queen Rose Hiking Trail	Cultural Centres	
9	Lone Tree Hill	17	Shangaan Village
		18	Matsulu Cultural Centre
		19	Nukaln Mabuza Painted Stones



- Legend**
- Road Numbers
 - Road_Network**
 - ROADS
 - SECONDARY
 - ARTERIAL
 - MAIN
 - NATIONAL
 - City_of_Mbombela_Boundary
 - Local_Municipalities
 - Ehlanzeni District Municipality
 - Neighbouring_Countries



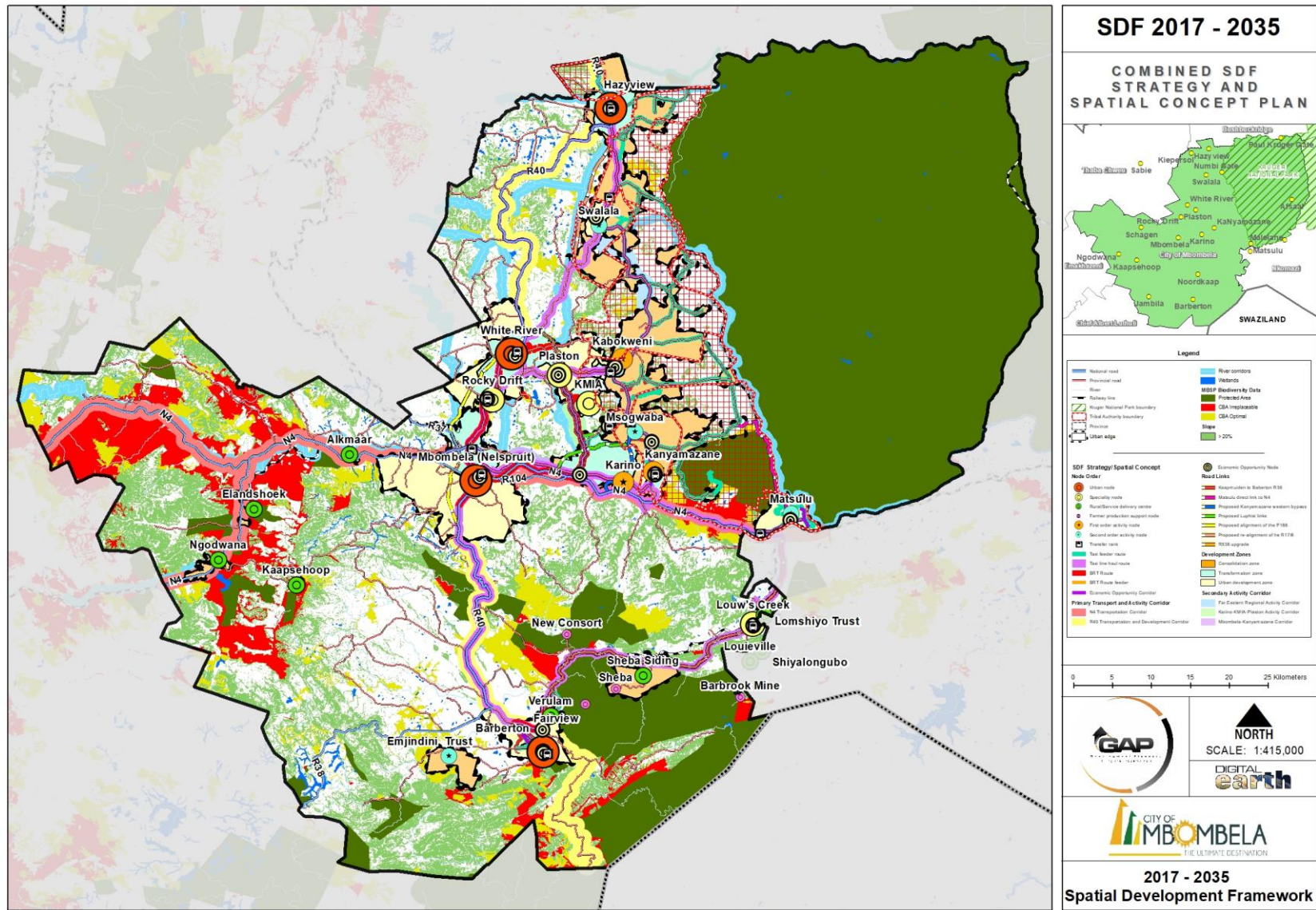
Map 52: Tourism Development

5.5 SPATIAL STRATEGIC FRAMEWORK AND DESIRED SPATIAL PATTERN

This spatial strategic framework spatially depicts the vision and spatial strategies rationale described in the preceding sections into one coherent spatial plan indicating the desired spatial pattern which will guide and direct decision-making. Detailed local-level planning will follow these informants and principles to ensure that the future form of growth and development is contextually appropriate, supported by the necessary infrastructure, and does not generate unacceptable or undesirable impacts on surrounding land uses.

The first element in this instance is to protect and enhance the areas of environmental significance. Secondly, the identification of sensible hierarchy of nodes which are critical towards the servicing and access of community facilities of the whole municipal area. In the third instance, is the importance of corridors which were also identified within the municipality. Major tourism development areas were also incorporated, and lastly the municipality was classified into different zones of spatial transformation

The Spatial Strategic Framework and desired spatial pattern of the municipality is indicated in the map below.



Map 53: Spatial Framework & Desired Spatial Pattern

CHAPTER 6: SPATIAL FRAMEWORKS PROPOSAL

6.1 INTRODUCTION

This chapter contains detailed plans for identified areas within the municipality, i.e.:

- **Urban Spatial Frameworks** - containing spatial development proposals and directives for the identified urban areas.
- **Rural Spatial Frameworks** – containing spatial development proposals and directives for the identified rural areas.
- **Traditional Authority Strategic Frameworks** - containing spatial development proposals for the 10 Traditional Authority Areas.

6.2 SPATIAL CONCEPTUAL DESIGNATION(S)

The conceptual designations identified by the frameworks have significance for guiding and informing development in the City. Most are not precisely geographically defined (or exclusive) areas and have been identified at a broad municipal scale and hinges on future road master planning, existing settlement boundaries, railway infrastructure, power lines or topographical features i.e.: rivers, mountains, ridges etc.

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

Table 41: Spatial Concepts

CONCEPT	DESCRIPTION
Densification	Densification is the process whereby densities, i.e. the number of dwelling units per hectare, increase in a planned and sustainable manner. It can take place by means of: Apartment buildings (flats), Cluster housing (group housing), Subdivision and second dwelling units.

CONCEPT	DESCRIPTION
Detailed Local Plan Area	As required in terms of section 21(j) of SPLUMA a detailed local plan area are areas of economic potential were detailed local plans must be developed, where shortened land use application maybe applicable, and should be the focus areas where development projects are directed.
Future Housing or Integrated Human Settlements	As required in terms of section 21(f) of SPUMA, future housing or IHS refers to the planned locations /areas of future housing development to be earmarked by the municipal spatial development framework.
Greenfield Development Area	Areas identified for future development (infill or new extensions). These are areas suitable for urban development and the broad form of development (i.e. residential, mixed use, industrial, institutional) that is appropriate for each area.
Localised Node	An existing or potential location for the concentration of commercial uses and social facilities forming a localized node. Nodes are areas where a higher intensity of land uses and activities are supported and promoted and are characterised by clustering of activities, accessibility and availability of public and private transport and recognizable centre or core.
Localised Corridor	Localised corridors refers to the main transport routes and link routes between nodes along which an increased intensity of development and activities may be encouraged.
Intensification Zone	Areas identified for intensified economic activity with mixed uses and where residential densification should be supported (localised) along the corridor with a longer term creation of pedestrian friendly environments in support of the transport system.
Industrial Growth Area	An area earmarked and suitable for future industrial development.
Strategic Mixed Use	The mixing of different land uses in a strategic manner within a specific location or precinct. Mixed uses can comprise a combination of residential (mostly higher

CONCEPT	DESCRIPTION
	density residential), businesses, offices and community facilities.
Urban Development Boundary	<p>This UDB was established to manage the expansion of the city's footprint, limit sprawl related infrastructure costs (capital and operational) and protect the City's ecological resources.</p> <p>It's a conceptual line that is defined by a road, contour, natural physical boundary (rivers, mountains etc.), built-up areas, cadastral line etc. and sets the limit for urban development.</p>
Upgrade Focus and Consolidation Area	Refers to areas where upgrading initiatives should focus on, inter alia, the following: Formal township establishment and land tenure upgrade; Upgrade of engineering services (sanitation, water supply, electricity and storm water); Provision of sufficient social infrastructure and services to enhance the quality of life of these communities and upgrading of existing housing stock.

6.3 URBAN STRATEGIC SPATIAL FRAMEWORKS

Urban Strategic Spatial Frameworks outlining the above spatial concepts were prepared for the following areas:

- Hazyview
- White River
- Rocky Drift
- Mbombela
- Barberton / Emjindini
- Karino
- KMIA

- Plaston
- Kabokweni
- Matsulu
- Swalala
- Kanyamazane

6.3.1 Hazyview

Hazyview is the northernmost town of the City of Mbombela Local Municipality, located in the northern-region, approximately 70km north of Mbombela town. Hazyview is identified as a first order activity node in the SDF, and forms part of the Far East Activity Corridor.

Hazyview provides a sub-regional business centre for the population of northern Mbombela, southern Bushbuckridge and surrounding farming areas. The trade sector is supported by agriculture and a very strong eco-tourism sector provided by the natural environment with numerous outdoor activities to be found in and around Hazyview.

6.3.1.1 Population Profile

According to the Stats SA Census 2011, the following population and household figures apply to the study area:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
Sanbonani	219	*	*	*	*
Hazyview-Vakansiedorp	2844	*	*	*	*
Hazyview SP	171	*	*	*	*
De Rust	453	*	*	*	*
Numbipark	549	*	*	*	*

Tshabalala SP1	13059	*	*	*	*
Total	17295	17502.	17712.5	17907.4	18086.5

Hazyview is a fairly small resident community which does not provide sufficient threshold for higher order civic services and commercial development and relies on passing traffic and tourism. It also has implications for the provision of social services, as the smaller settlements do not have sufficient population numbers to form thresholds for services like schools and clinics.

6.3.1.2 Spatial Constraints

The spatial constraints that characterise the Hazyview areas can be summarised as follows:

HIGH LEVEL SPATIAL CONSTRAINTS

- Disjointed spatial structure
- Weak access between residential areas and CBD
- Fairly small resident community – does not provide sufficient threshold for higher order civic services and commercial development / reliance on passing traffic and tourism
- Public transport facilities are located far apart
- Land pockets separated by rivers, ridges, roads and irrigated agriculture
- Need for road upgrades with specific focus on the R40 (in planning stages)
- Bulk service upgrades required (water and sanitation)
- The re-alignment of the R40 poses a risk of Hazyview losing business opportunities if traffic bypasses the CBD area

6.3.1.2 Spatial Opportunities

Hazyview has been identified as a first order node in the region in spatial planning for City of Mbombela. The area also has good spatial opportunities, however for

its full potential to be realised, certain interventions will be required. The spatial opportunities presented by the area are as follows:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Good regional access provided by the P17/6, R40 (Nelspruit Phalaborwa SDI), R536 roads
- Proximity to KNP (Phambeni Gate)
- Surrounded by a large labour force with buying power
- Close to Sabie River
- Surrounded by a strong Agricultural Sector
- Located on prime tourism route with access to two Kruger Park Gates
- Established tourism facilities
- Range of regional civic services being provided (e.g. clinic, post office, home affairs, etc.)
- Development interest in area (residential and non-residential) – opportunity for consolidation of spatial structure - opportunity to develop tourism accommodation due to proximity to Kruger

6.3.1.3 Development Trends & Interventions

A new shopping centre has recently been developed at the intersection of the R40 and R536 towards Holiday Town. Development pressure is being experienced in the Hazyview area. This includes SDF proposals and various new township proposals including:

- Residential development to the east of the CBD up to the Sandrivier, including various phases of the proposed Hazyview x42;
- Retail / commercial, mixed use and industrial development along the R40, Including proposed Hazyview x45; and
- Low density rural residential and tourism centred development are foreseen around the CBD.

6.3.1.4 Roads & Public Transport

Roads:

The R40 is the main route leading through Hazyview. It fulfils dual functions, being a major regional mobility route, but also functioning as the main street in town, giving direct access to land uses. The other routes giving access to Hazyview CBD are mostly regional mobility routes and include the R536 and the R538.

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

- Re-alignment of the R40
- A north-south link, parallel east of the R40.
- An east-west link providing direct access to Kruger Park Lodge from the R40 road.
- An access loop linking the R40 to D2965 across the North-Sand River and to the R536 via Hazyview Vakansiedorp.

Public Transport:

Public transport consists of busses and taxis. The R40 / R538 / R536 are the main bus routes. The main taxi rank in Hazyview is located behind the shopping mall in the extension of Hobby Ave. Taxis also stop at points along the R40.

6.3.1.5 Development Objectives

Hazyview currently has a disjointed spatial structure and the CBD consists of retail / public services area and tourism nodes located some distance to the North. Residential areas, rural villages and tourism facilities are located some distance from the CBD. The town is located in an area of great natural scenery and within the protected area buffer around the Kruger Park, supporting its role in tourism. The natural environment should as such be protected.

The following development objectives are therefore proposed in order to guide the development of Hazyview towards reaching its full potential as a sustainable urban node:

Map Symbol	Development Objective
	Consolidate the different components of the CBD to form a unified high intensity regional mixed-use centre.
	Promote corridor development along the R40 & R536 roads, as a development concept seek to consolidate investment and development in close proximity to transit infrastructure.
	Strengthening the natural structure as a provider of ecological services.
	Improve internal and external connectivity through proper road networks linking different areas to the wider region.
	Promote future housing / IHS to the east and south-east of CBD.
	Accommodate growth through strategic residential densification.
	Provide for light industrial / commercial / strategic mixed-use development to broaden the economic and employment base of the area.

6.3.1.5 Spatial Proposals & Development Directives

Detailed Local Plan Area

A detailed local plan area is demarcated according the footprint of the existing precinct plan for the Hazyview area, consisting of the CBD and the surrounding expansion areas and leisure developments, covering the bulk of the area within the urban edge. The detailed local plan area should be the focus area in which land use applications are shortened and in which development projects are directed including:

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

Localised Node

- Localised nodal development is encouraged in two areas, being at the intersection of the R536 & R40 and the confluence of the R40 and the R538.
- A variety of land uses including retail, tourism, commercial, business, etc. already exist in these areas and should further be strengthened by inclusion of more land uses on similar nature.

Localised Corridor

- Localised corridors are proposed along the R40, the P17/6 and the R536 road to Sabie areas in which higher intensity of strategic mixed land uses, including developments that require good access and visual exposures will be promoted.
- Developments facing onto the R40 should contribute to the aesthetic appearance envisaged along this route through extensive landscaping and specific architectural design.
- The R536 route provides a potential corridor of both agriculture and tourism development which must be exploited in an environmental sustainable way.

CBD Upgrade

- Emphasis should be made on consolidating the different components of the CBD to form unified regional mixed-use centres;
- An opportunity exists to expand the capacity of the CBD along the current R40 to accommodate more residential, business and commercial land uses;
- Strengthen businesses within the existing CBD and provide dedicated areas for informal traders and pedestrians; and
- A centralized taxi/bus rank should be provided in this zone.

Strategic Mixed Use & Light Industrial Development

- The Hazyview area currently has a narrow economic base, consisting primarily of retail and services.
- In order to expand this base and also provide more employment opportunities in future, it is recommended that provision should be made for strategic mixed land use areas and light industrial areas in order to accommodate more commercial, business, industrial, utilities, logistics etc. and businesses that will contribute to the local economy and employment.
- It is proposed that these uses be located to the south of the CBD and to the north of the CBD around the Perry's Bridge area.

Future Housing or IHS

- It is proposed that new residential development or integrated human settlement be restricted to the areas between the R40 (Hazyview CBD) and the rural settlement to the east.
- The provision of the full range of community facilities such as schools, clinics, parks etc. should be considered as part of residential development.

Residential Densification

- The following areas are earmarked for residential densification:
 - Higher residential densities are supported within and around economic opportunity zones and close to public transport stations.
 - Increased densities of existing residential areas of Hazyview and Numbi Park to allow a gross density of 20 dwelling units per hectare.
 - Refer to the Residential densification policy.

Greenfield Development Area

- The Hazyview area also has potential expansion areas which can accommodate a more diverse and intensified urban development form.
- The following areas have been identified as Greenfield Development Opportunity areas:

- The area to the east of Hazyview CBD
- The areas between Hazyview, Vankansiedorp and Sanibonani Lodge, and the areas east of Sanibonano along the R536 road.
- The area east of Numbi park along the R40 road
- Development within these areas should be strategically evaluated with the immediate surroundings.
- The provision of the full range of community facilities i.e.: schools, neighbourhood retail centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.

Upgrade Focus & Consolidation Area

- The Shabalala settlement which is situated mostly to the east of Hazyview CBD and far removed from economic centres within the city region has been identified as an upgrade focus and consolidation area.
- Upgrading initiatives should focus on, *inter alia*, the following:
 - Formal township establishment and land tenure upgrade,
 - Meeting infrastructure backlogs;
 - Establishment and improvement of public transit links and connectivity to the economic centres;
 - Establish safe and walkable environments especially to and from public transport and community facilities;
 - Affordable efficient and safe public transport provision;
 - Development of local economic opportunities especially around public transport facilities; and
 - A network of high quality social and community facilities that is easily accessible in social clusters where possible.
- The strategic intention is therefore to create liveable neighbourhoods with high quality public amenities and environments that are well connected with economic opportunities in the urban centre and sub-centre.
- The options for formalisation and upgrading of informal settlements should be carefully considered to ensure that further marginalisation of communities don't occur (through expansion).

Tourism & Accommodation

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

Integrated Open Space

- The banks of the Sabie and North-Sand Rivers are regarded as environmental sensitive with conservation value.
- Steep slopes to the north and rocky outcrops should remain undeveloped and reserved for conservation, eco-tourism and agricultural purposes.
- The protection of public open space should be made a priority and the 1:100 Floodline areas need to be cleared from settlement.
- Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.

6.3.1.6 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 55):

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of commercial, social, business, retail and light industrial land uses to be established in identified local node, along corridors and the areas earmarked for strategic mixed use.
- Future Housing & Integrated Human Settlements.
- CBD upgrade.

- New roads proposals, and upgrades.
- Residential formalisation of informal areas (Shabalala).

Five (5) Years to Ten (10) Years Spatial Development Direction

- Residential Densification & Infill Development.
- Future Housing & Integrated Human Settlements.
- Tourism & Accommodation.
- New Roads proposals & upgrades.
- Greenfield Development to accommodate new intensified urban land uses and provision of a full range of social facilities.

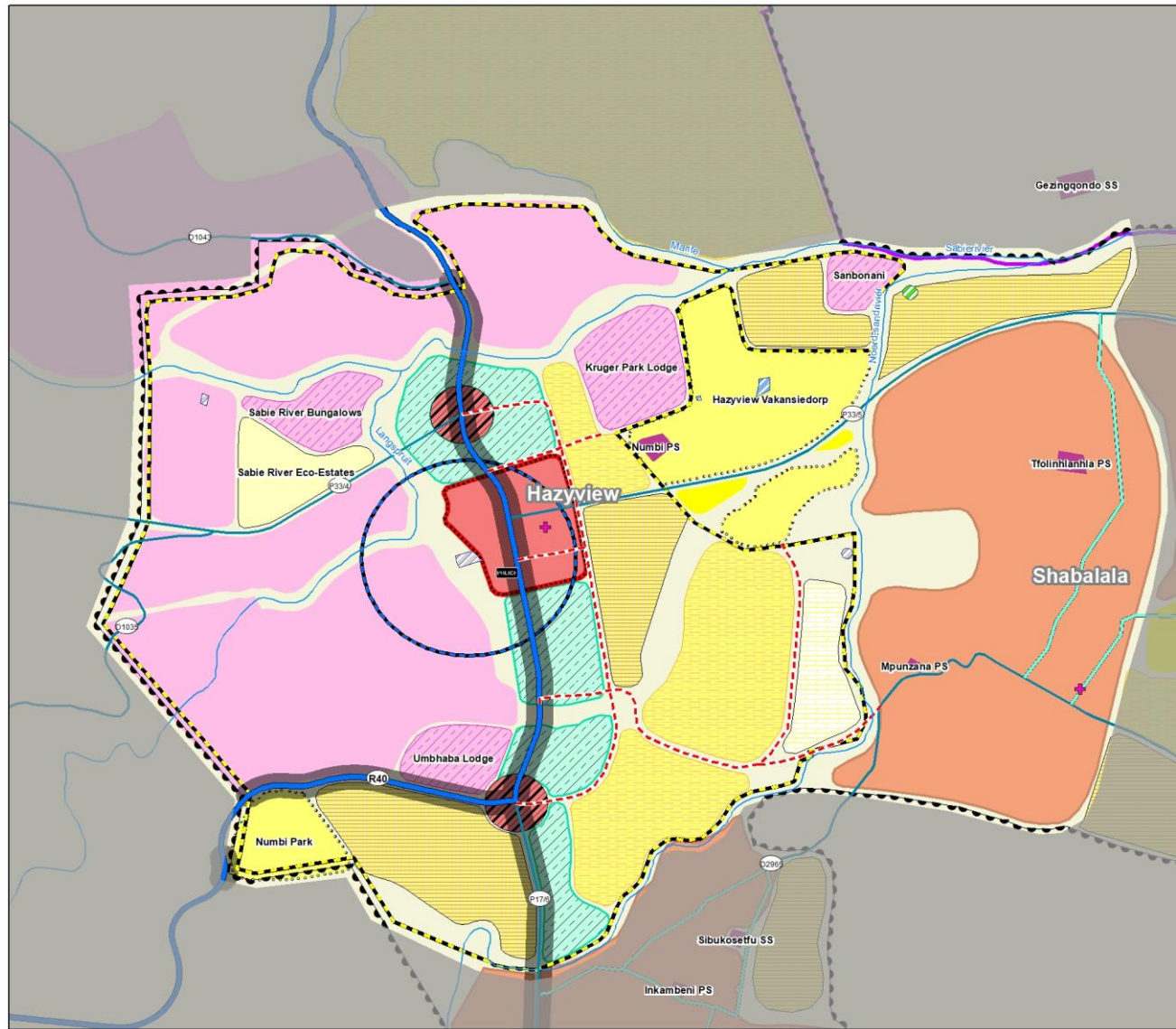
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.
- Tourism & Accommodation.
- Agriculture.

Areas for Future Infrastructure

As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure:

- Areas in the north & south of Shabalala settlements are earmarked as key areas for water & sanitation.



SETTLEMENT PROPOSALS

HAZYVIEW

Legend

- Health care facility
- Hospital
- National road
- Provincial road
- Railway
- River
- Local municipality
- Urban edge
- Water treatment plant
- Waste water treatment plan
- Waste water treatment plan buffer

Spatial proposal

- CBDO upgrade
- Detailed to call plan area
- Educational
- Estates
- Existing tourism & accommodation
- Existing residential
- Future housing / IHS
- Future waste water treatment plant
- Greenfield development area
- Inclusionary housing
- Localised corridor
- Localised node
- New road proposal
- Road upgrade
- Residential densification
- Strategic mixed use
- Tourism & accommodation
- Upgrade focus & consolidation area

0 500 1,000 1,500 2,000 Meters

GAP

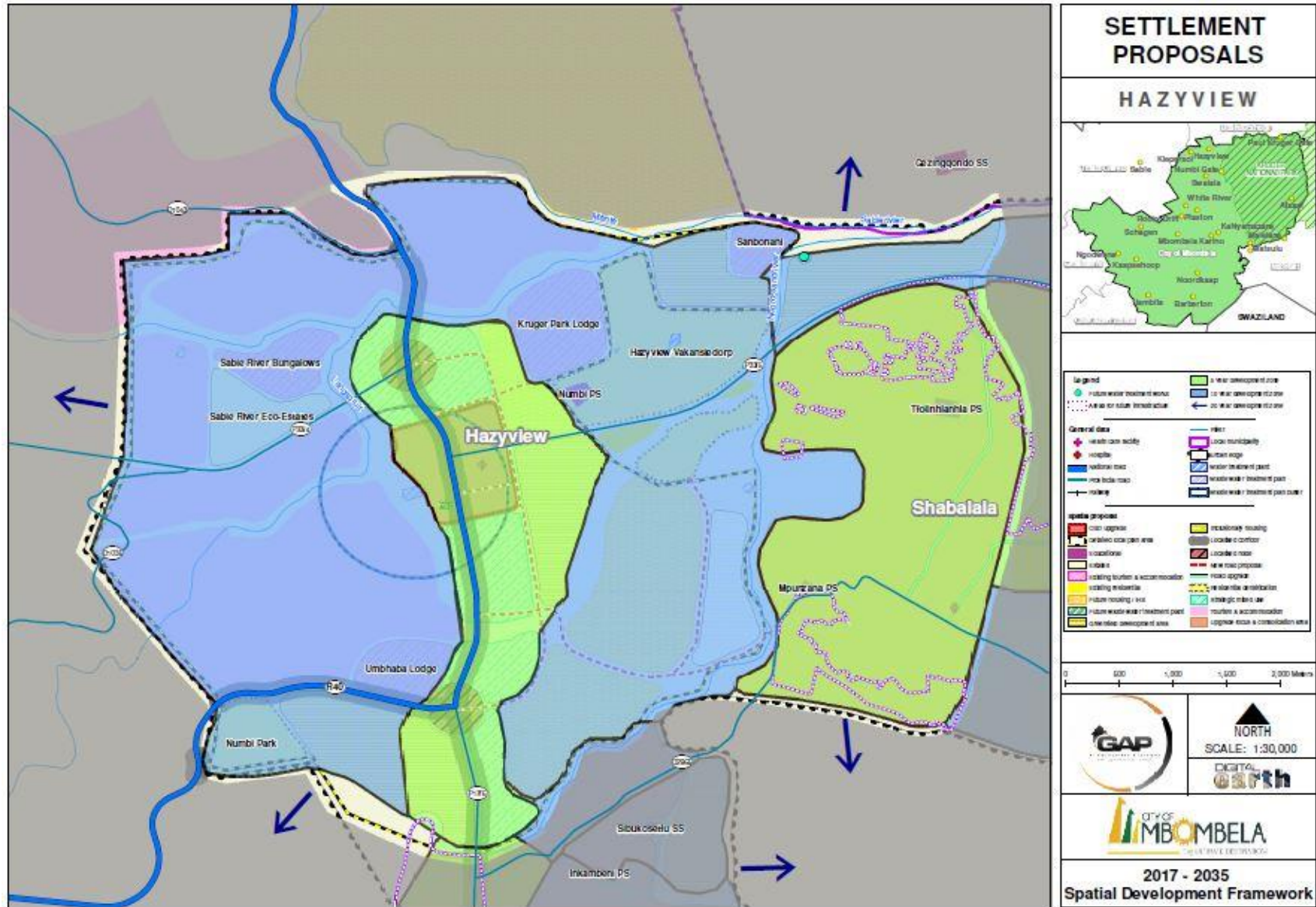
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2017 - 2035
Spatial Development Framework

Map 54: Hazyview Strategic Spatial Framework



Map 55: Hazyview Spatial Development Pattern

6.3.2 White River

Identified as an urban node in the SDF, White River is located 20 km north of Mbombela CBD, 45 km south of Hazyview, 23 km south of Swalala and 15 km west of the Kruger Mpumalanga International Airport.

White River includes areas such as the Central Business District (CBD), residential, commercial, and industrial areas as well as agricultural holdings. Therefore, White River serves a sub-regional role in terms of providing retail facilities and other services. White River is a secondary hub to Mbombela and acts as an employment centre and residential area.

6.3.2.1 Population Profile

According to the Stats SA Census 2011, the following population and household figures apply to the White River numeric area:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
		2018	2025	2030	2035
White River SP1	8718				
Kingsview	3264				
White River AH	2292				
White River SP3	921				
Total	15195	15377.3	15561.8	15733.0	15890.3

Most of the people (52%) reside in White River SP 1 which includes the areas such as Colts Hill, Kingsview, Sheffield Estate, White River Country Estate and surrounding areas.

6.3.2.2 Spatial Constraints

With White River being a secondary urban hub to Mbombela, it has over the years experienced considerable growth resulting into pressure and demand for infrastructure and urban land for development. The high level spatial constraints for White River are summarised as follows:

HIGH LEVEL SPATIAL CONSTRAINTS

- Public transport is far apart and not in close proximity to employment areas.
- Urban land demand for housing development.
- Lack of bulk water supply, therefore major bulk services upgrades are required for both sanitation and water.
- Expanding informal settlements specifically towards the south-west.
- The White River Agricultural Holdings restricts urban expansion towards the south.
- The topography – rivers, roads and railways that separate land parcels.
- Poor access to Plaston.
- High potential agricultural land is at risk – with increasing development pressure.

6.3.2.2 Spatial Opportunities

The main structuring elements in White River include: the CBD, nodal development, the activity corridor, the urban edge and the open space network. These elements provide the framework that determines the urban structure. The spatial opportunities presented by the White River area can be briefly summarised as follows:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Two nodal points development opportunities, the Bahati and Casterbridge nodes which are already surrounded by existing business and commercial development.
- Good road and rail accessibility (specifically the R40 and R538 with an opportunity to become an activity spine/corridor with a mix of land uses and activities).
- Number of well-established settlements with existing infrastructure.
- In close proximity to the Kruger Mpumalanga International Airport (KMIA) – roughly 15km.
- Strategically located in terms of roads and corridor access linking to major places.
- Supported by a strong agricultural sector with opportunities for agri-processing and industrial growth.
- Employment opportunities and economic activity centred on Nelspruit-Rocky Drift-White River corridor.
- Huge tourism potential due to the existing facilities (the Casterbridge tourism lifestyle node and White River is in close proximity to the Panorama and Lowveld Legogote Tourism Routes and the Kruger National Park.
- Range of civic services (police station, library and clinics).
- Strategically located vacant land parcels that are ideal for densification and infill development.
- Greenfield development opportunity to integrate White River, Phatwa, and Plaston.

6.3.2.3 Development Trends & Interventions

- The areas around the CBD mostly consist of medium density residential development and small residential units clustered together.
- Rural residential developments are located on the outskirts of the town. Both industrial and tourism opportunities are also evident, specifically towards the south and north-eastern part of White River.

- There has also been increasing industrialisation, coupled with the increased demand for industrial land, brought on by increased population growth and development.
- According to the existing precinct plan, there is a planned residential development around the existing built form of the areas including the areas south and north of the CBD, and areas north and east of Kingsview, etc.

6.3.2.4 Roads & Public Transport

Roads:

There are various roads within the White River area which serve different functions ranging from accessibility to connectivity, some of these major roads include the following:

- The R40 and R537 provincial roads which serves as main north-south connections between White River, Rocky Drift and Mbombela and also acts as a major corridor for vehicular traffic movement.
- The R538 provincial road which serves as main east-west connection.
- The P17/6 currently under reconstruction which acts as a connection route between White River and Hazyview, and also provides direct access to Legogote, Jerusalem, Phola, Mahushu, Nkambeni and Hazyview.
- Chief Mgiyeni Khumalo Avenue which facilitate, traffic mobility and urban route continuity.

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

- The P166 will significantly improve White River's regional access.
- Extending the P17/6 (R538) to Swalala in a westerly direction to link with the R537 road to Sabie.
- A proposed road parallel south of Chief Mgiyeni Khumalo Drive to improve access to the southern industrial and residential developments.
- Extending the Yaveland Road (D134) in a westerly direction to link with the R537.

- A north-south road connecting Chief Mgiyeni Khumalo Drive with the Yaverland Road (D134).
- An access loop linking the R40 with Chief Mgiyeni Khumalo Drive, providing access to Flamboyant School.

Public Transport

Public transport consists of buses and taxis. The R40 /R537 and R538 are the main bus routes. The buses also travel along various district roads as well as in and around the White River CBD.

There is a public transfer rank within the existing White River business node. This is the main taxi rank in White River, and it is located next to the railway line. It is in close proximity to the R40, the CBD and existing industrial area in the central part of White River.

As part of the Bus Rapid Transit system, a public transport rank is proposed in White River CBD. This transport rank should be provided with the necessary infrastructure i.e.: shelters, ablution facilities, trade space (vendors), security facilities etc.

6.3.2.3 Development Objectives

White River has been identified as an urban node in the SDF. Currently the area is known as a tourism destination and is located in a prime location for further development to link with the Casterbridge and Kruger Park tourism nodes. In order for White River to reach its full potential it should be realised that certain interventions will be required.

The following development objectives are therefore proposed in order to guide the development of White River towards reaching its full potential as a sustainable urban node:

Map Symbol	Development Objective
	Upkeep urban renewal initiatives, economic regeneration and infill development in and around the CBD in order to increase its role as an urban hub and economic generator.
	Strengthen development along major transport routes (corridors) and already established nodal development points to promote mixed land uses including commercial, business, high density residential etc. and densification.
	Improve mobility and access within and around White River through proper road planning.
	Provide for strategic mixed use, industrial growth and agri-industries where appropriate in order to strengthen the economic base of the area.
	Ensure the preservation and quality of the natural environment, by establishing and protecting the integrated open space network and intensifying urban management initiatives.
	Upkeep urban renewal initiatives, economic regeneration and infill development in and around the CBD in order to increase its role as an urban hub and economic generator.
	Strengthen development along major transport routes (corridors) and already established nodal development points to promote mixed land uses including commercial, business, high density residential etc. and densification.

6.3.2.3 Spatial Proposals & Development Objectives

Detailed Local Plan Area

A detailed local plan area is demarcated according to the footprint of the existing precinct plan for the White River area, consisting of the CBD and the surrounding expansion areas and leisure developments, covering the bulk of the area within the urban edge. The detailed local plan area should be the focus area in which land use applications are shortened and in which development projects are directed including:

- Urban renewal initiatives and economic regeneration;

- Upgrading and restructuring of engineering and social infrastructure; and
- Transportation infrastructure and road upgrades.

Localised Node

- Nodal development is supported in two nodal points in White River, the Bahati and Casterbridge nodes.
- The Bahati Node at the R40-R537 intersection is surrounded by existing business and commercial land uses.
- This node has the potential of accommodating mixed land uses, such as high-density residential development to support the existing businesses.
- The Casterbridge Lifestyle Tourism Node at the R40-R538 intersection provides a great focal point for mixed-use development with land uses mainly comprising of tourism facilities, restaurants, and retail and residential.

Localised Corridor

- The R40 and Chief Mgiyeni Khumalo Roads are the main activity corridors that connects the Bahati node and the Casterbridge node.
- It is proposed that this becomes an activity spine/corridor with a mix of land uses and activities that require good access and visibility.

CBD Upgrade

- The CBD is the core of White River as it consists of business, commercial, retail and office buildings.
- It is proposed that urban renewal initiatives, economic regeneration and infill development are implemented in and around the CBD.
- Emphasis should be made on encouraging mixed land uses in the CBD by strengthening community and social services.
- Preferred land uses include office development, restaurants, entertainment, tourism facilities and retail supported by high density residential developments. Office and high density residential development should be supported around the Tom Lawrence Park.

Strategic Mixed Use

- The area along the R40, from its intersection with the R537 in the south to its intersection with the R538 road to Swalala in the north, the area around Bahati and White River AH Extension 1 and the area east of Casterbridge is reserved for higher intensity mixed uses, which typically include developments that require good access and visual exposure.

Industrial Growth

- There are various industrial buildings south of the CBD.
- It is proposed that industrial growth occur along the R40 (south) and east of the R538.
- The existing sawmill is supported by a number of agri-industries specifically at the Yaverland Road and Chief Mgiyeni Khumalo Drive intersection.

Future Housing or IHS

- There are various areas earmarked for new residential development or Integrated Human Settlements to include a variety of densities and different income groups within these areas.
- The following areas are reserved for future housing development or Integrated Human Settlements:
 - The areas surrounding Casterbridge and Hillsvie; and
 - The area north of Kingsview; and
 - The area around Colts Hill, east of the R537 road.
- The necessary community facilities including neighbourhood retail centres, schools, clinics sports fields, open spaces and cemeteries should be provided when developing these areas.

Residential Densification

- Densification is proposed in existing urban areas including White River Agricultural Holdings Ext.1 and 2, Kingsview and various extensions in White River surrounding the CBD.

- High residential densities should be supported in close proximity to transport stations and around economic opportunity areas.

Green Field Development Area

- The area also has potential expansion areas which can accommodate a more diverse and intensified urban development form.
- The following areas has been identified as Greenfield Development Opportunity areas:
 - The area between the R537 and Msholozhi;
 - The areas south of White River Industrial and railway line; and
 - The areas in a south-easterly direction towards Plaston.
- New developments should be restricted to areas falling outside environmentally sensitive areas.

Rural residential

- Rural residential development is supported in the dedicated area to the south & north of White River.
- This area is characterized by smaller farm portions and agricultural holdings, functioning as an interface to prime agricultural land located further south.
- The main land use should be residential in nature. Second dwellings can be allowed on rural residential properties.
- The following uses are not supported: Noxious factories, pig farming, poultry farming, scrap yards, panel beaters, spray painters, vehicle servicing, maintenance and repairs, warehouses and transportation companies.

Integrated open space

- White River and Boonsteloop are important ecological corridors to be protected.
- Floodline areas, steep slopes, rocky outcrops, river environments, wetlands, biodiversity sensitive areas, should remain undeveloped to form part of the MOSS, including active open spaces (i.e.: sports fields, golf courses, public open spaces etc.).

- Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.
- The protection of public open space is a priority and areas within the 1:100 year Floodline shall remain undeveloped.
- Open spaces need to be functional and developments fronting onto parks should be sensitive to the character and functioning of the park.

6.3.2.4 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 57):

Year 0 to Five (5) Years Spatial Development Direction

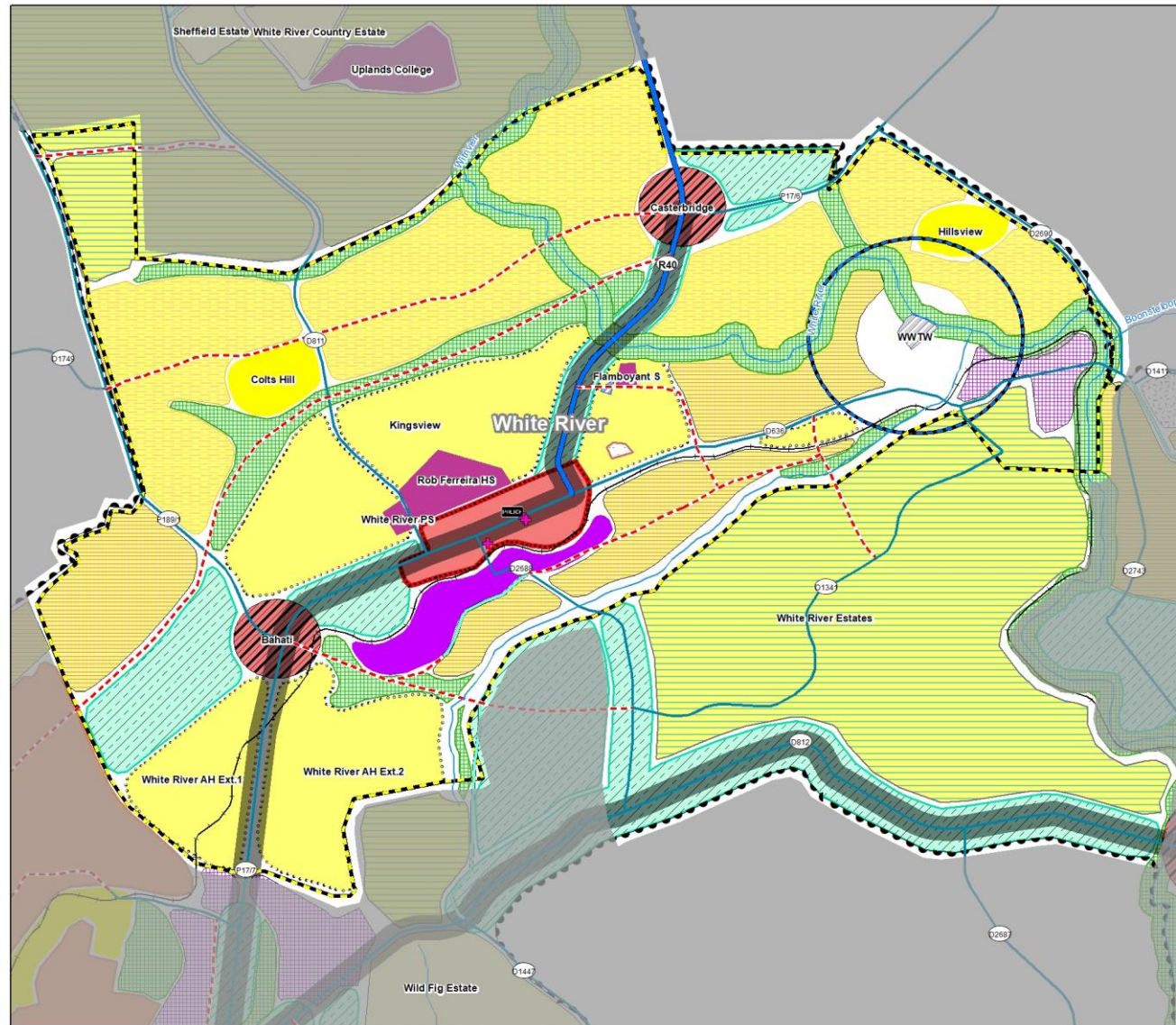
- Higher intensity development of commercial, social, business, retail and light industrial land uses to be established in identified local node, along corridors and the areas earmarked for strategic mixed use.
- Diverse combination of land uses through strategic mixed uses development.
- CDB upgrade.
- Residential densification and infill development.
- Future Housing and Integrated Human Settlements.
- New roads proposals and roads links.

Five (5) Years to Ten (10) Years Spatial Development Direction

- Residential densification and infill development.
- Future Housing and Integrated Human Settlements.
- Greenfield Development to accommodate new intensified urban land uses and provision of a full range of social facilities.
- New roads proposals & upgrades.
- Focus on service delivery to households within the area still lacking basic services.

Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.



SETTLEMENT PROPOSALS

WHITE RIVER

Legend

Health care facility	River
Hospital	Local municipality
Police station	Urban edge
National road	Water treatment plant
Provincial road	Waste water treatment plant
Railway	Waste water treatment plan buffer

Spatial proposal

CBD upgrade	New road proposal
Cemetery	Road upgrade
Detailed local plan area	Localised corridor
Educational	Future waste water treatment plan
Existing industrial	Industrial growth area
Existing residential	Open space
Future housing / IWS	Residential densification
Green field development area	Rural residential
Localised node	Strategic mixed use
	Upgrade focus & remediation area

0 500 1,000 1,500 2,000 Meters

GAP

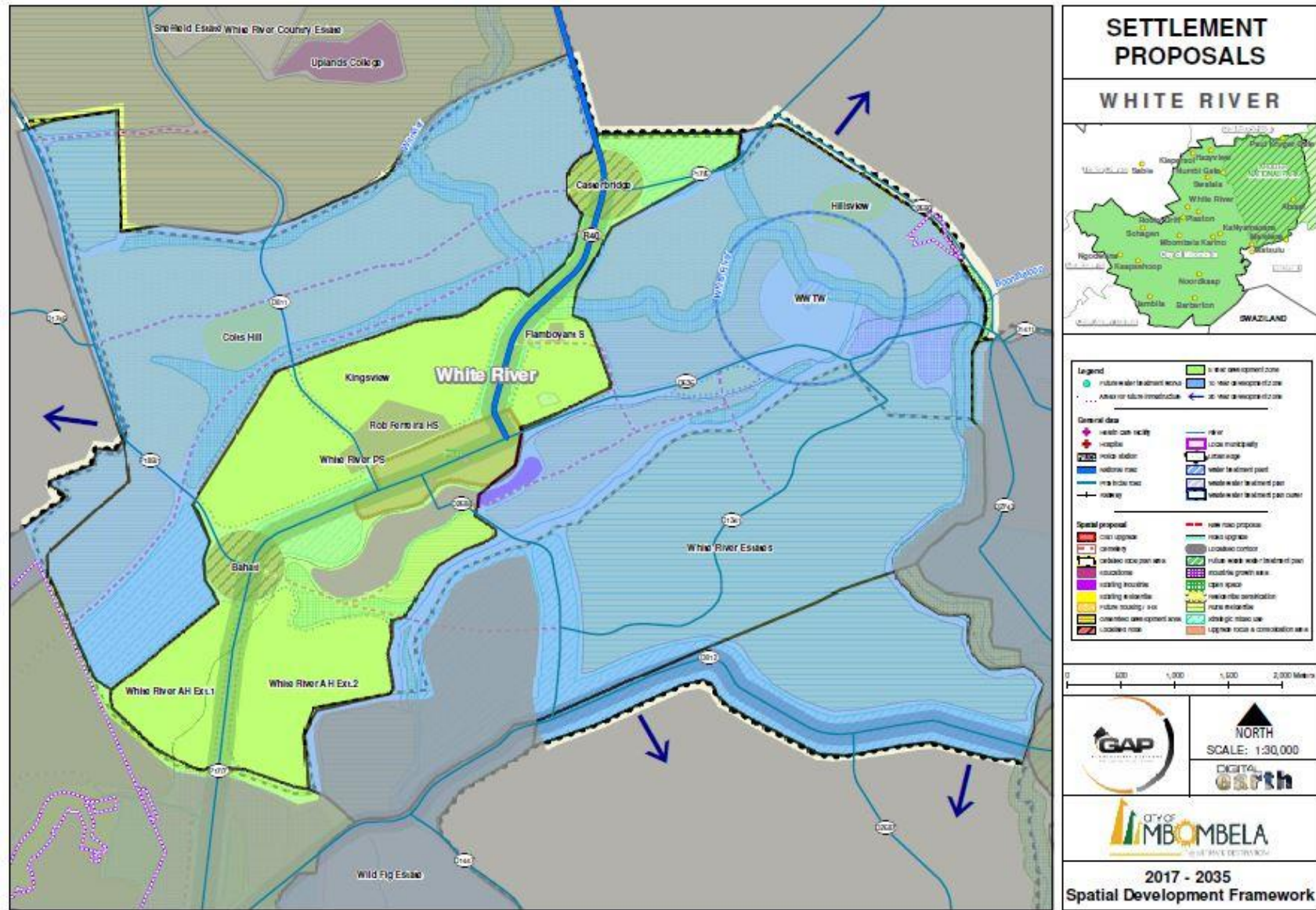
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2017 - 2035
Spatial Development Framework

Map 56: White River Strategic Spatial Framework



Map 57: White River Spatial Development Pattern

6.3.3 Rocky Drift

Situated approximately 13 km north of Mbombela town, 10 km west of KMIA and 7 km south of White River, Rocky Drift performs the function of a regional industrial node and an anchor point for economic development and employment opportunities.

The area enjoys good regional road access via the R40, D821 KMIA road and the Heidelberg road, which makes it an ideal location for urban expansion and future growth. Rocky Drift accommodates a variety of industrial and commercial developments bisected by the R40.

6.3.3.1 Population Profile

According to the 2011 census the population profile of Rocky Drift can be summarised and projected as follows:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
Rocky Drift	45	*	*	*	*
Wild Fig Country Estate	36	*	*	*	*
White River SP2	771	*	*	*	*
Msholozzi SP	4524	*	*	*	*
Total	5376	5440.51	5505.78	5566.36	5622.02

6.3.3.2 Spatial Constraints

Rocky Drift has been identified as a Speciality Node in terms of the COM spatial development framework and based on the existing natural environment and structural elements the areas have the following limiting spatial constraints:

HIGH LEVEL SPATIAL CONSTRAINTS

- Limited bulk infrastructure and the planned upgrades to bulk water and sewer would need to be implemented.
- Limited available land for extension due to topographical constraints.
- Land pockets separated by rivers, roads and railway line.
- Too many direct accesses off the R40.

6.3.3.3 Spatial Opportunities

Based on the existing built environment and physical structural elements the Rocky Drift area has the following spatial opportunities:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Well established Industrial Node.
- Well established rail and road accessibility.
- Centrally located between Mbombela, White River and KMIA.
- Land available for extension along the R40 and Heidelberg roads.
- Opportunity to Improve regional access through linkages to the P166.
- Opportunity to Improve internal road network.

6.3.3.4 Development Trends & Interventions

- Other than the existing industrial development within the Rocky Drift area, other land uses includes amongst others the following:

- A residential component – the south-eastern and northern areas are characterised by rural residential development. Phumlani is a residential township situated further to the north-west.
- Msholozhi informal settlement to the north-west.
- A regional cemetery is situated to the east of Rocky Drift, south of Heidelberg Road and occupies a large portion of land.
- Various developments such as industrial, residential, and business activities are proposed and are being planned within the area which includes amongst others the following:
 - Rocky Drift Extension 34 & 38 Industrial Township;
 - Rocky Drift Extension 28;
 - Rocky Drift Extension 25;
 - Proposed Dingwell Integrated Human Settlements; and
 - Formalization of Msholozhi Informal Settlement.

6.3.3.5 Roads & Public Transport

Roads:

- The following road proposals will reduce traffic congestion on the R40, improve internal and external access and mobility as well as improve regional linkages with different major areas.
- The following new road links are proposed:
 - The development of the proposed P166 Western Bypass to the west becomes more important as Rocky Drift continues to develop and positions itself as a sub-regional industrial area. The P166 western Bypass will function as a high mobility route with limited access points.
 - Access to Phumlani will be provided via the Heidelberg Road with a direct link between the Heidelberg Road and Phumlani, as well as via an access road off the R40.
 - Access collectors located parallel west and parallel east of the R40, this is to provide easy access to developments facing onto the R40.

- The following road upgrades are proposed:
 - The existing provincial roads D812 (Rocky/KMIA) and D1903 (Heidelberg road linking to the P166).
 - The D1473 Rocky Drift/Curlews gravel road.

Public Transport:

- It is proposed that a bus terminal/taxi rank be established at the R40 - Heidelberg Road/Wilkens Road intersection.
- This will also be enroute to the Phumlani residential area.
- Two Bus stations have been developed at Corner of R40 with Wilken Road/Solomon Street.

6.3.3.6 Development Objectives

In order for Rocky Drift to reach its full potential, certain interventions will be required. This includes the following strategic development objectives:

Map Symbol	Development Objective
	Develop a strong compaction of existing and mixed land use node to fulfil the function of the area as a secondary and principal industrial sub-centre respectively.
	Exploit the opportunity provided by the R40 and the D812 roads to develop an activity corridor which will act as conduits for economic activities and employment opportunities.
	Encourage strategic mixed-use development & industrial development along the R40 and D812, with the purpose of developing Rocky Drift as an intensive, accessible mixed use liveable area.
	Develop integrated human settlements close to Rocky Drift employment node.
	Accommodate growth and more diverse and intensified urban from through potential expansion areas.

Map Symbol	Development Objective
	Strengthening the natural structure as a provider of ecological services.
	Develop a strong compaction of existing and mixed land use node to fulfil the function of the area as a secondary and principal industrial sub-centre respectively.

6.3.3.6 Spatial Proposals & Development Directives

Localised Node

- A localise node servicing the broader Rocky Drift area including Msholzi, Phumlani and the surrounding industrial developments is proposed at the intersection of the R40 with Heidelberg & Wilkens roads.
- Typical land uses that should be accommodated include convenience shopping, banking, postal services, multi-purpose community centre, emergency services, firefighting, satellite police station etc.
- The intention is to create a strong compaction of existing and mixed land use to fulfil the function of a service node.

Localised Corridor

- The R40 road towards White River and the D812 road towards Plaston Park are identified as localised activity corridors with strategic mixed use and industrial development supported along these routes.
- The development of economic clusters and intensification of economic activity will be promoted along these corridors.
- The intention is to increase the job density around these highly accessible points and to attract economic development into the Rocky Drift area.

Strategic Mixed Land Use

- Strategic Mixed Land Use is supported in the areas along the R40 and the D812 in order to accommodate higher intensity land uses that require good access and exposure.

Industrial Growth Areas

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

Upgrade Focus & Consolidation Area

Msholzi including the areas south-east of Phumulani Township is identified as an upgrade focus area and upgrading initiatives should focus on, *inter alia*, the following:

- Formal township establishment and land tenure upgrade;
- Relocation of settlements in environmental sensitive areas (steep slopes, 1:100 year flood line etc) and P166 road reserve;
- Provision of engineering services (sanitation, water supply, electricity and storm water); and
- Provision of sufficient social infrastructure and services to enhance the quality of life of these communities. Integration with Rocky Drift employment node.

Future Housing or IHS

- The area to the west of the Rocky Drift regional cemeteries along the D1903 road is reserved for housing development or the establishment of Integrated Human Settlements.
- Future residential developments should be sustainable and accessible and should provide for a variety of residential densities including low, medium and high residential uses.
- The provision of the full range of community facilities i.e.: schools, neighbourhood centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.

Greenfield Development Area

- The area in between the Rocky Drift regional cemeteries and Msholozhi informal settlement is reserved for Greenfield development or future expansion, with the purpose of accommodating growth that is more diverse and intensified urban form.
- Development within these areas should be strategically evaluated with the immediate surroundings and the provision of the full range of community facilities i.e.: schools, neighbourhood retail centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.

Integrated open space

- Natural forests and areas with a high biodiversity should be protected and remain undeveloped.
- Flood line areas, steep slopes, rocky outcrops, river environments, wetlands, biodiversity sensitive areas, should remain undeveloped to form part of the Integrated Natural Structure.
- Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.

- The protection of public open space is a priority and areas within the 1:100 year flood line shall remain undeveloped.
- Open spaces need to be functional and developments fronting onto parks should be sensitive to the character and functioning of the park.

6.3.3.7 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 59):

Year 0 to Five (5) Years Spatial Development Direction

- High intensity development of economic clusters and intensification of economic activity, commercial, retail, social & community facilities on the identified node & corridor.
- Light industrial development.
- Greenfield Development to accommodate new intensified urban land uses and provision of a full range of social facilities.
- Residential development & integrated human settlements (proposed Dingwell IHS).
- New roads proposals, and upgrades.
- Residential formalisation and provision of a full range of services (Msholozhi).

Five (5) Years to Ten (10) Years Spatial Development Direction

- Greenfield Development to accommodate new intensified urban land uses and provision of a full range of social facilities.
- Strategic Mixed Land Use development.
- New roads proposals & upgrades.
- Focus on service delivery to households within the area still lacking basic services.

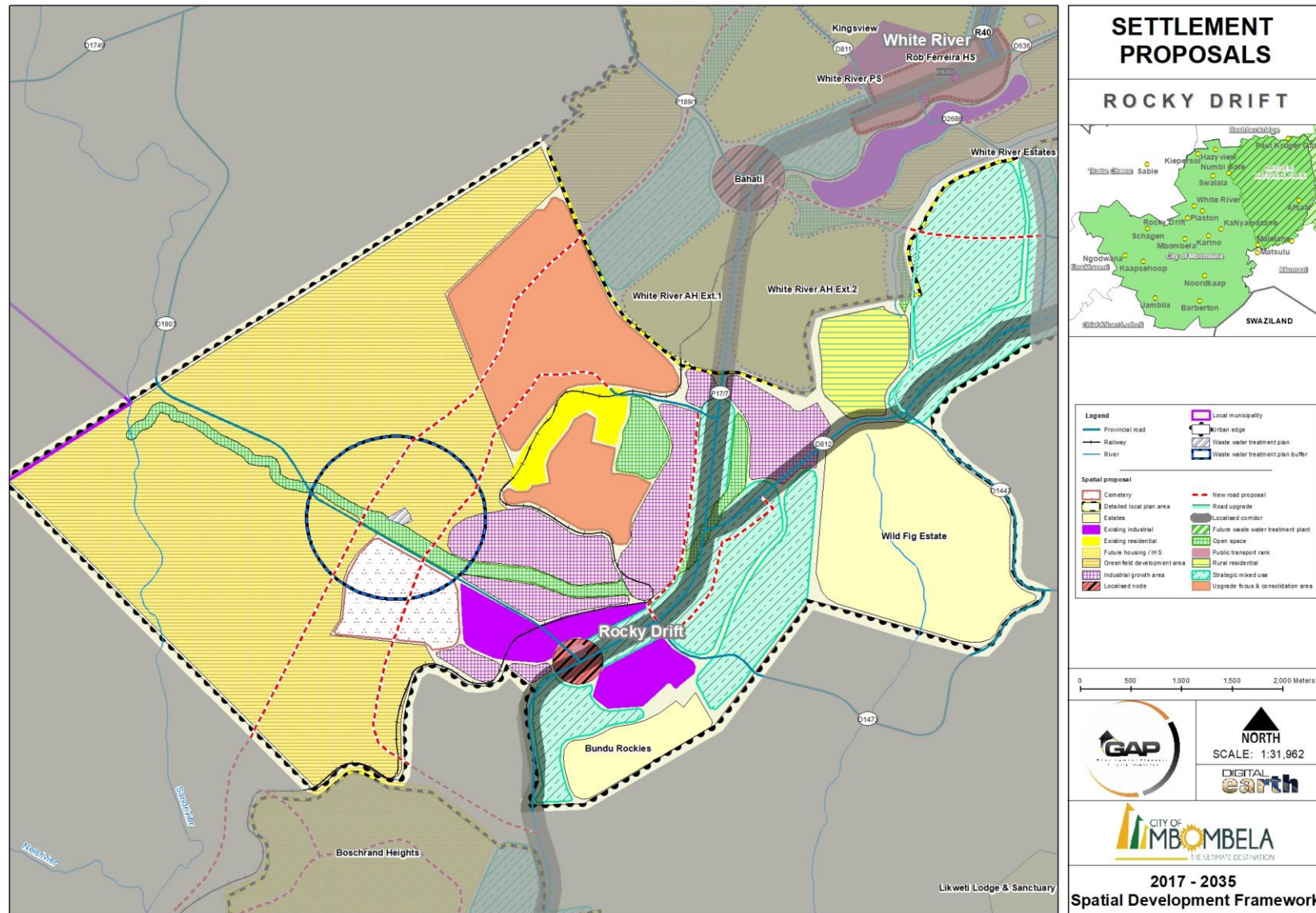
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.

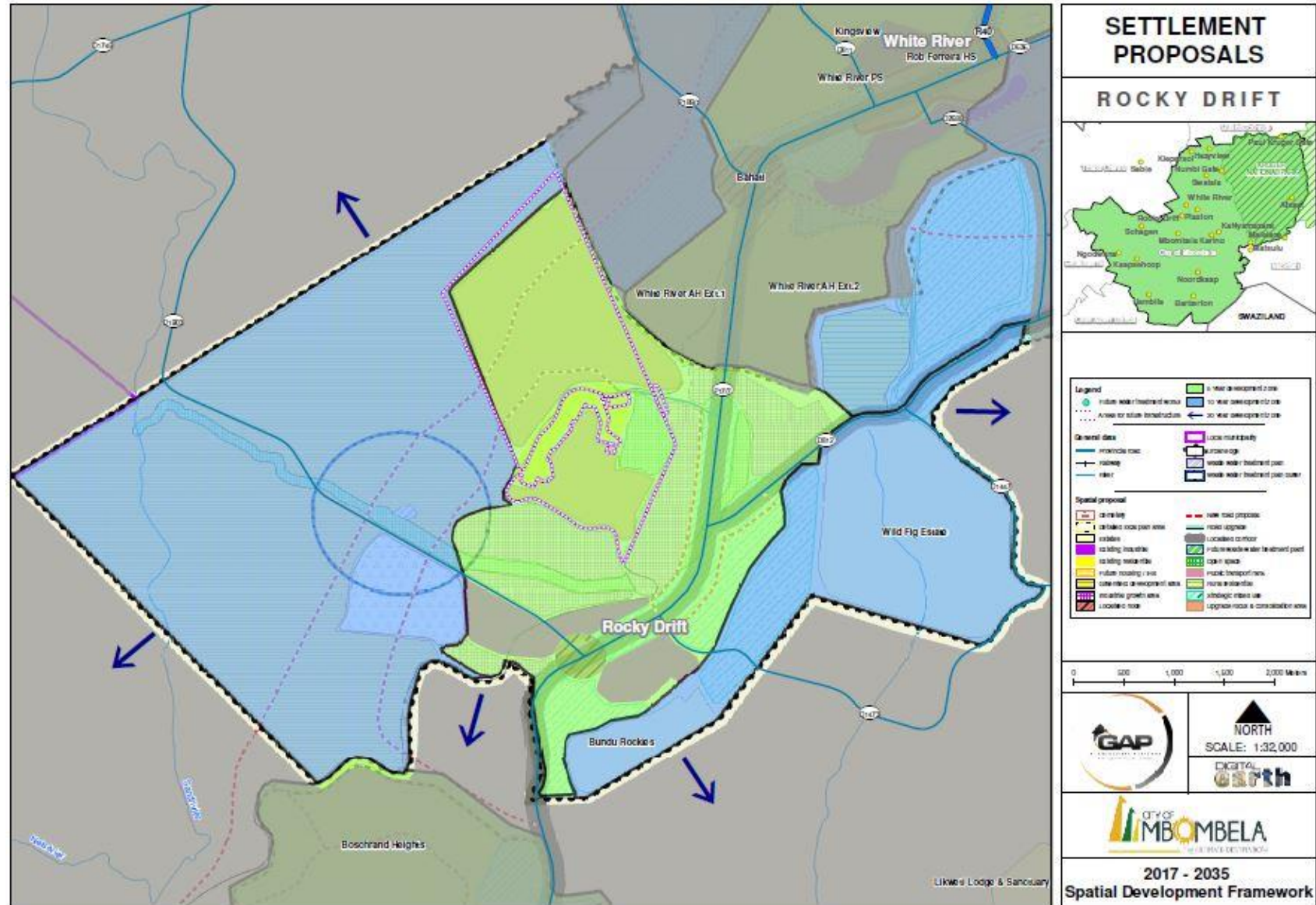
Areas for Future Infrastructure

As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure:

- The Msholozhi settlement.



Map 58: Rocky Drift Strategic Spatial Framework



Map 59: Rocky Drift Spatial Development Pattern

6.3.4 Mbombela

Mbombela (also known by its former name Nelspruit) is a regional services centre and capital of the Mpumalanga Province providing a variety of services and facilities to the broader Mpumalanga, Swaziland and Mozambique including the provincial government offices and the Mpumalanga legislature.

Mbombela lies about 110 kilometres by road west of the Mozambique border, 330 kilometres east of Johannesburg and about 82 kilometres North of the Swaziland border. Mbombela is one of the main South African tourist destinations, due to its proximity to the world-famous Kruger National Park.

Mbombela includes the CBD, Nelspruit Industrial, Mataffin Sport and Recreational Node, Riverside Industrial, Riverside Park (the Mall and Government Complex), the Stadium area and residential areas and surrounding agricultural holdings.

6.3.4.1 Population Profile

According to the 2011 census the population profile of Mbombela can be summarised and projected as follows:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
Boschrand Heights SP	-	*	*	*	*
Drum Rock Industrial Park	96	*	*	*	*
Drum Rock SP	132	*	*	*	*
Riverside Park	384	*	*	*	*
Mbombela Central	633	*	*	*	*
Kamagugu	4512	*	*	*	*
Nelindia	1329	*	*	*	*

Valencia Park	855	*	*	*	*
Mataffin	4812	*	*	*	*
Die Haak	5166	*	*	*	*
West Acres	11643	*	*	*	*
Stonehenge	4572	*	*	*	*
Beryl	489	*	*	*	*
Sonheuwel	6507	*	*	*	*
Mbombela SP	14718	*	*	*	*
Nelsville	1728	*	*	*	*
Matumi Golf Estate	357	*	*	*	*
Shandon Estate	543	*	*	*	*
Bateleur Estate	144	*	*	*	*
Dykrus	228	*	*	*	*
The Rest	60				
Total	58908	59614.9	60330.27	60993.91	61603.85

6.3.4.2 Spatial Constraints

Mbombela currently functions as a regional services centre serving the broader Mpumalanga area and surrounding countries, and continues to experience significant growth both on infrastructure and the population. The high level spatial constraints of the area can be summarised as follows:

HIGH LEVEL SPATIAL CONSTRAINTS

- Limited developable land due to environmental constraints
- Fading CBD
- Sprawling development
- Poor land use control on peripheral areas (Maggiesdal/Cromdale)
- Capacity of electricity network will have to be considered
- Lack of residential accommodation in vicinity of university will have to be considered as part of campus development or accommodation in surrounding area

6.3.4.3 Spatial Opportunities

As a regional service centre Mbombela has good structural elements such as good regional road access, established public transport systems, etc. The areas presents the following spatial opportunities:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Planned new developments with trickle-down effect (University, Fresh Produce Market, Mattafin Precinct etc.)
- Good regional road and rail access
- Proposed P166 bypass and associated developments
- Well established settlements with good infrastructure
- Efficient public transport system
- Good economic base
- Anchor developments providing regional services

6.3.4.4 Development Trends & Interventions

There are various proposed special development initiatives in the area which will have a major trickle-down effect. Some of the proposed developments include the following:

- The Fresh Produce Market will contain a mix of uses including retail / shops, offices, warehousing and distribution, light industrial, recycling, training, public transport, agriculture, etc.
- The ongoing development of the University of Mpumalanga.
- The public works precincts developments which includes various pieces of land within the Mbombela CBD and the Mpumalanga High Court Development.
- The ongoing development of the R40 Stations, to leverage public transport.

- The Matsafeni Precinct which will house various residential developments of different housing income groups, the Parliamentary Village, a Private Hospital etc.
- The proposed mixed use development on Riverside Ext 27, 28, 29 and 30.

6.3.4.5 Roads & Public Transport

Roads:

The road network of Mbombela consists of National, Provincial and District roads giving access to the area and the wider region. Some of the roads include the N4, R40, R37 and the R38. The following road proposals are proposed within the wider regional area in order to reduce traffic congestion and improve mobility and accessibility of the area:

- The following road proposals will reduce traffic congestion on the R40 and improve linkages in Riverside:
 - The development of the P166 Western Bypass becomes more and more important as Nelspruit continues to develop. This will be an important link between the Mataffin and Riverside nodes.
 - East-west links between the P166 and R40.
 - A link off the P166/R37 to Boschrand Heights in the north.
 - An east-west link between the R37 and D957 road to Schagen.
- The following road proposals will improve the accessibility of the Maggiesdal/Cromdale areas:
 - The development of the P166 Western Bypass will provide regional access to the Maggiesdal/Cromdale area.
 - The southern extension of Techno Street parallel east of the R40 and the southern extension of Bush Shrike Street parallel west of the R40 will open up the area for development.
 - An access loop off the R40 via the D2293 bending northwards and back to the R40.
 - Connecting the Uitkyk road with the R40 by extending the Rest road in a westerly direction.

- The following road proposals will improve the accessibility of the Mataffin Precinct by ensuring linkage to the CBD, Riverside, Ilanga Mall and promote integration with residential suburbs located to the east.
 - The development of the P166 Western Bypass will improve Mataffin's sub-regional access significantly.
 - The western extension of Figtree Street across the P166 and Kaapsehoop Road (D799), bending in a northerly direction to link with the N4.
 - The western extension of Granite Street to link with the internal road network of Mataffin.
 - East-west linkages between Kaapsehoop road and the Mataffin internal road network.
 - The southern extension of Belladonna Road, intersecting with the extension of Figtree Street to link with Van Rooyen Street to the south.
- The following road proposals will improve access between the south-eastern areas and Nelspruit and facilitate east-west linkages between the D585 Uitkyk Road and the R40.
 - Extending Johanna Drive in a southerly direction to link with the Rest road.
 - An access loop off Uitkyk road, linking with the Rest road and back to the Uitkyk road.
 - Connecting the Uitkyk road with the R40 Barberton road b extending the Rest road in a westerly direction.
 - Surfacing The Rest road has become imminent for the residents in the area.
- The following road links will improve the accessibility of the eastern parts of Nelspruit:
 - A link between the D725 and the N4, being the extension of Friedenheim Road in a northerly direction.
 - The northern extension of Dr Enos Mabuza Drive to link with the N4 Northern Bypass.

Public Transport

The area is served by both taxis and buses and has already established public transport facilities, including 3 taxi ranks and one bus terminal. The bus transport predominates the area as it's the cheapest mode of transport and transports large populations of the municipality from the Far Eastern side.

The Vision 2030 plan identifies the need for a concept and feasibility to be undertaken with regard to promoting a rapid light rail network across the city.

6.3.4.6 Development Objectives

Mbombela plays an important role in the local economy as a regional service centre and the administrative capital of the province. However different components of development need to be engaged and managed in order to continue maintaining the areas regional service centre status and optimal contribution to the wider economy.

The following development objectives are proposed:

Map Symbol	Development Objective
	Upgrade Mbombela CBD, through urban renewal, infill & densification and expanding capacity of the CBD to accommodate more residential and commercial development.
	Improved mobility and accessibility through new roads.
	Exploit the opportunities provided by developing nodes / mega-developments as important components of the local and regional economy.
	Encourage future growth and densification of the Mattaffin and Maggiesdal areas.
	Protect environmental sensitive areas.
	Improved mobility and accessibility through new roads.

6.3.4.7 Spatial Proposals & Development Directives

Detailed Local Plan Area

- A detailed local plan area is demarcated according to the footprint of the existing precinct plan for the Northern area, consisting of the University Precinct, the Fresh produce Market and the surrounding expansion areas and leisure developments, covering the bulk of the area.
- The detailed local plan area should be the focus area in which land use applications are shortened and in which development projects are directed including:
 - Housing development;
 - Upgrading and restructuring of engineering and social infrastructure; and
 - Transportation infrastructure and road upgrades.

Localised Node

- A localised node is proposed at the confluence of the R40, D2295 and P166 roads, mixed use development is promoted in the node to serve the residential developments envisaged in the surrounding Cromdale and Maggiesdal areas.

Localised Corridor

- The R40, D211 (Kanyamazane Road), and the N4 are proposed as main corridor development or activity spines in which an increased intensity of development is encouraged which typically include developments requiring good access and visual exposure.

Intensification Zones

Various areas have been identified in which an increased intensity of development is encouraged through redevelopment, infill, expansion or conversion of existing buildings to allow for higher densities or other uses similar in character and compatible to the greater adjoining area. The areas are as follows:

- Northern Corridor: The northern corridor is located from the intersection of the Old Pretoria Road and R 40 intersection in a northern direction along the R 40 up to the Nelspruit Show Grounds and includes the current CSFRI;
- Eastern Corridor: The eastern corridor stretches along the N4 from Protea Hotel, Orchards Spar and the Valencia Retail store to the west, to the intersection with Dr Enos Mabuza Drive at Nelsville and Nelindia to the east;
- Southern Corridor: The southern corridor stretches along the R 40 from the intersection with Piet Retief Street to the north and to the intersection with the D 2293 (Glenwood turn off) to the south, highlighting selective neighbourhoods along the road; and
- Western Corridor: The western corridor stretches along the R 40 and N4 from the Pick 'n Pay, SARS centre and Crossing to the east, up to the MAN Truck business next to the N4.

Strategic Mixed Use

Within the Mbombela area, strategic mixed-use development is encouraged in the following areas:

- The area west and north of Riverside Park Node and to the west of Riverside Industrial to include land uses complementary to the existing developments.
- The area around the Old Nelspruit Airport (Woodhouse area).
- The area between Matsafeni village and Broham Eco Estate, south of the N4 road.
- The area south-east of the Mpumalanga University along the N4 road.
- The area around Kiaat Private Hospital along the R40 road.

Future Housing or IHS

The following areas are reserved for future housing development and integrated human settlements to accommodate a variety of residential densities and provide for different income categories:

- The area north of Riverside node (proposed Boschrand Heights).

- The area east of the University of Mpumalanga (Friedenheim area).
- The area along the R40, south of Nelspruit in close proximity to the Tshwane University of Technology, hospital and employment areas render it suitable for integrated human settlements.
- Kamagugu could be expanded to the north, towards the D725 road, as well as to the west.
- The area south of Matsafeni Village and east of Mbombela Stadium.

The necessary community facilities including neighbourhood retail centres, schools, clinics sports fields, open spaces and cemeteries should be provided when developing these areas.

Residential Densification

The following areas are earmarked for residential densification:

- Higher residential densities are supported within and around economic opportunity zones and close to public transport ranks.
- Multiple-storey residential buildings are encouraged within Nelspruit CBD.
- Residential densification of existing residential neighbourhoods, located within the detailed local plan areas and around Nelspruit CBD, is encouraged.
- Residential densification of existing residential neighbourhoods between Nelspruit CBD and Mataffin Node is promoted.

Greenfield Development Area

Various areas with potential for expansions and accommodating new and more intensified urban developments has been identified and include the following areas:

- The area north of Matsafeni village around the Westaffin & Mataffin railway station along the R104 road is suitable for light industrial, commercial and high density residential development;
- The area west of Matsafeni village and south-east of the Mbombela Stadium can accommodate new urban development; and
- Greenfield development is encouraged between Stonehenge and West Acres to promote integration of these areas.

- The area along the R40 roads, south of Le Roy and The Rest Eco Estate to promote integration of the Maggiesdal area with Mbombela.

Upgrade Focus & Consolidation Area

Matsafeni village is identified as an upgrade priority area in order to create a desirable and sustainable residential neighbourhood. Upgrading initiatives should focus on, inter alia, the following:

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

Integrated Open Space

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

- The Greenbelt Initiative, which aim is to protect the Crocodile River and its adjacent riparian vegetation, should be extended to include the rivers mentioned above.
- Mountainous areas and nature reserves in and around Nelspruit should remain undeveloped and reserved for conservation and ecotourism purposes.
- Floodline areas, steep slopes, rocky outcrops, river environments, wetlands, biodiversity sensitive areas, should remain undeveloped to form part of the MOSS, including active open spaces (i.e.: sports fields, golf courses etc.)
- Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.

6.3.4.8 Spatial Development Pattern

Section 21 of SPLUMA requires the SDF to have a written & spatial presentation of a five-year spatial development plan for the spatial form of the municipality and also include a longer term spatial presentation indicating the desired spatial pattern for the next 10 to 20 years (see map 61).

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of commercial, social, business, retail and light industrial land uses to be established in identified local node, along corridors and the areas earmarked for strategic mixed use.
- Strategic road links and road upgrades.
- Residential densification is motivated around the nodal areas and the existing settlements of Sonheuwel, West Acres, Nelspruit Extensions etc.
- Residential formalisation of informal areas such as Matsafeni Village to establish sustainable integrated human settlements.
- Infill development on available vacant land within boundaries on existing settlements.

Five (5) Years to Ten (10) Years Spatial Development Direction

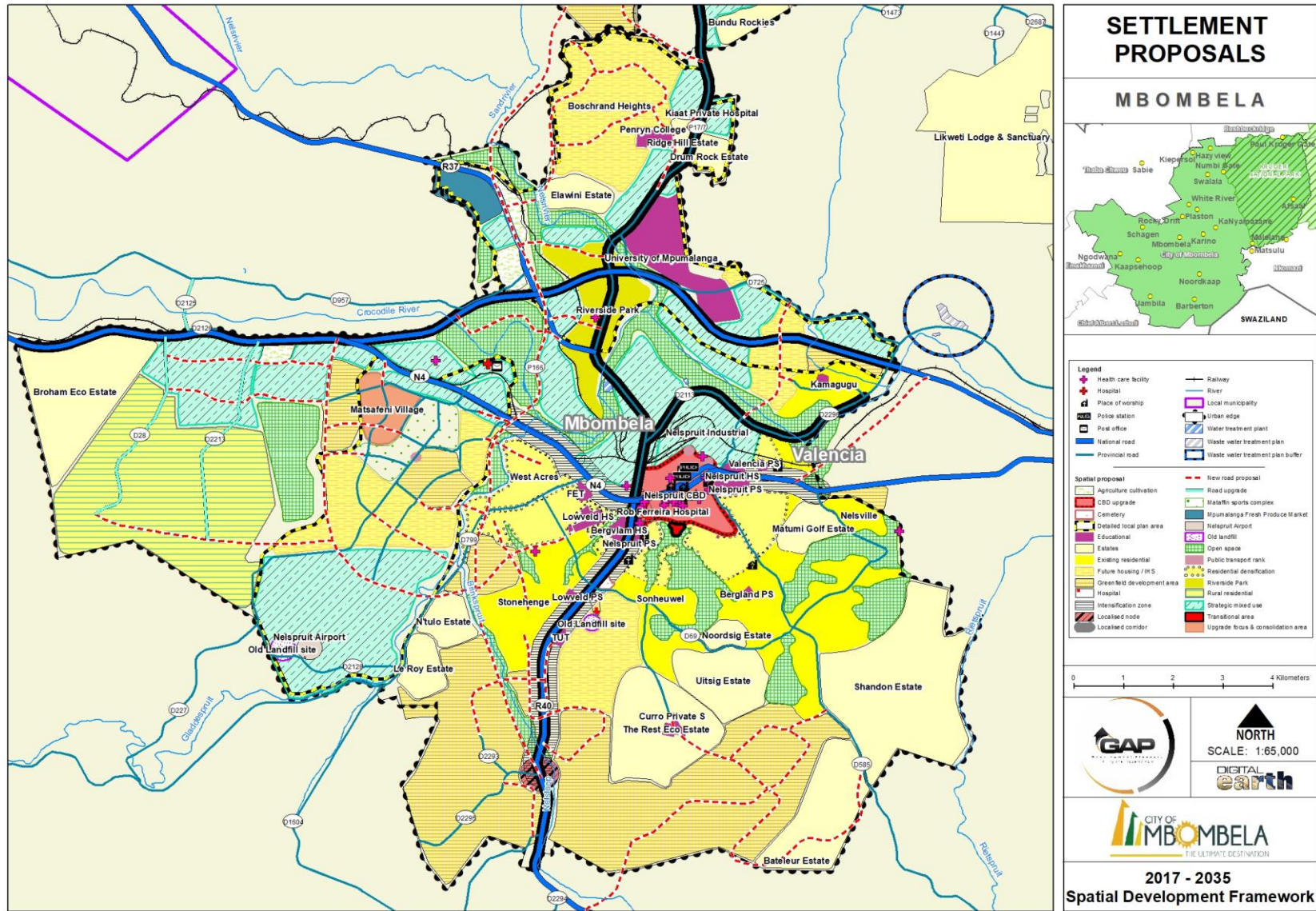
- Green Field development to accommodate future expansion and more intensified urban land uses & social facilities.
- Future Housing & Integrated Human Settlements Development.
- Strategic Mixed Use Development.

Ten (10) Years to 20 Years+ Spatial Development Direction

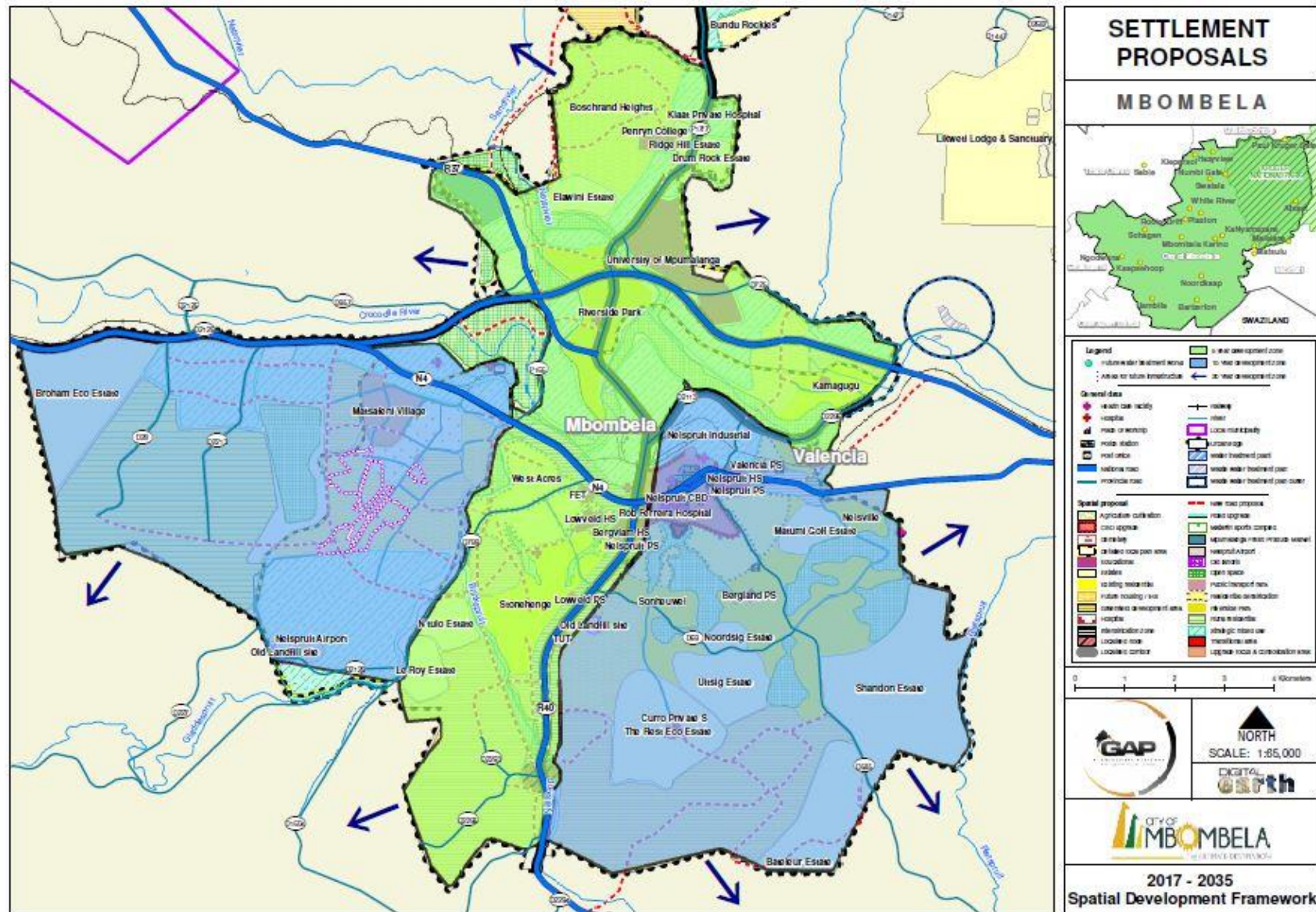
- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.

Areas for Future Infrastructure

- There is a growing recognition that the need to “make efficient use of existing infrastructure” (including public transport infrastructure) is not only driven by an environmental agenda pursuing sustainable development and carbon targets but is also fiscally imperative for the City in order to achieve service delivery.
- Areas for Future Infrastructure including water, sanitation and new roads have been identified around Mbombela Stadium and Matsafeni Village.



Map 60: Mbombela Strategic Spatial Framework



Map 61: Mbombela Spatial Development Pattern

6.3.5 Barberton-Emjindini

Barberton is a town of the former Umjindi Local Municipality which has its origins in the 1880s gold rush in the region. Barberton is situated approximately 43 km south of Mbombela and 178 km north-west of Swaziland and is fringed by the Makhonjwa Mountains world heritage site.

Barberton/ Emjindini is the major urban development node within the area consisting of business centres and residential areas with a disparate settlement pattern strongly influenced by pre-democracy planning allowing for spatial segregation.

6.3.5.1 Population Profile

According to the 2011 census the population profile of Barberton can be summarised and projected as follows:

Sub Place or Enumeration Area	Total Population	Projected Population					
		2011-2018: 1.2%					
		2018-2025: 1.2%					
				2025-2030: 1.1%			
				2030-2035: 1.0%			
		2018	2025	2030	2035		
Barberton Ext 1-6	3111	*	*	*	*		
Barberton SP	6930	*	*	*	*		
Glenthorpe	669	*	*	*	*		
Staatsgrond	297	*	*	*	*		
Verulum	3420	*	*	*	*		
Emjindini Ext 1-12	12879	*	*	*	*		
Phumula	10131	*	*	*	*		
KwaMhola	1047	*	*	*	*		
New Village	2133	*	*	*	*		
Spearville	2733	*	*	*	*		
Phola Park	4317	*	*	*	*		
Greenstone Wildlife Estate SP	24	*	*	*	*		
Total	47691	48263.2	48842.4	49379.7	49873.5		
		9	5	2	2		

6.3.5.2 Spatial Constraints

The existing land use patterns within urban areas reflect a dispersed system of segregated neighbourhoods, which stems from the pre-democratic period where settlement of people was regulated in terms of racial separation policies. The spatial constraints of the Barberton area can be summarised as follows:

HIGH LEVEL SPATIAL CONSTRAINTS

- Fading CBD and sprawling residential development
- Poor land use control
- Lack of bulk infrastructure and social amenities
- Disjointed spatial structure
- Limited public transport facilities
- Lack of shopping facilities
- Historical buildings restrict densification of areas adjoining CBD
- Limited internal accessibility

6.3.5.3 Spatial Opportunities

Based on the existing built environment and physical structural elements the Barberton area has the following spatial opportunities:

HIGH LEVEL SPATIAL OPPORTUNITIES

- The CBD is accessible and in close proximity to the existing residential areas
- Potential for tourism development due to the various nature reserves and Makhonjwa Mountain lands world heritage site
- The area is surrounded by productive mining and agricultural sector
- Range of civic services (hospitals, police station, etc.)
- Good regional road access provided by the R40, R38 and the N4
- Available vacant land and for greenfield development and urban expansion

6.3.5.4 Development Trends & Opportunities

The Barberton area has not experienced much development over the recent years, however the following proposed development opportunities exists within the area:

- Proposed Emjindini Extension 17, 18 & 19 residential townships;
- Proposed shopping complex at the intersection of the R38 and R40 roads, west of Barberton Mediclinic;
- Proposed shopping complex at the Old Caravan Park opposite to the FET College; and
- Proposed industrial development in between the R40 (Dikbas Avenue) and General Street.

6.3.5.5 Roads & Public Transport

- The following road proposals are proposed in order to improve internal and external access and mobility as well as improve regional linkage with different major areas:
- The following roads upgrades are proposed:
 - Upgrading of the R38 road linking Barberton to the N4 (the back born of Maputo development corridor);

- The existing General Street linking the CBD and residential areas with the R40;
- The upgrading of Shongwe street linking to General Street in order to maintain its mobility function; and
- Upgrading of Kruger street linking Emjindini Trust with the CBD.

6.3.5.6 Development Objectives

In order for the Barberton area to reach its full development potential, the following development objectives are adopted:

Map Symbol	Development Objective
	Consolidate the different components of the CBD through urban renewal initiatives, economic generation and infill development in order to form a unified and highly intensified regional mixed-use centre.
	Establish service nodes with compaction of current and proposed mixed land uses to provide services within the defined areas.
	Accommodate growth through strategic residential densification.
	Provide for industrial, commercial / strategic mixed land use to broaden the economic & employment base of the area.
	Accommodate the majority of regional growth within the identified expansion areas.
	Strengthening the integrated natural structure as a provider of ecological services.

6.3.5.7 Spatial Proposals & Development Directives

Localised Node

- Proposed Localised Nodes are identified at the following points where activity routes connect or intersect with each other:
 - The intersection of the R40 road and R38 road towards Badplaas;

- The intersection of Shongwe and General Streets; and
- The intersection of the P77/1 (Bulembu road), Sheba road and the P10 provincial roads towards Kaapmuiden.
- A few business and social facilities exist at these points and could further be strengthened with more such land uses and the clustering of facilities is recommended in this area.

Localised Corridor

- The following activity routes have been identified as the proposed localised corridors:
 - The General Street activity routes traversing the Baberton CBD and along the north-east of the Umjindi settlement, linking to the P10 provincial road. Industrial, business and other social facilities have located along this route and could further be enhanced by intensification of such uses.
 - The P10 provincial road which runs along the northern side of the Umjindi settlements linking to the P77/1 (Bulembu road).
- The aim is to exploit the regional accessibility provided by these routes in order to utilize the existing and future economic thrusts provided by the agriculture, mining and manufacturing sectors to stimulate integrated socio-economic development and growth into the whole Emjindini area.

CBD Upgrade

- Emphasis should be made on consolidating the different components of the CBD to form a unified regional mixed-use centre through an urban renewal initiative.
- An opportunity exists to expand the capacity of the CBD towards the north-west along General Street to accommodate more residential, business and commercial land uses.
- Strengthen businesses within the existing CBD and provide dedicated areas for informal traders and pedestrians.
- A centralized taxi/bus rank should be expanded to accommodate more commuters.

Strategic Mixed Use

- Strategic Mixed-Use development areas are identified in the following areas:
 - The area in between Kruger & General Streets, north-west of the Barberton CBD.
 - The area in between General Street and the railways line, north-west of the Sappi-Lomati Plant.
 - The areas north of the P77/1 Provincial Road.
- The intention is the provision of a sub-regional mixed used development providing for all related retail, businesses, offices, health, etc. facilities.

Industrial Growth Area

Industrial development is encouraged and supported in the following areas:

- The area at the intersection of the R38 and D2195 Rods, south of Snqobile Township.
- The area at the intersections of General street and P77/1 road towards the east.

Greenfield Development Area

- The following areas have been identified for future urban expansion and greenfield development within the Barberton / Umjindi area:
 - The area south of the D236 Road (Kruger Street) and west of the Barberton Prison Farm;
 - The areas south of the P77/1 Provincial road;
 - The areas south of the R38 Road towards Badplaas; and
 - The areas along the P10 Road towards Kaapmuiden from the intersection with the P77/1.
- The intention is to accommodate urban growth through Greenfield developments and the provision of the full range of community facilities i.e.: schools, neighbourhood retail centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.

Upgrade Focus & Consolidation Area

Emjindini settlement including the areas east of Phumulani Township is identified as an upgrade focus area and upgrading initiatives should focus on, *inter alia*, the following:

- Land tenure upgrade;
- Relocation of settlements in environmental sensitive area;
- Provision of engineering services (sanitation, water supply, electricity and storm water); and
- Provision of sufficient social infrastructure and services to enhance the quality of life of these communities. Integration with Rocky Drift employment node.

Future Housing or IHS

The following areas have been reserved for Future Housing or the establishment of Integrated Human Settlements:

- The area in between the P10 road towards the north and the railway station.
- The area at the intersection of the P10 and D2195 roads, west of Greenstone Estates.

Tourism & Accommodation

- Future tourism development is supported around the Makhonjwa Mountains World Heritage Site with the purposes of developing the area in a sustainable way to benefit both Swaziland and South Africa.
- Land uses should be restricted to agriculture, tourism and conservation uses.
- The utilisation of tourism facilities for permanent or long-term residential use needs to be restricted.
- Every new development should be informed by an Environmental Management Plan, headed by an Environmental Impact Assessment.
- A site development plan must be approved by the municipality indicating the design and functional utilisation of the site.

Integrated open space

- Natural forests and areas with a high biodiversity should be protected and remain undeveloped.
- Flood line areas, steep slopes, rocky outcrops, river environments, wetlands, biodiversity sensitive areas, should remain undeveloped to form part of the MOSS.
- Development of rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.
- The protection of public open space is a priority and areas within the 1:100 year flood line shall remain undeveloped.
- Open spaces need to be functional and developments fronting onto parks should be sensitive to the character and functioning of the park.

6.3.5.8 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 63):

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of commercial, social, business, retail and light industrial land uses to be established in identified local node, along corridors and the areas earmarked for strategic mixed use.
- Proposed shopping complex.
- CBD upgrade.
- Residential densification and infill development is motivated around the nodal areas and Barberton Extensions.
- Strategic Mixed Land Use Development

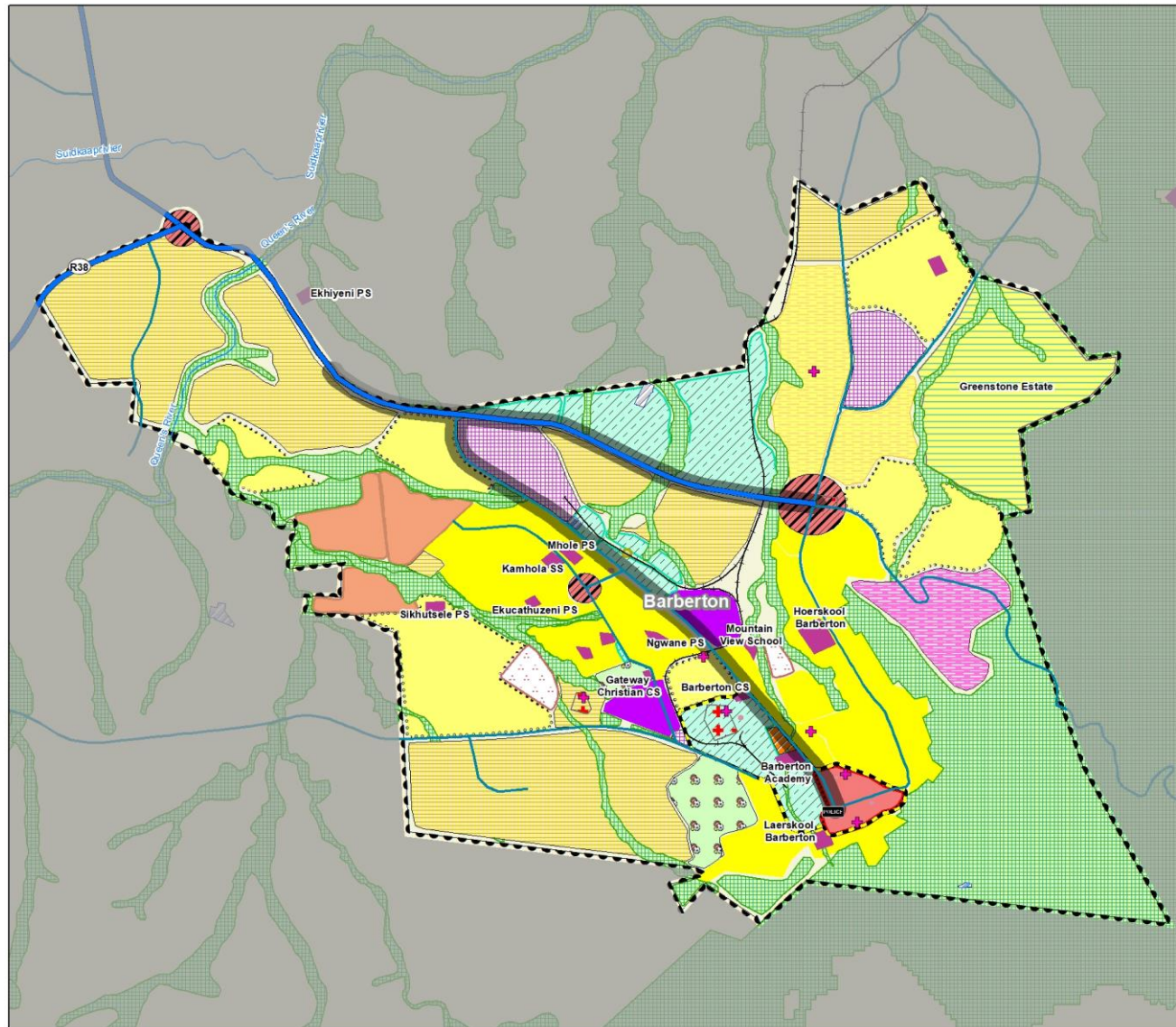
Five (5) Years to Ten (10) Years Spatial Development Direction

- Industrial Development around Kakhaleni Timber Processing.
- Residential densification and Infill Development (Kakhaleni Township).

- Strategic Mixed Use Development to accommodate new intensified urban land uses.
- Future residential development.
- Provision of a full range of community facilities.
- Future Housing & Integrated Human Settlements.

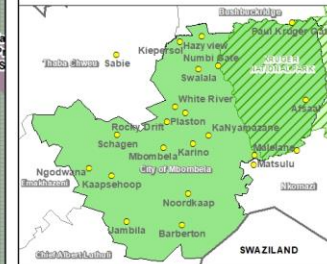
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.
- Tourism & Accommodation.
- Agriculture.



SETTLEMENT PROPOSALS

BARBERTON

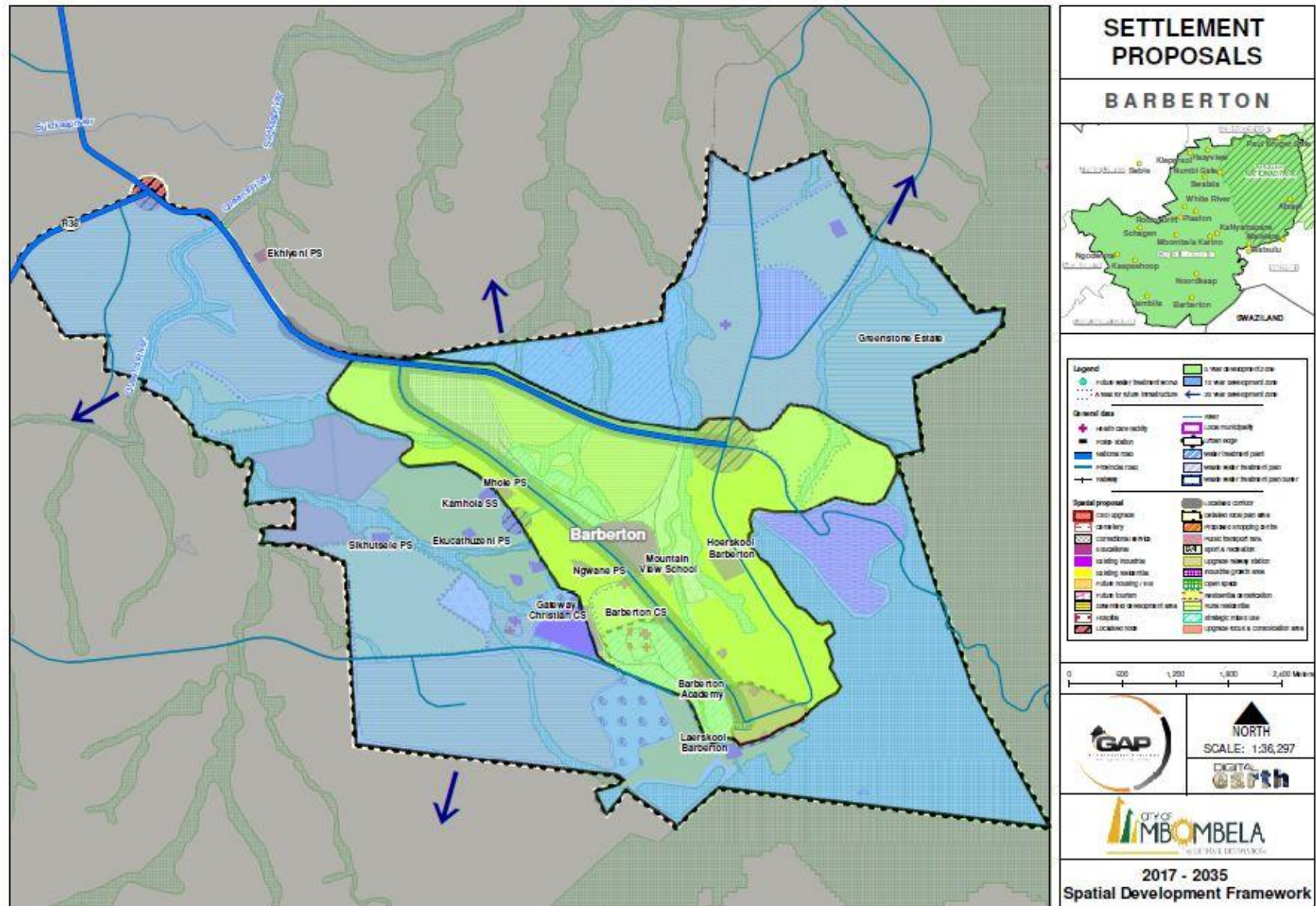


- Legend**
- Health care facility
 - Police station
 - National road
 - Provincial road
 - Railway
 - River
 - Local municipality
 - Urban edge
 - Water treatment plant
 - Waste water treatment plan
 - Waste water treatment plan buffer
- Spatial proposal**
- CBD upgrade
 - Cemetery
 - Correctional service
 - Educational
 - Existing industrial
 - Existing residential
 - Future housing / IWS
 - Future tourism
 - Green field development area
 - Hospital
 - Localised node
 - Localised corridor
 - Detailed local plan area
 - Proposed shopping centre
 - Public transport rank
 - Sport & recreation
 - Upgrade railway station
 - Industrial growth area
 - Open space
 - Residential densification
 - Rural residential
 - Strategic mixed use
 - Upgrade focus & consolidation area

0 600 1200 1800 2400 Meters

2017 - 2035
Spatial Development Framework

Map 62: Barberton-Emjindini Strategic Spatial Framework



Map 63: Barberton-Emjindini Spatial Development Pattern

6.3.6 Karino

Located approximately 13 km east of Mbombela CBD and 9 km south of the KMIA, the Karino area is considered an anchor point for the growing urban expansion area of the municipality. In recent years the area has been experiencing rapid development which includes amongst others Karino Lifestyle Estate, Summer Rain Estate, educational facilities and other commercial facilities.

The Karino area has good development potential supported by the recent developments and the much anticipated Tekwane hub which is meant to be a mixed-use development, with housing, commercial, government services and social services.

6.3.6.1 Population Profile

The population profile for the Karino area can be broadly summarized as follows:

Sub Place or Enumeration Area	Total Population	Projected Population							
		2011-2018: 1.2%							
		2018-2025: 1.2%							
				2025-2030: 1.1%					
				2030-2035: 1.0%					
		2018	2025	2030	2035				
Karino SP	561								
Tekwane Estate SP	5028								
Tekwane North	2190								
Tekwane West	141								
Tekwane South	6195								
Entokozweni East	852								
Total	14967	15146.6	15328.36	15496.98	15651.94				

Being located in the identified urban expansion area of Mbombela, the number of households in the primary catchment area of the hub is expected to increase substantially over the next five years.

6.3.6.2 Spatial Constraints

The Karino area has the following spatial constraints which are limiting spatial development:

HIGH LEVEL SPATIAL CONSTRAINTS

- Limited bulk infrastructure and the planned upgrades to bulk water and sewer would need to be implemented
- Lack of social amenities within the area (i.e. health facilities etc.)
- Pockets of land fragmented by road, rail and river
- Development opportunities with the possibility of forfeiting agricultural land

6.3.6.3 Spatial Opportunities

The Karino area forms an anchor point for the growing urban expansion area and opportunity for spatial transformation and the following proposed spatial opportunities:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Emerging urban built areas and new developments with trickle-down effect
- Good regional road and rail access
- Proposed Tekwane Hub (Mixed Use Development) and associated developments
- Good economic base
- Anchor developments providing regional services
- Surrounded by developable land suitable for developments requiring good rail and road access
- Close to large labour force (± 10 km)
- Adjacent to N4 Maputo Development Corridor Crocodile River

6.3.6.4 Development Trends & Interventions

- The area has experienced development initiatives including residential, commercial and industrial development over the past years, which includes amongst others the Karino Lifestyle Estate, Sumerian Estate, the Sasol Service Station, Curro Meridian School, and an Industrial township.
- Currently two proposed special developments represent the major development initiatives in the area.
- These developments include the proposed Tekwane Hub along the Kanyamazane Road, which is a mixed-use development and the proposed shopping complex at the intersection of the R538 and the Kanyamazane Road.

6.3.6.5 Roads & Public Transport

Roads:

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

6.3.6.6 Development Objectives

The Karino area forms an anchor point for the growing urban expansion area for the municipality, and the following development objectives are adopted in order to develop Karino as a second order node:

Map Symbol	Development Objective
	Promote nodal development of regional significance to provide for commercial, industrial, and other strategic mixed-use development.
	Encourage corridor development along the D2296 Kanyamazane road.
	Improve mobility and accessibility through proper road planning and upgrades.
	Accommodate growth through strategic mixed use development and integrated human settlements.
	Develop rail access between Plaston and Karino.
	Establish a well defined and integrated open space system.

6.3.6.7 Spatial Proposals & Development Directives

Localised Node

- A localised node serving the broader Karino area is proposed at the intersection of the D2296 Kanyamazane road, and the R538 road.
- A proposed shopping centre, business activities, commercial and an industrial township are already located in these nodes and could further be strengthened by inclusion of more land uses in the form of business, social facilities, etc.

Localised Corridor

- The D2296 Kanyamazane road towards the east and the R538 roads towards KMIA & Plastonpark are identified as corridor development.

- Both the mentioned corridors serve as transport logistics channels for activities and light industrial and business activities have located themselves along these corridors.

Strategic Mixed Use

- Strategic Mixed-Use Development is promoted to the east towards the Central Waste Disposal site, along the D2296 Kanyamazane road and the area west of the R538 & north of the D2296 towards the west.
- The intention is to provide social, business, commercial and residential uses to the envisaged surrounding developments.

Industrial Growth Area.

- Industrial development is supported in the area towards the east in between the N4 and the D2296 Kanyamazane Roads, along the Maputo railway line.
- The intention is to create a significant industrial hub that will exploit the regional access provided by the N4 and railway line and that will provide employment opportunities to the nearby eastern residential areas.

Future Housing or IHS

- The following areas are reserved for Future Housing or Integrated Human Settlements:
 - The area west of the R538 road;
 - The area south of the of the D2296 Kanyamazane road and north of the crocodile river; and
 - The area between the central dump site and the D2296 Kanyamazane road.
- Future residential developments should be sustainable and accessible and should provide for a variety of residential densities including low, medium and high residential uses.
- The provision of the full range of community facilities i.e.: schools, neighbourhood centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.

Greenfield Development Area

- The following areas are reserved for new development, mainly for residential purposes:
 - Areas to the north of Tekwane South and west of Entokozweni;
 - The area to the south of Tekwane North;
 - Areas between the northern and southern Luphisi links; and
 - The areas located west and east of the R538.
- New developments should be restricted to areas falling outside environmentally sensitive areas, such as the White, Crocodile and Rietbokloop Rivers.

Integrated Open Space

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

6.3.6.8 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 65):

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of commercial, social, business, retail and light industrial land uses to be established in identified local node, along corridors and the areas earmarked for strategic mixed use.
- Proposed shopping complex.
- Strategic road links and road upgrades.
- Residential densification and infill development is motivated around the nodal areas and Tekwane South.
- Integrated Human Settlement (Tekwane Hub).

Five (5) Years to Ten (10) Years Spatial Development Direction

- Future Housing & Integrated Human Settlements.
- Strategic Mixed Use Development to accommodate new intensified urban land uses.
- Future residential development.
- Provision of a full range of community facilities.

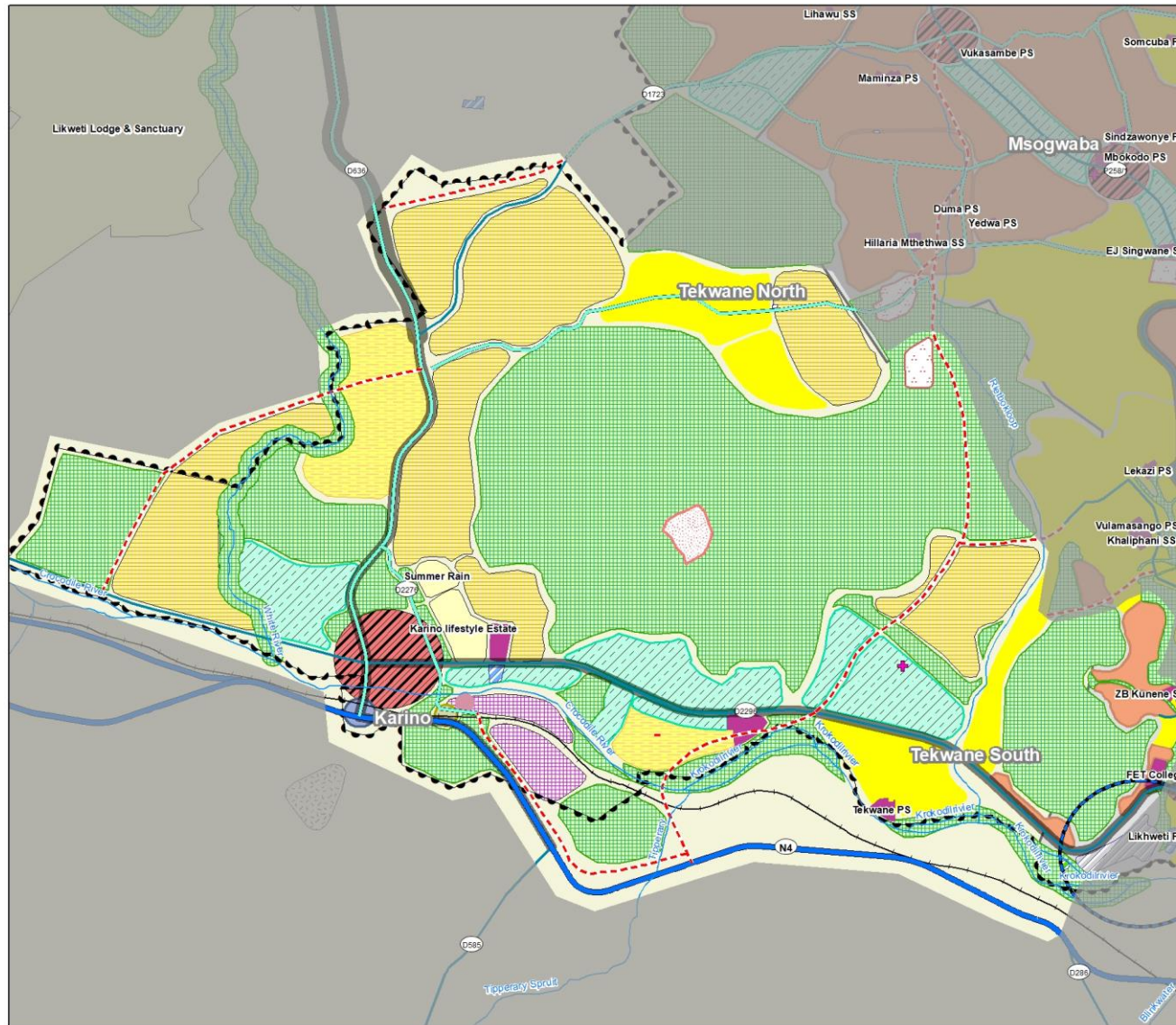
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.

Areas for Future Infrastructure

As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure:

- The proposed Tekwane Hub including Tekwane South Extension 2; and
- The areas north-east of Tekwane South (Entokozweni & surrounding).



SETTLEMENT PROPOSALS

KARINO

Legend

Health care facility	Local municipality
National road	Urban edge
Provincial road	Water treatment plant
Railway	Waste water treatment plan
River	Waste water treatment plan buffer

Spatial proposal

Cemetery	Future waste water treatment plan
Educational	Green field development area
Estates	Open space
Existing residential	Public transport rank
Future housing / IWS	Strategic mixed use
Industrial growth area	Upgrade focus & consolidation area
Landfill	Upgrade railway station
Localised node	New road proposal
Localised corridor	Road upgrade

0 600 1200 1800 2400 Meters

GAP

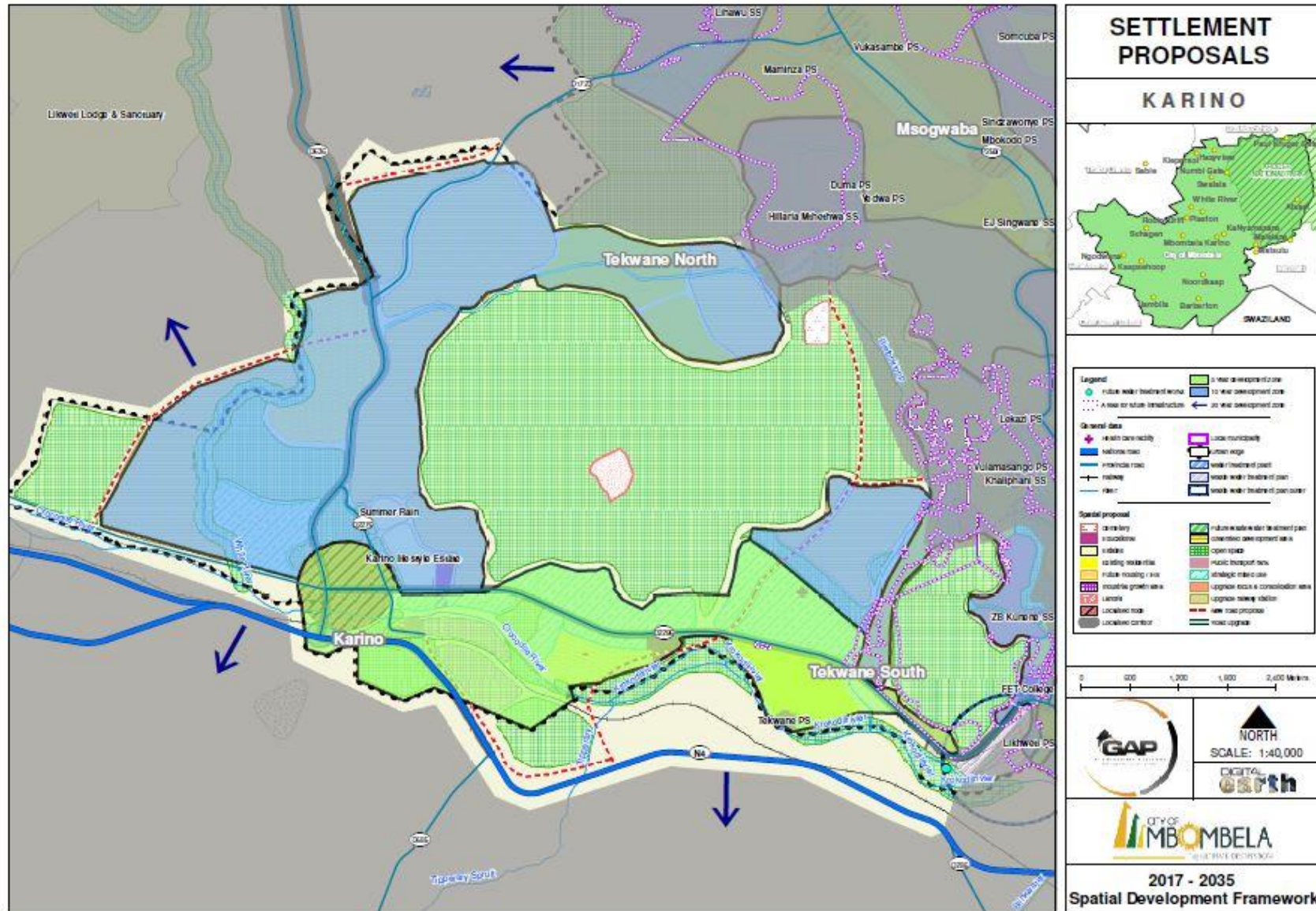
NORTH
SCALE: 1:40,000

DIGITAL earth

CITY OF MBOMBELA
THE ULTIMATE DESTINATION

2017 - 2035
Spatial Development Framework

Map 64: Karino Strategic Spatial Framework



Map 65: Karino Spatial Development Pattern

6.3.7.4 Development Trends & Interventions

- The Airport provides an opportunity for the areas to be developed as mini aerotropolis, however such an opportunity has not yet been exploited in terms of development.
- Currently the surrounding land market is still relatively underdeveloped and needs to be developed in order to reach the full economic potential provided by the area.

6.3.7.5 Roads & Public Transport

Roads:

- The following road upgrades are proposed:
 - Upgrade the R538 to at least four lanes in future as it forms the secondary north-south route for the eastern residential areas and provides direct access to the KMIA.
 - The upgrade of the southern Luphisi link and extension thereof to link with the D2296 Kanyamazane road.
- The following new roads are proposed:
 - The realignment of the D1723 northern Luphisi link.
 - A link road between the airport access road and Dwaleni.
 - The Kanyamazane Western Bypass (P258/1 road) to link with the N4 in order to improve regional access to the eastern residential areas.

Public Transport:

As part of the Bus Rapid Transit system a public transport rank or bus stop is proposed around the airport area. These transport ranks should be provided with the necessary infrastructure i.e.: shelters, ablution facilities, trade space (vendors), security facilities etc.

6.3.7.6 Development Objectives

The following development objectives are adopted in order to develop KMIA as a speciality node and a mini aerotropolis:

Map Symbol	Development Objective
	Develop an anchor mixed use node relating to a mini areotropolis and development that requires airport location.
	Maximise the airport potential as the growing economy of the region through strategic mixed use development.
	Ensure seamless integration with the proposed industrial zone in Plaston.
	Develop the surrounding market and intensify it over the medium to long term to reach its full economic potential.
	Ensure viable connectivity through proper roads planning and upgrade.
	Elevate status of airport, obtain licencing for expanded agricultural export and tourism capacity.

6.3.7.6 Spatial Proposals and Development Directives

Localised Node

- A localised mixed-use node is proposed at the intersection of the R538 and the access road to the airport.
- The intention is to develop an urban environment conducive to economic growth through the provision of essential infrastructure and facilities that require airport location and will encourage the development of economic linkages between the urban and rural areas.
- Business, commercial, industrial and high density residential are supported within this node.

Strategic Mixed-Use Development

The KMIA's prime location with good access to the N4 via the R538, close proximity of the labour force, good linkage to Rocky Drift (existing industrial), surrounded by high potential agricultural land lends the area suitable for the development of a mini aerropolis with target on the following industries or sectors:

- **Logistics and distribution:** Investors have the immediate benefit of mature logistics and distribution systems with excellent air, road and rail connectivity.
- **Manufacturing and High Tech Industries:** Excellent opportunities exist for high-value, low-weight goods production and exports.
- **Professional Services & Public Administration:** Regional business growth will generate increased demand for professional services and office space.
- **Tourism & Culture:** Regional focus on business tourism and cultural event-based travel created by the airport and proximity to the Kruger National Park.
- **Retail and Business:** Strategically located and high visibility sites available for retail development
- **Agri-Business & Food Processing:** Land availability for high value, low-weight agricultural production and the opportunity provided by the fresh produce market and eastern belt agricultural activation.
- **Agri-estate and lifestyle development.**
- Natural Resources & Energy.

Currently the surrounding market is still relatively underdeveloped and needs to develop and intensify over the medium to long term to reach its full economic potential. The proposed Industrial Development Zone at Plaston could play a leading role in this regard.

Integrated open space

- Steep slopes and "koppies" to the east of the airport should remain undeveloped and reserved for grazing purposes and eco-tourism.
- Floodline areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the MOSS.

- The protection of public open space is a priority and the area within the 1:100 year Floodline needs to be cleared from any development/settlement.

6.3.7.7 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 67):

Year 0 to Five (5) Years Spatial Development Direction

- Development of High intensity urban environment conducive to economic growth and facilities that require airport location in the identified node and corridor.

Five (5) Years to Ten (10) Years Spatial Development Direction

- Development of a mini aerropolis.

Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.



SETTLEMENT PROPOSALS

KMIA

Legend

- Provincial road
- River
- Local municipality
- Urban edge

Spatial proposal

- Road upgrade
- Agriculture cultivation
- Dam
- Future housing / IHS
- Future waste water treatment plan
- KMIA
- Localised node
- Localised corridor
- Open space
- Strategic mixed use
- Tourism & accommodation

0 400 800 1,200 1,600 Meters

GAP

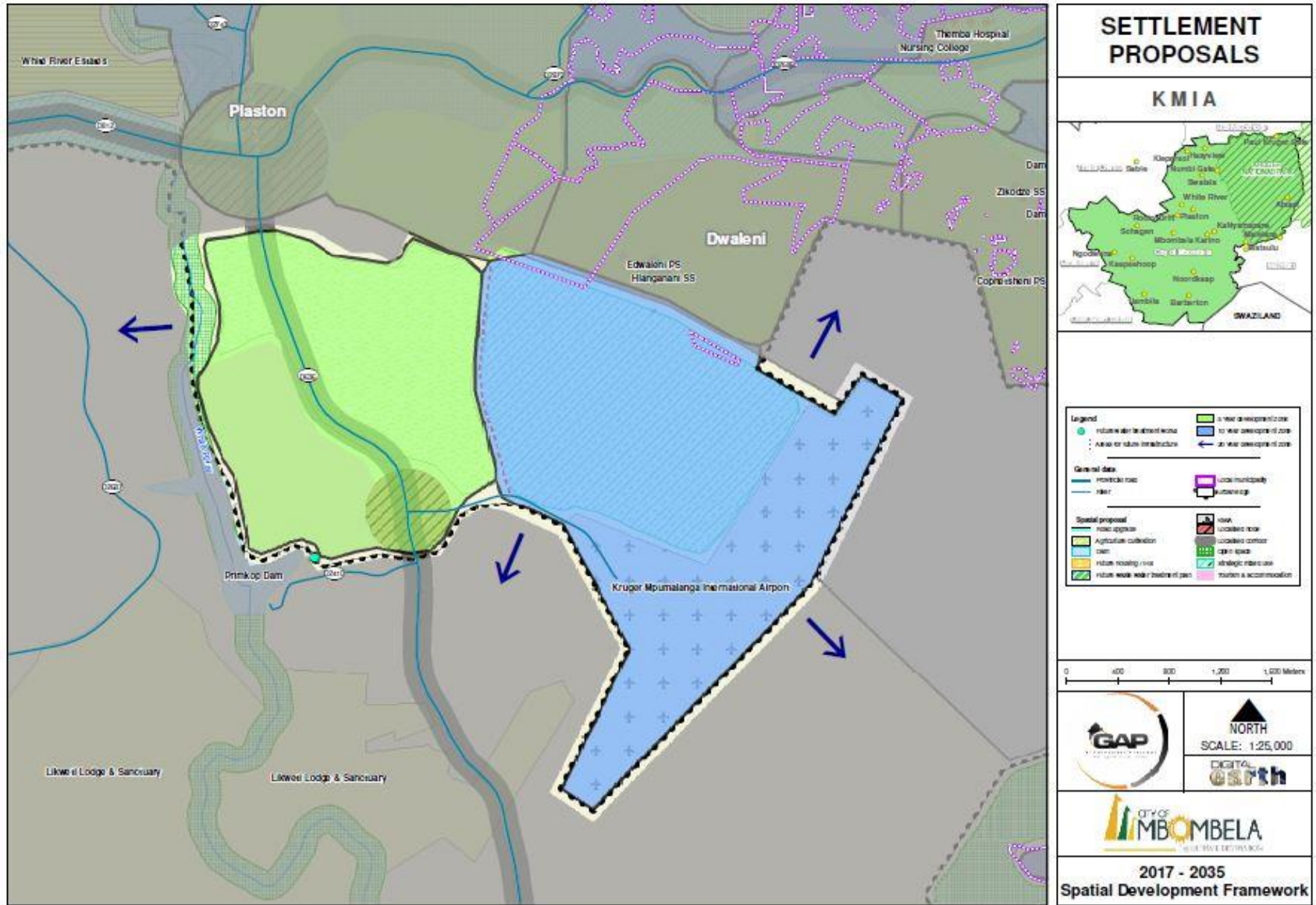
NORTH
SCALE: 1:25,000

DIGITAL earth

CITY OF MBOMBELA
THE ULTIMATE DESTINATION

2017 - 2035
Spatial Development Framework

Map 66: KMIA Strategic Spatial Framework



Map 67: KMIA Spatial Development Pattern

6.3.8 Plaston Park

Identified as a Speciality Node in the SDF, Plaston Park is situated approximately 3 km north of KMIA, 8km south of White River, 5km east of Kabokweni and 8km west of Rocky Drift. Residential settlements located around the area includes Dwaleni, Phatwa, Mbonisweni and Backdoor settlements located in the east.

6.3.8.1 Population Profile

According to Stats SA Small Place (SP) population areas some part of the Plaston area falls within the White River AH as covered under the White River population profile and the wider Mbombela NU main places.

6.3.8.2 Spatial Constraints

Like any other settlement in South Africa, Plaston has certain spatial limitations which are summarised as follows:

HIGH LEVEL SPATIAL CONSTRIANS

- Limited Social amenities
- Lack of municipal engineering services and pressure on the existing engineering services
- Development compromising the mobility function of the R538
- Informal settlements
- Topographic constraints limiting integration measures towards the eastern settlements
- Limited public transport facilities

6.3.8.3 Spatial Opportunities

The Plaston area partakes the following spatial opportunities based on its existing structural elements:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Proximity to the KMIA with opportunity for tickle-down effect development
- Good regional road access
- In close proximity to major economic centres (i.e. White River & Rocky Drift)
- Available suitable land for development
- Opportunity to establish an industrial zone
- Neat development occurring along the D2689 road
- Opportunity for corridor development along the D2689

6.3.8.4 Development Trends & Interventions

- Over the years development within the Plaston areas has been limited to a filling station, local shopping facilities, agricultural uses and market stalls.
- The D2689 has also accommodated various developments including technicrete manufactures, funeral offices, brick manufactures and other industrial and commercial activities.
- Other planned developments within the area include:
 - The proposed Integrated Human Settlement located east of the R538 and south of the D19944 Roads.
 - The proposed Industrial Development Zone along the D2689.

6.3.8.5 Roads & Public Transport

- The following road upgrades are proposed:
 - The R538 to at least four lanes in future. The upgrades should extend northwards to its intersection with the P17/6.
- The following new roads are proposed:

- The upgrade and further extension of the D1994 road to link with the access road to Backdoor and Phatwa.
- A new road link, connecting the D363 road with the R538 and the D2743
- A public transport rank and bus stop is further proposed to be located on the proposed node at the intersection of the R538 and the D2689 roads.

6.3.8.6 Development Objectives

The following development objectives are adopted in order to develop Plaston as a Speciality Node of regional importance:

Map Symbol	Development Objective
	Establish a Node of regional importance at the R538-D2689 intersection with compaction of current and proposed mixed land uses to provide services within the defined areas.
	Provide for strategic mixed use and industrial development along the D2689 Road.
	Establish Integrated Human Settlement on defined areas in close proximity to employment opportunities.
	Improved mobility and accessibility through proper roads planning and upgrades.
	Establish an Industrial Development Zone of regional importance.
	Protect environmental sensitive areas through a dedicated open space system.

6.3.8.7 Spatial Proposals and Development Directives

Localised Node:

- A proposed localised node serving the broader Plaston area and the surrounding settlements is identified at the R538-D2689 roads.

- A number of existing business and industrial activities are located at the crossing and could further be strengthened.
- The future development of Plaston node should focus on the development of industrial, commercial, retail, tourism, social and community facilities, supported by medium to high density residential development.

Localised Corridor:

- The D812 and D2689 from Rocky Drift which traverses the Plaston area towards Kabokweni to the east is proposed as a localised corridor.
- A number of activities including business, industrial and commercial uses have located along this corridor and could further be simulated through the intensification of such uses.
- The aim is to exploit the regional accessibility provided by this route in order to utilize existing and future economic thrusts provided by the growing industrial sector within the area.

Strategic Mixed-Use Development

- The areas in between Backdoor and Dwaleni Settlements west of Kabokweni along the D2689 road and the area bounded by the river to the west the R538 road to the east is proposed for strategic mixed-use development in support of the proposed industrial development zone to the east and the Kabokweni CBD.
- High intensity of land uses including high density residential, commercial and business land uses will be supported in this area.

Industrial Growth Area

- Industrial development is promoted to the east, along the D2689 towards Kabokweni, including developments such as Technicrete manufactures, funeral offices, brick manufactures and commercial activities.
- The intention is to establish an Industrial Development Zone at the convergence of the three corridors to provide employment opportunities to the nearby eastern residential areas.

- Prime agricultural land surrounding Plaston provides the opportunity to establish agri-industries processing natural resources and servicing the agricultural sector.
- Establish interfaces between industrial and adjacent residential areas.

Future Housing or IHS

- The following areas have been reserved for Future Housing or the establishment of Integrated Human Settlements with the purposes of providing housing opportunities in close proximity to employment opportunities:
 - The area bounded by the proposed Plaston Node and Dwaleni Settlement, south of the D2689 road; and
 - The areas east of the R538 road.
- The provision of the full range of community facilities i.e.: schools, neighbourhood retail centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.

Greenfield Development Area

- The area bounded by Phathwa, Backdoor and Mbonisweni settlements to the east, White River to the west, Boonsteloop River to the north and the IDZ to the south, is reserved for Greenfield Development or future expansion, with the purpose of accommodating growth that is more diverse and has intensified urban form.
- Development within these areas should be strategically evaluated with the immediate surrounding and be restricted to areas falling outside environmentally sensitive areas.

Integrated open space

- White River, Rietbokloop and tributaries are important ecological corridors that should be protected.
- Floodline areas, steep slopes, rocky outcrops, river environments, wetlands, biodiversity sensitive areas, should remain undeveloped to form part of the MOSS.

- Development of environmental sensitive areas should be restricted and development should only be allowed after formal environmental procedures have been conformed with.

6.3.8.8 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 69):

Year 0 to Five (5) Years Spatial Development Direction

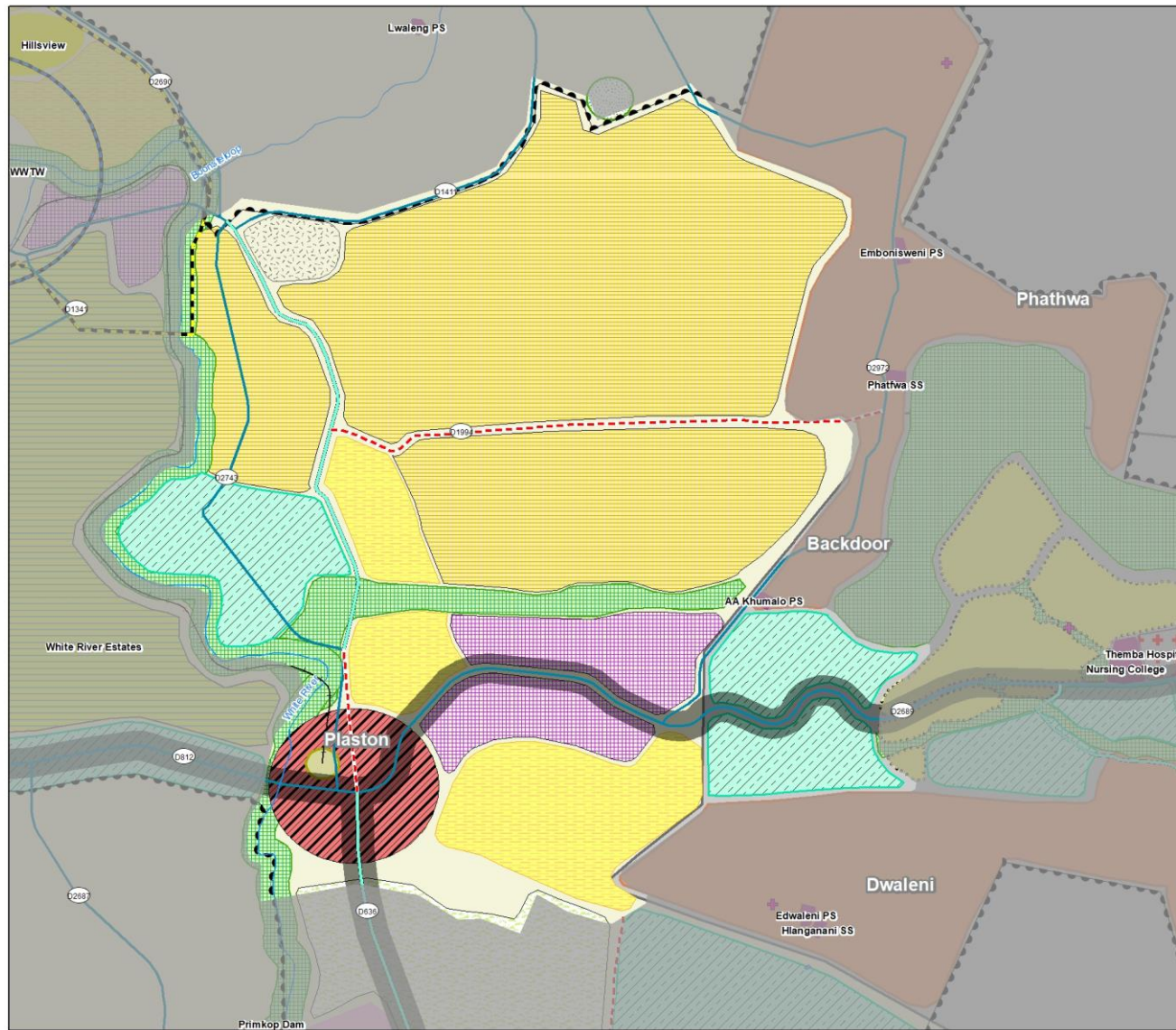
- Intensified development of light industrial, commercial, retail, tourism, social and community facilities, supported by medium to high density residential development on the identified node & corridor.
- Greenfield Development to accommodate new intensified urban land uses and provision of a full range of social facilities.
- Residential development & integrated human settlements.
- Light industrial development.
- New roads proposals, and upgrades.

Five (5) Years to Ten (10) Years Spatial Development Direction

- Greenfield Development to accommodate new intensified urban land uses and provision of a full range of social facilities.
- Strategic Mixed Land Use development.
- Future Housing Development & Integrated Human Settlements.
- Focus on service delivery to households within the area still lacking basic services.

Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.



SETTLEMENT PROPOSALS

PLASTON

Legend

- Provincial road
- Railway
- River
- Local municipality
- Urban edge

Spatial proposal

- New road proposal
- Road upgrade
- Agriculture cultivation
- Detailed local plan area
- Educational
- Future housing / IHS
- Greenfield development area
- Industrial growth area
- Localised corridor
- Localised node
- Quarry
- Rehabilitated landfill site
- Rural residential
- Strategic mixed use
- Upgrade focus & consolidation area
- Upgrade railway station

0 400 800 1,200 1,600 Meters

GAP

NORTH
SCALE: 1:25,000

DIGITAL earth

CITY OF MBOMBELA
THE ULTIMATE DESTINATION

2017 - 2035
Spatial Development Framework

Map 68: Plaston Strategic Spatial Framework

6.3.9 Kabokweni

Kabokweni is a formal township located approximately 40km south of Swalala, 17km north of Kanyamazane and 18km east of White River. The surrounding settlements serviced by Kabokweni includes Ngodini, Guthswakop, Backdoor, DwaleniTeka Takho and Nkohlakalo.

The Settlement is influenced by the surrounding mountainous areas (i.e. Gutshwakop), alignment of Ngodini River and its tributaries and alignment of main access roads (i.e.: D1411, P258/1, D2689).

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

6.3.9.1 Population Profile

The table below provides the summary of the current and projected population of Kabokweni:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
Kabokweni SP	16422	*	*	*	*
Teka Takho	3723	*	*	*	*
Kabokweni LA	1785	*	*	*	*
Ngodini SP	13365	*	*	*	*
Total	35295	35718.54	36147.16	36544.78	36910.23

6.3.9.2 Spatial Constraints

The spatial pattern of Kabokweni is negatively influence by the following constrains:

HIGH LEVEL SPATIAL CONSTRAINTS

- Lack of land for future expansion
- Settlements separated by topographical constraints (rivers and mountains)
- Traffic congestion and narrow main roads
- Uncontrolled access off main roads
- Illegal land invasion (informal settlement) and uncontrolled development along major roads
- Encroachment onto main roads and environmental sensitive areas
- Conflict between pedestrian and vehicular traffic

6.3.9.3 Spatial Opportunities

The Kabokweni area possesses the following spatial opportunities which can be utilized to reform the spatial structure of the area:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Regional access provided by the P258/1, D2689
- Anchor developments providing regional services (Hospital, College, Sports Stadium, Factories etc.)
- Human resources, large labour force and buying power
- Available public transport
- Already established CBD

6.3.9.4 Development Trends & Interventions

- The Kabokweni area has not experienced high impact development over the years, besides uncontrolled illegal businesses settling along main roads and the ongoing formalisation of informal settlements.
- However prominent long standing development includes the Kabokweni Shopping Centre, Themba Hospital and Nursing College, Kabokweni Sports Stadium, Kabokweni Industrial and Elijah Mango College.

6.3.9.5 Roads & Pubic Transport

- The following road proposals will promote the functional integration of Kabokweni to surrounding areas and improve the accessibility/legibility of the area itself:
- The following new roads are proposed:
 - The southern extension of road D2970 to Mgweyane Primary School;
 - A north-south road running parallel to Ngodini River, linking Vulindlela Secondary School to the CBD; and
 - A road across Ngodini River, linking the P258/1 road to Elijah Mango School.
- It is further proposed that the gravel road linking the P258/1 with the D2689, through the industrial area, be upgraded.
- A public transport rank is proposed at the D2689-P258-1 intersection. This transport rank should be provided with the necessary infrastructure i.e.: shelters, ablution facilities, trade space (vendors), security facilities etc.

6.3.9.6 Development Objectives

Identified as an activity node, the following development objectives are adopted towards the development of the area:

Map Symbol	Development Objective
	Consolidate the different components of the CBD to form a unified high intensity regional mixed-use centre.
	Revitalize the Kabokweni Industrial area into a Strategic Mixed-Use area.
	Develop Kabokweni Sports Stadium into a significant sports and recreational node.
	Accommodate growth through strategic densification and infill development.
	Promote vehicular and pedestrian connectivity between neighbourhoods.
	Consolidate the different components of the CBD to form a unified high intensity regional mixed-use centre.

6.3.9.7 Spatial Proposals & Development Directives

Localised Corridor

- The D2689 which traverse the area from Plaston in the east towards the west is proposed as a localised corridor.
- A number of existing business and industrial activities are located along this corridor and could further be strengthened by inclusion of more land uses.

CBD Upgrade

- Emphasis should be on consolidating the different components of the CBD to form unified regional mixed-use centres through urban renewal initiatives.
- An opportunity exists to expand the capacity of the CBD towards the east, in the area between Themba Hospital and the CBD to accommodate more residential, business and commercial land uses.
- Strengthen businesses within the existing CBD and provide dedicated areas for informal traders and pedestrians.
- A centralized taxi/bus rank should be provided in this zone.

Strategic Mixed Use

- The following areas are reserved for strategic mixed land use:
 - The area located between Themba Hospital and Kabokweni CBD; and
 - The areas south of the D2689 and north of the Dwaleni settlement.
- High intensity development requiring good access, visual exposure and a diverse combination of land uses are promoted within this area.
- The aim is to exploit the regional status provided by the area to provide for commercial, business and social amenities, in order to improve the social and economic viability of the area.

Residential Densification

The following areas are earmarked for residential densification:

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

Upgrade Focus and Consolidation Area

- Settlements located to the west of Ngodini River, around Elijah Mango School are identified as upgrade focus and consolidation areas.
- Upgrading initiatives should focus on, inter alia, the following:
 - Formal township establishment and land tenure upgrade;
 - Relocation of settlements located in environmental sensitive areas (steep slopes, 1:100 year flood line etc);
 - Upgrade of engineering services (sanitation, water supply, electricity and storm water); and

- Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.

- Informal settlement on the fringes of Kabokweni and in public open spaces, steep slopes should be avoided.
- Contain urban expansion/demarcation of sites within the proposed urban edge.

Sports and recreation

Develop Kabokweni Stadium into a significant sports and recreational node through improving accessibility, sufficient parking and manoeuvring space and development of related recreational facilities (i.e.: swimming pool, a multi-purpose sports centre and courts to play tennis, basketball, netball, volleyball etc.)

Integrated open space

- The banks of the Ngodini River and its tributaries are regarded as environmental sensitive with conservation value.
- Mountainous areas to the north (Gutshwakop), south and east should remain undeveloped and preserved for grazing and eco-tourism.
- Rivers, wetlands and natural forests should be protected against any form of development. Development should only be allowed after formal procedures have been conformed with, as specified in environmental legislation.
- The protection of public open space should be made a priority and the 1:100 Floodline areas need to be cleared from settlement.
- Open spaces need to be functional and developments fronting onto parks should be sensitive to the character and functioning of the park.
- Sand mining within the Ngodini River, can only take place after the consent of the Department of Mineral Resources has been obtained.

6.3.9.8 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map71):

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of commercial, social, business, retail and light industrial land uses to be established in identified local node, along corridors and the areas earmarked for strategic mixed use.
- Strategic Mixed Use Development.
- CBD upgrade.
- New roads proposals, and upgrades.
- Residential densification is motivated in exiting residential areas.

Five (5) Years to Ten (10) Years Spatial Development Direction

- Residential Densification & Infill Development.
- Residential formalisation of informal areas.
- Focus on service delivery to households within the area still lacking basic services.
- Future Housing & Integrated Human Settlements.
- New Roads proposals & upgrades.
- Greenfield Development to accommodate new intensified urban land uses and provision of a full range of social facilities.

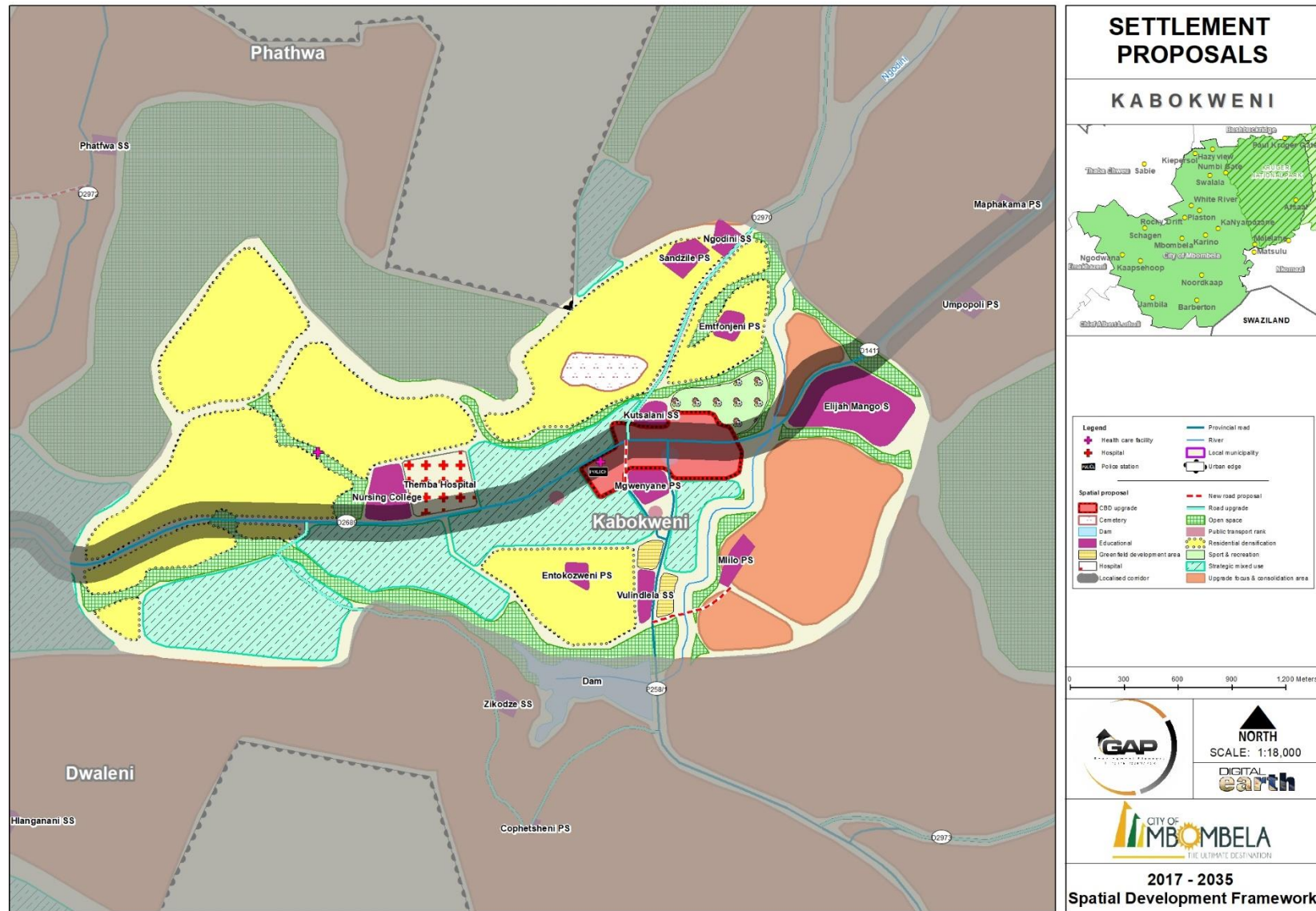
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.
- Tourism & Accommodation.
- Agriculture.

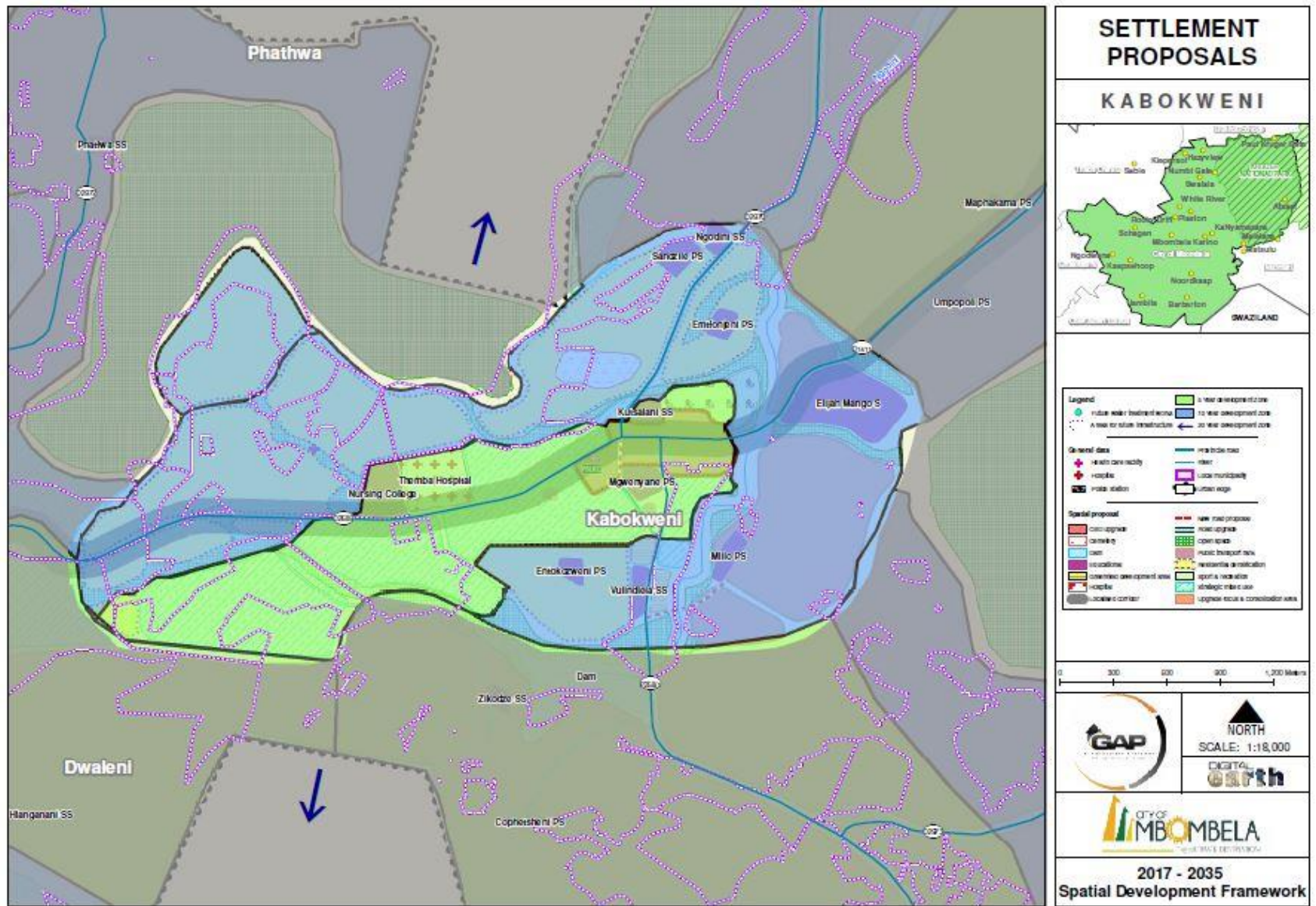
Areas for Future Infrastructure

- As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure investment:

- Areas north & south of the D2689 road including Teka Takho, Kabokweni Extensions, Ngodini, etc; and
- The area south of the CBD.



Map 70: Kabokweni Strategic Spatial Framework



Map 71: Kabokweni Spatial Development Pattern

6.3.10 Swalala

Located approximately 15km south of Hazyview and 25km north of White River, Swalala is central to the greater Masoyi area and provides services to the deprived areas of Manzini, Jerusalem, Phola, Mshadza and Lundi. Swalala forms part of the Masoyi Traditional Authority and, is subjected to poor urban management with a low economic base.

6.3.10.1 Population Profile

The Swalala area forms part of the Masoyi Traditional Authority, therefore the population of the area is summarised under the Masoyi Framework.

6.3.10.2 Spatial Constraints

Several spatial constraints including the following elements have certain spatial limitations:

HIGH LEVEL SPATIAL CONSTRAINTS

- Highly fragmented spatial structure
- Poor connectivity to urban centres – limited transport options and long distance from economic centres
- Low inter dependence and functional coherence with any urban centres
- Very low economic base and limited land for future development
- Illegal land invasion and mushrooming of informal settlements
- Encroachment onto P17/6 road and environmental sensitive areas
- Insufficient bulk water supply
- Lack of focal point and uncontrolled business development along the R538
- Poor internal road access and stormwater problems
- Lack of engineering services and social infrastructure
- Conflict between pedestrian and vehicular traffic

6.3.10.3 Spatial Opportunities

Some of the most prominent features which contribute to a well defined spatial structure are summarised as follows:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Good Regional access provided by the P17/6
- Good Local access provided by the D2969 and D2967
- Human resources, large labour force and buying power
- Opportunity for Nodal development at the intersection of main roads
- Opportunity of transit-oriented development or development requiring good road access and visual exposure

6.3.10.4 Development Trends & Interventions

- The Swalala area has a low economic base with few development initiatives taking place within the area.
- Uncontrolled industrial, commercial and business activities are located along the P17/6 (R538 road) and at the intersections of the R538 with the D2969 and D2967 respectively.

6.3.10.5 Roads and Public Transport

- The following road proposals will improve accessibility, increase mobility on the P17/6 and ensure connectivity between different communities:
- The following road upgrades are proposed:
 - D2967 road linking to Mashadza node;
 - D2969 road linking to the P17/6; and
 - D2967 linking Numbi road to Chwein in the south.

- The following new roads are proposed:
 - The re-alignment of the P17/6 to increase mobility along the route;
 - East-west linkages across the P17/6 road;
 - Extending road D2967 to link to the new alignment of the P17/6; and
 - Develop parallel connecting side roads to minimise direct access off the P17/6 road.
- As part of improving connectivity with other areas, a public transport rank is proposed at the D2967-P17/6 intersection. This transport rank should be provided with the necessary infrastructure.

6.3.10.6 Development Objectives

Identified as a 2nd Order Activity Node in the SDF, the following development objectives are adopted in order to develop Swalala into the desired node:

Map Symbol	Development Objective
	Create stronger nodal developments of compaction and mixed land uses.
	Improved access to economic nodes by creating strong connectivity through proper road planning and public transport .
	Promote a more diverse combination of land uses with the purpose of improving the economic and social viability of the area.
	Ensure densification and infill development in support of nodal development.
	Protect environmental sensitives areas from encroachments.
	Create stronger nodal developments of compaction and mixed land uses.

6.3.10.7 Spatial Proposals & Development Directives

Localised Nodes:

- Two localised nodes are proposed at the points where the P17/6 (R538 activity road) intersect with the D2969 & D2967 roads respectively.
- A few business, industrial and social land uses have concentrated around this point and could further be diversified by the inclusion of land uses.
- Economic opportunity for this nodal area rests in the fact that people travelling to and from Hazyview & Whiteriver through the municipality could serve as potential customers to commercial and retail uses located here.
- The development of Mshadza Stadium into a sports and recreational node of significance should include the upgrade of existing facilities, improving access (pedestrian and vehicular) off the P17/6 road, a multi-purpose sports centre and courts to play tennis, basketball, netball, volleyball etc.

Strategic Mixed Land Use:

- A more diverse combination of land uses along the P17/6 road is promoted to include developments that require good access and visual exposure.
- Depending on the intensity of activity, the width of the strip could range from half a street block to two or more street blocks.
- The aim is to exploit the regional accessibility provided by the P17/6 to provide for commercial, business, industrial land uses and social amenities, in order to improve the social viability of the area.

Greenfield Development Area

- The area north-west of the Legogote settlement is identified as an expansion area reserved for future development, including residential development.

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

Upgrade Priority and Consolidation Zone

An upgrade priority and consolidation zone is identified in the areas or settlements east and west of the P17/6 road. Upgrade initiative should focus on the following:

- Formal township establishment and land tenure upgrade;
- On-going commitment to the provision and upgrading of engineering services to meet the standards and needs of the local area;
- The provision of high quality social infrastructure and public facilities is a priority focus of the development strategy;
- Formalisation and upgrading of informal settlements. Poorly located informal settlements should be relocated to the closest possible proximity of employment centres;
- Promotion of local economic opportunities within settlements, concentrated around public transit stations;
- Improve connections and affordable public transport options to economic centres and job opportunities;
- Promote economic growth and job creation in the priority economic zones; and
- Provision of high quality public transport and upgrading of precincts around public transport nodes such as taxi ranks, interchanges, etc.

Integrated open space

- Steep slopes and “koppies” surrounding Swalala should remain undeveloped and reserved for conservation or grazing purposes.
- Rivers, wetlands and natural forests should be protected against any form of development. Development should only be allowed after formal procedures have been conformed to, as specified in environmental legislation.
- The protection of public open space is a priority and the 1:100 flood line areas need to be determined and protected.
- Open spaces need to be functional and developments fronting onto parks should be sensitive to the character and functioning of the park.

6.3.10.8 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 73):

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of commercial, social, business, retail and light industrial land uses to be established in identified local node, along corridors and the areas earmarked for strategic mixed use.
- Diverse combination of land uses to include developments that require good access and visual exposure.
- New roads proposals, and upgrades.
- Residential formalisation and provision of a full range of services.

Five (5) Years to Ten (10) Years Spatial Development Direction

- Residential formalisation and provision of a full range of services and provision of a full range of social facilities.
- New roads proposals & upgrades.
- Focus on service delivery to households within the area still lacking basic services.

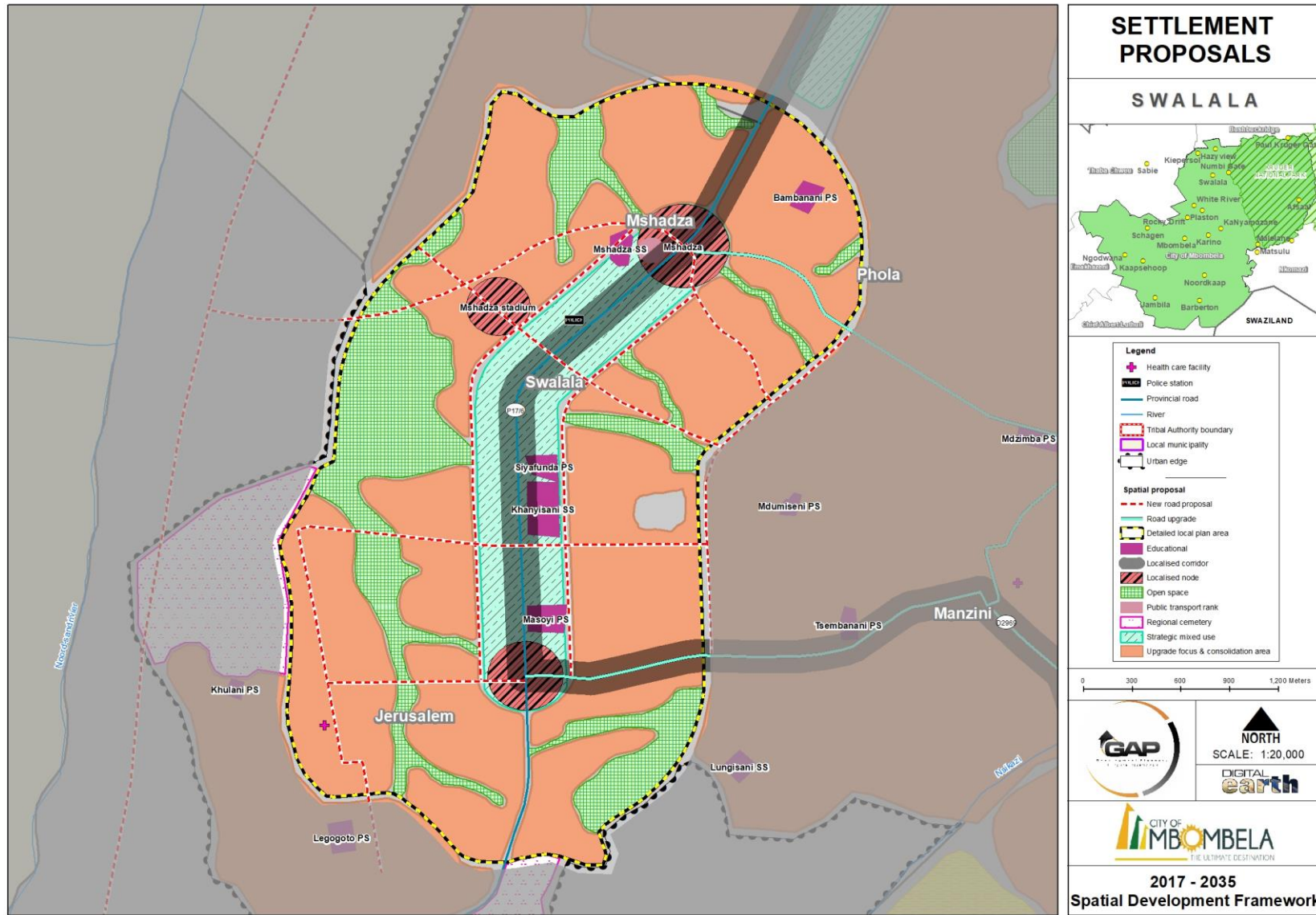
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development

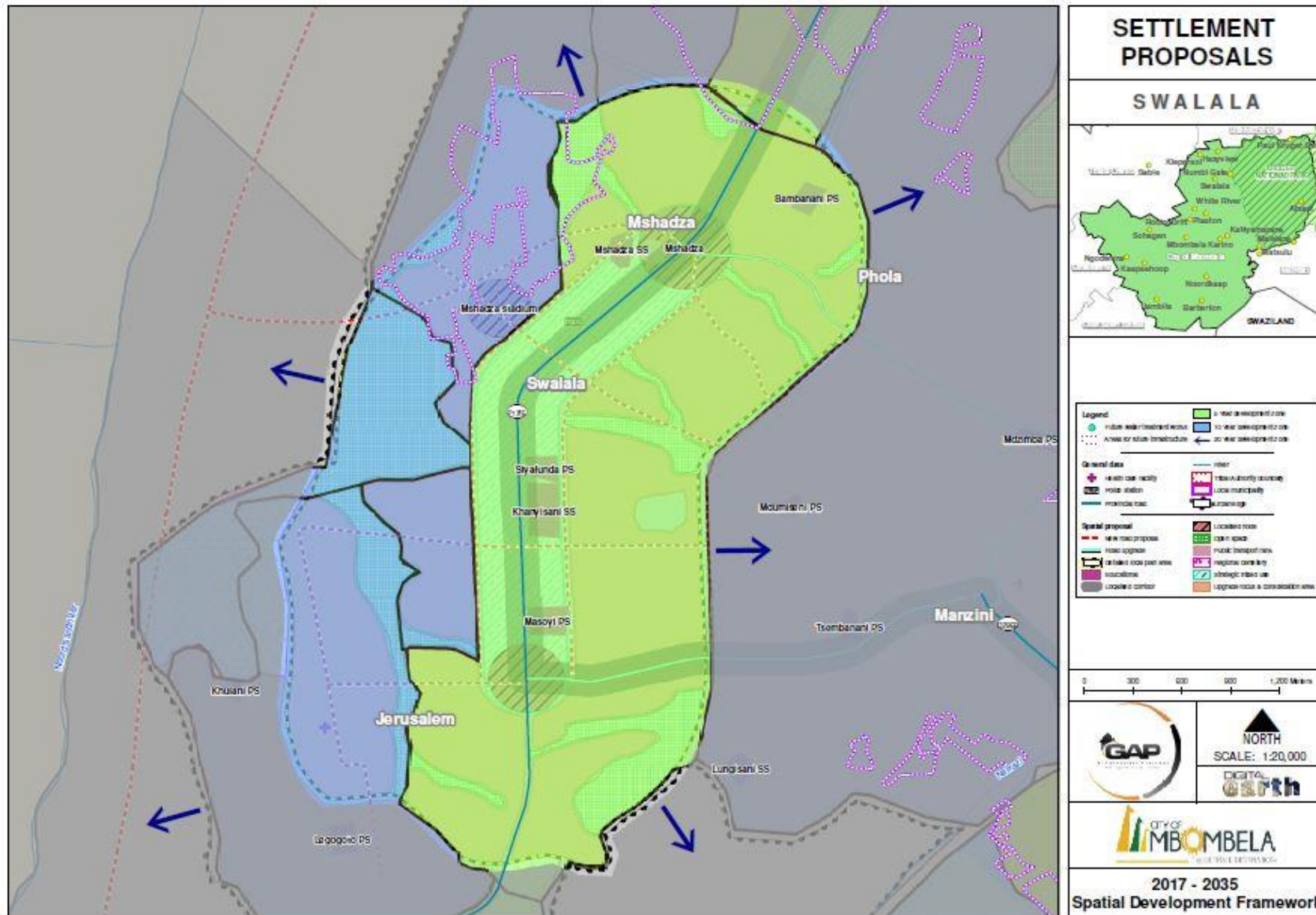
Areas for Future Infrastructure

As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure:

- The areas around Mshandza stadium.



Map 72: Swalala Strategic Spatial Framework



Map 73: Swalala Spatial Development Pattern

6.3.11 Matsulu

Matsulu is situated approximately 45 km east of Mbombela wedged by the Kruger National Park, Mthethomusha Nature Reserve and the N4 highway. Matsulu is predominantly residential consisting of formal townships with limited retail and social amenities.

Its proximity to the N4 makes it a rapid growing area with a high influx of people leading to informal settlement and pressure on municipal services.

6.3.11.1 Population Profile

The table below summarises the current and projected population of the Matsulu area over the planning horizon of the SDF:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
Matsulu C	22797	*	*	*	*
Matsulu B	13923	*	*	*	*
Matsulu A	10584	*	*	*	*
Makawusi SP	2625	*	*	*	*
Total	49929	50528.15	51134.49	51696.97	52213.93

6.3.11.2 Spatial Constraints

One of the major spatial constraints of Matsulu is that it's fairly secluded, situated in the easternmost part of the municipality far from employment and economic opportunities. Matsulu further has the following spatial constraints:

HIGH LEVEL SPATIAL CONSTRAINTS

- Located far from economic centres and employment opportunities
- Limited social and retail facilities
- Growing informal settlements and encroachments on limited suitable land for development
- Housing backlog
- Limited land available for future expansion
- Encroachment onto environmental sensitive areas and parks
- Lack of focus point and secluded shopping facilities
- Uncontrolled development along major roads
- Insufficient bulk water supply
- Lack of focal point and uncontrolled business development along major roads

6.3.11.3 Spatial Opportunities

Spatial opportunities found in the Matsulu area include the following:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Good Regional access provided by the N4 national road
- Proximity to Kruger National Park and Mthethomusha Game Reserve
- Available Public Transport
- Developments with regional significance (Cultural Centre, Sports Stadium, District Offices)

6.3.11.4 Development Trends & Interventions

- The areas have not experienced any formal development initiatives over the years other than Uncontrolled informal business development that tends to locate along main roads and the newly constructed municipal fire station and minor extension of the existing shopping complex.
- Due to the lack of available land Matsulu does not position its self as a focus area for future growth or expansion however few development areas are being proposed within the area.

6.3.11.5 Roads & Public Transport

- The rivers, railway infrastructure and alignment of the N4 make Matsulu rather inaccessible to the N4.
- The following road proposals and upgrades will promote connectivity of the different areas within and around Matsulu:
- The following new road links are proposed:
 - The existing D2977 connecting Matsulu with the N4 does not provide direct linkage but takes a detour to the west before reaching the N4. A direct link to the N4 is proposed, being the extension of Masakhane Street across the Crocodile River;
 - Connecting Matsulu B and C with a link across the railway line, being the extension of Fleet Street to Ligibholi Street; and
 - A new road is proposed between Matsulu and Lumphisi, being the northern extension of Ligibholi Street. This will only be a priority if the new gate at Lumphisi realises.
- The following road upgrades are proposed:
 - The gravel road linking Silulu Cultural Centre with the cemetery and Matsulu B in the north;
 - The road linking Nkululeko District Office to D2977; and
 - The access collector in Matsulu B.

6.3.11.6 Development Objectives

As a second order node, the following development objectives are adopted in order to enhance its role as the desired node:

Map Symbol	Development Objective
	Create stronger nodal developments of compaction and mixed land uses.
	Accommodate growth through strategic densification.
	Provide for more diversified land uses along major roads to encouraged transit orientated development.
	Improve mobility and connectivity trough proper roads planning and upgrades.
	Exploit Matsulu's proximity to the Kruger National Park.
	Establish an Integrated Open Space System.

6.3.11.7 Spatial Proposals & Development Directives

Localised Node

- Two localised nodes are proposed at the intersection of the D2977 road and the N4 high ways as well as the intersection of Madiba Drive & Simunye Street.
- A few businesses, social and government facilities have concentrated around these points.
- Further nodal development presents itself through the upgrade of the existing shopping centre node in the eastern part of Matsulu to ensure the integration of social and business facilities and optimal convenience to local residents.

Localised Corridor

- The D22977-Madiba Drive which traverses on the southern parts of the area from the N4 towards the east on the existing shopping complex is proposed as a localised node.

- Uncontrolled business and light industrial development have chosen to locate in this corridor and could further be stimulated through formalization and inclusion of more diversified land uses by means of social amenities, business and commercial.

Strategic Mixed Land Use

- Higher intensity and diverse combination of land uses are promoted along the D2977 main access road to Matsulu, including developments that require good access and visual exposure.
- The aim is to exploit the regional accessibility provided by this road to provide for commercial, business and social amenities, in order to improve the social and economic viability of the area.

Greenfield Development Area

The area located between the N4 and Crocodile River, opposite the Silulu Cultural Centre, is reserved for purpose of new development to include business, residential and retail land uses without resulting in the unavoidable loss of prime agricultural land.

Residential Densification

- The following areas are earmarked for residential densification:
 - Higher residential densities are supported within and around economic opportunity zones and close to public transport stations;
 - Support and promote residential densification (group housing and flats) in existing residential areas of Matsulu A, B and C; and
 - Refer to Residential densification policy.

Upgrade Focus and Consolidation Area

- The settlements located to the west, north and south of Matsulu B and north of the D2977 road are identified as upgrade priority areas. Upgrading initiatives should focus on, *inter alia*, the following:
 - Formal township establishment and land tenure upgrade;

- Relocation of settlements located in environmental sensitive areas (steep slopes, 1:100 year flood line etc);
- Provision of engineering services (sanitation, water supply, electricity and storm water);
- Provision of sufficient social infrastructure and services to enhance the quality of life of these communities;
- Prevent further informal settlement on the perimeters of Matsulu; and
- Contain urban expansion/demarcation of sites within the proposed urban edge.

Integrated open space

- The banks of the Crocodile and Nsikazi Rivers are regarded as environmentally sensitive with conservation value.
- Mountainous areas located to the west and north should remain undeveloped and reserved for eco-tourism and grazing purposes.
- The protection of public open space should be made a priority and the 1:100 Floodline areas need to be cleared from settlement.
- Rivers, wetlands and natural forests should be protected against any form of development. Development should only be allowed after formal procedures have been conformed with, as specified in environmental legislation.
- Open spaces need to be functional and developments fronting onto parks should be sensitive to the character and functioning of the park.

6.3.11.8 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map75):

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of commercial, social, business, retail and light industrial land uses to be established in identified local node, along corridors and the areas earmarked for strategic mixed use.

- Greenfield Development to accommodate new intensified urban land uses and provision of a full range of social facilities.
- Strategic Mixed Use Development.
- Residential formalisation of informal areas.
- New roads proposals, and upgrades .
- Residential densification is motivated in existing residential areas.

Five (5) Years to Ten (10) Years Spatial Development Direction

- Residential Densification & Infill Development.
- Residential formalisation of informal areas.
- Focus on service delivery to households within the area still lacking basic services.

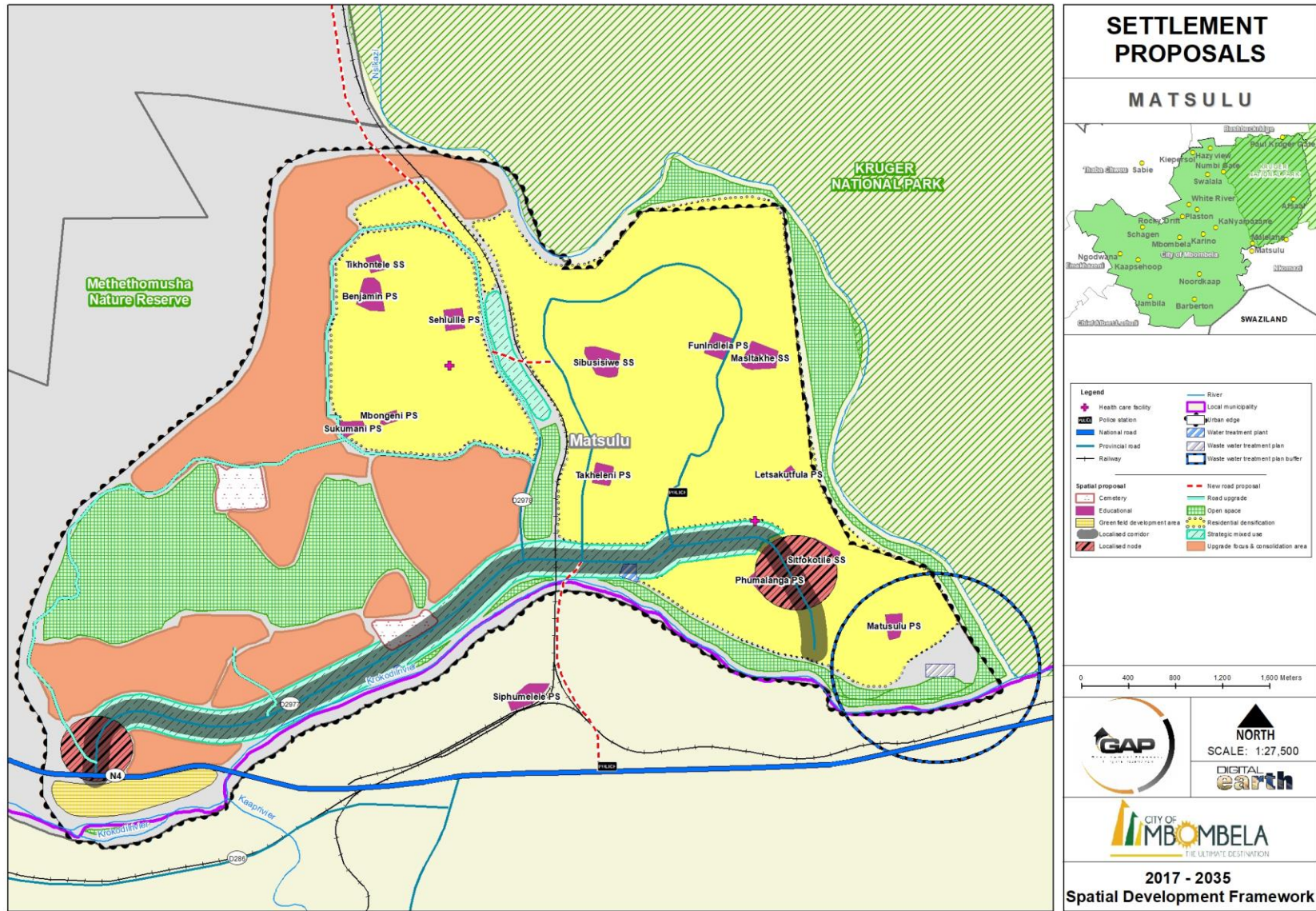
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.

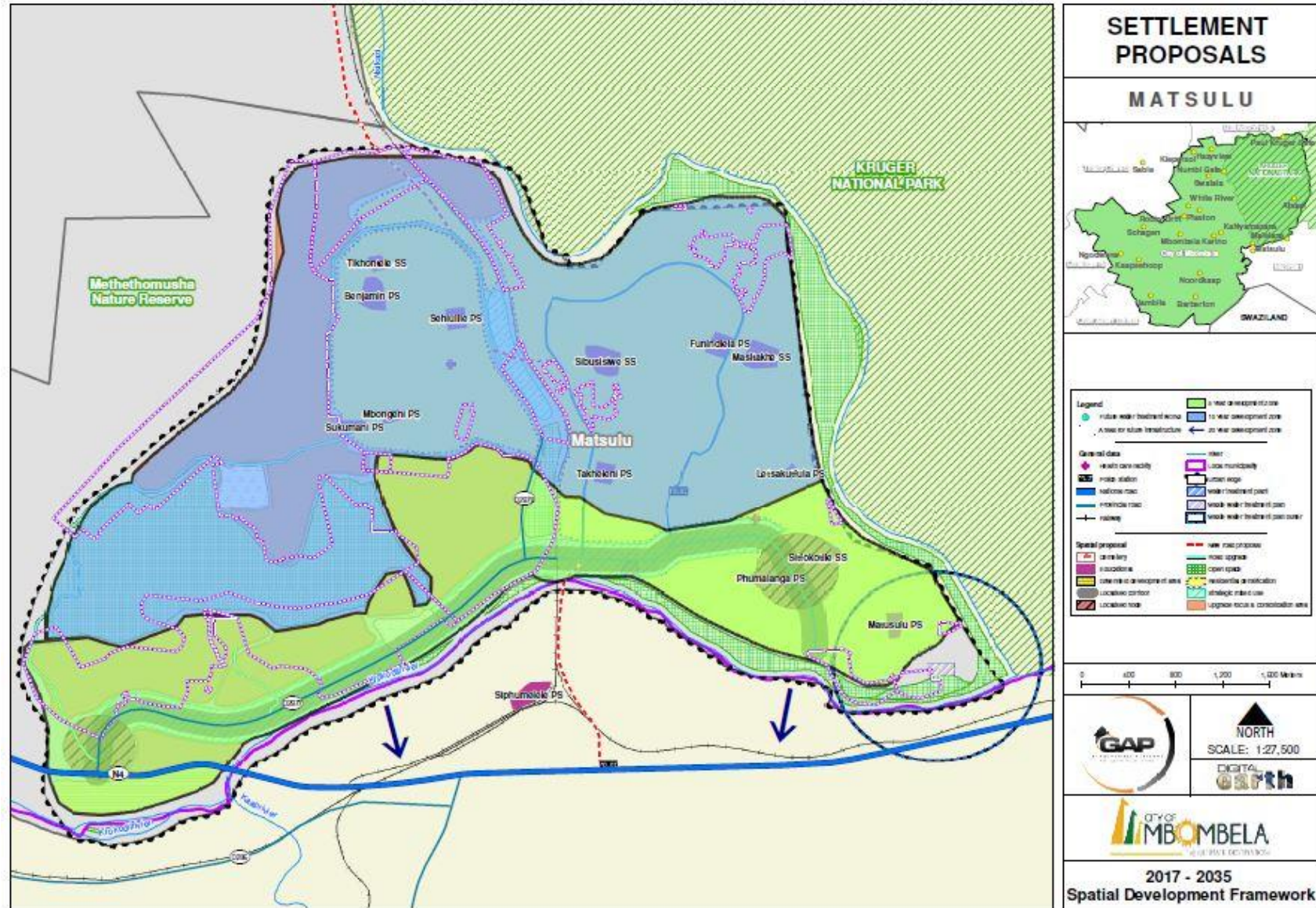
Areas for Future Infrastructure

As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure:

- The settlements located to the west, north and south of Matsulu B and north of the D2977 road are identified for infrastructure provision; and
- Other identified informal areas.



Map 74: Matsulu Strategic Spatial Framework



Map 75: Matsulu Spatial Development Pattern

6.3.12 Kanyamazane

Kanyamazane is a township situated about 30km east of Mbombela, 17km south of Kabokweni and was established in 1978 as a labour force reserved zoned to fall within the Kangwane homeland. It was also part of the housing project for the employees of a mining processing company based in the former Nelspruit.

Kanyamazane forms a continuous built-up area that links to Msogwana in the north and the open space along north-south configuration of Kanyamazane can be ascribed to the surrounding mountainous areas and a prominent tributary of the Crocodile River, separating the area in an eastern and western half.

6.3.12.1 Population Profile

The population of Kanyamazane is summarized and projected in the table below:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
		2018	2025	2030	2035
Kanyamazane-A	34593	*	*	*	*
Entokozweni SP	489	*	*	*	*
Total	35082	35502.9	35929.0	36324.2	36687.4
		8	2	4	8

6.3.12.2 Spatial Constraints

As a victim of residential segregation the Kanyamazane area poses the following spatial constraints:

HIGH LEVEL SPATIAL CONSTRAINTS

- Uncontrolled informal settlement in open spaces and flood line areas
- Informal trade along main roads
- Uncontrolled and unsafe access off main roads
- Conflict between pedestrian and vehicular traffic
- Lack of land for extension due to topography
- Settlements separated by rivers and ridges
- Poor linkage to the west (except for the N4 and Kanyamazane road)

6.3.12.3 Spatial Opportunities

Based on its existing structural elements the Kanyamazane area presents the following spatial opportunities:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Opportunity for densification and infill development of vacant and underutilised land
- Opportunity to upgrade the CBD and Sports Stadium
- Develop river corridors to facilitate pedestrian movement
- Opportunity to Improve linkages between communities and the CBD through proper roads planning and upgrades
- Regional access provided by the N4
- A well-established CBD
- Anchor developments providing regional services
- Human resources, large labour force and buying power

6.3.12.4 Development Trends & Interventions

- Kanyamazane provides a variety of social, retail, personal and industrial services scattered throughout the area.
- Prominent development includes the Kanyamazane Shopping Centres, Kanyamazane Sports Stadium, Ehlanzeni Regional Offices and FET College.
- Informal Businesses tend to locate along main roads (Chris Hani Street).
- The area has constantly experienced several services upgrades including the surfacing of gravel roads and the ongoing Sport & Recreation centre development adjacent to the Shopping Complex.

6.3.12.5 Roads & Public Transport

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

- The following road upgrades are recommended:
 - ✓ Upgrade Inhlanzi Street running parallel east of Chris Hani Street;
 - ✓ Pharaphara Umgwaco Street providing access to Catfulani Primary School; and
 - ✓ Upgrade Red Baron Street north of the Stadium.
- The following new roads are proposed:
 - ✓ A new link between Kanyamazane CBD and the node at the Chris Hani-Dr E.J. Mabuza Umgwaco intersection;
 - ✓ A road between the CBD and Sports Stadium;
 - ✓ The southern extension of Cobra Street, linking Wasp Street with Pharaphara Umgwaco Street; and
 - ✓ A new link between Moya and Imphisi Streets.
- As part of the Bus Rapid Transit system, the existing public transport rank at Kanyamazane CBD should be upgraded. This transport rank should be

provided with the necessary infrastructure i.e.: shelter, ablution facilities, trade space (vendors), security facilities etc.

6.3.12.6 Development Objectives

The following strategic objectives are adopted in order to develop Kanyamazane into a 1st order activity node.

Map Symbol	Development Objective
	Consolidate the different components of the CBD to form a unified high intensity regional mixed use centre.
	Focus strategic mixed land uses development along Chris Hani Street.
	Improve mobility, integration and accessibility through proper road links and upgrades.
	Accommodate growth through residential densification & infill development.
	Develop Kanyamazane Stadium into a significant sports and recreational node.
	Establish a well-defined open space system and remove settlement within the 1:100 year flood line.

6.3.12.7 Spatial Proposals & Development Directives

Localised Node:

- Two localised nodes are proposed at the intersection of Chris Hani and Dr E.J. Mabuza Umgwaco Streets in the north and the intersection of Chris Hani Street with the Kanyamazane Road in the south.
- Business and other related land uses have already settled at these points and could further be stimulated by including a variety of land uses such as retail, business, commercial, institutional and residential and/or services facilities.

Localised Corridor:

- The Chris Hani Street which traverses the area from the south towards the north, linking the two proposed Nodes is identified as an activity corridor.
- Business, industrial and other land uses have already settled along this corridor.
- Higher intensity uses, including developments that require good access and visual exposure, are promoted along this corridor.

CBD Upgrade

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

Strategic Mixed Used

- Strategic Mixed Use is encouraged along the Chiris Hani Street, two blocks away in the eastern side.
- The aim is to utilise the opportunity provided by this street for activity corridor development.
- High intensity development requiring good access, visual exposure and a diverse combination of land uses are promoted within this area.

Residential densification

The following areas are earmarked for residential densification:

- Higher residential densities are supported within and around economic opportunity zones and close to public transport ranks.
- Promote residential densification in identified residential areas.

Upgrade Focus and Consolidation Area

- Informal settlements located to the west of Dr E.J. Mabuza Umgwaco Street, east of the CBD and around the FET College are identified as upgrade focus areas.
- Upgrading initiatives should focus on, *inter alia*, the following:
 - Formal township establishment and land tenure upgrade;
 - Relocation of settlements in environmental sensitive areas (steep slopes, 1:100 year flood line etc);
 - Engineering services provision (sanitation, water supply, electricity and storm water); and
 - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
- Prevent further informal settlement on the perimeters of Kanyamazane.
- Contain urban expansion/demarcation of sites within the proposed urban edge.

Sports and recreation

- Develop Kanyamazane Stadium into a significant sports and recreational node through improving accessibility, sufficient parking and manoeuvring space and development of related recreational facilities (i.e.: swimming pool, a multi-purpose sports centre and courts to play tennis, basketball, netball, volleyball etc.)

Integrated open space

- Steep slopes and “koppies” surrounding Kanyamazane should remain undeveloped and reserved for conservation and grazing purposes.

- The banks of the Crocodile River are regarded as environmentally sensitive with conservation value.
- Rivers, wetlands and natural forests should be protected against any form of development. Development should only be allowed after formal procedures have been conformed to, as specified in environmental legislation.
- The protection of public open space is a priority and the 1:100 Floodline areas need to be protected.
- Open spaces need to be functional and developments fronting onto parks should be sensitive to the character and functioning of the park.

6.3.12.8 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map77):

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of commercial, social, business, retail and light industrial land uses to be established in identified local node, along corridors and the areas earmarked for strategic mixed use.
- Strategic Mixed Use Development.
- CBD upgrade.
- New roads proposals, and upgrades.
- Residential densification is motivated in existing residential areas.

Five (5) Years to Ten (10) Years Spatial Development Direction

- Residential Densification & Infill Development.
- Residential formalisation of informal areas.
- Focus on service delivery to households within the area still lacking basic services.
- New Roads proposals & upgrades.

Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.

Areas for Future Infrastructure

As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure:

- Areas located to the west of Dr E.J. Mabuza Umgwaco Street, east of the CBD and around the FET College are identified as upgrade focus areas.



SETTLEMENT PROPOSALS

KANYAMAZANE

Legend	
	Local municipality
	Urban edge
	Water treatment plant
	Waste water treatment plan
	Waste water treatment plan buffer

Spatial proposal	
	Future waste water treatment plan
	Open space
	Sport & recreation
	Residential densification
	Strategic mixed use
	Upgrade focus & consolidation area

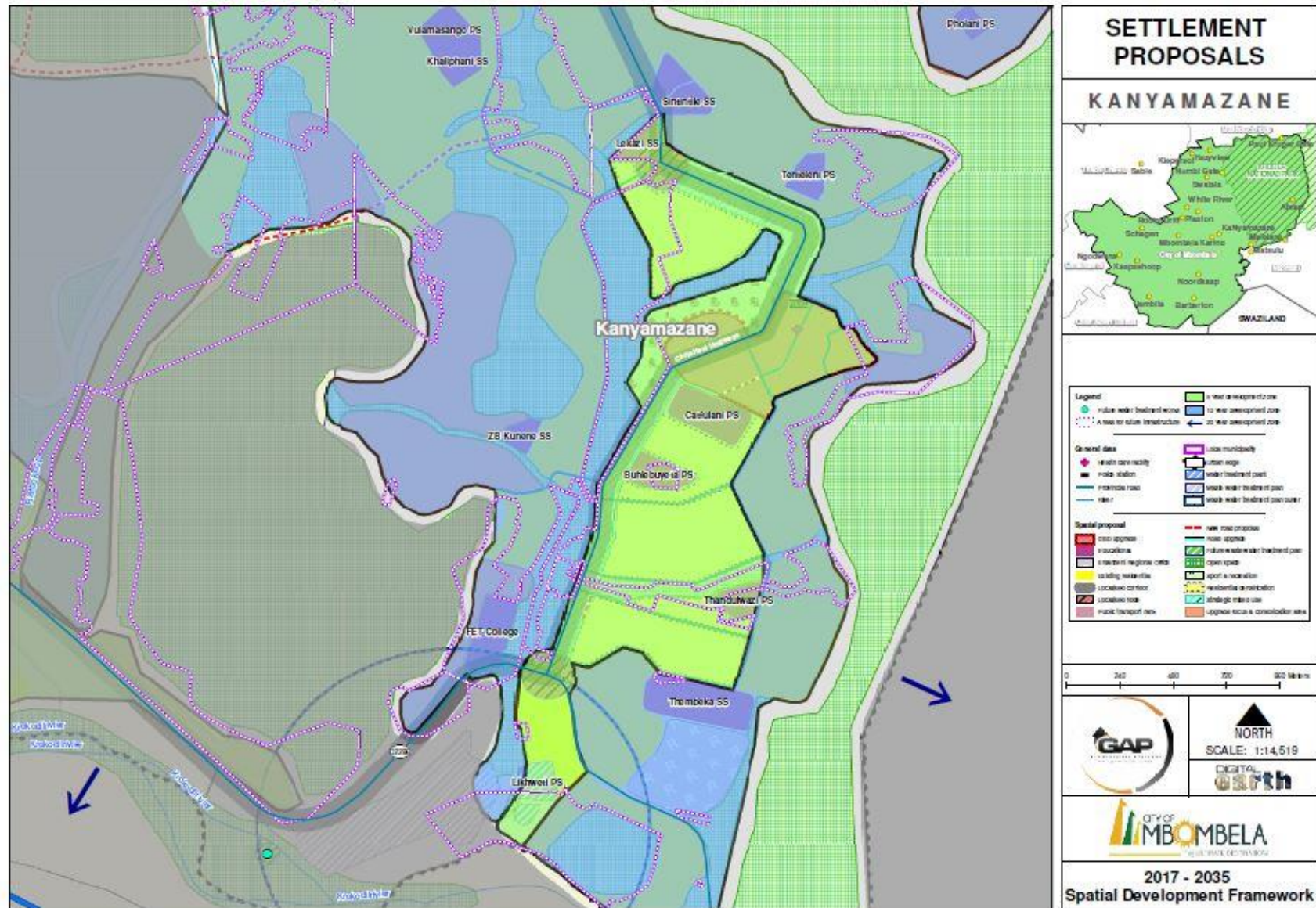
0 250 500 750 1,000 Meters

NORTH SCALE: 1:14,519

THE ULTIMATE DESTINATION

2017 - 2035
Spatial Development Framework

Map 76: Kanyamazane Strategic Spatial Framework



Map 77: Kanyamazane Spatial Development Pattern

6.4 TRADITIONAL AUTHORITIES STRATEGIC SPATIAL FRAMEWORKS

Traditional Authorities Strategic Spatial Frameworks outlining the spatial concept and the desired spatial pattern of the municipality are prepared for the following traditional authority areas:

- Nkambeni Traditional Authority
- Gutshwa Traditional Authority
- Msogwaba Traditional Authority
- Mbuyane Traditional Authority
- Masoyi Traditional Authority
- Mdluli Traditional Authority
- Mpakeni Traditional Authority
- Kgarudi Traditional Authority
- Lomshiyo Traditional Authority
- Umjindini Trust Traditional Authority

6.4.1 Nkambeni Traditional Authority

Nkambeni Traditional Authority is situated in the northern region of Mbombela, with Hazyview being the closest town towards the north-east of the area. The area is bordered by Bushbuckridge Local Municipality to the north, the Kruger National Park to the east, Mdluli and Masoyi Traditional Authorities to the south and the North-Sand River to the west.

The settlements of Shabalala, Nyongane, Nkambeni, Mahushu, Bekiswayo, Numbi and Salubindza form part of the area. The main access roads linking these settlements are the P17/6, P33/5 to Phabeni Gate and P113/1 to Numbi Gate.

6.4.1.1 Population Profile

The influx of people into the area is high and the population of the area is summarized and projected in the table below:

	Projected Population

Sub Place or Enumeration Area	Total Population	2011-2018: 1.2% 2018-2025: 1.2% 2025-2030: 1.1% 2030-2035: 1.0%			
		2018	2025	2030	2035
Tshabalala SP2	1965	*	*	*	*
Nkambeni SP	7803	*	*	*	*
Mahushu SP	16947	*	*	*	*
Numbi SP	7695	*	*	*	*
Salubindza SP	4698	*	*	*	*
Total	39108	39577	40052.2	40493	40897.7

6.4.1.2 Spatial Constraints

Informal settlements are growing rapidly within this area, mainly along major roads, resulting into the following spatial constraints:

HIGH LEVEL SPATIAL CONSTRAINTS

- Unplanned and informal settlement growing rapidly through illegal land invasion
- General poor road access and lack of road hierarchy
- Poor north-south linkage
- Limited economic base
- Lack of engineering services and social infrastructure
- Encroachment onto environmental sensitive areas
- Development encroaching onto the P17/6 road
- Limited vacant land for future development
- Pressure on municipal infrastructure
- Encroachment into environmental sensitive areas
- Lack of land use management

6.4.1.3 Spatial Opportunities

In contrast to the above spatial constraints, the area presents the following spatial opportunities:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Opportunity for Nodal development at P17/6-P113/1 intersection (Mahushu node)
- In close proximity to established economic centre of Hazyview
- Good regional access provided by the P17/6
- Opportunity for Tourism development along Sabie River and KNP boundary
- Availability of natural resources i.e.: Sabie and North-Sand Rivers
- Proximity and access to KNP through Phabeni and Numbi Gates
- Available land for a regional cemetery site
- Opportunity to improve north-south road linkages

6.4.1.4 Development Trends & Interventions

- The high influx of people results in settlements growing rapidly especially along the main roads, mainly in an informal manner. Nkambeni constitutes mainly low-density residential (informal) with scattered social services.
- Economic activities tend to locate along the main P17/6 road linking Hazyview with White River.
- Opportunities exist for corridor developments along the P17/6 road and Nodal development at P17/6-P113/1 intersection.

6.4.1.5 Roads & Public Transport

The following road proposals will improve access to and within Nkambeni Traditional area:

- The following road upgrades are recommended:

- The two north-south linkages between roads D2965 and R536;
- Upgrade the roads that link Nkambeni village with the D2965 and P17/6;
- The access collector located north of Mahushu; and
- Upgrade the extension of P113/1 that links with the P17/6.

- Proposed new roads:
 - Improve north-south linkage through a new road between Nyongane village and the P113/1 Numbi Road.
- Provide an efficient and effective public transport system to improve linkages within Nkambeni area and to other traditional authority areas.
- Implement a clear road hierarchy within the existing villages.

6.4.1.6 Development Objectives

The following development objectives are adopted for the Nkambeni area:

Map Symbol	Development Objective
	Focus development to the west, along the P17/6 road to provide for strategic mixed use.
	Direct development in the north towards the established economic centre of Hazyview.
	Exploit the opportunity of Nodal development at P17/6-P113/1 intersection.
	Transform human settlements through proper settlements upgrade and provision of services.
	Exploit and conserve the agricultural and tourism potential provided by the Sabie and North-Sand Rivers.
	Protect environmental sensitive areas through a dedicated open space system.

6.4.1.7 Spatial Proposals & Development Directives

Localised Node:

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

Localised Corridor:

- A localised corridor with an increased intensity of development is encouraged along the P17/6 activity corridor, within the urban edge, with priority on the section between the Mahushu and Mshadza nodes.
- The aim is to exploit the regional accessibility provided by this route in order to utilize existing and future economic thrusts for local economic development.

Strategic Mixed Used

The following areas have been reserved for Strategic Mixed-Use Development:

- The area along the D2967 with the new sports field to include various land uses such as recreational facilities including a community hall, swimming pool, a multi-purpose sports centre, playgrounds, business activities relating to sports etc.
- The area east of the P17/6 road, opposite to the Daizenza shopping centre. The provision of commercial, business and light industrial activities should be encouraged in this area.

Greenfield Development

- Three areas are reserved for Greenfield developments include amongst others residential development/demarcation of sites. These areas are located south of Bekiswayo, north of Nkambeni and east of Shabalala.
- Provision of the full range of community facilities such as schools, clinics, open spaces etc, should be taken into account in developing these areas.
- New developments should be restricted to areas falling outside environmentally sensitive areas.
- New residential developments should provide for smaller erven and higher densities.

Upgrade Focus and Consolidation Area:

- Upgrade focus areas include the settlements of Numbi, Salubindza, Bhakiswayo, Mahushu, Nkambeni, Tshabalala and Nyongane. (Refer to Chapter 7 for the Infrastructure Policy).
- Upgrading initiatives should focus on, inter alia, the following:
 - Formalisation and tenure upgrading;
 - Engineering services (sanitation, water supply, electricity and storm water);
 - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities; and
 - Upgrading of existing housing stock.

Integrated open space system

- The Sabie and North-Sand Rivers are regarded as important ecological corridors to be protected.
- Steep slopes and “koppies” to the north of Numbi, south of Shabalala and south of Nkambeni should remain undeveloped and reserved for grazing purposes and eco-tourism.
- Floodline areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the integrated natural stricture.

- The protection of public open space is a priority and the area within the 1:100 year flood line needs to be cleared from any development/settlement.

6.4.1.8 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 79):

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of commercial, social, business, retail and light industrial land uses to be established in identified local node and corridor.
- Diverse combination of land uses through strategic mixed uses development along the identified corridors.
- Residential formalisation of informal areas with good road accessibility.
- Focus on service delivery to households within the area still lacking basic services.

Five (5) Years to Ten (10) Years Spatial Development Direction

- Residential formalisation of informal areas.
- Focus on service delivery to households within the area still lacking basic services.
- Residential densification and infill development.
- New roads proposals.

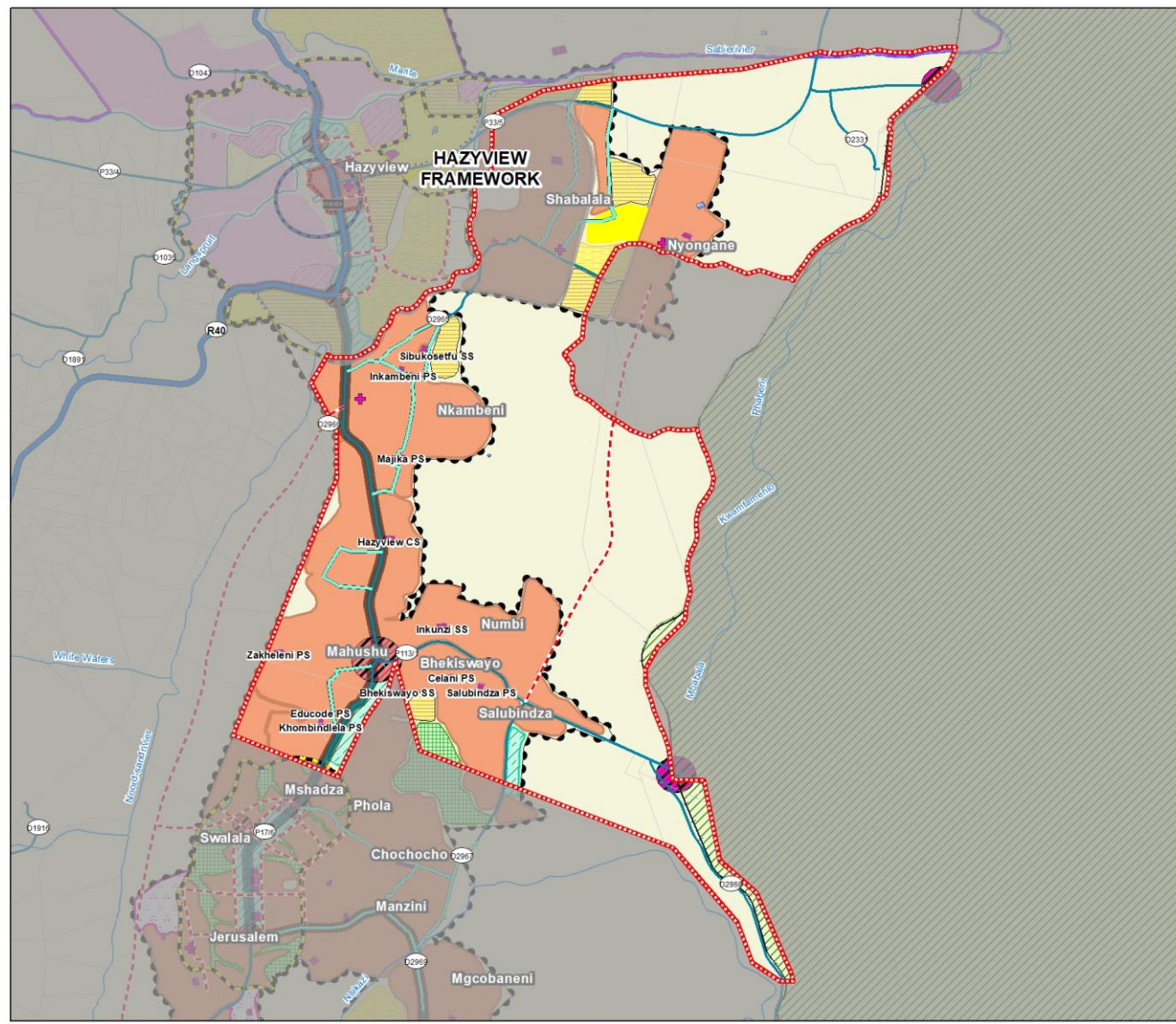
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.

Areas for Future Infrastructure

As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure investment:

- The identified informal areas of Numbi, Nyongane, Mahushu, Bhekiswayo and Salubindza.



SETTLEMENT PROPOSALS

NKAMBENI TA

Legend

- Health care facility
- Provincial road
- Railway
- River
- Local municipality
- Urban edge
- Tribal Authority boundary
- Water treatment plant

Spatial proposal

- Detailed local plan area
- Educational
- Existing residential
- Future housing / RH S
- Green field development area
- Inclusionary housing
- Localised node
- New road proposal
- Road upgrade
- Localised corridor
- Open space
- Strategic mixed use
- Tourism node
- Upgrade focus & consolidation area

0 900 1800 2700 3600 4500 Meters

GAP

NORTH
SCALE: 1:75,000

DIGITAL earth

CITY OF MBOMBELA
THE ULTIMATE DESTINATION

2017 - 2035
Spatial Development Framework

Map 78: Nkambeni TA Strategic Spatial Framework

6.4.2 Gutshwa Traditional Authority

Gutshwa Traditional Authority is situated in the northern and some part of the eastern region of COM approximately 55 km north-east of the Mbombela CBD. The area is bordered by Masoyi Traditional Authorities to the north, Mbuyane Traditional Authority to the south, the Legogote area to west and Mdluli Traditional Authority and the Kruger National Park to the east.

Gutshwa Traditional Authority constitutes the following settlements: Mgcobaneni, Chweni, Phathwa, Mbonisweni, Nkohlakalo, Gutshwakop, Khumbula, Malekutu, Mahukube, Phameni and Mjejane.

6.4.2.1 Population Profile

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
Phameni SP	1977	*	*	*	*
Nsikazi SP	768	*	*	*	*
Malekutu SP	7539	*	*	*	*
Gutshwa SP	14643	*	*	*	*
Phathwa SP	5085	*	*	*	*
Nsikazi	768	*	*	*	*
Mgcobaneni SP	3264	*	*	*	*
Total	34044	34452.5	34865.9	35249.5	35601.9

6.4.2.2 Spatial Constraints

The Gutshwa Traditional Authority area faces the following spatial constraints:

HIGH LEVEL SPATIAL CONSTRAINTS

- Illegal land invasion and illegal sand mining
- Encroachment onto environmental sensitive areas
- Pressure on municipal services
- Diminishing land for agricultural purposes (grazing and cultivation)
- Unplanned and informal settlement
- Scattered settlements
- General poor road conditions and lack of road hierarchy
- Limited economic base
- Lack of engineering and social infrastructure
- Lack of land use management

6.4.2.3 Spatial Opportunities

In contrast to the spatial challenges faced by the area, the following spatial opportunities prevail:

6.4.2.4 Development Trends & Interventions

- Gutshwa Traditional Authority has experienced limited development initiatives over the years and also has a limited economic base. Businesses tend to locate along the main D1411 road and around Nsikazi Stadium. Low-density residential dominates the area, supported by institutional uses, community and recreational facilities.
- An integrated human settlement of approximately 3500 units is being planned in between the Gutshwa River and the D2975 provincial road.
- The settlement will provide a range with housing typologies with the necessary social amenities.

6.4.2.5 Roads & Public Transport

- The following road upgrades are recommended:
 - The D2970 link between Kabokweni and Khumbula
 - The link between the D1411 and D2968s
- Provide an efficient and effective public transport system to improve linkages within Gutshwa and to other traditional authority areas.

6.4.2.6 Development Objectives

With focus on the development of sustainable and liveable settlements within the Gutshwa area, the following development objectives are adopted:

Map Symbol	Development Objective
	Diversify and Intensify development along the D2969 road (former Nsikazi Corridor).
	Accommodate urbanisation and transform human settlements through IHS and Informal Settlement Upgrading.
	Develop Activity Node to accommodate regional and sub-regional economic base growth.
	Address infrastructure backlog.

HIGH LEVEL SPATIAL OPPORTUNITIES

- Good regional road access and access to Kabokweni
- Proximity of KNP and possibility of a new access gate at Makoko
- Available land for a regional cemetery
- Availability of natural resources i.e.: Gutshwa, Ngodini, Nsikazi and Ga-Tswhe Rivers
- Nsikazi Sports Stadium
- Vacant land for Expansion
- Opportunity for Nodal development at the D2970-D1411 intersection
- Opportunity for services upgrade and formalisation
- Agricultural development along Gutshwa, Nsikazi and Ga-Tswhe Rivers

Map Symbol	Development Objective
	Integrate settlements in the southern part with the economic node of Kabokweni.
	Integrate settlements in the northern part with the proposed Swalala node.

6.4.2.7 Spatial Proposals and Development Directives

Localised Nodes

- Two mixed use localised nodes are proposed at the D1411/D2970/D2973 intersections to include business, commercial, retail, high density residential and land uses related to the Nsikazi Stadium.
- Emphasis should be on regenerating the node through urban design, landscaping, lighting, paving, pedestrian walkways and sufficient parking.

Localised Corridors

- The D2969 which traverses the area from Kabokweni in the south towards Swalala in the north is proposed as a localised corridor.
- A number of existing business and industrial activities are located along this corridor and could further be strengthened by inclusion of more land uses.
- An increased intensity of development is encouraged along the corridor, within the urban edge, with focus on the section between the Nsikazi Stadium and Kabokweni nodes.

Future Housing or HIS

- The area north of the D2975 provincial road and the south of the Gutshwa river has been reserved for the establishment of an Integrated Human Settlement (Kwakhumalo) with the purpose of transforming human settlements and addressing the housing backlog within the area.
- Provision of the full range of community facilities such as community centres, schools, clinics, open spaces, cemeteries etc, should be taken into account in developing these areas.

Greenfield Development Area

- The area located west of the D2969 in Mgcobaneni settlement and the area located north of Gutshwa river in Khumbula settlement are reserved for greenfield development.
- Greenfield development should be restricted to areas falling outside environmental sensitive areas.
- Provision of the full range of community facilities such as community centres, schools, clinics, open spaces, cemeteries etc, should be taken into account in developing these areas, with the purpose of addressing the social infrastructure backlog.

Upgrade Focus and Consolidation Area

- The settlements of Mgcobaneni, Chweni, Khumbula, Gutshwakop, Nkohlakalo, Phatwa/Mbonisweni, Malekutu, Mahukube, Mjejane and Phameni have been identified as upgrade focus areas to be consolidated into the suburban structure of the area.
- Upgrading initiatives should focus on, inter alia, the following:
 - Formal township establishment and land tenure upgrade;
 - Relocation of settlements located in environmental sensitive areas (steep slopes, 1:100 year flood line etc);
 - Upgrade of engineering services (sanitation, water supply, electricity and storm water); and
 - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
- Further informal settlement should be prevented and be contained on the perimeters of the existing villages within the proposed urban edge.

Integrated Open Space System

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

6.4.2.8 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 81):

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of residential, commercial, social, business, retail and light industrial land uses to be established in identified local node and corridor.
- Diverse combination of land uses in the identified corridor.
- Residential formalisation of informal areas with good road accessibility.
- Focus on service delivery to households within the area still lacking basic services.
-

Five (5) Years to Ten (10) Years Spatial Development Direction

- Residential formalisation of informal areas.
- Future Housing (Proposed Kwakhumalo Township).
- Focus on service delivery to households within the area still lacking basic services.
- Residential densification and infill development.

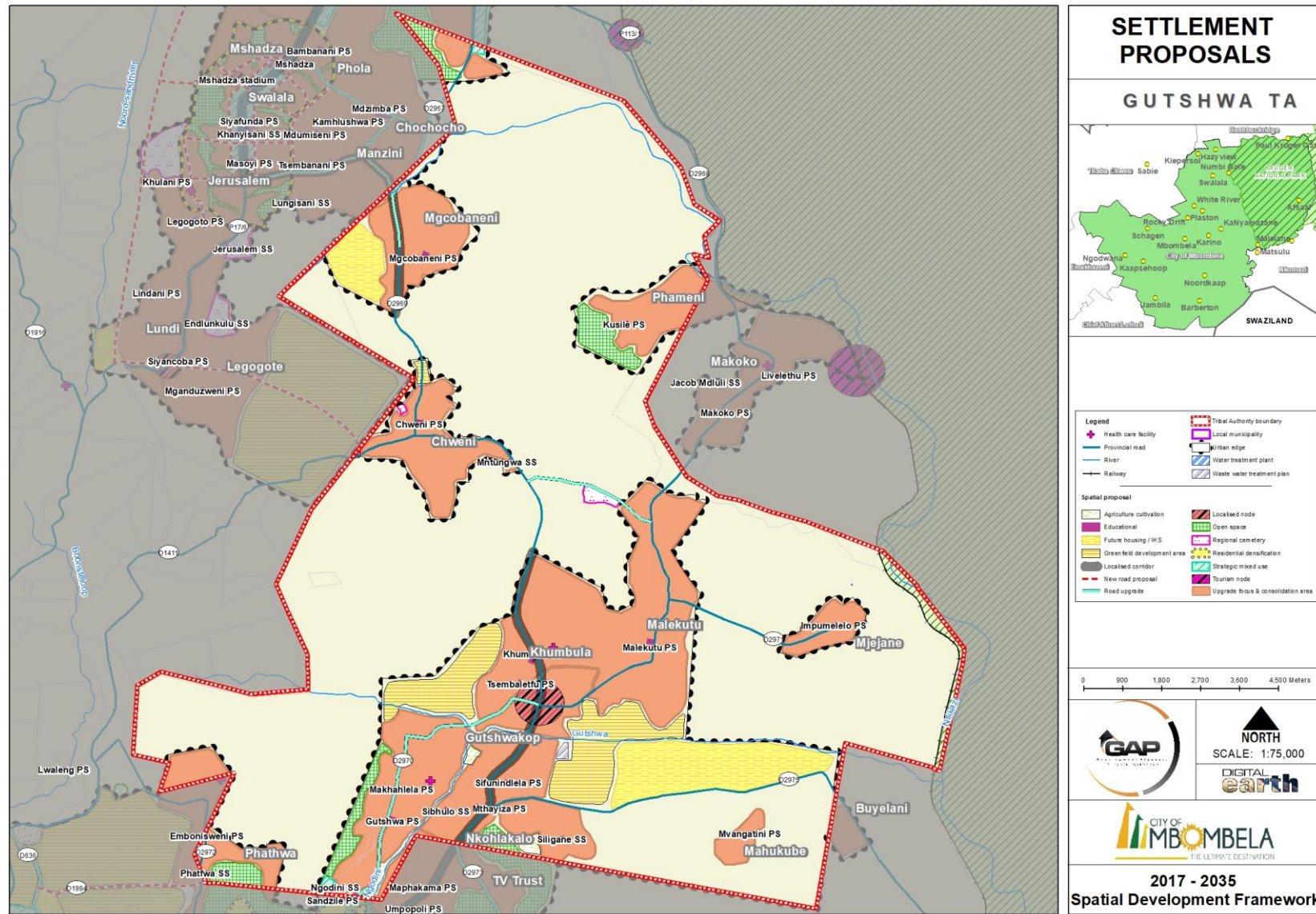
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.

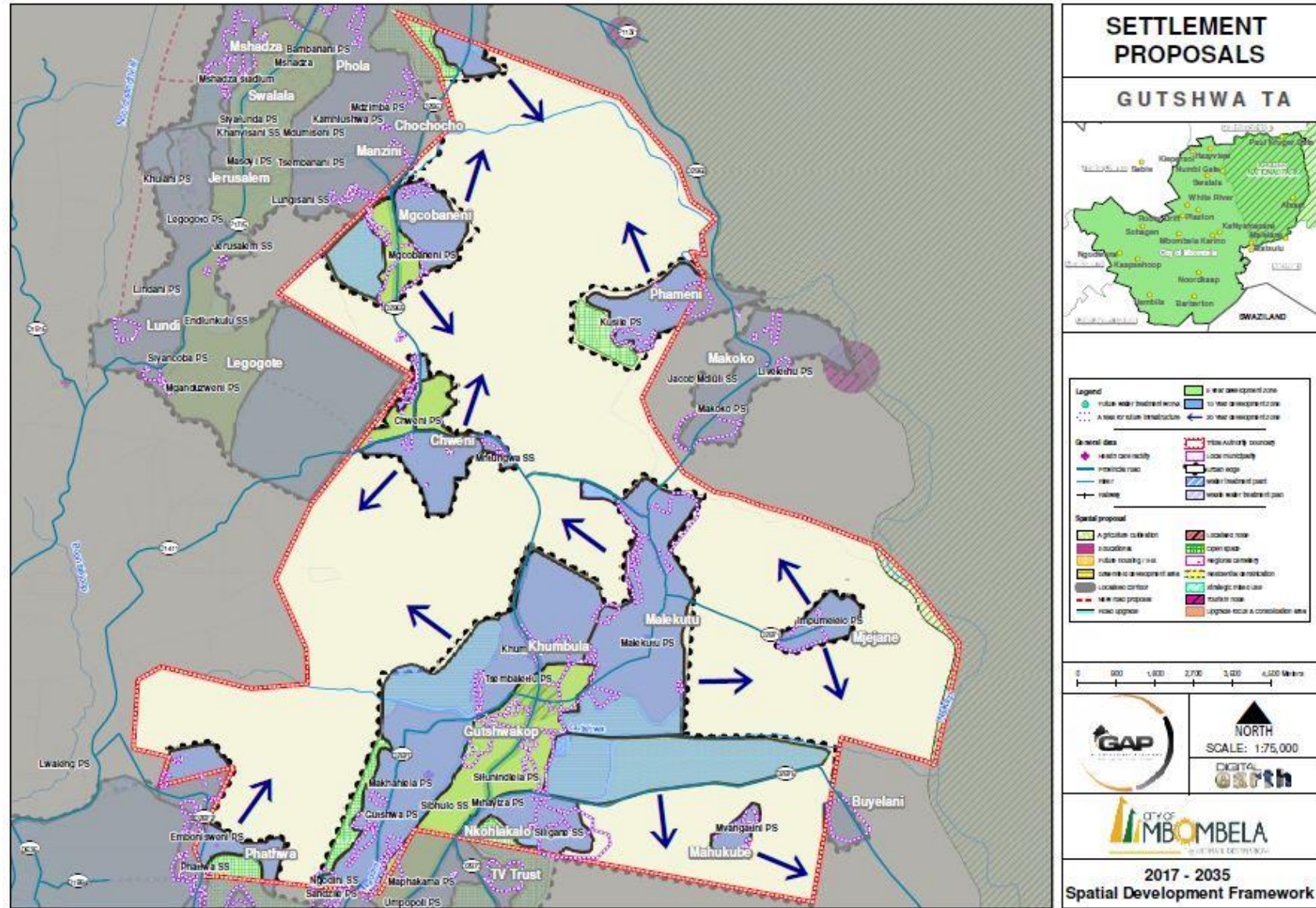
Areas for Future Infrastructure

As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure:

- The identified informal areas of Mgcobaneni, Phameni, Chweni, Khumbula, Malekutu, Mjejane, Nkohlakalo and Guthswakop Settlements.



Map 80: Gutshwa TA Strategic Spatial Framework



Map 81: Gutshwa TA Spatial Development Pattern

6.4.3 Msogwaba Traditional Authority

Located approximately 30 km east of Mbombela and 14 km north-east of Karino, the Msogwaba Traditional Authority area extends across the eastern & central region of the Municipality with Kanayamazane falling within the central region and the settlements of Msogwaba, Lehawu & Danjie falling in the eastern region.

The main roads linking these settlements are:

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

The area is relatively small in size and is densely populated as evident from the table below.

6.4.3.1 Population Profile

The table below provides an outline of the population of the area, projected over certain years:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
Aldie SP	7518	*	*	*	*
Pienaar SP	12333	*	*	*	*
Msogwaba SP	17550	*	*	*	*
Emoyeni SP	153	*	*	*	*
Daantjie SP	39999	*	*	*	*
Nyamazaneni SP	14568	*	*	*	*
Verdoux SP	1068	*	*	*	*
Sherwood SP	1533	*	*	*	*
Broedersvrede SP	999	*	*	*	*

Total	95721	96869	98031	99110	100101.
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6.4.3.2 Spatial Constraints

Msogwaba is surrounded by mountainous areas restricting development into any direction and is further characterised with the following development constraints:

HIGH LEVEL SPATIAL CONSTRAINTS

- Lack of land use management
- Lack of land available for future development
- Unplanned settlement separated by topographical constraints
- General poor road conditions
- Limited economic base
- Lack of engineering and social infrastructure
- Urban sprawl and illegal land invasion
- Pressure on municipal services
- Encroachment onto roads P258/1 and D2975
- Encroachment onto environmental sensitive areas

6.4.3.3 Spatial Opportunities

The Msogwaba area presents the following spatial opportunities, which can contribute towards spatial transformation:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Good access to established economic nodes of Kabokweni and Kanyamazane
- Good access to R538 via the Luphisi links
- Proximity of KNP and possibility of a new access gate at Luphisi
- Social facilities such as Msogwaba Sports Stadium and Msogwaba Community Hall
- Development opportunities provided by the proposed Nkosi City, towards the north-east
- Opportunity for Nodal development at the confluence of roads D2975, P258/1 and southern Luphisi link and the P258/1-D1723 intersection

6.4.3.4 Development Trends & Interventions

- Residential dominates the area, supported by institutional uses, community and recreational facilities.
- Businesses tend to locate along the P258/1 main road, clustering at the P258/1-D1723 intersection and at the confluence of roads D2975, P258/1 and the southern Luphisi link.
- The Msogwaba area has experienced some development initiatives to a certain extent from the private and public sector, which includes amongst others the newly developed Emoyeni Mall, Formalisation and Tenure upgrading, roads upgrades, etc.
- Some parts of the proposed Nkosi City Development also form part of the Msogwaba area.

6.4.3.5 Roads & Public Transport

- The following road proposals will improve access to and within Msogwaba Traditional area:
- The following road upgrades are recommended:

- The southern Luphisi link;
- The D1723 northern Luphisi link, extending eastwards to the residential areas of Pienaar;
- North-south roads linking the northern and southern Luphisi roads; and
- The access road to Msogwaba Stadium.

- The following new roads are proposed:
 - The Kanyamazane Western Bypass will provide regional access to Msogwaba area; and
 - Eastern extension of an internal road in Pienaar to link with Phakane settlement to the north.
- Provide a public transport rank at Lehawu.
- Provide an efficient and effective public transport system to improve linkages within Msogwaba and to other traditional authority areas.

6.4.3.6 Development Objectives

The development objectives adopted for the Msogwaba Traditional Authority area are as follows:

Map Symbol	Development Objective
	Promote corridor and strategic mixed-use development along the D2975 & P258/1 roads, as a development concept seek to consolidate investment and development in close proximity to transit infrastructure.
	Strengthen development along major transport routes (corridors) and already established & defined nodal development points to promote mixed land uses including commercial, business, high density residential etc. and densification.
	Transform human settlement through proper informal settlement upgrading to create sustainable and liveable settlements and limit expansion of existing unplanned settlements.
	Improve functional integration of communities (villages) through pedestrian friendly links and roads upgrades.

6.4.3.7 Spatial Proposals & Development Directives

Localised Nodes

- Localised Mixed use Nodal development is supported at the confluence of roads D2975 and P258/1, the P258/1- access road to Msogwaba Stadium intersection and the P258/1-D1723 intersection.
- Business and other social amenities already exist in this node and could further be strengthened by inclusion of more land uses such as high density residential, commercial, social amenities etc.
- Emphasis should be on revitalising these nodes through urban design, landscaping, lighting, paving, pedestrian feeder roads and sufficient parking.

Localised Corridor

- A localised corridor with high intensity strategic mixed-use development is encouraged along the far-eastern corridor within the urban edge, linking the proposed nodes with the Kanyamanze area.
- A number of existing business and industrial activities are located along this corridor and could further be strengthened by inclusion of more land uses.

Strategic Mixed-Use Development

- Strategic Mixed-Use Development is supported along the D2975 and P258/1roads.
- The intention is to provide social, business, commercial, residential uses and developments that require good access and visual exposure.

Upgrade Focus and Consolidation Area

- Upgrade focus areas include the settlements of Lehawu, Pienaar and Msogwaba.

- Priority areas are the identified nodes and settlements along the corridor.
- Upgrading initiatives should focus on, *inter alia*, the following:
 - Tenure upgrading and township formalisation;
 - Engineering services (sanitation, water supply, electricity and storm water);
 - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities; and
 - Upgrading of existing housing stock.
- Prevent further informal settlement on the perimeters of existing villages.
- Contain urban expansion/demarcation of sites within the proposed urban edge.

Integrated Open Space

- Flood line areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the MOSS.
- Mountainous areas should be reserved for grazing purposes and eco-tourism.
- The protection of public open space is a priority and areas located within the 1:100 year flood line.

6.4.3.7 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 83):

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of commercial, social, business, retail and light industrial land uses to be established in identified local node, along corridors and the areas earmarked for strategic mixed use (Including Kanyamazane Framework).
- Diverse combination of land uses through strategic mixed used development along the identified corridors.
- Residential densification and infill development.
- Residential formalisation of informal areas with good road accessibility.

- Roads upgrades and road links proposals.
- Focus on service delivery to households within the area still lacking basic services.

Five (5) Years to Ten (10) Years Spatial Development Direction

- Residential formalisation of informal areas.
- Focus on service delivery to households within the area still lacking basic services.
- Residential densification and infill development.

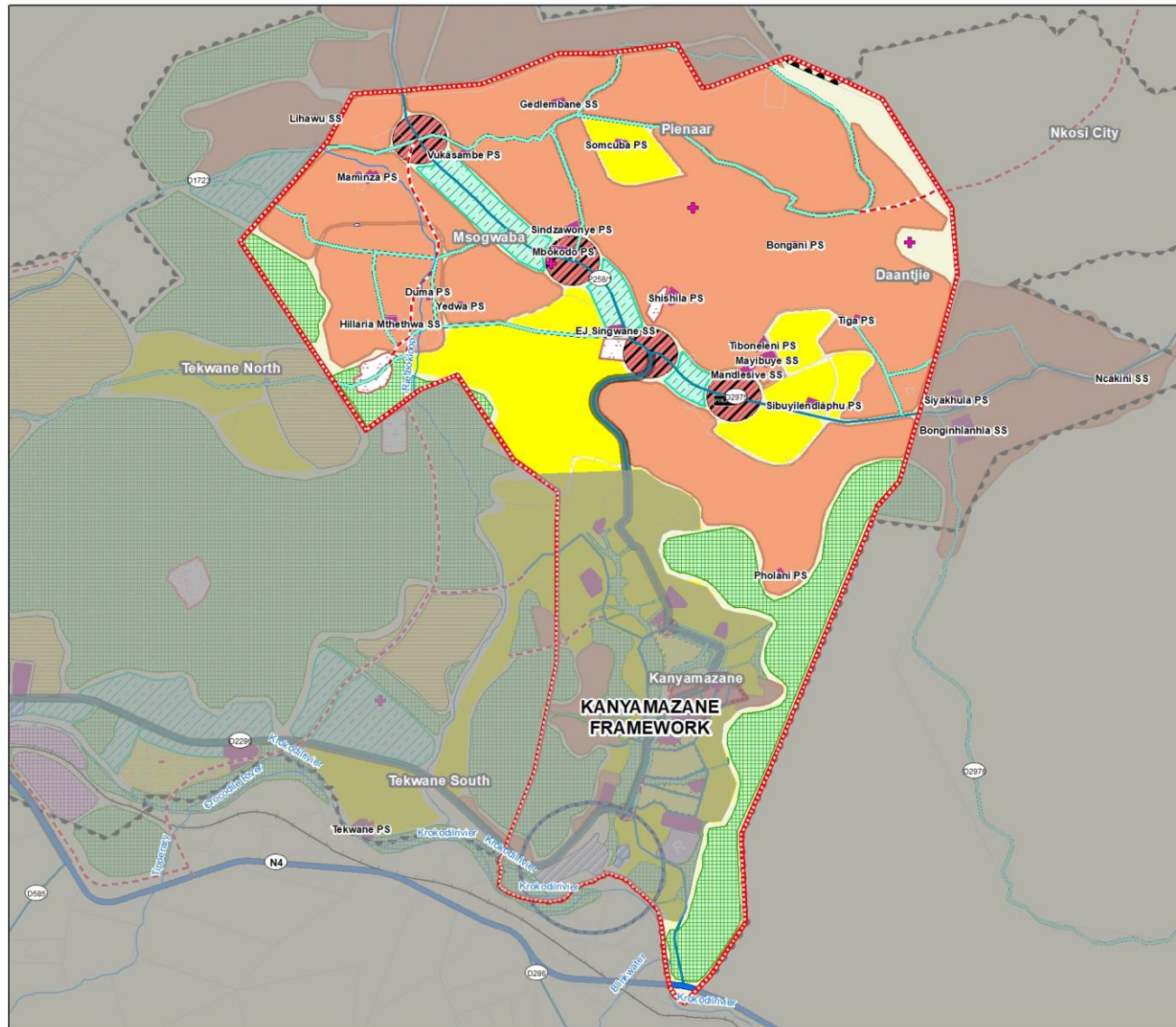
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.

Areas for Future Infrastructure

As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure:

- The identified informal areas of Pienaar, Msogwaba , Daanjtie and Gendlembane settlements.



SETTLEMENT PROPOSALS

MSOGWABA TA

Legend	
Health care facility	Tribal Authority boundary
Provincial road	Urban edge
River	Water treatment plant
Local municipality	Water treatment plant
	Waste water treatment plant buffer

Spatial proposal	
CBD upgrade	New road proposal
Cemetery	Road upgrade
Educational	Future waste water treatment plan
Ehlanzeni Regional Office	Open space
Existing residential	Public transport rank
Green field development area	Residential densification
Localised node	Sport & recreation
Localised corridor	Strategic mixed use
	Upgrade focus & consolidation area

0 700 1400 2100 2800 Meters

GAP

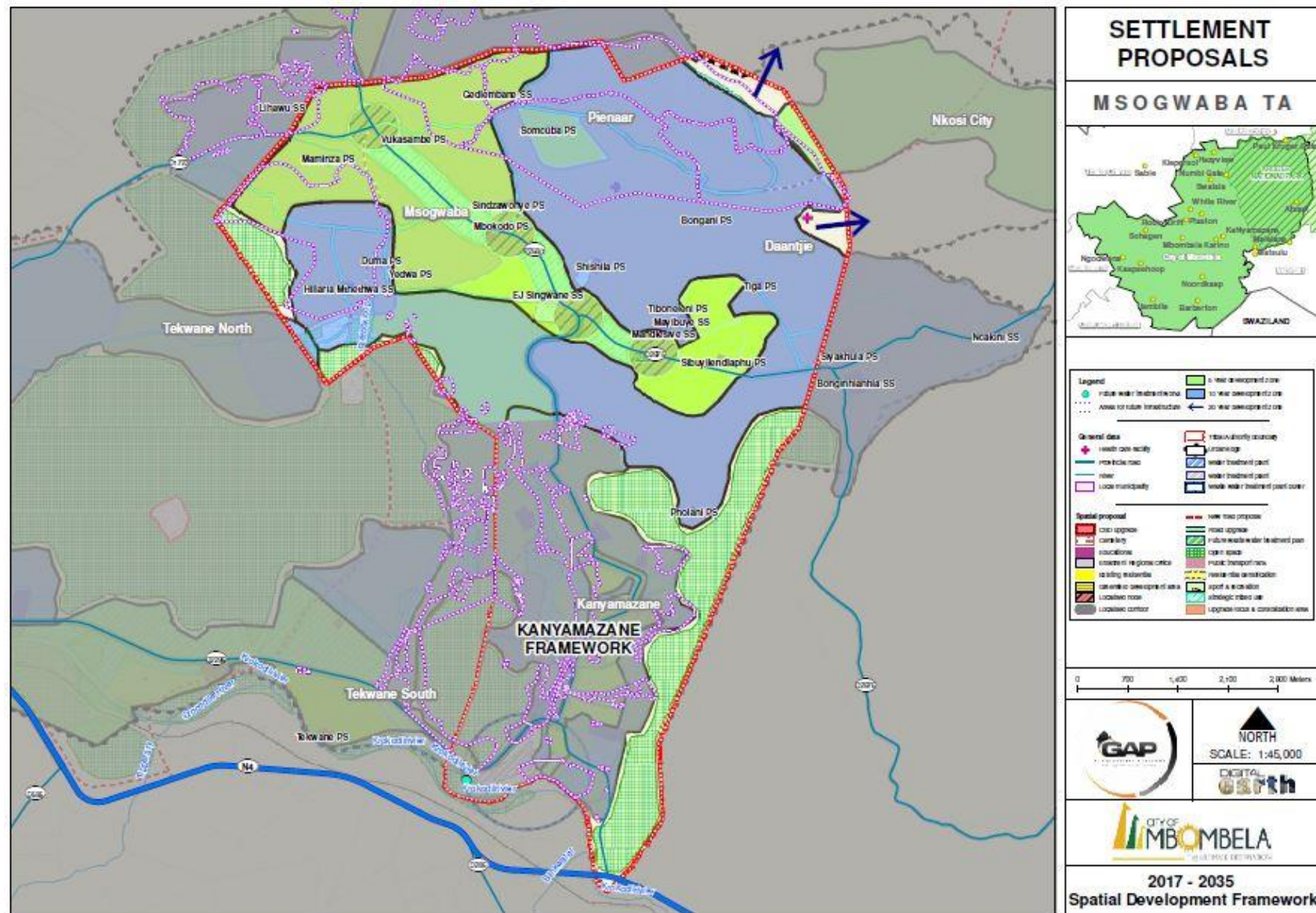
NORTH
SCALE: 1:45,000

DIGITAL earth

CITY OF MBOMBELA
THE ULTIMATE DESTINATION

2017 - 2035
Spatial Development Framework

Map 82: Msogwaba TA Strategic Spatial Framework



Map 83: Msogwaba TA Spatial Development Pattern

6.4.4 Mbuyane Traditional Authority

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

The settlements of Backdoor, Dwaleni, Newscom, Ngodini, Clau-Clau, TV Trust, Nkohlakalo, Sipelanyane and Buyelane, form part of the Mbuyane Traditional Authority area. The Kabokweni area under the control of the municipality also forms part of the Mbuyane Traditional Authority area.

The Mbuyane Traditional Authority area is linked to the wider regions of the municipality through the following roads:

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

6.4.4.1 Population Profile

The table below provides an outline of the population of the area, projected over certain years:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
Buyelani SP	237	*	*	*	*
Sipelanyane SP	942	*	*	*	*
Hlauhlu SP	9591	*	*	*	*
Newscom SP	8814	*	*	*	*
Backdoor SP	2997	*	*	*	*

Dwaleni SP	6087	*	*	*	*
Nkohlakalo SP	4533	*	*	*	*
Gutshwakop SP	7317	*	*	*	*
Total	40518	41004	41497	41953	42372

6.4.4.2 Spatial Constraints

The spatial constraints evident in the area are summarised as follows:

HIGH LEVEL SPATIAL CONSTRAINTS

- Sprawling of settlements and illegal land invasions
- Pressure on municipal infrastructure and social amenities
- Unplanned settlement separated by topographical constraints
- Settlements scattered to the east
- General poor road conditions (mainly gravel)
- Lack of engineering and social infrastructure
- Lack of land use management
- Illegal sand mining
- Encroachment onto road P258/1
- Encroachment onto environmentally sensitive areas
- Diminishing agricultural land

6.4.4.3 Spatial Opportunities

The area enjoys the following spatial opportunities:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Opportunity for eco-tourism and cultural developments
- Available vacant land for infill development and densification
- Opportunity for Agricultural development along main rivers
- Settlements well configured for services upgrades and formalisation
- Already established economic node of Kabokweni with regional influence
- Good north-south linkage
- Good access to road R538 via the D2689 and D1723 (northern Luphisi links)

6.4.4.4 Development Trends & Interventions

- Residential dominates the area and not much developed has been experienced over the years.
- Economic opportunities are dispersed throughout the area, whilst commercial and industrial activities are mainly located in the activity node of Kabokweni.

6.4.4.5 Roads & Public Transport

- It is important to achieve functional integration of fragmented communities (villages) through pedestrian friendly links and road upgrades.
- The following road upgrades are proposed:
 - The D2973 access loop;
 - The D2974 road to Sipelanyane in the east; and
 - The D1723 and D2689 are important east-west linkages and should be maintained or upgraded on a regular basis.
- Provide an efficient and effective public transport system to improve linkages within Mbuyane and to other traditional areas.

6.4.4.6 Development Objectives

The following development objectives are adopted for the Mbuyane area.

Map Symbol	Development Objective
	Consolidate and intensify the different components of the CBD to form a unified high intensity regional mixed-use centre.
	Integrate settlements with the economic node of Kabokweni.
	Maintain strong east-west linkages to the Karino-KMIA-Plaston corridor, through proper road planning and upgrades.
	Transform human settlement through proper informal settlement upgrading to create sustainable and liveable settlements and limit expansion of existing unplanned settlements.

6.4.4.7 Spatial Proposals & Development Directives

Localised Node

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

Localised Corridor

- A localised corridor with an increased intensity of development is encouraged along the P17/6 activity corridor, within the urban edge, with priority on the section between the Mahushu and Mshadza nodes.
- The aim is to exploit the regional accessibility provided by this route in order to utilize existing and future economy thrusts for local economic development

Strategic Mixed Used

- The following areas have been reserved for Strategic Mixed-Use Development:
 - The area along the D2967 with the new sports field to include various land uses such as recreational facilities including a community hall, swimming pool, a multi-purpose sports centre, playgrounds, business activities relating to sports etc.
 - The area east of the P17/6 road, opposite to the Daizenza shopping centre. The provision of commercial, business and light industrial activities should be encouraged in this area.

Greenfield Development

- Three areas are reserved for Greenfield developments and include amongst others residential development/demarcation of sites. These areas are located south of Bekiswayo, north of Nkambeni and east of Shabalala.
- Provision of the full range of community facilities such as schools, clinics, open spaces etc, should be taken into account in developing these areas.
- New developments should be restricted to areas falling outside environmentally sensitive areas.
- New residential developments should provide for smaller erven and higher densities.

Upgrade Focus and Consolidation Area:

- Upgrade focus areas include the settlements of Numbi, Salubindza, Bhekiswayo, Mahushu, Nkambeni, Tshabalala and Nyongane. (Refer to Chapter 9 for the Infrastructure Policy).
- Upgrading initiatives should focus on, inter alia, the following:
 - Formalisation and tenure upgrading;
 - Engineering services (sanitation, water supply, electricity and storm water);
 - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities; and
 - Upgrading of existing housing stock.

Integrated open space system

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

6.4.4.7 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 85):

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of commercial, social, business, retail and light industrial land uses to be established in identified local node, along corridors and the areas earmarked for strategic mixed use (Kabokweni Framework).

- Residential formalisation of informal areas with good road accessibility.
- Focus on service delivery to households within the area still lacking basic services.

Five (5) Years to Ten (10) Years Spatial Development Direction

- Residential formalisation of informal areas.
- Focus on service delivery to households within the area still lacking basic services.
- Greenfield Development to accommodate new intensified urban land uses and provision of a full range of social facilities.

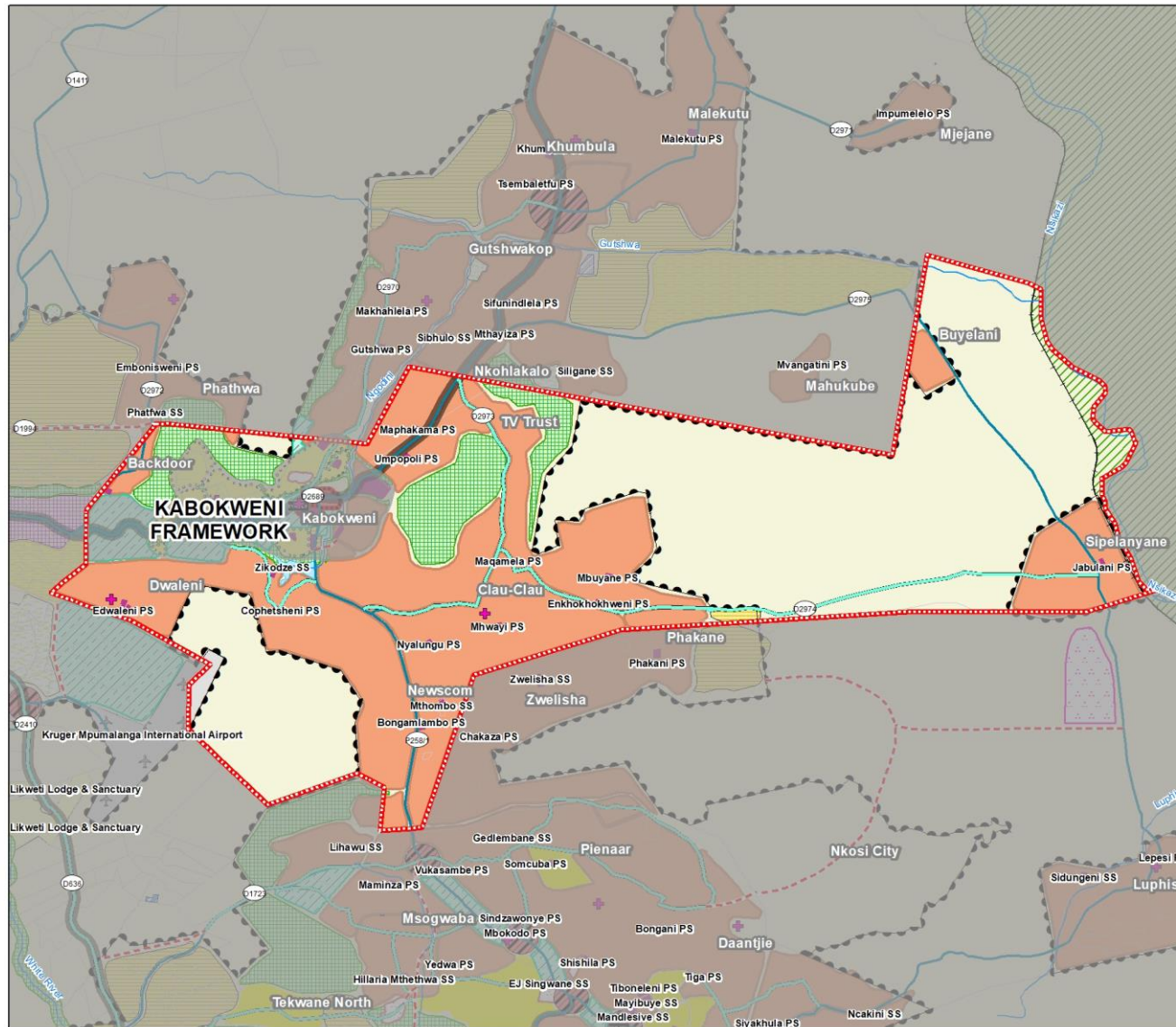
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.

Areas for Future Infrastructure

As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure:

- The identified informal areas of Sipelanyane, Buyelani, Clau-Clau, Dwaleni, Newscom, Zwelisha and Backdoor.



SETTLEMENT PROPOSALS

MBUYANE TA

The inset map shows the City of Mbombela with various local municipalities highlighted in green. Mbuyane TA is specifically outlined in red, indicating its position within the larger urban area. Other municipalities shown include Sabie, Kiepersol, Hazyview, Numbi, Swalala, White River, Piaston, Kanyaloparane, Schagen, Mbombela, Karino, Maseru, Ngodwana, Kaapsehoop, Noordkaap, Mbombela, Maseru, and Barberton.

Legend	
Health care facility	River
Hospital	Local municipality
Police station	Tribal Authority boundary
Provincial road	Urban edge
Railway	Water treatment plant

Spatial proposal	
CBD upgrade	New road proposal
Cemetery	Road upgrade
Open	Industrial growth area
Detailed local plan area	Localised corridor
Educational	Open space
Future housing / IBS	Public transport rank
Green field development area	Residential densification
Hospital	Strategic mixed use
KMIA	Sport & recreation
	Upgrade focus & consolidation area

0 1 2 3 4 Kilometers

GAP

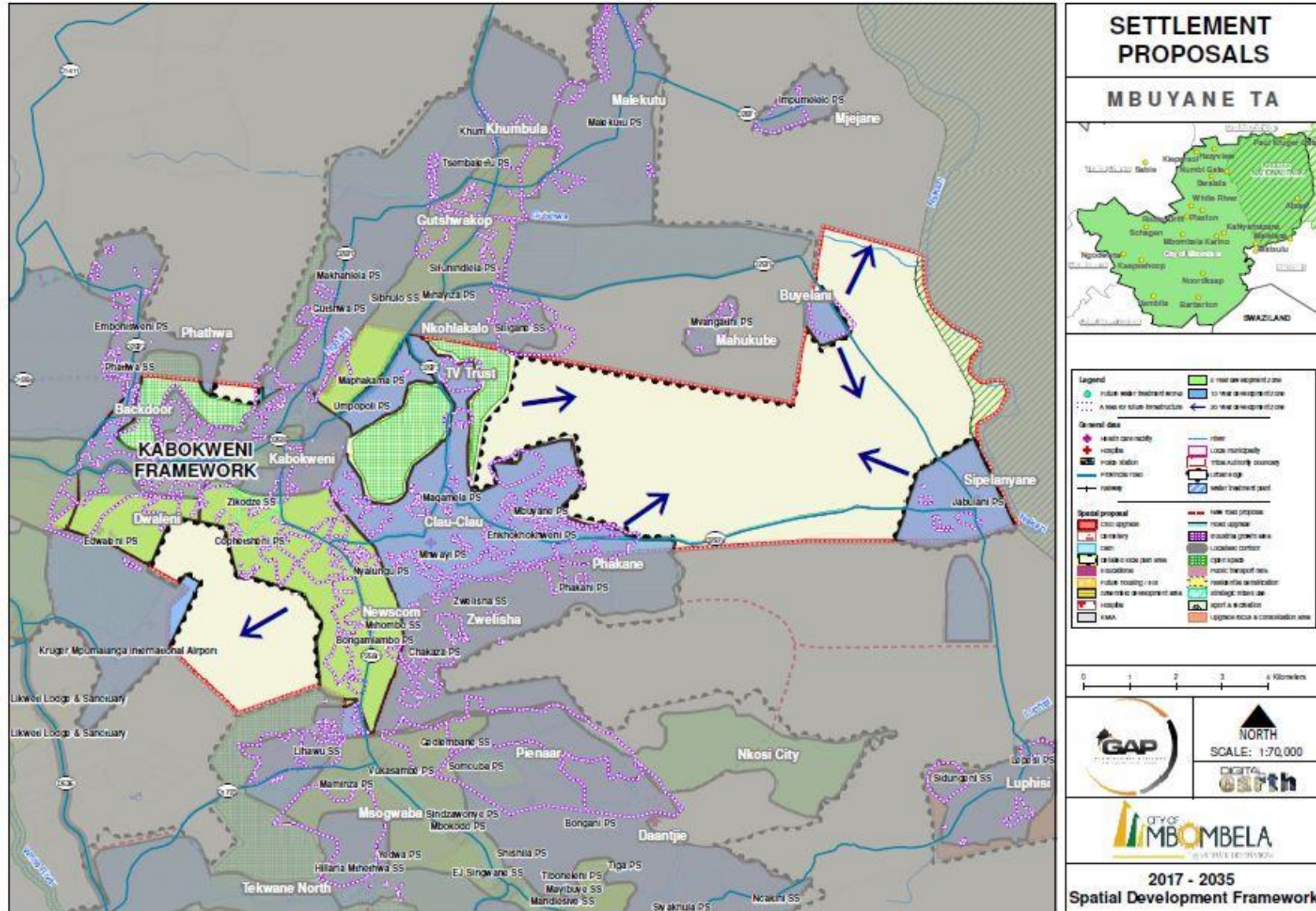
NORTH
SCALE: 1:70,000

DIGITAL earth

CITY OF MBOMBELA
THE ULTIMATE DESTINATION

2017 - 2035
Spatial Development Framework

Map 84: Mbuyane TA Strategic Spatial Framework



Map 85: Mbuyane TA Spatial Development Pattern

6.4.5 Masoyi Traditional Authority

The Masoyi Traditional Authority area is situated within the northern region of the municipality, approximately 47 km from the Mbombela CBD. The area is bordered by Nkambeni Traditional Authority to the north, Kruger National Park to the east, Mdluli and Gutshwa Traditional Authorities to the south, forestry plantations and farming areas to the west.

Masoyi Traditional Authority constitutes the following settlements; Mshadza, Phola, Chochocho, Swalala, Jerusalem, Manzini, Lundi and Legogote.

6.4.5.1 Population Profile

The table below provides a summary of the population of the settlements within the Masoyi Traditional Authority area:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
Phola SP	16533	*	*	*	*
Manzini SP	7992	*	*	*	*
Swalala SP	7953	*	*	*	*
Legogote SP	6207	*	*	*	*
Lundi SP	4512	*	*	*	*
Mthimba SP	7668	*	*	*	*
Jerusalem SP	8811	*	*	*	*
Total	59676	60392	61117	61789	62407

6.4.5.2 Spatial Constraints

The following spatial challenges are evident and limiting in the Masoyi area:

HIGH LEVEL SPATIAL CONSTRAINTS

- Urban sprawl, illegal land invasion and mushrooming informal settlement
- Pressure on municipal services
- Encroachment onto road P17/6
- Encroachment onto environmental and agricultural sensitive areas
- Diminishing agricultural land
- Limited economic base
- Unplanned settlement separated by topographical constraints
- General poor road conditions (mainly gravel) and stormwater problems
- Lack of land use management
- Lack of engineering and social infrastructure

6.4.5.3 Spatial Opportunities

In contrast to the above spatial challenges, the following spatial opportunities are noted within the area:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Development opportunities provided by the planned re-alignment of the P17/6
- Opportunity for Nodal development at strategic places along the Nsikazi corridor
- Development of Mshadza Stadium
- Tourism development (eco- and cultural tourism)
- Agricultural development along main rivers
- Densification and infill development on vacant and underutilised land
- Good regional access road provided by the P17/6, D2969 and D2967 roads
- Proximity of Hazyview, White River and commercial agricultural areas to the west

6.4.5.4 Development Trends & Interventions

- The Masoyi area has been deprived in terms of development and it's dominated by residential that lacks sufficient social facilities and engineering infrastructure.
- Commercial and business activities tend to locate along the main P17/6, D2969 and D2967 roads.

6.4.5.5 Roads & Public Transport

- The following road upgrades are proposed:
 - D2967 between Mashadza and Chochocho;
 - D2969 between Manzini and the P17/6;
 - D2967 towards the P113/1 Numbi road; and
 - The North-south link between Chochocho and Manzini.
- The following new roads are proposed:
 - The re-alignment of the P17/6 to increase mobility along the route;

- The western extension of the D2967 to link with the new P17/6; and
- A road between the P17/6 and D1411, linking to Chweni in the east.

- Provide an efficient and effective public transport system to improve linkages within Masoyi and to other traditional areas.
- Establish a clear road hierarchy within existing settlements.

6.4.5.6 Development Objectives

The intention within this area is to create liveable neighbourhoods with high quality public amenities and environments that are well connected with economic opportunities in the urban centre and sub-centre. Therefore, the following development objectives are adopted:

Map Symbol	Development Objective
	Develop Swalala into a prominent compact economic node to provide for socio-economic opportunities.
	Transform human settlement through informal settlement upgrading to create sustainable and leasable settlements.
	Encourage nodal development at strategic places along the Far-east activity corridor.
	Improved access and integration in between economic nodes and settlements through proper road planning and affordable public transport options.
	Protect environmental sensitive areas through integrated open space system.
	Develop Swalala into a prominent compact economic node to provide for socio-economic opportunities.

6.4.5.7 Spatial Proposals and Development Directives

Localised Node:

(See Swalala Urban Framework)

Localised Corridor:

An increased intensity of development is encouraged along the D2969 road, within the urban edge, with focus on the section between Manzini & Mshadza (see Swalala Urban Framework).

Upgrade Focus and Consolidation Area

- The settlements of Mshadza, Phola, Chochocho, Swalala, Jerusalem, Manzini, Lundi and Legogote have been identified as upgrade focus areas to be consolidated into the suburban structure of the area.
- Upgrading initiatives should focus on, inter alia, the following:
 - Formal township establishment and land tenure upgrade;
 - Relocation of settlements located in environmental sensitive areas (steep slopes, 1:100 year flood line etc);
 - Upgrade of engineering services (sanitation, water supply, electricity and storm water); and
 - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
- Further informal settlement should be prevented and be contained on the perimeters of the existing villages within the proposed urban edge.

Greenfield Development Area:

- Greenfield development and future expansion for residential purposes is promoted in the area east of Legogote Settlement.
- Provision of the full range of community facilities such as community centres, schools, clinics, open spaces, cemeteries etc, should be taken into account in developing these areas, with the purpose of addressing the social infrastructure backlog.

Integrated open space

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

Regional Cemeteries:

- Regional cemeteries are proposed in the following areas:
 - Northern part, close to Salubindza settlement;
 - Northern part, close to Khulani Primary school; and
 - East of the R538 road in Jerusalem.

6.4.5.8 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 87):

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of commercial, social, business, retail and light industrial land uses to be established in identified local node, along corridors and the areas earmarked for strategic mixed use (Swalala Framework).
- Residential formalisation of informal areas with good road accessibility
- Focus on service delivery to households within the area still lacking basic services.
- New roads proposals and roads links.

Five (5) Years to Ten (10) Years Spatial Development Direction

- Residential formalisation of informal areas.
- Focus on service delivery to households within the area still lacking basic services.
- New roads proposals & upgrades.
- Greenfield Development to accommodate new intensified urban land uses and provision of a full range of social facilities.

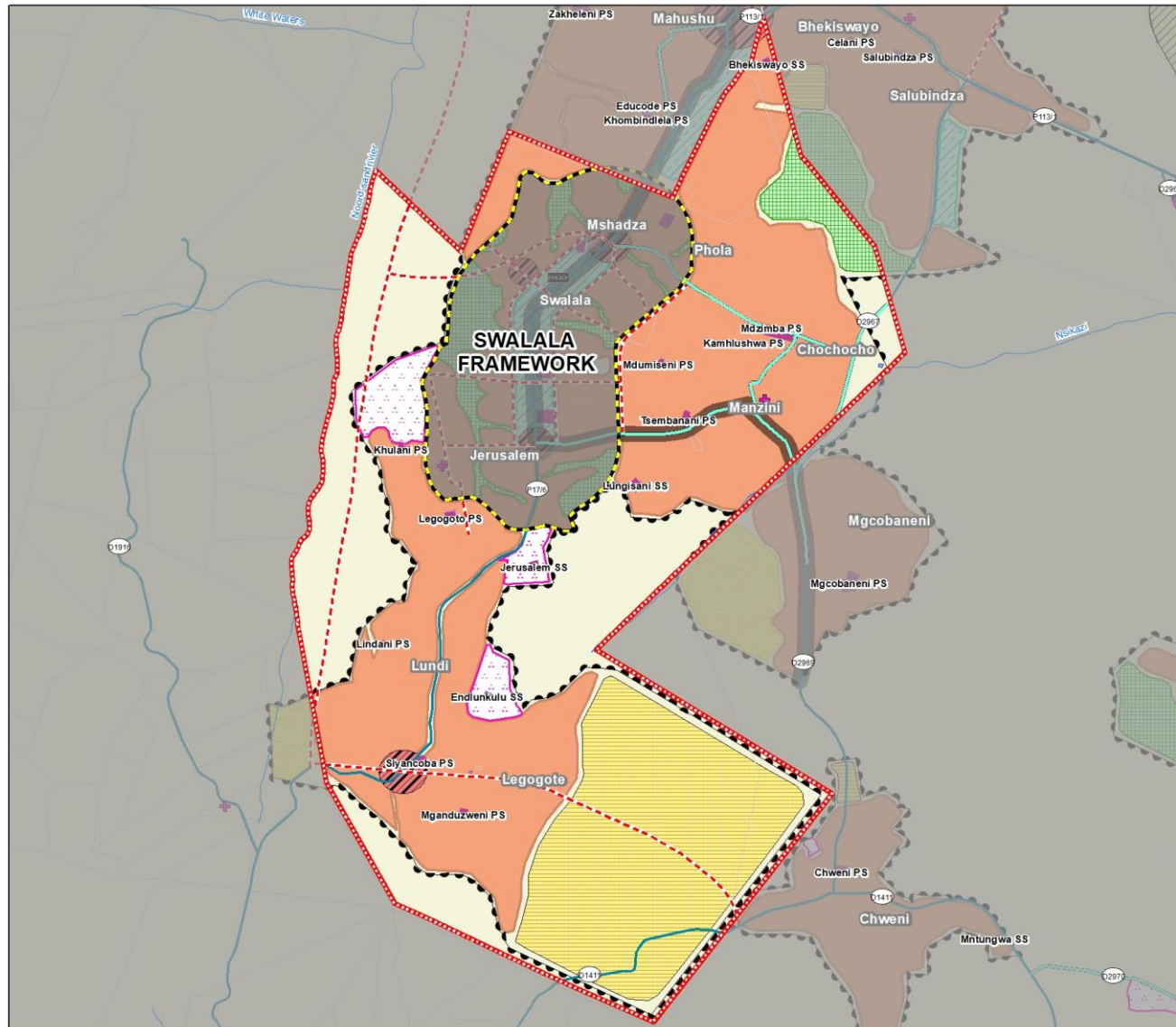
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.

Areas for Future Infrastructure

As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure:

- The identified informal areas around Mshadza, Phola, Manzini, Chocho and Lundi settlements.



SETTLEMENT PROPOSALS

MASOYI TA

Legend	

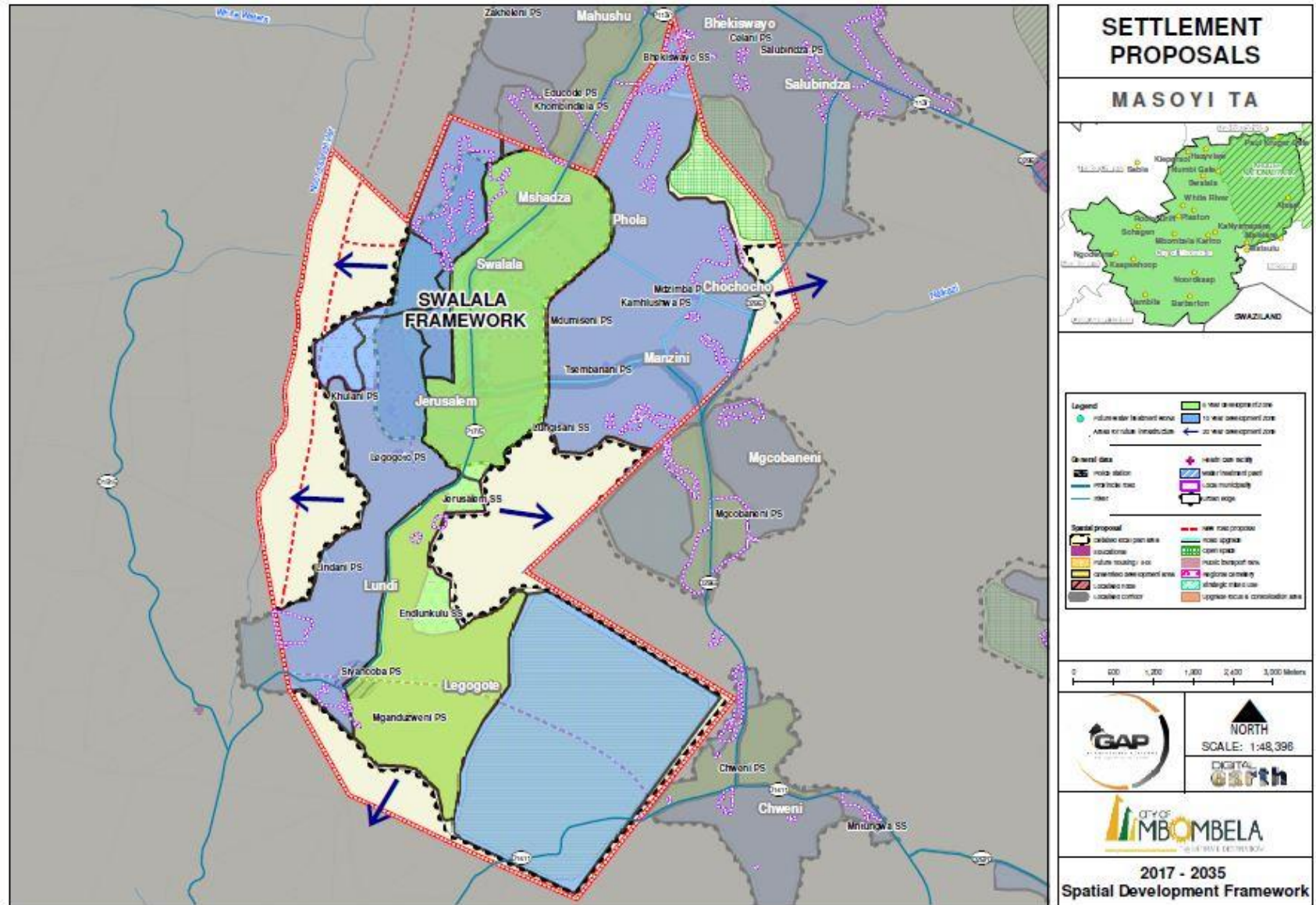
Spatial proposal	

0 600 1200 1800 2400 3000 Meters

NORTH
SCALE: 1:48,396

2017 - 2035
Spatial Development Framework

Map 86: Masoyi TA Strategic Spatial Framework



Map 87: Masoyi TA Spatial Development Pattern

6.4.6 Mdluli Traditional Authority

Mdluli Traditional Authority comprises two detached areas, the southern area including Makoko settlement which is approximately 31 km north-east of White River & 25 km north east of Hazyview and the northern area including a part of Nyongane settlement which is situated approximately 12 km east of Hazyview. Both areas are bordered by the Kruger National Park to the east.

Main access roads include:

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

6.4.6.1 Population Profile

The table below provides a summary of the population of the settlements within the Mdluli Traditional Authority area:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
Nyongane SP	5439	*	*	*	*
Makoko SP	3024	*	*	*	*
Total	8463	8564.56	8667.33	8762.67	8850.29

6.4.6.2 Spatial Constraints

Both Makoko and Nyongane settlements within the Mdluli Traditional area possess the following spatial constraints:

HIGH LEVEL SPATIAL CONSTRAINTS

- Secluded settlements
- No significant economic base
- Lack of engineering and social infrastructure
- Unplanned settlement
- General poor road conditions (mainly gravel)
- Lack of land use management
- Illegal invasion of land and informal settlements
- Ad-hoc development spoiling the intention of the KNP Conservation Zone
- Pressure on municipal services
- Encroachment onto environmental sensitive areas
- Diminishing agricultural land

6.4.6.3 Spatial Opportunities

The spatial opportunities evident within the area can be summarized as follows:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Orderly settled households providing an opportunity for good insitu informal settlement upgrading
- Available vacant land for infill development, densification and provision of social services
- Tourism opportunities provided by the KNP, proposed Makoko gate and railway line

6.4.6.4 Development Trends & Interventions

- The area has not experienced any development initiatives over the years.
- The villages are mainly residential with limited economic activities providing day-to-day services. Potential for rural-tourism development exists, especially along the KNP boundary at Makoko and Nyongane.

6.4.6.5 Roads and Public Transport

- The D2968 and D2965 should be maintained and upgraded on a regular basis to ensure good access to the western areas.
- Provide an efficient and effective public transport system to improve linkages.

6.4.6.6 Development Objectives

The following development objectives are adopted in order to transform the area:

Map Symbol	Development Objective
	Transform human settlement through proper informal settlement upgrading to create sustainable and liveable settlements and limit expansion of existing unplanned settlements.
	Exploit the tourism potential provided by the KNP.
	Deliberately protect land along the KNP for open space, conservation, tourism and agricultural purposes.
	Protect environmental sensitive areas through the integrated natural structure.
	Transform human settlement through proper informal settlement upgrading to create sustainable and liveable settlements and limit expansion of existing unplanned settlements.
	Exploit the tourism potential provided by the KNP.

6.4.6.7 Spatial Proposals & Development Directives

Localised Node:

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

Upgrade Focus and Consolidation Area:

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

Greenfield Development Area

A portion of the area in between Shabalalais reserved for new development, mainly for residential purposes and for the provision of a full range of community facilities such as community centres, schools, clinics, open spaces, cemeteries etc, to cater for the Nyongane settlement and surrounding area.

Integrated open space

- The Nsikazi River is an important ecological corridor to be conserved. The natural vegetation along this river should be maintained, loss of natural habitat minimised, and restoration encouraged.
- Mountainous areas to the south of Nyongane should be reserved for purposes of grazing, eco-tourism and conservation.
- Floodline areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the integrated natural structure.

6.4.6.8 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 89):

Year 0 to Five (5) Years Spatial Development Direction

- Residential formalisation of informal areas with good road accessibility.
- Focus on service delivery to households within the area still lacking basic services.

Five (5) Years to Ten (10) Years Spatial Development Direction

- Residential formalisation of informal areas.
- Focus on service delivery to households within the area still lacking basic services.
- Residential densification and infill development.

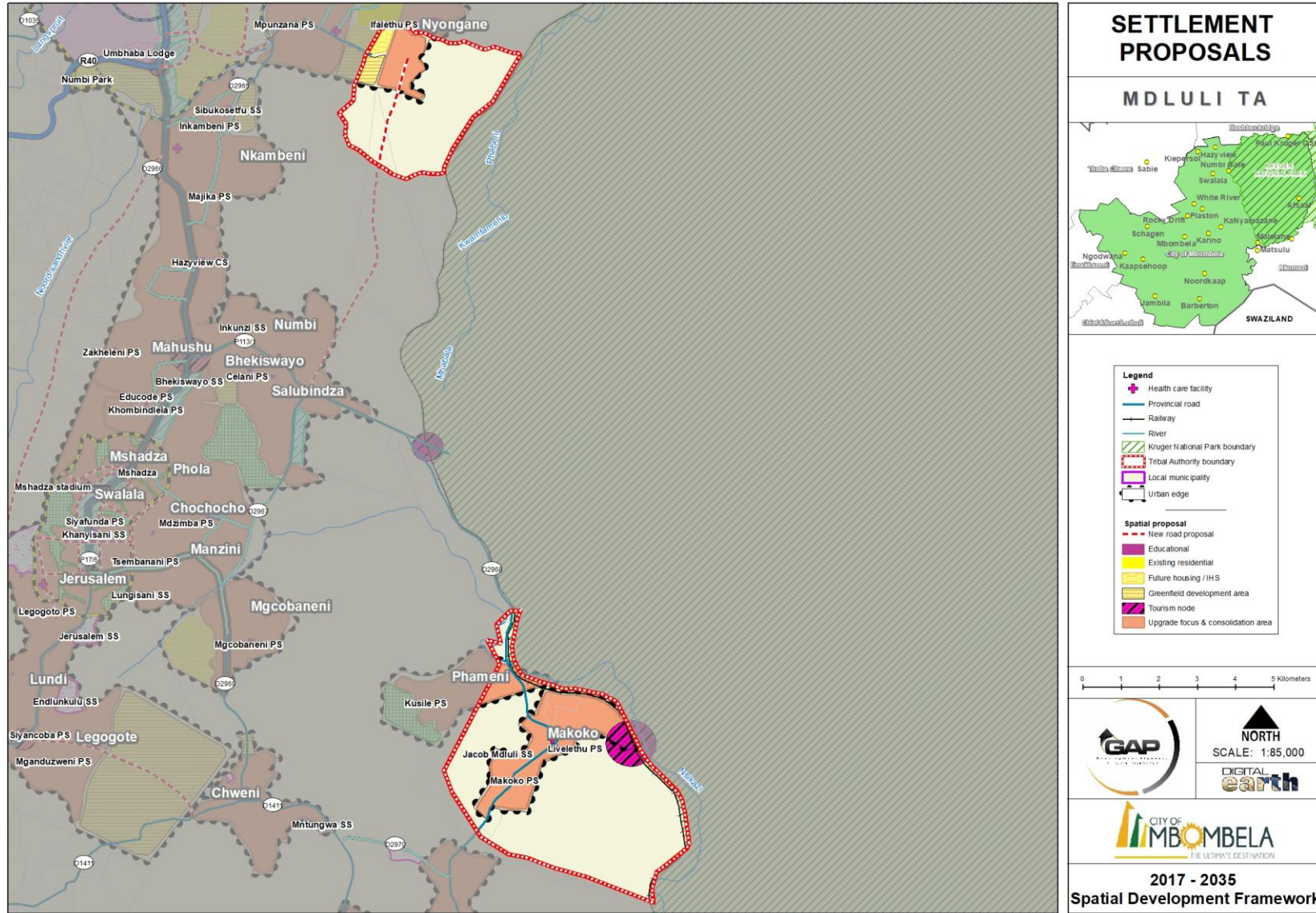
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development.

Areas for Future Infrastructure

As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure:

- The identified informal areas of Makoko, Phameni, and Nyongane settlements.



Map 88: Mdluli TA Strategic Spatial Framework

6.4.7 Mpakeni Traditional Authority

The Mpakeni Traditional Authority area is situated approximately 42 km east of the Mbombela CBD, in the eastern region of the municipality and is bordered by Mbuyane Traditional Authority to the north, Msogwaba Traditional Authority to the west, the Kruger National Park to the east and Lomshiyo Traditional Authority to the south and south-east.

Mpakeni Traditional Authority comprises of the settlements of Daantjie, Luphisi, Mpakeni, Zwelisha and Phakane. Mthethomusha Nature Reserve and Crocodile Gorge are situated in the southern part.

6.4.7.1 Population Profile

The table below provides a summary of the population of the settlements within the Mpakeni Traditional Authority area:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
Zwelisha SP	12636	*	*	*	*
Phakane SP	3087	*	*	*	*
Mpakeni SP	1395	*	*	*	*
Luphisi SP	2910	*	*	*	*
Total	20028	20268.3	20511.5	20737.1	20944.5
		4	6	8	5

6.4.7.2 Spatial Constraints

The following spatial constraints are evident in the area and limiting in terms of spatial development:

HIGH LEVEL SPATIAL CONSTRAINTS

- Lack of engineering services and pressure on municipal infrastructure
- Unplanned settlements secluded by topographical constraints
- Distant settlements with little or no economic base
- General poor road conditions (mainly gravel) and storm water problems
- Lack of land use management and ownership
- Urban sprawl and illegal land invasion
- Encroachment onto main roads
- Encroachment onto environmental sensitive areas
- Diminishing agricultural land

6.4.7.3 Spatial Opportunities

The Mpakeni Traditional Authority area presents the following spatial opportunities based on its existing structural elements.

HIGH LEVEL SPATIAL OPPORTUNITIES

- Good road accessibility through Luphisi road and the D2976
- Available vacant and/or underutilised land for future development
- Proximity to the established economic centres of Kabokweni and Kanyamazane
- Opportunity for densification and infill development on vacant and underutilised land
- Opportunity for Eco-tourism development along the KNP and Mthethomusha Nature Reserve

6.4.7.4 Development Trends & Interventions

- In terms of development initiatives, the Mpakeni Traditional Area has been deprived of development initiatives and opportunities.
- Land uses are dominated by residential including supporting institutional uses,
- Economic activities are found in Daantjie, along the main Lumphisi road.
- However, the much anticipated Nkosi City Development will have a trickle-effect and invite more development opportunities within the area.
- Nkosi City will offer 4 500 houses, preschools, primary schools, high schools, an FET College, a community health centre, a veterinary clinic, an office complex, a 40 000m2 shopping centre, a fresh produce market, a lodge with traversing rights and tourism opportunities into the KNP, light industrial facilities, a bus terminal and cemetery and land for agriculture.

6.4.7.5 Roads & Public Transport

The following road proposals will improve access to and within Mpakeni Traditional Authority area:

- The following road upgrade is proposed:
 - The D2976 to Mpakeni
- The following new roads are proposed:
 - A north-south link between Lumphisi and Matsulu, improving access to the N4;
 - A north-south link between the new development areas at Phakane and Daantjie; and
 - An east-west link to road D2975, improving access to the regional cemetery.
- Provide an efficient and effective public transport system to improve linkages within Mpakeni and to other traditional authority areas.
- Establish a clear road hierarchy within existing settlements.

6.4.7.6 Development Objectives

The strategic objectives adopted for Mpakeni Traditional Authority are as follows:

Map Symbol	Development Objective
	Exploit the development potential provided by the proposed Nkosi City Development.
	Exploit the tourism potential provided by the KNP, Mthethomusha Nature Reserve and the railway line.
	Transform human settlement through proper informal settlement upgrading to create sustainable and liveable settlements and limit expansion of existing unplanned settlements.
	Protect environmental sensitive areas through a dedicated open space system.
	Improve connectivity and linkage with other regional areas through proper roads planning and upgrades.
	Exploit the development potential provided by the proposed Nkosi City Development.

6.4.7.7 Spatial Proposals & Development Directives

Localised Node

- Opportunities exist for nodal development at the proposed Nkosi City Development area, to include commercial, residential, light industrial and other social infrastructure development.
- Ensure sufficient integration of settlements with the economic nodes of Kabokweni, Msogwaba (proposed) and Kanyamazane.

Greenfield Development Area

- The east of Phakane are reserved for new development, mainly for residential purposes and for the provision of a full range of community

facilities such as community centres, schools, clinics, open spaces, cemeteries etc, to cater for the Phakane and Zwelisha settlement.

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

Upgrade Focus and Consolidation Area

- The settlements of Zwelisha, Phakane, Luphisi, Daantjie and Mpakeni have been identified as upgrade focus areas to be consolidated into the suburban structure of the area.
- Upgrading initiatives should focus on, inter alia, the following:
 - Formal township establishment and land tenure upgrade;
 - Relocation of settlements located in environmental sensitive areas (steep slopes, 1:100 year flood line etc);
 - Upgrade of engineering services (sanitation, water supply, electricity and storm water); and
 - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
- Further informal settlement should be prevented and be contained on the perimeters of the existing villages within the proposed urban edge.

Regional cemetery

- A regional cemetery is proposed in the north-eastern part, along the D2975 road.

Integrated open space

- The Nsikazi, Luphisi and Clau-Clau Rivers are considered as important ecological corridors to be conserved. The natural vegetation along these rivers should be maintained, loss of natural habitat minimised, and restoration encouraged.
- Mountainous areas, Mthethomusha Nature Reserve and Crocodile Gorge should be utilised for purposes of grazing, eco-tourism and conservation.
- Flood line areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the integrated natural structure.

- The protection of public open space is a priority and the areas within the 1:100 year flood line need to be cleared from any development/settlement.

6.4.7.8 Spatial Development Pattern

As required in terms of SPLUMA the following areas are earmarked for the 5 to 10 years and 10 to 20 years desired spatial pattern development (see map 91):

Year 0 to Five (5) Years Spatial Development Direction

- Higher intensity development of commercial, social, business, retail, government services and housing development (Proposed Nkosi City).
- Future Housing or Integrated Human Settlements.
- Residential formalisation of informal areas with good road accessibility.
- Focus on service delivery to households within the area still lacking basic services.

Five (5) Years to Ten (10) Years Spatial Development Direction

- Residential formalisation of informal areas.
- Focus on service delivery to households within the area still lacking basic services.

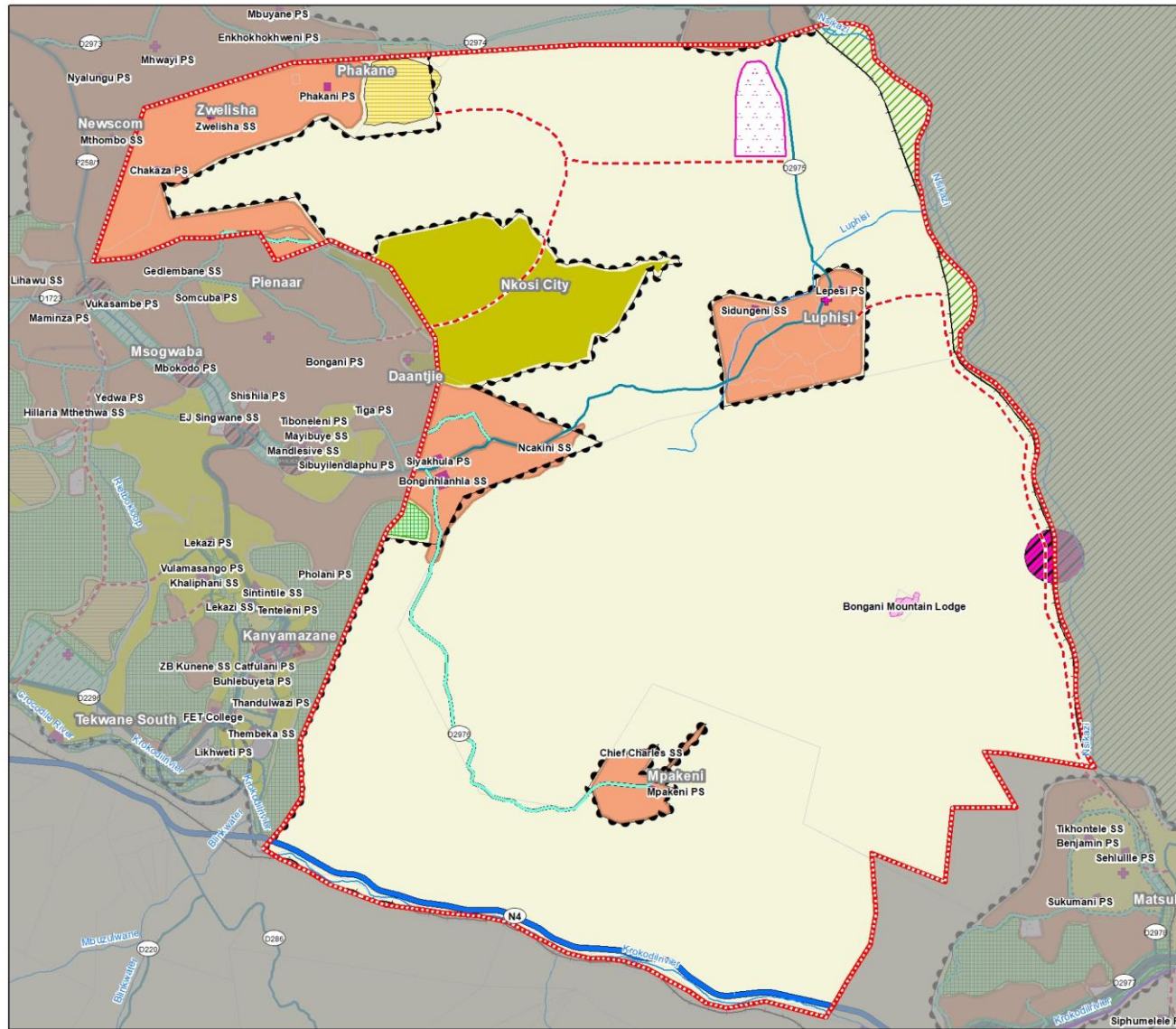
Ten (10) Years to Twenty (20) Years+ Spatial Development Direction

- Urban Development outside the urban edge which should be considered in the instance where there is no more opportunity towards densification or infill development within the urban edge.
- Extended long term development

Areas for Future Infrastructure

As required in terms of SPLUMA section 21(h) the following areas have been identified for Infrastructure:

- The identified informal areas of Luphisi, Mpakeni, Phakane, Zwelisha and parts of Daantjie settlements.



SETTLEMENT PROPOSALS

MPAKENI TA

Legend

- Health care facility
- National road
- Provincial road
- Railway
- River
- Krugers National Park boundary
- Tribal Authority boundary
- Local municipality
- Urban edge

Spatial proposal

- New road proposal
- Road upgrade
- Cemetery
- Educational
- Existing tourism & accommodation
- Greenfield development area
- Nkosi City
- Open space
- Regional cemetery
- Tourism node
- Upgrade focus & consolidation area

0 1 2 3 4 Kilometers

GAP

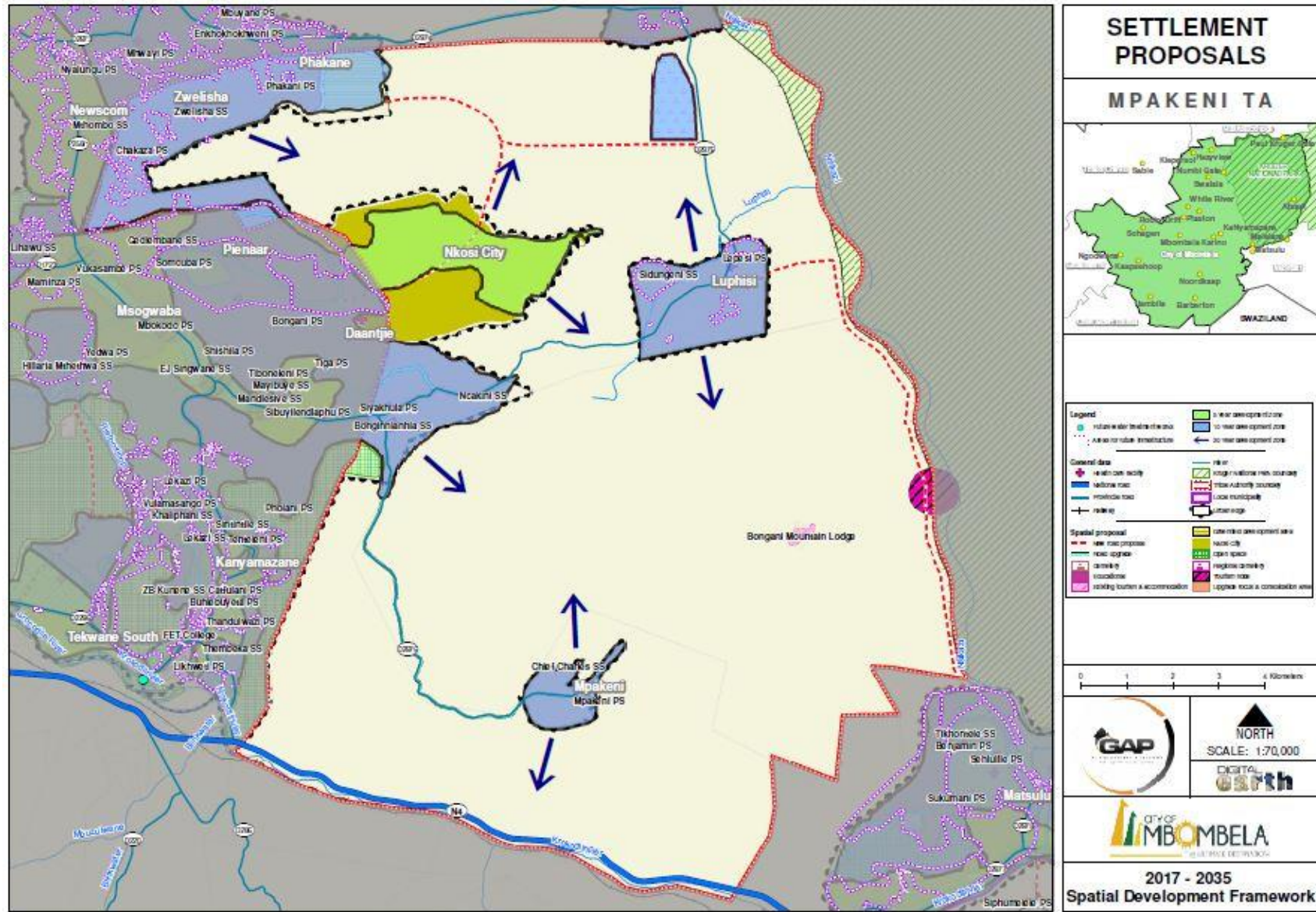
NORTH
SCALE: 1:70,000

DIGITAL earth

CITY OF MBOMBELA
THE ULTIMATE DESTINATION

2017 - 2035
Spatial Development Framework

Map 90: Mpakeni TA Strategic Spatial Framework



Map 91: Mpakeni TA Spatial Development Pattern

6.4.8 Emjindini Trust Traditional Authority

Emjindini Trust Traditional Authority area comprises of two detached areas, the area approximately 25 km north-east of Barberton CBD comprising of the Sheba and KaMdavu settlements and the area approximately 14 km west of Barberton CBD comprising of Selapi settlement.

The settlements are mainly residential with limited economic activities providing for day-to-day services.

6.4.8.1 Population Profile

The table below provides a summary of the population of the settlements within the Emjindini Trust Traditional Authority area:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2011-2018: 1.2%			
		2018-2025: 1.2%			
2025-2030: 1.1%					
2030-2035: 1.0%					
		2018	2025	2030	2035
Emjindini Trust	5106	*	*	*	*
Sheba Mine	156	*	*	*	*
Bonanza Gold Mine SP	1608	*	*	*	*
Total	6870	6952	7035.86	7113.26	7184.39

6.4.8.2 Spatial Constraints

Both Sheba and Selapi settlements within the Emjindini Trust Traditional area possess the following spatial constraints:

HIGH LEVEL SPATIAL CONSTRAINTS

- Secluded settlements
- No significant economic base
- Lack of engineering and social infrastructure
- Unplanned settlement
- General poor road conditions (mainly gravel)
- Lack of land use management
- Illegal invasion of land and informal settlements
- Pressure on municipal services
- Encroachment onto environmental sensitive areas
- Diminishing agricultural land

6.4.8.3 Spatial Opportunities

The spatial opportunities evident within the area can be summarised as follows:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Available vacant land for infill development, densification and provision of social services
- Good road access provided by the R38 road
- Proximity to employment and economic centres i.e. the CBD and Mines

6.4.8.4 Development Trends & Interventions

- The area has not experienced any development initiatives over the years.
- The villages are mainly residential with limited economic activities providing day-to-day services and houses four (4) primary schools.

6.4.8.5 Roads & Public Transport

- The R38 and the R40 should be maintained and upgraded on a regular basis to ensure good access to the western areas.
- Provide a direct road link from Selapi to the R38 road.
- Provide an efficient and effective public transport system to improve linkages.

6.4.8.6 Development Objectives

The following development objectives are adopted with the purpose of developing the area into a sustainable rural service centre:

Map Symbol	Development Objective
	Transform human settlement through proper informal settlement upgrading and Integrated Human Settlement to create sustainable and liveable settlements and limit expansion of existing unplanned settlements.
	Protect environmental sensitive areas through the integrated natural structure.
	Provide for mixed use development as a means of creating a sustainable rural services centre providing for social, retail and other services.

6.4.8.7 Spatial Proposals & Development Directives

Strategic Mixed Use

- The area north of the R38 road in the Sheba settlement is reserved for Strategic Mixed Use development.
- High intensity development requiring good access, visual exposure and a diverse combination of land uses are promoted within this area.

- The aim is to exploit the regional status provided by the area to provide for commercial, business and social amenities, to improve the social welfare of the area.

Future Housing / IHS

- The areas far south and north of the R38 road is earmarked for future housing and the establishment of Integrated Human Settlements.
- The purposes is to address the housing backlog of these areas and improve social welfare.
- The provision of the full range of community facilities i.e.: schools, neighbourhood retail centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing these areas.

Upgrade Focus & Consolidation Area

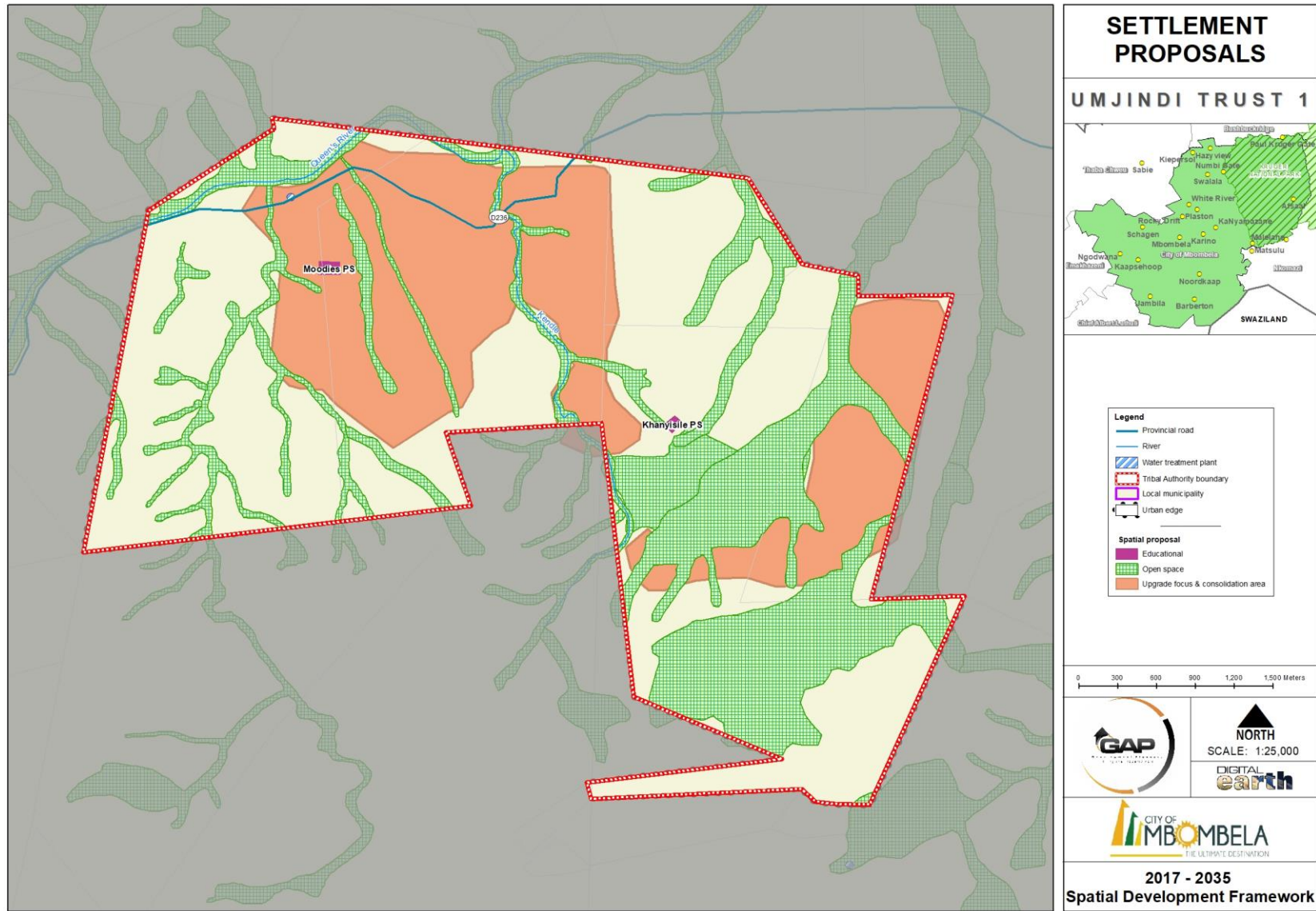
- The settlements around Selapi and Sheba have been identified as upgrade focus areas to be consolidated into the suburban structure of the area.
- Upgrading initiatives should focus on, inter alia, the following:
 - Formal township establishment and land tenure upgrade;
 - Relocation of settlements located in environmental sensitive areas (steep slopes, 1:100 year flood line etc);
 - Upgrade of engineering services (sanitation, water supply, electricity and storm water); and
 - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.
- Further informal settlement should be prevented and be contained on the perimeters of the existing villages within the proposed urban edge.

Integrated open space

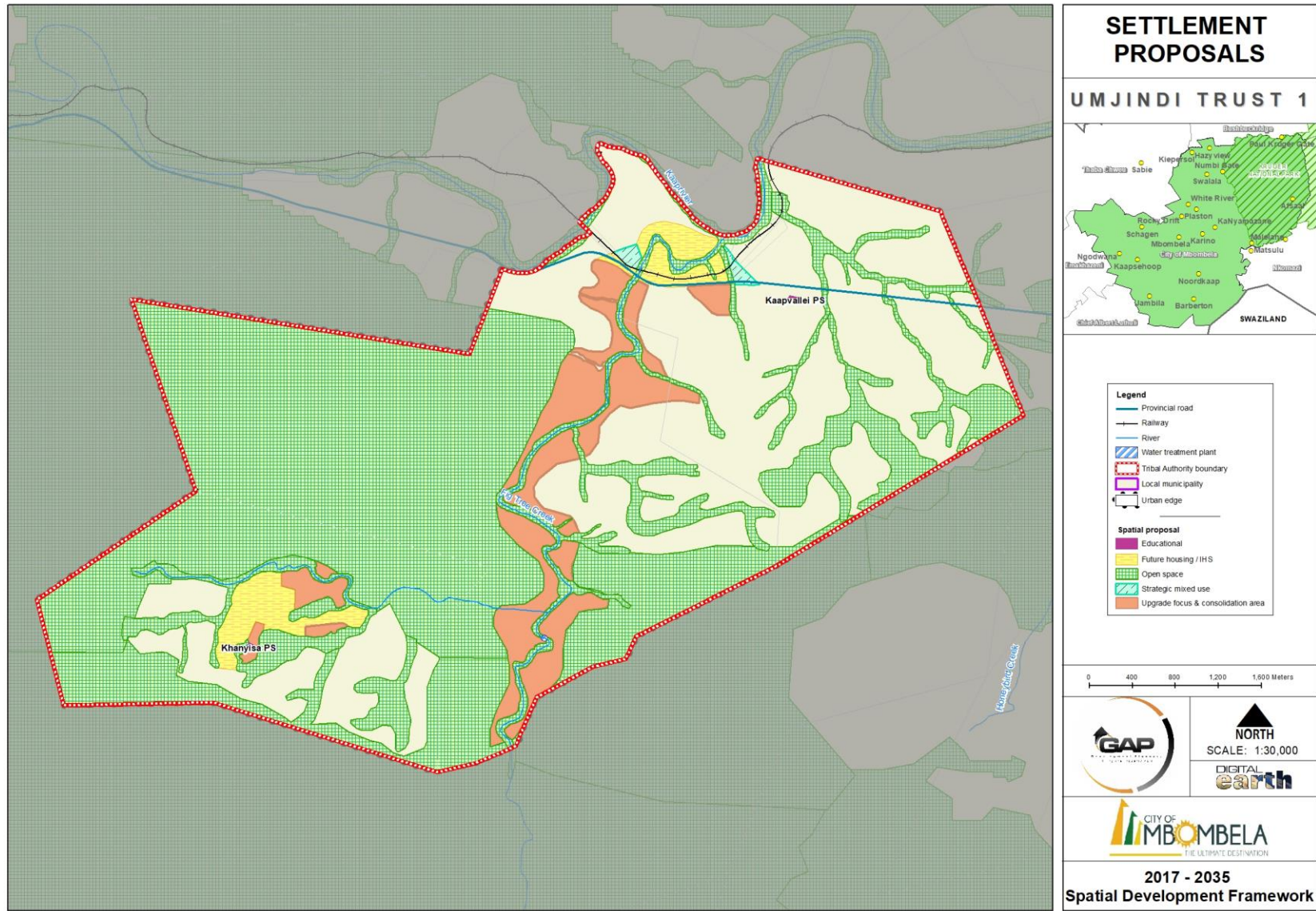
- The Kaapriver, Fig Tree Creek, Queen's River and Kendle River are considered as important ecological corridors to be conserved. The natural

vegetation along these rivers should be maintained, loss of natural habitat minimised, and restoration encouraged.

- Mountainous areas and Nature Reserves should be utilised for purposes of grazing, eco-tourism and conservation.
- Flood line areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the integrated natural structure.
- The protection of public open space is priority and the areas within the 1:100 year flood line need to be cleared from any development/ settlement.



Map 92: Emjindini Trust TA Strategic Spatial Framework (a)



Map 93: Emjindini Trust TA Strategic Spatial Framework (b)

HIGH LEVEL SPATIAL CONSTRAINTS

- Lack of land suitable for human settlements due to topographical constraints
- Traditional authority crosscutting municipal boundaries
- Limited economic base
- Lack of engineering services and social infrastructure
- Illegal Land Invasions and encroachment into environmental sensitive area

6.4.9 Kgarudi Traditional Authority

Kgarudi Traditional Authority is located in the northernmost part of the municipality, north of Sabie River near approximately 9 km north of Hazyview CBD. The R40 road traverses the area from the south towards the north, with Marite Village being the only settlement within the area.

6.4.9.1 Population Profile

The population profile of the Kgarudi Traditional Authority area can be summarised as follows:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2011-2018: 1.2% 2018-2025: 1.2% 2025-2030: 1.1% 2030-2035: 1.0%			
		2018	2025	2030	2035
Sandfort SP	783	*	*	*	*
Mahukule A SP	225	*	*	*	*
Total	1008	1020.09	1032.34	1043.69	1054.1

6.4.9.2 Spatial Constraints

Kgarudi Traditional Authority area has the following spatial constraints:

6.4.9.3 Spatial Opportunities

The following spatial opportunities are evident in the area:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Proximity to the established economic centre of Hazyview
- Regional access provided by the R40 and R535 roads
- Established cultural heritage site
- Availability of natural resources i.e.: Sabie and Marite Rivers, adjoining Boschhoek Nature Reserve
- Proximity and access to KNP through Phabeni Gate
- Tourism development (Eco and cultural tourism)
- Agricultural development along Sabie and Marite Rivers

6.4.9.4 Development Trends & Interventions

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

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

6.4.9.5 Roads and Public Transport

- Upgrade and maintain the R40 and R535 main roads on a regular basis to ensure efficient vehicular movement.

6.4.9.6 Development Objectives

The development objectives adopted for Kgarudi Traditional Authority are listed in the table below:

Map Symbol	Development Objective
	Direct urban development/settlement towards the established economic centre of Hazyview.
	Develop Kgarudi's inherent tourism (R40 and R535) and agricultural potential along Sabie and Marite Rivers.
	Align tourism and conservation initiatives with the adjoining Boschhoek Nature Reserve.
	Prevent the further southern extension of Marite settlement and provide for an integrated human settlement.
	Protect environmental sensitive areas through a dedicated open space system.

6.4.9.7 Spatial Proposals & Development Directives

Localised Node

- Shangana Cultural Centre should be developed into a regional cultural tourism centre. Provision should be made for good access, signage, ablution facilities, proper maintenance and accommodation facilities at the centre.
- Economic activity and mixed use development should be directed towards the node of Hazyview.

Localised Corridor

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

Future Housing or IHS

- The area east of the R40 and Marite Village is earmarked for future housing and the creation Integrated Human Settlements.
- The area must be subjected to the pre-acquisition studies by the HDA to ensure that the property is suitable for integrated human settlement based on possible negative environmental factors like slope analysis and environmentally sensitive areas, flood lines, etc.
- The provision of the full range of community facilities i.e.: schools, neighbourhood retail centres, clinics, open space, sports fields, cemeteries etc. should be taken into account in developing this area.

Upgrade Focus and Consolidation Area

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

Tourism and accommodation

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

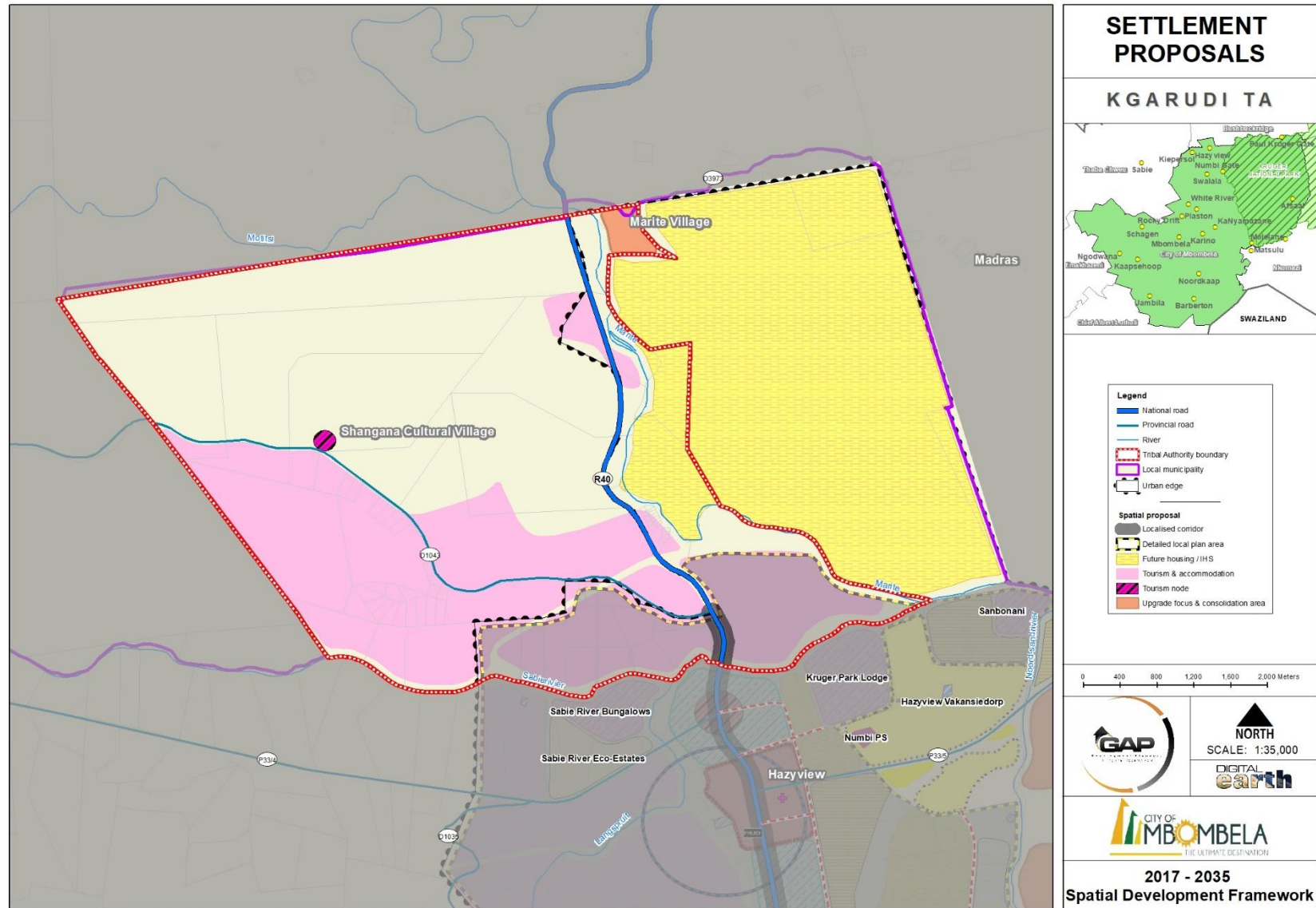
Integrated open space system

- The Sabie and Marite Rivers are regarded as environmental sensitive with conservation value.
- Mountainous areas in the north-western part of Kgarudi should remain undeveloped and reserved for grazing purposes and ecotourism.
- Floodline areas, river environments, wetlands, biodiversity sensitive areas etc. should remain undeveloped to form part of the integrated natural structure.

6.4.10 Lomshiyo Traditional Authority

The Lomshiyo Traditional Authority area is situated approximately 45 km east of Mbombela wedged by the Kruger National Park, Mthethomusha Nature Reserve, the N4 highway and bordered by Mpakeni Traditional Authority to the west. The Lomshiyo Transitional Authority area consist of the Matsulu settlement which is predominantly residential consisting of formal townships with limited retail and social amenities.

NB: Further details on the Lomshiyo Traditional Authority Area is outlined in the Matsulu Strategic Framework



Map 94: Kgarudi TA Strategic Spatial Framework (b)

HIGH LEVEL SPATIAL CONSTRAINS

- Distance to main economic centre of Nelspruit
- No engineering services
- Development separated by the N4 and unsafe access
- Lack of land use control with conflicting land uses
- Pressure on groundwater resources (boreholes)
- Encroachment onto environmental sensitive areas

6.5 RURAL STRATEGIC SPATIAL FRAMEWORKS

Rural Strategic Spatial Frameworks outlining the spatial concept and the desired spatial pattern of the municipality are prepared for the following areas:

- Akmaar
- Ngodwana
- Elandshoek
- Kaapsehoop
- Lows Creek-Esperado

6.5.1 Akmaar

Alkmaar is situated along the N4 highway, about 15km west of Mbombela CBD and 7km west of the Cairn-Burnside area. Alkmaar is traversed by the N4 and bordered by the Crocodile River and railway line to the north.

6.5.1.1 Population Profile

The Akmaar area falls within the enumeration area of the wider Mbombela NU population area.

6.5.1.2 Spatial Constraints

The following spatial constraints are evident in the area:

6.5.1.3 Spatial Opportunities

The following spatial opportunities are evident in the area:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Establishment of agri-industries and agri-related business
- Opportunity for tourism development
- Regional access and exposure provided by the N4
- Proximity to water resources
- Good local access via roads D1175 and D957

6.5.1.4 Development Trends & Interventions

- Due to high accessibility and visual exposure provided by the N4, the area is experiencing development pressure from opportunistic developments that may not be in support of existing rural character of the area.
- Small-scale businesses i.e.: filling station, general dealer, liquor store, tourism facilities etc. are clustered south of the N4 highway.
- Agri-industries, warehousing, motor workshops, a racetrack, transport depot are located to the north of the N4, around Alkmaar railway station.
- A crusher quarry is situated further to the south-east.

6.5.1.5 Roads & Public Transport

The following is proposed for Alkmaar:

- Upgrade the D1175 link to the D957 Schagen road.

- Upgrade the D1175-N4 intersection.

6.5.1.6 Development Objectives

The following development objectives are adopted to improve the role of Alkmaar as a rural service center.

Map Symbol	Development Objective
	Provide for nodal development to cater for day-to-day services such as retail, social services, etc.
	Contain development within the urban edge.
	Improve access off the N4 whilst protecting its mobility function.
	Protect environmental sensitive areas through a dedicated open space system.
	Alkmaar should not be viewed as a future growth area.

6.5.1.7 Spatial Proposal & Development Directives

Localised Node

- A localized activity node is proposed & demarcated adjacent south of the N4. This is to cater for the local retail and social needs.
- Various business & commercial activities have already located in the area and could further be stimulated.

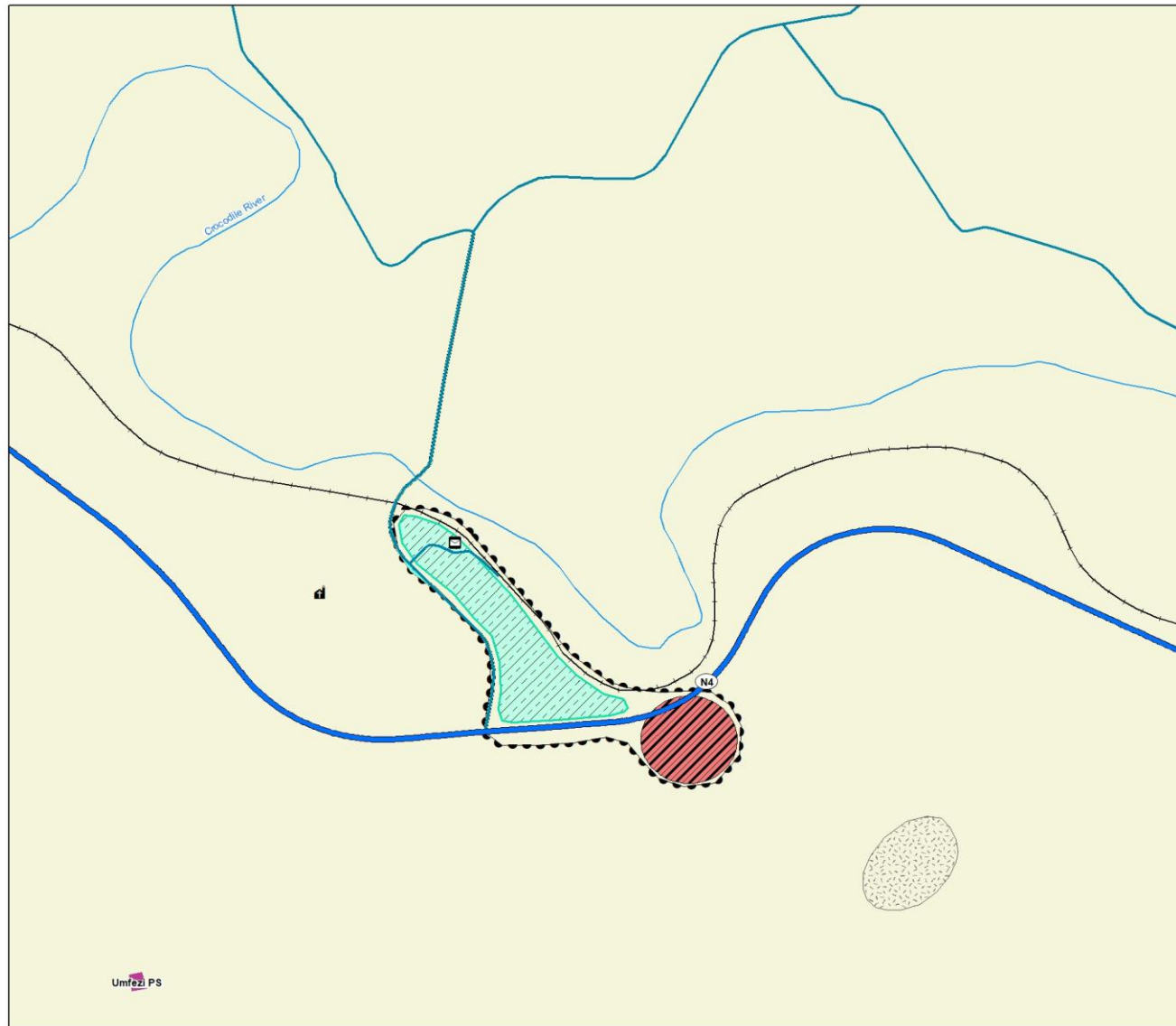
Strategic Mixed Use

- Strategic Mixed Use Development is proposed in the area north of the N4.
- Good access provided by the N4 and Alkmaar railway station lends the area located north of the N4, suitable for low impact transport, logistics and commercial uses.

- Surrounding prime agricultural land provides the opportunity to focus agri-industries in this area, processing natural resources and servicing the agricultural sector.

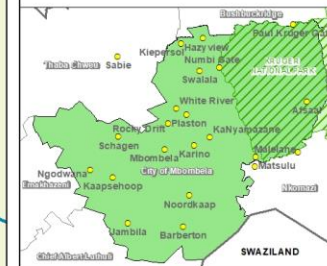
Integrated open space

- Mountainous areas and rocky outcrops shall remain undeveloped and reserved for conservation and eco-tourism.
- The Crocodile River and its tributaries are important ecological corridors to be protected.
- Floodline areas, river environments, wetlands, biodiversity sensitive areas, should remain undeveloped to form part of the Integrated Natural Structure.
- Development around rivers, natural forests and wetlands should be regarded as restricted and development should only be allowed after formal environmental procedures have been conformed with.



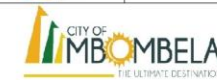
SETTLEMENT PROPOSALS

ALKMAAR



- Legend**
- Place of worship
 - Post office
 - National road
 - Provincial road
 - River
 - Local municipality
 - Urban edge
- Spatial proposal**
- Road upgrade
 - Educational
 - Localised node
 - Public transport rank
 - Quarry
 - Strategic mixed use

0 200 400 600 800 1,000 Meters



2017 - 2035
Spatial Development Framework

Map 95: Akmaar Strategic Spatial Framework

6.5.2 Ngodwana

Ngodwana is situated along the N4 highway, within the Elands River valley, approximately 40km west of Mbombela CBD. The pulp factory is the main industrial activity in Mbombela and provides approximately 2000 employment opportunities.

The residential settlements of Ngondwana, Imbokodo Village, Old Jabulani Village and New Jabulani Village, emerged due to the pulp industry.

6.5.2.1 Population Profile

The population profile of the Ngodwana area is summarised in the table below:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
Ngodwana SP	3483	*	*	*	*
Total	3483	3524.79	3567.09	3606.33	3642.39
		6	4	2	5

6.5.2.2 Spatial Constraints

The spatial constraints of Ngodwana are indicated below:

HIGH LEVEL SPATIAL CONSTRAINS

- Distance to main economic centre of Nelspruit
- No engineering services
- Development separated by the N4 and unsafe access
- Lack of land use control with conflicting land uses
- Pressure on groundwater resources (boreholes)
- Encroachment onto environmental sensitive areas
- Possible forfeiting high potential agricultural land
- Resource exhaustion
- Illegal land invasion (informal settlement)
- Uncontrolled access off the N4 highway
- Encroachment onto environmental sensitive areas
- Possible forfeiting high potential agricultural land

6.5.2.3 Spatial Opportunities

The spatial opportunities of Ngodwana are indicated below

HIGH LEVEL SPATIAL OPPORTUNITIES

- Good rail and road access (N4 and D799)
- Proximity of water resource (Elands River and Ngodwana Dam)
- Prime agricultural land
- Centrally located to surrounding forestry plantations (resource)
- Established rural industry
- Opportunity for formalisation and upgrading

6.5.2.4 Development Trends & Interventions

- A mixed use node is situated opposite the N4/Kaapsehoop Road intersection, which includes a shopping centre, filling station and truck stop.
- The shopping centre has various vacant shops and therefore not regarded as successful.
- Sports facilities include golf, power-boating, horseback riding, rugby, cricket hockey. All engineering and social infrastructure is provided by Sappi. Water is abstracted from the Ngodwana Dam.

6.5.2.5 Roads & Public Transport

The following are proposed for Ngodwana:

- Protect the mobility function of the N4 highway by limiting access points.
- Avoid encroachment onto the N4.
- Upgrade and maintain the internal road network between the different villages.

6.5.2.6 Development Objectives

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

Map Symbol	Development Objective
	Revitalise the already existing nodal development to make it sustainable.
	Accommodate growth through strategic infill and densification within the urban edge.
	Reduce accesses off the N4.
	Protect environmental sensitive areas through a dedicated open space system.
	Ngodwana should not be viewed as a future growth area.

6.5.2.7 Spatial Proposals & Development Directives

Localised Node

- A localized activity and mixed use development should be concentrated in the selected node located opposite the N4-D799 Kaapsehoop road intersection to provide social and business uses to the surrounding developments.
- Business and other social services are already located in this node, and need to be further stimulated.

Industrial growth area

- Industrial development should be contained within the area earmarked for industrial growth. This is to include the existing Sappi factory, limited extensions thereto and ancillary uses.
- Establish interfaces between industrial and adjacent residential areas.

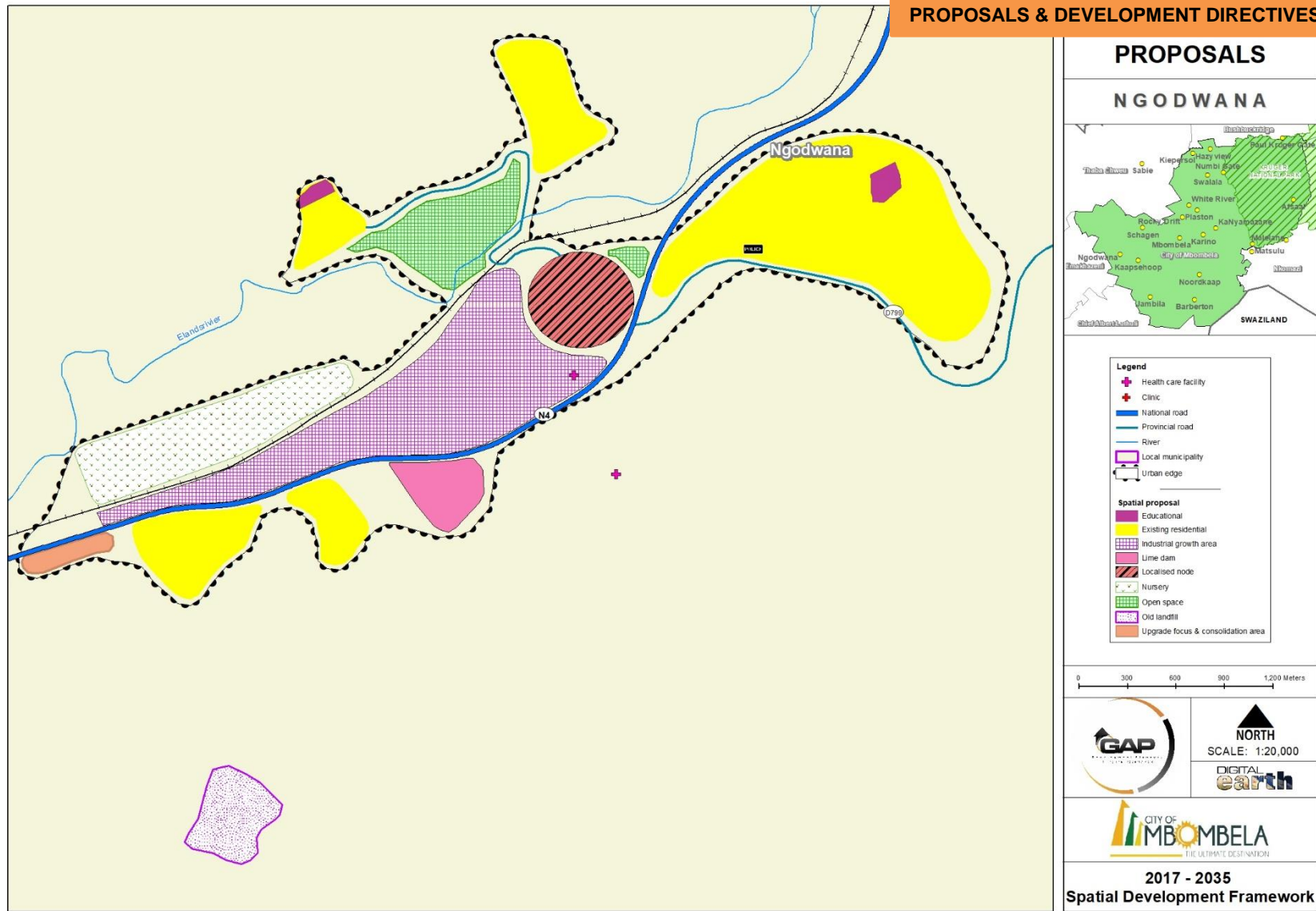
Upgrade Focus & Consolidation Area

- Bhamjee informal settlement, located adjacent south of the N4, has been identified as a service upgrade area. Limited mixed use should be allowed to cater for the day-to-day needs of the residents.
- Upgrading initiatives should focus on, inter alia, the following sectors:
 - Providing engineering services (sanitation, water supply, electricity and stormwater management);
 - Upgrading of existing housing stock; and
 - Provision of social infrastructure and services to enhance the quality of life of these communities.
- Engineering infrastructure needs to be upgraded should any extension to existing residential settlements and/or the industry be considered.
- Contain development within the proposed urban edge.
- Prevent further informal settlement on the perimeters of Ngodwana

Integrated open space

- Mountainous areas surrounding Ngodwana should remain undeveloped and reserved for conservation, forestry and eco-tourism purposes.
- Elands River is an important ecological corridor that should be protected.
- Establish environmental linkages to Coetzeestroom Nature Reserve situated to the south-east.
- Development of rivers, wetlands and natural forests should be regarded as restricted and form part of the integrated natural structure. Development affecting these areas should only be allowed after formal environmental procedures have been conformed with.

PROPOSALS & DEVELOPMENT DIRECTIVES



Map 96: Ngodwana Strategic Spatial Framework

6.5.3 Elandshoek

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

6.5.3.1 Population Profile

The population of the area is summarised and further projected as per the table below:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
Elandshoek SP	1176	*	*	*	*
Total	1176	1190.11	1204.39	1217.64	1229.81

6.5.3.2 Spatial Constraints

The evident spatial constraints of the area are summarised as follows:

HIGH LEVEL SPATIAL CONSTRAINTS

- Land fragmented by roads, railway, river, ridges and power lines
- Uncontrolled access off the N4
- Poor local road access
- Distance to main economic centres
- No economic base
- Illegal land invasion (informal settlement)
- Limited land available for extension
- Poor or no engineering infrastructure

6.5.3.3 Spatial Opportunities

The area boasts the following spatial opportunities:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Good access (bisected by N4 highway)
- Railway access (railway siding)
- Proximity to water resource (Elands River)
- Established orchards
- Proximity of Starvation Creek Nature Reserve
- Tourism ventures linking with Starvation Creek and N4 Corridor
- Agricultural development
- Upgrade and formalisation

6.5.3.4 Development Trends & Interventions

- Elandshoek accommodates a school, local shop, railway siding, tourism and houses for people associated with the forestry industry, including employees and contractors of Sappi.
- Seedless lemon projects are located both sides of the N4 highway, these projects were allocated to the Sebonello Trust.
- Housing and poor engineering services is a concern, this is exaggerated by the rapid pace of informal settlement.

6.5.3.5 Roads & Public Transport

The following proposals are put forward for Elandshoek:

- Upgrade the internal road network and establish a clear road hierarchy.
- Limit accesses off the N4 to retain its mobility function and to ensure the safety of Elandshoek's residents.

6.5.3.6 Development Objectives

The following development objectives are adopted for the Elandshoek area:

Map Symbol	Development Objective
	Elandshoek should not be viewed as a focus growth area, rather improve its current status.
	Establish a local economic base focussing on tourism and agriculture.
	Restrict settlement to the east of the N4 highway, within the urban edge.
	Improve road linkages between fragmented settlements.
	Reduce accesses off the N4.
	Protect environmental sensitive areas through a dedicated open space system.

6.5.3.7 Spatial Proposals & Development Directives

Upgrade Focus and Consolidation Area

- Informal settlement needs to be either upgraded or re-established elsewhere. Preferably be re-established in the nearest formal town.
- Upgrading initiatives should focus on, *inter alia*, the following:
 - Upgrade existing engineering services (sanitation, water supply, electricity and storm water);
 - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities; and
 - Upgrading of existing housing stock.
- Prevent further informal settlement on the perimeters of existing Elandshoek settlement.
- Contain urban expansion/demarcation of sites within the proposed urban edge.

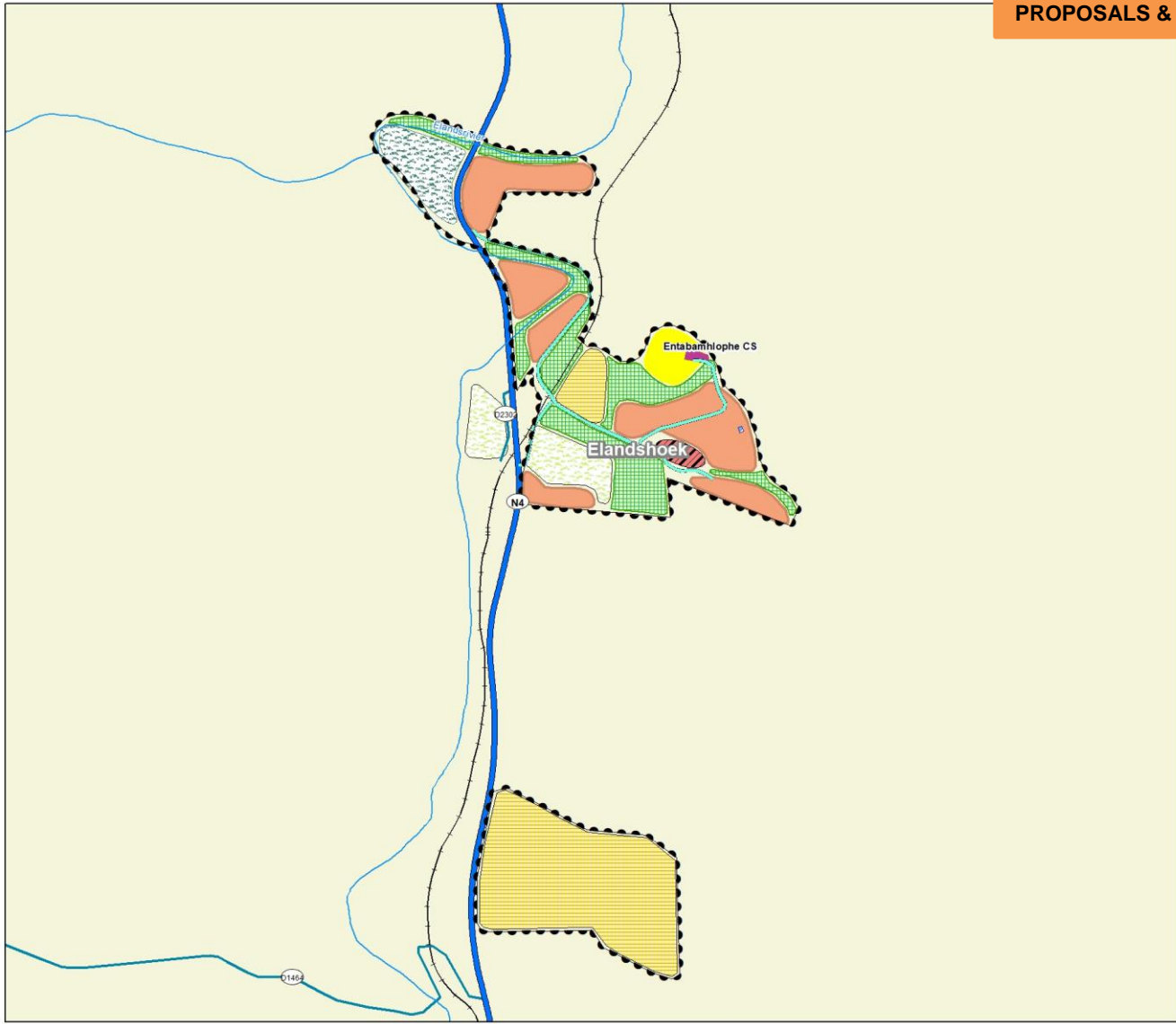
Greenfield Development Area

- Greenfield development is encouraged on the land located within the settlements.
- New development should be restricted to areas falling outside environmentally sensitive areas.
- The provision of a community service node needs to be developed to cater for local retail and social needs including public transport facilities (bus/taxi ranks).
- The provision of the necessary community and social facilities should be taken into account in developing this area.

Integrated open space

- Mountainous areas surrounding Elandshoek should remain undeveloped and reserved for conservation, forestry and eco-tourism purposes.
- The Elands River is an important ecological corridor that should be protected.
- Promote eco-tourism initiatives similar to Elandsvally lodge and encourage environmental linkages with Starvation Creek Nature Reserve situated to the south-east.
- Rivers, wetlands and natural forests should be protected against any form of development. Development should only be allowed after formal procedures have been conformed to, as specified in environmental legislation.

PROPOSALS & DEVELOPMENT DIRECTIVES



PROPOSALS

ELANDSHOEK

Legend

- National road
- Provincial road
- Railway
- River
- Water treatment plant
- Local municipality
- Urban edge

Spatial proposal

- Agriculture cultivation
- Educational
- Localised node
- Proposed Agriculture
- Existing residential
- Greenfield development area
- Open space
- Upgrade focus & consolidation area

0 300 600 900 1,200 Meters

GAP

NORTH
SCALE: 1:20,000

DIGITAL earth

CITY OF MBOMBELA
THE ULTIMATE DESTINATION

2017 - 2035
Spatial Development Framework

Map 97: Elandshoek Strategic Spatial Framework

6.5.4 Kaapsehoop

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

6.5.4.1 Population Profile

The population profile of the area is summarized as follows:

Sub Place or Enumeration Area	Total Population	Projected Population			
		2018	2025	2030	2035
		2011-2018: 1.2%			
		2018-2025: 1.2%			
		2025-2030: 1.1%			
		2030-2035: 1.0%			
Kaapsehoop	183	*	*	*	*
Total	183	185.19	187.418	189.4	191.374

6.5.4.2 Spatial Constraints

The Kaapsehoop area has the following spatial constraints:

HIGH LEVEL SPATIAL CONSTRAINTS

- Uncontrolled access off the D799 main road
- Encroachment onto environmental sensitive areas
- Loss of rural character and tourism destination
- Poor social infrastructure and engineering services (water and sanitation)
- Limited land available for extension due to environmental sensitive areas
- Limited economic base

6.5.4.3 Spatial Opportunities

HIGH LEVEL SPATIAL OPPORTUNITIES

- Natural assets (escarpment location, waterfall, nature reserve, scenic beauty)
- Established tourism destination
- Easy access to Nelspruit (25km) and N4 at Ngodwana (15km)

6.5.4.4 Development Trends & Interventions

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

6.5.4.5 Development Objectives

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

Map Symbol	Development Objective
	Kaapsehoop should not be viewed as a focus growth area.
	Promote the town as a tourist destination and retain its rural character.
	Prohibit direct access to properties off the D799 main road.
	Protect environmental sensitive areas.

6.5.4.5 Spatial Proposals & Development Directives

Residential and Tourism

- Contain residential development within the urban edge.
- Accommodate growth through strategic densification and infill development.
- Upgrade existing water and sanitation services before any further settlement is considered.
- Promote tourism development in and around Kaapsehoop and encourage environmental linkages with Blue Swallow Nature.
- Reserve situated to the south.
- Blue Swallow Reserve should be managed to retain its biodiversity, wildlife production and recreational/educational tourism.
- Mountainous areas surrounding Kaapsehoop should remain undeveloped and reserved for conservation, forestry and ecotourism.
- Rivers, wetlands and natural forests should be protected against any form of development to form part of the integrated natural structure.
- Development should only be allowed after formal procedures have been conformed to, as specified in environmental legislation.

6.5.5 Lows Creek-Esperado

The area is situated along the R38 road, approximately 40 km north-east of the Barberton CBD and 12 km south of the N4 (from Kaapmuiden), within the southern region of the municipality.

The area is identified as a rural service centre which came as a result of industrial, mining and agricultural activities. Settlements within the area includes Lows creek, Esperado, Sincobile and Louisville.

6.5.5.1 Population Profile

According to the STATS SA data, the Lowe Creek-Esperado area falls within the wider extent of the Umjindi NU population area.

6.5.5.2 Spatial Constraints

The area presents the following spatial constraints

HIGH LEVEL SPATIAL CONSTRAINTS

- Fragmented residential villages and informal settlements
- Homogeneous economic base
- Lack of engineering services
- Encroachment into environmental sensitive area
- Lack of social facilities
- Located far from economic centres

6.5.5.3 Spatial Opportunities

The spatial opportunities which exist in this area can be summarised as follows:

HIGH LEVEL SPATIAL OPPORTUNITIES

- Good road access provided by the R37 and the N4
- Already established rural industry
- Prime agricultural land
- Opportunity for Nodal Development
- Already established economic base

6.5.5.4 Development Trends & Interventions

- The area is constituted of mainly residential informal settlements scattered across the area.
- Few social and business services exist within the area including a Police Station, Filling Station and few local shops.
- Few business and industrial activities also exist within the area which provides for employment opportunities.
- These activities includes amongst others, Timber Processing, Lilly Mine as well as agricultural processing and packaging.

6.5.5.5 Roads & Public Transport

- The following is proposed for the area:
 - Upgrade and protect the mobility function of the R38 road; and
 - Upgrade and maintain the internal road network between the different villages and establish a road hierarchy.
- Provide an efficient and effective public transport system to improve linkages within area and to other areas by upgrading the existing illegal public transport rank that operates in the area.

6.5.5.6 Development Objectives

The following development objectives are proposed in order to develop the area as a sustainable rural service node:

6.5.5.7 Spatial Proposals & Development Directives

Strategic Mixed Use

- The area east of the R38 road is proposed for Strategic Mixed Use Development.
- Business, light industrial, social services and other active already exists within these area and could further be strengthened by incusing of more land uses in the likes of business, commercial and social amenities.
- The intention is to provide for a convenient rural service node with nucleus of mixed use land uses to service the wider area.

Industrial Growth Areas.

- Industrial development encouraged at the intersection of the R38 road and the service road towards the police station, the area in between the railway line and the R38 road and the area east of the existing Timber Processing industry.

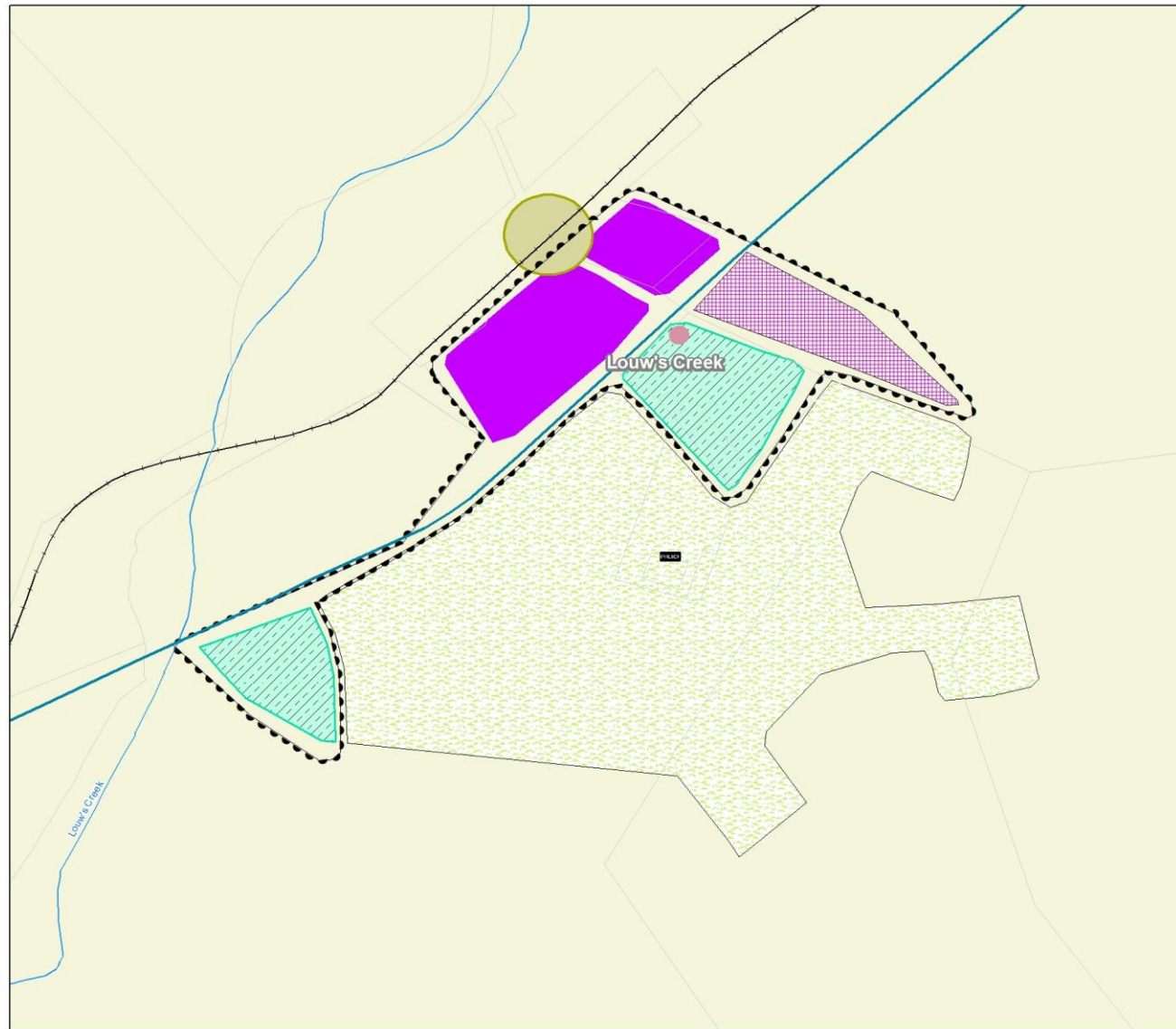
Future Housing or IHS

- The area west of the R38 road is reserved for Future Housing or the establishment of an IHS.
- The intention is to address the current informal settlements and the housing backlog within the area.
- The provision of a full range of community facilities such as community centres, schools, clinics, open spaces, cemeteries etc, should be taken into account when developing this area.

Upgrade Focus and Consolidation Area

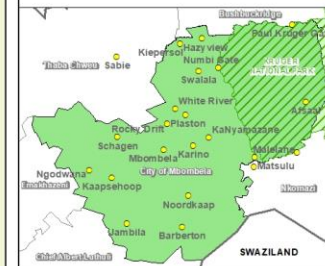
- The settlements of Lows creek and Esperado have been identified as updgrade focus and consolidation areas.

- Upgrading initiatives should focus on, inter alia, the following:
 - Formalisation and tenure upgrading;
 - Engineering services (sanitation, water supply, electricity and storm water);
 - Provision of sufficient social infrastructure and services to enhance the quality of life of these communities; and
 - Upgrading of existing housing stock.

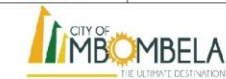
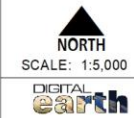


SETTLEMENT PROPOSALS

LOUW'S CREEK

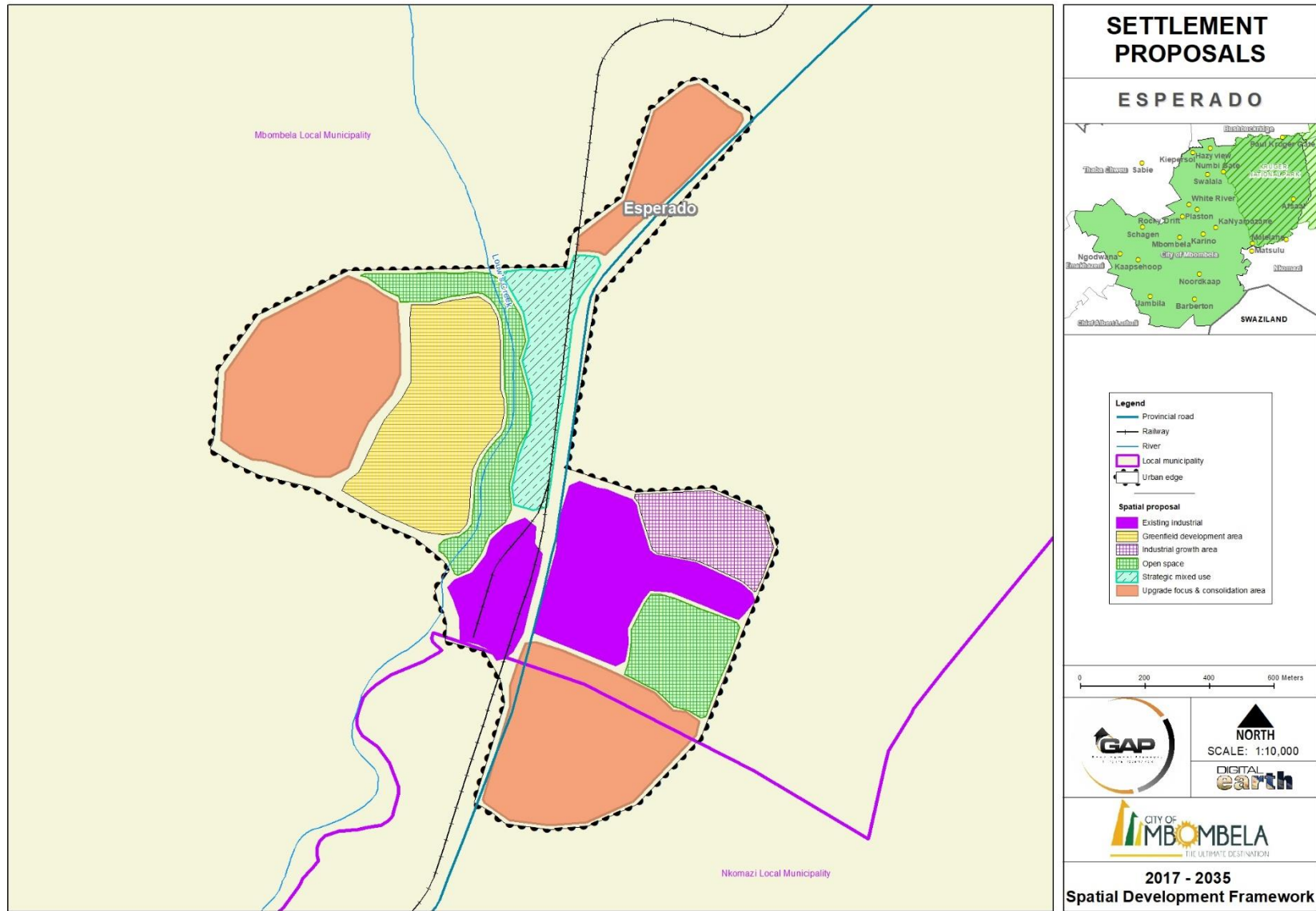


- Legend**
- Police station
 - Provincial road
 - Railway
 - River
 - Local municipality
 - Urban edge
- Spatial proposal**
- Agriculture cultivation
 - Existing industrial
 - Industrial growth area
 - Public transport rank
 - Strategic mixed use
 - Upgrade railway station



**2017 - 2035
Spatial Development Framework**

Map 99: Lows Creek Strategic Spatial Framework



Map 100: Esperado Strategic Spatial Framework

CHAPTER 7: IMPLEMENTATION FRAMEWORK

SPLUMA requires an articulation of an Implementation Plan consisting of policies and guidelines which directs how the strategies will be realised. Reference is also made in legislation to the requirements of a Capital Investment/ Expenditure Framework (CIF/CEF) that expresses phasing of development in space.

The alignment between the MSDF, IDP and Budget is critical to ensure that financial resources as reflected in the annual budget, bring to fruition the realisation of programmes and projects in the IDP.

Therefore the purpose of this chapter is to provide an overview of the strategic investment focus and how it links back to the spatial strategy. The implementation of the SDF takes place at two key levels.

Firstly state and private sector developments are overseen by the city through its development approval process. The intent of the Spatial Development Framework is realised through the application of policy and legal guidelines, requirements and mechanisms to direct development towards achieving its overall goals and outcomes.

Secondly the implementation of the SDF relies on capital investment in infrastructure. This investment guides growth directions and ambitions for future development. Through guiding public investment in bulk infrastructure and services the SDF will in turn guide private investment and development in the city. Public sector investment in infrastructure and services represents the most significant portion of capital investment in the city and the direction the spatial framework provides for the capital investment programme is essential for successful implementation.

This section considers how best to implement the spatial plan, strategies and projects; how to package and market the areas and towns, and the ways in which the impact of the interventions can be measured and evaluated to ensure that the desired outcomes are achieved. This chapter is packaged as follows:

- Implementation Policies and Guidelines
- Proposed Policy Review & Development

- Capital Expenditure Framework
- Institutional Arrangements

-
- Precinct Plans

The Implementation Plan's strategies and projects are linked to the municipal spatial priorities which guide investment and development spending in the municipality.

7.1 IMPLEMENTATION POLICIES

The following spatial and non-spatial policies will enable City of Mbombela to achieve its desired spatial form and effectively implement the SDF. These will assure the effective implementation of the Spatial Development Framework and it is fundamental that the Land Use Management System incorporates these guidelines to ensure effective land use management in Mbombela.

The following policies are developed under the SDF for City of Mbombela:

- Urban edge policy
- Residential densification policy
- Infrastructure policy
- Subsidised housing policy
- Sustainability policy
- Demarcation of sites

7.1.1 The Urban Edge Policy

One of the City's Growth Management Tools, which has been in place since 2000, is the Urban Edge. An urban edge is a demarcated line and interrelated policy that serves to manage, direct and limit urban expansion. Land located beyond the City's urban edge is predominantly rural and agricultural in nature and high proportions of the City's Critical Biodiversity (CBA's) and Environmental Support Areas (ESA's) are found outside of the boundary.

Purpose & Objectives of the Urban Edge Policy

The urban edge was established to manage the expansion of the city's footprint, limit sprawl related infrastructure costs (capital and operational) and protect the City's ecological resources which will in turn ensure the following:

- Optimal utilisation of engineering services;
- Optimisation of public transport;
- Prevention of urban decay and promotion of urban integration;
- Promotion of opportunities for redevelopment;
- Conservation of environmentally sensitive areas and scenic resources;
- The protection of high potential agricultural land; and
- The creation of urban corridors along public transportation routes.

Development outside the Urban Edge

Development outside the Urban Edge will be considered in terms of compliance with the following land use criteria:

- **Agriculture:** purposes normally associated or reasonably necessary in connection with agricultural purposes and agri-villages. This includes only dwelling units related to the agricultural use of the property.
- **Conservation Areas and Nature Reserves:** Areas designated for nature conservation, which may include tourism facilities (accommodations/restaurants) and recreational facilities directly related to the main use.
- **Tourism and recreational related facilities:** Outdoor and tourism related activities including hiking trails, hotels, restaurants, curio markets, conference facilities, wedding venues, game lodges and other similar uses with a rural character not causing a nuisance or having a detrimental effect on the environment.
- **Social amenities:** Social amenities serving communities in close proximity and that cannot be accommodated within the Urban Development (including Schools, Clinics, Religious facilities) – the scale of these facilities will be considered carefully and may be more restricted

than the development controls outlined below, especially schools and religious facilities.

- **Farm stalls**
- **Rural residential uses and agricultural holdings**
- Any other related development or service, provided that the proposed development:
 - ✓ Services primarily a local market; or
 - ✓ Is located at a service delivery centre or central place to the community; or
 - ✓ Is premised on a City approved Development Framework / Precinct Plan.

Proposed activities that conform to the above land use criteria will be further evaluated noting whether:

- The development is in an area that has been identified to be ecologically sensitive or contains endangered species – proposals would not generally be supported in these instances.
- The development would have a detrimental effect on the environment – applicable environmental legislation will prevail.
- Bulk infrastructure capacities would be exceeded – proposals would not generally be supported in these instances.
- The development will be in keeping with the character / ambience of the surrounds.

Proposed developments outside the urban edge that do not conform to the above land use criteria will not be supported.

Urban Edge Development Regulations

The following development regulations are applicable to the Urban Edge Policy:

(a) Site Specific Circumstances

In many instances, applications submitted for a change of land use or division of land beyond the urban edge are motivated on the grounds that agricultural potential and operations have diminished and / or there are security issues associated with relatively large portions of land. Whilst these issues cannot be

ignored and each proposal and application must be considered on individual merit, the bigger picture of the desired City form and the potential precedent (if approved) must also be considered in assessing applications and proposals. The availability of bulk services on a site cannot be used as the primary motivation for development beyond the urban edge. Infrastructure is one aspect related to the delineation of the urban edge, issues of environmental sensitivities, precedent, implication of similar developments on infrastructure capacities and life-cycle costs, urban form and access to current / planned (i.e. 3-5 year budget horizon) public transportation infrastructure are also considerations.

(b) Existing & New Land Use Rights

Amending the urban edge each time an application is approved beyond its delineation would be impractical.

Where rights have been historically approved or are newly approved by Council beyond the urban edge, these rights remain intact. It will not however necessitate a formal amendment to the urban edge (unless deemed prudent by senior management).

Where rights have been historically approved or are newly approved by Council beyond the urban edge and a conflict exists with the Provincial Edge (given alignments) the City recognises these rights as legitimate and directs any queries in respect of additional Provincial policy or requirements to the Head of Department: Cooperative Governance & Traditional Affairs.

(c) Infrastructure Provision

The focus for the City in the short to medium timeframe is to upgrade and refurbish existing infrastructure within the urban edge and within the consolidation zone areas associated. As a founding principle, extensions of the City's infrastructure beyond the urban edge cannot be supported.

(d) Township Establishment and Land Development Areas outside the Urban Edge

A proliferation of developments beyond the urban edge, facilitated via Township Establishment applications is not desirable. However, the formal establishment of a township to facilitate an appropriate and acceptable development (in relation to the criteria outlined in this section) without placing an obligation on the City to extend services and infrastructure may be acceptable in certain instances (e.g. where legal issues prohibit the granting of consent uses, where a township application becomes most appropriate to address development concerns i.e. traffic impact study & geotechnical analysis).

(e) Subdivision of Land outside the Urban Edge

The subdivision of land outside the UDB will only be allowed if it complies with the following criteria and associated table:

- Compliance with land use criteria noted above;
- Division is within the parameters of the Subdivision of land as per the density policy;
- An existing second dwelling is not the primary motivation for the subdivision;
- Subdivision of productive agricultural areas with agricultural potential should only be allowed in special circumstances and only with the written consent from the National Department of Agriculture;
- Where a subdivision is motivated because of a road, river or servitude physically severing land, the reason for the severance should be proven. The provision of services and registration of servitudes should be to the satisfaction of the local authority;
- There shall be no obligation on Council to render services in any form whatsoever.

7.1.2 Densification Framework

Densification is the process whereby densities (i.e. the number of dwelling units per hectare) increase in a planned and sustainable manner. It can take place by means of apartments buildings (flats), cluster housing (group housing) and through subdivision and development of second dwelling units.

Densification creates a more compact environment that improves access to work and services and improves efficiency and sustainability by:

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

The Densification Framework is critical for the municipality as it guides decision making with respect to density-related applications. It guides the detailed planning and design of precinct plans, it aligns density patterns, trends and proposals with land use management and infrastructure capacity and it identifies the processes to support the implementation and management of higher densities.

Importance of Densification

Planned densification is crucial to addressing the housing crisis which faces South Africa and to improving the quality of life of its citizens. Densification can create good quality sustainable urban environments and result in the following:

- A reduced demand for prime agricultural land;

- Though the provision of sustainable population thresholds, an increased reliance on public transport services and resultant decrease in private vehicular transport dependence, thereby decreasing traffic congestion;
- A cohesive socio-economic structure by bringing people closer to social infrastructure and economic opportunities;
- Improved quality of life and the reintroduction of alternative transport methods such as walking and cycling; and
- Diversity in housing patterns and choice of housing types and tenure options.

Densification can take place within developed areas of the city of vacant land, through re-development of existing sites and by the way of Greenfield development. Densification is achieved through a range of zoning and land use regulations and the introduction of varying housing typologies as follows:

- Constructing second dwellings;
- Increasing the existing bulk and number of units through the expansion of the building area, or by adding additional floors;
- Consolidating vacant or developed erven, and then redeveloping them at higher densities;

Directive A	Directive B
1 dwelling unit per hectare	Maximum 1 dwelling unit per hectare
1 dwelling unit per 2 000 to 5 000 m ²	Maximum 5 dwelling units per hectare
1 dwelling unit per 1 000 to 2 000 m ²	Maximum 10 dwelling unit per hectare
1 dwelling unit per 500 to 700 m ²	Maximum 14 dwelling units per hectare
1 dwelling unit per 300 to 500 m ²	Maximum 20 dwelling unit per hectare
1 dwelling unit per 200 to 300 m ²	Maximum 33 dwelling units per hectare
1 dwelling unit per 120 to 200 m ²	Maximum 50 dwelling unit per hectare
1 dwelling unit per 120 to 200 m ²	Maximum 83 dwelling units per hectare
1 dwelling unit per 120 m ² or less	83 + dwelling units per hectare

- Subdivision of land; and

- Higher density infill on vacant and underutilised land.

Purpose & Objectives of the Densification Framework

The purpose of the Densification Formwork is to provide the municipality with a guideline and foundation towards the development of a detailed densification policy that will address the rapid rate of urbanisation and facilitate land use management to create a sustainable urban environment that brings people closer to social and economic opportunities.

The objectives of the densification framework are as follows:

- To undertake densification in a sustainable manner with due consideration of existing infrastructure and of existing infrastructure and optimal utilisation thereof and further be aware of infrastructure limitations and costs related to upgrade thereof;
- To protect high potential agricultural land;
- To increase reliance on public transport systems by the creation of population thresholds which makes public transport initiatives viable;
- To ensure that densification takes place in a manner that sustains quality of life and good urban form;
- To support the development of mixed land use to create vibrant urban environments with place-making characteristics;
- To provide guidance to homeowners and investors on the type of long term development anticipated in specific areas; and
- To provide a framework for the assessment of density related town planning applications.

Density Directives Applicable within the Urban Edge

The density directives which are imposed in a form of a densification framework are summarised as follows (See Map 101):

Table 42: Density Directives

Application of the Density Directives

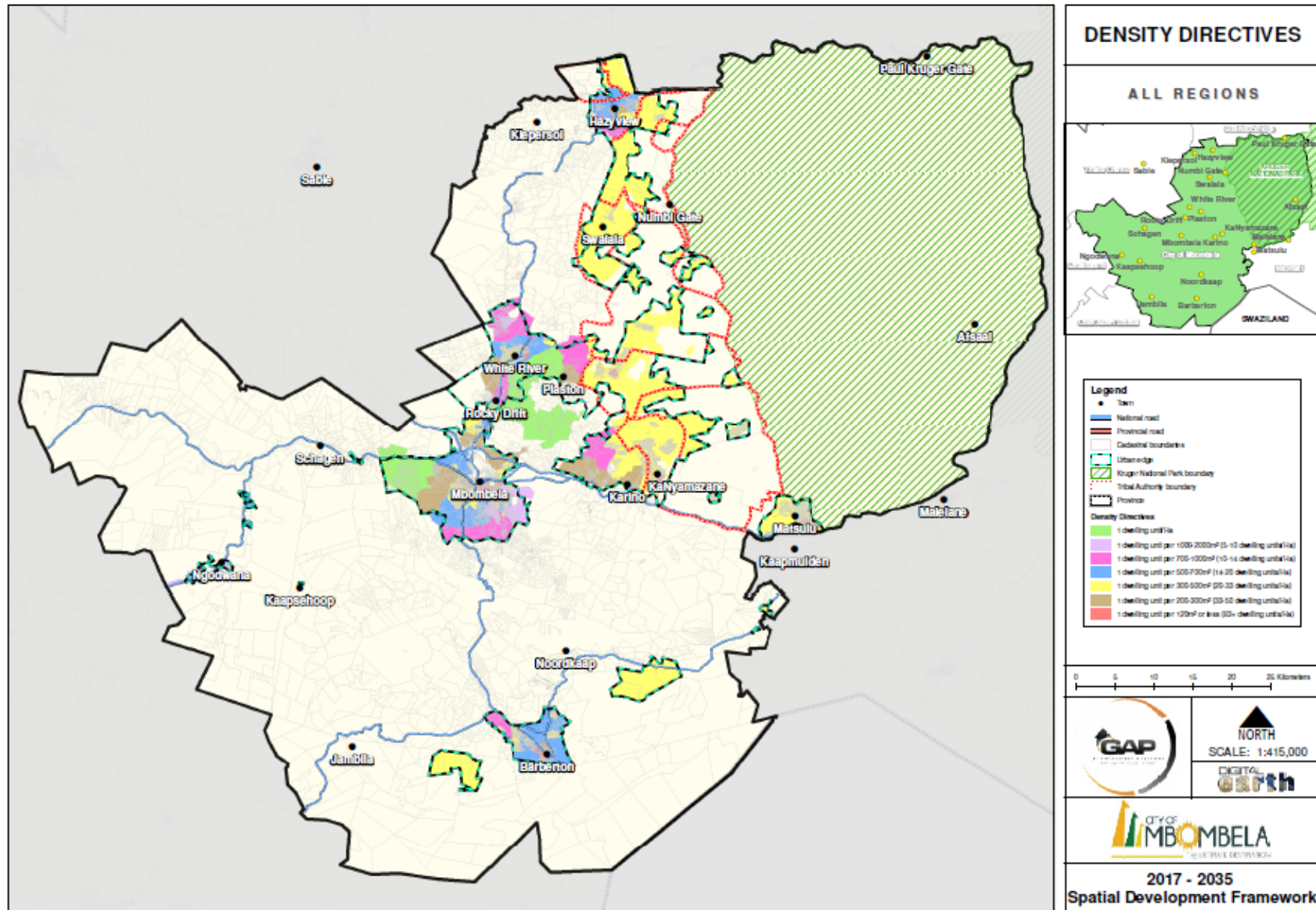
The above mentioned density directives will be applied to the following areas or types of developments:

- Freehold development (full tile erven) & second dwelling units;
- Sectional title, share block & tourism accommodation;
- Greenfields development;
- Informal development;
- Traditional Council areas; and
- Other developments.

Consideration of Density Application

In consideration of application for densification, the municipality must intensify the density directives applicable to a particular area as indicted on the map and impose these densities where possible within the parameters of infrastructure capacity.

Although the densification framework provides specific densification directives, it must be viewed as a guideline and it is recommended that the municipality develops a detailed density policy for the entire municipal area.



Map 101: Density Directives

& Infrastructure Policy

The Social Amenities & Infrastructure Policy focuses on servicing backlogs and deficiencies in engineering & social services in the under serviced and marginalised areas of the municipality, usually found within the consolidation zone.

The policy is therefore targeted at resolving backlogs & inequalities specifically related to the settlements located in the east towards creating more sustainable & liveable settlements with improved quality of life.

In terms of the Constitution of South Africa everyone has the right to sufficient water and basic sanitation (healthy environment). The Constitution requires that a municipality must structure and manage its administration, budgeting and planning processes to:

- Give priority to basic needs; and
- Promote the social and economic development of the community.

In keeping with its obligation in terms of the Constitution the municipality must ensure that the following building blocks towards the provision of sustainable social amenities & engineering services are in place:

Master Planning

COM must ensure that adequate engineering infrastructure plans are in place to ensure the provision of engineering services to all residents within the municipality. This master plans must also allow for economic, social development and growth (new development & densification) as well as the progressive increase of service levels where it is economical viable & sustainable.

The objectives of these master plans must be to:

- Direct and guide planning and development for growth and expansion of the COM area (new developments) towards the identified activity nodes as this will ensure efficiency, benefit of scale, affordability and equity,

- Plan for the demand on services due to changes in town planning (densification or infill development).
- Plan for the systematic eradication of backlogs (provision of basic levels of services) to all consumers within its area of jurisdiction, but specifically to the lower order identified settlements.
- Plan for the demand in terms of increased service levels (climbing ladder). The planning must exclusively be based on the sustainability of the higher level of service (must be economically viable).
- Ensure that planning is in place for the conservation and preservation of the natural resources required to provide sustainable services.
- Ensure that informed technology choices specifically with regards to sanitation are made to ensure that the services provided are affordable and sustainable.

Guidelines for Provision of Social Amenities

Developing and maintaining community facilities is one the biggest challenges facing local government. In many instances, there is no realistic plan in place to address the shortcomings. Development involves spending funds that are, in most cases, not readily available. Plans are drawn up to address infrastructure challenges but nothing is in place to maintain the developed infrastructure. There should be a realistic and workable approach to proposing new infrastructure so that municipalities are not left with a burden in the long run.

To model the impact of population growth on the demand for social facilities, the “CSIR Guidelines for the Provision of Social Facilities in South African Settlements” must be considered for the provision of social amenities within the municipality. The guidelines categorise COM mostly as a “Dense dispersed settlements” with a catchment size of between 10 000 and 36 000 people. The future requirements for social facilities were indicated in the socio-economic analysis section in the previous chapters. Note that the requirements does not take into account existing backlogs – it only deals with the future provision of facilities in terms of growth.

Locational Preference and Spatial Optimisation

The clustering of social amenities spatially holds many benefits. It is commonly considered the preferred approach to cluster such amenities together, provided that the facilities to be grouped together are complementary in nature.

Consideration should also be made on the extent of land required for some facilities. National Government promotes the clustering and sharing of facilities in the form of Thusong Centres.

The Urban Networks Strategy similarly advocates the spatial clustering of facilities in identified nodes to attract people and intensify activity in the nodes to make these economically and socially viable. The clustering of facilities also allows for these facilities to be used in more than one way and resources can be shared. If well-planned, the results should resemble trip reductions and land saving. Note that not all amenities are compatible. For obvious reasons it would be insensitive to locate an old-age home adjacent to a cemetery etc.

The following are a few points to note about the social facilities location preference:

- Strategic and regional social amenities (which are associated with high-intensity land use) are better suited for higher-order nodes and movement networks, provided they do not take up too much space.
- Strategic and regional social amenities requiring large areas of land, such as cemeteries, are not preferred in nodes, but should be located close to major freeways or arterial roads to facilitate wide access. There are however some exceptions. An international airport itself functions as a primary node. Coupled with an extensive road network connecting the airport and complementary land uses around the airport, the node itself becomes an aerotropolis and is thus ranked as a primary node.
- Relating to rural nodes/service delivery centres within the municipality it may be appropriate to employ mobile solutions such as mobile libraries or clinics due to low densities in rural areas.

Formalisation of Informal Settlements Programme

Providing social amenities & engineering infrastructure in informal areas is a challenge for local government. Therefore the Formalisation of Informal Settlements Programme is an integral part of this policy. A large number of housing projects are currently addressing demand in these areas. The development strategy is to conclude existing projects already underway and to align new in-situ development projects to the SDF policy imperatives for integrated and sustainable human settlements before engineering services can be provided.

Institutional arrangements

COM must ensure that adequate institutional arrangements are in place to give effect to its mandate of delivering quality services to consumers within its area.

- Bulk service provider agreements
- Local service provider agreements
- Consumer charter
- Consumer contracts/agreements
- Policies and tariffs (bylaws)
- Intermediary agreements
- Adequate skilled staff
- Monitoring mechanisms
- Comprehensive forward planning – services & funding
- Project coordination – internal & external
- Accountability of staff
- Adequate systems and processes
- Avoid political interference that are not based on sound technical inputs

Financial arrangements

- Ensure adequate sustainable investment in infrastructure to ensure access to services. Ensure adequate financial administration of funds used for capital development of services. Where possible ring fence funds (e.g. service contributions) to ensure investment into new infrastructure.
- Adequate financial resources for operation and maintenance of services.

- Ensure financially viable water services provision arrangements, to ensure ongoing operation, maintenance and rehabilitation of assets (use of equitable share, tariff policy, and water service provider contract details). This must also be for the internal service provision function.
- Ensure mechanisms are in place to provide financial assistance to intermediaries.
- Appropriate financing mechanisms to provide higher levels of services where it is sustainable and economically valuable.
- Adequate credit control
- Adequate pricing and tariffs

7.1.4 The Housing Policy

The objective of the Housing Policy is to provide a housing vision and approach and locational principles for housing, including housing for the poor, state delivered housing, informal settlements and inclusionary housing. COM's housing delivery strategy should support the SDF in ensuring that programmes deliver the range of housing typologies in the areas identified for residential densification and future housing / integrated human settlements.

General Guidelines

- The development of new subsidised housing should conform to guidelines and parameters set-out by National and Provincial Government's.
- Diversification of housing projects and housing types should be promoted.
- Optimal infrastructure must be developed in order to allow for the long term development of such areas.
- Pre-paid services must be standard in all new projects to ensure a minimum effect on the financial sustainability of the municipality.
- All developments (i.e. industrial and mining developments) requiring a large work force must address the issue of housing close to the place of work. This is to ensure that informal settlements do not pursue.
- The development of social housing schemes is a specific priority and a number of focus areas/sites for such developments need to be identified.

Locational Preference

The location of future housing developments to meet demand across socio-economic categories should be located close to urban amenities, including economic activity, public transport and jobs. As such the SDF defines the areas earmarked for future housing and Transformation Zone as the primary focus for public and private delivery of large-scale housing developments in the municipality, whereas housing development in the Consolidation Zone is subject to a range of conditions to ensure sustainable development takes place.

In the Consolidation Zone, opportunities exist for developing housing opportunities within Deprivation areas, targeting low income residents, depending on the

locational characteristics. The approach to development of any informal settlement within the Consolidation Zone will be informed by key determinants such as local economic opportunities, access to public transport and future growth potential.

In terms of this focus, in the City Centres, the City of Mbombela Vision 2030 Strategy has targeted to accommodate a large number of new affordable housing opportunities, including social rental housing, mainly through conversion of buildings. The identified city centres, including new infill developments where significant housing opportunities for all income groups can be realised must be prioritised.

Informal Settlements

The SDF Housing Policy reiterates the position supported in national policy (e.g. Breaking New Ground, the National Development Plan, National Development Outcome 8 and the National Upgrading Support Programme) that in-situ upgrading of informal settlements should be the first option for intervention, with relocation only applied where upgrades are not possible or desirable for the community in question, i.e. when settlements are not well located regarding “public transport and/or pedestrian access to economic opportunities and social amenities (in particular, schools and health facilities)” and bulk services. When relocation is necessary, distances should be kept to a minimum (within 5 km) and should be done in close consultation and negotiation with the community/ies affected. Upgrading of informal settlements should be done in line with the Upgrading Informal Settlements Programme (UISP) and with support from the National Upgrading Support Programme (NUSP).

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

- Formal Township Establishment;
- Land tenure upgrade;
- Relocation of settlements in environmental sensitive areas;
- Provision of engineering services (sanitation, water supply, electricity and storm water); and

- Provision of sufficient social infrastructure and services to enhance the quality of life of these communities.

Inclusionary Housing

Section 21(i) of SPLUMA requires municipal SDF's to identify areas where national or provincial inclusionary housing policy may be applicable. Inclusionary housing is defined as “a housing programme that requires developers to dedicate a certain percentage of new housing developments to low income and low middle income households at affordable housing cost”.

The number of inclusionary units will be based on a percentage of the total number of units in a development; currently proposed at between 10 and 30%. This SDF seeks to achieve a conscious mix of income groups in areas of the city that are well located and well serviced by jobs, social services and public transport. The SDF supports a requirement for inclusionary housing. With a complex issue such as this, it is recommended that a dedicated policy be adopted for inclusionary housing.

Until such time that an Inclusionary Housing Policy or By-Law is adopted by council, all new residential or mixed use developments of 20 residential units or more must include at least 20% affordable inclusionary housing, catering to households earning R7000 or less per month. The municipality may include conditions related to inclusionary housing in approval of applications. Density bonuses will be awarded to developers who accommodate inclusionary housing. Inclusionary housing provided must cater to a range of household incomes below the R7000 a month indicated above, based on the City's income distribution.

The Inclusionary Housing Policy proposed must aim to achieve the following:

- Contribute towards achieving a better balance of income groups in new residential and mixed use developments and redevelopments.
- Provide accommodation opportunities for low income and lower-middle income households in well located areas that they might otherwise be excluded from.

- Improve the supply of affordable housing opportunities for low income households (ownership and rental).
- Mobilise the private sector to provide lasting solutions in the delivery of affordable housing opportunities across all income groups in the city.

In order to facilitate the delivery of inclusionary housing, the SDF proposes the following:

- Inclusionary housing should be coupled to an incentive programme to create a positive development environment, and to target priority areas.
- The inclusionary housing policy provides for inclusionary units to be additional to allowable residential densities.
- Land use and development management should give priority to development applications that include inclusionary housing through fast tracking approvals.
- Land use and development management must support smaller unit sizes to promote the provision of inclusionary housing.
- Flexibility in zoning, density, height, footprint, parking and other design requirements should be allowed to accommodate affordable housing.

7.1.5 Land Use Management & Demarcation of Sites in Traditional Authority Areas

The objective of the demarcation of sites policy in the City of Mbombela Traditional Authority areas is intended to assist the Chiefs and their Headmen (Tindvuna) to allocate stands that have been properly surveyed and are suitable for human settlement. This process will ensure the following:

- Efficient utilisation of land for human settlement development;
- Efficient provision and access to basic services in respect of water, sanitation, refuse removal and electricity;
- Creation of planned, consistent and sustainable layouts with proper road hierarchy and improved access to communities, social and economic opportunities;
- Conservation of environmentally sensitive areas; and
- Protection of agricultural land.

Description

The demarcation of sites policy guides the process to be followed in the demarcation of stands. The process involves the transformation of undeveloped vacant or derelict land to land that can be used for residential, mixed, retail, commercial, industrial or institutional use. The process does not involve land tenure upgrading, it is only a township establishment process and finishes upon the approval of a General Plan.

Locality

The policy applies in the Traditional Authority areas.

Objectives

The objectives are to:

- Limit unplanned and uncontrolled informal settlement and to ensure more efficient use of resources and land within Traditional Authority Areas; and
- To create sustainable and orderly human settlements.

Guidelines

The process to be followed in the demarcation of sites will be as follows:

1. The Traditional Authority shall request assistance from the municipality in the demarcation of sites:

- The demarcation of sites should be guided by the proposals contained in the respective Traditional Authority Framework.
- The Traditional Authority shall request assistance from the Municipality in the process of demarcating sites.

2. The Municipality shall facilitate the process of township establishment:

- The Municipality shall engage with the relevant departments to solicit support of the project, be it financial or otherwise i.e. from the Department of Human Settlement or Department of Agriculture, Rural Development and Land Affairs.
- Where capacity is an issue, the Municipality shall procure the services of experienced and capable service providers for the demarcation of sites i.e. Town & Regional Planners.

3. Preparation of the application

A Township Establishment Process shall commence which will include an application consisting of the following:

- Locality and Layout Plan with contour lines and a motivational memorandum which will include:
 - ✓ Land Claims investigation
 - ✓ Mineral Rights investigation
 - ✓ Land ownership and land rights investigation
 - ✓ Investigation of servitudes
 - ✓ Conditions of title
 - ✓ Community participation information
 - ✓ Availability of bulk services (water, electricity, etc)
 - ✓ Traditional Authority Input

- ✓ Local Authority Recommendations
- ✓ Inputs from external departments
- ✓ Geotechnical report & engineering services
- ✓ 1:100 Flood line Certificate
- ✓ Scoping Report & ROD
- ✓ Community Resolution
- ✓ Certified copy of Title Deed

4. Lodging of a township establishment application:

- Before lodging the application, the layout plan shall be approved (i.e. stamped) by the Traditional Authority and a Community Resolution shall be obtained.
- The relevant legislation shall be used to lodge an application with the Mpumalanga Department of Agriculture, Rural Development and Land Administration (DARDLA) for its decision.
- A copy of the application shall be forwarded to the Municipality and other relevant departments for comments.
- The Department (DARDLA) shall provide its written decision (approval or disapproval) of the proposed township.
- Upon approval the Land Surveyor shall draft the General Plan of the study area and prepare the necessary technical documentation to be lodged with the Office of the Surveyor-General for approval.

5. Submission and presentation of approved layout plan to Traditional Authority:

- Upon receiving all necessary approvals the Municipality shall handover the Layout Plan to the Traditional Authority.
- A copy the approved General Plan shall also be handed over to the Traditional Authority.
- The Traditional Authority shall use the Layout Plan to allocate stands to residents.
- The Traditional Authority together with the Municipality shall monitor the unlawful occupation of land and illegal land uses.

7.2 PROPOSED POLICY REVIEW AND DEVELOPMENT

The SDF must, together with the municipal development priorities and objectives, inform the operational strategies, plans and policies of the different departments in the Municipality (such as infrastructure master plans, housing delivery plans, public transport plans and plans for the delivery of social and community services such as health and educational facilities).

These sector plans & policies then become implementation mechanisms for the Spatial Development Framework.

The following sector plans or policies are considered relevant implementation mechanisms for the Spatial Development Framework and it is recommended that they are reviewed and developed according to the proposals of the SDF:

Table 43: Policy Review & Development

Plan / Policy / Strategy	In Place / Absent	Status / Year	Comment
Densification Policy	In Place	2016	Needs to be reviewed according to SDF proposal
Intensification Policy	In Place	2017	Needs to be reviewed to cover the southern region
Local Economic Development Strategy	In Place	2015	Needs to be reviewed to cover the southern region and give effect to the SDF
Roads Master Plan	In Place	2018	-
Land Use Management Scheme	In progress	2018	Currently being developed
Climate Change Policy	In place	2018	-

Plan / Policy / Strategy	In Place / Absent	Status / Year	Comment
Water & Sanitation Services Plan	In Place	-	Needs to be reviewed
Housing Policy	In Place	-	Needs to be reviewed according to the SDF policy framework
Land Use Transportation Strategy	In place	2010	Needs to be reviewed
Comprehensive Infrastructure Plan (CIP)	Absent	-	Needs to be considered
Built Environment Performance Plan	Absent	-	Needs to be considered
Tourism Development Strategy	In place	-	Needs to be reviewed
Integrated Waste Management Plan	In place	2010	Needs to be reviewed

7.3 CAPITAL EXPENDITURE FRAMEWORK

Section 21 (n) of the SPLUMA requires for the development of a Capital Expenditure Framework (CEF) as part of the SDF. The purpose of this chapter is to provide an overview of the strategic investment focus and how it links back to the spatial strategies of the SDF. The CEF spatially depict where capital spending should be prioritised, what key interventions need to take place and where they need to occur.

The alignment between the SDF, IDP and Budget is critical to ensure that financial resources as reflected in the annual budget, bring to fruition the realisation of programmes and projects in the IDP. The Municipal IDP must be informed by the CEF as part of the budgetary requirements for the medium-term period as well as the next financial year. The CEF should also inform other requirements of a municipal SDF. The alignment between the SDF, IDP and Budget is critical to ensure that financial resources as reflected in the annual budget, bring to fruition the realisation of programmes and projects in the IDP.

Capital Expenditure Geographic Priority Zones

The proposed CEF identifies three broad zones & categories for capital investment that contribute to the overall Capital Investment Framework strategy. These relate to managing existing assets, meeting infrastructure backlogs, and increasing capacity to direct growth. These are discussed below and spatially indicated in map 102 & 103.

Infrastructure Investment Zone:

- The infrastructure investment zone focuses on servicing backlogs and deficiencies in engineering and social infrastructure in underserved, marginalised parts of the city (i.e. the settlements in the far east)
- Investment in these areas also needs to address the structural and built form concerns that have been raised in the SDF.
- Infrastructure investment is therefore targeted at resolving backlogs and inequalities specifically related to the deprivation areas towards creating more sustainable and liveable settlements with improved quality of life for residents.

- These areas are classified as 1st priority (high priority) investment areas with clear envisaged outcomes and spatial opportunities as expressed in the SDF, as well as detailed frameworks and development strategies for the individual areas.
- The Formalisation of Informal Settlements Programme is an integral part of capital investment in this zone.

Infrastructure Management Zone:

- Infrastructure Management refers to investment in existing infrastructure assets to address asset life cycle requirements.
- It includes refurbishment and replacement in order to secure continued service delivery.
- In priority development areas including the Transformation Zones, strategic economic nodes and deprivation areas (The Consolidation Zone), upgrading of existing infrastructure, (in addition to refurbishment and replacement), to create additional capacity for development will form part of the asset management investment where it contributes to the intended development outcomes of the SDF.
- This zone is categorised as being a 2nd priority for capital investment

Increased Infrastructure Zone:

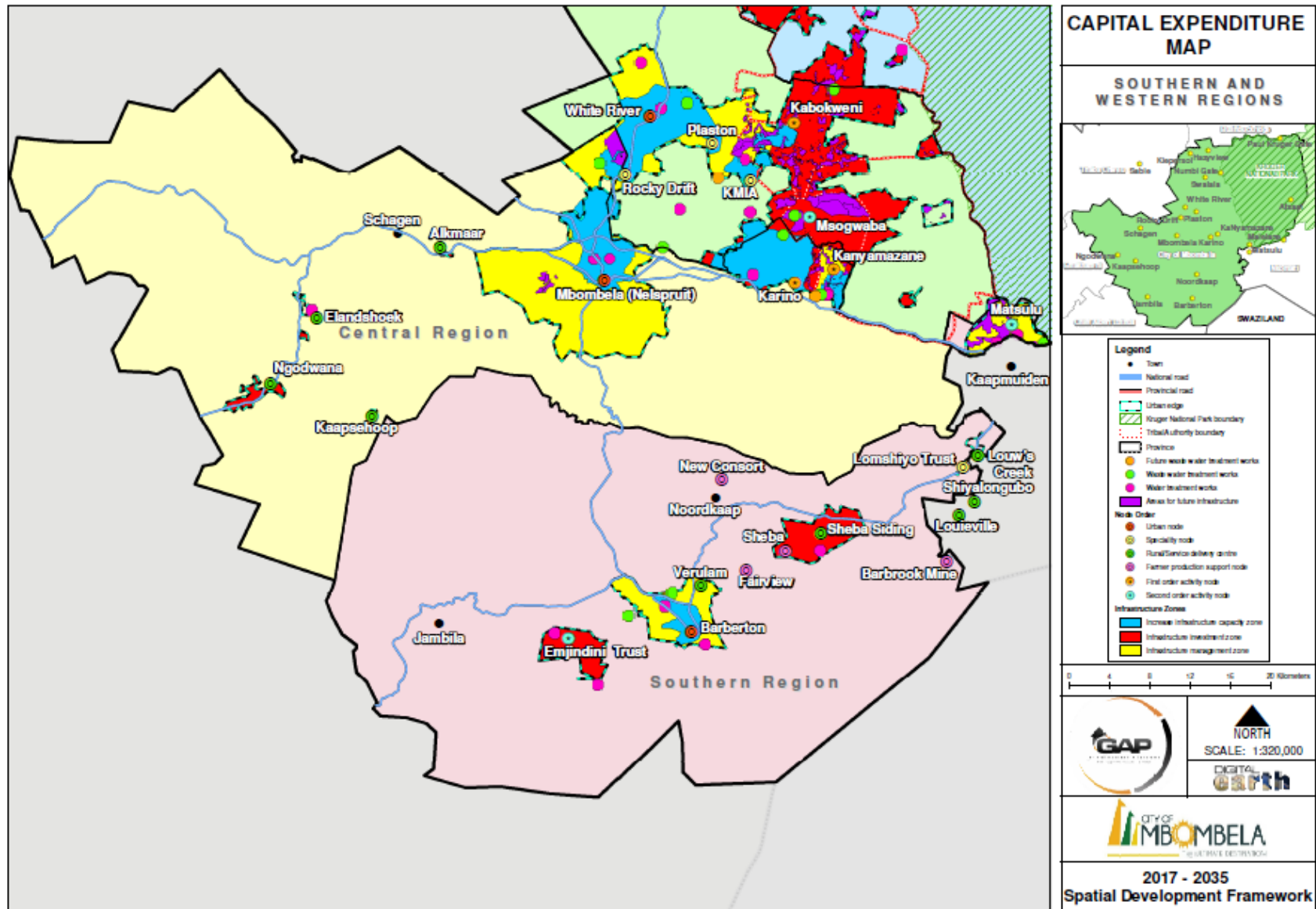
- This capital expenditure framework zone targets the Transformation Zone and proposed Urban Nodes (i.e. Tekwane Hub, Nkosi City, Mattafin Precinct, etc.) and strategic economic and nodes to provide adequate capacity for higher intensity development promoted throughout the SDF.
- This zone is aimed at accommodating urbanisation, economic growth and future urban development.
- Development programmes in these areas require pre-emptive capacity upgrades both to allow for the densities proposed, and to attract private investment towards building a more compact, efficient and ultimately liveable city.
- The transformation areas are the main focus for future development through urban intensification and growth and thus are high priority areas for growth enabling capital investment.

- Some of the programme that makes up the Transformation Zone already has detailed development frameworks and precinct plans to guide capital investment.
- Investment in these areas covers all infrastructure requirements, including engineering infrastructure, social infrastructure and public facilities.

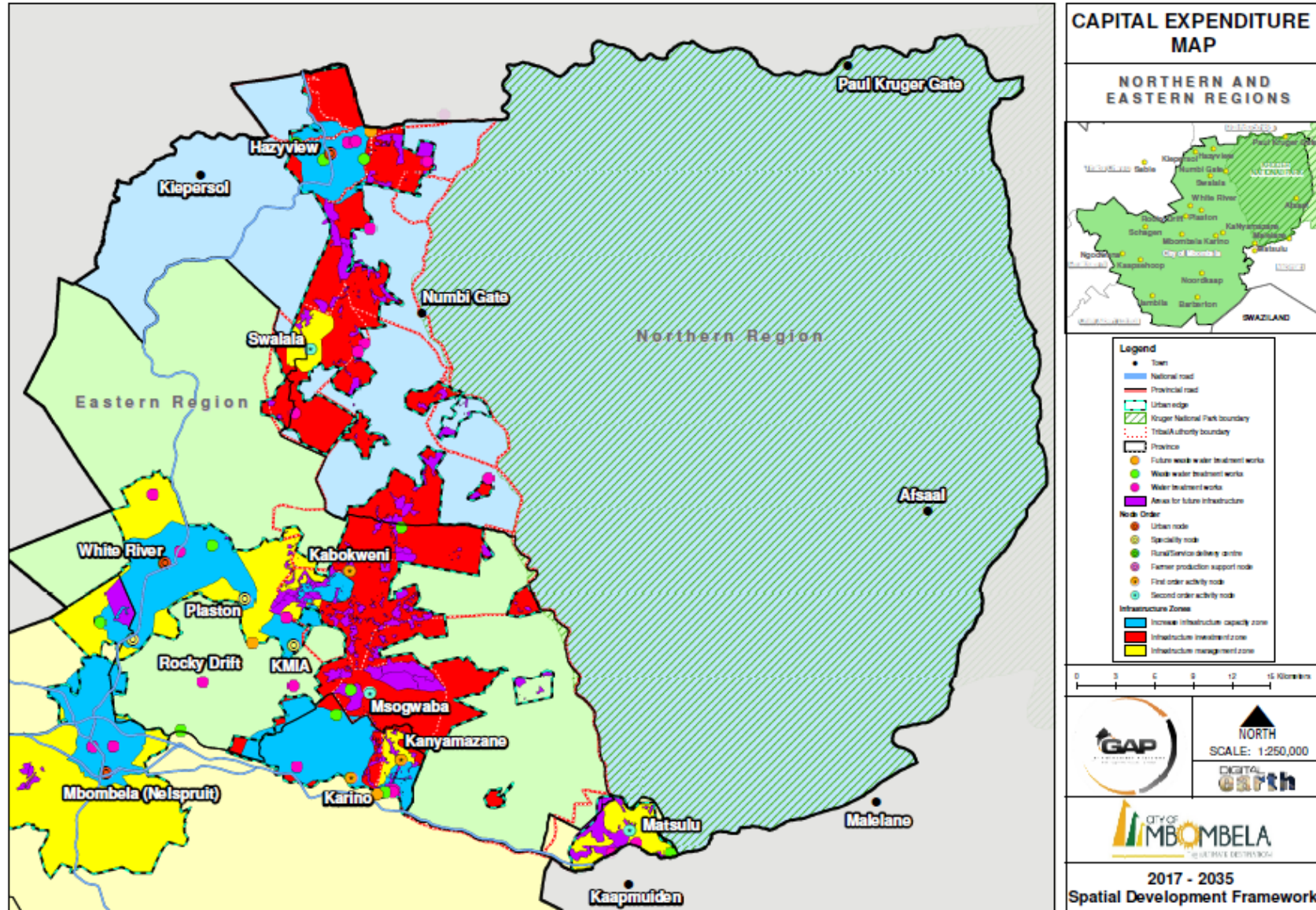
The funded capital projects for the 2018-2019 IDP and 2018/2019 – 2020/2021 Budget and Medium-Term Revenue and Expenditure Framework (MTREF), should be classified and linked in to the SDF Spatial Strategies in order to develop the Capital Expenditure Framework which is prioritised as the above zones.

The legends in the maps below are not clear. Please increase resolution!!!

It will be good to do an overlay of the vision 2030 spatial transformation strategies with the various infrastrucxture zones, transformation zones, etc. there must be direct alignment between vision 2030 spatial strategies and SDF.



Map 102: Capital Expenditure Framework Sheet 1



Map 103: Capital Expenditure Framework Sheet 2

7.4 INSTITUTIONAL ARRANGEMENTS

Effective and credible spatial planning depends heavily on cooperative governance and requires bottom-up and top-down, iterative interactions amongst the spheres of government. There are many areas of joint responsibility amongst the different spheres of government and the prevailing legislative framework demands coherence, stability and predictability between the spheres notwithstanding the Constitutional competencies of each sphere.

All planning processes of this nature require consultation with the relevant stakeholders. Stakeholders to be consulted during the implementation of the SDF include the District, the National and Provincial sector departments, Traditional Authorities as well as parastatals.

The proper consultation and communication between all stakeholders and the Local Authority may speed up the approval process and ensure the buy-in of all stakeholders and facilitate for the faster implementation of projects resulting from the SDF and/or IDP.

For the detail of the actual programmes or projects from sector departments and the funding allocations the IDP, and approved budget (each updated an annual basis) should be referred to.

7.5 PRECINCT PLANS

By setting more localised policy contexts for individual planning decisions, precinct plans are important policy instruments by which local authorities can promote specific objectives (e.g. economic renewal, in the case of regenerating city and town centres, or ensuring protection of environmental qualities such as bio-diversity).

The primary mandate and focus of precinct plans is therefore towards ensuring for the implementation of broader strategic spatial objectives as reflected on the SDF at the local level.

The following Precinct Plans exist within the City of Mbombela, and it is further proposed that precinct plans be developed for the following areas:

Table 44: Existing & Proposed Precinct Plans

Name of Precinct Plan	Locality	In Place / Absent	Year	Comment
Tekwane Hub Precinct Plan	Karino-Tekwane	In Place	2017	To be implemented
Mataffin Precinct Plan	Mataffin	In Place	2010	Needs to be reviewed
Mbombela Precinct	Mbombela CBD	In Place	2017	To be implemented
Hazyview Precinct Plan	Hazyview CBD & Surrounding areas	In Place	2016	To be implemented
White River Precinct Plan	White River CBD & Surrounding areas	In Place	2016	To be implemented
Northern Areas Precinct Plan	Mpumalanga University, Riverside & Surrounding areas	In Place	2016	To be implemented
Barberton Town Precinct Plan	Barberton CBD & Surrounding Areas	Absent	-	To be considered
Plaston Park Industrial Precinct	Plaston Park	Absent	-	To be considered
Kabokweni Urban Renewal Precinct Plan	Kabokweni	Absent	-	To be considered
Matsulu Precinct Plan	Matsulu	Absent	-	To be considered
Swalala Precinct Plan	Swalala	Absent	-	To be considered

7.6 CONCLUSION

The purpose of a municipal SDF is to guide all decisions of a municipality relating to the use, development and planning of land and should have the following key objectives:

- To provide a strategic and indicative forward planning tool to guide decisions on land development;
- To provide a set of policies, principles and directives for spatial development
- To provide a clear and logical framework for private and public sector investment;
- To promote sustainable development in terms of the natural and built environment;
- To provide a framework for dealing with key issues such as natural resource management, land reform and land use management;
- To guide and inform directions of growth and major movement routes

Within the context of the City of Mbombela Local Municipality, an SDF can be seen as a Spatial Transformation tool, in which its successful implementation will give Citizens access to:

- Adequate and appropriate Housing,
- Good quality of life
- Proper land use management and planned future development
- Basic Municipal Services (water, sanitation, electricity and refuse removal);
- Social Services such as Libraries, Sports Facilities, and Cemeteries;
- Access to Employment and Higher Incomes;
- Access to a Social Safety Net.
- All services must be provided in a sustainable manner.