



# **NORTH WEST NOORDWES**

**EXTRAORDINARY • BUITENGEWOON**

**PROVINCIAL GAZETTE  
PROVINSIALE KOERANT**

**Vol. 258**

**MAHIKENG**  
12 JANUARY 2017  
12 JANUARIE 2017

**No. 7723**

**PART 1 OF 3**

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ISSN 1682-4532



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14/1/1

Tel : (012) 748-6066

Fax : (012) 323-9574

E-mail : [Maureen.Toka@gpw.gov.za](mailto:Maureen.Toka@gpw.gov.za)

20 October 2016

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The 27<sup>th</sup> of December 2016 has been declared as a public holiday by the State President Mr Jacob Zuma.

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Sincerely,

Maureen Toka  
Acting Assistant Director: Publications  
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PROCLAMATION • PROKLAMASIE

PROCLAMATION 1 OF 2017

# Spatial Development Framework

**North West  
Province**

**Office of the Premier**

**2016**



Version July

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**ABBREVIATIONS**

<b>C2C</b>	Coast 2 Coast Corridor
<b>CBA</b>	Critical Biodiversity Area
<b>CBD</b>	Central Business District
<b>CRDP</b>	Comprehensive Rural Development Programme
<b>CSD</b>	United Nations Commission on Sustainable Development
<b>DEDET</b>	Department of Economic Development and Tourism
<b>DM</b>	District Municipality
<b>ESA</b>	Ecological Support Area
<b>FDI</b>	Foreign Direct Investment
<b>GWS</b>	Ground Water System
<b>ICT</b>	Improving Communication Networks
<b>IDP</b>	Integrated Development Plan
<b>IRP</b>	Integrated Resource Plan
<b>ITC</b>	Information Technology and Communication
<b>LM</b>	Local Municipality
<b>MaB</b>	Man and Biosphere
<b>MPCC</b>	Multi Purpose Community Centre
<b>NDP</b>	National Development Plan
<b>NSSD</b>	National Strategy for Sustainable Development
<b>NEPAD</b>	New Partnership for Africa's Development
<b>NWP</b>	North West Province
<b>PPP</b>	Public Private Partnership
<b>RISDP</b>	Regional Indicative Strategic Development Plan
<b>SADC</b>	Southern African Development Community
<b>SANRAL</b>	South African National Roads Agency Limited
<b>SDF</b>	Spatial Development Framework
<b>SDI</b>	Spatial Development Initiative
<b>SIP</b>	Strategic Infrastructure Projects
<b>SMME</b>	Small and Medium Enterprises
<b>SPD</b>	Spatial Development Programme
<b>SPLUMA</b>	Spatial Planning and Land Use Management Act

<b>TDP</b>	Transmission Development Plan
<b>UNESCO</b>	United Nations Education, Scientific and Cultural Organization
<b>UNCED</b>	United Nations Conference on Environment and Development
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>WSA</b>	Water Supply Area
<b>WWTW</b>	Wastewater Treatment Works

# 1 CHAPTER 1: INTRODUCTION

## 1.1 Background

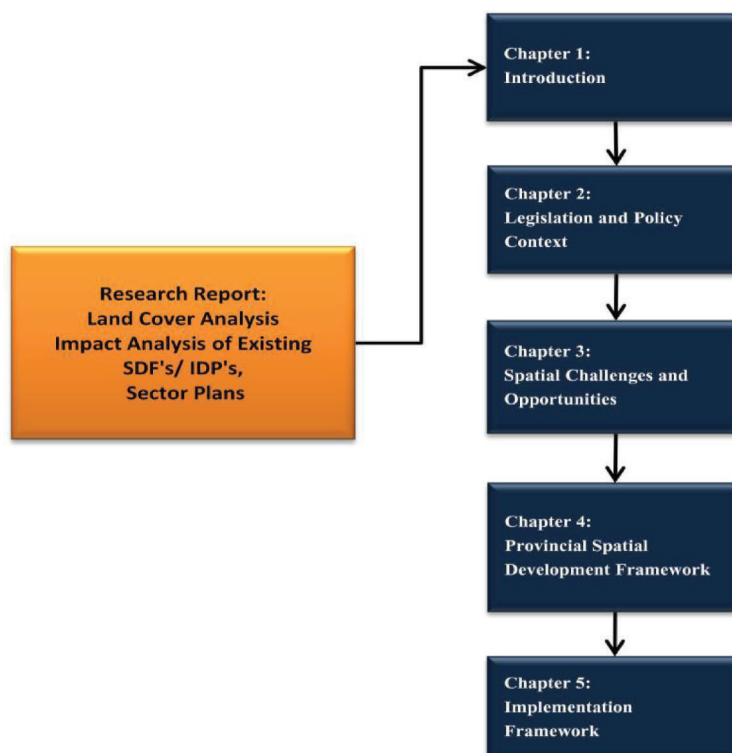
The review of the North West Spatial Development Framework 2012 was commissioned by the Office of the Premier of North West Province. The review is necessitated by the promulgation of the Spatial and Land Use Management Act 2013 and the need to align national, provincial, regional and municipal spatial plans, policies and strategies. The North West Spatial Development Framework will eventually form part of a system of plans including:

- A National Spatial Development Framework
- Regional Spatial Development Frameworks
- Provincial spatial development Frameworks
- Municipal Spatial development Frameworks

The North West Provincial Spatial Development Framework is provided in five chapters:

- Chapter 1: Introduction
- Chapter 2: Legislation and Policy Context
- Chapter 3: Spatial Challenges and Opportunities
- Chapter 4: Provincial Spatial Development Framework
- Chapter 5: Implementation Instruments

The Lay out of this document is summarised in **Figure 1-1**.



**Figure 1-1: Methodology**



## **1.2 The Spatial Planning and Land Use Management Act 2013.**

The preparation, content and legal effect of provincial spatial development framework is prescribed in Section 15, 16 and 17 of the Spatial and Land Use Management Act 2013.

### **Section 15. Preparation of a Provincial Spatial Framework**

- (1) The Premier of each province must compile, determine and publish a provincial spatial development framework for the province.
- (2) A provincial spatial development framework must be consistent with the national spatial development framework.
- (3) Provincial spatial development frameworks must coordinate, integrate and align:
  - (a) provincial plans and development strategies with policies of national government;
  - (b) the plans, policies and development strategies of provincial departments; and
  - (c) the plans, policies and development strategies of municipalities.
- (4) An Executive Council must adopt and approve a provincial spatial development framework for the province within five years from the date of commencement of this Act.
- (5) An Executive Council may amend the provincial spatial development framework when necessary and must review it at least once every five years.
- (6) Before determining a provincial spatial development framework contemplated in subsection (1) and any proposed amendments to the provincial spatial development framework contemplated in subsection (5), the Premier must:
  - (a) give notice of the proposed provincial spatial development framework in the *Gazette* and the media;
  - (b) invite the public to submit written representations in respect of the proposed provincial spatial development framework to the Premier within 60 days after the publication of the notice referred to in paragraph (a); and
  - (c) consider all representations received in respect of the proposed provincial spatial development framework.
- (7) A provincial spatial development framework and any amendment must be approved by the Executive Council and published in the *Provincial Gazette* and the media.

### **Section 16. Content of provincial spatial development framework**

A provincial spatial development framework must:

- (a) provide a spatial representation of the land development policies, strategies and objectives of the province, which must include the province's growth and development strategy where applicable;
- (b) indicate the desired and intended pattern of land use development in the province, including the delineation of areas in which development in general or development of a particular type would not be appropriate;
- (c) coordinate and integrate the spatial expression of the sectoral plans of provincial departments;
- (d) provide a framework for coordinating municipal spatial development frameworks with each other where they are contiguous;
- (e) coordinate municipal spatial development frameworks with the provincial spatial development framework and any regional spatial development frameworks as they apply in the relevant province;
- (f) incorporate any spatial aspects of relevant national development strategies and programmes as they apply in the relevant province.

**Section 17. Legal effect of provincial spatial development framework**

- (1) A provincial spatial development framework comes into operation upon approval by the Executive Council and publication to that effect in the *Provincial Gazette*.
- (2) All provincial development plans, projects and programmes must be consistent with the provincial spatial development framework.
- (3) The provincial spatial development framework cannot confer on any person the right to use or develop any land except as may be approved in terms of this Act, relevant provincial legislation or a municipal land use scheme.

## 2 CHAPTER 2: POLICY AND LEGISLATION CONTEXT

### 2.1 Introduction

The legislation and policy context is informed by Spatial Policies and Initiatives and a Legal Framework providing **Objectives** guiding what the Spatial Development Framework wants to achieve.

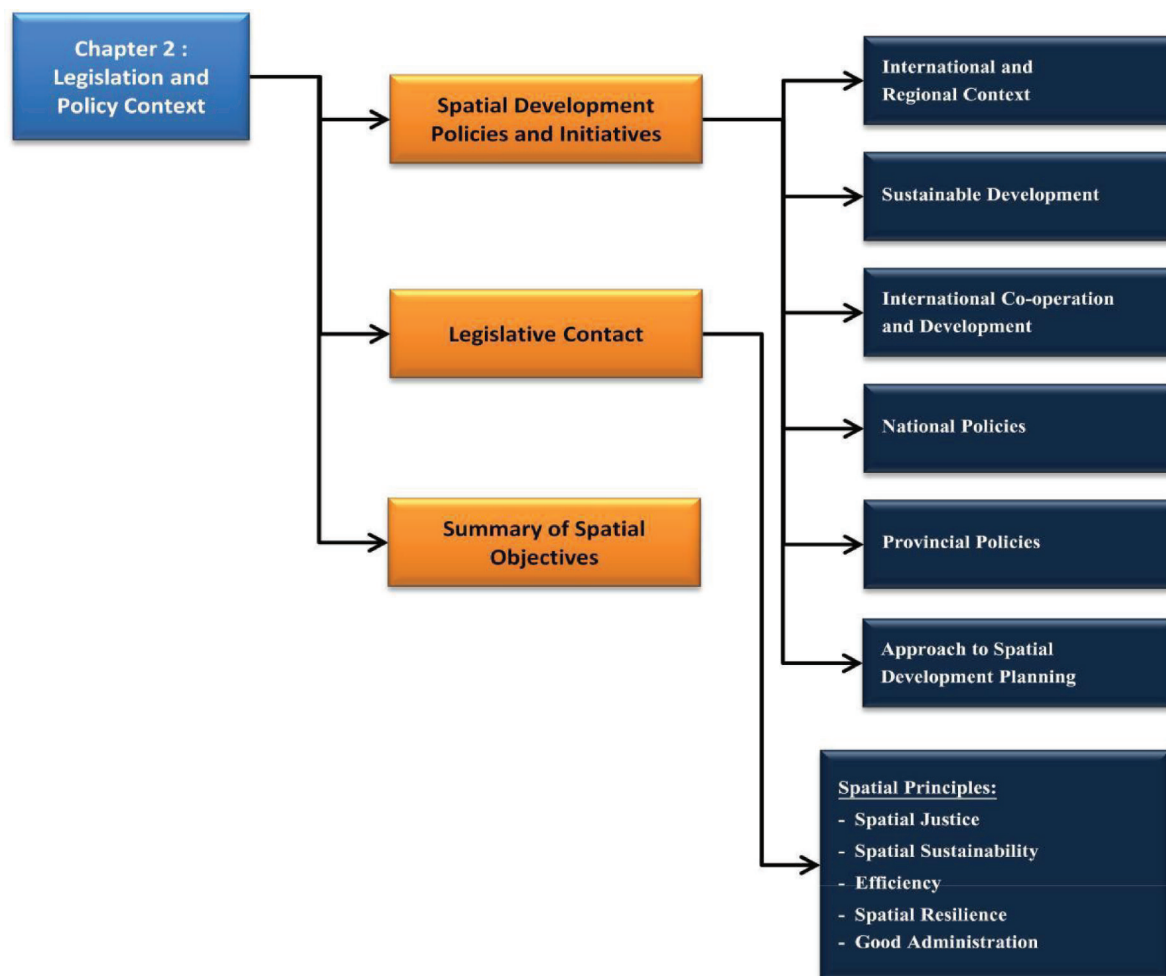


FIGURE 1-1: METHODOLOGY

## 2.2 Spatial Policies and Initiatives

### 2.2.1 International and Regional Context

#### 2.2.1.1 Background

International agreements, protocols and conventions between the South African Government and the international community both globally, continentally and regionally is binding on all spheres of government and will support integrated development on a global and regional scale.

On a global scale South Africa is signatory to inter alia:

- the United Nation's Millennium Development Goals (2000),
- Agenda 21 (1992),
- UNESCO's Man and Biosphere Programme ( MaB)
- Unesco Convention concerning the Protection of the World Cultural and Natural Heritage
- United Nations Framework Convention on Climate Change (UNFCCC)
- The UN Convention on Wetlands of International Importance - the Ramsar Convention
- United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly In Africa

As part of the African Union, South Africa also subscribes to the New Partnership for Africa's Development (NEPAD), strategic framework for Pan-African socio-economic development.

Within the southern African context, South Africa as member of the Southern African Development Community (SADC) forms part of development agreements including the Regional Indicative Strategic Development Plan (RISDP)

These agreements, protocols and conventions the following fundamental objectives of these agreements to provide sustainable development through:

- Integration into the continental and global economies
- Regional development integration
- Regionally balanced and equitable development
- Poverty eradication
- Improvement of Quality of Life
- Responsible management of natural resources and protection of the environment
- Rational use of land

Spatial development options need to support the implementation of the agreements, protocols and conventions **providing an interactive network of regional and local corridors, nodes and zones to which economic development can be directed** supported by catalyst economic, engineering and social infrastructure programs and projects.

#### 2.2.1.2 Sustainable development

***"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs"***<sup>1</sup> - is a commonly accepted definition qualified by three equal aspects of Sustainability - Social, Biophysical and Economic. Business and society cannot exist without a

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<sup>1</sup> Brundtland Report: - Report of the World Commission on Environment and Development 1987

sustainable biophysical basis. Furthermore, political power, policy and decisions are recognised as a fourth critical aspect.

The focus on regional development in order to promote sustainable development supported by Agenda 21 prepared by The United Nations Commission on Sustainable Development (CSD) emanating from the United Nations Conference on Environment and Development (UNCED), 1992.

The United Nations Commission on Sustainable Development (CSD) was mandated to ensure the effective implementation of the outcomes of Agenda 21. This includes the monitoring and reporting on implementation of agreements at local, national and international levels.

The objectives of Agenda 21 are the alleviation of poverty, hunger, sickness and illiteracy worldwide while halting the deterioration of ecosystems, which sustain life. As such, CSD provides a forum for considering issues relating to the three core elements of sustainable development (**namely economic, social and environmental**).

Agenda 21 focuses on partnerships involving the public and all relevant stakeholders to resolve developmental problems and to plan strategically for the future. It also tries to address the practicalities of applying sustainable development principles in human activity and development.

In line with the goals set by Agenda 21, development goals are set for South Africa<sup>2</sup> of which the following are directly applicable to development in the North West Province:

- International Cooperation to Accelerate Sustainable Development in Developing Countries and Related Domestic Policies(Trade)
- Changing consumption patterns
  - Changing consumption patterns energy
  - Changing consumption patterns transport
- Demographic dynamics and sustainability
- Protecting and promoting human health
- Promoting sustainable human settlement development
- Integrating environment and development in decision making
- Protection of the atmosphere
- Integrated approach to the planning and management of land resources
- Combating deforestation
- Managing Fragile Ecosystems: Combating Desertification and drought
- Managing fragile ecosystems: Sustainable mountain development
- Promoting sustainable agriculture and rural development
- Conservation of biological diversity
- Environmentally sound management of biotechnology and transfer of environmentally sound technology, cooperation and capacity building
- Protection of the quality and supply of freshwater resources

In terms of sustainability, the North West Province Spatial Development Framework needs to provide objectives which:

- Adopt a holistic approach to spatial development in order to minimise the long-term negative impacts of current land use or development decisions
- Ensure that spatial planning serves national, provincial and/or local interest

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<sup>2</sup> World Summit on Sustainable Development Johannesburg Summit 2002. South Africa Country Profile

- Support the long-term adequacy or availability of **physical, social and economic** resources to support or carry development
- Protect existing natural, environmental and cultural resources
- Ensure that land which is currently in agricultural use would only be reallocated to other uses where real need exists and prime agricultural land should remain in production.
- Support mining as an vital economic driver in the province without jeopardizing the biodiversity value of the environment
- Adopt a climate change strategy that will provide for responsible actions to curb the effect of global warming and climate change.

#### 2.2.1.3 International Cooperation and Development

International cooperation and development within the Southern African context is supported by the following integrated programmes:

##### 2.2.1.3.1 *UNESCO's programme on Man and the Biosphere (MaB)*

The MaB programme provides for an internationally recognized biosphere reserve network. Six biosphere reserves have been recognised in South Africa of which the Magaliesberg Biosphere Reserve in North West covers almost 358,000ha

**Biosphere reserves consist of three components, namely:**

- **Core areas:** are securely protected areas for conserving biological diversity, monitoring minimally disturbed ecosystems, and undertaking non-destructive research and other low-impact uses( education) e.g. **National Parks, Nature Reserves, World Heritage Sites and Ramsar Sites**
- **Buffer zone:** usually surrounds or adjoins the core areas, and is used for co-operative activities compatible with sound ecological practices, including environmental education, recreation, ecotourism and applied basic research; and
- **Transitional area:** contains a variety of agricultural activities, settlements and other uses in which local communities, management agencies, scientists, non-governmental organizations, cultural groups, economic interest and other stakeholders work together to manage and sustainably develop the area's resources.

Within the Magaliesburg Biosphere Reserve, 58,000 ha make up the core area, 110,000 ha the buffer area and 190,000 ha the transition area.

##### 2.2.1.3.2 *The UN Convention on Wetlands of International Importance - the Ramsar Convention*

The Convention is the intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resource. Barberspan Nature Reserve is a Ramsar Wetland Site

The reserve is 3118 ha in extent, of which about 2 000 ha is water. The pan is connected with the Harts River via a channel and is the largest of a series of depressions along this channel. The pan itself is about 600m wide and 1 550m long. It is a natural, shallow, alkaline lake which is perennial. Other pans in the vicinity are non-perennial. It is one of the few permanent natural water bodies on the western highveld and provides food and shelter during the dry months for large numbers of waterfowl. Migrating aquatic species use the pan as an important stopover. Almost 300 species of birds have been recorded here, about one-fifth being migrants.



#### **2.2.1.3.3 *Unesco Convention concerning the Protection of the World Cultural and Natural Heritage, 1972***

The Vredefort Dome World Heritage Site was added to the World Heritage Sites of the Unesco Convention concerning the Protection of the World Cultural and Natural Heritage, in 2005 The World Heritage Convention Act 1999 (Act No 49 of 1999) in terms of which this listing was done

Fossil Hominid Sites listed by UNESCO include:

- Sterkfontein, Swartkrans, Kromdraai and Environs
- the Makapan Valley
- Taung Skull Fossil Site.

The Taung Skull, found in a limestone quarry at Dart Pinnacle amongst numerous archaeological and palaeontological sites south-west of the Sterkfontein Valley area, is a specimen of the species *Australopithecus Africanus*. Fossils found in the many archaeological caves of the Makapan Valley have enabled the identification of several specimens of early hominids, more particularly of *Paranthropus*, dating back between 4.5 million and 2.5 million years, as well as evidence of the domestication of fire 1.8 million to 1 million years ago. Collectively these sites have produced abundant scientific information on the evolution of modern humans over at least the past 3.5 million years. They constitute a vast reserve of scientific information, with enormous potential.

#### **2.2.1.3.4 *United Nations Framework Convention on Climate Change (UNFCCC)***

South Africa ratified the United Nations Framework Convention on Climate Change (UNFCCC) in August 1997. The primary objective of this multilateral agreement is to achieve the stabilisation of greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic activities from interfering with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable development to proceed in a sustainable manner.

In terms of Articles 4.1(c), (j) and 12 of the Convention, countries are periodically required to submit reports to the Conference of Parties on various topics regarding their attempts to address climate change. In order to fulfil these requirements, South Africa prepared an Initial National Communication in 2000. In July 2002, the South African Government acceded to the Kyoto Protocol. This was deemed necessary as the international community recognised that the commitments set out in the UNFCCC were inadequate for achieving its ultimate objectives. Over this period South Africa compiled a detailed Country Study on a sectoral basis. This study, with information obtained from the Intergovernmental Panel on Climate Change (IPCC) Third Assessment Reports, made a significant contribution to the national Department of Environmental Affairs and Tourism (DEAT) launching South Africa's National Climate Change Response Strategy in 2004.

#### **Implications of climate change for South Africa**

According to the latest scientific information, key impacts predicted for Africa for the period 2020 to 2050 include (IPCC 2007) the following:

- Between 75 and 250 million people will experience greater water stress by 2020.
- Rain-fed agricultural yields could be reduced by 50% by 2020 in some countries.
- There could be a 10 to 30% reduction in average river run-off and water availability by mid-century.
- Drought-affected areas will increase in extent.
- Flood risk in high rainfall areas will increase.

- Ecosystem structures will change and there will be a loss of biodiversity if temperatures increase more than 1,5 to 2,5°C.
- Human health challenges will arise, e.g. possible changes in malaria transmission potential.

Key risks of climate change for a water-stressed area such as the North West province include threats to water supplies and changing rainfall patterns. Temperature increases could enlarge the areas prone to malaria and other vector-borne diseases. Temperature changes could also pose various challenges to crop cultivation. Higher carbon dioxide levels could reduce proteins in grasslands in livestock producing areas, in particular in poorer, drier parts of the country, and fisheries and the livelihoods of fishing communities will be affected by changes in the sea temperature. The impact of climate change is increasingly emerging as possibly the greatest threat to biodiversity loss.

#### 2.2.1.3.5 ***United Nations Convention to Combat Desertification, particularly in Africa***

The United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa was adopted by the Convention on 17 June 1994.

The objective of this Convention is to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through effective action at all levels, supported by international cooperation and partnership arrangements, in the framework of an integrated approach which is consistent with Agenda 21, with a view to contributing to the achievement of sustainable development in affected areas.

Achieving this objective will involve long-term integrated strategies that focus simultaneously, in affected areas, on improved productivity of land, and the rehabilitation, conservation and sustainable management of land and water resources, leading to improved living conditions, in particular at the community level.

#### **Principles**

In order to achieve the objective of this Convention and to implement its provisions, the Parties shall be guided, inter alia, by the following:

- a) the Parties should ensure that decisions on the design and implementation of programmes to combat desertification and/or mitigate the effects of drought are taken with the participation of populations and local communities and that an enabling environment is created at higher levels to facilitate action at national and local levels;
- b) the Parties should, in a spirit of international solidarity and partnership, improve cooperation and coordination at sub regional, regional and international levels, and better focus financial, human, organizational and technical resources where they are needed;
- c) the Parties should develop, in a spirit of partnership, cooperation among all levels of government, communities, non-governmental organizations and land holders to establish a better understanding of the nature and value of land and scarce water resources in affected areas and to work towards their sustainable use; and
- d) the Parties should take into full consideration the special needs and circumstances of affected developing country Parties, particularly the least developed among them.

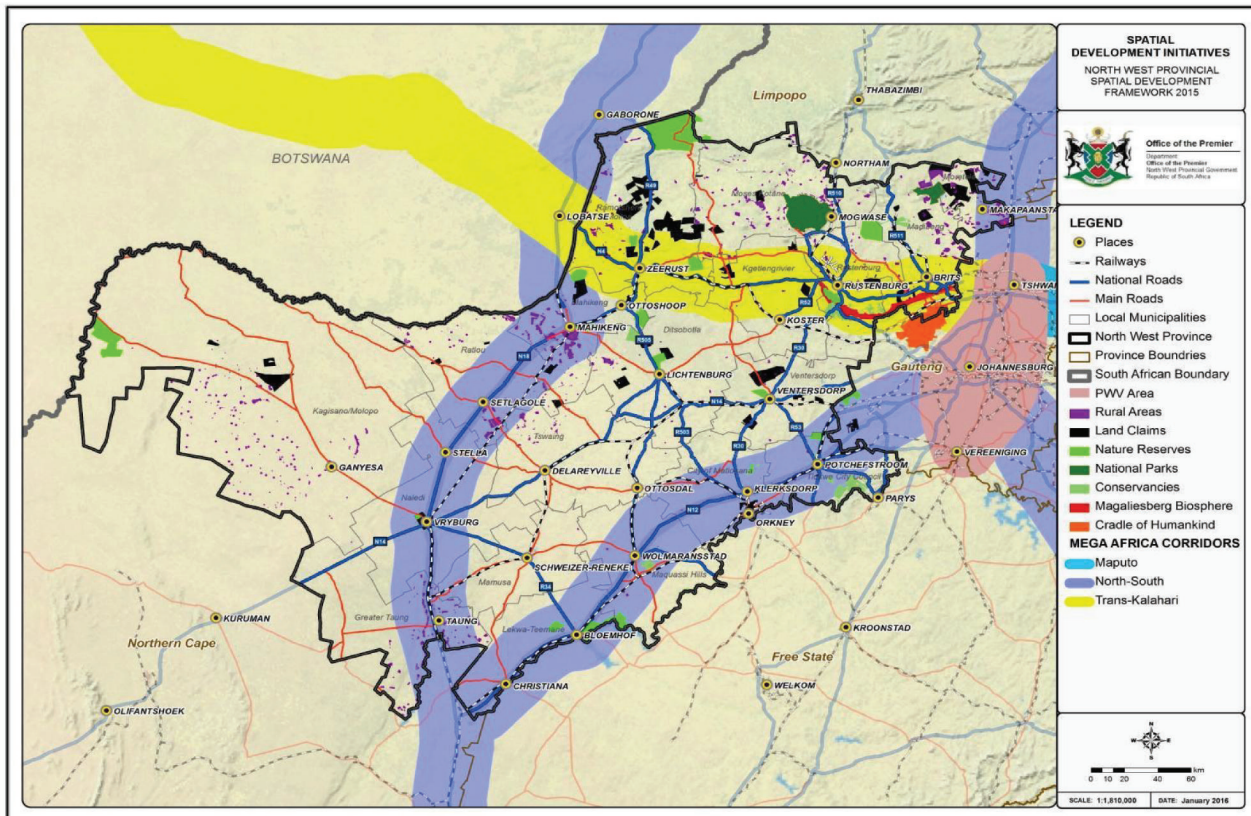
#### 2.2.1.3.6 ***The NEPAD Spatial Development Programme (SDP)***

**The Coast 2 Coast Corridor** consists of the **Maputo Development Corridor**, **Gauteng SDI**, **Platinum SDI** (where it traverses North West) and **Walvis Bay SDI** and this creates a seamless link on the sub-continent between the Indian and south Atlantic Oceans.

The Coast 2 Coast Corridor (C2C) aims to promote regional integration, economic growth, and employment creation, mobilisation of private sector investment and local economic empowerment of adjacent communities in and between the countries of Namibia, Botswana, South Africa, Swaziland and Mozambique.

It aims to offer tourists a wide diversity of African experiences on a single route passing through five countries, each of which offers special attractions and cultures.

### Map 2-1 Spatial Development Initiatives



## 2.2.2 National Policies

### 2.2.2.1 National Spatial Development Policies

The objectives of sustainable development to support the alleviation of poverty need to form an integral part of decision making at all spheres of Government. The optimal integration of the aspects of social, economic, institutional, political, physical and engineering services into decision making is a prerequisite for coherent growth and the alignment of policies, institutions and strategies.

At national level the **National Development Plan: Vision for 2030** focuses on the following key priority areas:

- An economy that will create more jobs
- Improving Infrastructure
- Transition to low carbon economy
- An inclusive and integrated rural economy
- Reversing the spatial effects of apartheid
- Improving the quality of education, training and innovation
- Quality health for all
- Social protection
- Building safer communities
- Reforming the public sector

National spatial development interventions including:

- Gauteng as a national **Node of Competitiveness** which strongly associates with the nearby economic activity nodes of Brits and Rustenburg as part of the Maputo Development Corridor
- The primary trans national development corridor and cross border infrastructure connections include the Platinum Spatial Development Initiative (SDI)
- The national competitiveness corridor connecting Gauteng with Ethikweni building on the Durban - Gauteng Freight Corridor providing indirect accessibility of North West Province to the Durban Harbour
- **Rural Restructuring Zones.** These zones include the more densely parts of the previous homelands where there is sufficient numbers of people to provide the basis for viable markets. The rural restructuring zones within North West affect the municipalities of Moretele, Madibeng, Moses Kotana, Mahikeng, Ratlou, Ditsabotla, Tswaing, Greater Taung and Kagisano/ Molopo
- **Resource critical zones**

The **National Infrastructure Plan 2012** aims to transform the economic landscape while simultaneously creating significant numbers of new jobs, and strengthen the delivery of basic services. The plan also supports the integration of African economies. Strategic Infrastructure Project: Unlocking the economic opportunities in North West Projects has a direct impact on the development and spatial planning of the North West Province

The **National Strategy for Sustainable Development (NSSD)** promotes the development of effective tools, process and frameworks to manage the integration between social demands, natural resource protection, sustainable use and economic development. The objectives of the NSSD include the following:

- **Protect the natural resource base as a priority** in order to achieve a sustainable supply of environmental goods and services.
- Ensure sustainable livelihoods and food security.
- **Align policy and legislation that integrates and gives effect to sustainable development at the levels/spheres where it matters most.**

Complementary to the above, **The National Spatial Development Perspective (NSDP)** provides principles and notions to be addressed in all Provincial and Local Municipality integrated plans to contribute to the broader growth and development policy objectives of government to ensure the above: The following principles are included:

1. **Rapid economic growth** that is sustained and inclusive is a **pre-requisite for the achievement of other policy objectives**, amongst which poverty alleviation is key.
2. Government has a constitutional obligation to **provide basic services** to all citizens (e.g. water, energy health and educational facilities) wherever they reside.
3. Beyond the constitutional obligation identified in Principle 2 above, Government spending on fixed investment, should be **focused on localities of economic growth and/or economic potential** in order to:
  - **gear up private sector** investment
  - **stimulate sustainable economic** activities
  - create long-term employment opportunities
  - Efforts to address past and current social inequalities should focus on people not places
4. In localities where there are **both high levels of poverty and development potential**, this could include fixed capital investment beyond basic services to exploit the potential of those localities

In localities with low development potential, Government spending should focus on providing social transfers, human resource development and labour market intelligence which would enable people to become more mobile and migrate to localities that are more likely to provide sustainable employment or other economic opportunities

In order to overcome the spatial distortions of Apartheid, future settlement and economic development opportunities should be channelled into **activity corridors and nodes that are adjacent to or link the main growth centres**

5. Infrastructure investment should primarily support localities that will become **major growth nodes in South Africa and the SADC region** to create regional gateways to the global economy.

**The Comprehensive Rural Development Programme (CRDP)** has the ultimate vision of creating vibrant, equitable and sustainable rural communities through a three-pronged strategy based on:

- a coordinated and integrated **broad-based agrarian transformation** which includes the establishment of rural business initiatives, agro-industries, co-operatives, **cultural initiatives** and **vibrant local markets in rural settings**, the empowerment of rural people and communities (especially women and youth), and the revitalisation of old, and revamping of new economic, social, and information and communication infrastructure, public amenities and facilities in villages and small rural towns;
- strategically increasing rural development; and
- an improved land reform programme aiming at tenure reform, restitution and land redistribution

The North West Spatial Development Framework needs to spatially accommodate the execution CRDP by promoting agrarian transformation, rural development and land reform

#### 2.2.2.2 National Economic Development Policies

In order to provide for sustainable economic growth and eradicate poverty, **The Growth Path** supports the deepening of the **domestic and regional market** by **growing employment, increasing incomes** and undertaking other measures to improve **equity and income distribution**, and widening of the market for



South African goods and services through a stronger **focus on exports** to the region and other rapidly growing economies.

The Growth Path **focuses on areas** that have the potential for creating employment on a **large scale** ("jobs drivers"), mostly by the private sector and securing strong and sustainable growth in the next decade.

The jobs drivers identified are;

1. Substantial **public investment in infrastructure** both to create employment directly in **construction, operation and maintenance as well as the production of inputs**, and indirectly by **improving efficiency** across the economy.
2. Targeting more labour-absorbing activities across the main economic sectors – the **agricultural and mining value chains, manufacturing and services**.
3. Taking advantage of new opportunities in the **knowledge and green economies**.
4. **Leveraging social capital** in the social economy and the public services.
5. Fostering **rural development and regional integration**.

In each of these areas, a special effort needs to be made to generate opportunities for young people, who face the highest unemployment rate.

**The Industrial Policy Action Plan (IPAP)** advances the work of the Economic Sectors and Employment Cluster. It contributes to:

- **Rural development** through **interventions in a range of sector such as agro processing, bio-fuels, forestry, cultural industries, aquaculture, tourism**
- **Advanced technological capabilities** through interventions in the nuclear, advanced materials, aerospace, and ICT industries
- A serious first step towards the systematic promotion of **Green and energy-efficient** goods and services.
- **Downstream mineral** beneficiation
- Strengthened **linkages between Tourism and Cultural industries**
- Stronger **integration between sector strategies, skills development plans and commercialisation of publicly funded innovation**.

The North West Spatial Development Framework needs to spatially accommodate the Job Drivers of the New Growth Path and **the Industrial Policy Action Plan** within North West, which include:

- Infrastructure Development for Employment and Development ( Jobs Driver 1) which includes:
  - Industrial Areas
  - Infrastructure
- The Comprehensive Rural Development Programme attending to a large rural population.
- Tourism, agriculture, mining and agro processing strategic interventions (Job Driver 2)
- Manufacturing
- Green Economies to ensure the conservation of the environment which provides employment opportunities in the mining, agricultural, and tourism sector.

## 2.3 Provincial Policies

### 2.3.1 North West Provincial Development Plan (Draft 2013)

The Draft North West Development Plan is the direct implementation response to the **National Development Plan: Vision for 2030** with the aim of realising the national vision and development plan at provincial level.

The North West Development Plan accepted 8 development priorities to align to the National Development Plan (NDP). The development priorities constitute the first five-year inaugural plan of economic transformation in the North West province, which includes the following:

1. Economy and employment
2. Economic infrastructure
3. An integrated and inclusive rural economy
4. Human settlement and spatial transformation
5. Improving education, training and innovation
6. Building a capable and developmental state
7. Fighting corruption
8. Transforming society and uniting the province

The spatial rationale towards the future development of North West is determined by the collective application of the following identified key drivers:

- **Nodal and Corridor development** including:

- **Competitiveness Corridors** including:

- The **Platinum Corridor** presents the western portion of the N4 corridor that links Maputo with Walvis Bay. The route passes through Nelspruit, Pretoria, Rustenburg, Lobatse and Windhoek.
    - The **Treasure Corridor** is aimed at strengthening linkages between Johannesburg, Potchefstroom, Klerksdorp and areas further south along the N12 national road.
    - The **Western Corridor** is intended to strengthen a north-south initiative from the South-African Development Community (SADC) through Botswana southwards

- **Nodes of Competitiveness**

- **Primary nodes:** Rustenburg; Madibeng; Mogwase; Odi Moretele; Potchefstroom; Klerksdorp; Lichtenburg; and Mahikeng.
    - **Secondary nodes:** Zeerust; Coligny; Sannieshof; Schweizer Reneke; Bloemhof; Makwassie; Vryburg; Ganyesa; and Taung.
    - **Tertiary nodes:** Koster; Swaruggens; Ventersdorp; Tosca; Zeerust; and Setlagole.

- **Rural Restructuring Zones** containing:

- Agricultural Areas
    - Traditional Areas
    - Small towns and villages

- **Resource Critical Regions**

- Critical Biodiversity Areas
    - Ecological Support Areas

- **Special Intervention Areas**

- Job Intervention Zones
    - Growth Management Zones
    - Green Economy Zones

## 2.4 Policy Objectives of the North West Spatial Development Framework

North West Spatial Development Framework needs to be conducive for sustainable development and will provide for the execution of the following objectives:

1. The alignment of international agreements, protocols and policies on sustainable development as determined by Agenda 21
2. The integration of international cooperation and development programmes which includes the **Spatial Development Initiatives (SDI's)** involving the Coast to Coast Development Corridor
3. Giving spatial effect to objectives set by National Government Policies on Sustainability to support the optimal integration of the aspects of social, economic, institutional, political, physical and engineering services. The objectives include:
  - a. The National Development Plan 2030 which promotes an economy that will create more jobs, improving Infrastructure, transition to low carbon economy, an inclusive and integrated rural economy, reversing the spatial effects of apartheid ,improving the quality of education, training and innovation, quality health for all, social, protection, building safer communities and reforming the public sector.
  - b. **The National Strategy for Sustainable Development (NSSD)** promoting the integration between social demands, natural resource protection, sustainable use and economic development.
  - c. **The Comprehensive Rural Development Programme (CRDP)** integrating **broad-based agrarian transformation**, strategically increasing rural development and land reform programme aiming at tenure reform, restitution and land redistribution
4. Restructuring and eliminating the disparate spatial development patterns provided by apartheid planning
5. Creating an enabling environment for sustainable employment and economic growth and infrastructure development, promoting the objectives of the **National Growth Path, The Industrial Policy Action Plan (IPAP) and The National Infrastructure Plan.**
6. **Providing for the integration of the objectives of sustainable housing**
7. Reducing inherited spatial divisions and distorted spatial patterns through spatial restructuring tenure reform, restitution and land redistribution
8. Addressing the inequality in the spatial distribution of economic activities and population in the province
9. Maintaining and developing national and regional roads, railway and airport linkages promoting national, regional and provincial accessibility support the development of Transportation Corridors. These corridors include systems of.
10. The optimal utilisation of natural resources by the objectives of:
  - a. Protecting biodiversity from the development of mines, forestry, urban and rural development, agriculture set by the North West Biodiversity Sector Plan
  - b. Enhancing the quantity and protecting the quality of water resources
  - c. Utilising the mineral resources in a responsible way attending to the effect of it on the environment



- d. Protecting and high and unique potential agriculture land and the reduction of available land due to the development of mines, urban and rural areas and forestry

## 2.5 Legislative Context

The implications for spatial development planning can be summarised under five broad development principles set out by the Spatial Planning and Land Use Management Act 2013 viz.

- Spatial Justice
- Fair and good governance
- Sustainability
- Efficiency
- Integration

### 2.5.1 Spatial Justice

The principle of equality requires that everyone affected by spatial planning, must enjoy equal protection and benefits, and no unfair discrimination should be allowed. (White Paper of Spatial Planning and Land Use Management 2001).

The Spatial Planning and Land Use Management Act 2013 promotes the inclusion of the principle of spatial justice in spatial planning, whereby past spatial and other development imbalances are redressed through improved access to and use of land, secure tenure and the incremental upgrading of informal areas.

The North West Spatial Development Framework is an integrated strategic spatial plan which should address the inclusion of persons and areas that were previously excluded, with an emphasis on informal settlements, former homeland areas and areas characterised by widespread poverty and deprivation

### 2.5.2 Sustainability

**The principles of sustainability of spatial planning as defined by the different policies and legislation require** the sustainable management and use of the resources making up the natural and built environment. Land use planning and development should protect existing natural, environmental and cultural resources (White Paper of Spatial Planning and Land Use Management 2001).

The Spatial Planning and Land Use Management Act (2013) refines the sustainable management and use of the resources making up the natural and built environment further and:

- Promote the protection of the prime and unique agricultural land
- Uphold consistency of land use measures with environmental management instruments
- Promote and stimulate the effective and equitable functioning of land markets
- Consider all the current and future costs to all parties for the provision of infrastructure and social services in land developments
- Promote land development in locations that are sustainable and limit urban sprawl
- Result in communities that are viable

The Preservation and Development of Agricultural Land Framework Bill 2015 supports the sustainable utilisation of natural agriculture resources and protection of agricultural land and preserve and develop agricultural land

Sustainable environmental management within the country and the province is primarily provided for by:

- **The National Environmental Management Act** that serves as the general framework within which **environmental management** and implementation plans must be formulated requiring that developments must be socially, environmentally and economically sustainable. People and their needs need to be a priority, and their physical, psychological, developmental, cultural and social interests equitably served. The disturbance of ecosystems and loss of biological diversity needs to be avoided, or, where they cannot be altogether avoided, minimised and remedied
- **The National Environmental Management: Biodiversity Act, (10 of 2004)** that provides for the management and conservation of biological diversity, the use of indigenous biological resources in a sustainable manner and the fair and equitable sharing among stakeholders of benefits arising. It also gives effect to ratified international agreements relating to biodiversity
- **National Environmental Management: Air Quality Act, 39 of 2004** that provides for the protection of the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development whilst promoting justifiable economic and social development

In terms of sustainability, the North West Spatial Development Framework needs to provide sustainability objectives which:

- Adopt a holistic approach to spatial development in order to minimise the long-term negative impacts of current land use or development decisions
- Ensure that spatial planning serves international, national, provincial or local interest
- Prioritise people and their needs and their physical, psychological, developmental, cultural and social interests to be equitably served.
- Support the long-term adequacy or availability of physical, social and economic resources to support or carry development
- Conserve biological diversity and the use of indigenous biological resources
- Gives effect to ratified international agreements relating to biodiversity
- Protect existing natural, environmental and cultural resources
- Ensure that land which is currently in agricultural use shall only be reallocated to other uses where real need exists and prime agricultural land should remain in production.

### 2.5.3 Fair and good governance

The principle of co-operative government is determined by **Chapter 3 of the Constitution**. This created an interdependent and interrelated functional environment within which all spheres of government operate.

The **Intergovernmental Relations Framework Act, (No. 13 of 2005)** establishes a framework for the national government, provincial governments and local governments to promote and facilitate these intergovernmental relations and to provide within the **principle of co-operative government** a framework for the national government, provincial governments and local governments, and all organs of state within those governments, to facilitate co-ordination in the implementation of policy and legislation, including-

- **coherent government;**
- **effective provision of services;**
- **monitoring implementation of policy** and legislation; and
- **realisation of national priorities**

It is within this context that the White Paper of Spatial Planning and Land Use Management (2001) provides the basis for a future spatial planning scenario in South Africa determining that spatial planning, land use management and land development must be democratic, legitimate and participatory.

**The Spatial Planning and Land Use Management Act (2013)** includes the principle of good administration requiring the inputs of all spheres of government to ensure an **integrated approach to land use and land development** that is guided by a normative approach to be included into spatial planning and land use management systems. Transparent processes of public participation are required involving the inputs of all parties on matters affecting them. Empowerment and informing citizens remain central to the good governance.

The North West provincial Spatial Development Framework needs to adopt objectives that:

- promote the principle of co-operative governance
- ensure the alignment and integration of spatial and development policies
- ensure transparent processes of public participation
- empower citizens

#### 2.5.4 Efficiency

**The principle of efficiency requires that the desired result of land use must be produced with the minimum expenditure of resources. The Spatial Planning and Land Use Management Act (2013)** promotes that land development should:

- optimise the use of existing resources and infrastructure
- minimize negative financial, social, economic or environmental impacts; and
- accommodate spatial resilience providing flexibility in spatial plans, policies and land use management systems to ensure sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shocks

The North West Spatial Development Framework needs to achieve efficiency in the settlement form or pattern, and the utilisation of man-made or natural resources and provide objectives which:

- Promote the development of compact human settlements, combating low intensity urban sprawl;
- Promote the proximity of areas in which people live and work
- Positively relate spatial planning of contiguous provinces, municipalities and regions to each other.

#### 2.5.5 Integration

Integrated Development Planning is at the core of spatial development policies in South Africa.

The principle of integration requires that the separate and diverse elements involved in development planning and land use should be combined and coordinated into a more complete or harmonious whole.

The North West Spatial Development Framework is an integrated strategic spatial plan which should:

- Take account of and relate to the sectoral policies of other spheres and departments of government.
- Promote efficient, functional and integrated settlements;
- Be determined by the availability of appropriate services and infrastructure, including transportation infrastructure;
- Promote racial integration.

### 3 CHAPTER 3: SPATIAL CHALLENGES AND OPPORTUNITIES

#### 3.1 Introduction

Chapter 3 provides the spatial challenges facing North West Province that will support the future spatial pattern. The spatial dimensions are informed by the:

- Spatial implications of the Integrated Development Policies in South Africa
- Development Implications of the development elements of spatial development within North West
- The socio economic profile and distribution of the population within North West
- Development priorities

#### 3.2 Spatial implications of the Integrated Development Policies in South Africa

Spatial development policies in South Africa provide for a combination of “top down” and “bottom up” approaches. A top down approach provides for government interventions attending to the social, economic and natural environmental needs within certain regions, district and communities. A bottom up approach focuses on the sustainable inclusion of communities in the development process of their areas.

The most prominent national space economy policy in South Africa is the National Spatial Development Perspective (NSDP). The NDSP recommends mechanisms to bring about optimum alignment between infrastructure investment and development programmes within localities.

The NSDP gives direction to a trend to where investment of infrastructure should take place and acknowledges the importance of PGDS's and IDP's in considering local spatial planning. It presents a “top down” development approach promoting governments' infrastructure investment on localities of economic growth and/or economic potential. In localities with low development potential, it propagates that Government spending should focus on providing social transfers, human resource development and labour market intelligence which would enable people to become more mobile and migrate to localities that are more likely to provide sustainable employment or other economic opportunities.

This approach represents a market driven approach and supports urbanisation. It promotes the competitive advantages of economic growth nodes in the region, attracting outside investment and providing opportunities to local people.

The Governments' rural development policy represents very much a “bottom up” approach attaining “socially cohesive and stable rural communities with “viable institutions, sustainable economies and universal access to social amenities, able to **attract and retain** skilled and knowledgeable people, who are equipped to contribute to growth and development”. The approach of this policy is to empower communities to take responsibility for their economic, social and environmental well-being and support socio economic development.

This “bottom up” approach propagates the empowerment of marginalised rural communities to enable them to unlock the economic and spatial potential of their areas, providing them with sustainable livelihoods and environments.

The **National Development Plan: Vision for 2030** at national level focuses on the following key priority areas:

- An economy that will create more jobs by:
  - Creating an environment for sustainable employment and economic growth
  - Promoting employment in labour absorbing industries

- Promoting exports
  - Strengthening the capacity of government to implement its economic policy
  - leadership among stakeholders to mobilise around a national vision
- Transforming human settlements by:
  - Reducing Inherited spatial divisions and distorted spatial patterns
  - Unlocking development potential through targeted investment in economic and social infrastructure and institutional support
  - Spatial investment frameworks to support growth and inform infrastructure investment
  - Producing economic dynamics by concentrating productive activity, entrepreneurs, workers and consumers in a place without congestion (Planned Urbanisation)
- Improving Economic in South Africa's Infrastructure by:
  - Investing in energy infrastructure
  - Investment in water infrastructure
- An inclusive and integrated rural economy by:
  - Agriculture development based on successful land reform, employment creation and strong environmental safeguards
  - Quality basic services particularly education, health care and public transport
  - Developing industries such as agro processing, tourism and small enterprise development in areas with greater economic potential

The combination of these policy approaches supports a balanced development of the spatial economy, providing for both concentrated and dispersed economic and social development providing opportunities for sustainable development for both the urban and rural areas in support of the The National Growth Path, the National Development Plan and the North West Provincial Development Plan.

These developmental policies provide for priority intervention areas, promoting economic growth and development, especially where it addresses job-creation and poverty reduction, in an environmentally sustainable manner within a spatial context and incorporating the principles of good governance. The combined effect of these policies provides for:

- Combinations of choices for people.
- Provincial economic growth priorities such as targeted growth areas, priority sectors and corridor development, the creation of jobs and the eradication of poverty.
- Integrated engineering and social infrastructure strategies
- A system of accessible and interactive economic nodes supported by vibrant rural areas accommodating and catalysing growth and development.
- High-level spatial interactions and linkages both within the province and between the province and its neighbours, including corridor development and national and provincial infrastructure development plans.

### 3.3 Natural Structural Elements

#### 3.3.1 Natural Resources

The natural resources of the North West Province drive all economic and social activity in the province. Natural features of interest include the following:

- Altitudes ranging from 920-1782 metres above mean sea level provide the Province with one of the most uniform terrains of all the South African provinces.
- Gently undulating plains characterise the central and western parts, while the eastern section is more mountainous and includes the scenic Magaliesberg.
- Ancient igneous rock formations dominate the north-eastern and north-central areas of the Province. The Gatsrand between Potchefstroom and Carletonville is considered to be one of the most ancient landscapes preserved anywhere in the world.
- The geology of the province is significant because of its mineral resources which are rich in exploitable platinum, gold, uranium, iron, chrome, manganese and diamonds.

Natural resources that affect the spatial development framework for the province are:

- Climate
- Hydrology
- Geology
- Soils
- Biodiversity

##### 3.3.1.1 Climate

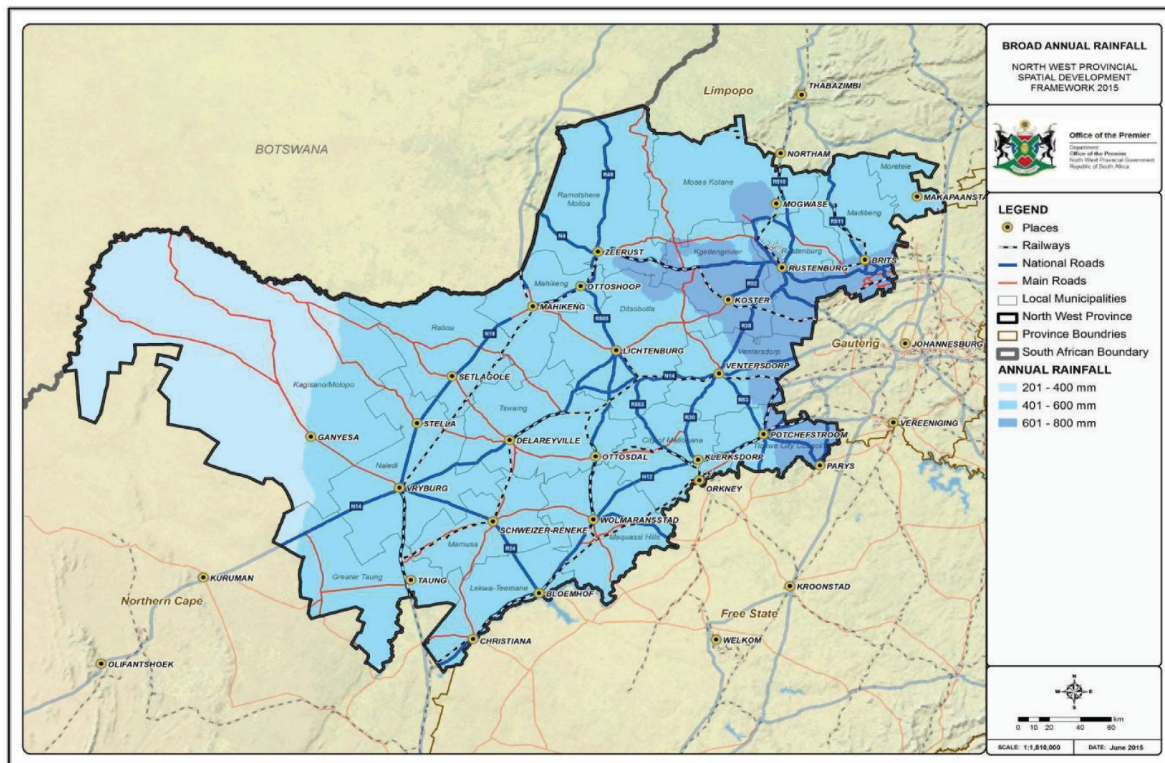
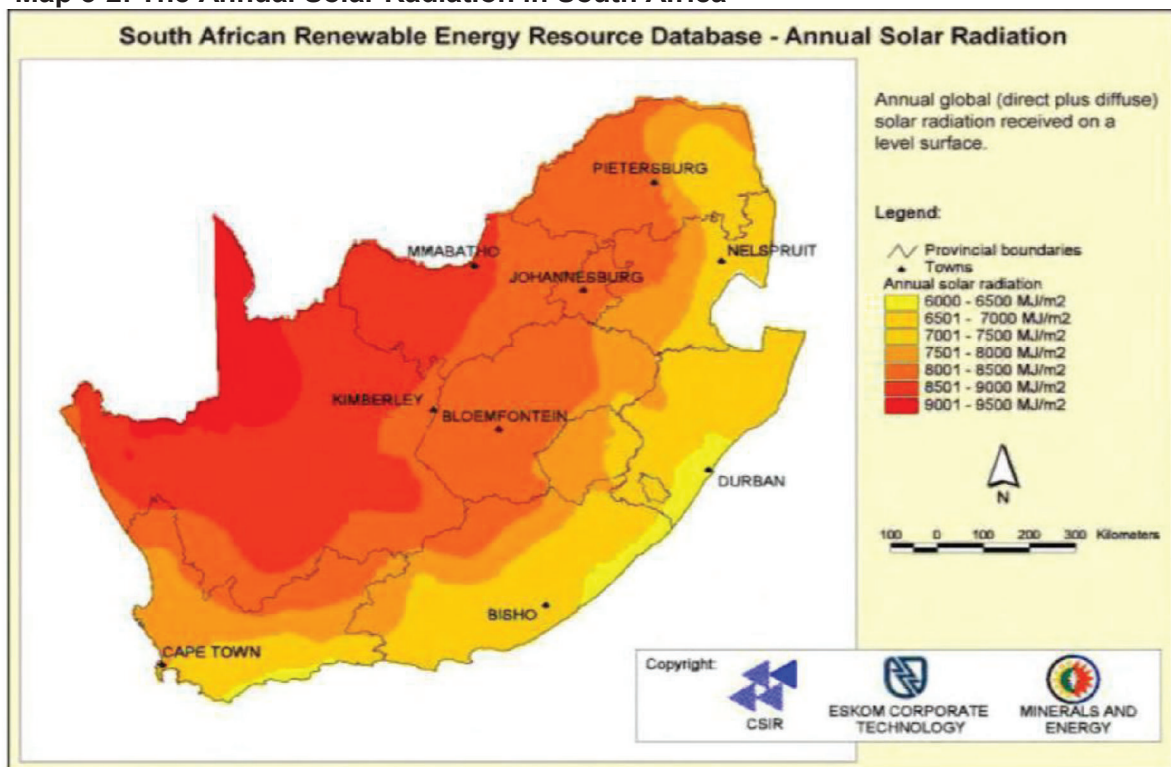
Climate plays an important role in determining the availability of water resources, the nature of the natural landscape and vegetation types. As of late, the number of sun days and the frequency of wind has become a significant consideration in terms of the availability of alternative power. There is a wide variation in climate throughout the Province as illustrated below:

- Rainfall is highly variable both in time and regionally. On average, the western part of the Province receives less than 300 mm per annum, the central part around 550 mm, while the eastern and south-eastern parts receive over 600 mm. See **Map 3-1**.
- Droughts and floods occur regularly at both provincial and local scales. They play a significant role in almost every aspect of the social, economic and ecological environment within the Province.
- Evaporation exceeds rainfall in most parts of the Province.
- There are wide seasonal and daily variations in temperature, being very hot in summer (daily average high temperatures of 32°C in January) and mild to cold in winter (average daily minimum in July is 0,9°C).
- The far western part is arid, encompassing the eastern portion of the Kalahari Desert. The central part of the Province is typically semi-arid, with the eastern part region being predominantly temperate.
- In the western half of the province, the annual solar radiation is the second highest in the country and measures between 8501 and 9000  $\text{mj/m}^2$  as illustrated in **MAP 3-2**
- Wind power potential in the province is low.<sup>3</sup>

<sup>3</sup> North West Department of Economic Development, Environment, Conservation and Tourism. Renewable Energy Strategy for the North West Province. December 2012



Map 3-1 Annual Rainfall

Map 3-2: The Annual Solar Radiation in South Africa<sup>4</sup>

4

North West Department of Economic Development, Environment, Conservation and Tourism. Renewable Energy Strategy for the North West Province. December 2012

### 3.3.1.2 Hydrology

The hydrological regime in the province is divided into surface and ground water<sup>5</sup>

#### 3.3.1.2.1 *Surface Water Resources*

Surface water is dependent on rainfall, soil conditions and land cover. Three primary catchments drain the province: The Limpopo, Vaal and Orange River catchments. The North West Province hosts four Water Management Areas (WMA); namely the Crocodile (West) and Marico, Upper Vaal, Middle Vaal and the Lower Vaal. The Middle and Upper Vaal WMAs extend significantly beyond the North West provincial boundary differ markedly in terms of surface and groundwater resource availability, associated dependent landscape ecology, sensitivity for exploitation and their conservation priority.

The rainfall pattern within the province is varied, with the western portion that includes a section of the Kalahari Desert classified as arid and only receiving 300 mm per annum, a central part which is semi-arid receiving 500 mm per annum and a temperate eastern section receiving the most rainfall - about 600mm per annum. This relatively low rainfall creates a naturally water stressed condition. In line with these conditions, the North West faces a multitude of issues with regards to water availability, since most surface water resources are non-perennial, resulting in water stress and limiting development.

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<sup>5</sup> North West Environmental Outlook 2013





### 3.3.1.2.1.1 Crocodile-West and Marico Catchments

The Bojanala Platinum District Municipality (BPDM) falls within two main river systems, namely the Crocodile West and Groot Marico. The Crocodile West system includes the largest portion of domestic and industrial/mining consumers.

#### **Crocodile West**

The Crocodile West catchment is largely augmented from the return wastewater from the Gauteng Province, which in turn is augmented from transfers from the Lesotho Highlands Water Project and the Thukela-Vaal Transfer Scheme. Water in this catchment is expected to increase with time due to higher levels of service and increased population growth, but water quality is of concern.

The main rivers in this catchment are the Pienaars, Jukskei, Elands, Crocodile and Bierspruit. The Crocodile River is used directly for abstraction and water supply to the Brits Water Supply Scheme. Water is further abstracted from the rivers for irrigation requirements.

The main dams or dams of importance in this catchment are the Roodeplaat and Rietvlei (in the Gauteng Province), Klipvoor, Hartbeespoort, Roodekopjes, Vaalkop, Bospoort, Koster, Swaruggens, Lindley's Poort and Madikwe Dams. Most of these dams, except Klipvoor, Roodekopjes and Lindley's Poort, are used directly for domestic and industrial water supply. Furthermore, the majority of dams, except Vaalkop and Bospoort, are also used for irrigation.

#### **Marico**

The Marico catchment is a smaller catchment comprising the north-western part of the BPDM and the northern part of the NMMDM.

The main rivers in this catchment are the Groot-Marico, Klein-Marico, Marico and Ngotwane. Rivers are used for direct abstraction and treatment of domestic water. Otherwise, water is abstracted from the rivers for irrigation requirements. The main dams or dams of importance in this catchment are the Molatedi, Sehujwane, Ngotwane, Klein Maricopoort, Kromellenboog, Pella, Madikwe and Marico-Bosveld. All dams, except the Ngotwane, Klein Maricopoort, Kromellenboog and Marico-Bosveld Dams, are utilised for domestic water supply. Otherwise, water is also used for irrigation purposes.

### 3.3.1.2.1.2 Upper Vaal Catchment

A small portion of the BPDM (south) and the DrKKDM (east), fall within the Upper Vaal Catchment area. The remainder of this Catchment includes the southern portion of Gauteng, south-western portion of Mpumalanga and eastern portion of the Free State Provinces.

Water quality is largely affected by treated effluent (not meeting license requirements) as well as acid mine drainage.

The main rivers in this catchment, apart from the Vaal, are the Mooi and Loopspruit (applicable to the NWP). Water is utilised from the river systems for irrigation and mining. The Mooi River system provides the water to the Potchefstroom Dam, which is used for this area's domestic water supply. The other main dam in this catchment is the Boskop Dam, utilised for irrigation purposes.

Mining activities in this area may affect the return flows further downstream (Potchefstroom Dam, Boskop Dam, Wonderfontein Spruit) if water is re-used and it may also affect water quality.

### 3.3.1.2.1.3 Middle Vaal Catchment

The northern portion of the Middle Vaal Catchment includes most of the DrKKDM and a smaller portion of the Ditsobotla LM in the NMMDM. The remainder of this catchment comprises the central portion of the Free State Province.

As with the Upper Vaal Catchment, water quality is largely affected by treated effluent (not meeting license requirements) as well as acid mine drainage. The main river in this catchment, apart from the Vaal, is the Schoonspruit (applicable to the NWP). There are a number of secondary rivers, denoting the quaternary catchment areas, such as Bamboesspruit, Klipspruit, Makwassiespruit, Rietspruit and Taaibosspruit. Water is utilised from the river systems for irrigation and mining. The Vaal River is the main source of water for domestic and industrial/mining supply.

The main dams or dams of importance in this catchment are the Allemanskraal, Johan Naser Dam (also known as Klerksdorp Dam), Koppies and Erfenis. The Johan Naser Dam is supplied from a tributary of the Vaal River, namely the Schoonspruit River. The Johan Naser Dam is not utilised for a domestic water supply scheme (only adjacent property owners utilise the Dam for domestic supply), but rather for irrigation and recreation.

Most of the other dams are utilised for irrigation and recreation.

#### **3.3.1.2.1.4 Lower Vaal Catchment**

The Lower Vaal WMA is the second-largest WMA in South Africa and includes the whole of the DrRSMMDM as well as the north-east portion of the Northern Cape and a small corner of the Free State.

As with the Upper Vaal Catchment, water quality is largely affected by treated effluent (not meeting license requirements) as well as acid mine drainage.

The main rivers in this catchment, apart from the Vaal, are the Harts, Molopo and Kuruman (applicable to the NWP). There are a number of other rivers such as the Droë Harts, Klein-Harts, Moshaweng, Phepane and Setlagole. Many however are non-perennial. Water is utilised for irrigation such as the Vaalharts Irrigation Scheme and for domestic supply via the Vaalharts Irrigation Canal and direct abstraction from the Vaal River.

The main dams or dams of importance in this catchment are the Bloemhof, Barberspan, Wentzel (also known as Schweizer-Reneke Dam), Spitskop and Vaalharts. Of these, the Bloemhof Dam (located on the Vaal River), is utilised for domestic water supply, irrigation and recreation. The Wentzel Dam supplies water to the town of Schweizer-Reneke. The Spitskop Dam, together with the Vaalharts Dam, forms part of the Vaalharts Irrigation Scheme, which in turn provides water for irrigation as well as domestic use. Dams in this WMA are also utilised for irrigation and recreation.

#### **3.3.1.2.2 Groundwater Resources**

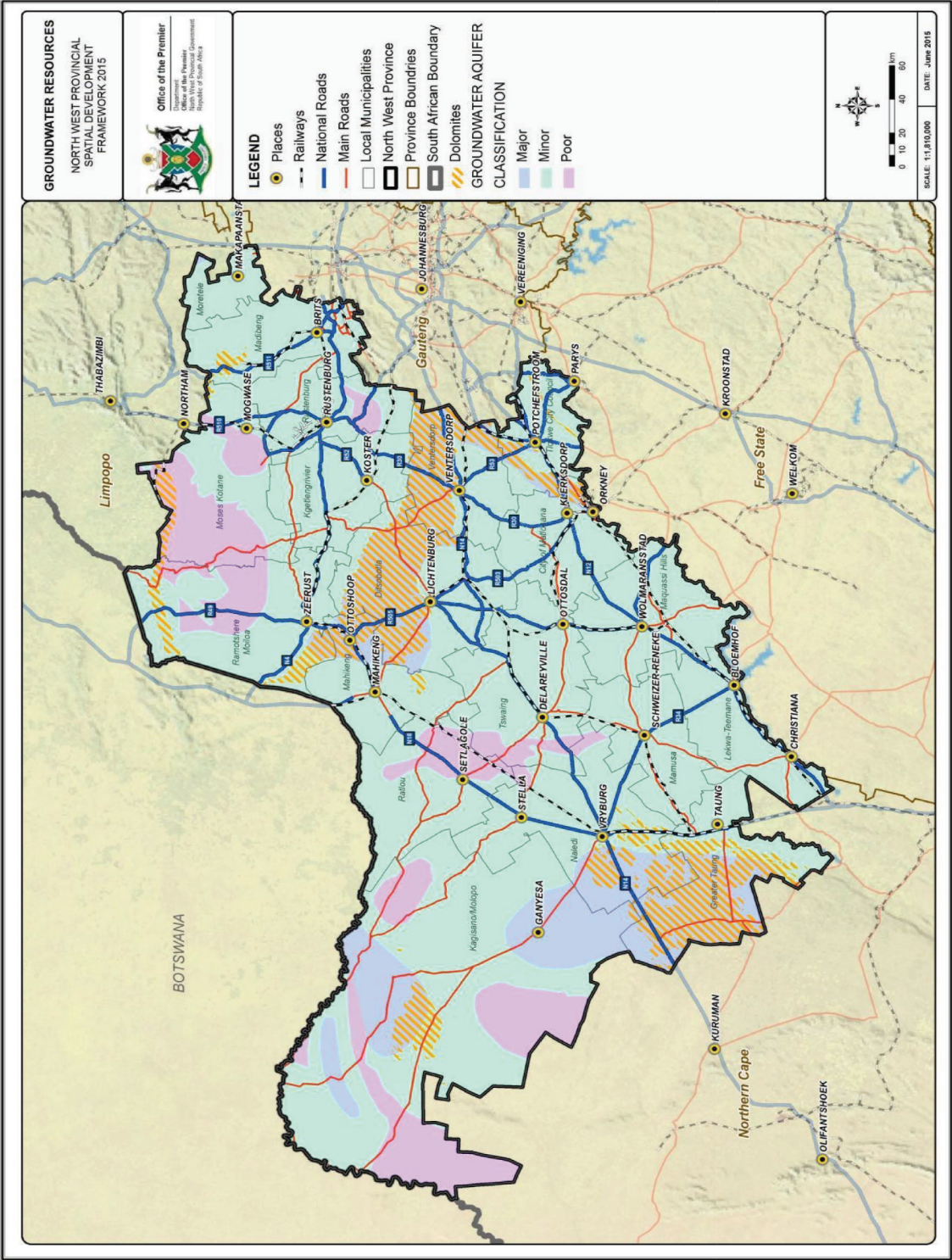
This section describes the main groundwater resources in the NWP. This section provides a brief overview and focuses more on groundwater developed for larger consumptive use such as for local borehole schemes or for industrial and mining use.

An overview of groundwater resources is provided in **Map 3-4** overleaf.

The DWS (then called the Department of Water Affairs and Forestry, DWAF), developed a Groundwater Master Plan for the North West Province in 2010. The Master Plan address groundwater sources in the various geo-hydrological regions as divided by Vegter (1990). These regions are illustrated in **Figure 4** and briefly discussed in this section. Where possible, major groundwater consumers or entities, impacting groundwater quantity and quality will be highlighted. The DWS Groundwater Master Plan for the NWP does not include the Moretele LM. There is no Groundwater Master Plan yet for the Gauteng and the Limpopo Provinces.



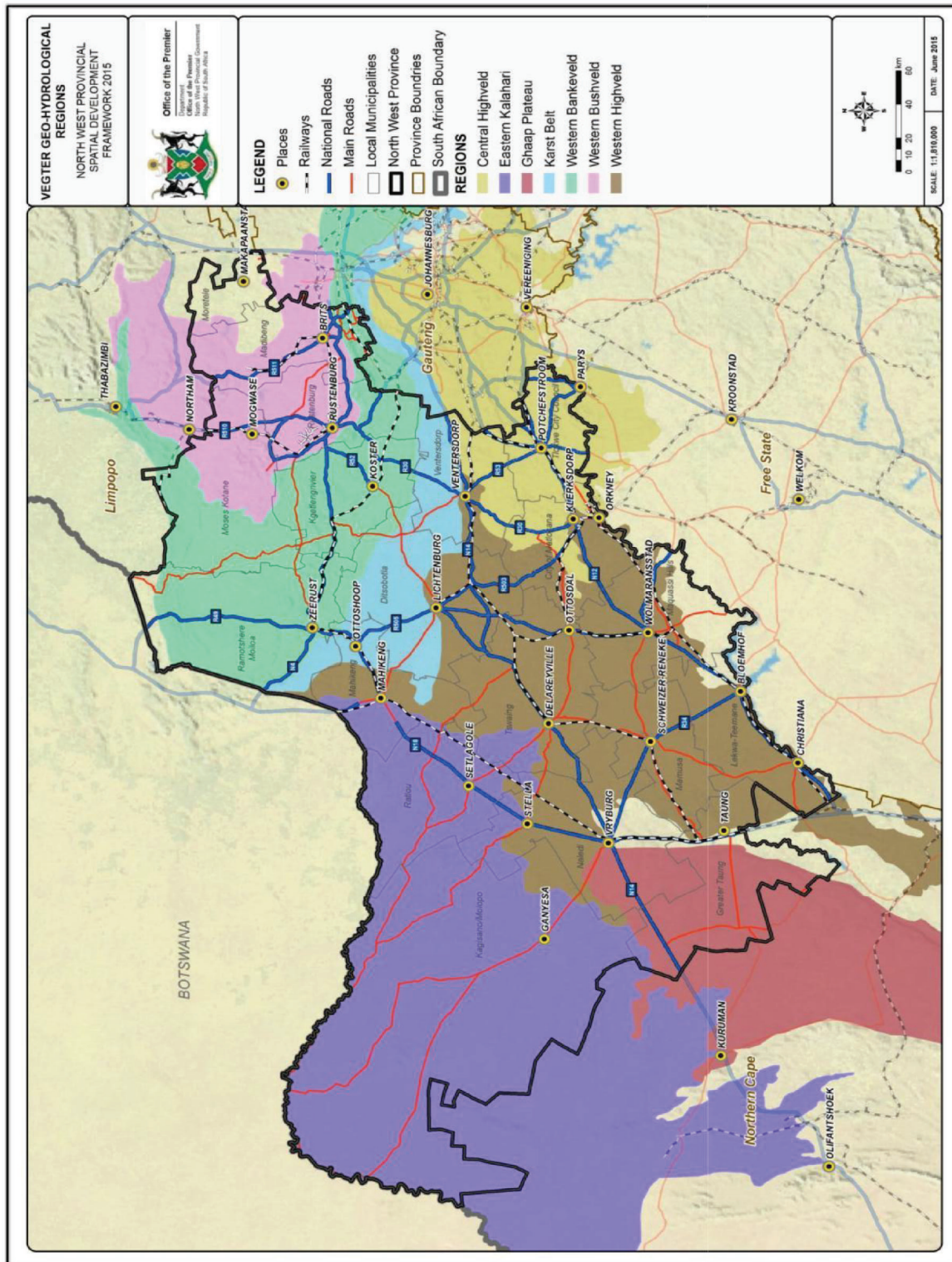
Map 3-4: Overview of Groundwater Resources in the North West Province



Groundwater Regions (NWP) - Overview



Map 3-5: Groundwater Regions in the North West Province



### **3.3.1.2.2.1 Eastern Kalahari Hydrogeological Region**

This region includes the northern half of the Dr RSMDM and a large portion of the western NMMDM. Groundwater is utilised for communal and small town water supply, agriculture (irrigation and livestock) and to a lesser extent for mining.

The largest portion this region is covered by recent sand deposits of the Kalahari Group. Some outcrops of sedimentary rocks of different Groups and Supergroups also occur. This region is mapped as intergranular and fractured aquifer with a very low to extremely low development potential however, when considering irrigated agriculture; the development potential may be higher than initially estimated. Dolomitic outcrops shown on the Geological Map of South Africa (1984) indicate that dolomite could occur underneath the Kalahari sands.

Information on groundwater use, abstraction volumes and groundwater quality is limited. The NW Groundwater Master Plan suggests amongst others to establish a Water User Association (WUA) for the Tosca area to better manage this resource.

### **3.3.1.2.2.2 Western Highveld Hydrogeological Region**

This region includes the southern-central portion of the North West Province, between Taung in the south-west, to Lichtenburg in the central-northern area. Groundwater is utilised for communal and small town water supply, agriculture (irrigation and livestock) and also for mining (mainly diamonds and gold).

The region is underlain mostly by volcanic rocks of the Ventersdorp Supergroup. The Vryburg and Johannesburg Hydrogeological map (2522 and 2526 respectively) indicate the aquifer types as fractured with an extremely low to medium development potential. In smaller areas such as Coligny, aquifer types are mapped as intergranular and fractured with a high development potential.

Information on groundwater use, abstraction volumes and groundwater quality is limited except for Delareyville where some monitoring takes place. It is important that the Local Municipalities and WSAs in this area develop, implement and maintain a groundwater monitoring programme, seeing that groundwater is used for irrigation as well as sole source of water for urban communities.

### **3.3.1.2.2.3 Karst Belt Hydrogeological Region**

The Karst Belt is a dolomitic region stretching in a band from Lobatse in Botswana west of Zeerust, past Lichtenburg and Ventersdorp, in the municipal areas of Ditsobotla LM and Ventersdorp LM, towards and around the built-up areas of Mogale City in the Gauteng Province and even further eastwards.

Groundwater is utilised for communal, small town and larger town water supply, industries, agriculture (irrigation and livestock) and also for mining. Groundwater (from the Molopo Eye and Grootfontein well fields) makes up around 50% of the water supplied to Mahikeng. Groundwater is also used for water supply to Lichtenburg, Ventersdorp and Zeerust, amongst others.

Rocks found here belong to the Chuniespoort Group and the hydrogeological maps of Johannesburg and Vryburg shows this area as karst aquifer with a medium to high development potential. The groundwater in this area is highly susceptible to pollution due to the nature of the geological formations. Furthermore, many springs feed the river supply systems and could therefore face an additional risk to quality of water in the surface water sources if the groundwater systems are polluted.

This aquifer is shared with the neighbouring country of Botswana and although detailed analysis is available on the groundwater use in NWP, more investigation is required on water use in Botswana to ensure sustainable management of this resource.

The North West Groundwater Master Plan further recommended the establishment of WUAs to assist in the management and protection of this resource, especially the Grootfontein Compartment (supplies the Mahikeng area and irrigation in the Bo-Molopo area).

#### **3.3.1.2.2.4 Western Bankeveld & Marico Bushveld Hydrogeological Region**

This Region runs north of the Karst Belt, starting in the west (encompasses almost the entire Ramotshere Moiloa LM) with the border of Botswana and continuing to the east through the western half of the Moses Kotane LM, the further south-east towards the Gauteng Province, following the Magaliesberg Mountain range.

Groundwater is utilised for communal, small town and larger town water supply, industries, agriculture (irrigation and livestock) and also for mining. Groundwater is the main source of water for the majority of residents in the Ramotshere Moiloa LM and in the western half of the Moses Kotane LM. It is also the main water source for Derby and it is used to augment water supply in Swartruggens and Koster and it also used by the mining sector.

The rocks underlying this region are predominantly sedimentary of nature and mostly belonging to the Pretoria Group. The aquifer types are mapped (Johannesburg and Polokwane Hydrogeological maps) as intergranular and fractured with a low to medium development potential.

Similar to other areas, there is a complete lack of groundwater use information for the areas supplied. There have been concerns raised on the quality of groundwater, which is affected by the on-site sanitation and agricultural activities in the area. Even if the Groundwater Protocol (to protect groundwater sources during on-site sanitation installation) was followed, little is known on the efficacy thereof to protect the sources. The North West Groundwater Master Plan also mentioned that overgrazing may increase runoff and in turn affect groundwater aquifer recharge as well as quality.

Close cooperation is required between the municipalities and the DWS to establish and implement programmes for groundwater monitoring and protection.

#### **3.3.1.2.3 Western Bushveld Complex Hydrogeological Region**

The Western Bushveld Complex follows closely the geological region rich in platinum group metals in this area: stretching from the northern portion of the City of Tshwane Metropolitan Municipality, towards Brits and Rustenburg, through the eastern half of the Moses Kotane LM and further north in the Moses Kotane and Madibeng LMs. The main towns in this region (Mogwase, Rustenburg, Boitekong, Brits, Soshanguve and Akasia, etc.) are predominantly supplied from surface water sources.

Groundwater is utilised by smaller towns and rural settlements, mines and industries and for agricultural use.

The aquifers are mapped as both fractured and intergranular and fractured and are formed by igneous rocks of the Bushveld Complex with a low to medium potential.

The mining activities in this region play an important role in the use and protection of groundwater resources. Mines are predominantly supplied potable water from surface water sources. Few mines utilise groundwater and treated effluent water for processes.

Similar to the other regions, there is very little information on groundwater abstracted, used (all sectors) and pollution risks and the management thereof. The municipalities do not have any groundwater abstraction records for domestic supply. Water use licensing and registration records are available for this area, but would still need to be supplemented with actual water use information.

#### 3.3.1.2.4 **Central Highveld Hydrogeological Region**

The Central Highveld region encompasses the central and southern portion of the Gauteng Province and continues further south-west into the DrKKDM, including the eastern part of Klerksdorp and all of Orkney and a portion of the central area of the City of Matlosana LM, including some of the small rural town of Hartbeesfontein. Only the latter rural town is supplied from groundwater, the remainder of groundwater use occurs from rural communities, mines and agriculture.

This area is heavily impacted by mining activity – recent as well as closed mines – and most relate to gold mining. This type of mining activity result in acid mine drainage if mines are closed, shafts empty, but groundwater seepage result in the dissolution of minerals and iron, lowering the pH of the groundwater. This water in turn may enter the surface, resulting in acid mine drainage: polluting surface water (as well as groundwater) sources and having a detrimental effect on the environment. This phenomenon is evident on the West Rand, from where water drains naturally towards the Vaal River.

The geological formations underlying this Region consist of mostly of sediments of the Witwatersrand Supergroup. The aquifers are mapped as fractured and intergranular and fractured aquifers with a very low to low development potential. There is a dolomitic region running from Orkney, through Klerksdorp in a north-easterly direction towards Westonarea.

Very little information is available on groundwater use, abstraction and quality risks associated with urban development and mining activities.

#### 3.3.1.2.5 **Ghaap Plateau Hydrogeological Region**

The Ghaap Plateau includes a small area in the south-western corner of the Dr RSMDM, just west of Taung, continuing north to Vryburg and further west to Kuruman in the Northern Cape. It stretches further south into the Northern Cape towards Griekwastad. The town of Reivilo falls within this region and utilises boreholes for water supply. Vryburg utilises both surface water (from the Vaalharts Irrigation Scheme) and groundwater as source. There are a few other settlements in this area utilising groundwater, whereas groundwater is also used in agriculture (irrigation and livestock) and a few mining operations.

This whole region's geology is indicated as dolomites and this in general provide groundwater of good quality and high yields, therefore very good development potential.

Except for the town of Vryburg, little is known on the groundwater abstracted and utilised in the remainder of this region. The All Towns Strategy (2011) for Vryburg indicated that the groundwater sources utilised for the town have been fully developed and need to be carefully managed. The groundwater table in the Reivilo area is very shallow (between 1.2 and 3 metres) and this may make it vulnerable to pollution (Reivilo All Towns Strategy, 2011).



### 3.3.2 Geology

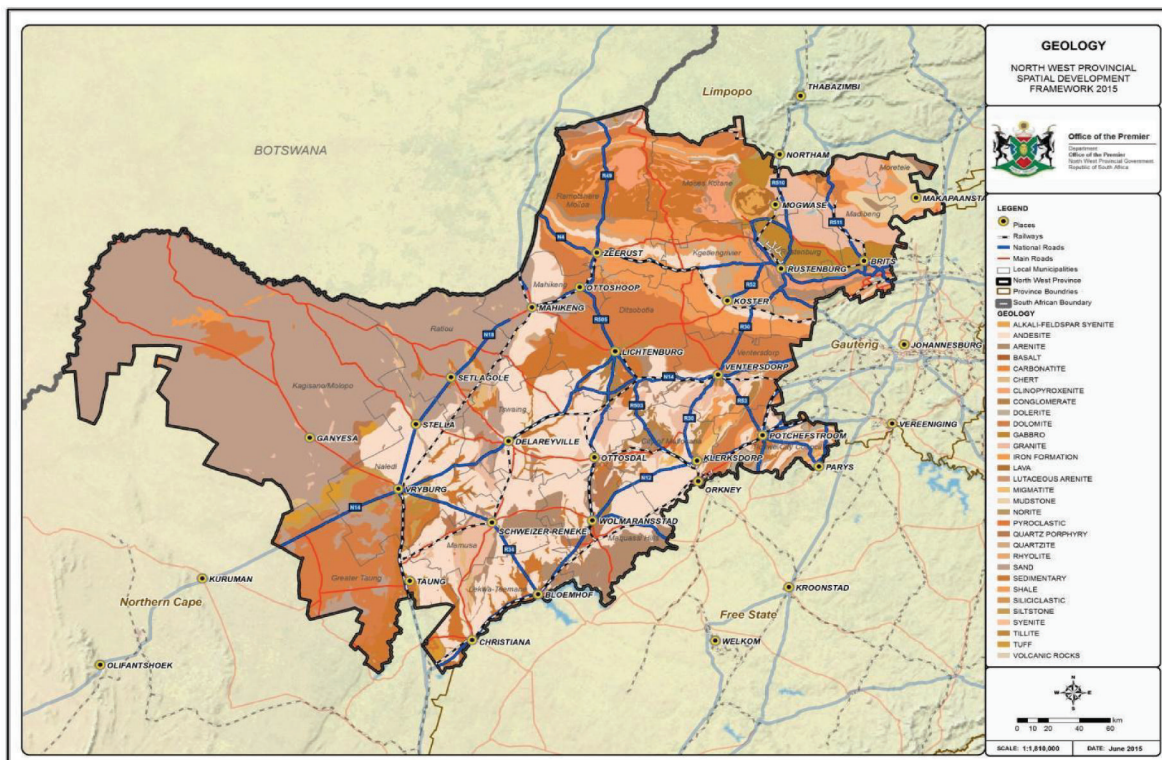
#### 3.3.2.1 Background

The geological history of South Africa is a long and complex one, which goes back some 3.7 billion years. The keystone on and around which the rest of the geological formations of South Africa have developed is the **Kaapvaal Craton**, which underlies the northern part of the country. It is made up largely of **Archaean gneisses** and **granitoids** (Basement Complex), along with lesser volumes of metamorphosed, volcano sedimentary rocks.

The geology of North West played a major role in the economic development and distribution of the population of the North West Province providing:

- Minerals (chrome and platinum) and diamonds
- Topographical features supporting tourism eg. Pilanesberg and Vredefort
- High-yield potential dolomitic geological formations

**Map 3-6: Geology**



#### 3.3.2.2 Minerals

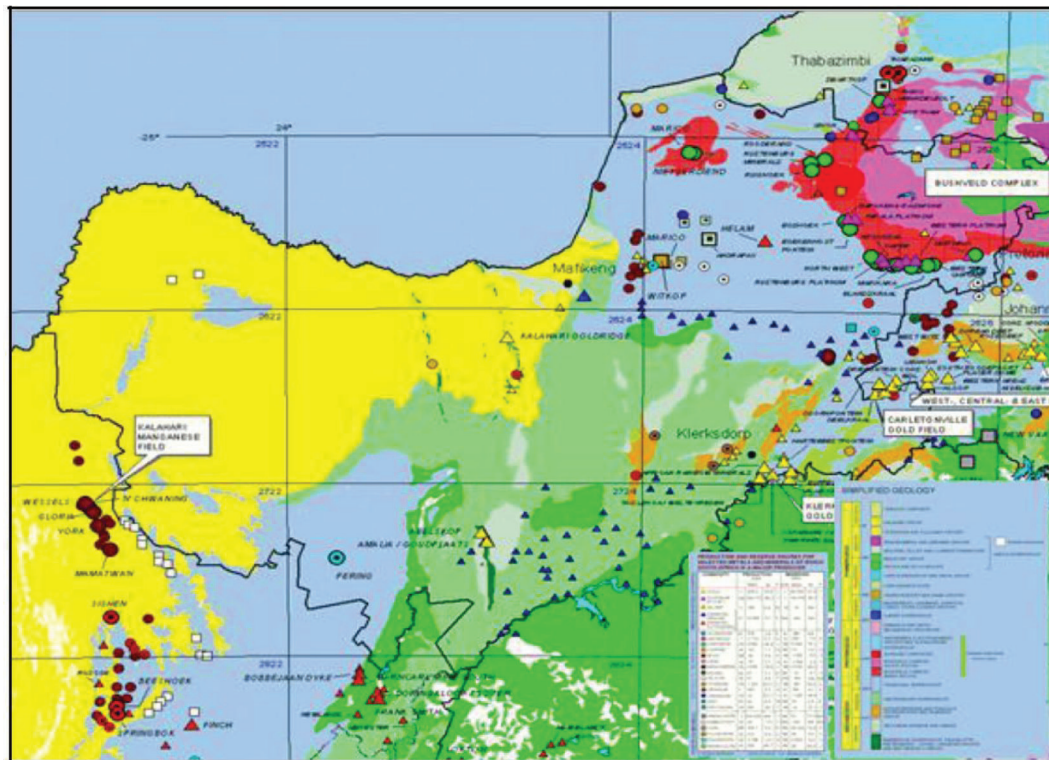
North West has a wealth of mineral deposits, and the distribution of these reserves on which mining industry is built entrenched the existing development patterns in large parts of the province.

Most of the provincial mining activity is found in the Bojanala Platinum District (Rustenburg) and Dr Kenneth Kaunda District (Klerksdorp) as a result of the rich mineral deposits, predominantly gold and platinum group metals, located in these areas. Extensive mining is done all over the province and the minerals found include Gold, Platinum group metals, Andalusite, Amosite Asbestos, Kaolin, Chromium,

Copper, Alluvial Diamonds, Fluorine, Iron, Gypsum, Mercury, Limestone and Dolomite, Magnesite, Manganese, Sodium, Nickel, Phosphate, Lead, Thorium, Titanium, Uranium, Vanadium, Zinc.

A generalised geology map of the province indicates that the western quadrant of the province is dominated by sand deposits, with the eastern side being rich in mineral deposits and the central area dominated by a quartzite deposits. The mining activity is mostly associated with the northern and eastern areas of the province, from where the platinum, treasure development corridors were identified. **Map 3.7** shows the mineral deposits and the mining activity in the province.

**Map 3-7 Mineral Deposits with the Mining Activity in the North West Province**



### 3.3.3 Soils

Agriculture is by far the most extensive land use in the NW province. It takes many forms, including commercial dry land and irrigated cultivation, livestock farming, game farming, as well as subsistence farming. The strong agricultural character also means that the province is considered to be predominantly rural.

Climatic conditions, water availability and soil conditions dictate the success of agriculture in the province. Of all the various soil characteristics, erodibility is the most critical to understand. The erodibility of soils can be described as their sensitivity to the effects of wind and water on the soil structure. This property is expressed as an erodibility index, where low values indicate high susceptibility to erosion, and high values correspondingly indicate a low susceptibility to erosion.

The productive land for food production is protected by legislation which includes the Conservation of Agricultural Resources Act (Act 43 of 1983), the Subdivision of Agricultural Land Act (Act 70 of 1970) and Draft Preservation and Development of Agricultural Land Framework Bill 2015 promote the

objectives of sustainable utilisation of natural agricultural resources, and control the subdivision and change of use of agricultural land and prime- and unique agricultural land, in support of biodiversity.

The Land Capability classification within North West indicates the suitability of soils for most kinds of field crops and divides it into 8 classes. The National Department of Agriculture considers Class 1- 4 as well as existing arable land as high potential agricultural land. The department is in the process of refining the land capability classes.

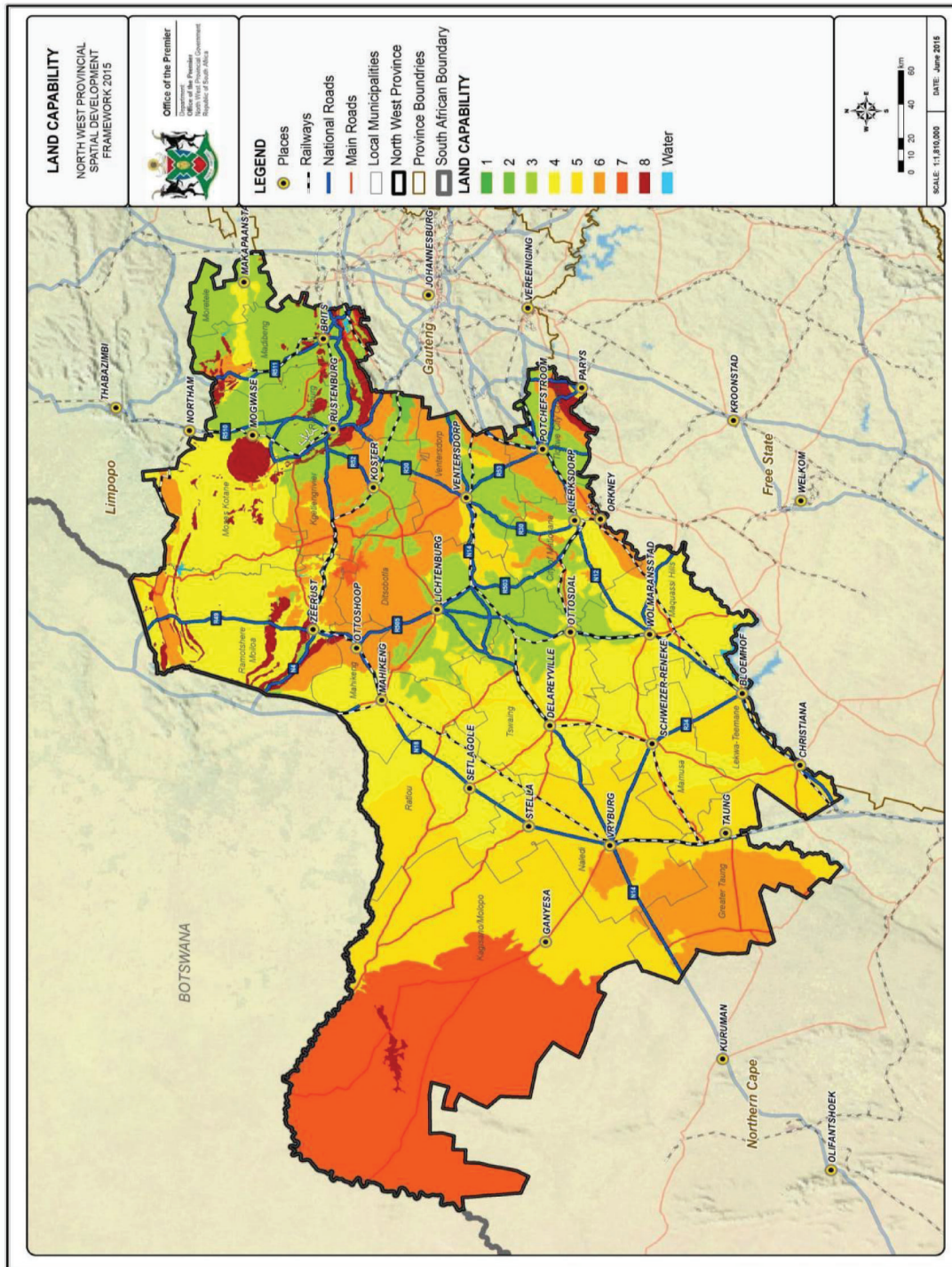
**Table 3-1: Land Capability Classification**

<b>Class 1</b>	Soils have slight limitations that restrict their use.
<b>Class 2</b>	Soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.
<b>Class 3</b>	Soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.
<b>Class 4</b>	Soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.
<b>Class 5</b>	Soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.
<b>Class 6</b>	Soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.
<b>Class 7</b>	Soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.
<b>Class 8</b>	Soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

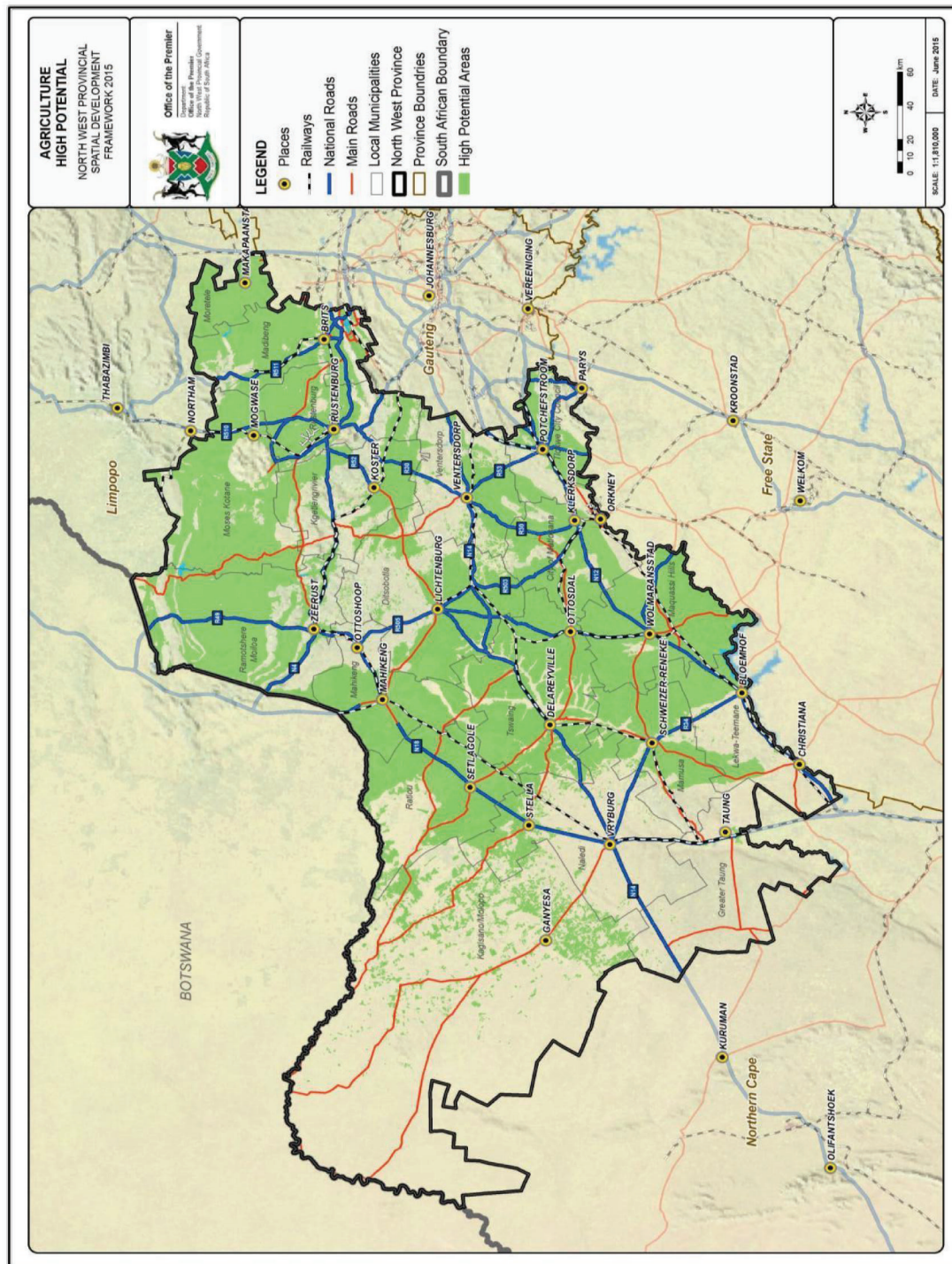
High and medium soil erodability indices have a significant influence on the degradation of the agricultural potential of land, aggravated by unmanaged human settlement. See **MAP 3-10**



Map 3-8 Land Capability



Map 3-9 High Potential Agricultural Land







### 3.3.4 Biodiversity

The North West Biodiversity Sector Plan<sup>6</sup> was developed in 2015 to inform land use planning, environmental assessments, land use authorisations, water use authorisations and natural resource management, by a range of sectors whose policies and decisions impact on biodiversity. This is done by providing a map of biodiversity priority areas, referred to as Critical Biodiversity Areas and Ecological Support Areas, with accompanying land use planning and decision-making guidelines.

Land use patterns indicate that 31% of the province is irreversibly modified. This area comprises:

- 69% of the North West is in a natural or near-natural state,
- 3.5% is urban,
- 25.6% is croplands and
- 0.7% is mining,

The North West supports a total of 41 South African vegetation types. Thirteen of these are threatened and seven are endemic to the province.

A total of 16 threatened plant species, 31 threatened mammal species, and 40 threatened bird species occur in the province.

The vegetation of the province can be divided into seven broad biogeographic regions based on the climate, predominate soils and landforms, and dominant vegetation forms:

1. The flat, sand cover Kalahari plain in the west supports mostly open savanna type vegetation
2. Ghaap Plateau in the south west and including the dolomitic out-lier at Morokweng.
3. The Bankenveld includes the Magaliesberg, Swartruggens and Dwarsberg on the border with Limpopo, and has bushveld vegetation of the hills and broad-leaf or Acacia savannas in the valleys.
4. Western Grasslands cover the central and eastern plains of the province. Trees are mostly absent in this landscape except on ridges/koppies or azonal habitats.
5. The Bushveld Basin located on the plains north of the Magaliesberg-Swartruggens is covered mainly by dense Acacia bushveld on heavy soils or broadleaf woodlands on sandy soils.
6. The Lower-Vaal Valley has mostly arid bushveld type vegetation.
7. The characteristic Vredefort Dome landscape has similar structure vegetation to the Bankenveld with woodland on the hills and grassland in the valleys.

Three Important Bird Areas of South Africa fall entirely within the province, and another three fall partially within the province.

The Magaliesberg Mountain Range is a Protected Environment in terms of the National Environmental Management: Protected Areas Act (No. 57 of 2003) and a Biosphere Reserve due to the high biodiversity value of this area, which also represents one of the Important Bird Areas.

The Harts River supports the Barberspan Reserve wetland Ramsar site near Lichtenberg. Several relatively pristine dolomitic eyes (springs) are supported in the province and a number of freshwater springs, lakes and waterfalls that have created very unique tufa systems are recognized to be of international importance.

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<sup>6</sup> North West Department of Rural, Environment and Agricultural Development (READ)

In the North West there are 21 protected areas that cover 2.2% (230031 ha) of the province. Conservation areas cover approximately 1.5% (160877 ha), which combined amounts to 3.7% (390908 ha) of the province. There are also two biosphere reserves (Magaliesberg and Vredeford Dome) and one World Heritage Site (Taung).

The key pressures on biodiversity in the North West are associated with agriculture (cropping and game breeding), mining and urban settlements. Whilst there is a definite concentration of mining taking place in the Platinum Belt and the Golden Highway, to the east of the province, and generally close to Gauteng, there is significant loss of natural habitat taking place across the entire province.

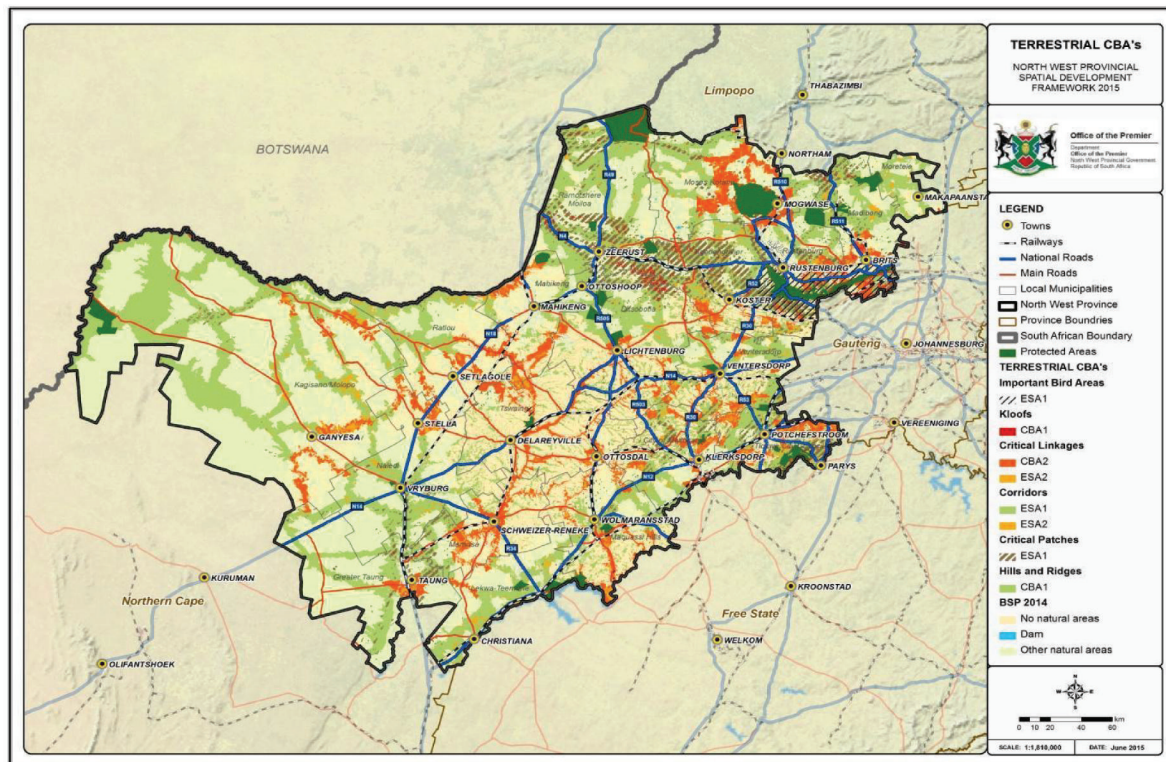
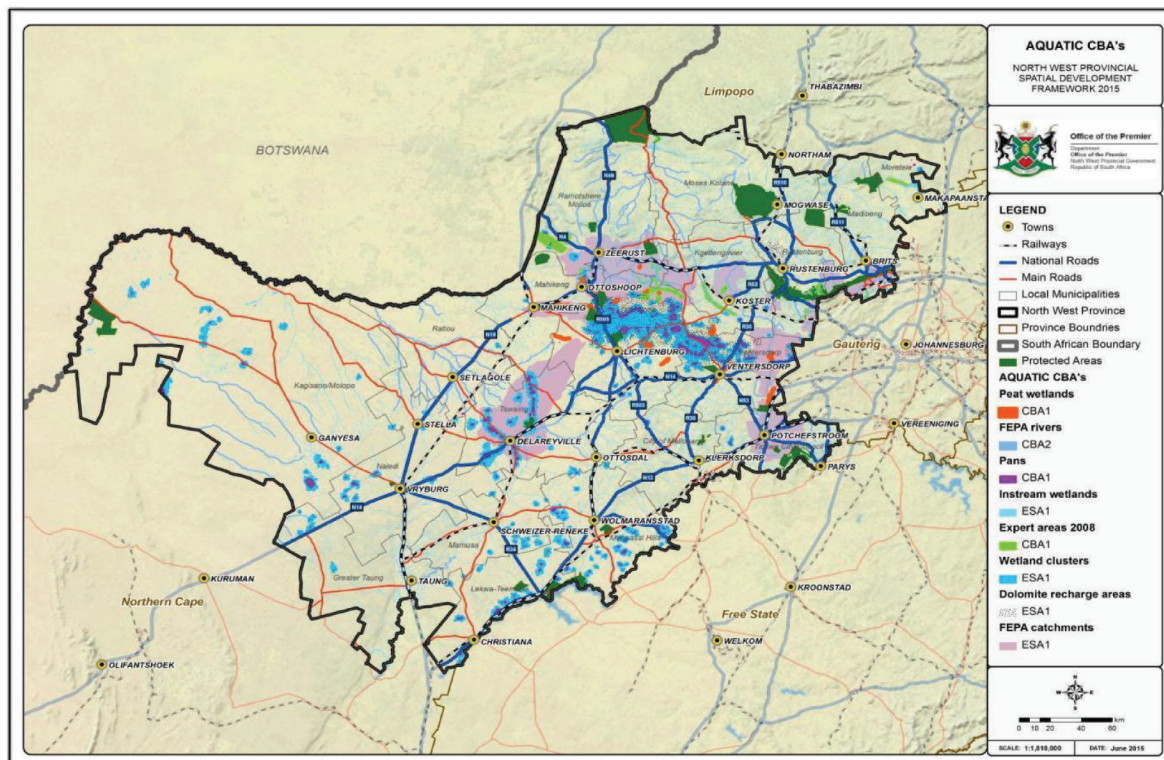
Wetland and river ecosystem diversity is high, with 55% of the wetland systems and 80% of the river systems classified as threatened ecosystems. The Harts River supports the Barberspan Reserve wetland Ramsar site near Lichtenberg. Several dolomitic eyes (springs) are supported in the North West that are in a relatively pristine state. A number of freshwater springs, lakes and waterfalls that have created very unique tufa systems are recognized to be of international importance (Roux, 2015b) (see Section 2.2). A high diversity of bird species occur which has resulted in the designation of three Important Bird Areas of South Africa in the North West, while another three extend across provincial boundaries.

The Magaliesberg Mountain Range extends 120km eastward from Rustenberg in the North West to the Gauteng Province's Hartebeerspoort Dam. The Magaliesberg is a Protected Environment in terms of the National Environmental Management: Protected Areas Act (No. 57 of 2003) and a Biosphere Reserve due to the high biodiversity value of this area, which also represents an Important Bird Area of South Africa. Biosphere Reserves are geographical areas representing priority terrestrial, aquatic and coastal ecosystems that promote the conservation and sustainable utilisation of biodiversity. Biosphere Reserves are nominated by national governments all over the world and are internationally recognized by declaration through UNESCO.

The Taung World Heritage Site is situated within the Dr Ruth Segomotsi Mompati District Municipality (Greater Taung Local Municipality), to the south-west of the province.

**Map 3-11 and Map 3-12** show the Terrestrial and Aquatic Critical Biodiversity Areas and Ecological Support Areas for the province. Several important biodiversity features occur within the North West.



**Map 3-11 Terrestrial Critical Biodiversity Areas and Ecological Support Areas****Map 3-12: Aquatic Critical Biodiversity Areas and Ecological Support Areas**

### 3.3.4.1 Biodiversity Development Implications

#### 3.3.4.1.1 Core Protection Areas

The biodiversity within North West province makes a large contribution to economic development within the province. The maintaining of and development of the Pilansberg National Park and other parks in North West province and the integration thereof into the Heritage Corridor to link to the Madikwe Game reserve. This proposed conservation estate will allow a bigger migration space for animals, creating a prime eco-tourism destination. The initiative is a 20-year project culminating in linking up with Limpopo Province and Botswana.

Several important biodiversity features which need to be protected occur within the North West, viz.:

- The Harts River supports the Barberspan Reserve wetland Ramsar site, which also falls within an Important Bird Area
- The upper reaches of the Marico River and tributaries are a priority, referred to as river Freshwater Ecosystem Priority Areas
- Dolomitic eyes (springs) with unique biodiversity and active tufa formations that are in a relatively pristine state are supported in the Blue Pools, Molopo, Molemane and Marico rivers. The Ngotwane River and Schoonspruit River are also fed by a dolomitic eye
- The Malmani karst system located approximately between Molemane and Ventersdorp is the recharge area for all the major eyes in the province. This area is possibly the single most important ecosystem service area in the province given that it is responsible for regulating and maintaining the fresh water resources for the majority of the provinces population.
- Associated with all the dolomitic eyes of the Malmani karst system are extensive peat wetlands. These are nationally unique ecosystems that provide an immense ecosystem service. Apart from being massive carbon sinks these wetland systems filter, clean and regulate the flow of fresh water from the dolomitic eyes. These wetlands have very high ecosystem service value and make a disproportionately large contribution to human well-being in the province.
- All river systems that are in a natural or near-natural ecological state (ecological category A/B: largely natural) are important as they represent a representative sample of the diversity of freshwater ecosystem types in the province that should remain in a good ecological state. For example, in the Marico Catchment these include the Rietspruit, Bokkral, Ribbokfontein se Loop, Kaaloog se Loop and the upper reaches of the Groot Marico River. The Magaliesberg Mountains is the source of the Sterkstroom River, a tributary of the Crocodile River, which is also in a good ecological condition (Roux, 2015b).
- The Vulnerable Nile crocodile is rare in the province and is found throughout the bushveld regions, but numbers are declining in rivers in protected areas, for example the Olifants River.
- Within the South African context, the North West is not characterized by a large diversity of endemic or rare species. This does not mean that the province does not have important biodiversity. With nearly 3000 native plant and 120 mammal species recorded from the province, it can be considered as being species rich and so there is no shortage of species that need conservation consideration.
- The Griqualand West Centre of Endemism falls partially within the North West, centred on the Ghaap Plateau (Taung and Revilio) and stretching to Morokweng and Vryburg.
- Three Important Bird Areas of South Africa fall entirely within the province, namely: Pilansberg National Park, Botsolano Nature Reserve; and Barberspan and Leeupan. Another three fall partially within the province, namely: Magaliesberg to the north-west and Spitskop Dam; and Sandveld and Bloemhof Dam Reserve to the south.

- The Magaliesberg Mountain Range: This extensive mountainous area that stretches 120km across the North West and Gauteng provinces delivers the most important ecosystem service in the province - clean, fresh water. The Magaliesberg is therefore invaluable ecological infrastructure that supports all the settlements, agricultural, mining and industrial development in the south of the province. It is especially important from a water resource perspective. Overgrazing, deforestation and poor development planning, as well as poor construction and maintenance of roads, can damage wetland and river ecological infrastructure. Impacts occur downstream in the form of soil erosion, gully erosion or the siltation of dams required for economic development and human consumption.

#### 3.3.4.1.2 *Biodiversity Trends and Conflicts*

Land-cover is a key information requirement for a wide range of landscape planning, inventory and management activities, ranging from environmental resource management to telecommunication planning. To inform the trends and guide the Provincial Spatial Development Framework, the land cover comparison had been done from 1990 to 2014 and from 2006 to 2014.

**Table 3-2** shows the comparisons for each municipality.

Furthermore the conflicts between the four main land cover sets were completed to determine the focus areas for guideline development and planning. See **Map 3-13** to **Map 3-17**. Comparisons were drawn with the biodiversity and with the agricultural data sets the two bases. **TABLE 3-2** indicates the components that are included on each map. The conflict assessments that were derived are:

1. Biodiversity Compilation, which is a compilation of the critical biodiversity areas with the corridors that is identified in the Biodiversity Sector Plan 2015.
2. Biodiversity Compilation with Agriculture indicated the province is dominated by agriculture. See **Map 3-13**
3. Biodiversity Compilation with Mining shows the large areas of mining, but with a closer investigation of the maps, the illegal mining activity adjacent to the river systems can clearly be defined. See **Map 3-14**
4. Biodiversity Compilation with Settlements indicates what a small percentage of the province is dedicated to urban development. See **Map 3-15**
5. Biodiversity Compilation with all conflicts provided the mining agriculture, and settlements See **Map 3-16**
6. Settlement and mining conflicting with agriculture shows the areas of mining activity that is threatened by mining activity. See **Map 3-17**

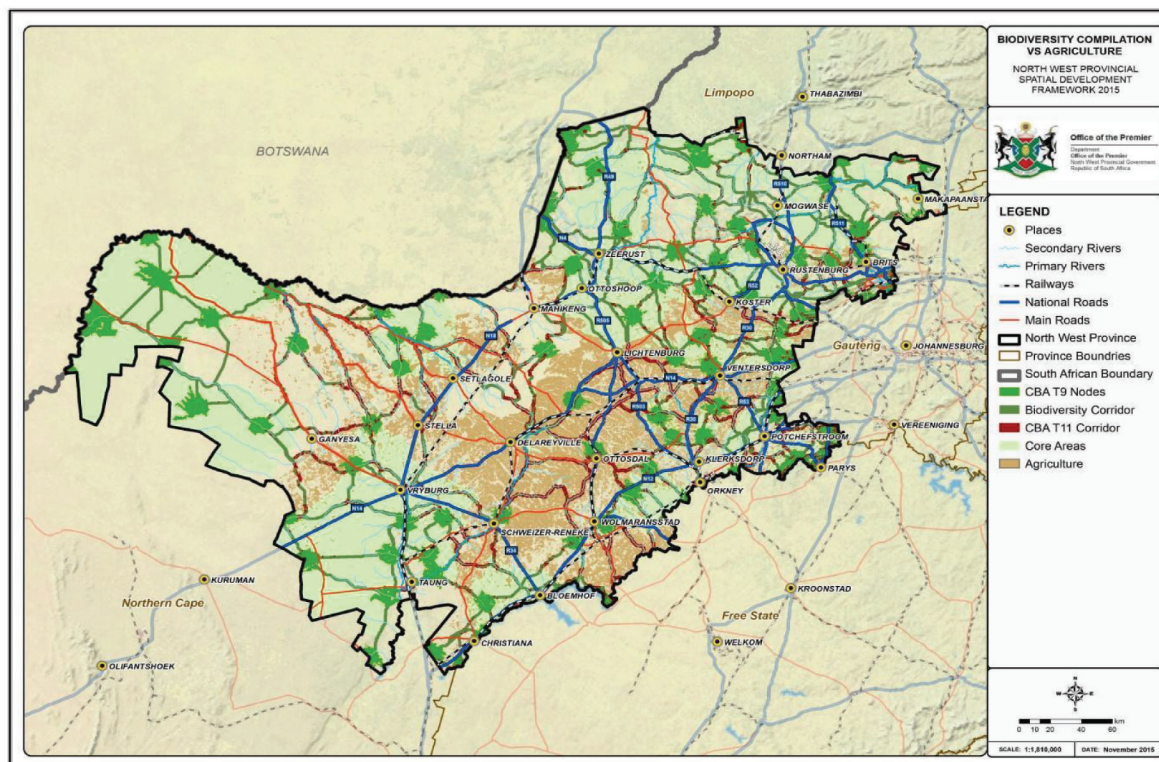
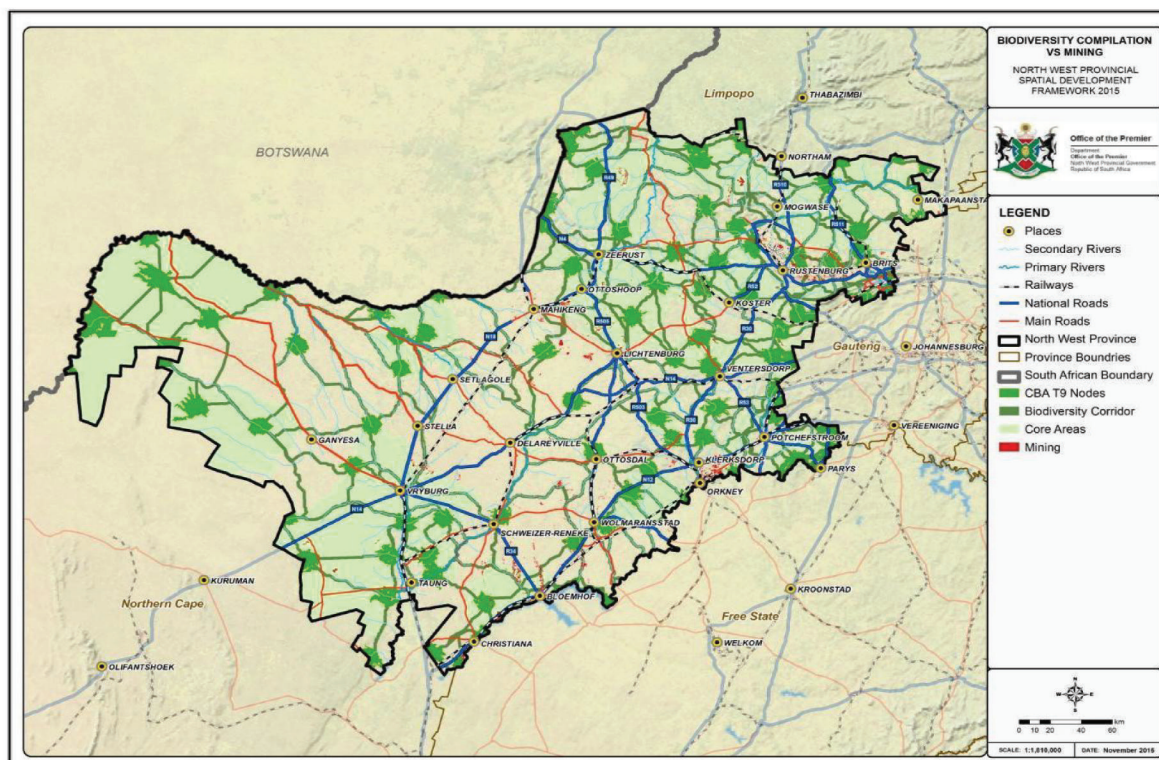


**Table 3-2: Summary of Change Analysis for each North West Province Municipality**

	1990	2013/2014	Change	
	Hectares	Hectares	Hectares	%
Natural (Untransformed)	102922.5	107130.9	4208.4	4.09
Cultivation	18386.91	14819.67	-3567.24	-19.40
Plantations/Woodlots	15.75	9.27	-6.48	-41.14
Mines	155.07	52.29	-102.78	-66.28
Erosion/Bare Soil	409.68	298.44	-111.24	-27.15
Urban	15904.17	15483.51	-420.66	-2.64
Natural (Untransformed)	301972.3	304466.1	2493.81	0.83
Cultivation	58896.72	51736.68	-7160.04	-12.16
Plantations/Woodlots	1598.49	936	-662.49	-41.44
Mines	2058.12	3385.17	1327.05	64.48
Erosion/Bare Soil	824.31	1250.1	425.79	51.65
Urban	18305.55	21881.43	3575.88	19.53
Natural (Untransformed)	264400.7	259868.4	-4532.22	-1.71
Cultivation	54395.1	49438.44	-4956.66	-9.11
Plantations/Woodlots	3345.21	2476.8	-868.41	-25.96
Mines	3656.7	8291.07	4634.37	126.74
Erosion/Bare Soil	1455.48	3031.56	1576.08	108.29
Urban	14805.18	18952.02	4146.84	28.01
Natural (Untransformed)	311359.1	318463.5	7104.33	2.28
Cultivation	79651.08	71744.94	-7906.14	-9.93
Plantations/Woodlots	2146.14	1845.72	-300.42	-14.00
Mines	896.22	774.54	-121.68	-13.58
Erosion/Bare Soil	2082.15	2966.49	884.34	42.47
Urban	861.84	1201.41	339.57	39.40
Natural (Untransformed)	503056.8	504759.8	1702.98	0.34
Cultivation	36027.18	23932.62	-12094.6	-33.57
Plantations/Woodlots	21.42	13.23	-8.19	-38.24
Mines	1053.18	2641.32	1588.14	150.79
Erosion/Bare Soil	6531.3	11716.02	5184.72	79.38
Urban	24766.74	28393.65	3626.91	14.64
Natural (Untransformed)	303442.1	320402.1	16959.96	5.59
Cultivation	168765.6	150801.6	-17964	-10.64
Plantations/Woodlots	89.37	59.85	-29.52	-33.03
Mines	174.87	651.6	476.73	272.62
Erosion/Bare Soil	46.8	68.22	21.42	45.77
Urban	15909.12	16444.53	535.41	3.37
Natural (Untransformed)	192325.8	201266.1	8940.33	4.65
Cultivation	396174.7	385426.8	-10747.9	-2.71
Plantations/Woodlots	1692.09	1409.13	-282.96	-16.72
Mines	885.69	1403.64	517.95	58.48
Erosion/Bare Soil	465.39	747.09	281.7	60.53
Urban	4879.44	6170.31	1290.87	26.46

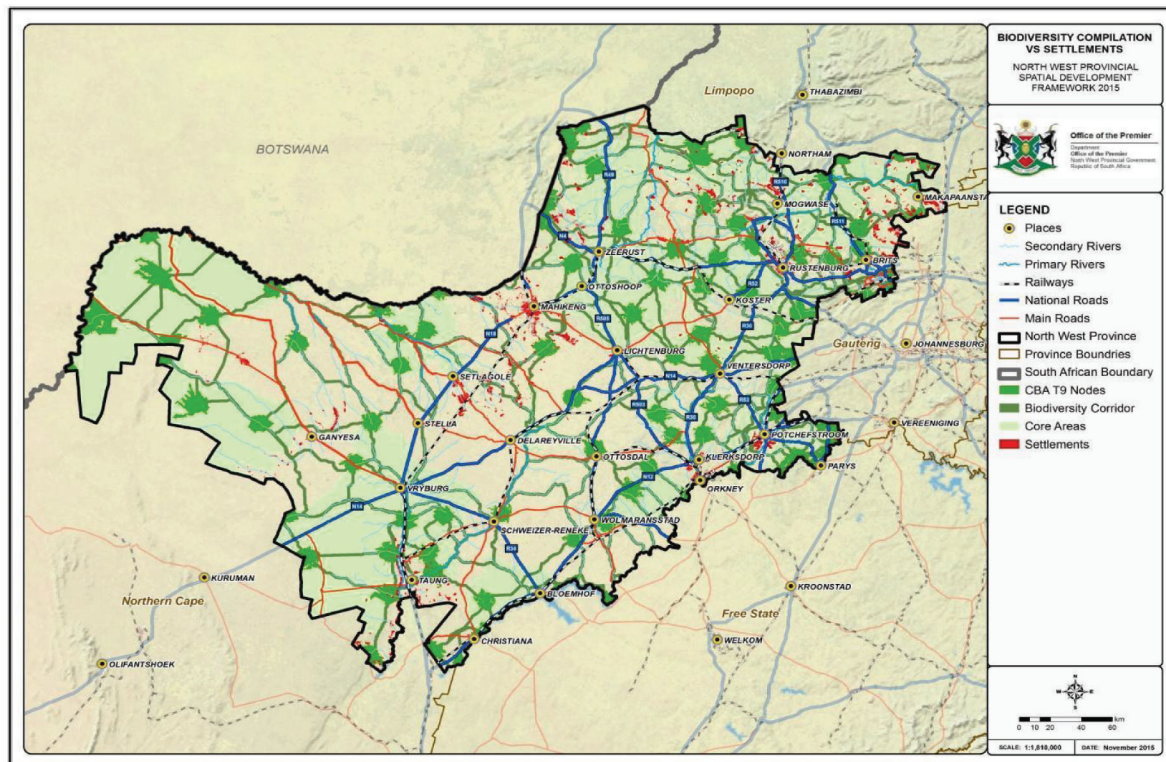
	1990	2013/2014	Change	
	Hectares	Hectares	Hectares	%
Natural (Untransformed)	229942.8	234693.9	4751.1	2.07
Cultivation	115265.3	109407.8	-5857.56	-5.08
Plantations/Woodlots	595.44	360.36	-235.08	-39.48
Mines	2622.78	2880.99	258.21	9.84
Erosion/Bare Soil	122.67	226.53	103.86	84.67
Urban	21164.22	22143.69	979.47	4.63
Natural (Untransformed)	361581.1	372519.7	10938.6	3.03
Cultivation	270233.9	256748.9	-13485.1	-4.99
Plantations/Woodlots	2644.83	2883.42	238.59	9.02
Mines	5436.81	5419.35	-17.46	-0.32
Erosion/Bare Soil	297.54	1282.59	985.05	331.06
Urban	5874.12	7214.4	1340.28	22.82
Natural (Untransformed)	645129.5	653026.4	7896.96	1.22
Cultivation	47336.76	28626.93	-18709.8	-39.52
Plantations/Woodlots	227.97	154.53	-73.44	-32.21
Mines	1580.22	1899	318.78	20.17
Erosion/Bare Soil	11368.8	19018.44	7649.64	67.29
Urban	13216.59	16134.48	2917.89	22.08
Natural (Untransformed)	532367.9	549334.4	16966.44	3.19
Cultivation	156679.4	139544.5	-17134.9	-10.94
Plantations/Woodlots	177.48	143.01	-34.47	-19.42
Mines	3784.5	3651.21	-133.29	-3.52
Erosion/Bare Soil	198.09	187.11	-10.98	-5.54
Urban	1189.62	1536.84	347.22	29.19
Natural (Untransformed)	189734.9	204080.9	14346	7.56
Cultivation	168604.8	152991.5	-15613.4	-9.26
Plantations/Woodlots	213.39	171.81	-41.58	-19.49
Mines	2043.54	2837.7	794.16	38.86
Erosion/Bare Soil	36.9	137.25	100.35	271.95
Urban	825.66	1240.11	414.45	50.20
Natural (Untransformed)	526529.7	532027	5497.29	1.04
Cultivation	16395.03	11764.71	-4630.32	-28.24
Plantations/Woodlots	72.45	35.64	-36.81	-50.81
Mines	1294.11	1258.47	-35.64	-2.75
Erosion/Bare Soil	2986.02	960.84	-2025.18	-67.82
Urban	16710.3	17940.96	1230.66	7.36
Natural (Untransformed)	286631.2	296391.1	9759.87	3.41
Cultivation	72306.18	59142.6	-13163.6	-18.21
Plantations/Woodlots	181.53	120.33	-61.2	-33.71
Mines	7583.22	10160.73	2577.51	33.99
Erosion/Bare Soil	279.9	824.76	544.86	194.66
Urban	1096.11	1438.65	342.54	31.25
Natural (Untransformed)	2097086	2172873	75786.39	3.61
Cultivation	278504.6	201698.8	-76805.7	-27.58

	1990	2013/2014	Change	
	Hectares	Hectares	Hectares	%
Plantations/Woodlots	73.98	104.4	30.42	41.12
Mines	691.56	715.05	23.49	3.40
Erosion/Bare Soil	1242.99	449.01	-793.98	-63.88
Urban	9529.47	11288.88	1759.41	18.46
Natural (Untransformed)	248788.9	252291.6	3502.71	1.41
Cultivation	124056.9	120299	-3757.86	-3.03
Plantations/Woodlots	914.22	829.8	-84.42	-9.23
Mines	1476.18	903.33	-572.85	-38.81
Erosion/Bare Soil	53.73	81.99	28.26	52.60
Urban	816.84	1701	884.16	108.24
Natural (Untransformed)	187229.3	192884.9	5655.6	3.02
Cultivation	67138.83	60873.21	-6265.62	-9.33
Plantations/Woodlots	1339.56	1283.49	-56.07	-4.19
Mines	913.41	612.09	-301.32	-32.99
Erosion/Bare Soil	183.15	518.13	334.98	182.90
Urban	10348.38	10980.81	632.43	6.11
Natural (Untransformed)	236069.3	242677.4	6608.07	2.80
Cultivation	106414.3	96815.7	-9598.59	-9.02
Plantations/Woodlots	1092.51	958.95	-133.56	-12.23
Mines	3814.74	4867.83	1053.09	27.61
Erosion/Bare Soil	128.16	274.5	146.34	114.19
Urban	8366.22	10290.87	1924.65	23.01
Natural (Untransformed)	241452.7	258708.5	17255.9	7.15
Cultivation	217539.8	197376.8	-20163	-9.27
Plantations/Woodlots	825.84	769.32	-56.52	-6.84
Mines	2801.16	4934.97	2133.81	76.18
Erosion/Bare Soil	121.95	306.36	184.41	151.22
Urban	1296.9	1942.38	645.48	49.77

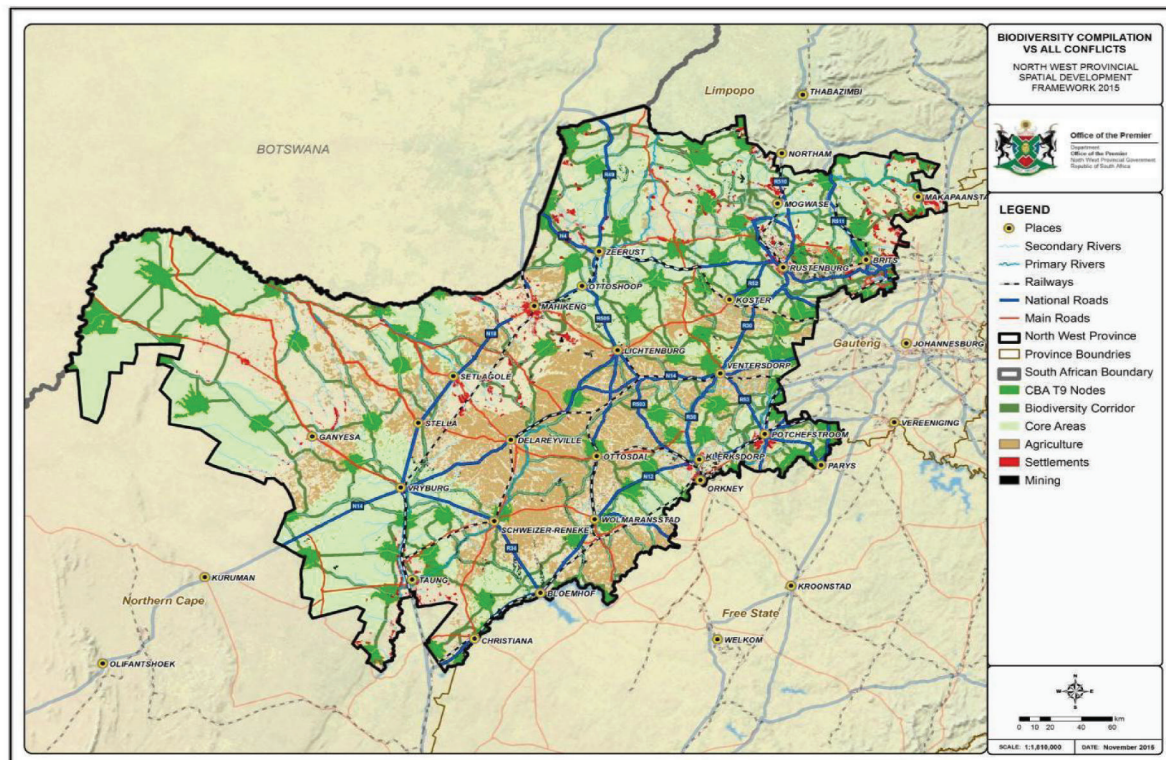
**Map 3-13: Biodiversity vs. Agriculture****Map 3-14: Biodiversity vs. Mining**



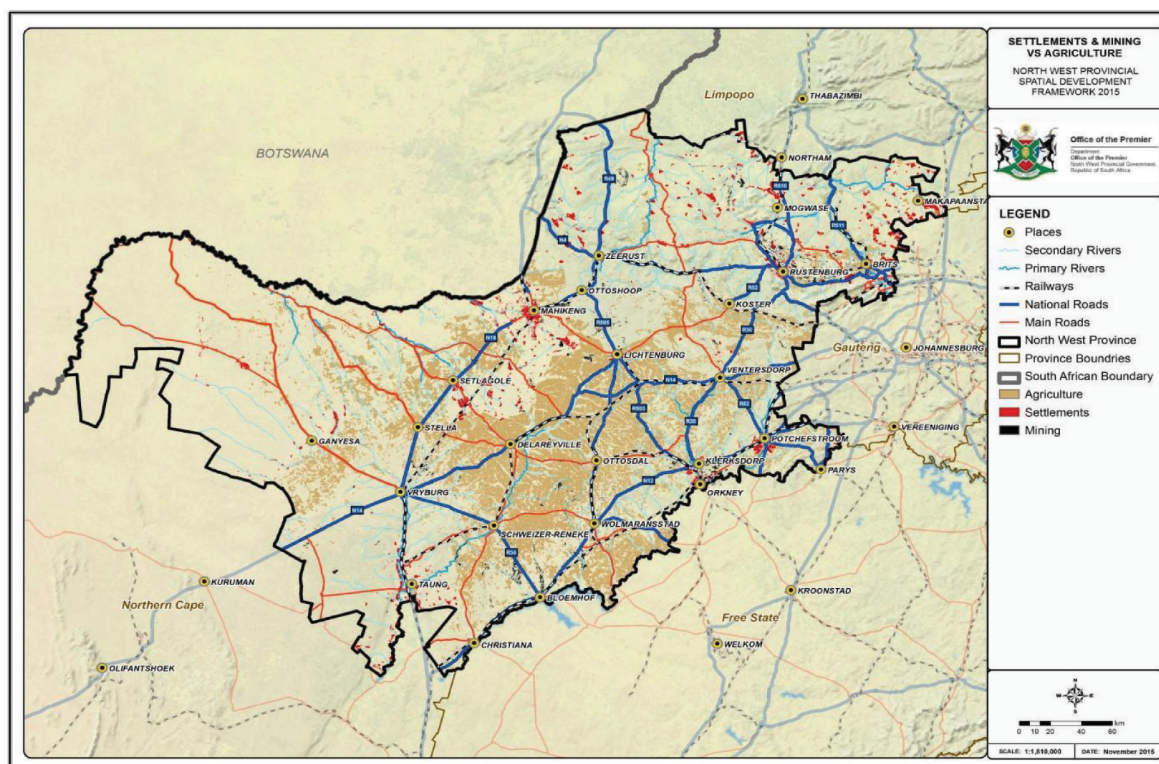
Map 3-15: Biodiversity vs. Settlements



Map 3-16: Biodiversity Compilation with all conflicts





**Map 3-17: Settlement and Mining conflicts with Agriculture**

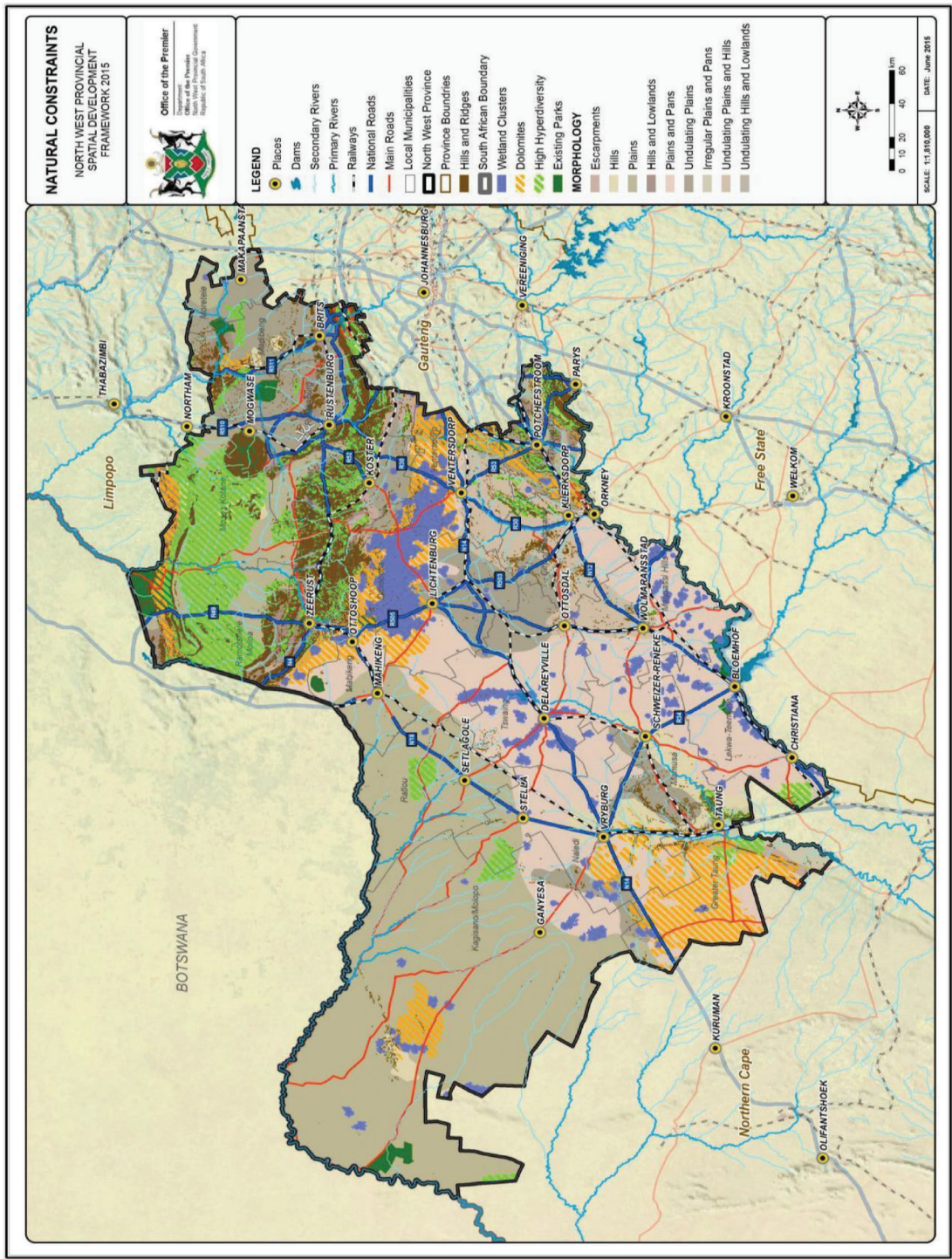
### 3.3.5 Natural Constraints

Natural constraints restricting development include the following:

- River systems and wetland clusters
- Biodiversity factors, and
- Topographical constraints including morphological aspects, slopes and dolomitic areas

See **Map 3-18 Natural Constraints**

Map 3-18 Natural Constraints





### 3.4 Spatial Development Elements within North West

North West lies in the northern part of South Africa, north - east of the Northern Cape Province, west of the Free State Province and Gauteng Province and south of Limpopo Province. It borders Botswana in the east. The Geographical size of North West is 105703.4 km<sup>2</sup>.

#### 3.4.1 Regional and intra-regional accessibility and mobility

North West has excellent regional and intraregional accessibility supported by a system of regional and national linkages, providing different levels of mobility within the province.

##### 3.4.1.1 Road links

The roads of regional importance supporting the development of transportation development corridors North West is linked to surrounding areas by a system of national and provincial roads. The national and provincial roads systems within the North West provide the following regional links supporting the development of transportation development corridors:

- The N4 linking Tshwane with Walvis Bay Harbour (Platinum Corridor). Development nodes within along this route include Brits (Madibeng LM), Rustenburg, Swartruggens (Kgetlengrивer LM ), Groot Marico and Zeerust ( Ramotshere Moloa LM)
- The N17 route between Johannesburg and Kimberley (Treasure Corridor) including the development nodes of Potchefstroom (Tlokwe LM), Klerksdorp (Matlosana LM), Wolmaranstad (Maquassi Hills LM) and Christiana (Lekwa Teemane LM).
- The N14 route linking Gauteng with Kuruman ( Northern Cape) including the development nodes of Ventersdorp, Delareyville (Tswaing LM) and Vryburg ( Naledi LM)
- The N18 linking Gaborone (Botswana ) with Mahikeng, Setlagole (Ratlou LM) , Vryburg (Naledi LM), Taung (Greater Taung) and Christiana and Kimberley ( N17)

##### 3.4.1.2 Railway Systems

The railway system provides the following main links:

- Johannesburg- Potchefstroom- Kleksdorp- Christiana – Kimberley( Cape Town)
- Johannesburg - Koster - Zeerust – Mahikeng- Setlagole- Vryburg- Taung- Kimbeley ( Cape Town)
- Johannesburg- Ventersdorp- Delareyville- Wolmaranstad- Taung – Kimberley
- Tshwane – Brits – Rustenburg - Ellisras
- Mahikeng- Lobatse- Gaborone - Francistown- Buluwayo- Lusaka- Dar es Alaam

##### 3.4.1.3 Airports

Two major airports are provided:

- Pilanesberg International Airport ( ACSA)
- The Kgosi Montshioa Airport (Mahikeng Airport - North West Province Department of Transport and Roads)

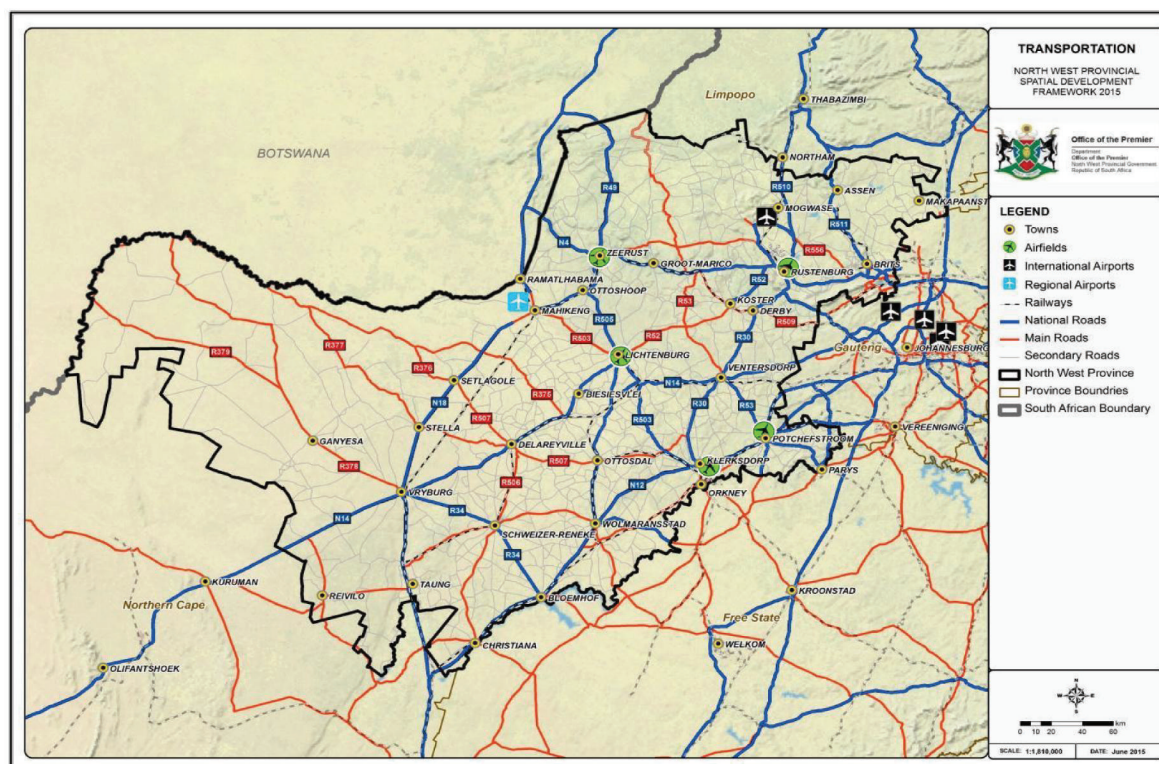
Other smaller airfields include:

- Potchefstroom

- Klerksdorp
- Rustenburg
- Lichtenburg
- Zeerust

The main roads, railway system and airports provide the accessibility and mobility necessary for regional economic development.

### Map 3-19 Regional Setting



### 3.4.2 The spatial development pattern

The existing spatial pattern within North West provides for a spatial development system providing for economic development concentrated in a system represented by:

- Regional activity nodes within transportation corridors.
  - The Platinum Development Corridor as the **main regional development corridor** supported by the N4 route focusing on public and private investments initiatives within the corridor. Within North West, the Platinum Development Corridor accommodates:
    - the primary activity nodes of Brits and Rustenburg and associated industrial and mining concentrations,
    - the secondary activity nodes of Hartbeespoort and Marikana
    - Zeerust as tertiary node
    - The tertiary activity nodes of Swaruggens, Lehurutse, Groot Marico and Swaruggens

- The N12 development corridor supporting the Johannesburg- Cape Town transportation corridor with;
  - Potchefstroom and Klerksdorp as primary activity nodes
  - Stilfontein, Orkney and Wolmaranstad as secondary nodes
  - Bloemhof and Christiana as tertiary nodes
- The concentration of North West's economic development and population into the main subregional/regional development nodes of Madibeng, Rustenburg, Mahikeng and Matlosana
  - Attracting subregional trade, industry and services providing for the existing population and adjoining rural areas
  - Providing economic growth, providing employment to the existing as well future urban and rural hinterland population
- A system of smaller activity nodes interconnected with each other and the regional corridor and activity nodes by a system of roads providing economic and social infrastructure for their respective populations and economies.
- The development of poor rural communities, remote from economic activity nodes which also form part of historically homelands with economic, social and engineering infrastructure to enable them to participate in the local and regional economies
- A strong developed tourism sector as a result of the biodiversity provided by regional, national, provincial and private protected and conservation areas.
- Agriculture taking up the largest part of the province.

### 3.4.3 Clusters of population and economic concentrations

The distribution of population and economic activity indicate a definite pattern of categories of local municipalities representing main concentrations, the previous homelands, medium sized population concentrations and small concentrations.

#### 3.4.3.1 Main concentrations of economic activity and population (Regional Nodes)

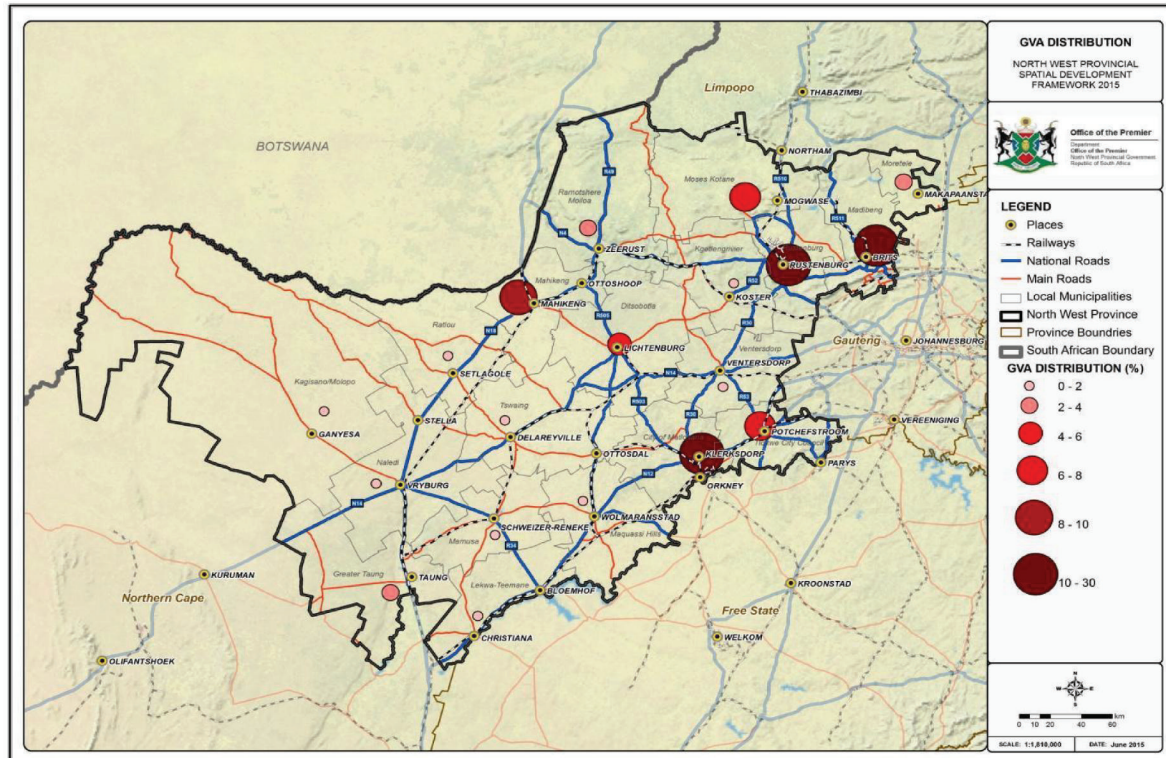
The main concentrations of economic activity provide the regional activity centres, which provide collectively the basis for the development of future development corridors and already accommodate a strong urbanisation trend. Approximately **63%** of the total economic activity of North West is concentrated into the 4 local economies of Madibeng, Rustenburg, Mahikeng and Matlosana Municipalities. These municipalities represent approximately 50% of the North West population and **58%** of the North West labour force.

All the main concentrations experienced very low or declining economic growth rates. The population growth rates within these concentrations are exceeding the population growth rates by far especially in Madibeng (2.4%) and Rustenburg (3.1%).

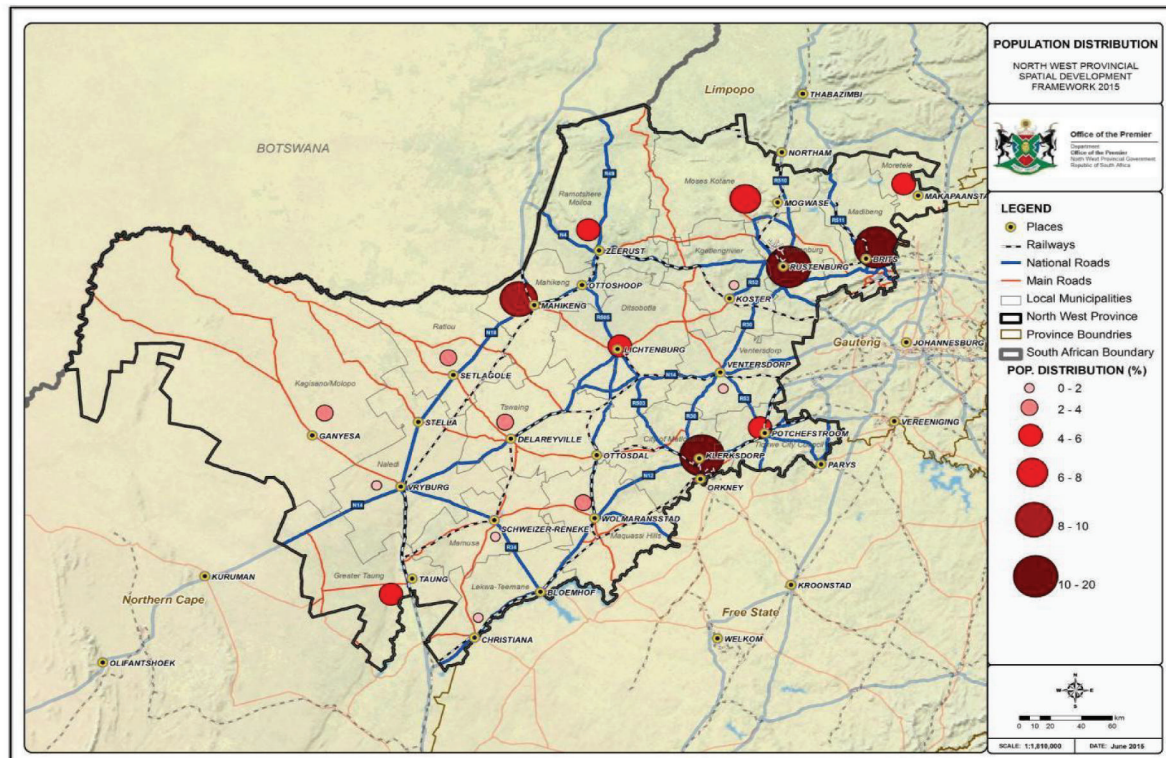
Should slow economic growth rates prevail, it can be expected that it will assist in lower incomes and GVA's per capita and higher unemployment. High employment growth rates are however necessary to ensure the eradication of poverty. The concentration of economic activities into the 4 municipalities supported by the large accessible activity nodes of Madibeng, Rustenburg, Mahikeng and Matlosana provides a strong basis for further urbanisation and nuclei for attracting and distributing economic development.

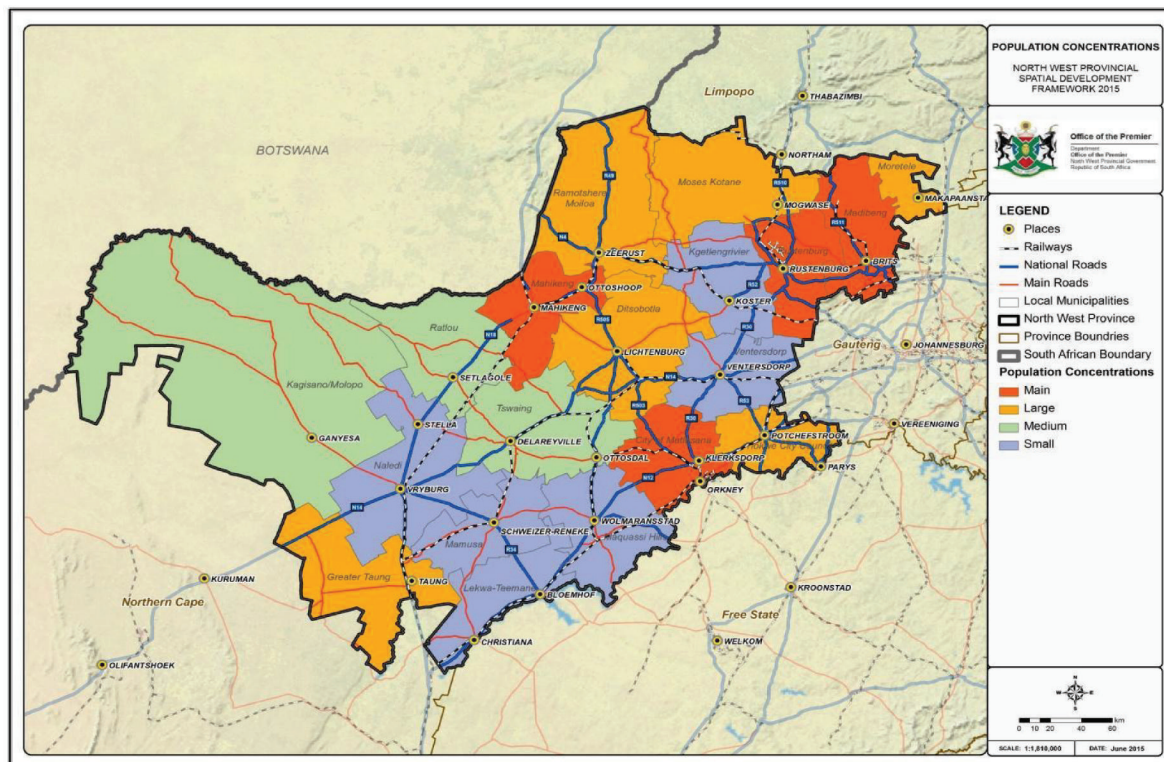


Map 3-20 GVA Distribution (Municipal)



Map 3-21 Population Distribution (Municipal)



**Map 3-22 Population Concentrations (Municipal)****3.4.3.2 Large Population concentrations**

Large population concentrations are represented by Moretele, Moses Kotane, Disobotla, Ramotshere, Greater Taung, Tlokwe, Ratlou, Tswaing and Kagisano. These economies make up **30.5%** of the total North West population and represent **28%** of the total provincial economy and **29%** of its labour force. The previous homeland areas, representing poverty pockets with low levels of social, economic and engineering infrastructure are spatially segregated from main economic activity nodes and people of these areas have to travel long distances to employment and service nodes. These areas have little economic development potential and have to rely on social grants and public capital spending.

**3.4.3.3 The medium size population concentrations (population 100000-150000)**

The medium sized population concentrations are represented by Ratlou, Tswaing and Kagisano. The population represents 9.7% of the North West population, the economy 2.9% and labour force 14.5%. Tswaing has the highest population growth rate at 0.9% p.a.

All local economies are not growing or declining. Employment experienced limited or negative growth.

**3.4.3.4 Small population concentrations (population 100000-150000)**

Small population concentrations are represented by Kgetlengrivier, Naledi, Mamusa, Lekwe- Teemane, Ventersdorp and Maquassi Hills. The population represents 10.0% of the North West population, the economy 6.4% and labour force 8.8%. Kgetlengrivier (2.6% p.a) and Ventersdorp experiences the highest population growth rates with Lekwe Teemane declining at -0.4% p.a. With the exception of Ventersdorp (0.3% p.a.) and Maquassi Hills (1.2% p.a.) all the municipalities have declining economies.



Table 3-3: North West Population Concentrations. Population Development Indicators

	Homeland	Population (2016 est.)	Population % (2015)	Long Term Population Growth %	Size of the economy % (2013)	Employment Rate % (2013)	Size of Labour force % (2013)	Labour participation Rate % (2013)	GVA per capita (2013)	GVA Distribution (2013)	GVA Annual Growth	Average Annual income (2015)	Aids (%)
Madibeng	X	531761	13.9	2.4	14.6	76	14.1	58.4	28 991,4	14.6	0.6	103 210	13.4
Rustenburg	X	617126	16.1	3.1	26.9	81	21.0	69.0	46 275,2	26.9	-0.6	119 264	14.4
Mahikeng	X	327320	8.6	1.3	9.2	75	9.1	50.1	29 665,3	9.2	1.8	107 979	11.5
Matlosana		426060	11.1	1.0	12.1	80	13.7	57.8	28 894,3	12.1	0.6	101 432	12.7
<b>Main Population Concentrations</b>		<b>1902267</b>	<b>49.7</b>	<b>2.1</b>	<b>62.7</b>	<b>78.5</b>	<b>58.0</b>	<b>60.0</b>	<b>34692.75</b>	<b>62.7</b>	<b>0.4</b>	<b>108827.6</b>	<b>13.2</b>
Moretele	X	209803	5.5	0.7	3.9	78	4.7	41.6	20 014,9	4.0	3.4	50 275	12.2
Moses Kotane	X	272553	7.1	0.6	7.9	71	7.5	52.7	31 130,1	8.0	2.9	69 296	13.4
Ditsobotla	X	166087	4.3	1.1	4.8	67	6.3	52.6	27 002,7	4.8	3.9	89 689	14.4
Ramotshere	X	167966	4.4	1.2	2.1	70	2.7	34.2	13 204,7	2.1	1.8	63 871	11.5
Greater Taung	X	197424	5.2	0.2	2.4	77	2.2	26.7	15 402,5	2.4	6.8	46 741	12.7
Tlokwe		154571	4.0	0.9	6.6	87	5.4	64.9	38 661,8	6.6	1.5	143 512	11.8
<b>Large Pop. Concentrations</b>		<b>1168404</b>	<b>30.5</b>	<b>0.7</b>	<b>27.9</b>	<b>74.0</b>	<b>28.7</b>	<b>46.5</b>	<b>24309.52</b>	<b>27.9</b>	<b>5.5</b>	<b>74008.5</b>	<b>12.7</b>

	Homeland	Population (2016 est.)	Population % (2015)	Long Term Population Growth %	Size of the economy % (2013)	Employment Rate % (2013)	Size of Labour force % (2013)	Labour participation Rate % (2013)	GVA per capita (2013)	GVA Distribution (2013)	GVA Annual Growth	Average Annual Income (2015)	Aids (%)
Ratlou	X	118692	3.1	0.8	0.7	55	1.3	25.6	5 838,5	0.7	1.1	43 958	10.7
Tswaing	X	136764	3.6	1.9	1.5	75	1.9	37.7	11 097,0	1.5	1.3	68 883	11.2
Kagisano	X	117529	3.1	0.7	0.8	65	1.3	27.2	8 570,2	0.8	0.9	55 484	12.7
Medium Pop. Concentrations		372985	9.7	1.2	2.9	65.2	4.5	30.2	8 627.43	2.9	1.1	56726.1	11.5
Kgetlengrivier		56680	1.5	2.6	1.1	70	1.3	57.4	19 801,7	1.1	-0.3	88 146	11.6
Naledi		75185	2.0	1.3	1.4	66	1.9	54.2	23 371,9	1.4	0.9	98 196	11.1
Mamusa		67265	1.8	2.1	0.7	80	1.0	41.6	12 949,7	0.7	0.1	65 539	11.3
Lekwa-Teemane		32809	0.9	-0.4	0.6	68	1.0	52.1	13 003,0	0.6	-2.4	70 113	10.9
Ventersdorp		63699	1.7	3.3	0.8	73	1.0	43.4	13 511,3	0.8	0.8	59 068	11.5
Maquassi Hills		86389	2.3	1.6	1.7	63	2.6	50.9	21 316,4	1.7	3.1	72 110	11.1
Small Pop. Concentrations		382027	10.0	1.8	6.4	67.9	8.8	50.2	18007.66	6.4	0.5	76131.6	11.3

### 3.4.4 A system of interactive activity nodes

The existing distribution of development and activity nodes provides the basis for future development options within North West. The activity nodes within the regional development nodes and main road and transportation linkages are indicated in **Map 3-23 and Map 3-24**.

In order to develop a nodal hierarchy for the province three values were acknowledged according to which the various settlement nodes were rated – GVA size, Formal Employment Size, Education Levels and Population Size. According to these ratings we identified the level of significance and whether it represents a growth or concentration point. These indicators were integrated to reflect its nodal order size – Primary, secondary, tertiary or fourth order.

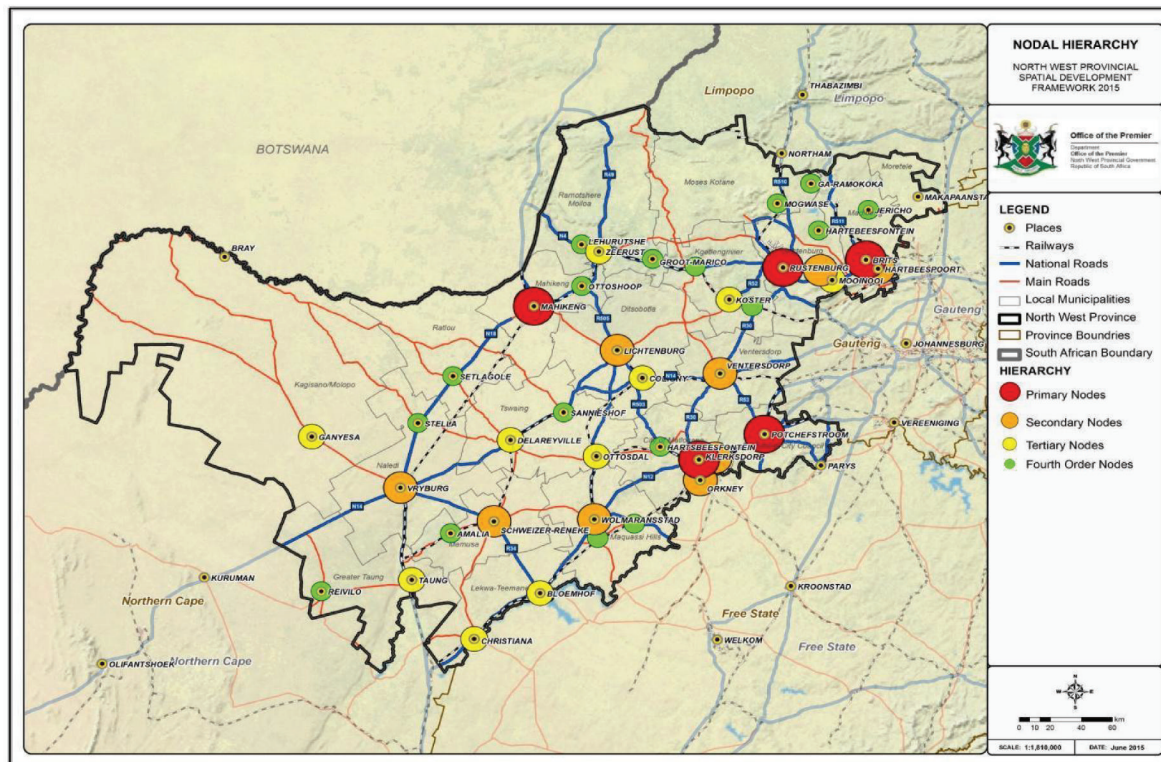
The spatial structure of the regional nodes of Rustenburg, Madibeng, Matlosana and Mahikeng and large concentrations of Moretele, Moses Kotane, Ditsobotla, Ramotshere, Greater Taung and Tlokwe have a major influence on the efficient functioning of nodal systems within the province. The structural elements include the identified regional activity nodes, and existing and emerging corridors integrating with regional development corridors.

**Table 3-4: Nodal Hierarchy**

Town	Order	Significance
Rustenburg	Primary	Regional
Klerksdorp	Primary	Regional
Potchefstroom	Primary	Sub-Regional
Mahikeng	Primary	Regional
Brits	Primary	Sub-Regional
Orkney	Secondary	Sub-Regional
Lichtenburg	Secondary	Sub-Regional
Stilfontein	Secondary	Local
Vryburg	Secondary	Regional
Mmabatho	Secondary	Sub-Regional
Schweizer-Reneke	Secondary	Sub-Regional
Hartbeespoort	Secondary	Sub-Regional
Marikana	Secondary	Local
Wolmaranstad	Secondary	Sub-Regional
Ventersdorp	Secondary	Sub-Regional
Taung	Tertiary	Local
Bloemhof	Tertiary	Local
Zeerust	Tertiary	Sub-Regional
Coligny	Tertiary	Local
Koster	Tertiary	Sub-Regional

Town	Order	Significance
Ganyesa	Tertiary	Local
Mooi-nooi	Tertiary	Local
Ottosdal	Tertiary	Sub-Regional
Christiana	Tertiary	Sub-Regional
Delareyville	Tertiary	Sub-Regional
Setlagole	Fourth order	Local
Reivilo	Fourth order	Local
Setlopo	Fourth order	Local
Leeudoringstad	Fourth order	Sub-Regional
Lehurutshe	Fourth order	Local
Lethabong / Haartebeesfontein	Fourth order	Local
Sannieshof	Fourth order	Local
Hartbeesfontein	Fourth order	Local
Jericho	Fourth order	Local
Makwassie	Fourth order	Local
Stella	Fourth order	Local
Swartruggens	Fourth order	Local
Groot Marico	Fourth order	Local
Mogwase	Fourth order	Local
Ramokoka	Fourth order	Local
Ottoshoop	Fourth order	Local
Amalia	Fourth order	Local
Derby	Fourth order	Local
Bray	Fourth order	Local

### Map 3-23 Nodal System



### 3.4.5 Economic and Transportation Corridor Development

#### 3.4.5.1 Regional Spatial Development initiatives

Regional Development Spatial Initiatives provide a myriad of development opportunities within North West and its broader region.

A range of Regional and Provincial Spatial Development Initiatives affects North West directly providing an integrated system of economic development corridors supporting regional, provincial and local social and economic development. These include:

- The Platinum Development Corridor (PDC) as part of the Coast 2 Coast Corridor (C2C) that links Maputo with Walvis Bay, attracts public as well as private investment
- The **Treasure Corridor** between Johannesburg, Potchefstroom, Klerksdorp and areas further south along the N12 national road.
- The **Western Corridor** part of a north-south SADC initiative through Botswana southwards

The positive impact of these development initiatives on the development of the natural, social and economic resources of the province is evident and is the result of co-coordinated medium and long term interventions. The success of implementation of an initiative will however depend on the extent of integration of the individual initiatives with other initiatives.

## 3.4.5.2 Routes, corridors and nodal development

Table 3-5: Transportation Corridors

Route	N4	N12	N18	N14	R53/R30/ N4	R505/N14/R53
Corridor	Platinum Development Corridor	Treasure Corridor	Western Corridor		Eastern Development Belt	New Development Corridor
District Municipality	LM	LM	LM	LM	LM	LM
Bojanala District	Kgetlengrivier				Kgetlengrivier	
	Madibeng				Madibeng	
	Rustenburg				Rustenburg	
Dr Kenneth Kaunda District		Maquassi Hills		Ventersdorp	Matlosana	Tlokwe
		Matlosana			Tlokwe	Ventersdorp
		Tlokwe			Ventersdorp	
Dr Ruth Segomotsi Mompati District		Lekwa-Teemane	Greater Taung	Greater Taung		
			Naledi	Naledi		
	Ramotshere Molla		Mahikeng	Tswaing		Ditsobotla
Ngaka Modiri Molema District			Ratlou			Mahikeng
	1 373 533	699 829	718 621	473 073	1 849 897	711 677
	35.9	18.3	18.8	12.4	48.4	18.6
Population Growth	2.1	1.5	1.6	1.6	1.9	1.7
Size of Economy % (2013)	44.7	21.2	13.3	5.5	62.8	21.4
GVA per Capita (2013)	34 416.9	29 119.7	19 555.8	12 794.2	34 710.4	29 806.4
GVA Annual Growth (2013)	2.6	2.0	2.5	2.1	2.4	3.4



Route	N4	N12	N18	N14	R53/R30/ N4	R505/N14/R53
Corridor	Platinum Development Corridor	Treasure Corridor	Western Corridor		Eastern Development Belt	New Development Corridor
District Municipality	LM	LM	LM	LM	LM	LM
Labour Force Size	39.1	22.7	14.5	7.0	56.5	21.9
Employment %	40.1	23.6	13.9	6.7	59.2	21.8%
Employment growth %	-0.1	-0.09	-0.5	-2.6	-0.06	-0.2
Average Employment Rate %	74.3	74.5	68.3	72.8	77.8	75.5

#### 3.4.5.2.1 ***The Platinum (N4) Development Corridor***

The Platinum Development Corridor, as transportation corridor linking Gauteng, the economic heartland of the South Africa with the Maputo harbor, is supported by the N4 and the Johannesburg- Mahikeng railway line, which traverses through the **Bojanala** and **Ngaka Modiri Molema** Districts.

#### 3.4.5.3 **The Treasure (N12) Corridor**

The N12 corridor serves the Kenneth Kaunda District linking the Maquassi Hills, Matlosana, Tlokwe, and Lekwa-Teemane Local Municipalities. The Treasure Corridor is supported by the Johannesburg – Cape Town railway line.

#### 3.4.5.4 **The Western (N18) Corridor**

The Western corridor intersects with the Platinum and Treasure corridors at Zeerust and west of Taung. The corridor also includes the local economies of Greater Taung, Naledi, Mahikeng and Ratlou.

#### 3.4.5.5 **The N14 route**

The N14 route provides the link between Gauteng and the Northern Cape and is supported by the Johannesburg Vryburg railway line also joining up with the Johannesburg-Cape Town railway line in the west.

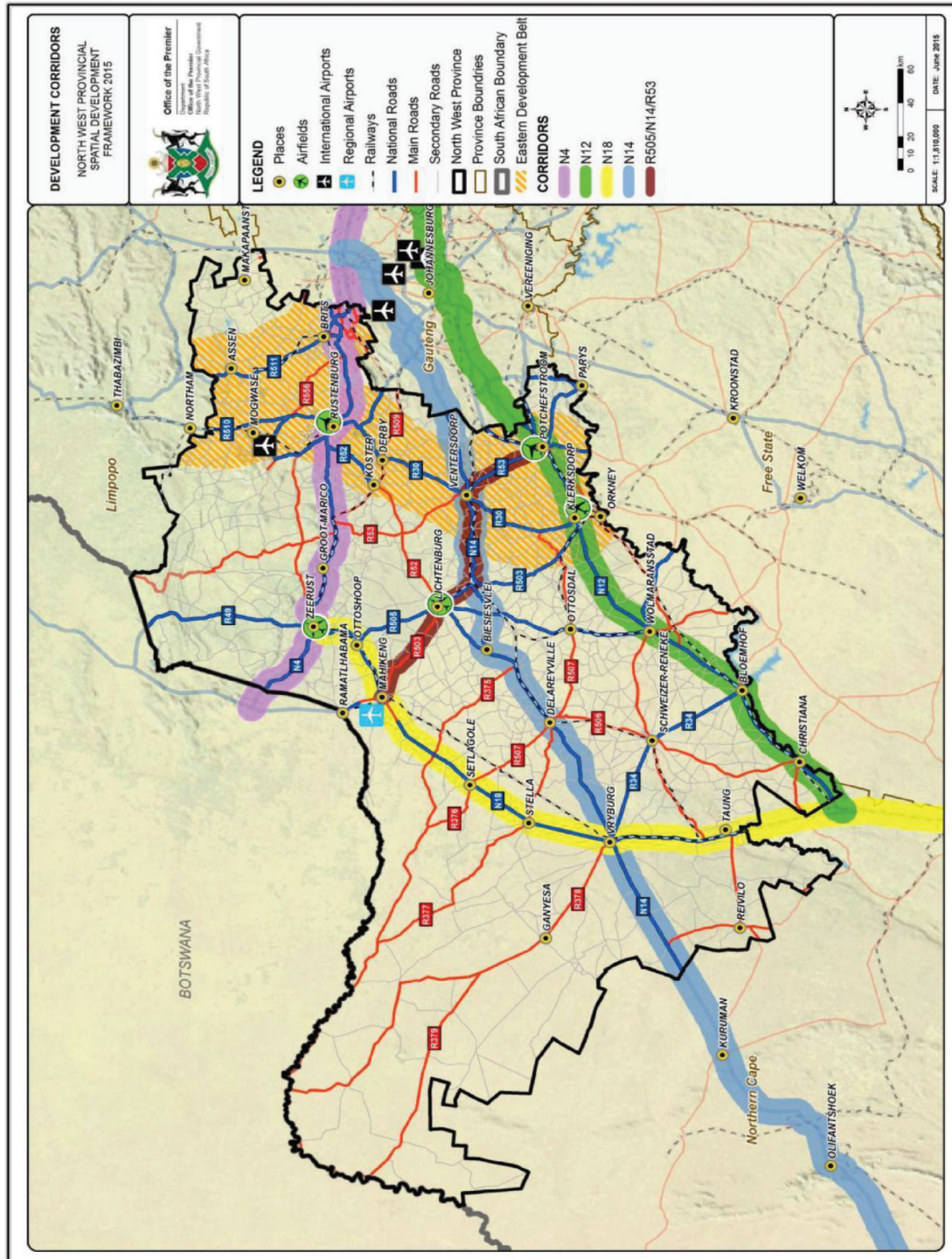
#### 3.4.5.6 **The R505/N14/R53 route**

The R505/N14/R53 route links Tlokwe with Mahikeng, via Ventersdorp and Lichtenburg and was identified in the North West Provincial Development Plan as a new development corridor.

#### 3.4.5.7 **The R505/N14/R53 route (Eastern Development Belt)**

The R505/N14/R53 route links Kgetlengrivier, Madibeng, Rustenburg, Matlosana, Tlokwe, Ventersdorp. These municipalities are situated on the western fringe of the economic hub of Gauteng and interact with the economy of Gauteng.

Map 3-24: Development Corridors and Zones



### 3.4.6 Existing Nodal Hierarchy, Corridor Focus and Potential Development Nodes

The existing hierarchy of corridors and nodes as provided by the Spatial Development Frameworks of municipalities are summarised below.

**Table 3-6: Current Nodal Hierarchy, Corridor Focus and Potential Development Nodes**

Municipality	First Order Nodes	Second Order Nodes	Other Nodes	Development Corridors	Potential Development Nodes	Sectoral Drivers
Bojanala						
Kgetlengrivier	None specified	✓ Koster	✓ Swartruggens ✓ Derby	✓ N4 Other important routes: ✓ R52 ✓ R30 ✓ R509 ✓ R53	✓ Ratsagai ✓ Mazista ✓ Magaliesberg Biosphere	✓ Trade ✓ Finance and business ✓ Mining ✓ Transport and communication
Madibeng	✓ Brits	✓ Hartbeespoort	✓ Jericho	✓ N4 Other important routes: ✓ R104 ✓ R556 ✓ R511 ✓ R512 ✓ R560 ✓ R3 ✓ R513	✓ Hebron ✓ Lethlabile ✓ Mmakau ✓ Ifai ✓ Schoemansville ✓ Mothutlung ✓ Peacanwood	✓ Mining ✓ Finance and business ✓ Transport and communication ✓ Community, social and other personal services ✓ Trade ✓ Manufacturing
Moretele	None Specified	✓ None Specified	✓ None Specified		✓ Mathibestad ✓ Makapanstad ✓ Selepe ✓ Tladistad	✓ Finance and business ✓ General government services ✓ Community, social and other personal services

Municipality	First Order Nodes	Second Order Nodes	Other Nodes	Development Corridors	Potential Development Nodes	Sectoral Drivers
Moses Kotane	✓ None Specified	✓ None Specified	✓ Mogwase ✓ Ramokoka	✓ No development corridor  Other important routes: ✓ R510 ✓ R565	✓ Mableskraal ✓ Ledi ✓ Lerome ✓ Moruleng ✓ Saulspoort ✓ Madikwe ✓ Pella ✓ Mokgalwaneng ✓ Bodirelo Industrial area	✓ Mining ✓ Finance and business ✓ Transport and communication ✓ Trade
Rustenburg	✓ Rustenburg	Marikana	✓ Moolinooi	✓ N4 Platinum Corridor  Other important routes: ✓ R104 ✓ R24 ✓ R510	✓ Rustenburg CBD ✓ Boitekong ✓ Phokeng ✓ Robega Cluster ✓ Luka Cluster ✓ Tlaseng Cluster ✓ Thekwane Cluster ✓ Hartbeesfontein Cluster	✓ Mining ✓ Finance and business ✓ Transport and communication ✓ Trade
Dr Kenneth Kaunda						
City of Matlosana	✓ Klerksdorp	✓ Stilfontein ✓ Orkney	✓ Hartbeesfontein	✓ N12 Treasure Corridor  Other important routes: ✓ R30 ✓ R503 ✓ R507 ✓ R502	✓ Klerksdorp, Orkney and Stilfontein including the neighbourhoods of Jouberton, Kanana, Khuma, Alabama / Manzilpark as well as Vaal River Village will develop into one integrated urban node ✓ Tigane ✓ Vaal Reefs ✓ Alabame / Manzil Park ✓ Dominionville	✓ Trade ✓ Finance and business services ✓ Community, social and other personal services ✓ Mining ✓ Manufacturing



Municipality	First Order Nodes	Second Order Nodes	Other Nodes	Development Corridors	Potential Development Nodes	Sectoral Drivers
Maquassi Hills	✓ None Specified	✓ Wolmaransstad	✓ Leeudoringstad ✓ Makwassie	✓ N12 Treasure Corridor Other important routes: ✓ R504 ✓ R502 ✓ R505	✓ Bloemhof Dam Nature Reserve ✓ Witpoort	✓ Trade ✓ Finance and business services ✓ Mining ✓ Community, social and other personal services ✓ General government services
Tlokwe	✓ Potchefstroom	✓ None Specified	✓ None Specified	✓ N12 Treasure Corridor Other important routes: ✓ R53 ✓ R501 ✓ R54	✓ Klipdrift node ✓ Lindequedrift ✓ Boskop Node ✓ Matwang Rural Village ✓ Venterskroon	✓ Finance and business services ✓ Community, social and other personal services ✓ General government services ✓ Agriculture
Ventersdorp	✓ None Specified	✓ Ventersdorp	✓ None specified	✓ N14 Other important routes: ✓ R53 ✓ R30	✓ Welgevonden ✓ Boikhutso ✓ Goedgeveonden	✓ Finance and business services ✓ Community, social and other personal services ✓ General government services ✓ Agriculture
Dr Ruth Segomotsi Mompati						
Lekwa-Teemane	✓ None specified	✓ None Specified	✓ Christiana ✓ Bloemhof	✓ N12 Treasure Corridor Other important routes: ✓ R34 ✓ R506	✓ Bloemhof CBD ✓ Christiana CBD	✓ Agriculture ✓ Transport and communication ✓ Manufacturing ✓ Community, social and other personal services

Municipality	First Order Nodes	Second Order Nodes	Other Nodes	Development Corridors	Potential Development Nodes	Sectoral Drivers
Greater Taung	✓ None Specified	✓ None Specified	✓ Taung ✓ Reivilo	✓ N18 ✓ N14 Other important routes: ✓ R371 ✓ R372 ✓ R504	✓ Rooiwal / Lethola / Matolong / Bathaping / Randstad / Colong / Makwating / Nhole / Manokwane ✓ Diplankeng / Dipitising / Magogong / Lothwanyeng ✓ Lower / Upper ✓ Majeokgoro ✓ Dryharts / Lehatlheng ✓ Pudimo ✓ Mokgareng / Lokgabeng / Ditompong	✓ General government services ✓ Finance and business services ✓ Community, social and other personal services ✓ Electricity and water ✓ Trade
Kagisano / Molopo	✓ None Specified	✓ None Specified	✓ Ganyesa ✓ Bray	✓ No development corridors Other important routes: ✓ R378 ✓ R379	✓ Ganyesa and Morokweng ✓ Piet Plessis	✓ Trade ✓ Transport and communication ✓ Finance and business services ✓ Community, social and other personal services ✓ General government services ✓ Manufacturing
Mamusa	✓ None Specified	✓ Schweizer Reneke	✓ Amalia	✓ No development corridors Other important routes: ✓ R34 ✓ R506 ✓ R504	✓ Mamusa ✓ Molatswaeneng	✓ Finance and business services ✓ Community, social and other personal services ✓ Agriculture ✓ Trade ✓ General government services

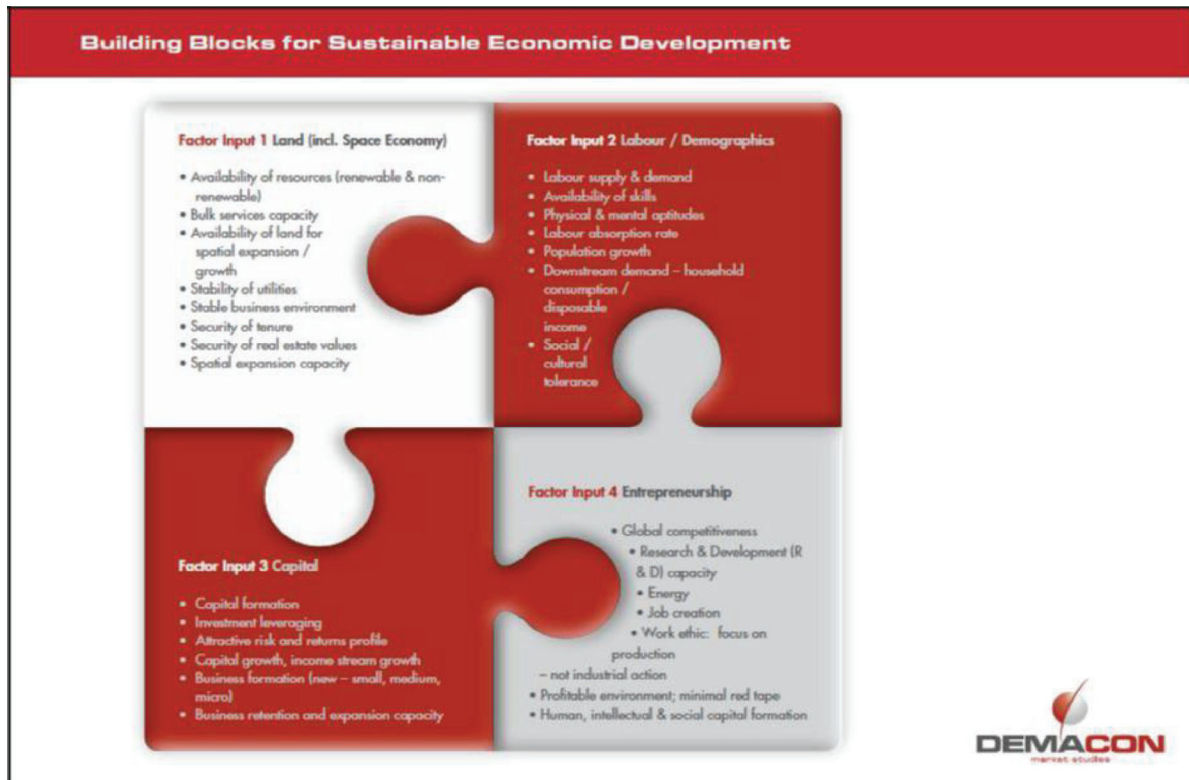
Municipality	First Order Nodes	Second Order Nodes	Other Nodes	Development Corridors	Potential Development Nodes	Sectoral Drivers
Naledi	✓ None Specified	✓ Vryburg	✓ Stella	✓ N14 ✓ N18 Other important routes: ✓ R34 ✓ R376	✓ Vryburg Regional Development Hub ✓ Vryburg CBD	✓ Community, social and other personal services ✓ General government services ✓ Transport and communication services ✓ Finance and business services ✓ Construction
Ngaka Modiri Molema						
Ditsobotla	✓ None Specified	✓ Lichtenburg	✓ Coligny	✓ N14 Other important routes: ✓ R505 ✓ R503 ✓ R52	✓ Itsoeng-Bodibe ✓ Bakerville ✓ Grootpan ✓ Bodenstein ✓ Gerdau	✓ Trade ✓ Finance and business services ✓ Agriculture ✓ Community, social and other personal services ✓ Manufacturing ✓ General government services
Mahikeng	✓ Mahikeng	✓ Mmabatho	✓ Setlopo ✓ Ottoshoop	✓ N18 Other important routes: ✓ R503 ✓ R49 ✓ R505	✓ Mahikeng CBD	✓ Trade ✓ Finance and business services ✓ Agriculture ✓ General government services ✓ Construction ✓ Manufacturing

Municipality	First Order Nodes	Second Order Nodes	Other Nodes	Development Corridors	Potential Development Nodes	Sectoral Drivers
Ratlou	✓ None specified	✓ None Specified	✓ Setlagole	✓ N18  Other important routes: ✓ R375 ✓ R376 ✓ R507	✓ Disaneng / Mokgobistad ✓ Setlagole / Madibogo ✓ Setlagole Commercial Hub ✓ Madibogo Gateway Node ✓ Kraaipan Cultural Node ✓ Mareetsane Gateway Node	✓ Trade ✓ Community, social and other personal services ✓ General government services ✓ Agriculture, forestry and fishing ✓ Construction
Ramotshere-Moiloa	✓ None Specified	✓ None Specified	✓ Zeerust ✓ Lehurutse ✓ Groot Marico	✓ N4 Platinum Corridor  Other important routes: ✓ R49	✓ Clusters in close proximity to the Platinum Highway and the Gaborone road such as: ✓ Zeerust-Kageleng ✓ Lekubu / Braklaagte ✓ Mokopa ✓ Nietverdiend ✓ Doornlaagte	✓ Trade ✓ Finance and business services ✓ Manufacturing ✓ Electricity and water ✓ Community, social and other personal services
Tswaing	✓ None Specified	✓ None Specified	✓ Delareyville ✓ Sannieshof	✓ N14  Other important routes: ✓ R505 ✓ R507 ✓ R506 ✓ R377 ✓ R375	✓ Khunwana ✓ Ottosdal ✓ Middelton	✓ Community, social and other personal services ✓ Transport and communication ✓ Trade ✓ Finance and business services ✓ General government services

### 3.4.6.1 District Related Competitive Edge

The following diagram indicates the factor inputs – levers that will be influenced through development.

**Diagram 3-1: Building Blocks for Sustainable Economic Development**



The main building blocks for sustainable economic development are:

- **Land**
  - Availability of resources
  - Bulk service capacity
  - Availability of land for spatial expansion
  - Stability of utilities
  - Stable business environment
  - Security of tenure
  - Security of real estate values
  - Spatial expansion capacity
- **Labour / demographics**
  - Labour supply & demand
  - Availability of skills
  - Physical mental aptitudes
  - Labour absorption rate
  - Population growth
  - Downstream demand
  - Social / cultural tolerance



- **Capital**
  - Capital formation
  - Investment leveraging
  - Attractive risk and return profile
  - Capital growth, income stream growth
  - Business formation
  - Expansion capacity
- **Entrepreneurship**
  - Global competitiveness
  - Research & Development capacity
  - Energy
  - Job creation
  - Work ethic: focus on production – not industrial action
  - Profitable environment, minimal red tape
  - Human, intellectual & social capital formation

In order to provide a sustainable economic long term plan the **competitive advantage** of the area has to be determined. This is done through analyses of the basic and non-basic sectors.

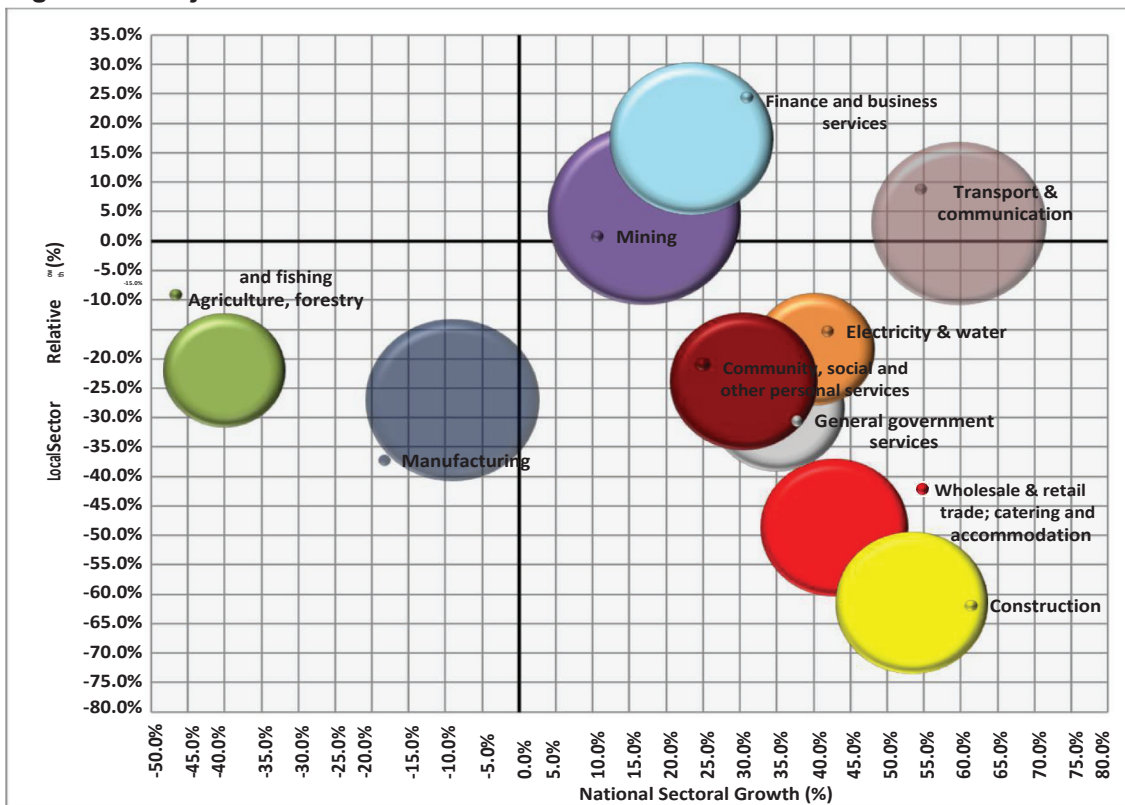
The following tables provide a summary of the nodes, corridors, focus areas and competitive edge of the district municipalities.

**Table 3-7: Bojanala District**

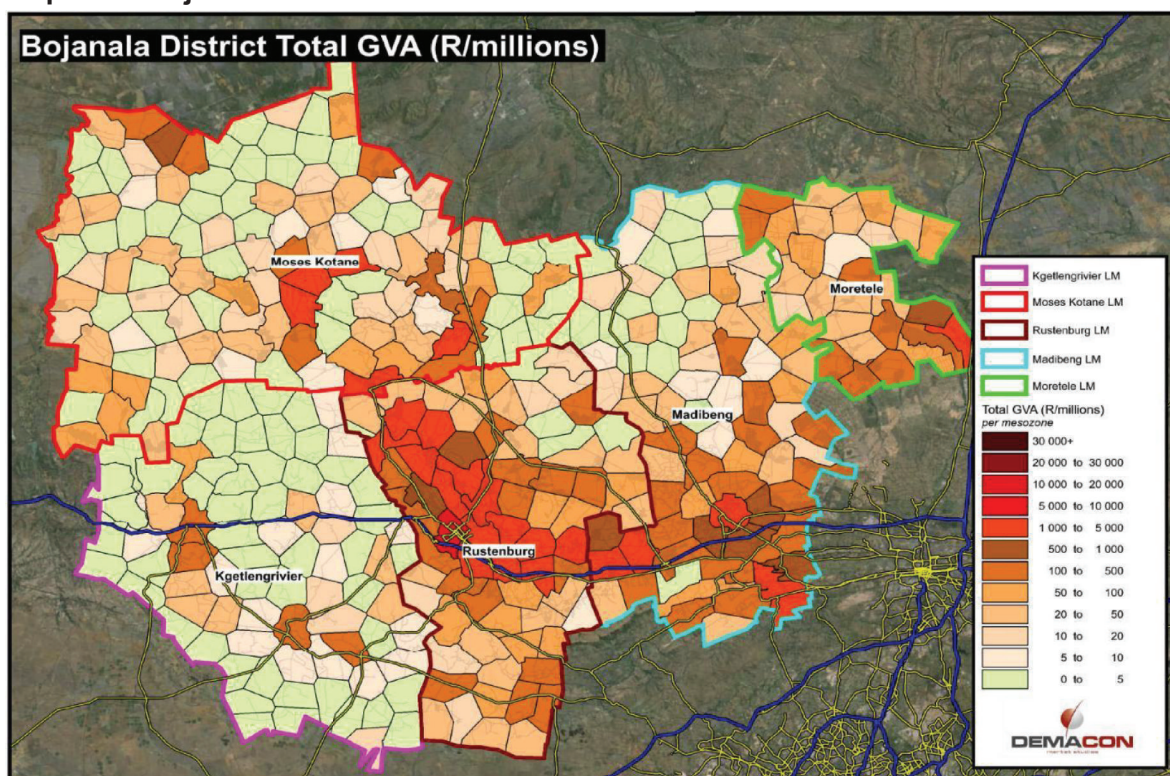
<b>Number of First Order Nodes</b>	✓ Two (Rustenburg, Brits)
<b>Number of Second Order Nodes</b>	✓ Two (Marikana, Hartbeespoort)
<b>Major Development Corridors</b>	✓ N4 Platinum Corridor
<b>Mining Focus Area</b>	<ul style="list-style-type: none"> <li>✓ Rustenburg</li> <li>✓ Marikana</li> <li>✓ Madibeng</li> </ul>
<b>Primary Industrial Cluster</b>	<ul style="list-style-type: none"> <li>✓ Rustenburg</li> <li>✓ Madibeng</li> </ul>
<b>Agricultural Cluster</b>	<ul style="list-style-type: none"> <li>✓ Koster</li> <li>✓ Swartruggens</li> <li>✓ Derby</li> </ul>
<b>Key Tourism Nodes / Clusters / Attractions</b>	<p>Bojanala-Rustenburg region is covered in natural bushveld vegetation. With the added attraction of the Magaliesberg, this region has much to offer to the eco-tourist. It is a natural game area with a number of fine game parks.</p> <p>There is a large variety of historical and cultural interests to be found in the area, such as the German community of Kroondal that dates back to 1857, the indigenous Bafokeng, Bakgatla and Botswana tribes with their totemic and other tribal traditions.</p> <p>Bojanala-Eastern Region is situated close to Gauteng, and is the most scenic region of the province. If you like adventure, this is your kind of region. Water activities, mountain sports, hang-gliding, parasailing, abseiling, hiking trails, angling, yachting, ballooning, cable way and leisure.</p> <p>This region is host to the internationally-renowned Lost City Sun City complex with two designer golf courses, 6000-seat Superbowl, the largest casino and gaming complex in the country and its situation in</p>

	<p>the extinct Pilanesberg volcano formed more than 1300 million years ago. It is adjacent to the Pilanesberg Game Reserve which is home to thousands of animals including the Big Five – lion, leopard, rhino, buffalo and elephant.</p> <p>Here rests the Cradle of Humankind, set around the Rustenburg, Magaliesberg and Hartbeespoort regions. The area abounds with relics from the Stone Age and early middle and late Iron Age. There are a large number of arts, crafts and curio outlets, especially in the Hartbeespoort Dam and Rustenburg areas. Many form part of the Crocodile, Rustenburg and Magliesburg Arts and Crafts Rambles – ever popular with visitors.</p> <p>The northwest of the region borders on the Madikwe Game Reserve, a haven to visitors who want to live the African experience:</p> <ul style="list-style-type: none"> <li>✓ Sun City</li> <li>✓ Hartbeespoort Dam</li> <li>✓ Hartbeespoort Aerial Cableway</li> <li>✓ De Wildt Cheetah and Wildlife Centre</li> <li>✓ Bush Babies Monkey Sanctuary</li> <li>✓ Kgaswane Game Reserve</li> <li>✓ Madikwe Game Reserve</li> <li>✓ Pilanesberg Game Reserve</li> </ul>
Competitive Edge	<ul style="list-style-type: none"> <li>✓ The Eastern Limb of the Bushveld Complex is situated within Bojanala District Municipality</li> <li>✓ Bojanala-Rustenburg region is covered in natural bushveld vegetation. With the added attraction of the Magaliesberg, this region has much to offer to the eco-tourist. It is a natural game area with a number of fine game parks.</li> <li>✓ As a result of the linkage with Gauteng the majority of the provincial manufacturing activity (51%) takes place in the eastern part of the province, in the Bojanala Platinum DM.</li> <li>✓ <b>Land</b> <ul style="list-style-type: none"> <li>○ Availability of resources</li> <li>○ Bulk service capacity</li> <li>○ Availability of land for spatial expansion</li> <li>○ Stability of utilities</li> <li>○ Spatial expansion capacity</li> </ul> </li> <li>✓ <b>Labour / demographics</b> <ul style="list-style-type: none"> <li>○ Labour supply &amp; demand</li> <li>○ Availability of skills</li> <li>○ Physical mental aptitudes</li> <li>○ Labour absorption rate</li> <li>○ Downstream demand</li> </ul> </li> <li>✓ <b>Capital</b> <ul style="list-style-type: none"> <li>○ Capital formation</li> <li>○ Investment leveraging</li> <li>○ Attractive risk and return profile</li> <li>○ Capital growth, income stream growth</li> <li>○ Business formation</li> <li>○ Expansion capacity</li> </ul> </li> </ul>

Source: Demacon, 2015

**Figure 3-1: Bojanala District**

Source: Demacon, 2015

**Map 3-25: Bojanala Platinum Total GVA**

Source: Demacon, 2015

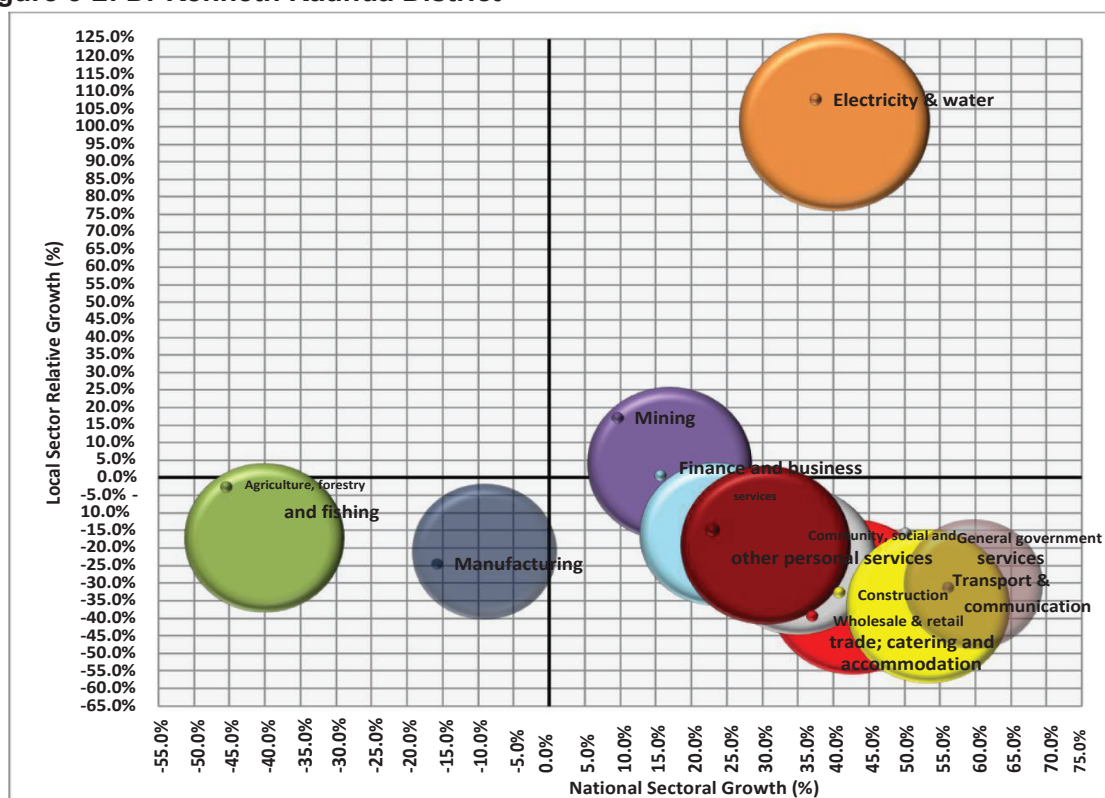
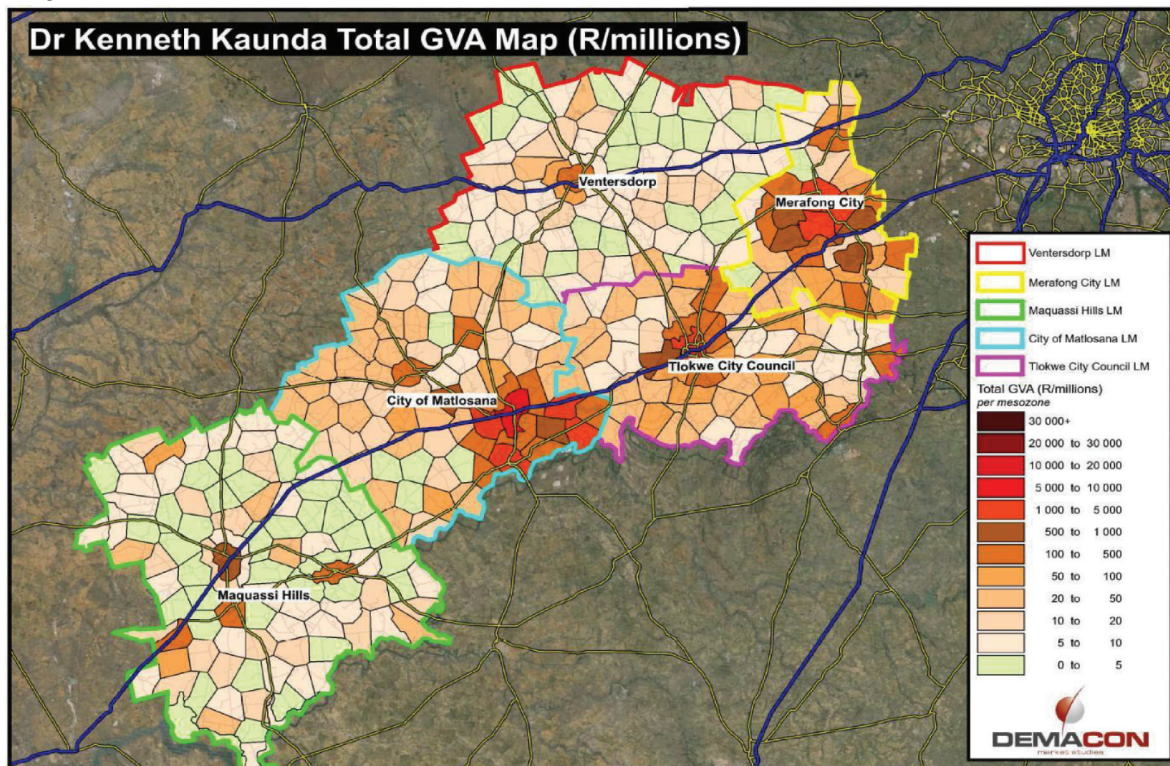
**Table 3-8: Dr Kenneth Kaunda District**

<b>Number of First Order Nodes</b>	✓ N12 Corridor
<b>Number of Second Order Nodes</b>	✓ Largest parts of: ✓ Tlokwe LM ✓ Matlosana LM ✓ Maquassi Hills LM ✓ Ventersdorp LM
<b>Major Development Corridors</b>	KOSH area – Klerksdorp, Orkney, Stilfontein, Hartbeesfontein
<b>Mining Focus Area</b>	✓ KOSH area
<b>Primary Industrial Cluster</b>	✓ N12 Corridor
<b>Agricultural Cluster</b>	✓ Largest parts of: ✓ Tlokwe LM ✓ Matlosana LM ✓ Maquassi Hills LM ✓ Ventersdorp LM
<b>Key Tourism Nodes / Clusters / Attractions</b>	An outdoor adventurer's paradise, offering hiking trails, mountain biking trails, canoeing, white water rafting, mountain climbing, abseiling.  Lodges along the Vaal River afford some of the best angling and flyfishing opportunities in South Africa.  ✓ Bloemhof Dam Reserve ✓ Boskop Dam Reserve ✓ Vredefort Dome ✓ Klerksdorp Mine Tours

	<ul style="list-style-type: none"> <li>✓ Sunwa Water Experiences</li> <li>✓ The Vaal River</li> <li>✓ Wolwespruit Nature Reserve</li> </ul>
Competitive Edge	<ul style="list-style-type: none"> <li>✓ The district municipality consists of prime agricultural land (defined as the best available land for agriculture)</li> <li>✓ The municipality is home to the NWU Potchefstroom Campus</li> <li>✓ The district municipality has two developed first order nodes – Potchefstroom and Klerksdorp, given it in competitive edge regarding finance and business services</li> <li>✓ <b>Land</b> <ul style="list-style-type: none"> <li>○ Availability of resources</li> <li>○ Bulk service capacity</li> <li>○ Availability of land for spatial expansion</li> <li>○ Stability of utilities</li> <li>○ Stable business environment</li> <li>○ Security of tenure</li> <li>○ Spatial expansion capacity</li> </ul> </li> <li>✓ <b>Labour / demographics</b> <ul style="list-style-type: none"> <li>○ Labour supply &amp; demand</li> <li>○ Availability of skills</li> <li>○ Physical mental aptitudes</li> <li>○ Labour absorption rate</li> </ul> </li> <li>✓ <b>Capital</b> <ul style="list-style-type: none"> <li>○ Capital formation</li> <li>○ Investment leveraging</li> <li>○ Attractive risk and return profile</li> <li>○ Capital growth, income stream growth</li> <li>○ Business formation</li> <li>○ Expansion capacity</li> </ul> </li> <li>✓ <b>Entrepreneurship</b> <ul style="list-style-type: none"> <li>○ Global competitiveness</li> <li>○ Research &amp; Development capacity</li> <li>○ Energy</li> <li>○ Job creation</li> <li>○ Work ethic: focus on production – not industrial action</li> <li>○ Profitable environment, minimal red tape</li> <li>○ Human, intellectual &amp; social capital formation</li> </ul> </li> </ul>

Source: Demacon, 2015



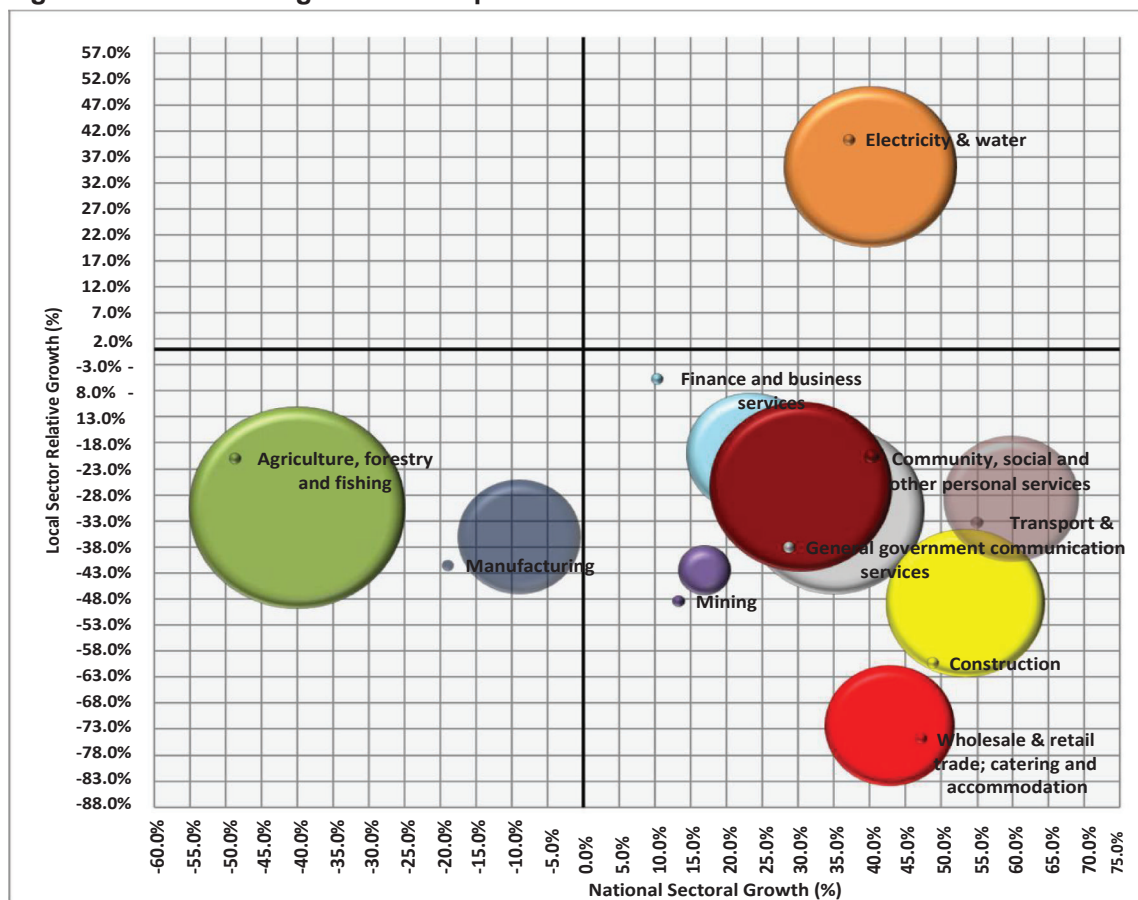
**Figure 3-2: Dr Kenneth Kaunda District****Map 3-26: Dr Kenneth Kaunda Total GVA**

Source: Demacon, 2015

**Table 3-9: Dr Ruth Segomotsi Mompati District**

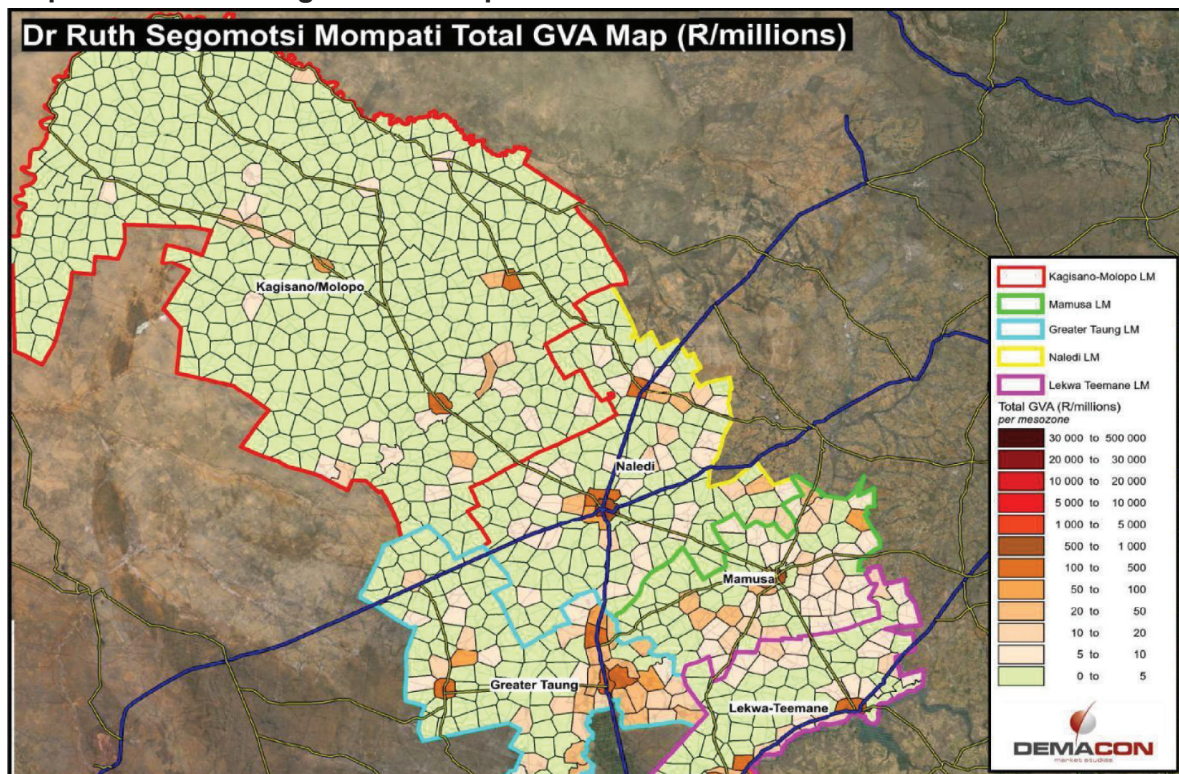
<b>Number of First Order Nodes</b>	✓ None
<b>Number of Second Order Nodes</b>	✓ Two (Schweizer-Reneke, Vryburg)
<b>Major Development Corridors</b>	✓ N18 ✓ N14
<b>Mining Focus Area</b>	✓ The district is mainly rural with agricultural activities throughout the municipality. ✓ Vryburg is known as the Texas of South Africa due to its cattle farming.
<b>Primary Industrial Cluster</b>	✓ Mining is limited
<b>Agricultural Cluster</b>	✓ Industrial activities are limited. ✓ A small amount of industries can be found in Vryburg.
<b>Key Tourism Nodes / Clusters / Attractions</b>	<p>The larger part of the region is still commonly known as Stellaland. Taung is the site of the discovery of the Taung skull, one of the world's most important archaeological discoveries. The region is also affectionately known as "The Texas of South Africa" given its strong mining and agricultural economy.</p> <p>The region is situated 1,200m above sea level and has an annual average rainfall of 430mm. The climate is dry and healthy, particularly in winter when days are sunny and bracing. Summers are hot with temperatures ranging from 16 – 38 degrees C.</p> <p>The vast expanses of this African savannah bushland is home to a great variety of game species, including lion, buffalos and rhino to be encountered at number of privately owned game reserves.</p> <ul style="list-style-type: none"> <li>✓ Taung Heritage Route</li> <li>✓ Molopo Game Reserve</li> <li>✓ Leon Taljaard</li> </ul>
<b>Competitive Edge</b>	<ul style="list-style-type: none"> <li>✓ <b>Land</b> <ul style="list-style-type: none"> <li>○ Availability of resources</li> <li>○ Availability of land for spatial expansion</li> <li>○ Security of tenure</li> <li>○ Spatial expansion capacity</li> </ul> </li> <li>✓ <b>Labour / demographics</b> <ul style="list-style-type: none"> <li>○ Labour supply &amp; demand</li> <li>○ Downstream demand</li> <li>○ Social / cultural tolerance</li> </ul> </li> </ul>

Source: Demacon, 2015

**Figure 3-3: Dr Ruth Segomotsi Mompoti District**

Source: Demacon, 2015



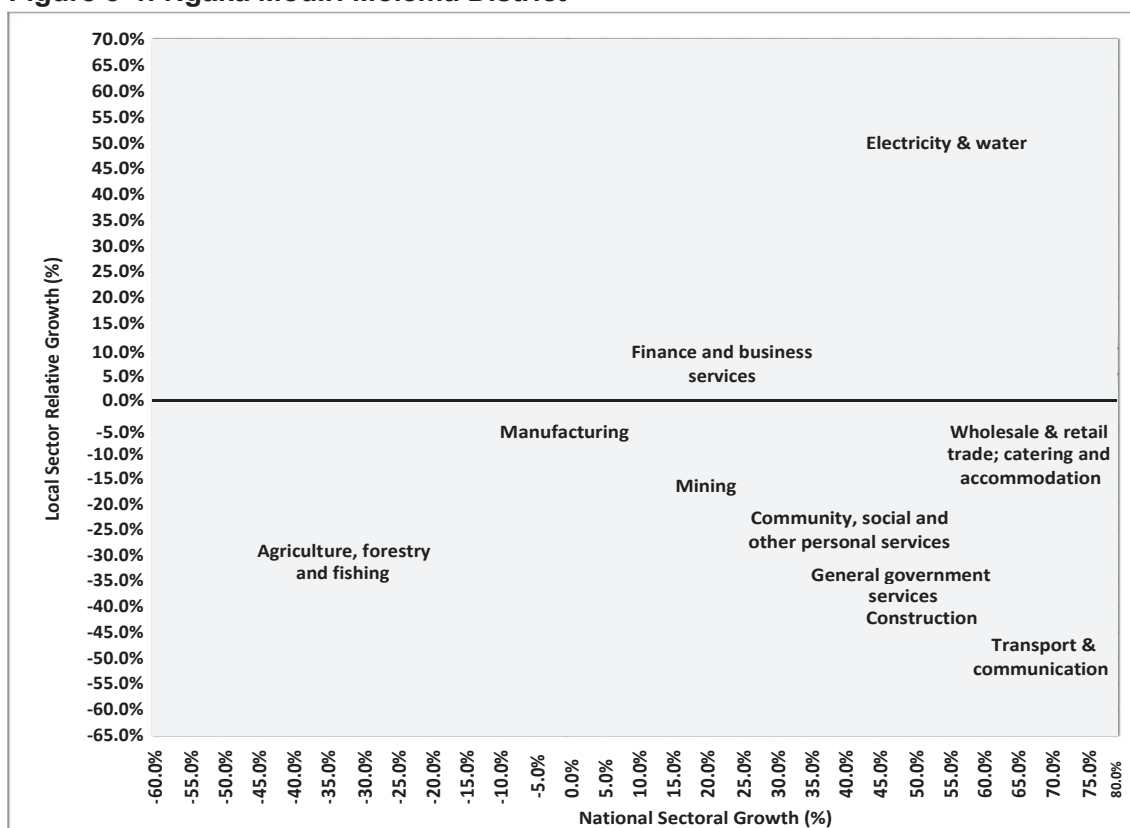
**Map 3-27: Dr Ruth Segomotsi Mompati Total GVA****Table 3-10: Ngaka Modiri Molema District**

<b>Number of First Order Nodes</b>	✓ One (Mahikeng)
<b>Number of Second Order Nodes</b>	✓ Two (Mmabatho, Lichtenburg)
<b>Major Development Corridors</b>	✓ N18
<b>Mining Focus Area</b>	✓ Largest part of Ditsobotla and Ramotshere Moiloa Local Municipalities
<b>Primary Industrial Cluster</b>	✓ Mining is limited
<b>Agricultural Cluster</b>	✓ Lichtenburg ✓ Mahikeng
<b>Key Tourism Nodes / Clusters / Attractions</b>	<p>The area is fairly flat and dry in the west, becoming bushveld towards the east. The Central Region offers game viewing – including the Big 5 – bird watching, hunting, fishing, sport, hospitality, conference facilities, shopping, gaming, Anglo-Boer War sites and a number of excellent guest houses and guest farms.</p> <ul style="list-style-type: none"> <li>✓ Madikwe Game Reserve</li> <li>✓ Anglo Boer War Sites</li> <li>✓ Molemane Eye</li> <li>✓ Barberspan Bird Sanctuary</li> <li>✓ Botsalano Game Reserve</li> <li>✓ Disaneng Dam</li> <li>✓ Henk Joubert Game Reserve</li> <li>✓ Kortkloof Cultural Village</li> <li>✓ Leopard Park Golf Course</li> <li>✓ Mahikeng Game Reserve</li> </ul>



Source: Demacon, 2015

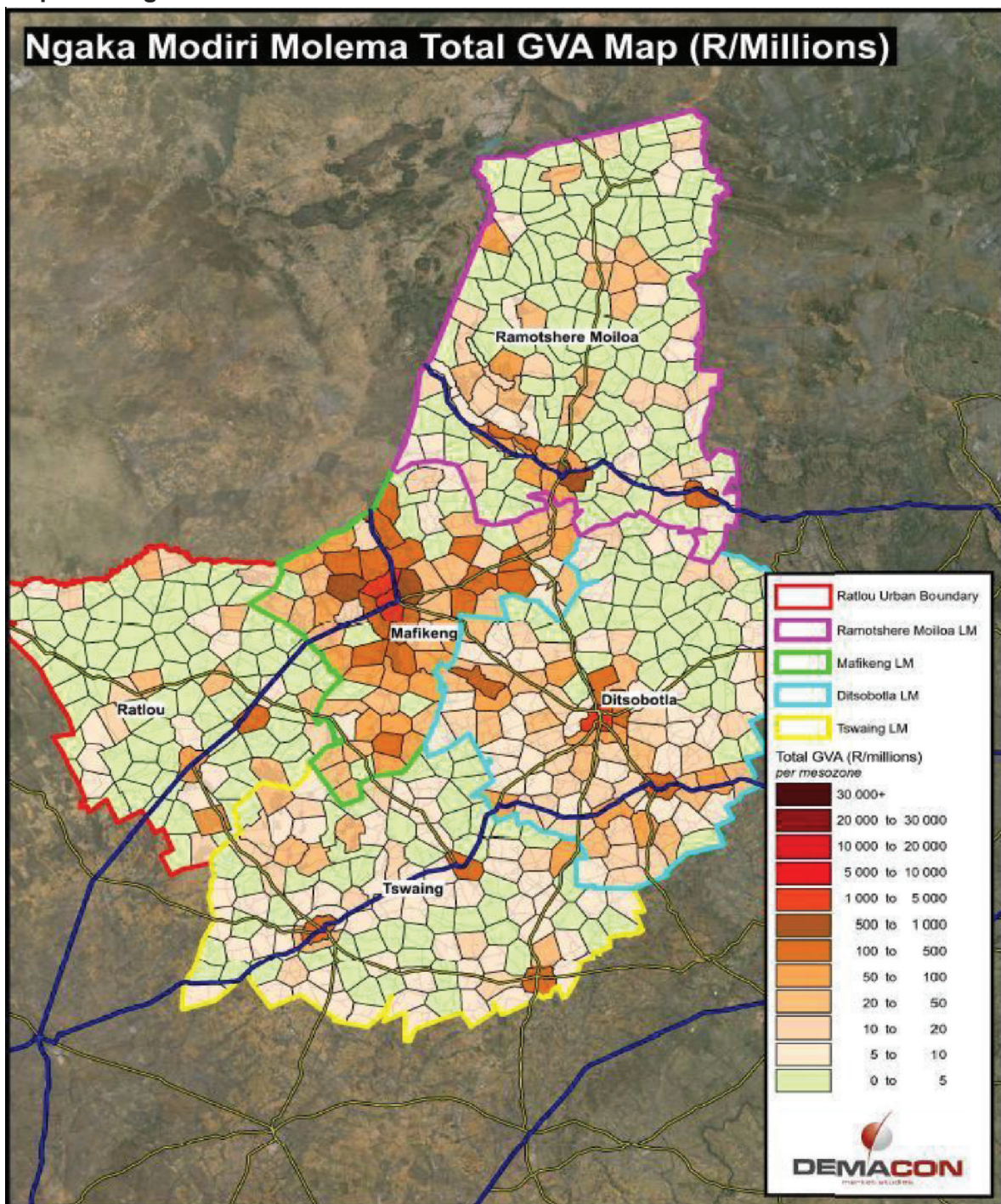
**Figure 3-4: Ngaka Modiri Molema District**



Source: Demacon, 2015



Map 3-28: Ngaka Modiri Molema Total Gva



Source: Demacon, 2015

### 3.4.7 Economic Infrastructure

The Infrastructure Plan prepared by the Presidential Infrastructure Co-ordinating Commission (PICC) is intended to transform the economic landscape of South Africa, create significant numbers of new jobs, strengthen the delivery of basic services to the people of South Africa and support the integration of African economies. It sets out the challenges and enablers South Africa needs to respond to in the building and developing of infrastructure.

#### 3.4.7.1 Strategic Integrated Projects (SIPs)

Seventeen Strategic Integrated Projects (SIPs) have been developed and approved to support economic development and address service delivery in the poorest provinces. Each SIP comprise of a large number of specific infrastructure components and programmes. The following SIP's will have a direct impact on economic development within North West:

- SIP 4: Unlocking Economic Opportunities in the North West
- SIP 6: Integrated Municipal Infrastructure Project
- SIP 7: Integrated Urban Space and Public Transport Programme
- SIP 8: Green Energy in support of the South African economy
- SIP 9: Electricity Generation to support socio-economic development
- SIP 10: Electricity Transmission and Distribution for all
- SIP 11: Agri-logistics and rural infrastructure
- SIP 12: Revitalisation of public hospitals and other health facilities
- SIP 13: National school build programme
- SIP 14: Higher Education Infrastructure
- SIP 15: Expanding access to communication technology
- SIP 17: Regional Integration for African cooperation and development
- SIP 18: Water and sanitation infrastructure

#### SIP 4: Unlocking Economic Opportunities in the North West

- Acceleration of investments in road, rail, bulk water, water treatment and transmission infrastructure
- Enabling reliable supply and basic service delivery.
- Facilitate development of mining, agricultural activities and tourism opportunities.
- Open up beneficiation opportunities in North West province.

#### SIP 6: Integrated municipal infrastructure project

- Develop national capacity to assist the 23 districts with the fewest resources (19 million people) to address all the maintenance backlogs and upgrades required in water, electricity and sanitation bulk infrastructure.
- The road maintenance programme will enhance service delivery capacity thereby impacting positively on the population.

#### SIP 7: Integrated urban space and public transport programme

- Coordinate planning and implementation of public transport, human settlement, economic and social infrastructure and location decisions into sustainable urban settlements connected by densified transport corridors. This will focus on the 12 largest urban centres of the country, including all the metros in South Africa. Significant work is underway on urban transport integration.

SIP 8: Green Energy in support of the South African economy

- Support sustainable green energy initiatives on a national scale through a diverse range of clean energy options as envisaged in the Integrated Resource Plan (IRP2010).
- Support bio-fuel production facilities

SIP 9: Electricity generation to support socio-economic development

- Accelerate the construction of new electricity generation capacity in accordance with the IRP2010 to meet the needs of the economy and address historical imbalances.
- Monitor implementation of major projects such as new power stations: Medupi, Kusile and Ingula.

SIP 10: Electricity transmission and distribution for all

- Expand the transmission and distribution network to address historical imbalances, provide access to electricity for all and support economic development.
- Align the 10-year transmission plan, the services backlog, the national broadband roll-out and the freight rail line development to leverage off regulatory approvals, supply chain and project development capacity.

SIP 11: Agri-logistics and rural infrastructure

Improve investment in agricultural and rural infrastructure that supports expansion of production and employment, small-scale farming and rural development, including:

- facilities for storage (silos, fresh-produce facilities, packing houses)
- transport links to main networks (rural roads, branch train-line, ports)
- fencing of farms
- irrigation schemes to poor areas
- improved R&D on rural issues (including expansion of agricultural colleges)
- processing facilities (abattoirs, dairy infrastructure)
- aquaculture incubation schemes
- rural tourism infrastructure.

SIP 12: Revitalisation of public hospitals and other health facilities

- Build and refurbish hospitals, other public health facilities and revamp 122 nursing colleges. The SIP contains major builds for six hospitals.
- Extensive capital expenditure to prepare the public healthcare system to meet the requirements of the National Health Insurance (NHI) system.

SIP 13: National school build programme

- A national school build programme driven by uniformity in planning, procurement, contract management and provision of basic services.
- Replace inappropriate school structures and address basic service backlog and provision of basic services under the Accelerated School Infrastructure Delivery Initiative (ASIDI).
- Address national backlogs in classrooms, libraries, computer labs and admin buildings.

The Accelerated Schools Infrastructure Delivery Initiative (ASIDI) is funded from the Schools Infrastructure Backlog Grant (SIBG). Updates on the programme are available as:

- school by school updates



- the ASIDI Brief Newsletter SIP

#### 14: Higher education infrastructure

- Infrastructure development for higher education, focusing on lecture rooms, student accommodation, libraries and laboratories, as well as ICT connectivity.
- Development of university towns with a combination of facilities from residence, retail to recreation and transport.
- Potential to ensure shared infrastructure such as libraries by universities, FETs and other educational institutions.
- Two new universities will be built - in Northern Cape and Mpumalanga.

#### SIP 15: Expanding access to communication technology

- Provide for broadband coverage to all households by 2020 by:•establishing core Points of Presence (POPs) in district municipalities
- extend new Infraco fibre networks across provinces linking districts
- establish POPs and fibre connectivity at local level
- further penetrate the network into deep rural areas.
- While the private sector will invest in ICT infrastructure for urban and corporate networks, government will co-invest for township and rural access, as well as for e-government, school and health connectivity.
- The school roll-out focus is initially on the 125 Dinaledi (science and maths-focussed) schools and 1 525 district schools.
- Part of digital access to all South Africans includes TV migration nationally from analogue to digital broadcasting.

#### SIP 17: Regional integration for African cooperation and development

- Participate in mutually beneficial infrastructure projects to unlock long-term socio-economic benefits by partnering with fast-growing African economies with projected growth ranging between 3% and 10%.
- The projects involving transport, water and energy also provide competitively-priced, diversified, short and medium to long-term options for the South African economy. For example, electricity transmission in Mozambique (Cesul) could assist in providing cheap, clean power in the short-term whilst Grand Inga in the Democratic Republic of Congo (DRC) is long-term.
- All these projects complement the Free Trade Area (FTA) discussions to create a market of 600 million people in South, Central and East Africa.

#### SIP 18: Water and sanitation infrastructure

- A 10-year plan to address the estimated backlog of adequate water to supply 1.4 million households and 2.1 million households to basic sanitation. The project will involve provision of sustainable supply of water to meet social needs and support economic growth.
- Projects will provide for new infrastructure, rehabilitation and upgrading of existing infrastructure, as well as improve management of water infrastructure.

#### **3.4.7.2 Economic Infrastructure Projects**

The main infrastructure projects envisaged for **North West** include **Mahikeng Airport and Logistics Hub**, and the **Cradle of Humankind World Heritage Site Buffer Zone** (although the Cradle of Humankind is not situated in North West, it can have a profound impact on the development of the North West).

As part of the provincial Growth and Development Strategy, the North West has identified for itself a development (including industrial development) and economic growth niche in the transport and trade facilitation sectors. This is occasioned by the strategic and central location of North West Province in the Republic of South Africa (in the middle of the Coast-to-Coast Spatial Development Initiative between Maputo (in the East) and Walvis Bay (in the West)) and in the Southern African Development Community ("SADC") region. However, such development and economic growth initiatives can only be satisfactorily manifested where activities of an international nature are possible. One such example is the proposed **Industrial Development Zone**, for which access to an international port of entry for import and export activities is an absolute requirement. Mahikeng airport as an international port of entry is an anchor for the success of the Industrial Development Zone. We intend to unveil the strategy that will make this noble intention as success.

The **Cradle of Humankind World Heritage Site Buffer Zone** is a new initiative from the Gauteng Department of Agriculture, Conservation and Environment (GDACE) "intended to create a layer of additional environmental and land use protection to cushion the WHS against developments and activities".<sup>4</sup> The proposed new buffer zone around the Cradle covers almost the entire Mogale City save for the existing built-up areas, the area to the east of the R28 and some outlying areas in the western part of Mogale City. Currently, GDACE is still in the process of finalising the Environmental Management Framework for the Cradle of Humankind World Heritage Site and the buffer zone, with the result that there is currently no clarity on the type and intensity of land uses proposed for the buffer zone.

Other projects are envisaged for North West is listed in the following table.

**Table 3-11: Infrastructure Projects**

Economic Sector	Project	Location	Related SIP
Agriculture /Forestry	Horticulture cluster	Bojanala	SIP 11
	Horticulture production (Ikageng CPA, bareng Batho Agric Projects, Dirang Mmogo)	Dr Kenneth Kaunda	SIP 11
	Beef beneficiation program	Dr Ruth Segomotsi Mompoti	
	Agro-processing & manufacturing project	Dr Ruth Segomotsi Mompoti	SIP 11
	Support to Aquaculture and Sweet Potato projects in Lekwa-Teemane	Dr Ruth Segomotsi Mompoti	
	Groundnut Processing	Ngaka Modiri Molema	
	Oil Processing Plant	Ngaka Modiri Molema	SIP 11
Mining	Mineral beneficiation cluster	Bojanala	
	Platinum Visitor Mining equipment manufacturing hub and mining supply park	Bojanala	
	Leeukop project	Bojanala	
	Sedibelo Platinum Project	Bojanala	
Manufacturing	Construction materials suppliers park	Bojanala	SIP 4
	Vehicle component manufacturing park and distribution dry-port	Bojanala	SIP 4
	Tlokwe Light Industrial Park	Dr Kenneth Kaunda	SIP 4
Tourism and Cultural Industries	Implementation of Heritage Park	Bojanala	



Economic Sector	Project	Location	Related SIP
	Development of tourism facilities at Borakolalo Reserve	Bojanala	SIP 4
	Bospoortdan Tourism / Waterfron development	Bojanala	
ICT	Distribution and logistics hub	Bojanala	SIP 4
	Development of N4 integrated mixed land use precincts	Bojanala	SIP 6
	Bulk infrastructure development program to unlock and support rapid development at key development nodes	Bojanala	SIP 6
Transport	Road D1303 between Wolmaransstad and Maquassi Hills	Dr Kenneth Kaunda	
	Road P13/4 from Wolmaransstad to Wesselsbron	Dr Kenneth Kaunda	
	Road D509 Leeuwdoringstad	Dr Ruth Segomotsi Mompoti	
Water Infrastructure Projects	Construction of New Taung Water Treatment Plant	Dr Ruth Segomotsi Mompoti	SIP 18
	Construction of Bulk Water Supply Pipeline from New Taung Water Treatment Plant to various villages	Dr Ruth Segomotsi Mompoti	SIP 18
	Construction of the Bulk Water Supply Line from Bloemhof to Schweizer-Reneke	Dr Ruth Segomotsi Mompoti	SIP 18

Source: Demacon ex Various SDF's and IDP's

### 3.4.7.3 Information, Communication and Technology (ICT)

Government's adoption of the National Development Plan (NDP) as a roadmap continues to be the point of departure for all state departments, to deliver the key national strategic priorities of poverty eradication, improved economic growth and social development. ICT is central to making these endeavours a reality for citizens, through enabling service delivery and contributing to modernising the state

The development of the Information and Communications Technologies (ICTs) facilitates and promotes growth in the economy and the country. Expansion of ICT networks not only plays a role in the development of industries but can also directly contribute to the development of SMME's which has the potential to directly contribute to poverty reduction. ICT development has the following advantages in that they:

- Provide reliable access to markets (local, regional and international) through increased use of affordable communications (phone, fax, email).
- Improve contact with suppliers, and transport links to and from markets through databases of enterprises, products, and suppliers.
- Inform choices, particularly regarding prices of raw materials and finished goods, enabling better prices for enterprises when dealing with traders.
- Provide information about locally and internationally available non-financial business development services (bds) (e.g., training schemes, business skills, and marketing).
- Provide direct or intermediated access to bds (e.g., training packages, advice on better practice).
- Provide access to legal information, including information on contract law, tax, law, registration and regulation.
- Provide improved access to information about financial services, and access to financial services (e.g., via micro-finance institutions – mfis).

In the 2015 State of the Nation address, President Jacob Zuma announced that eight municipalities were set to have full broadband capability within five years. **These are Dr Kenneth Kaunda in North West**, Gert Sibande in Mpumalanga, O.R. Tambo in the Eastern Cape, Pixley ka Seme in the Northern Cape, Thabo Mofutsanyane in the Free State, Umgungundlovu and Umzinyathi in KwaZulu-Natal, and Vhembe in Limpopo. In addition to these eight, the cities of Cape Town, Johannesburg, Tshwane and Ethekwini have programmes and plans in place.

#### 3.4.7.4 Tourism Development

Tourism is a priority economic sector in the government's Medium-Term Strategic Framework (MTSF), which identifies the following overall priorities:

- Creating decent work and sustainable livelihoods
- Education
- Health
- Rural development, food security and land reform
- The fight against crime and corruption, and building cohesive and sustainable communities

Tourism is one of the six core pillars of growth as identified in the New Growth Plan. Tourism is one of the areas expected to contribute to the development of, among others, rural areas and culture (craft) by growing the economy and creating jobs.

There is an inverse or negative correlation (hence inherent incompatibility) between leisure tourism establishments and mining activity. Whilst a mine has a LOM (Life of Mine), the contribution by the tourism activities potentially continues in infinity. In view of the superior sustainability profile of tourism, compared with that of a mine, it is evident that the accrued long term benefits of tourism, by far exceeds and outweighs the benefits of a mine which will span only 20 to 50 years – a mine that will also irreversibly scar a most iconic feature of the natural landscape, thereby permanently diminishing the regional tourism potential and eroding future growth potential in this 'sector' (based on its natural, historic growth trajectory). Tourism offers appreciable long term net gains over mining. Similarly, the sustained employment potential of tourism is superior (in numbers and sustainability) compared to those potentially created by mining.

The Pilansberg is the setting for what was at the time arguably one of the most iconic, man-made tourist attractions globally – the Sun City complex. The Pilanesberg National Park measures 57 200 hectare and gained national park status in 1979. The total annual number of visitors numbers 926 046.

The Pilansberg is situated on western limb of the Bushveld Igneous Complex, which has seen increasing friction between mining and leisure tourism as a consequence of encroaching mining activity on Pilansberg.

Allegations have been made that mining in the area has intensified water shortages as the Pilanesberg Platinum mine is alleged to divert the flow of rivers and disposing of waste water in a manner that may be detrimental to regional water resources. The mines are, however, not only accused of exploiting water resources and threatening future conservation efforts to secure and extend natural heritage sites – leisure tourist numbers have been reported to dwindle in recent years.

Regardless of accusations and allegations which are inevitably emotionally charged, tourist patronage numbers indicate that the Pilansberg natural wonder has been systematically compromised by increasing mining activity in the surrounding region. Tourism numbers at the park have decreased over the past 10 years due to the encroachment of mines on the National Park. According to the Pilanesberg Statistics department, visitor numbers have decreased by approximately 4.7% over the past 10 years.

Save for proportionally larger visitor numbers from China over the years, Sun City – which is more directly exposed to the encroaching mining activity from the south – appears to be suffering the same fate. Informal observations indicate that the Palace at Sun City (opened in December 1992), appears long overdue for a

major refurbishment - a delayed refurbishment that is informed by inter alia financial considerations, of which the risks associated with encroaching mining activity would be a consideration.

Albeit that mining activity potentially stimulates the demand for business tourism establishments in the immediate vicinity (typically in nearby towns, close to social amenities, retail facilities, etc), such demand appears to be marginal, compared with the sustained demand from leisure tourism, provided an area holds such potential. Dwindling leisure tourist numbers at the Pilansberg National Park over the past decade, in the face of encroaching platinum mining activity, affirm this natural averseness between leisure tourism and mining.

#### 3.4.7.4.1 ***Bojanala Platinum District Municipality***

The main tourism attractions the region has to offer, are closely linked to the comparative advantages the area has to offer with regard to its natural assets, the occurrence of many heritage sites relating to iron / stone age, Anlgo-Boer history and indigenous tribes such as the Tswana and Ndebele, and the variety of minerals and mining activities found in the area. Tourism attractions include:

- Implementation of Heritage Park (including development at Molatedi Dam)
- Further development of tourism facilities around Sun City node
- Development of tourism facilities at Borakalalo Reserve (Klipvoordam)
- Upgrading of Papatso cultural village and establishment of incubator for arts, crafts and cultural industries.
- Heritage Park Tourism company
- Improved road access to Hartebeespoortdam tourism node
- Soccer World Cup precinct development
- Traditional Art Gallery and cultural information centre (Rustenburg)
- Bospoortdam Tourism/Waterfront development (Rustenburg)

In response to the importance of the Bojanala Platinum District as far as biodiversity is concerned, the North West Parks and Tourism board is also considering the extension of a number of existing nature reserves and conservation areas. The most notable of these include the existing Heritage Park development which is envisaged to link the Madikwe Game Reserve in the west with the Pilanesberg National Park in the east.

Other proposed initiatives include the possible expansion of the Vaalkopdam nature reserve to link up with the Pilanesberg National Park as well as the expansion of the Borakalalo nature reserve to link up with Vaalkop. This will create a conservation corridor stretching from the Borakalalo nature reserve in the east through Vaalkopdam, Pilanesberg up to the Madikwe Game Reserve in the west. Other potential areas of conservation include the Magaliesberg area as well as some the Norite hills not damaged by mining and quarrying activities.

#### 3.4.7.4.2 ***Dr Kenneth Kaunda***

The district has launched a project called "Shot 'Left to the Dr Kenneth Kaunda District". The Project will primarily focus on launching the Dr. Kenneth Kaunda District Municipality's dedicated generic as well as artillery routes (Township routes) i.e. the N12 (Treasure Route / artillery routes) & N14 / artillery tourism routes and heritage sites while highlighting / amplifying the economic opportunities / spin-offs along those routes.

The focus will be on the 'low-hanging fruit' i.e. Visiting Friends & Relatives market (VFR), Meetings, Incentives, Conferences & Exhibitions markets (MICE) and Events markets. We will 'sell' tourism as a 'fashionable' commodity and create legacy projects whereby all participating municipalities would maintain throughout the year and moving forward.

#### 3.4.7.4.3 **Ngaka Modiri Molema**

Another development on the cards for the North West Province is the development of the 'Heritage Park' conservation corridor that will join Madikwe and Pilanesberg.

The 60 000-hectare Madikwe Game Reserve, established in 1991, has been developed as a premier game reserve with very high tourism potential. A successful conservation plan has created this exceptional wildlife reservation for the preservation of a unique wilderness area of Kalahari thornveld. The reserve has a wide diversity of habitats, ranging from the perennial Marico River to large open plains with steep cliffs on the Rant van Tweedepoort, boulder-strewn koppies and the Dwarsberg mountain range. The varied vegetation reflects the interplay of the low rainfall (~540mm per annum), complex geology (such as dolomites, Bushveld Igneous Complex, etc), broken topography (inselbergs, Dwarsberg Mountains, plains, and the perennial Marico River) and diverse soil formations. Madikwe, which is a transition zone between the Kalahari thornveld and bushveld ecological regions of Southern Africa, is host to many game and bird species. An extensive restocking programme of game species has been implemented.

The North West Parks Board, following a people-based wildlife conservation approach aimed at benefiting local communities, manages it. The primary objective of the Madikwe Game Reserve is to stimulate ecologically sustainable economic activity based on wildlife through joint venture operations involving the Parks Board, private sector and local people for the benefit of the people of the region. Madikwe is run as a three-way partnership between the State, local communities and the private sector. It is not solely a protected area or tourism destination, but also a social and economic core around which the development of the region can be based. An exciting development is the creation of the 'Heritage Park' conservation corridor that will join Madikwe and Pilanesberg, creating a prime eco-tourism destination.

The proposed corridor follows a new Open Africa tourist route, the Segarona Heritage Experience, which was launched in 2012. This new route runs between Pilanesberg and Madikwe, and includes the Bakgatla tribal lands, and the towns of Derdepoort, Zeerust and Groot Marico (and many others). The rural villages connected by this route offer insight into the struggle history of South Africa and the cultural heritage of the many African clans who still live in the area.

The aim is to introduce the traveller to the cultural attractions through interaction with people and local guides.

#### 3.4.7.4.4 **Dr Ruth Segomotsi Mompati**

Highest conservation importance is allocated to individual wetlands or clusters of wetlands. Ecological buffers (500m) are included as an ecological support area. Possible threats have been identified for the following protected areas:

- **Bloemhof Nature Reserve**
  - Pressure on the endemic yellowish due to extensive tourism and fishing activities.
- **S.A. Lombard Nature Reserve**
  - Pressures from agricultural activities on surrounding farms.

The local municipalities are strongly supportive of the growth of game farming, game trading and responsible hunting. It also realises the immense potential for the expansion of eco-tourism opportunities.

Future strategies should take note of the rapid growth in hunting, game farming and game trading among the African population. Opportunities must be explored to direct a significant portion of this aspirational market towards Naledi.

### 3.4.8 Existing Development Pattern

The existing development pattern of North West indicated on **Map 3-29** is characterised by:

- A settlement pattern of urban and rural settlements consisting of:
  - Urban Areas
  - Rural Dense Settlements
  - Rural Scattered Settlements
  - Villages
- Agriculture
  - Cultivated areas
  - Natural Areas
- Mining Areas
- Industrial Areas
- Nature Reserves
- Dams
- Airports
- A system of roads
- A system of railway lines

The existing development patterns for the respective districts are indicated as;

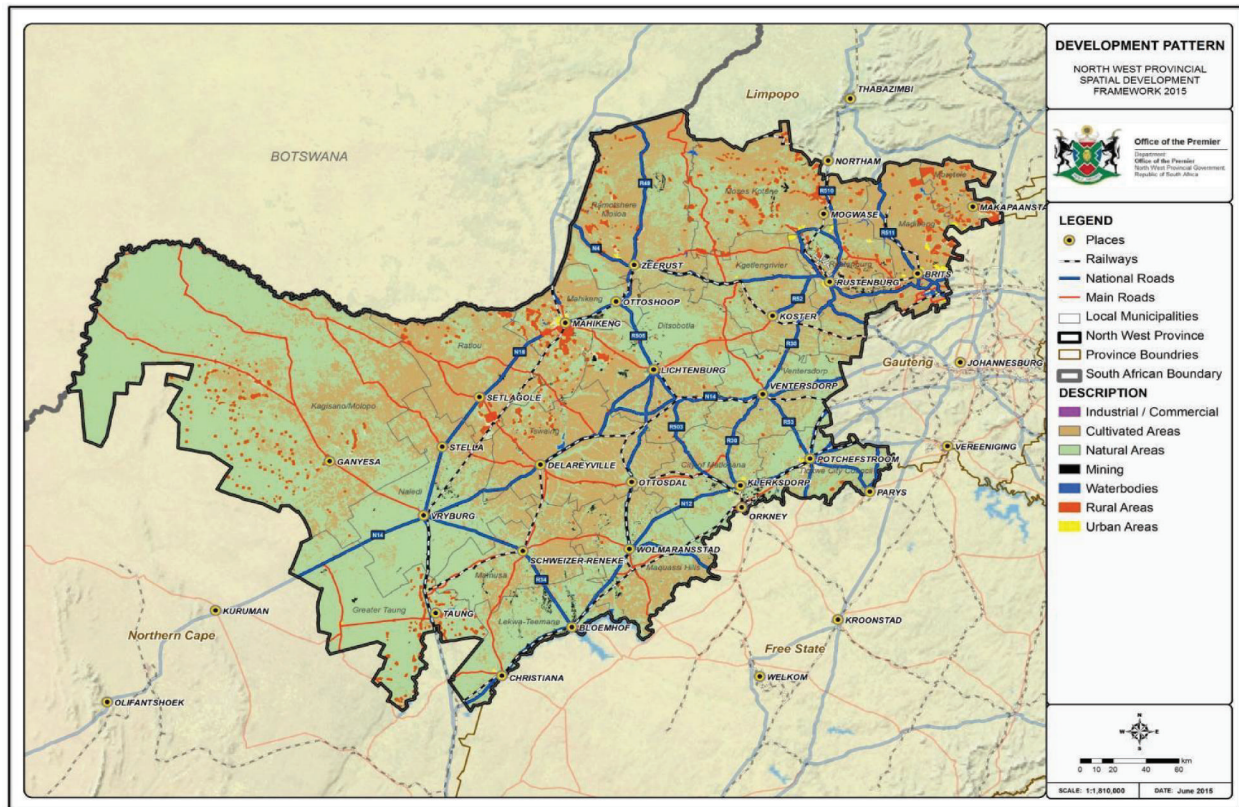
- ☐ **Map 3-30 Bojanala DM Existing Development Pattern**
- ☐ **Map 3-31 Dr Kenneth Kaunda DM Existing Development Pattern**
- ☐ **Map 3-32 Dr Ruth Segomotsi Mompati DM Existing Development Pattern**
- ☐ **Map 3-33 Ngaka Modiri Molema DM Existing Development Pattern**

The existing settlement pattern and structure within North West is mainly the result of:

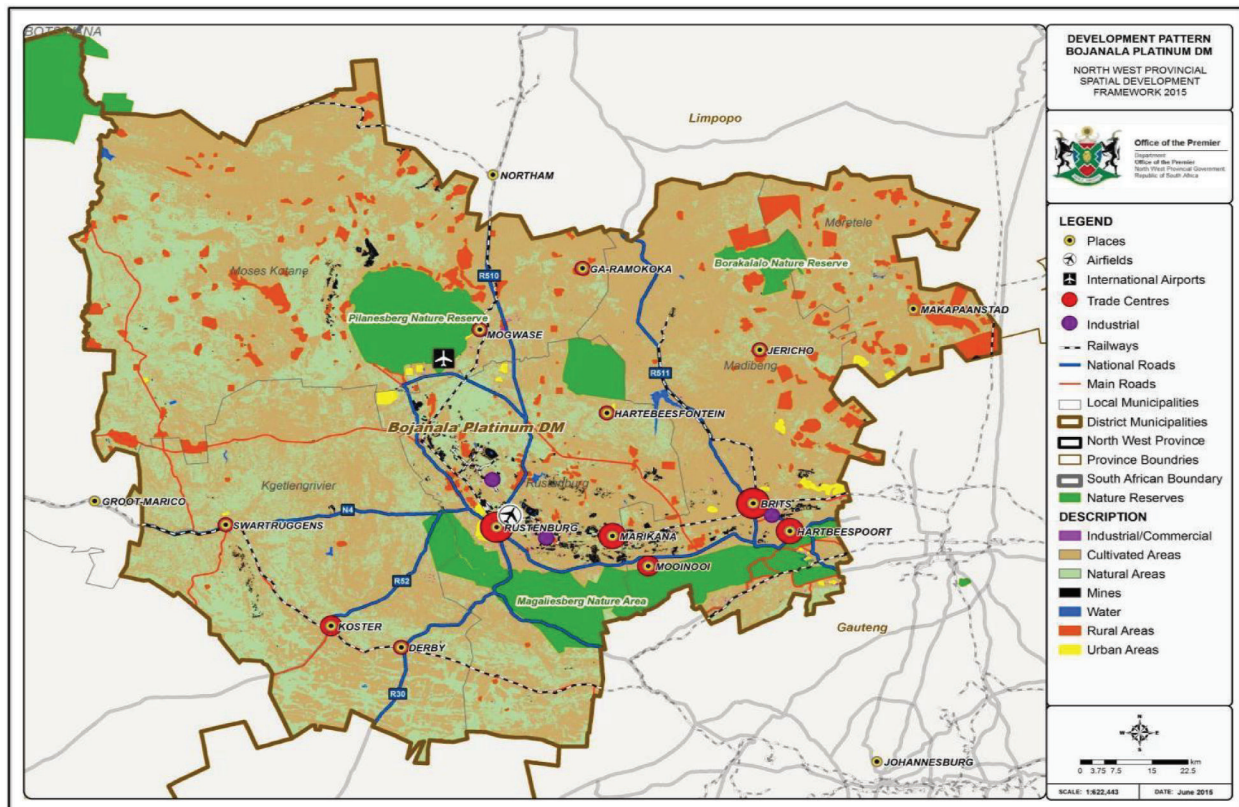
- The distribution of natural resources in the province.
- The legacy of Apartheid
- Regional accessibility provided by a system of roads and railway lines
- A strong urbanisation trend
- Other urban and rural structuring elements



Map 3-29: North West Existing Development Pattern

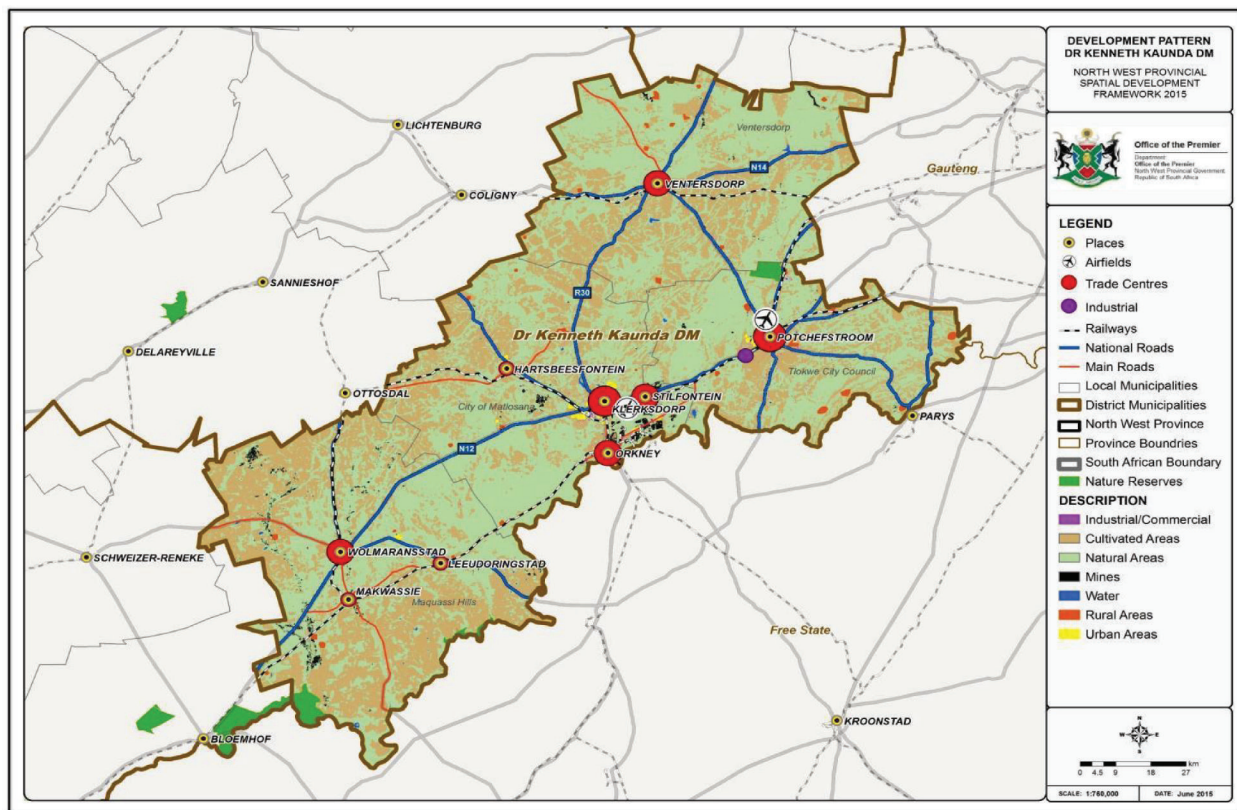


Map 3-30 Bojanala DM Existing Development Pattern

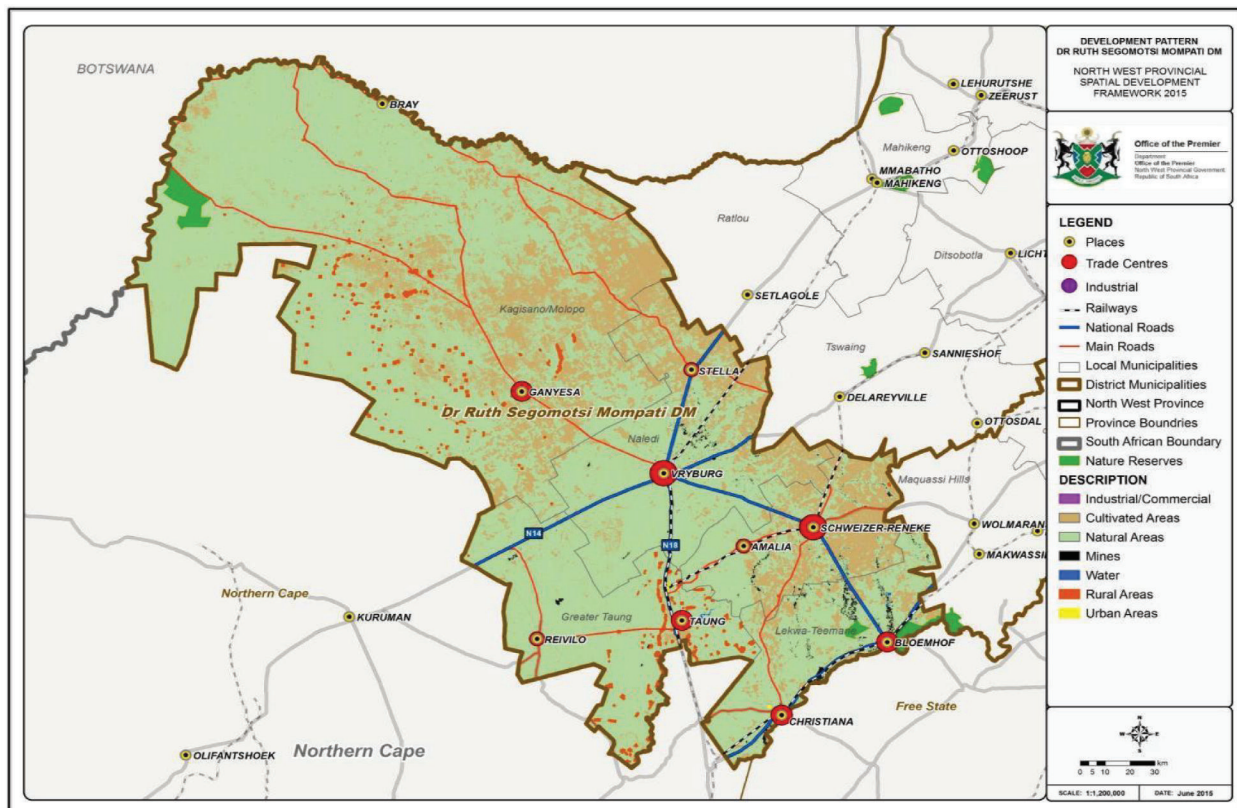




Map 3-31 Dr Kenneth Kaunda DM Existing Development Pattern

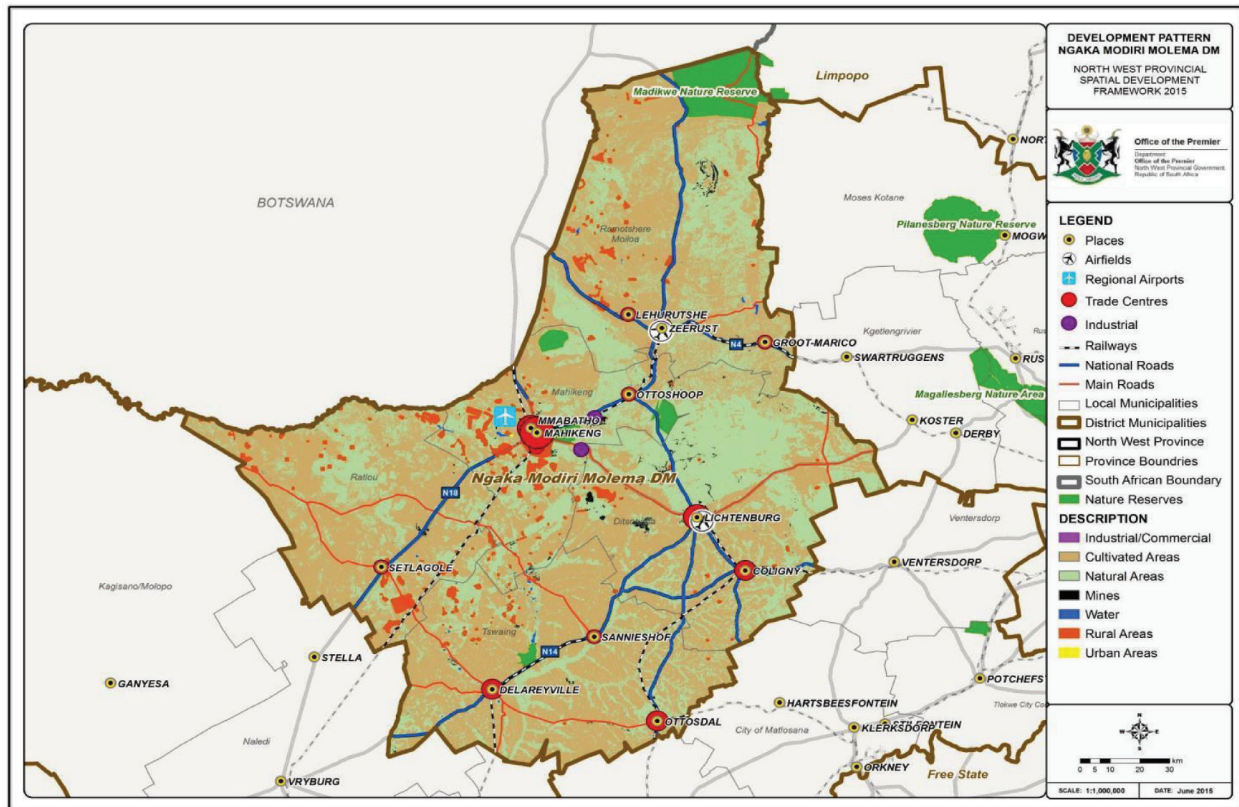


Map 3-32 Dr Ruth Segomotsi Mompati DM Existing Development Pattern

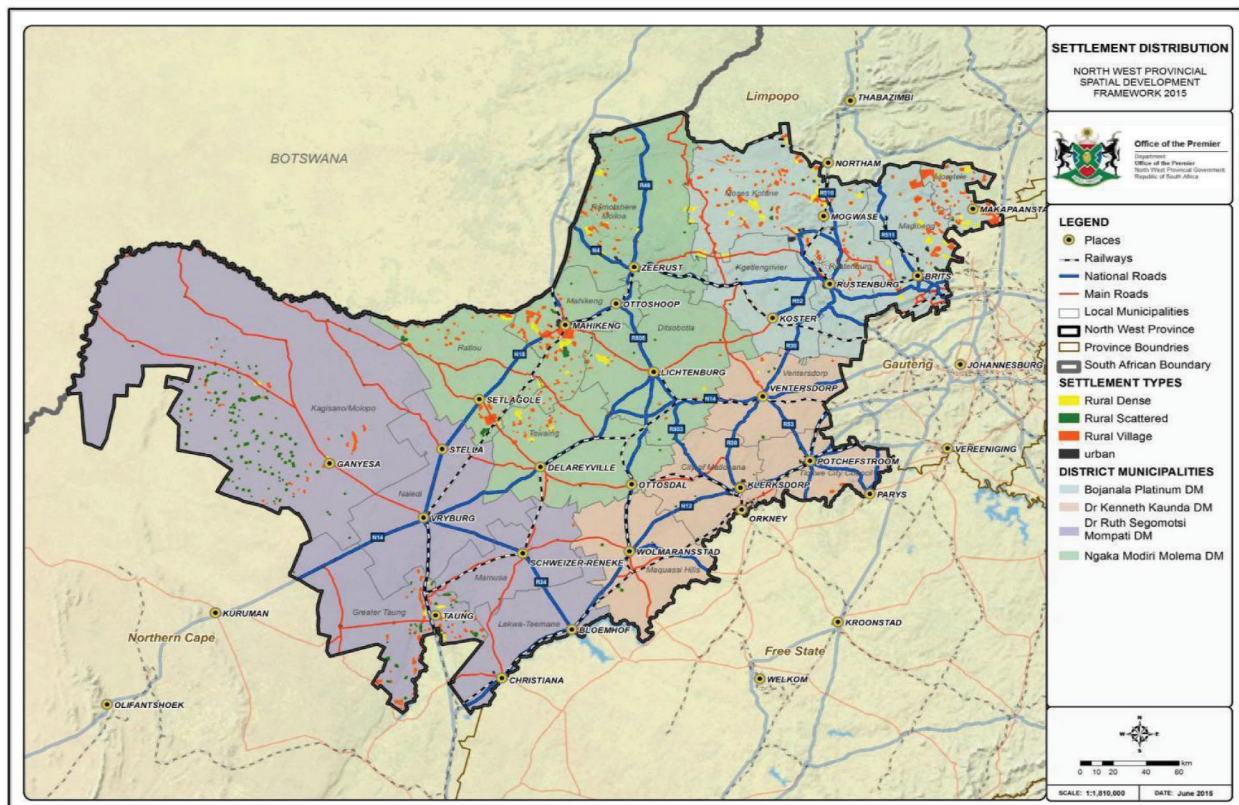




Map 3-33 Ngaka Modiri Molema DM Existing Development Pattern

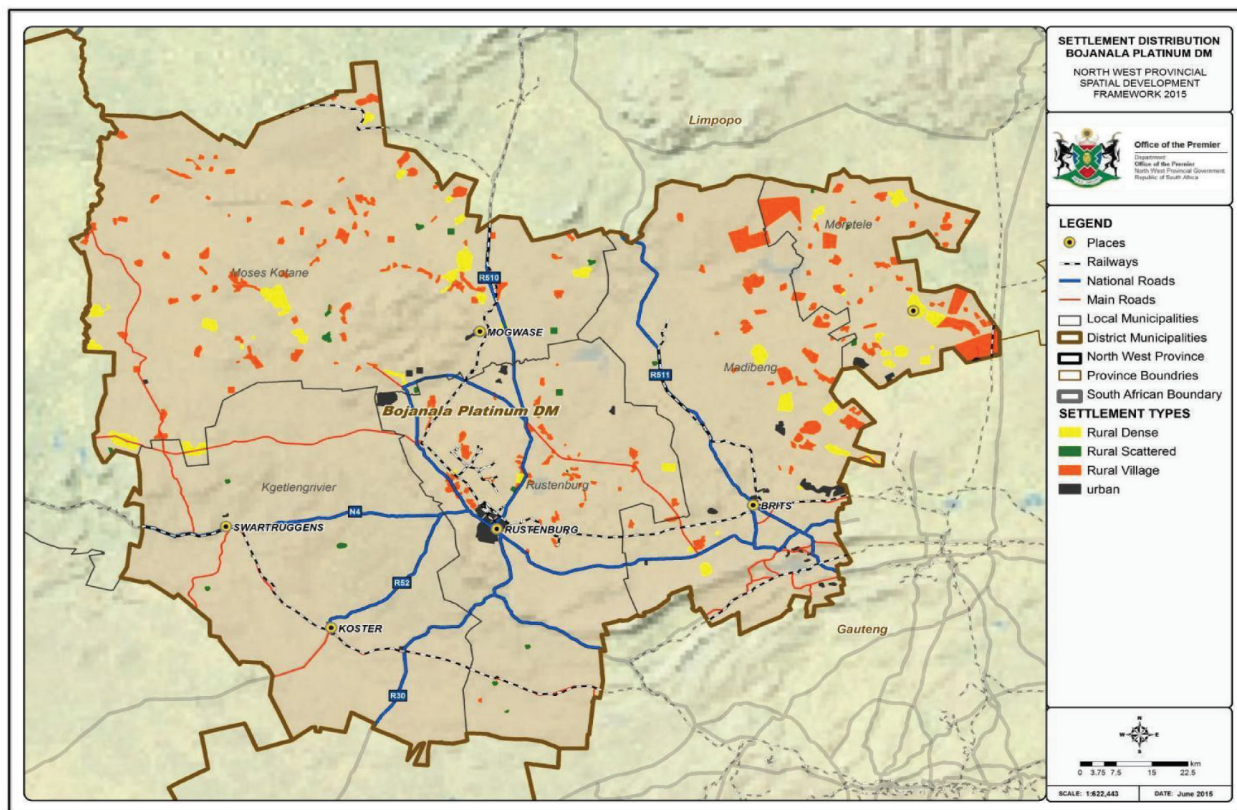


Map 3-34: Settlement Distribution

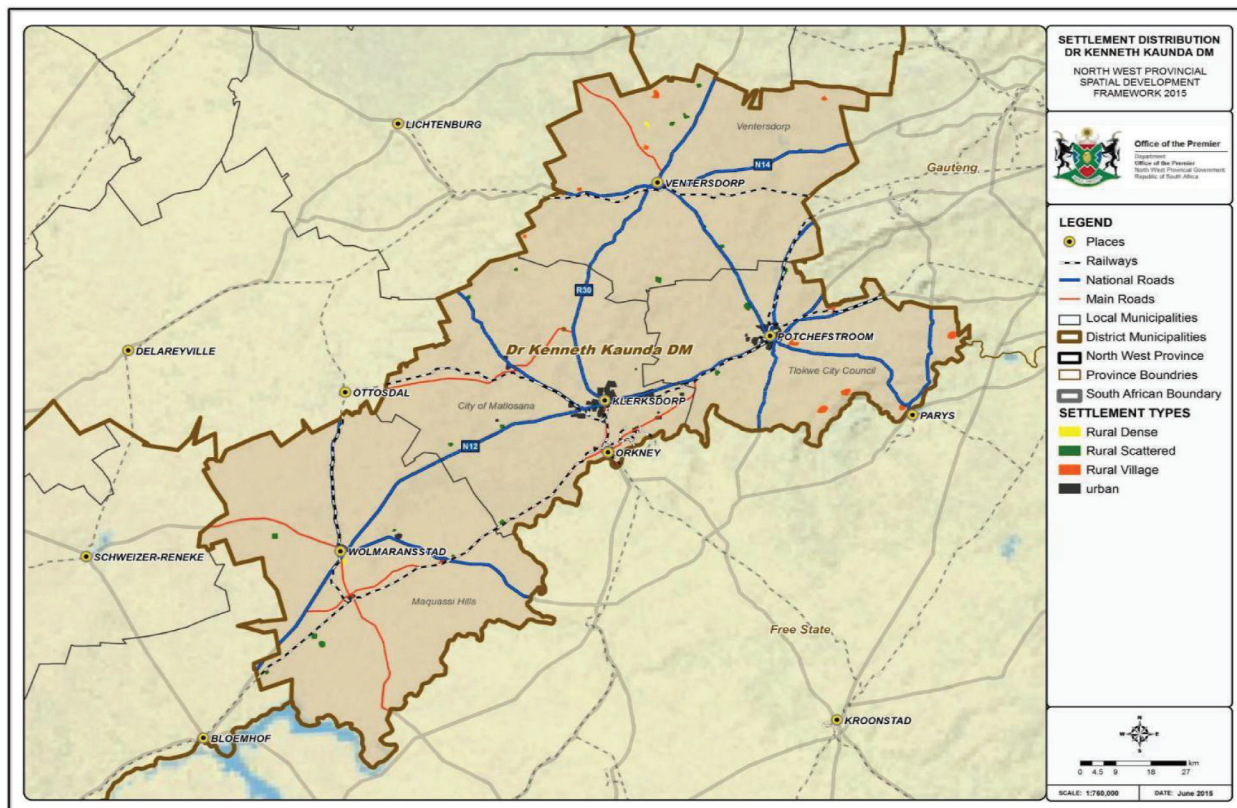




Map 3-35 Bojanala DM Settlement Distribution

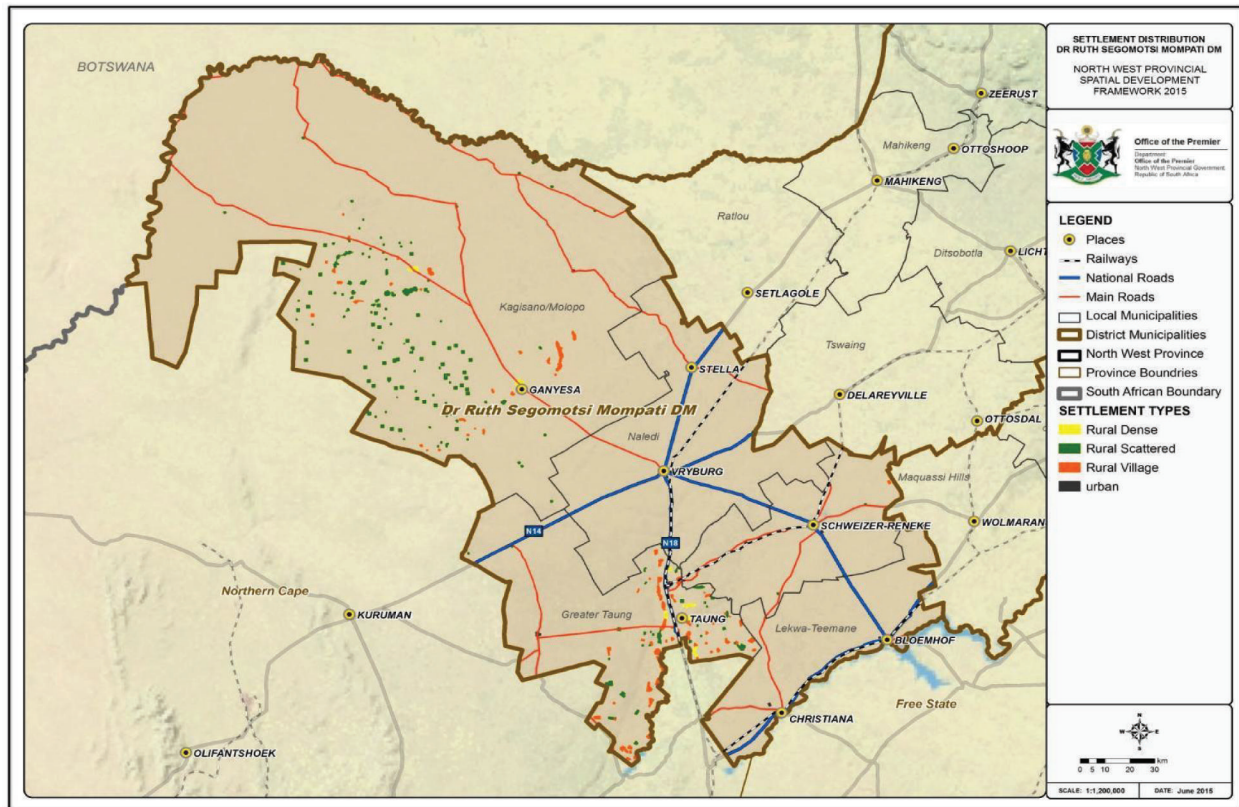


Map 3-36 Dr Kenneth Kaunda DM Settlement Distribution

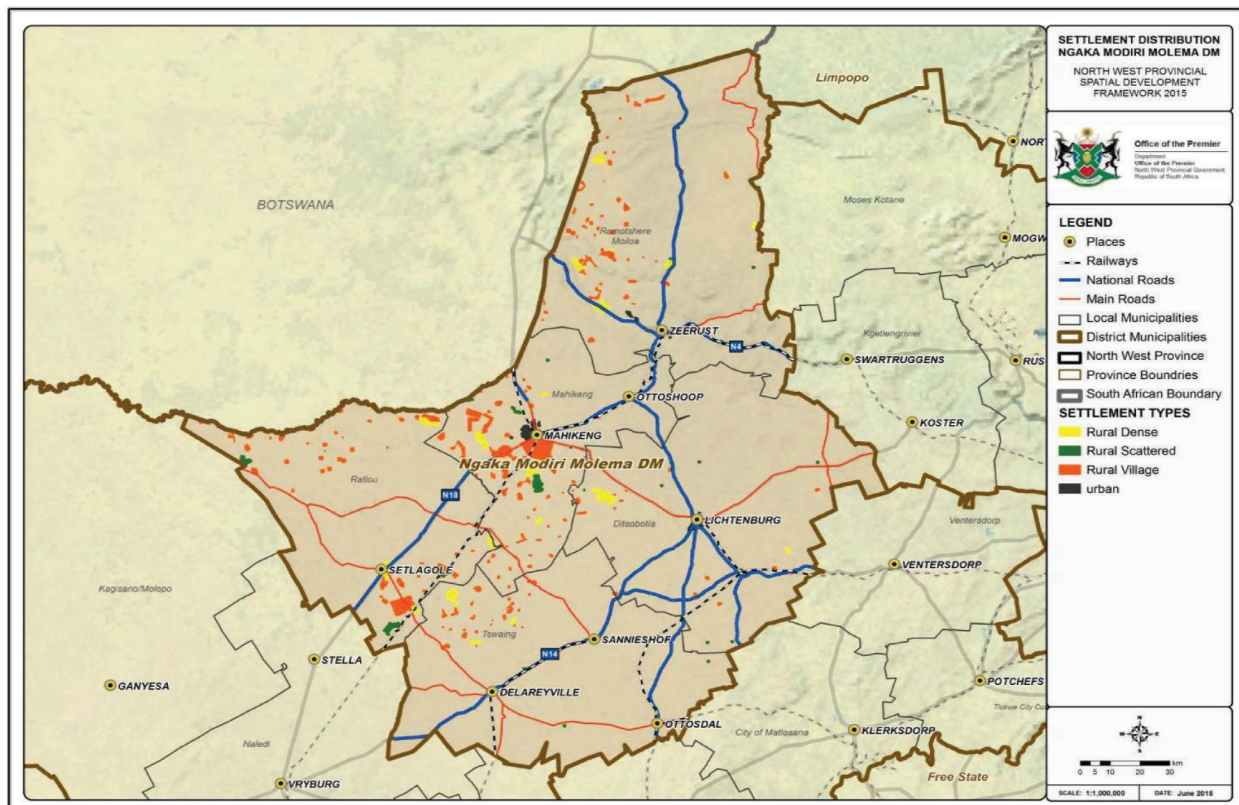




Map 3-37 Dr Ruth Segomotsi Mompati DM Settlement Distribution



Map 3-38 Ngaka Modiri Molema DM Settlement Distribution





**Table 3-12: Settlement Types: Households per Municipality (2011)**

MN_NAME	Urban	Tribal/ Traditional	Farming	Total	% Urban	% Tribal/ Traditional	% Farming
Moretele	7,408	179,540	0	186,948	3.96	96.04	0
Madibeng	132,427	278,329	66,624	477,380	27.74	58.30	13.96
Rustenburg	373,485	164,922	11,168	549,575	67.96	30.01	2.03
Kgetlengrivier	33,917	0	17,132	51,049	66.44	0.00	33.56
Moses Kotane	17,876	224,054	624	242,554	7.37	92.37	0.26
Ratlou	0	102,030	5,309	107,339	0.00	95.05	4.95
Tswaing	41,370	50,860	31,987	124,217	33.30	40.94	25.75
Mahikeng	64,623	218,474	8,430	291,527	22.17	74.94	2.89
Ditsobotla	88,426	40,718	39,758	168,902	52.35	24.11	23.54
Ramotshere Moiloa	27,884	106,184	16,645	150,713	18.50	70.45	11.04
Naledi	51,308	2,760	12,713	66,781	76.83	4.13	19.04
Mamusa	52,603	0	7,752	60,355	87.16	0.00	12.84
Greater Taung	4,182	170,581	2,879	177,642	2.35	96.03	1.62
Lekwa-Teemane	48,786	0	4,462	53,248	91.62	0.00	8.38
Kagisano/Molopo	5,295	84,461	16,033	105,789	5.01	79.84	15.16
Ventersdorp	22,239	0	34,462	56,701	39.22	0.00	60.78
Tlokwe City Council	148,988	798	12,976	162,762	91.54	0.49	7.97
City of Matlosana	370,608	0	28,067	398,675	92.96	0.00	7.04
Maquassi Hills	62,004	0	15,790	77,794	79.70	0.00	20.30
<b>NW Province</b>	<b>1,553,429</b>	<b>1,623,711</b>	<b>332,811</b>	<b>3,509,951</b>	<b>44.26</b>	<b>46.26</b>	<b>9.48</b>

#### 3.4.8.1 Distribution of Natural Resources

The distribution of natural resources provided the basis for urban and rural development in the North West Province providing for:

- The development of gold, platinum and chrome mines are mainly concentrated in Rustenburg, Madibeng and Matlosana and diamond mines in the southern parts of the Dr Kenneth Kaunda District (Wolmaranstad, Delareyville)
- Natural areas providing for nature reserves and conservancies supporting the tourism and wildlife industries. Nature reserves include:
- Agricultural areas providing for cultivation and grazing

#### 3.4.8.2 The Spatial Legacy of Apartheid

Apartheid planning provided North West with a spatial legacy in which black people were consigned to places severed from sustainable employment centers, services and livelihoods. More than 45% of the North West population still resides in areas formerly destined as the homeland of Bophuthatswana. This situation was added to by the segregation of people based on race on the periphery of most towns in created townships and group areas. The result of this is a spatial development structure that provides North West with poverty and inequality traps in rural and urban areas, with low levels of economic, social and engineering infrastructure.

Within the underdeveloped Traditional Authorities and former homelands indicated on **Map 3-39 Former Homelands and Traditional Authorities**, **densification** of certain settlements took place, whilst in smaller concentrations, population growth in settlements declined, but poverty remains. Poor people, living in neighbourhoods created along racial lines, are severed from economic and employment centres and has to travel long distances to work, to shop or make use of social facilities. The planning of urban areas and settlements need to consider the needs of these people and ensure that the injustices of the past are set right. See **Map 3-40 Poverty Concentrations Distribution**.

The occupancy of land along racial lines is still strong as illustrated on **Map 3-41 Racial Segregation**. The redistribution of ownership is an ongoing process involving the restitution of land and the transformation of urban areas to ensure the integration of poor people.

### 3.4.8.3 Accessibility

Regional accessibility supports economic development within the province and interactivity between regional economic nodes. Regional accessibility within the North West Province is provided by a well-developed system of transnational, national and regional roads, railways and airports supporting the development of a system of development nodes. Accessibility of North West Province to the broader region is supported by the following:

- The N4 linking Tshwane with Walvis Bay Harbour (Platinum Corridor) supported by the Johannesburg - Koster - Zeerust – Mahikeng and Tshwane – Brits – Rustenburg – Ellisras railway lines
- The N17 route between Johannesburg and Kimberley (Treasure Corridor) supported by the Johannesburg- Potchefstroom- Kleksdorp- Christiana – Kimberley ( Cape Town) railway line
- The N14 route linking Gauteng with Kuruman ( Northern Cape)
- The N18 linking Gaborone (Botswana ) with Mahikeng and Kimberley (N17) ( Western Corridor) supported by the Mahikeng-Setlagole- Vryburg- Taung- Kimbeley (Cape Town) railway line
- The Mahikeng - Lobatse - Gaborone – Francistown – Buluwayo - Lusaka- Dar es Salaam regional road and railway ( (Friedmann, 1966)North south corridor)
- Regional airports including the Pilanesberg International Airport (ACSA) and the Kgosi Montshioa Airport (Mahikeng Airport at Mahikeng and smaller airfields)

Accessibility of North West Province to Tshwane via the N4 and to Johannesburg via the N12 and the mobility function of these roads are relatively good. The following aspects with regard to accessibility and mobility however need to be addressed:

- The continuous upgrading of the mobility function of all regional routes:
  - Restricting local accessibility and providing free flow interchanges
  - Providing by pass roads around development nodes where the mobility function has been compromised
- The accessibility of the N14 to Gauteng
- The accessibility of the Rustenburg and Brits development nodes to Johannesburg
- The lack of accessibility of the rural areas within the Bojanala and Dr Ruth Segomotsi Mompati District Municipalities to the main road system restricting socio economic development

### 3.4.8.4 Urbanisation

Rapid urbanisation over the past two decades had a significant impact on the existing disparate settlement structure. Within urban areas people flocked to existing towns and created informal settlements adding to the existing poverty pockets and providing immense pressure on the provision of economic, social and engineering infrastructure.

The main population concentrations of Madibeng, Rustenburg, Mahikeng and Matlosana making up 50 % of the provincial population contributed 67% of the province's population growth. Growth within these municipalities is supported by a strong urbanisation trend with people moving from rural areas to urban built up areas and a positive migration rate. It is within these areas that the highest demands for land, services and goods in urban areas place high pressures on local authorities to meet these growing demands.

The economies of Madibeng, Rustenburg and Matlosana are concentrated on a declining mining industry under severe pressure. This results in:

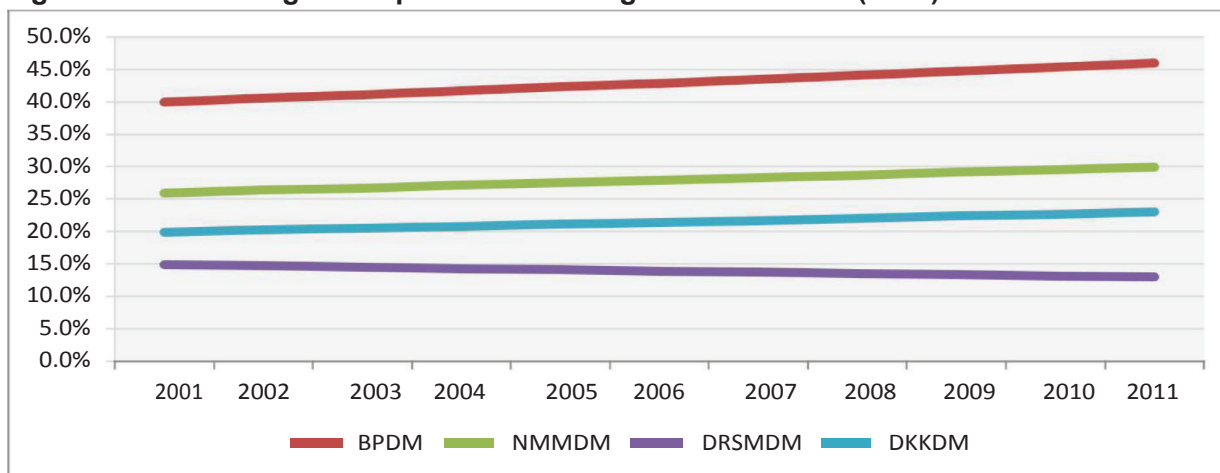
- A general decline in the economy of these nodes
- A drop in living standards
- Proliferation of informal settlements
- Poor living conditions in informal settlements due to a lack of basic infrastructure – clean water, sanitation, refuse removal, electricity.
- Pressure on housing delivery
- Pressure on the existing dysfunctional engineering and social infrastructure

The focus of government in the transformation of these nodes needs to be supported by all role players including the mining houses, national government departments and agencies, provincial government and local municipalities.

The effects of urbanisation differ within the different District Municipalities:

- The **Bojanala District**, accommodating 46% (2011) of the provincial urban population accommodates Madibeng and Rustenburg which provide for 54% of the provincial population growth.
- the **Ngaka Modiri Molema District**, accommodating 30% (2011) of the provincial urban population accommodates the main population concentration of Mahikeng which provide for 8.6% of the provincial population growth and large population concentrations of Disoboltla and Ramotshere making up 6.1% of the population growth
- Dr Ruth accommodating 23% (2011) of the provincial urban population accommodates the large population concentration of Greater Taung which provide for only 0.6% of the provincial population growth
- The share of Dr Kenneth Kaunda District accommodating 13% (2011) of the provincial urban population is declining. It accommodates the population concentration of Matlosana and Tlokwe which provide for 6.6% and 2,2 % of the of the provincial population growth

**Figure 3-5: Percentage of Population Residing In Urban Areas (2011)**

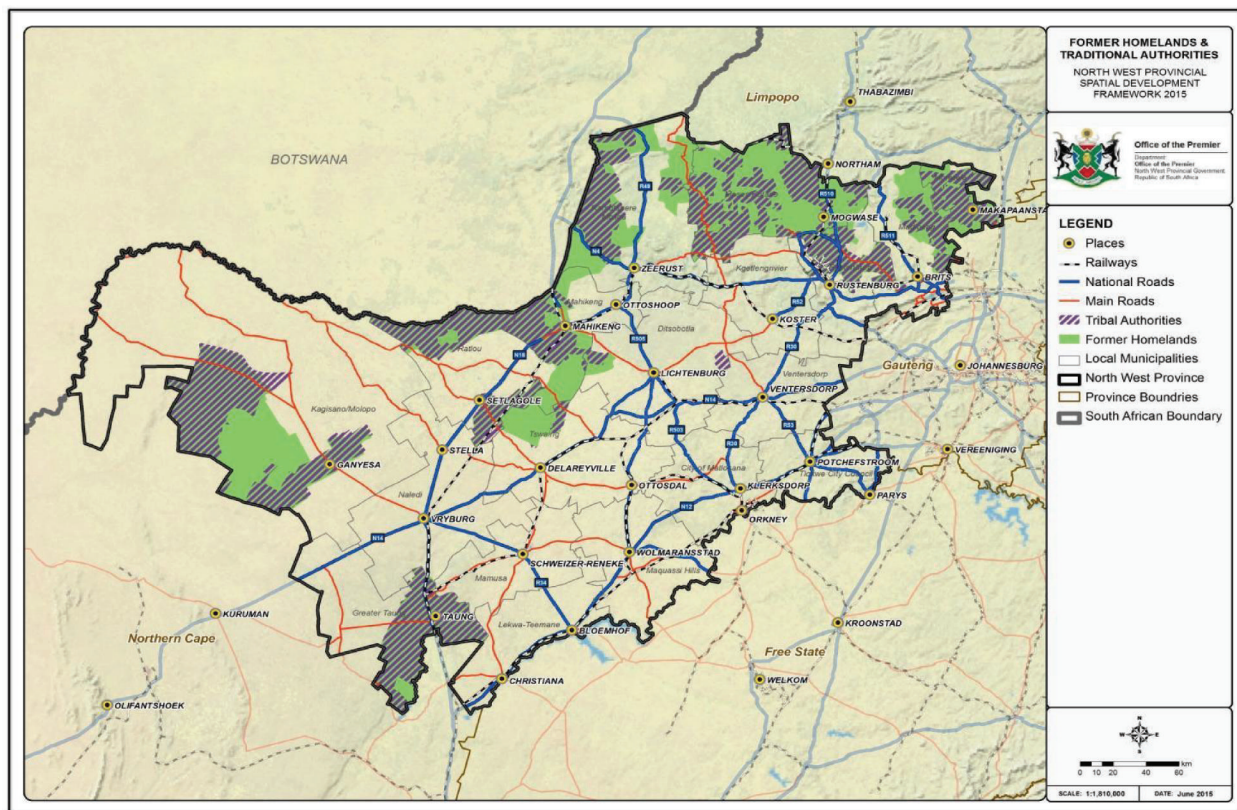


**Table 3-13: Population Growth Distribution**

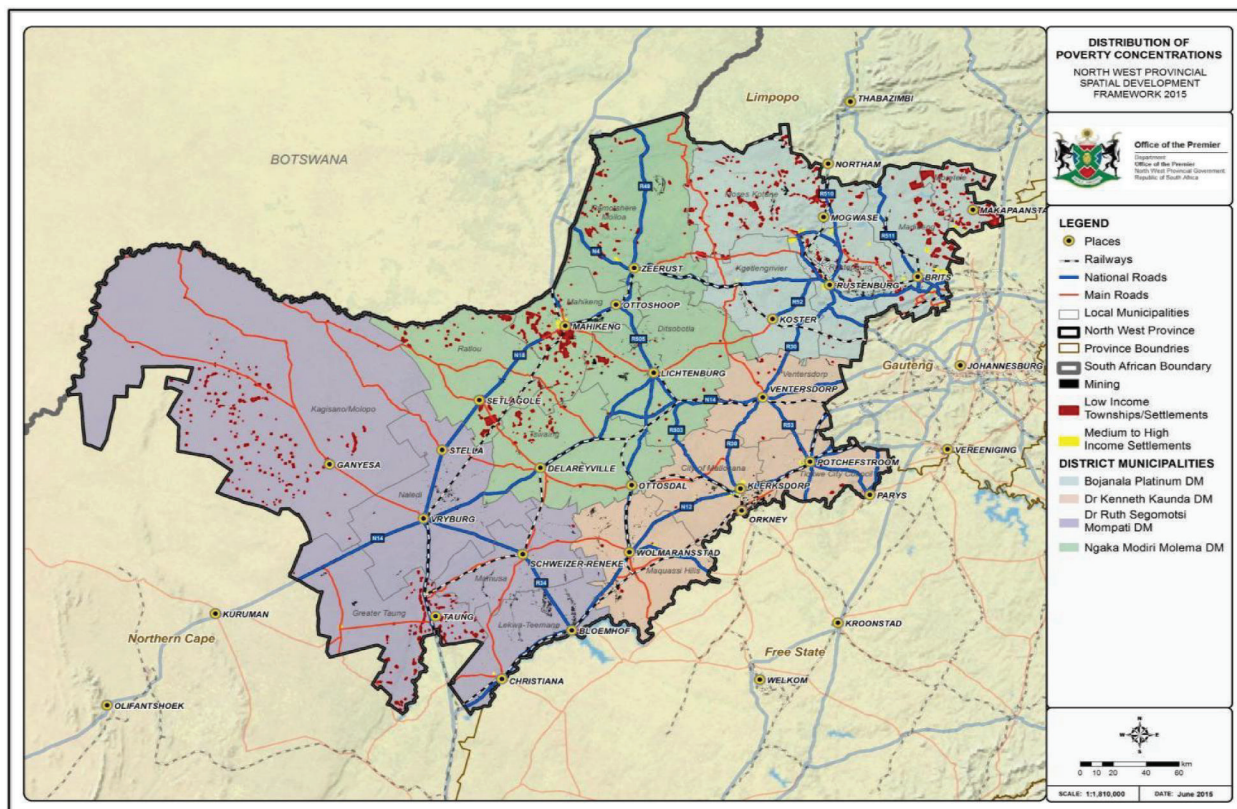
MUNICIPALITIES	Population%(2015)	LongTermPopulationGrowth%	%ofPopulationGrowth
Madibeng	13.9	2.4	21.2%
Rustenburg	16.1	3.1	32.9%
Mahikeng	8.6	1.3	6.7%
Matlosana	11.1	1.0	6.6%
<b>Main Population Concentrations</b>	<b>49.7</b>	<b>2.2%</b>	<b>67.5%</b>
Moretele	5.5	0.7	2.3%
Moses Kotane	7.1	0.6	2.5%
Ditsobotla	4.3	1.1	2.9%
Ramotshere	4.4	1.2	3.2%
Greater Taung	5.2	0.2	0.6%
Tlokwe	4	0.9	2.2%
<b>Large Pop. Concentrations</b>	<b>30.5</b>	<b>0.8%</b>	<b>13.6%</b>
Ratlou	3.1	0.8	1.5%
Tswaing	3.6	1.9	4.2%
Kagisano	3.1	0.7	1.3%
<b>Medium Pop. Concentrations</b>	<b>9.7</b>	<b>1.2%</b>	<b>7.0%</b>
Kgetlengrivier	1.5	2.6	2.5%
Naledi	2	1.3	1.5%
Mamusa	1.8	2.1	2.3%
Lekwa-Teemane	0.9	-0.4	-0.2%
Ventersdorp	1.7	3.3	3.6%
Maquassi Hills	2.3	1.6	2.2%
<b>Small Pop. Concentrations</b>	<b>10</b>	<b>1.9%</b>	<b>12.0%</b>
<b>Total</b>	<b>100.0%</b>		<b>100.0%</b>



Map 3-39 Former Homelands and Traditional Authorities

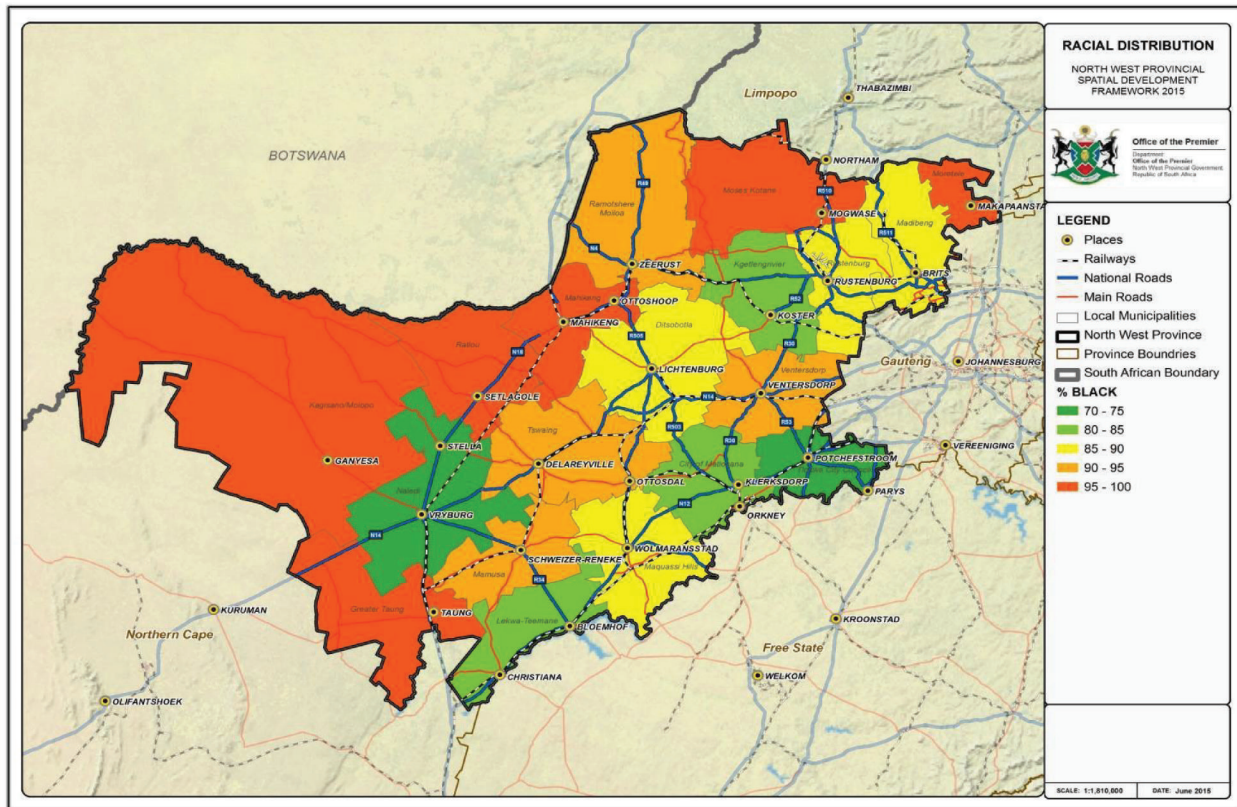


Map 3-40 Poverty Concentrations Distribution

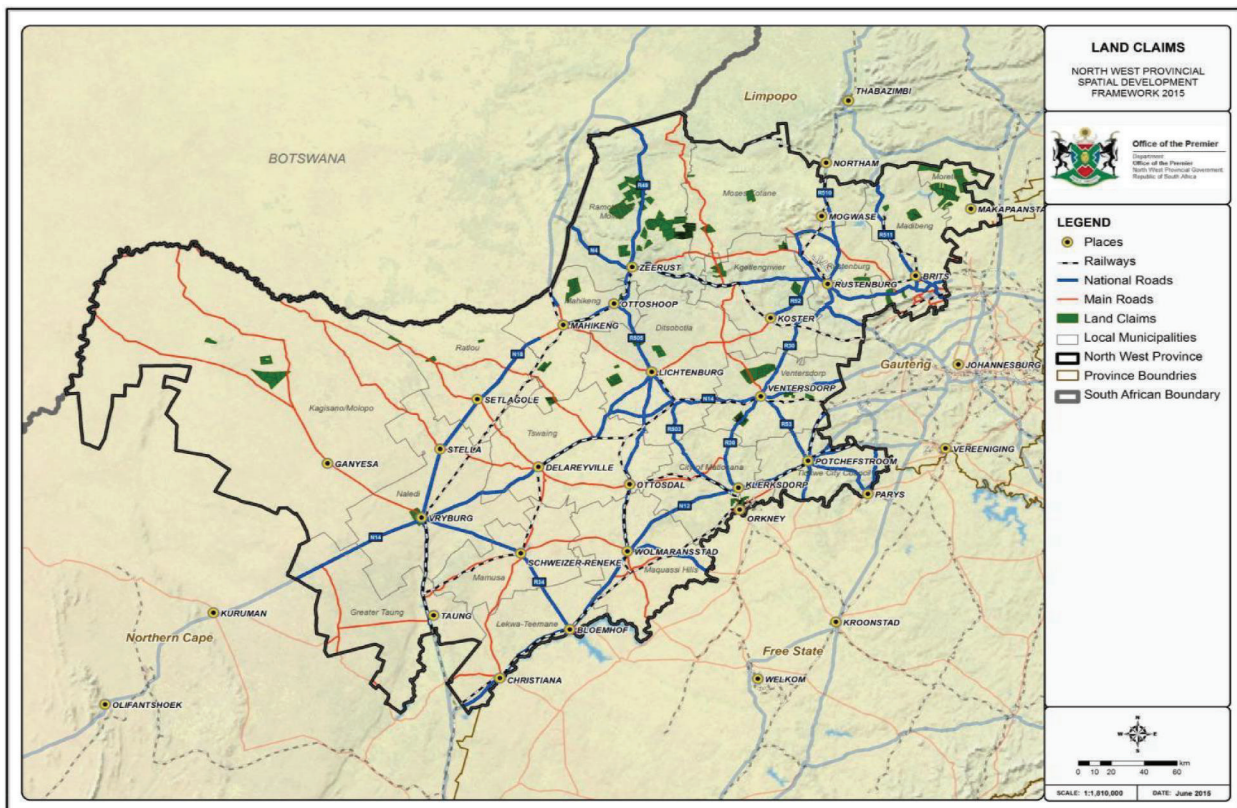




Map 3-41 Racial Segregation



Map 3-42 Land Claims



### 3.4.8.5 Other urban and rural structuring elements

#### 3.4.8.5.1 Population Densities

The existing urban densities within North West are relatively low. In order to create efficient urban areas with high densities of mixed land uses within close proximity of economic activity nodes and transportation systems residential densities within the urban nodes need to be enhanced. The Spatial Development Frameworks of most local municipalities within North West provide urban activity nodes, corridors and spines allowing for higher density land uses.

Densification adds to the demand for social and engineering infrastructure, already under pressure, and requires the upgrading of services and social infrastructure including facilities such as schools, clinics, recreation facilities and parks. The need for social facilities and the availability of land or buildings to provide therefore restricts the creation of sustainable neighbourhoods and towns. These aspects need to be attended to in the densification policies of the local municipalities.

See:

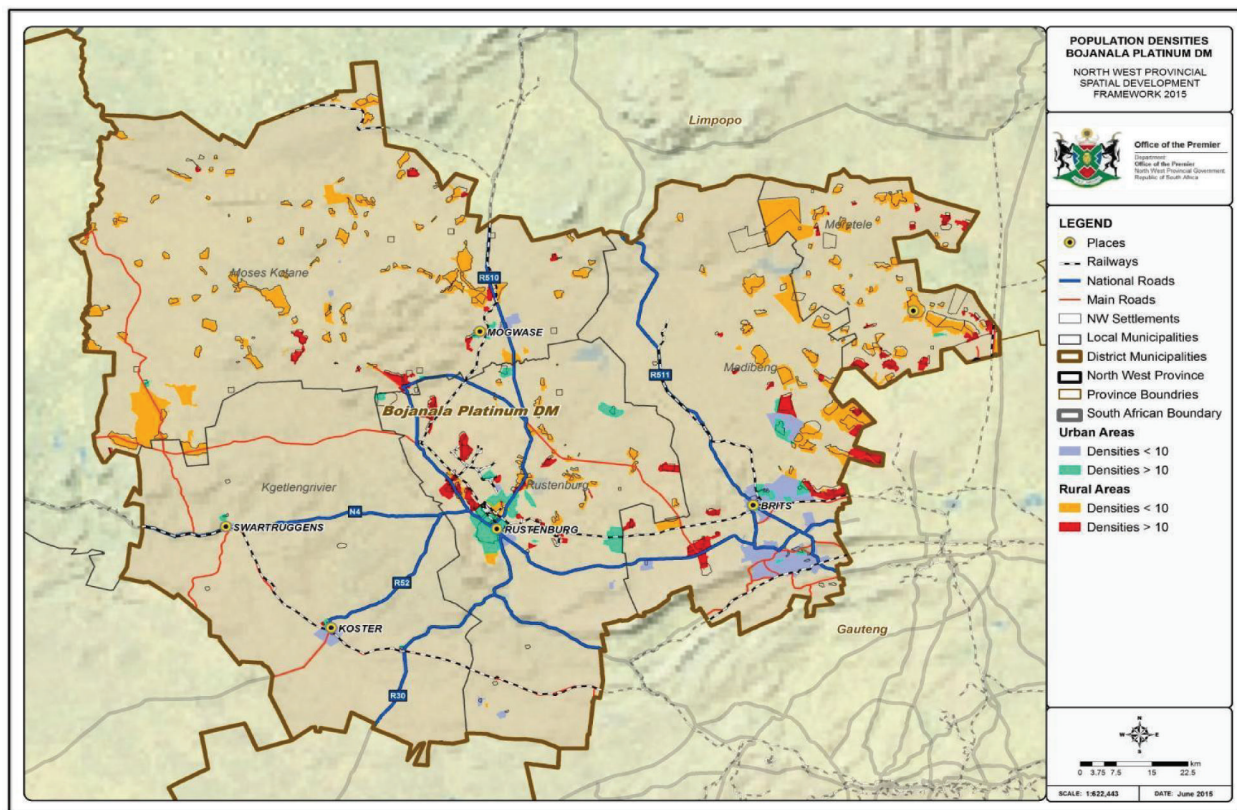
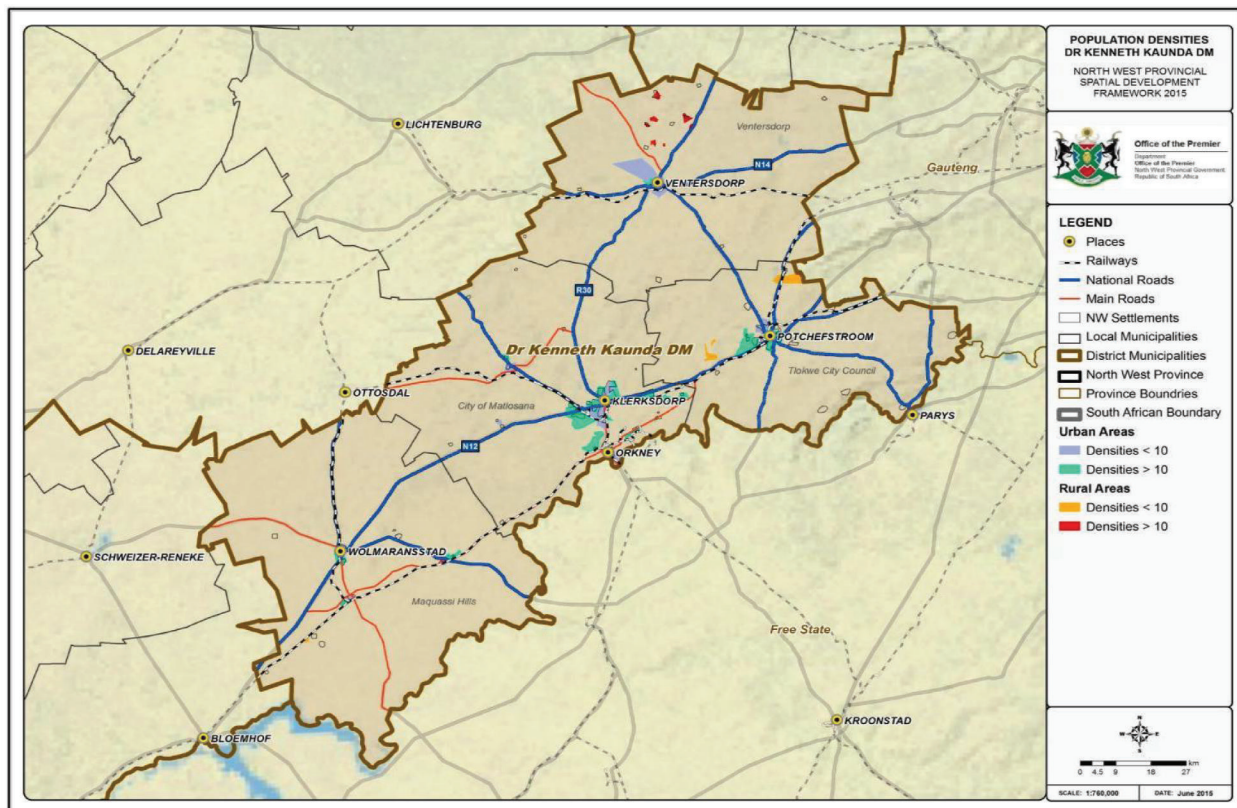
- ☐ Map 3-43 Population Density for Bojanala Platinum District
- ☐ Map 3-44 Population Density for Dr Kenneth Kaunda District
- ☐ Map 3-45 Population Density for Dr Ruth Segomotsi Mompati District
- ☐ Map 3-46 Population Density for Ngaka Modiri Molema District

**Table 3-14: Population Densities per LM**

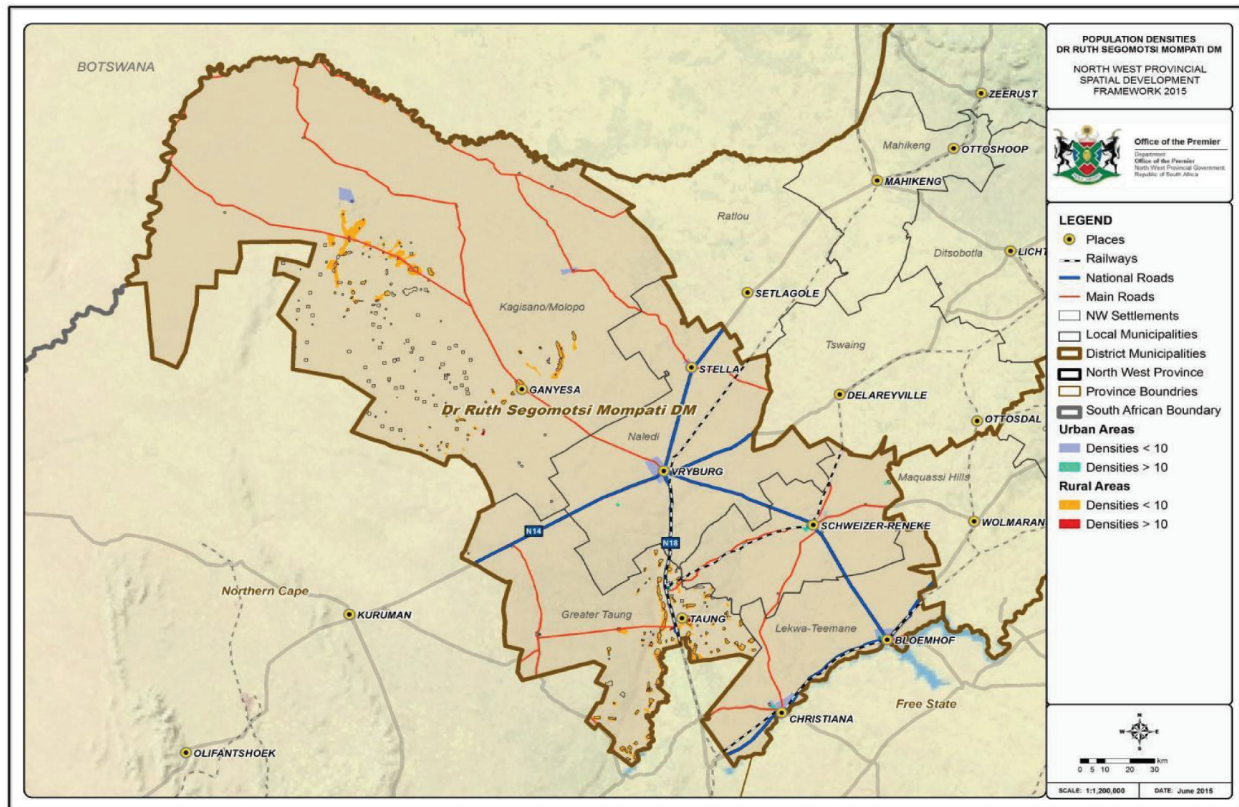
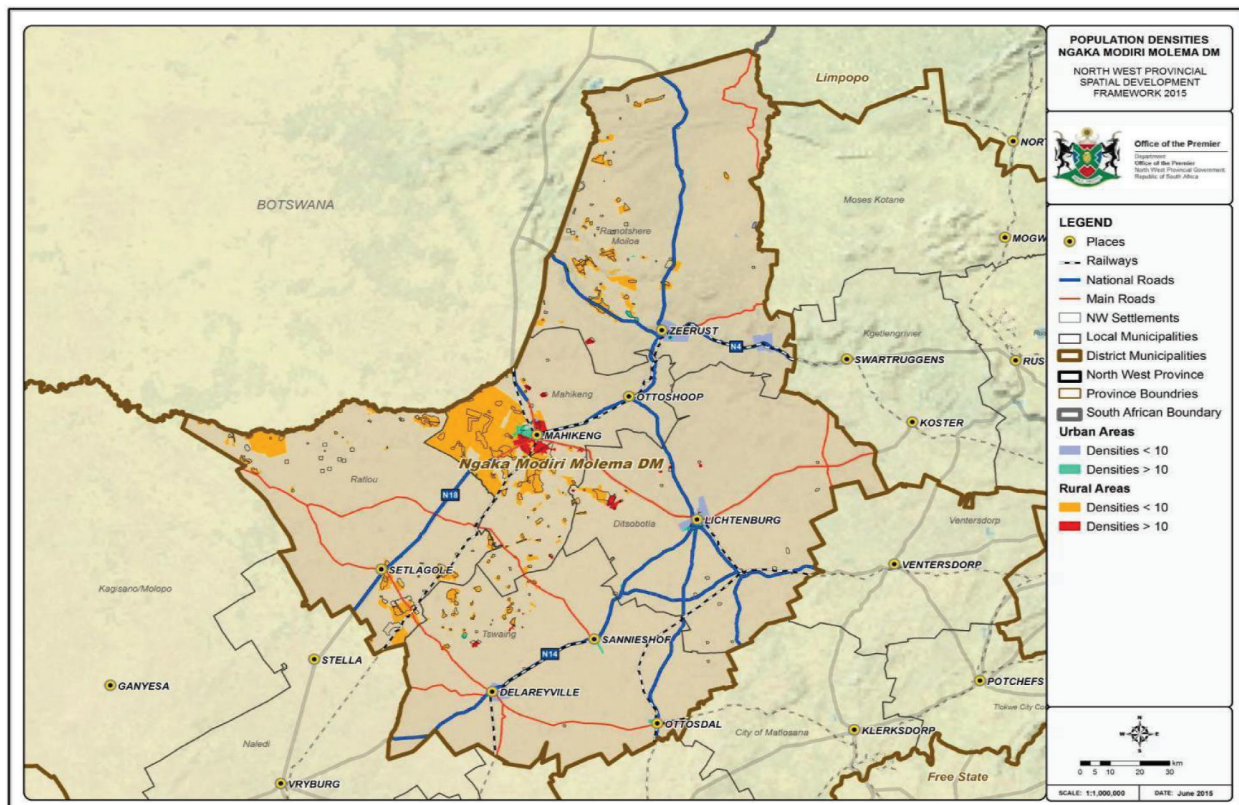
Municipalities	Population	Area (ha)	Average Density
<b>Bojanala</b>	<b>1530437</b>	<b>1839982.5</b>	<b>0.83</b>
<b>Kgetlengrivier</b>	<b>51047</b>	<b>399008.4</b>	<b>0.13</b>
Rural	6351	111.8	56.82
Urban	27126	2828.1	9.59
<b>Madibeng</b>	<b>477385</b>	<b>384944.4</b>	<b>1.24</b>
Rural	270401	28438.9	9.51
Urban	136657	22748.2	6.01
<b>Moretele</b>	<b>186956</b>	<b>138175.7</b>	<b>1.35</b>
Rural	169980	27199.5	6.25
Urban	11505	317.7	36.21
<b>Moses Kotane</b>	<b>263236</b>	<b>574379.2</b>	<b>0.46</b>
Rural	234450	44998.3	5.21
Urban	15883	2193.6	7.24
<b>Rustenburg</b>	<b>551813</b>	<b>343474.9</b>	<b>1.61</b>
Rural	180211	15037.9	11.98
Urban	327410	12770.8	25.64
<b>Dr Kenneth Kaunda</b>	<b>695933</b>	<b>1471324.9</b>	<b>0.47</b>
<b>City of Matlosana</b>	<b>398674</b>	<b>357925.2</b>	<b>1.11</b>
Urban	366715	14795.0	24.79
<b>Maquassi Hills</b>	<b>77793</b>	<b>467088.3</b>	<b>0.17</b>
Rural	1200	133.9	8.96
Urban	61742	2868.0	21.53

Municipalities	Population	Area (ha)	Average Density
<b>Tlokwe City Council</b>	<b>162763</b>	<b>268340.6</b>	<b>0.61</b>
Rural	982	2537.3	0.39
Urban	142196	5963.0	23.85
<b>Ventersdorp</b>	<b>56703</b>	<b>377970.7</b>	<b>0.15</b>
Rural	20689	1402.3	14.75
Urban	22074	5772.4	3.82
<b>Dr Ruth Segomotsi Mompati</b>	<b>463558</b>	<b>4419419.4</b>	<b>0.10</b>
<b>Greater Taung</b>	<b>177648</b>	<b>569437.6</b>	<b>0.31</b>
Rural	159421	28669.1	5.56
Urban	12960	1262.1	10.27
<b>Kagisano/Molopo</b>	<b>105528</b>	<b>2413945.8</b>	<b>0.04</b>
Rural	84442	32105.2	2.63
Urban	3938	4539.3	0.87
<b>Lekwa-Teemane</b>	<b>53249</b>	<b>370980.3</b>	<b>0.14</b>
Urban	48787	10559.4	4.62
<b>Mamusa</b>	<b>60352</b>	<b>364368.4</b>	<b>0.17</b>
Rural	5902	1700.1	3.47
Urban	46273	838.1	55.21
<b>Naledi</b>	<b>66781</b>	<b>700687.2</b>	<b>0.10</b>
Urban	54090	8124.6	6.66
<b>Ngaka Modiri Molema</b>	<b>839547</b>	<b>2839651.3</b>	<b>0.30</b>
<b>Ditsobotla</b>	<b>168901</b>	<b>650123.9</b>	<b>0.26</b>
Rural	60564	5319.5	11.39
Urban	68464	7508.4	9.12
<b>Mahikeng</b>	<b>285852</b>	<b>372455.3</b>	<b>0.77</b>
Rural	195879	92379.4	2.12
Urban	71867	2757.8	26.06
<b>Ramotshere Moiloa</b>	<b>153241</b>	<b>723599.3</b>	<b>0.21</b>
Rural	105419	23342.9	4.52
Urban	30022	10478.3	2.87
<b>Ratlou</b>	<b>107337</b>	<b>492644.8</b>	<b>0.22</b>
Rural	101319	33558.0	3.02
Urban	202	24.5	8.26
<b>Tswaing</b>	<b>124216</b>	<b>600828.0</b>	<b>0.21</b>
Rural	45648	6364.2	7.17
Urban	45207	5205.0	8.69



**Map 3-43 Population Density for Bojanala Platinum District****Map 3-44 Population Density for Dr Kenneth Kaunda District**



**Map 3-45 Population Density for Dr Ruth Segomotsi Mompoti District****Map 3-46 Population Density for Ngaka Modiri Molema District**



#### 3.4.8.5.2 *Urban Edges*

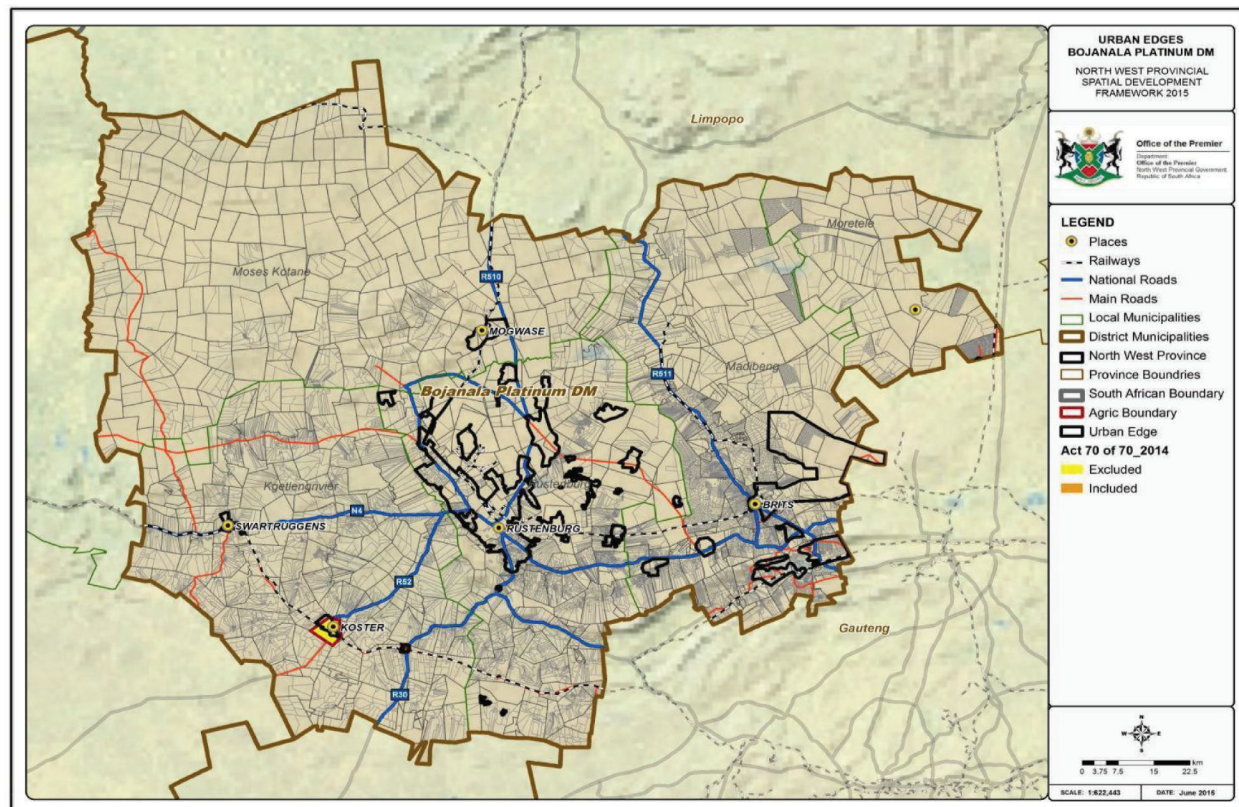
To contain urban sprawl and to provide compact urban development, a well determined and enforced urban edge needs to be demarcated that considers the long term demand for all urban land uses, the preservation of open space, prime and unique agriculture land, areas of natural beauty, heritage sites and critical environmental areas. Urban development takes place within the urban edges in the form of infill development and densification.

The municipalities within North West are actively involved in the demarcation of urban edges in the preparation and review processes of spatial development frameworks to ensure that prime and unique agriculture land is not unnecessarily compromise by urban development.

See:

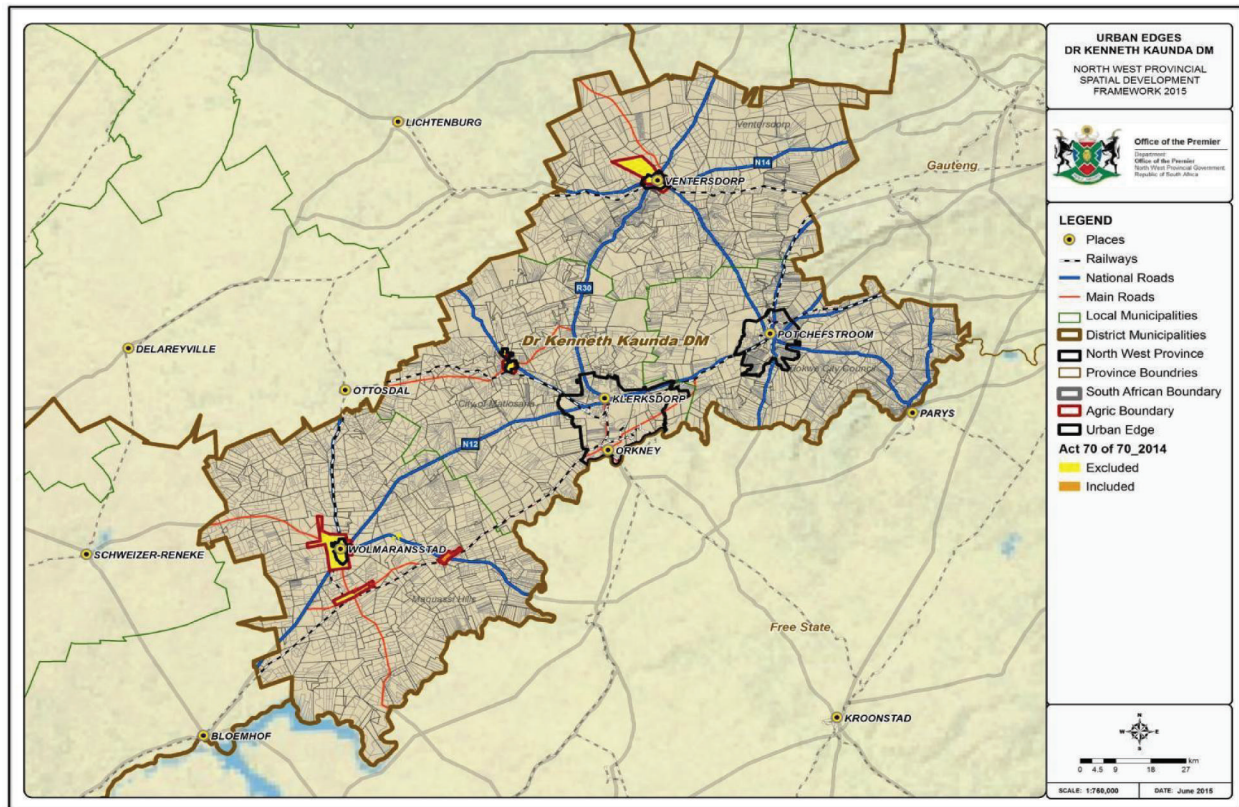
- ☐ **MAP 3-47 URBAN EDGES FOR BOJANALA DISTRICT**
- ☐ **MAP 3-48 URBAN EDGES FOR DR KENNETH KAUNDA DISTRICT**
- ☐ **MAP 3-49 URBAN EDGES FOR DR RUTH SEGOMOTSI MOMPATI DISTRICT**
- ☐ **MAP 3-50 URBAN EDGES FOR NGAKA MODIRI MOLEMA DISTRICT**

### Map 3-47 Urban Edges for Bojanala District

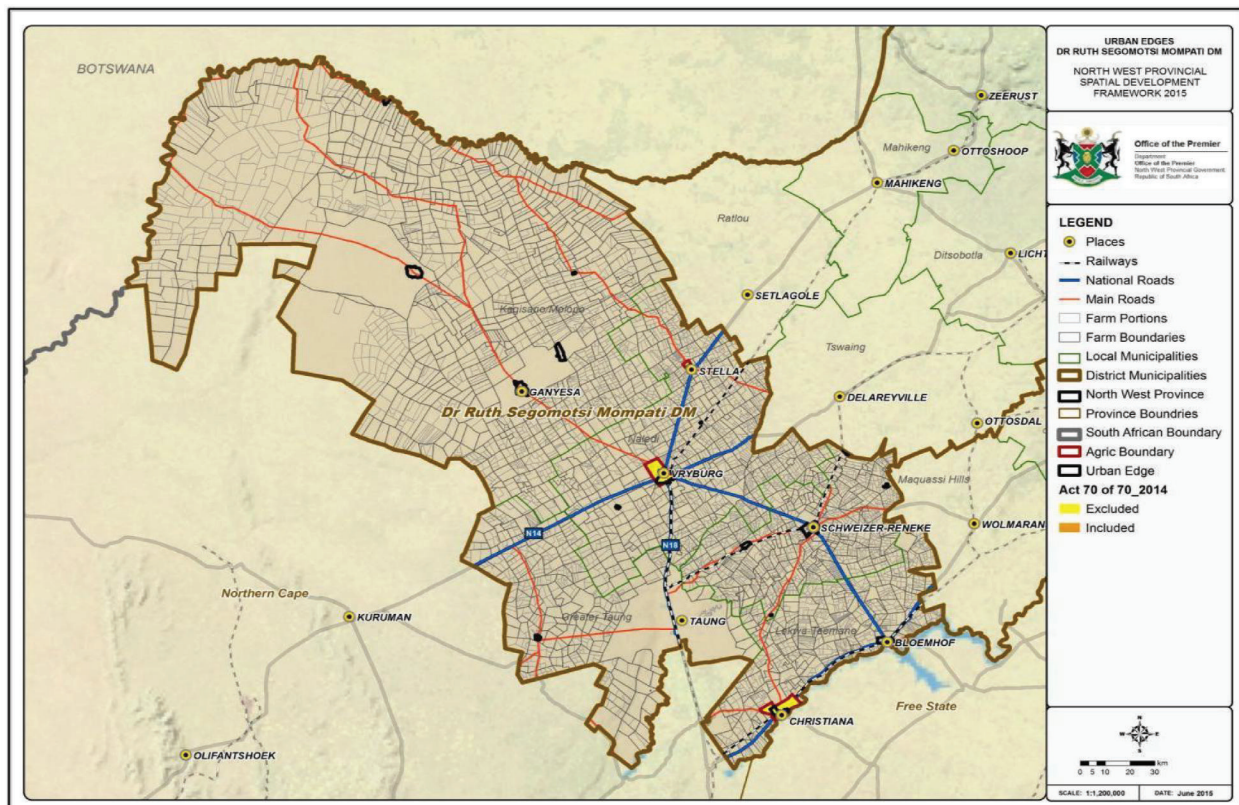




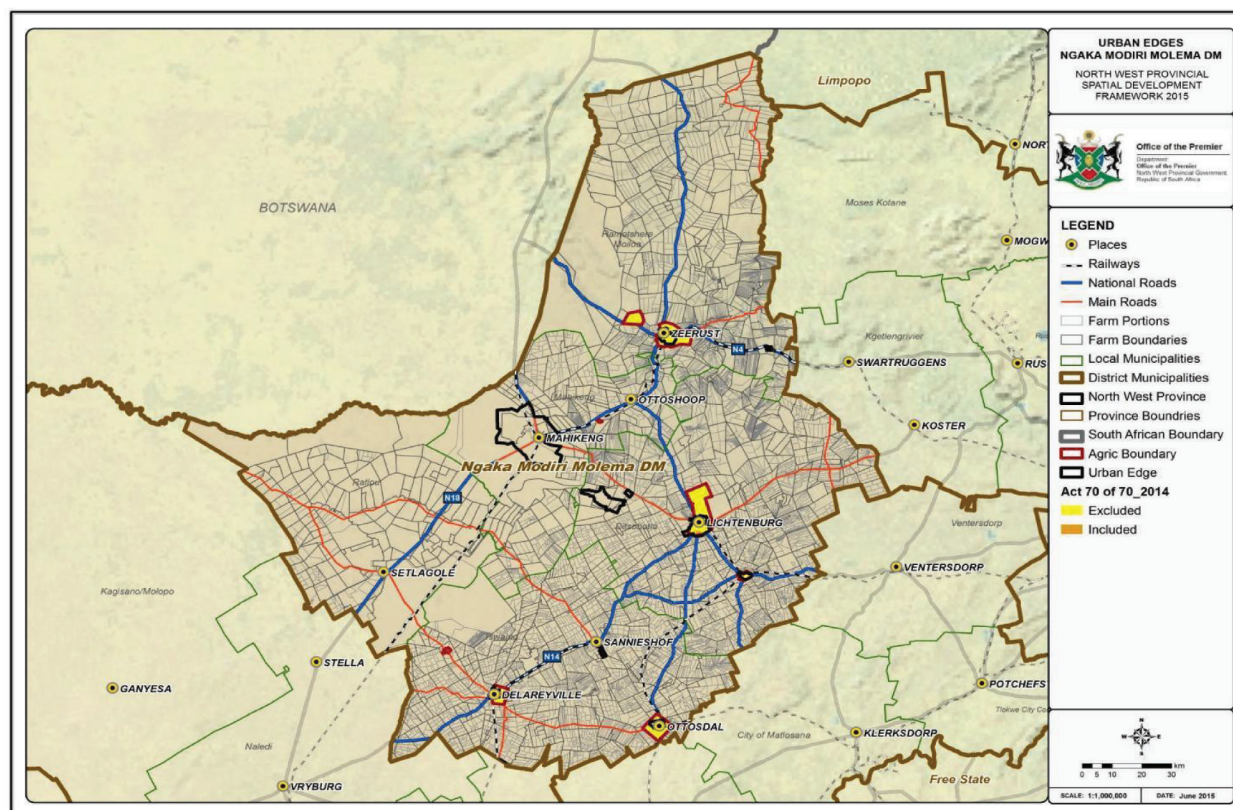
Map 3-48 Urban Edges for Dr Kenneth Kaunda District



Map 3-49 Urban Edges for Dr Ruth Segomotsi Mompoti District





**Map 3-50 Urban Edges for Ngaka Modiri Molema District****3.4.8.5.3 Housing**

The strong urbanisation trend causing an influx of people into towns and dense human settlements puts pressure on housing delivery. All municipalities already experience housing backlogs, which exacerbate the already dismal housing situation. This large demand for housing resulted in the development of informal housing areas on the periphery of existing towns and settlements adding pressure on the existing dysfunctional engineering and social infrastructure and roads. The timely provision of housing is of cardinal importance to the general well-being of urban areas and its people.

The provision of housing needs to consider a variety of housing choices involving high, medium and low density developments to provide in the housing typology needs of all individuals. Sustainable neighbourhoods require the integration of all social and economic facilities to serve the daily needs of its people.

An integrated housing strategy at provincial level and integrated housing planning as part of the Housing Chapter of the IDP and the SDF at municipal level, will ensure the sustainable integration of housing into urban areas.

**3.4.8.5.3.1 Community Facilities**

Community facilities within urban areas form an integral part of the urban areas and the demand and geographical distribution thereof needs to be provided for within the communities taking into consideration the local needs of the communities. It is therefore necessary to attend to the provision of local community facilities in the local IDP's and SDF's of municipalities in conjunction with the relevant provincial and national departments.



### 3.4.8.6 Rural development

Rural communities include the sparsely populated areas where people depend on farms or natural resources for their livelihoods, including the villages and small towns in these areas with little or no economic infrastructure. The former homeland areas that include larger settlements are also included. The distribution of rural settlements is indicated on **Map 3-29**. A strong focus on rural areas is needed to ensure the sustainable regeneration thereof and the integration of urban and rural areas in support of each other.

### 3.4.8.7 Engineering Infrastructure

#### 3.4.8.7.1 Water

##### 3.4.8.7.1.1 Bulk Water Infrastructure

The North West Province is generally considered as an area with low to average rainfall conditions. This highlights the importance of sustainable water management in lieu of sustainable development in this area. The spatial challenges and opportunities as it relates to the NWP are discussed herein.

Challenges in water resource, water source and water services range in extent and character, but revolve around human and environmental interactions.

#### On-site Sanitation

Provision of access to basic<sup>7</sup> services remains one of the top and most challenging priorities for a municipality. This includes the provision of basic sanitation: at least a Ventilated Improved Pit latrine and basic water: potable water within a distance of 200m. The municipalities have made substantial progress in providing basic services in the last two decades. This has brought additional challenges however in the form of operation and management of existing sanitation installations, specifically on-site installations.

The most prevalent on-site basic on-site sanitation technology is Ventilated Improved Pit latrines. Sanitation practised below RDP standards include pit latrines (not lined and not ventilated), the bucket system and no form of sanitation or open defecation. All these however pose a risk to groundwater sources if the water table is high and furthermore to human health if groundwater sources are used for consumption.

The responsibility for pit or rather VIP emptying is that of the Water Services Authority (as it is a health risk in emptying and safe disposal of the pit contents). Very few municipalities actually make provision for assistance to consumers in this regard. The design life of a VIP will depend on the number of people served, but can be anything between five and ten years. This means that many of the households provided with VIP installations and where the municipality is not assisting in pit emptying, are put at risk in terms of personal health as polluting groundwater sources.

The areas in the NWP most affected by on-site sanitation include:

- Madibeng LM: 107 602 households;
- Rustenburg LM: 84 645 households;
- Moses Kotane LM: 64 078 households;
- Mahikeng LM: 56 600 households;
- Moretele LM: 48 629 households; and
- Greater Taung LM: 43 440 households.

There are a total of 570 856 households with on-site sanitation (2011 Census) in the NWP, of which 97 890 households are reliant on groundwater as source (boreholes, springs). Of the latter, most are within the

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<sup>7</sup> Refer to the basic levels of service according to RDP standards

**CONTINUES ON PAGE 130 - PART 2**



# **NORTH WEST NOORDWES**

***EXTRAORDINARY • BUITENGEWOON***

## **PROVINCIAL GAZETTE PROVINSIALE KOERANT**

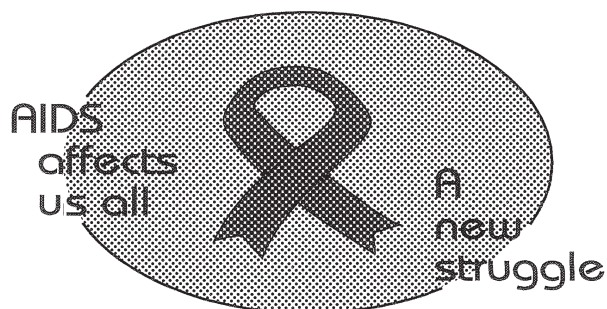
Vol. 258

**MAHIKENG**  
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Mahikeng LM (21 492 households), Madibeng LM (16 460 households) and Ditsobotla LM (8 569 households).

It can be further illustrated in overleaf that provides a summary of the on-site sanitation for each Local Municipality in the North West Province according to the 2011 Census.

**Note: None of the municipalities in the NWP have any groundwater monitoring, management and protection programmes.**

**Table 3-15: On-Site Sanitation per Local Municipality – Number of Households**

Local Municipality	VIP, Pit and other on-site sanitation, including none	VIPs as percentage of on-site sanitation, including none	Non-VIP as percentage of on-site sanitation, including none	No. of HH utilising Groundwater
Madibeng LM	107 602	13%	87%	16 460
Rustenburg LM	84 645	19%	81%	5 480
Moses Kotane LM	64 078	16%	84%	6 189
Mahikeng LM	56 600	23%	77%	21 492
Moretele LM	48 629	29%	71%	4 644
Greater Taung LM	43 440	32%	68%	2 929
Ramotshere Moiloa LM	29 729	9%	91%	5 807
Ratlou LM	25 562	27%	73%	4 856
Kagisano/Molopo LM	24 016	51%	49%	5 662
Ditsobotla LM	23 193	17%	83%	8 569
Tswaing LM	19 082	15%	85%	3 899
Tlokwe City Council LM	8 232	10%	90%	1 939
Ventersdorp LM	7 973	59%	41%	3 367
City of Matlosana LM	6 901	10%	90%	2 162
Naledi LM	5 694	19%	81%	727
Mamusa LM	5 233	32%	68%	872
Kgetlengrivier LM	4 705	22%	78%	1 479
Maquassi Hills LM	4 157	6%	94%	958
Lekwa-Teemane LM	1 385	11%	89%	399
<b>Total</b>	<b>570 856</b>	<b>21%</b>	<b>79%</b>	<b>97 890</b>

#### **Groundwater Monitoring and Management; Information Systems**

In lieu of the above, the municipalities and Water Services Providers need to have information systems to record borehole equipment, spring protection, groundwater abstraction, borehole yield, borehole depth, water quality, etc.

Groundwater quality (for domestic use) is affected by unsafe sanitation, industrial or mining pollution as well as agricultural activities (livestock, fertilizers). Natural aquifer characteristics may also contribute in the form of elevated (unsafe) levels of salts and fluoride. Problems with groundwater quality are experienced on the following regions:

- Northern part of the Madibeng LM (salinity, nitrates due to on-site sanitation);



- Northern and central part of the Moses Kotane LM (nitrates and to a lesser extent magnesium and TDS<sup>8</sup>; livestock sharing water sources used for domestic consumption);
- Ramotshere Moiloa LM (nitrates and magnesium due to on-site sanitation and livestock sharing water sources for domestic consumption);
- Eastern part of the Tswaing LM (nitrates from agricultural fertilizer);
- The northern area of the Kagisano-Molopo LM (brackish water, fluorides, salts and nitrates). Elevated levels of nitrates are most probably due to on-site sanitation and livestock; and
- Mamusa LM (nitrates due to on-site sanitation).

The pollution risk is higher in areas with higher water table levels and where limited surface water resources occur.

There are no formal urban areas or densely populated areas in the DrKKDM that utilise groundwater for domestic water supply. Individual and farming communities may utilise this source, but information on groundwater quality is not available for these specific consumers. It is noted that this area is a gold mining area and groundwater may be at risk due to mines that have closed and dewatering of mines (dissolving metals in the water, lowering the pH).

### **Ageing Infrastructure**

Many of the early-established towns in the NWP have infrastructure that dates back thirty or more years from when it was first installed. A number of municipalities face the challenge of providing for the unserved, but still maintaining existing infrastructure. This was reported and evident in areas such as Brits, Rustenburg, Potchefstroom, Klerksdorp, Makwassie, Wolmaransstad, Mahikeng and Mmabatho, Lichtenburg, Zeerust and Vryburg.

Ageing infrastructure result in higher operational and maintenance costs if appropriate preventative maintenance cannot be implemented. High maintenance costs compete with new capital investment for new developments. Pipe bursts and leakages interrupt supply and channel resources away from where it could serve existing and new customers. Furthermore, meters that are old and not calibrated provide incorrect readings, resulting in loss of revenue.

### **Illegal Connections and Informal Settlements**

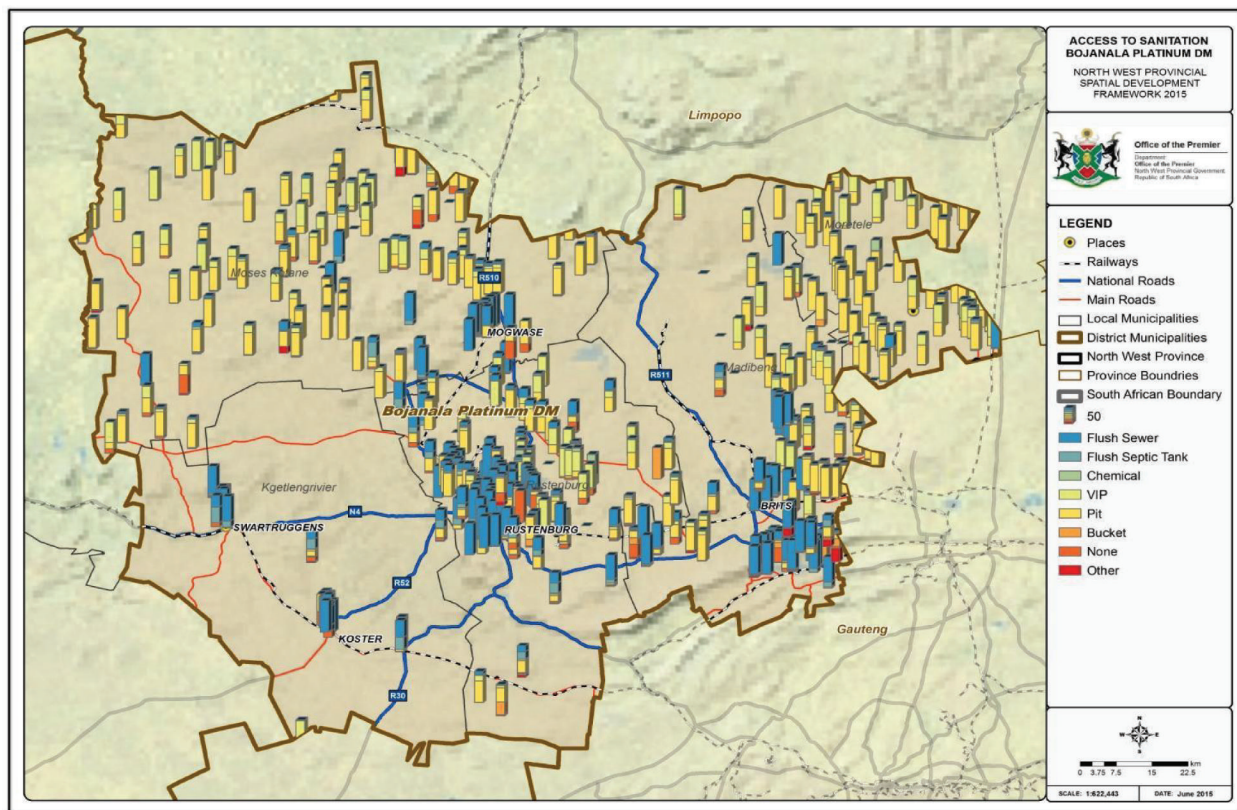
Illegal connections still rate high on the challenges experienced in sustainable and adequate water provision. Illegal connections interfere with the quantities of supply to legally-connected consumers and put the integrity (health) of consumers at risk when exposing the pipelines and content to the environment. It reduces water volumes supposedly allocated for a certain number of consumers and it may reduce pressure in the water supply pipelines, interfering with the system operations. It furthermore increases the loss in revenue in contributing to non-metered water consumption (metered losses) and physical water losses.

Most urban or developed areas not yet providing all consumers with at least basic levels of service have a problem of consumers illegally connecting to existing water supply schemes.

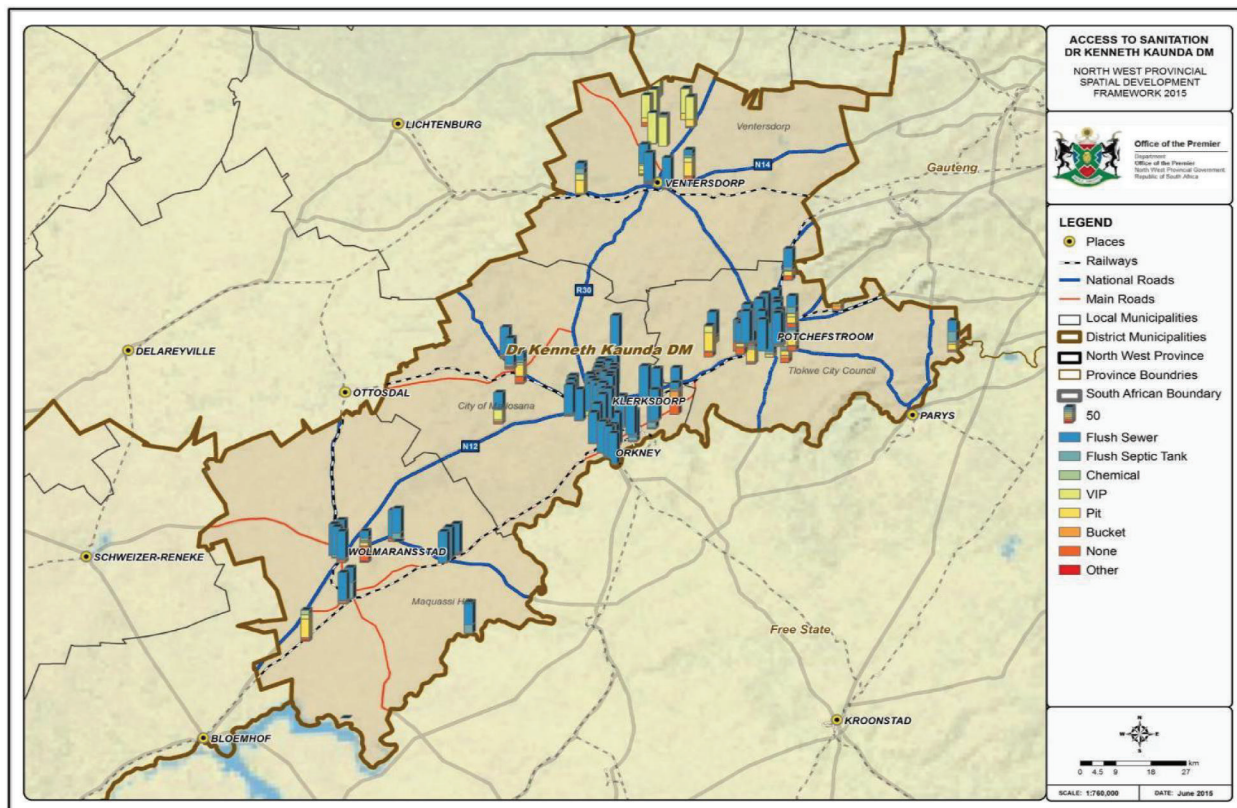
Informal settlements are more evident in the areas with high economic potential or areas closer to urban developments such as Rustenburg, Brits, Klerksdorp (Jouberton), Tigane, Huhudi, Colridge, Rekgaratilhile and Reivilo-Boipelo. Managing illegal occupation of land remains a challenge for all municipalities and to ensure safe water and sanitation services are provided (in-situ or relocation).

<sup>8</sup> TDS: Total Dissolved Solids, used as a measurement of inorganic salts dissolved in water.

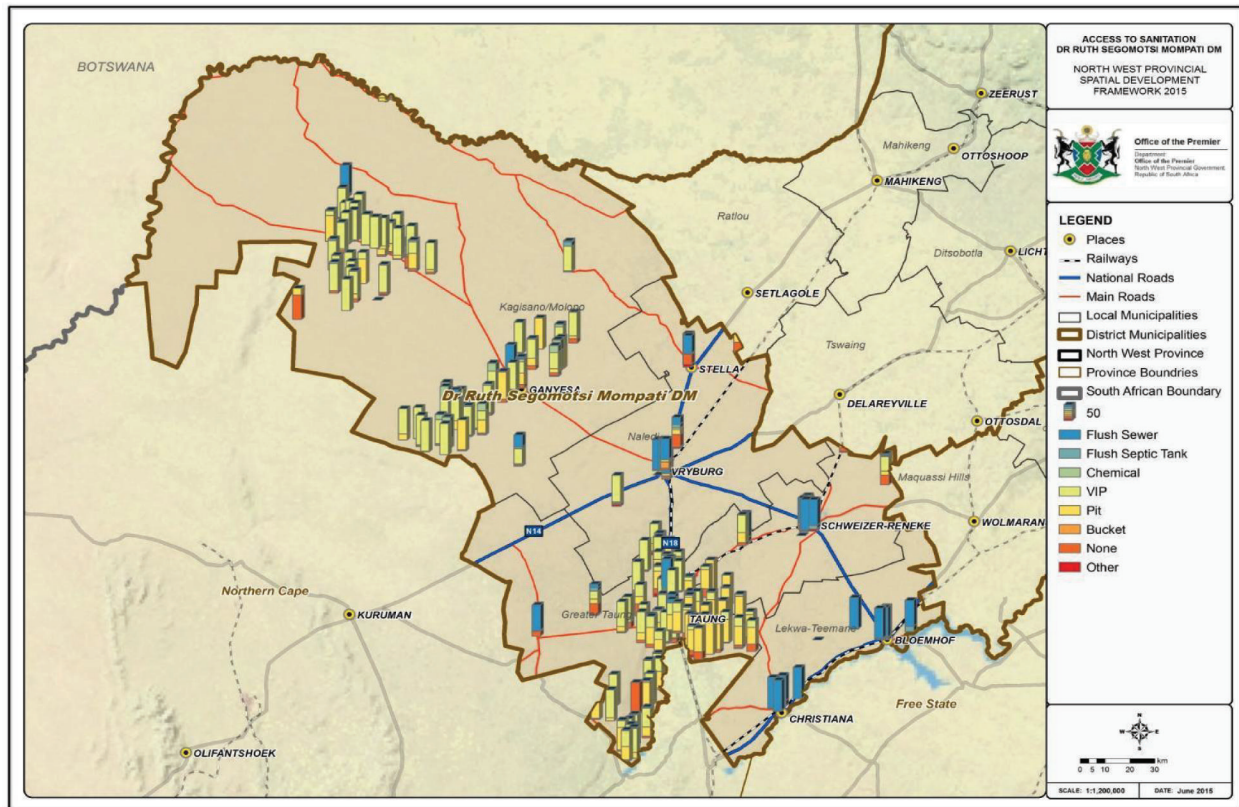
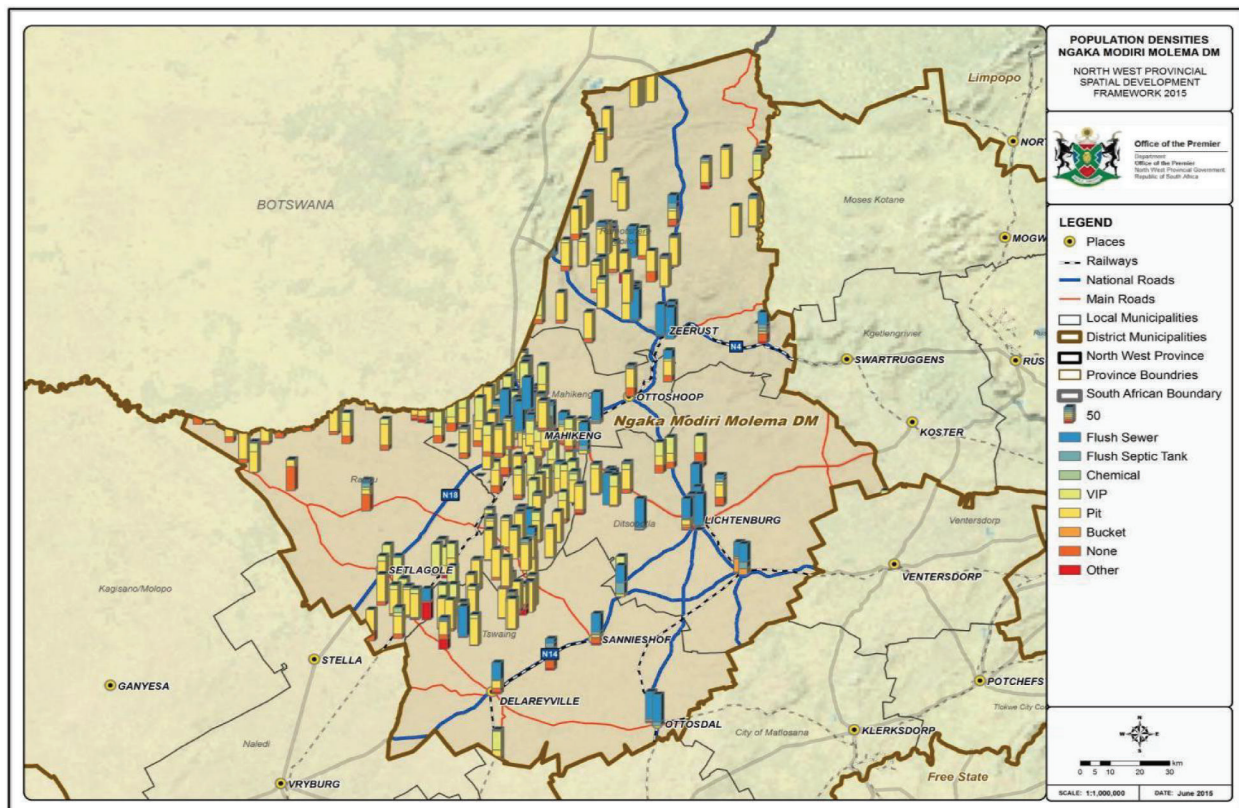
Map 3-51 Access to Sanitation for Bojanala District



Map 3-52 Access to Sanitation for Dr Kenneth Kaunda District





**Map 3-53 Access to Sanitation for Dr Ruth Segomotsi Mompoti District****Map 3-54 Access to Sanitation for Ngaka Modiri Molema District**

### **Water Conservation and Water Demand Management (WC/WDM)**

The Department of Water and Sanitation (DWS) puts a high rating on WC/WDM activities when evaluating any new applications for funding for water supply projects. WC/WDM is critical in the optimal utilisation of existing, local water sources and the efficient management of water supply.

In order to develop an appropriate WC/WDM plan, a Water Services Provider (WSP) needs to have information on existing water abstracted, treated, stored, supplied and used. Metering of all bulk components and of consumers' supply is therefore critical. Such information is utilised to develop a water balance, where the WSP would be able to deduct how to address Revenue (focus on increasing) and Non-Revenue (focus on decreasing) water.

Water losses are generally more prevalent in surface-supplied water schemes, but do not exclude groundwater-supplied schemes.

A summary of the Non-Revenue Water and Water Losses, per District Municipality (for municipal consumers) is presented in **Table 3-16**.

**Table 3-16: Summary of Non-Revenue Water and Water Losses per District Municipality**

District Municipality	Revenue Water (MI/d)	Non-Revenue Water (MI/d)	Water Losses (MI/d)	Non-Revenue Water (%)	Water Losses (%)
Bojanala Platinum (last available data from 2012)	63.75	54.53	53.90	46.1	45.6
Ngaka Modiri Molema (last available data from 2010)	32.47	15.03	15.03	31.6	31.6
Dr Ruth Segomotsi Mompati (last available data from 2009)	11.73	4.18	4.18	26.3	26.3
Dr Kenneth Kaunda (last available data from 2012)	38.13	6.33	6.33	14.2	14.2

*Source: National Non-Revenue / Water Loss Assessment, 2013*

The Non-Revenue Water and Water Losses for the Dr Ruth Segomotsi Mompati and Dr Kenneth Kaunda DM is doubtful. The metered water abstraction and consumption figures need to be updated for all supply areas in the NWP.

To illustrate: at a tariff of R8/kl, a loss of 10MI/d translates to potential financial losses of R80 000 per day – a significant amount if summarised per annum: R29.2 million!

### **Information Systems and Record-Keeping**

Each WSA is responsible for the provision of water and sanitation services within its area of jurisdiction. Without adequate information at hand on existing water supply infrastructure, it makes it more difficult for the WSA to plan and execute water supply projects. Many WSAs do not have all the as-built drawings of existing infrastructure in an information system, ready for interrogation and use in water development planning as well as management.

WSAs need to ensure that they obtain all as-built drawings of infrastructure from consultants and if possible, consolidate it with existing information in a system that can be utilised for infrastructure and asset management. Information may also be collected, stored and accessed using a CAD or GIS<sup>9</sup>. Asset registers

<sup>9</sup> CAD: Computer Aided Drawing. Typically used for engineering design and as-built drawings.



need to be spatially enabled and accurate, providing the latest information on infrastructure components' age, condition, capacities, materials, etc.

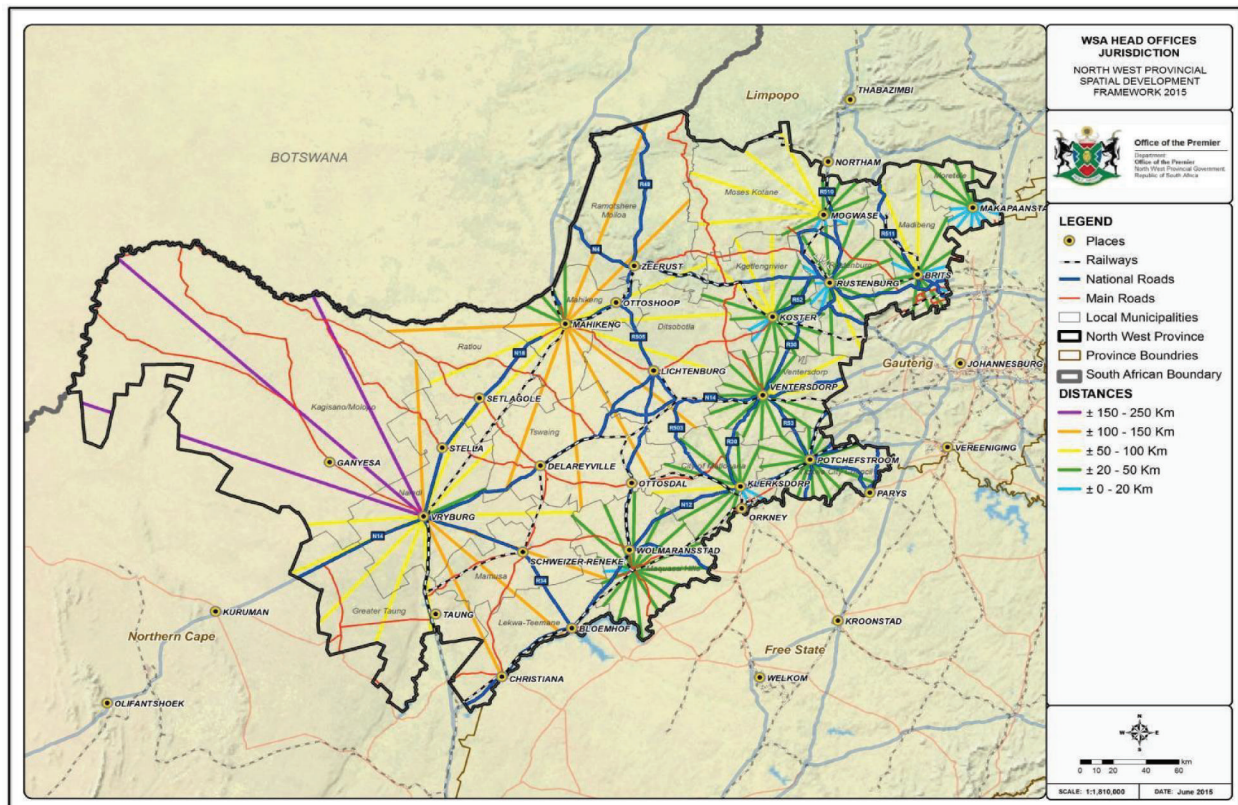
Even though some WSAs have a GIS, it may not be optimally utilised for the purpose of engineering infrastructure (water, sanitation, roads, stormwater and electricity). It will depend on where the GIS is hosted (Department) and the assigned responsibilities for the maintenance of the GIS.

### **Rural Extent**

Most municipal areas have a large rural component in terms of geographic extent. Households in rural areas are more dispersed and further located from formal infrastructure and developed water sources. The distance required to travel to and from settlements or components such as pump stations or reservoirs is larger than for denser-developed urban areas, therefore increasing maintenance costs and affecting staff availability.

In **Map 3-55** below, the distance requirements per WSA main town is illustrated geographically. It is clear that the District-level WSAs have a greater challenge in terms of the geographic area that it covers.

**Map 3-55 Illustration of WSA head office / town and area of jurisdiction**



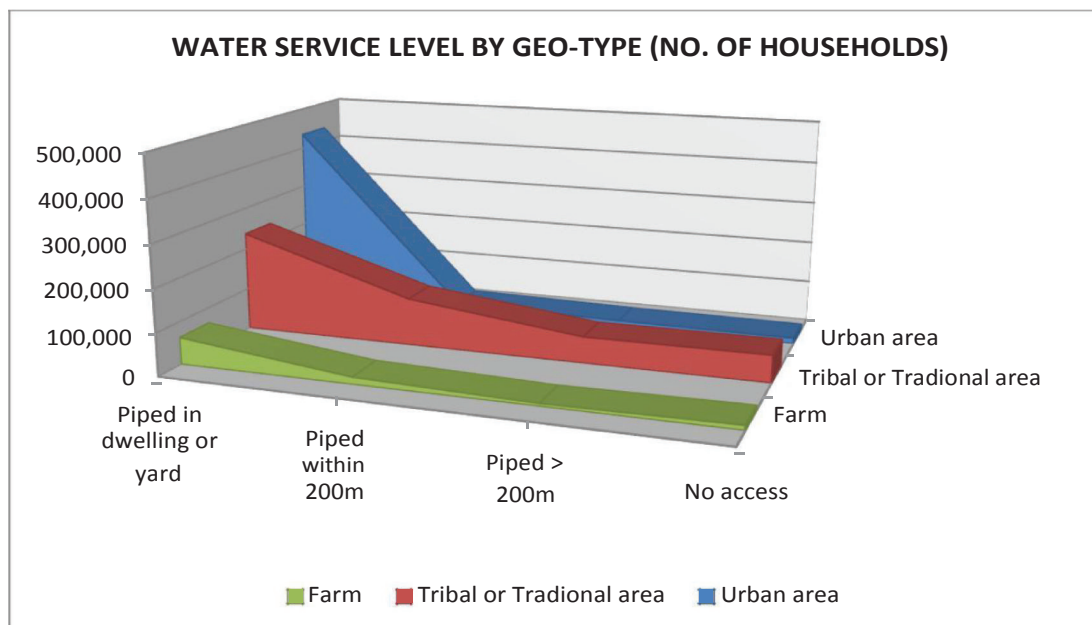
The longest distance (as the crow flies) from a WSA main town to the furthest corner of its area of jurisdiction is nearly 250km (Vryburg towards the north-west of the Kagisano-Molopo LM). The WSA with the shortest average distance to reach all consumers within its area of jurisdiction is the Moretele LM (average of 16km).

GIS: Geographic Information System. Typically used for representation of geographically orientated information for mapping, querying and analysis.

In **Figure 3-13** below, the piped water level of service is provided for the urban, traditional areas & rural areas and farmland from the 2011 Census. **The ideal scenario is also illustrated for comparison.**

A total of 88% of all urban areas are supplied with piped water inside the yard or inside the dwelling compared to 38% of all traditional or tribal areas that are supplied with a higher level of service. Bringing higher levels of service to all consumers is more challenging in rural areas as the topography, distances, source development and operational aspects all contribute to increased costs and management effort.

**Figure 3-6: Piped Water Level of Service per Geographic Sub-Place Type**



### Surface Water Users and Quality

In South Africa, the largest water consumer is agriculture, in the form of irrigated water use – predominantly from surface water sources. Second to that are the municipalities or domestic consumers and thirdly mines and industries. Competing for the same, limited water sources, creates a challenging environment for conserving our water, utilising water for development and growth and protecting the quality of water for our use as well as that of the environment.

In the agricultural areas of Schweizer Reneke, Ottosdal, Koster and Swartruggens, water quality is affected by runoff from lands which use fertilizer to increase production. This may lead to the development of algal blooms and more specifically blue-green algae, which produces toxic components. It would further increase the treatment costs of water used for domestic consumption.

One of the main sources affecting surface water quality is wastewater treatment works (WWTW) that are not operated according to its license conditions for effluent quality released back into the environment. The most prominent example is the Hartbeespoort Dam near Brits, which receives the poor quality water from Gauteng. This is the most eutrophic – actually hypertrophic – dam in South Africa, which is in a nutrient-enriched state to the extent of causing algal blooms, specifically blue-green algae.

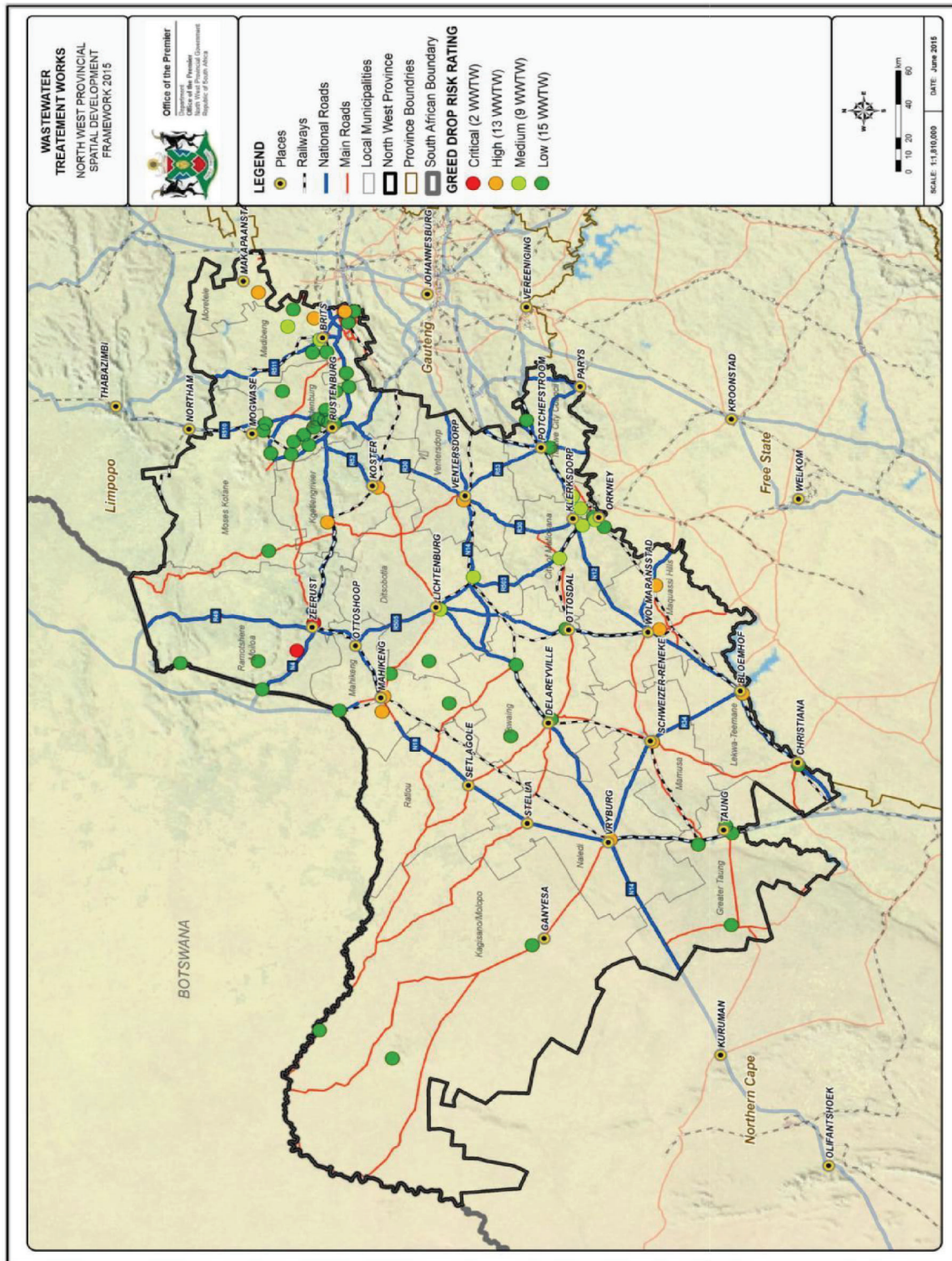
Furthermore, the Spitskop Dam (near Vaalharts) and the Baberspan Dam (between Delareyville and Sannieshof) are also reported as having high levels of blue-green algae and surface scum. Pollution in the Spitskop Dam is likely caused by agricultural runoff and fertilizer loads in the water sources. Pollution in the

Baberspan Dam however, is exacerbated by poor management of wastewater and effluent in the catchment area.

The Hartbeespoort Dam forms part of the Crocodile River catchment and both these sources are used for abstraction for domestic water supply (and irrigation). The Spitskop Dam forms part of the Harts River catchment and the Vaalharts Irrigation Scheme. Both are utilised for irrigation as well as domestic water supply. **Map 3-56** overleaf provides an overview of the last available Green Drop Risk Rating for the WWTWs within the province.



**Map 3-56: Wastewater Treatment Works – Green Drop Risk Rating, 2012**





## **Urban Development**

Urban development is considered a challenge not only to provide for the extension of water supply services to new consumers, but also to accommodate the densification typology of housing developments. Increased costs for land and development necessitated the need to densify settlements which is a great advantage to the consumer. It brings people closer to services and their workplace. The municipalities, however, need to make provision for the increased water requirements (volume) and infrastructure (bulk and reticulation) to meet those requirements.

All well-established town areas are faced with increased urban development and densification due to economic development and urbanisation.

## **Per Main Nodal Hierarchy**

This section provides a brief overview of the spatial challenges faced in the primary nodal areas of the NWP, related to water and sanitation.

### **• Rustenburg, Brits, Marikana and Hartbeespoort**

The Rustenburg and Brits areas are highly affected by the mining development and operations, both in terms of water and sanitation services and a water source management. The mining operations (and potential mining operations) attract people into the area, putting strain on the development of additional water supply and sanitation infrastructure, especially to provide for informal settlements. The applicable municipalities are further limited to develop on municipal land, which is not within the safety boundaries set by the mining operations (mine site and blasting limitations).

Furthermore, communities located on tribal authority land, should be served by the municipalities Rustenburg and Madibeng (both Water Services Authorities). The Royal Bafokeng Administration however provides services to people within its area of jurisdiction. There are a number of traditional authority areas next to or around Rustenburg and Brits, in which the municipalities need still to provide adequate water and sanitation services.

All municipalities face the continued challenge of ageing infrastructure, leakages, vandalism, illegal connections and making provision for densification of settlements. This requires additional manpower and financial resources that could have been spent on the maintenance and operation of existing infrastructure and provision for new connections and bulk water supply.

Water sources are shared resources and in this case, shared and managed by various institutions (municipalities, mines, Water Boards and the Department of Water and Sanitation). Coordinating activities between the institutions to promote development requires initiative, cooperation and leadership.

Water quality in the Hartbeespoort Dam (direct water source for the Hartbeespoort residents and part of the Crocodile River system – a direct source for Brits) is of concern and has been an on-going problem. The poor quality of treated (and untreated) sewer effluent from Gauteng is the main source of pollution. It increases the treatment costs, putting increased financial strain onto the Madibeng LM for ensuring sustained water quality, meeting national standards.

### **• Klerksdorp**

The Klerksdorp urban node is largely formalised and its main challenges are to maintain existing, ageing water supply and sanitation infrastructure whilst providing for new consumers and continued higher levels of service. Programmes for leak detection and repair and pressure management

should be developed to ensure sustainable water supply. Physical losses are estimated to be 24% of the system input volume; therefore potential for WC/WDM exists.

This area is renowned for its gold mining activities (and to a lesser extent uranium and other minerals), but as a result, is also affected by acid mine drainage. When mines closed, dewatering of shafts discontinued and water seeped back into the shafts, but is now exposed to metals and other mining-related infrastructure. The metals and other exposed components react with the water and become acidic. When left untreated and not dewatered, it may rise to the surface, where it pollutes the environment, surface water and forms a health and environmental hazard.

- **Potchefstroom**

Water supply to consumers are affected by the limits in bulk water treatment and storage infrastructure, however a project is currently under way to upgrade the WTW capacity. This will ensure continued water supply to current consumers and further developments in the area. Due to the increase in densification and new developments, some of the existing reticulated infrastructure is not appropriate and would need to be redesigned and replaced.

The Tlokwe LM has to take into consideration the siting of developments due to the dolomitic areas within the Potchefstroom and Ikageng urban areas.

Mining (gold and uranium) operations in the upper catchment could affect groundwater quality and pose a risk to the environment (decanting acid mine water) and surface water sources.

- **Mahikeng and Mmabatho<sup>10</sup>**

The Mahikeng and Mmabatho areas obtain water from surface and groundwater sources. The surface water source is the Setumo Dam, but this dam is also the water resource where the treated effluent from the Mmabatho WWTW is released into. The Mahikeng WWTW releases its treated effluent into the Molopo River, between Cookes Lake and Lotlamoeng Dam. The Molopo River flows into the Setumo Dam. The water sources are at high risk and already impacted by poor quality treated effluent, this affects the raw water quality abstracted and treated for domestic consumption. (High treatment costs, varying raw water quality and environmental degradation of the water sources).

It has been suggested by the All Towns Strategy for the Mahikeng Cluster (2015) to conduct a water use Validation and Verification study to establish the water used by the domestic, industrial and irrigation users. Especially for the groundwater sources (Molopo eye and Grootfontein wellfield) since the registered water use allocations for municipal use is 10.95 million m<sup>3</sup>/a and for irrigators, it is 11 million m<sup>3</sup>/a. According to the Drought Operating Rules for Stand Alone Dams Study (2013), the maximum available groundwater resources are 8.8 million m<sup>3</sup>/a, however this is only based on preliminary analysis results and detailed hydrogeological investigations are required to increase the accuracy and confidence levels of information. The DWS is in the process of assisting in this regard as the water sources in this cluster is shared not only between different water user categories, but also with the neighbouring country of Botswana.

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<sup>10</sup> The municipality has very little information on water use and water wastage, resulting in unreliable figures for leaks and actual use to conduct a water balance. This affects the planning ability of the Water Services Authority to ensure adequate water supply and management of water sources.

### **Spatial Opportunities**

Water is a key development resource for anyone whether it is for personal, industrial or mining, agriculture or municipal use. South African water law also made provision for water used by the environment's ecosystems in order to ensure the sustainability of our resources. This section describes the key spatial opportunities linked to the **use, development and protection** of the water sources within the NWP.

#### **a. Groundwater Development**

There are a number of areas that are underlain by high-yield potential dolomitic geological formations. These sources can be developed to ensure at least basic water supply to all consumers. A feasibility study is currently under way in the Kagisano-Molopo LM on providing basic and improved water services in this area.

Development of regional groundwater schemes and improvement of existing groundwater supply could be investigated in areas such as Moretele LM, Madibeng LM, Moses Kotane LM, most of the NMMDM and DrRSMDM.

In areas where mining operations are active, dewatering of mines can also be investigated as an opportunity to augment water supply to domestic consumers.

Water development to support agricultural activities such as crop production and livestock should be encouraged as it will enhance the economic status of people and encourage further infrastructure developments.

The WSAs in the NWP may lead the way to develop and implement suitable groundwater management and monitoring programmes, starting with metering of water abstractions and water use. This would assist greatly in developing water balances for the aquifers utilised for domestic consumption.

Water quality monitoring and management must be included in the management programmes for groundwater as there are many activities impacting on groundwater quality (on-site sanitation, fertilizers, livestock and mining).

#### **b. Surface Water Development**

There are a number of surface water sources that could be developed further as part of an integrated approach for water use in the larger catchment areas such as the Klipvoor Dam, Vaalkop Dam, Bloemhof Dam and Spitskop Dam. Furthermore, with improved operating rules of water resources, sources such as the Crocodile, Elands, Setlagole River, Schoonspruit River, Mooi River and Harts River could be further developed. The Vaal River, being one of the larger water sources in South Africa and forming the southern border of the NWP, could also be included as a developmental opportunity for all water use sectors.

The Hartbeespoort Dam is part of a water remedial programme – Metsi a Me – to address the hypertrophic status of the Dam. A number of activities have been developed, tested, initiated and implemented since 2008. This is an on-going effort by the DWS in improving the water quality in the Dam, but it remains dependent on the water quality received upstream of the Dam, from Gauteng. Lessons learnt from the Metsi a Me programme, can be applied to other dams in the NWP with similar environmental conditions.

A number of the dams mentioned in this section, along with smaller waterbodies and rivers are and should be further developed for recreational use and to promote further tourism development. Along

with economic opportunities, secondary benefits include raising awareness to conserve and protect the natural resources and attract further investment into the NWP.

### **c. Water Conservation and Water Demand Management**

Water Conservation and Water Demand Management (WC/WDM) is receiving a higher priority from the Department of Water and Sanitation (DWS) funding programmes and applying funding criteria for considering new projects. Utilising local water sources, optimising existing infrastructure and conservation of the water resources are critical in achieving sustainable water supply and sanitation services.

Industries and mining are not excluded from implementing WC/WDM as it has a direct financial and operational effect. Most mines are applying some form of recycling to ensure re-use of water in mining process and limited release of effluent. Mines in the Rustenburg area are utilising treated effluent from the Rustenburg WWTW, reducing therefore their need for potable water and creating a revenue stream for the Rustenburg LM. Similar opportunities exist in Brits, Klerksdorp and Stilfontein amongst others. Treated effluent from municipalities can also be applied towards irrigation of public spaces and recreational areas, instead of using treated, potable water.

The irrigation sector is also subject to improved efficiency measures not only as a financial consideration, but also environmental. The irrigation boards already implement some form of WC/WDM activities such as refurbishment of canals and improved irrigation technology. This could make more water available for other developments (urban, agricultural, industrial, etc.). This is evident in the areas supplied from and near the Vaalharts Irrigation Scheme.

All water use sectors play a role in the overall management and operation of water resources in a particular catchment area, or in shared water courses. Repairing leaks, adequate pressure management to prevent pipe bursts, improved management of water and wastewater treatment works, metering of bulk supplies and consumers – all have a direct positive influence on the availability and quality of our water resources, not to mention improved asset management and reduced costs to deal with ad-hoc emergencies.

### **d. Water Re-Use**

There are a number of wastewater treatment works in the province, some of which have a fairly large treatment capacity. It does not however limit the option to consider re-use of treated effluent by the municipality or other (such as for irrigation or industrial users) consumers. The following are the largest (>10MI/d design capacity) WWTW within the province:

- Brits WWTW (18MI/d), operating at 79%;
- Klerksdorp WWTW (36MI/d), operating at 70%;
- Lichtenburg WWTW (20MI/d), operating at 96%;
- Mmabatho WWTW (24.5MI/d), operating at 69%;
- Orkney WWTW (22MI/d), operating at 40%;
- Potchefstroom WWTW (45MI/d), operating at 71%;
- Rustenburg WWTW (42MI/d), operating at 84%; and
- Stilfontein WWTW (36MI/d), operating at 49%.

The responsible WSAs should consider the inclusion of re-use in the feasibility investigations and design of wastewater treatment works both new and if upgrading is planned, such as the Koster WWTW.



It is important however that the operational standards of the WWTW be maintained and kept as a low risk. The 2012 Green Drop risk rating indicated that of the above, the Mmabatho WWTW received a high risk rating and the Klerksdorp WWTW a medium risk rating. The best-performing WWTW were Potchefstroom and Rustenburg with low risk ratings.

Treated effluent from the Rustenburg WWTW is already being utilised by the municipality (for irrigation) and by some of the mines.

Furthermore, mines that are dewatering can be considered as an opportunity for further investigation to re-use the water (if not already used by the mine processes).

#### **e. Urban Development**

Urban development and densification provides the opportunity to provide more cost-effective services to a larger portion of the population. Costs to provide services increase with the distance required to build new infrastructure and transport the goods (in this case, water, sewerage) to and from the point of production and point of use.

Urban planning and development or formalisation of new townships should ensure optimal use of land and facilities. Further benefits include a reduction in transportation costs for residents as they are closer to amenities and services; decreased travel time; increased security; improved response times in case of emergency, likely higher levels of service; etc.

Municipalities can improve planning and budgeting to allow for existing infrastructure upgrades versus the extension of infrastructure to new areas. Densification of urban areas further reduces the extent of suitable land required for urban development as this poses a challenge for many municipalities.

#### **f. Irrigation Efficiency**

According to the 2013 NWRS2, water requirements for irrigation would largely remain the same, even though it is expected that there will be an increase in small-scale farmers. This would depend however on the irrigation efficiency of schemes. Irrigation is the largest water user in the country and any potential savings that could be achieved in this sector, would have a potential significant impact in ensuring water can be developed and utilised optimally for economic, socio and environmental benefit.

The Vaalharts Irrigation Scheme is the largest and oldest irrigation scheme in the country, consisting of a canal system of 1 176 kilometres. It irrigates 39 820 hectares of land, supporting an estimated 1 040 irrigation farmers. It furthermore provides industrial water to six municipalities and nine other industrial raw water users<sup>11</sup>. The current initiative to refurbish and upgrade the scheme has the potential water saving of 40 million m<sup>3</sup>/a (109.58ML/d), which could be allocated towards water for development, assisting emerging irrigation farmers. (This applies to the whole of the Vaalharts Irrigation Scheme, which serves areas in the North West Province and Northern Cape Province).

In the Bojanala Platinum DM, the potential savings that could be achieved from the Crocodile (West) and Hartbeespoort Irrigation schemes are estimated to be 51.65 million m<sup>3</sup>/a (141.51ML/d). In the Dr Kenneth Kaunda DM, the potential savings that could be achieved from the Schoonspruit

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<sup>11</sup> Taken from the Request for Proposal for Multi-Stakeholder Funding and Investment Plan for Vaalharts Irrigation Scheme Upgrading, April, 2015.

GWS and Mooi River GWS are estimated to be 18.06 million m<sup>3</sup>/a (49.5MI/d). In the Ngaka Modiri Molema DM, the potential savings that could be achieved from the Marico-Bosveld and Klein Maricopoort Irrigation Schemes are estimated to be 9.06 million m<sup>3</sup>/a (24.82MI/d). Lastly, in the Dr Ruth Segomotsi Mompati DM, the potential savings that could be achieved from the Vaalharts Irrigation Scheme, operations applicable to the DM, are estimated to be 9.18 million m<sup>3</sup>/a (25.15MI/d)<sup>12</sup>.

If irrigation efficiency can be improved in many of the irrigation schemes, the water made available would assist in unlocking economic opportunities in many of the rural areas of the NWP. It requires however large capital investment and coordination between the DWS (often the owner of the bulk infrastructure), Irrigation Boards and WSAs, amongst other.

#### **g. Rainwater Harvesting**

Rainwater harvesting has been considered in many of the All Towns Reconciliation Strategies for urban areas to assist in alleviating the water requirements from formal water supply infrastructure. Households equipped with rainwater harvesting tanks can utilise the raw water for non-potable purposes such as cleaning, washing of clothes or watering the garden. It will be more feasible in areas of higher rainfall, but it will nevertheless alleviate the water required from groundwater or from treated surface water.

#### **h. Water for Development: Tourism and Recreation**

The North West Province has a number of waterbodies that can and are utilised for purposes other than water supply to municipalities, mines and industry and agriculture. Dams, pans and rivers often form part of conservation areas that ensure the protection of the water and surrounding environment. Examples include the Hartbeespoort Dam, Bloemhof Dam, Vaal River, Baberspan and many other areas utilised for water sports, bird watching, camping, fishing and other activities.

Further developing and protecting water resources can contribute to the development of tourism and economy of the NWP.

#### **Spatial Opportunities per Main Nodal Hierarchy**

This section provides a brief overview of the spatial opportunities faced in the primary nodal areas of the NWP, related to water and sanitation.

##### **• Rustenburg, Brits, Marikana and Hartbeespoort**

Very little groundwater sources are utilised in this area to supplement the water supply. There is an opportunity to investigate the options for groundwater use, considering new developments in areas such as Marikana and the areas along the N4 corridor between Brits and Rustenburg. The Madibeng LM has a Regional Bulk Infrastructure Grant project to upgrade the Brits WTW and further upgrade bulk water supply to the Brits and Lethlabile water supply scheme.

Water sources in this catchment are expected to have an increased yield due to the increase in return volumes upstream, from consumers in Gauteng. This however may be offset by the increased water requirements in the neighbouring Limpopo catchment due to developments in Lephalale. Water transfers into Lephalale are planned via the Mokolo Crocodile Water Augmentation Project.

<sup>12</sup> Development of a Water Provisioning and Management Plan in the North West Province: 2008 – 2030. Final Draft, March 2011.

There are opportunities for water re-use in the form of treated effluent, which is already the case in Rustenburg.

- **Klerksdorp**

The towns of Klerksdorp, Stilfontein, Khuma, Orkney and Kanana are provided with water from the Midvaal Water Company's WTW, which abstracts water from the Vaal River. The WTW has a design capacity of 250Ml/d and is operating at 50%. The Midvaal Water Company also provides water to the mining industry (various shafts in the area), but the mining activities have scaled down (and therefore water use) due to the economic climate and mines reaching their end of life. This allows implies that the availability of water supply should not hamper any new developments in this region.

Klerksdorp and surrounding suburbs and towns (Jouberton, Alabama, Manzilpark, Kanana, Orkney, Stilfontein and Khuma) already have high levels of service and very small backlogs in water and sanitation services, which could ensure that the City of Matlosana LM can achieve universal access for all consumers within the national target of 2019.

The water source – Vaal River – is part of the Integrated Vaal River System and is managed and operated under careful guidance according to operating rules developed for this system (augmented from the Lesotho Water Project). Water abstractions by the Midvaal Water Company and releases of treated effluent by the Klerksdorp, Orkney and Stilfontein WWTWs are recorded and monitored. The total design capacity of the three towns' WWTWs are 68.3Ml/d (24.930 million m<sup>3</sup>/a) and they are operating at 57% of their combined capacities.

The gold mining activities are associated with acid mine draining. This requires the continued pumping and treatment of water to ensure safe releases back into the environment and returns to water resources. This, together with the potential re-use of municipal treated effluent, should be further investigated as water source options for domestic (including irrigation of public and recreational spaces) and industrial re-use. This includes supplying water to the Midvaal Water Company.

- **Potchefstroom**

Water sources seem to be sufficient until 2026 (All Towns Strategy, 2015). Irrigation water use from the Mooi River system needs to be verified as there is potential to supplement domestic water requirements if the full irrigation allocation is not going to be utilised.

Potchefstroom already has a high level of service and a very small backlog in water and sanitation services, which could ensure that the Tlokwe LM can achieve universal access for all consumers within the national target of 2019. There is a Regional Bulk Infrastructure Grant Project under way to increase bulk supply capacity (upgrade of the WTW), which will ensure that the current and future water requirements can be met.

An assessment is required into the re-use of treated mine water which could be utilised to augment water supply, but which also could affect the water available in Boskop and Potchefstroom Dams. Groundwater is a potential source for augmenting water supply in the area as there are dolomitic compartments. Mining (gold and uranium) operations however could affect groundwater quality.

- **Mahikeng**

The Mahikeng LM urban area, according to the 2011 Census, only had 138 households that were below RDP water levels of service. If this is the case, the urban area can achieve universal access

for all consumers within the national target of 2019. Due to the lack of adequate information on water supply and consumption, opportunities exist in developing and implementing an appropriate WC/WDM programme for this area.

The Mahikeng Cluster Area is supplied from various water sources, namely the Setumo Dam, Grootfontein wellfields and Molopo eye. There is currently a Regional Bulk Infrastructure Grant project in order to re-instate the capacity of the Mmabatho WTW which cannot operate according to design due to the poor quality of water from the Setumo Dam. The Mmabatho WTW is also being upgraded during this project.

The DWS is preparing a Terms of Reference for the development of a Larger Reconciliation Strategy for this region, ensuring water requirements can be met for current and future consumers. It is expected that this will be a two-year study period, possibly commencing during the 2016 calendar year.

#### **3.4.8.7.2 *Developments and Strategic Perspective***

This section describes the major developments taking place related to water resources and water services provision. Linkages to the National Development Plan, NWRS2 and Provincial Development Plan are also established to lead to a strategic perspective for the NWP.

##### **3.4.8.7.2.1 Water Resources Development**

This section address larger water resource development and infrastructure such as large dams and water transfer schemes that are the responsibility of DWS. It is expected that flow in the Vaal River would remain positive with the implementation of the Lesotho Highlands Water Project, Phase 2. This project is anticipated to be commissioned during 2020 to 2023. However, the recent meeting of the Strategy Steering Committee for the Vaal River System raised concern over the lack of progress made to implement WC/WDM and increase savings of water (June, 2015).

#### **Augmentation to Lephalale from the Crocodile (West) Catchment**

The increased mining operations and energy generation in the Lephalale area of the Waterberg District Municipality have resulted in increased water requirements which cannot be entirely met by local sources. The DWS is busy augmenting supply to Lephalale via the Mokolo Crocodile Water Augmentation Project. Water in the Crocodile (West) catchment will likely increase due to increased return flows from wastewater from Gauteng.

#### **Molatedi Dam, TSWASA Agreement**

An agreement was signed in 1988 for water in the Marico, Upper Molopo and Ngotwane catchment areas between South Africa, Botswana and the then Bophuthatswana government (the TSWASA agreement). A volume of seven million cubic metres per annum (7 million m<sup>3</sup>/a or 19.2MI/d) has been allocated to the government of Botswana, for transfer to Gaborone. Due to the increased water requirements and poor summer rainfall (2014/2015) in South Africa, this allocation has recently (DWS communication of 16 September 2015) been reduced to 5 million m<sup>3</sup>/a (13.7MI/d).

The agreement does not include any reference to the groundwater sources shared between the countries.

#### **Klipvoor Dam**

The Klipvoor Dam lies within the northern portion of the Madibeng LM and is currently utilised for irrigation. It forms part of the Borakalalo National Park and therefore a conservation area.



The Magalies Water Board is considering utilising the Dam for water augmentation to the Madibeng, Moretele and as far as the Bela Bela Local Municipalities. Detail feasibility studies are however required to establish the available yield from the dam for the purpose of domestic supply and utilisation by irrigated agriculture.

#### **Hartbeespoort Dam**

The Hartbeespoort Dam is a key area for development, tourism and recreation and forms part of the Crocodile (West) catchment area. The DWS continues with activities to improve the water quality of the Dam (being hypertrophic).

#### **Vaalharts Irrigation Scheme**

The Vaalharts Irrigation Scheme is in the process of being rehabilitated and refurbished. This would ensure more efficient use of water and therefore making more water available for potentially new urban as well as agricultural development. A preliminary study estimated that R4 billion would be required over a period of 20 years to rehabilitate and upgrade the infrastructure, ensuring its sustained and efficient operation.

#### **3.4.8.7.2.2 Groundwater Development and Protection**

There are no coordinated, regional developments of groundwater sources and this is definitely an opportunity for the NWP and WSAs, seeing the cross-border nature of the groundwater sources. The NWP has limited surface water sources available for further development and groundwater provides the opportunity not only for human development, but also economic growth in the form of employment and business development.

Areas that could potentially benefit from regional groundwater scheme development include: Northern area of Madibeng and Moretele LMs;

- Ventersdorp LM – rural area to the north of Ventersdorp;
- Northern area of the Ditsobotla LM;
- Southern area of the Ramotshere Moiloa LM;
- Eastern area of the Mahikeng LM;
- Whole of the Greater Taung LM;
- Western area of the Naledi LM; and
- North-central area of the Kagisano-Molopo LM.

Groundwater abstraction and quality management would remain a priority to ensure sustainable development of the source.

#### **3.4.8.7.2.3 Water Services Development**

The WSAs would continue making provision for and development of water supply infrastructure and sanitation in urban and peri-urban areas. Furthermore, regional bulk infrastructure schemes are being planned and implemented to ensure water requirements can be met for current and future developments. This section focuses rather on the larger scheme developments.

**Regional Bulk Infrastructure Grant (RBIG) Projects**

RBIG projects are mostly for the development of water supply, but may include bulk infrastructure development for treatment works larger than 2Ml/d (design capacity).

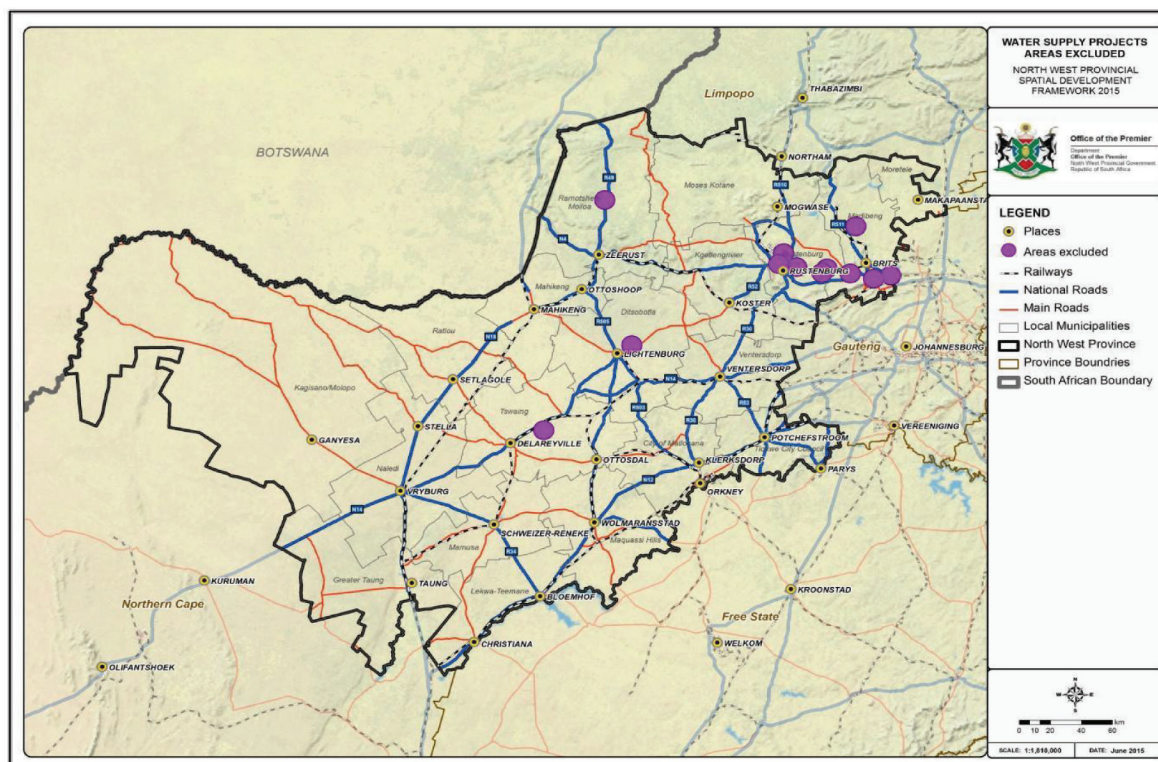
The following areas have registered RBIG projects for regional water supply development:

- Kagisano Molopo Bulk Water Supply (feasibility study for water supply to ensure adequate services for the municipality);
- Greater Mamusa Bulk Water Supply (refurbishment and upgrade of the Bloemhof WTW and abstraction works, storage and bulk pipeline from Bloemhof to Schweizer Reneke);
- Moretele Bulk Water Supply (upgrade of the Klipdrift WTW, additional storage, extension of water supply and raising of the Pienaars River weir);
- Pilanesberg Regional Bulk Water Supply (upgrade of the Vaalkop WTW, pumping, bulk pipeline to new Mafenya reservoir north of Phokeng);
- Taung / Naledi Bulk Water Supply (refurbishment of the Pudimoe 1967 WTW, additional WTW module, upgrade of Pudimoe 2003 WTW, bulk pipeline to Vryburg, bulk pipeline from Taung Dam to a new WTW at Taung, storage and reticulation);
- Ratlou Bulk Water Supply (water supply to Setlagole, Thutlwane and neighbouring Kraaipan and Madibogo); and
- Ventersdorp Bulk Water Supply (upgrade of the Ventersdorp WTW, bulk pipeline and new storage to Ventersdorp area).

The following RBIG projects relate to the upgrade or refurbishment of WTW and WWTW:

- Madibeng Bulk Water Supply (refurbishment and upgrade of the Brits WTW);
- Mahikeng Bulk Water Supply (refurbishment and upgrade of the Mmabatho WTW);
- Potchefstroom WTW upgrade;
- Koster Waste Water Treatment Works (new WWTW); and
- Wolmaransstad Waste Water Treatment Works (upgrading of the Wolmaransstad WWTW).

However, as illustrated in **Figure 9** below, the areas along the N4 (highway) corridor and the rural areas of the Madibeng LM, Ramotshere Moiloa LM, Ditsobotla LM and the Tswaing LM are not included in specific regional or local (MIG, MWIG Programmes) water-related projects, but have a total estimated water supply backlog of 25 000 households.

**Map 3-57: Areas not included in Current Water Supply Projects**

### Water for Industry and Mining

The majority of large scale mining operations are situated along the Western Bushveld Complex (along the N4 highway between Gauteng, towards Brits, Rustenburg and around the Pilanesberg Nature Reserve) and the Klerksdorp area (including Stilfontein, Vaal Reefs and Orkney). Smaller mining operations are scattered within the province, but has a lesser impact on water resources and water quality than the larger operations.

The gold mining areas increase the risk of water pollution both of surface and groundwater sources through decanting acid mine water. The platinum group metals mining areas also have to manage dewatering of mines, but do not pose an acid mine drainage risk.

Mines utilise water as much as possible with very little to no discharge by re-use of water for mine processes. An opportunity exists for treated municipal wastewater to be used by the mining sector, instead of mines abstracting directly or being supplied only with potable water.

Water for Agriculture (Irrigation, Livestock)

There are a number of irrigation schemes in the NWP, used mainly for crop, fruit and vegetable production on a large or commercial scale. There are however opportunities to develop community irrigation and water supply schemes suitable for crop, fruit and vegetable production as well as the maintenance of livestock.

**TABLE 3-17** provides a summary of the water service levels of each Local Municipality in the North West Province according to the 2011 Census.

**Table 3-17: Water Service Levels Per Local Municipality from the 2011 Census**

Local Municipality	Urban / Rural	No. of Households	No. of Households Above RDP	No. of Households At RDP	No. of Households Below RDP
<b>BOJANALA PLATINUM DISTRICT MUNICIPALITY</b>					
Moretele	Urban	2337	1596	548	193
	Tribal Land, Farming	49726	35483	4847	9396
Madibeng	Urban	44560	36448	3659	4453
	Tribal Land, Farming	116163	72733	12897	30533
Rustenburg	Urban	132544	113202	6696	12646
	Tribal Land, Farming	66499	54652	2494	9353
Kgetlengrivier	Urban	8711	7525	586	600
	Tribal Land, Farming	5961	4503	531	927
Moses Kotane	Urban	6302	5717	493	92
	Tribal Land, Farming	68891	36581	17966	14344
Sub-Total		501 694	368440	50717	82537
<b>NGAKA MODIRI MOLEMA DISTRICT MUNICIPALITY</b>					
Ratlou	Urban	-	-	-	-
	Tribal Land, Farming		4269	12200	10420
Tswaing	Urban	26889	7471	670	2274
	Tribal Land, Farming		7546	8284	4389
Mahikeng	Urban	10415	21066	89	138
	Tribal Land, Farming		23453	15384	24108
Ditsobotla	Urban	20219	20384	2555	1770
	Tribal Land, Farming		8969	4547	6274
Ramotshere Moiloa	Urban	21293	7538	380	356
	Tribal Land, Farming		15745	8377	8344
Sub-Total		227 000	116441	52486	58073
<b>Dr RUTH SEGOMOTSI MOMPATI DISTRICT MUNICIPALITY</b>					
Naledi	Urban	14214	11598	1550	1066
	Tribal Land, Farming	4359	2901	973	485
Mamusa	Urban	12585	9800	1427	1358
	Tribal Land, Farming	2040	1311	390	339

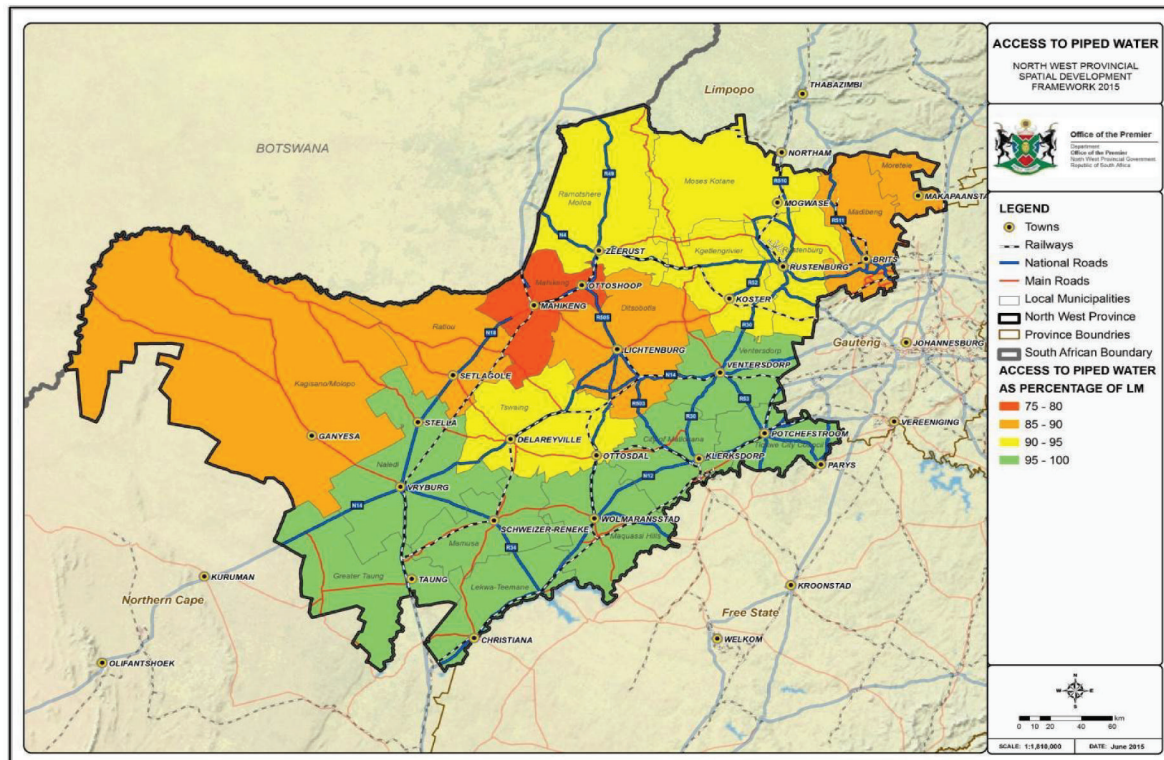


Local Municipality	Urban / Rural	No. of Households	No. of Households Above RDP	No. of Households At RDP	No. of Households Below RDP
Greater Taung	Urban	957	842	93	22
	Tribal Land, Farming	47656	9038	24775	13 843
Lekwa Teemane	Urban	13245	13032	93	120
	Tribal Land, Farming	1686	1382	138	166
Kagisano-Molopo	Urban	1499	1277	148	74
	Tribal Land, Farming	27032	8777	9740	8515
Sub-Total		125 273	59 958	39 327	25 988
<b>Dr KENNETH KAUNDA DISTRICT MUNICIPALITY</b>					
Ventersdorp	Urban	6372	5390	460	522
	Tribal Land, Farming	8190	4637	2676	877
Tlokwe City Council	Urban	48261	45171	1595	1495
	Tribal Land, Farming	4276	2769	769	738
City of Matlosana	Urban	114257	111462	1198	1597
	Tribal Land, Farming	6185	4188	1162	835
Maquassi Hills	Urban	15975	15285	278	412
	Tribal Land, Farming	4531	2299	1451	781
Sub-Total		208047	191201	9589	7257
<b>SUB-TOTAL</b>					
Urban		486 509	434 803	22 518	29 188
Tribal Land, Farming		575 505	301 236	129 601	144 668
<b>GRAND TOTAL</b>					
Urban and Rural		1 062 014	736 039	152 119	173 856
Percentage of total		100%	69%	14%	16%

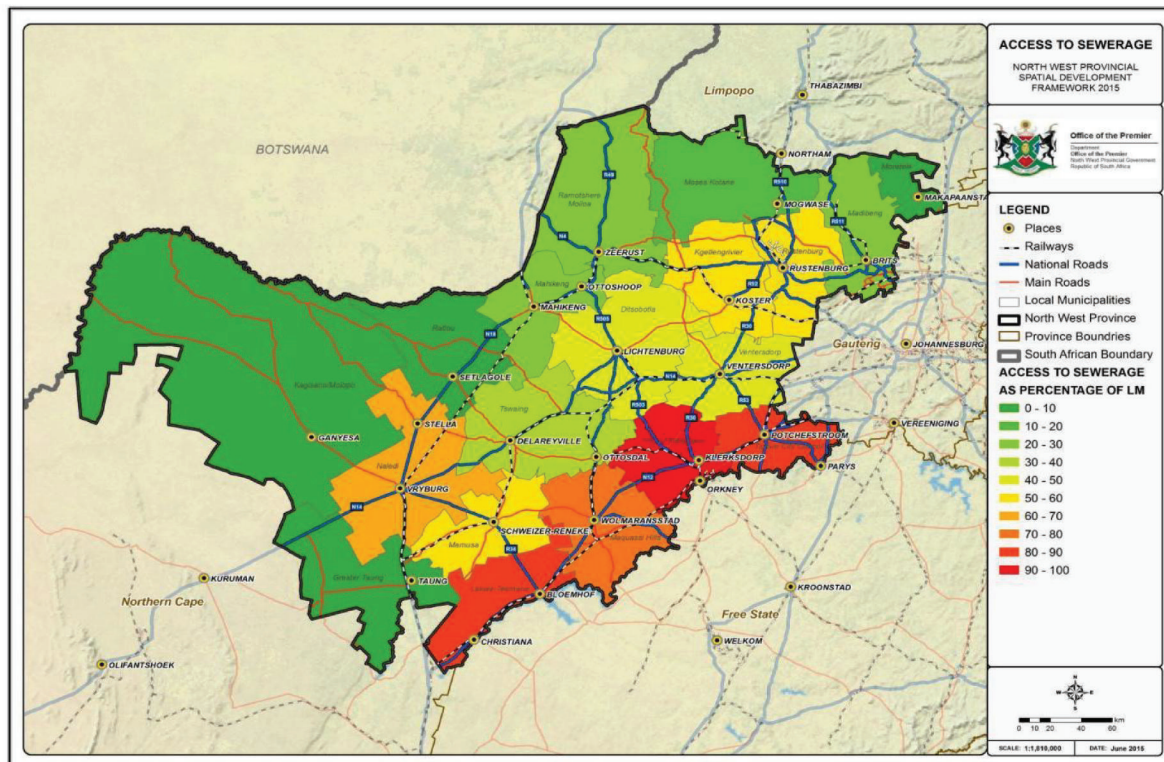
From the above, the municipality with an overall majority of urban households below RDP, is the Rustenburg LM – 12 646 households. This is largely due to the influx of people looking for employment opportunities in the mining sector, thereby an increase in informal settlements.

The municipalities with most rural households below RDP are Madibeng LM and Mahikeng LM having 30 533 and 24 108 households respectively below RDP. The situation in the Madibeng LM is to an extent similar to the Rustenburg LM, and in addition, people are also seeking employment in the neighbouring Gauteng Province whilst staying in the Madibeng LM.

Map 3-58: Existing Water Needs Categorisation



Map 3-59: Existing Sanitation Needs Categorisation





### 3.4.8.8 Electricity

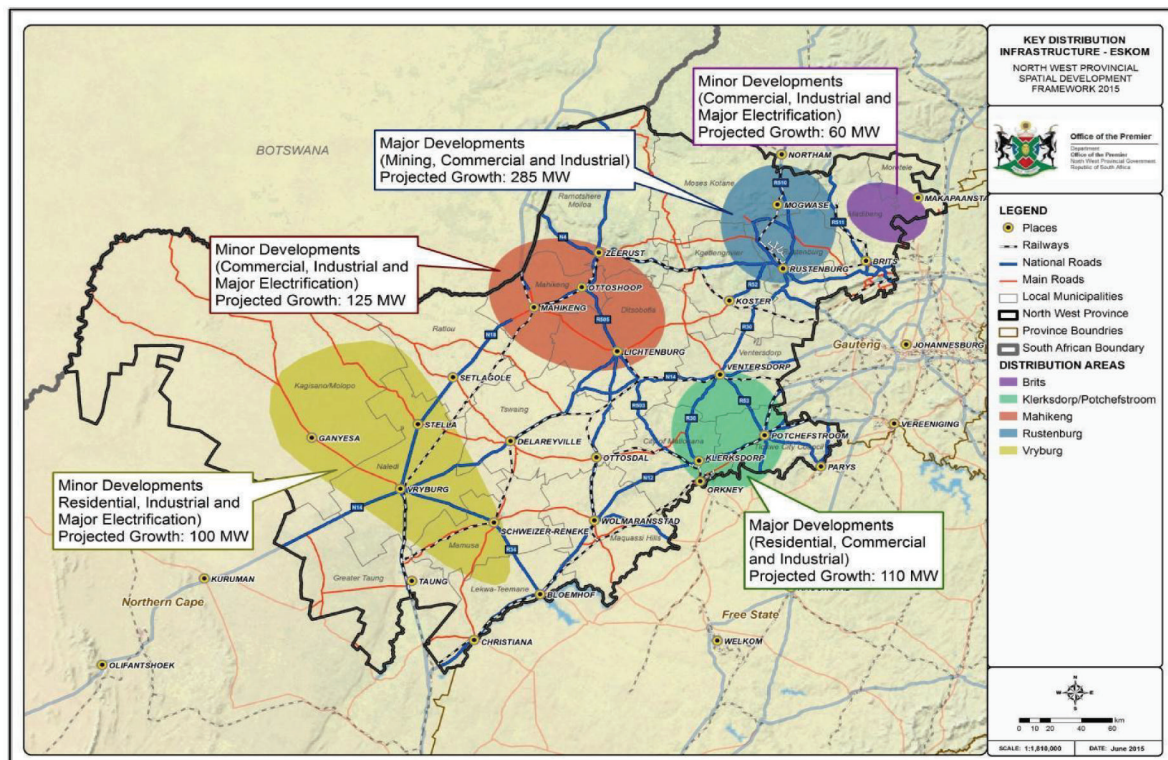
Electricity within the North West province is primarily provided by Eskom to re-distributors - mainly municipalities (10%), commercial (5%), agriculture (5%), mining (30%), industrial (30%) and Residential (20%).

Electricity for supply to the North West province is mostly generated by Matimba Power Station in Limpopo which will be augmented by the Medupi Power Station in future.

Load Drivers within the province. North West Province is provided by two customer load networks (CLN) viz. **Rustenburg CLN and Carletonville CLN with the main load drivers within:**

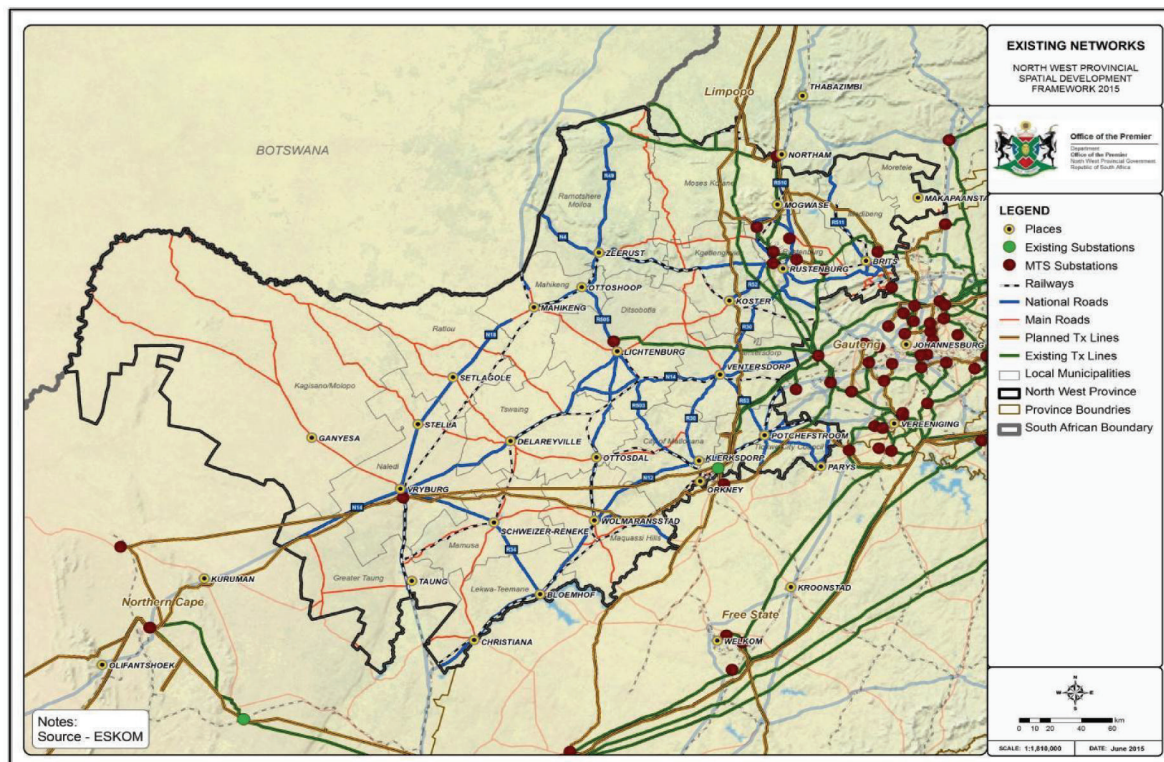
- **Rustenburg CLN**
  - Platinum mining and smelting operations
  - Home to the largest platinum refinery; and two largest platinum mines
  - The 4th largest integrated ferrochrome producer is based in the North West Province
- **Carletonville CLN**
  - Supplies predominantly gold mines
  - Richest gold-producing hub

**Map 3-60 Key Distribution Infrastructure**



3.4.8.8.1 *Existing Networks*

Map 3-61 Existing Networks

3.4.8.8.2 *Forward Planning*

The provision of electricity is managed by the Department of Energy (Energy Planner,) which is accountable for the Integrated Resource Plan (IRP). The Integrated Resource Plan (IRP) is intended to drive all new generation capacity development.

The Long-term Electricity Planning<sup>13</sup> goal is to ensure sustainable development considering:

- Technical constraints
- Economic constraints
- Social constraints
- Externalities

The purpose of the IRP is the identification of the requisite investments in the electricity sector that maximize the national interest by the identification of the investments in the electricity sector that allows the country to meet the forecasted demand with the minimum cost to the country.

**The Integrated Resource Plan provides a Strategic Grid Plan** which formulates long term strategic transmission corridor requirements. The Plan is based on a range of generation scenarios, and associated strategic network analysis. The horizon date is 20 years and it is updated every 2 - 3 years.

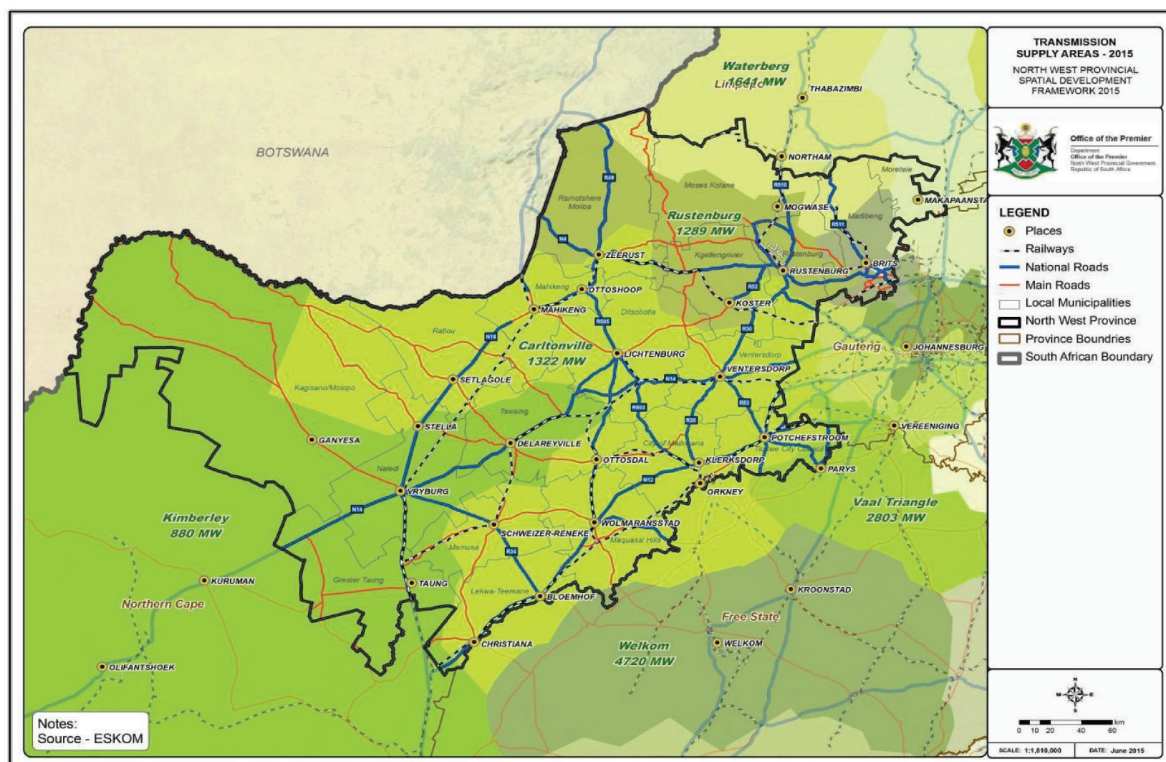
<sup>13</sup> Integrated Resource Plan for Electricity (IRP) 2010-2030. Update Report 2013. 21 November 2013



The transmission grid is divided into supply areas that are used to conduct the load forecast, and those areas have a certain number of MTS substations supplied by them. The supply areas cross provincial boundaries in some cases because these areas are related to the networks from which they are supplied. North West Province is supported by the following supply areas indicated on **Map 3-62**:

- Kimberley
- Carletonville
- Rustenburg
- Waterberg
- Pretoria
- Warmbad
- Vaal Triangle

**Map 3-62 The GCCA-2022 transmission supply area generation connection capacities**



The Transmission Development Plan (TDP) <sup>14</sup> represents the transmission network infrastructure investment requirements and covers a 10 year window

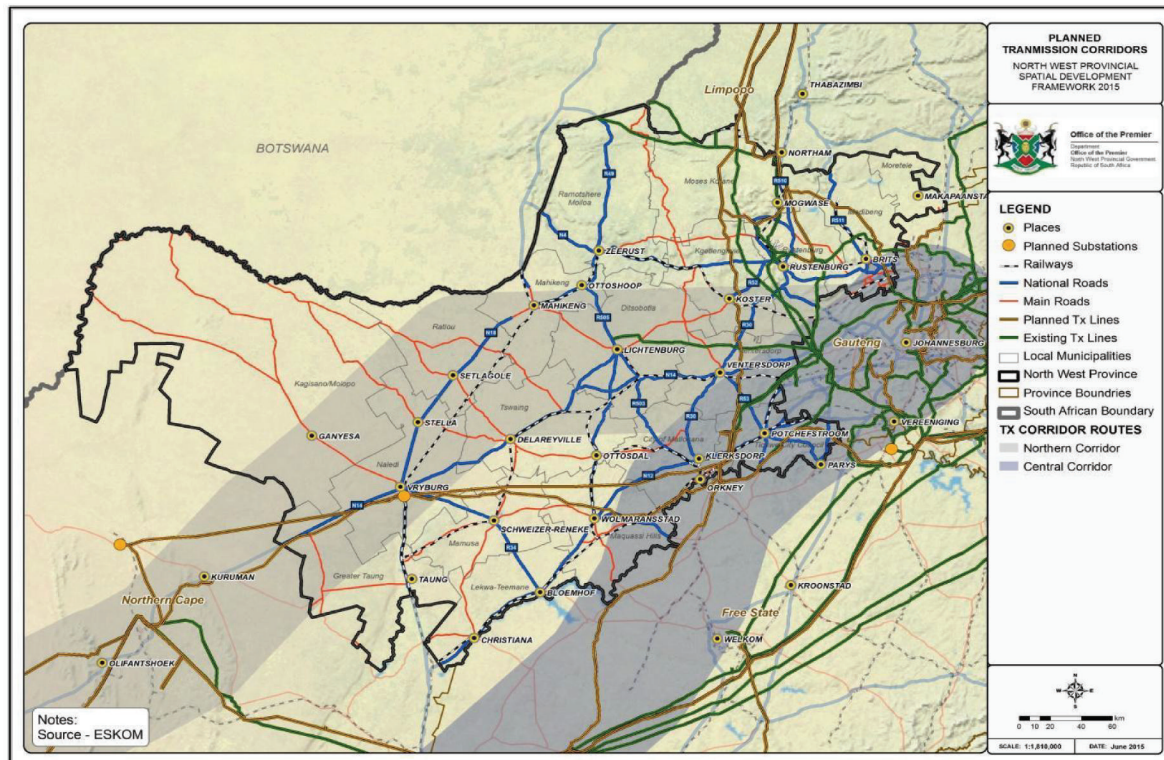
The projects for the North West province for the next 10 years are mainly the introduction of 400 kV lines and transformation to support or relieve the existing networks.

<sup>14</sup> Eskom Transmission development plan 2015-2024

Five transmission power corridors have been identified as critical to providing a flexible and robust network that could respond to meet the needs of future Independent power producer and **IRP** Integrated Resource Plan requirements. The Department of Environmental Affairs (DEA) is currently undertaking SEA studies of these routes as part of the SIP 10 initiative of the government's National Development Plan

The location of the potential MTS substation projects for additional grid access and the transmission power corridor routes are shown in **MAP 3-63 PLANNED TRANSMISSION POWER CORRIDORS**.

**Map 3-63 Planned Transmission Power Corridors**



#### 3.4.8.8.3 Access to Electricity

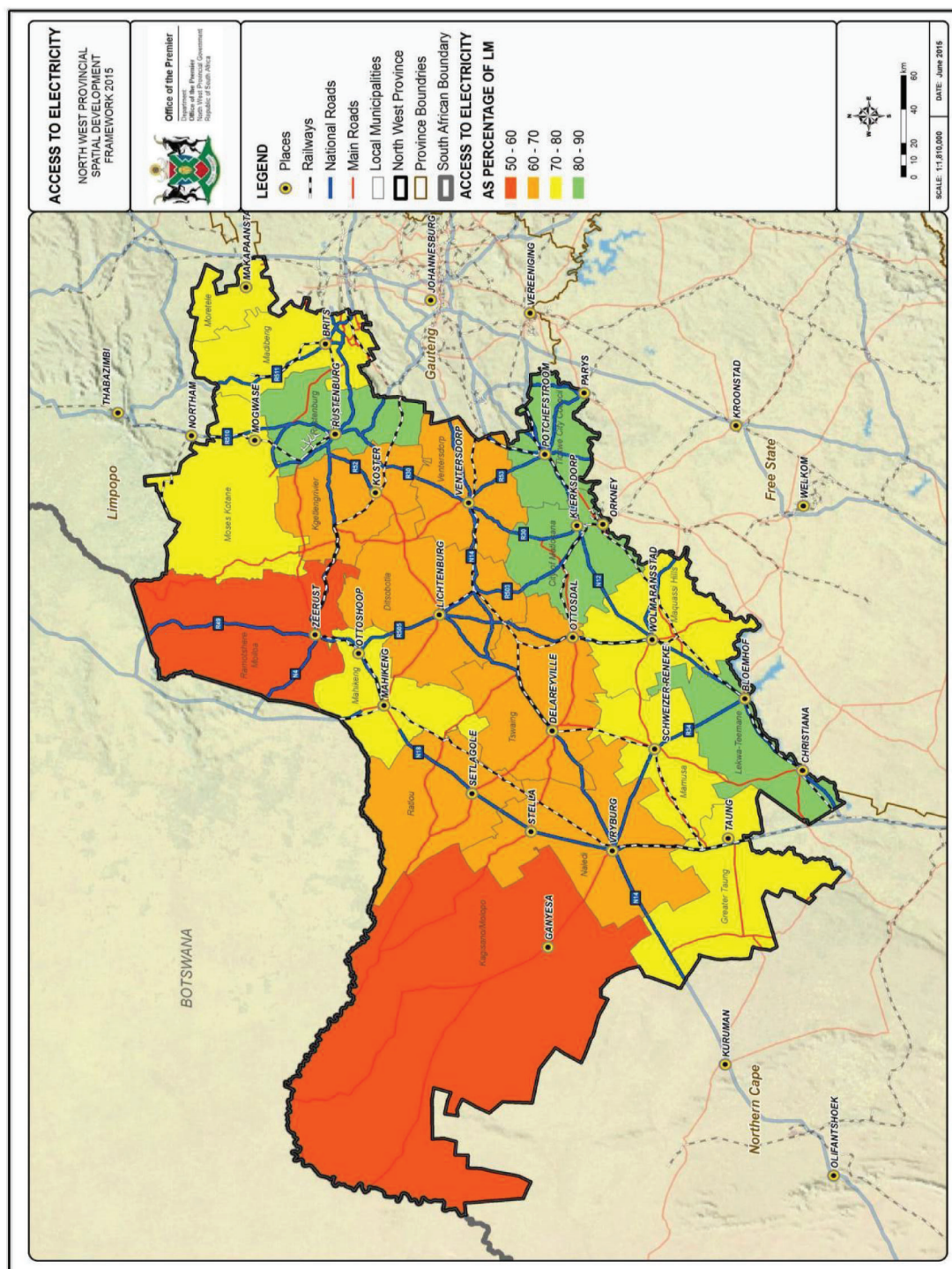
**Map 3-65** indicates that the municipalities with an overall majority of households with access to electricity include:

- City of Matlosana LM
- Tlokwe City Council LM
- Rustenburg LM
- Lekwa Teemane

Kagisano-Molopo LM and Ramotshere Moiloa LM are the two municipalities with the lowest access to electricity.



## Map 3-64 Access to Electricity



## 4 CHAPTER 4: SPATIAL DEVELOPMENT FRAMEWORK

### 4.1 Introduction

The **Spatial Challenges and Opportunities** provided as part of Chapter 3 provide the crucial components that underlie sustainable development, i.e. need for basic infrastructure and development for the poor, economic growth and development, environmental conservation and improved livelihoods. These spatial development priorities form the basis for guiding specific decisions regarding the desired spatial development and arrangement of broad land uses within North West and investment and development spending.

Chapter 4 Spatial Framework provides a Spatial Framework and Development Strategies that will manage future growth and associated change in a way that protects and enhance the use of natural resources, biodiversity and lifestyle values. This requires a highly sustainable pattern of development based on the efficient utilisation of land and infrastructure, supported by management decisions over ad-hoc and dispersed forms of development.

The Development Strategies provides for ten (10) Strategic Objectives, each providing for a set of Spatial Development Strategies, Strategic Focus Areas and Strategic Projects.

Future growth scenarios are defined providing for the baseline and sustainable growth targets

The layout of **Chapter 4** is summarised in **Figure 4-1**.

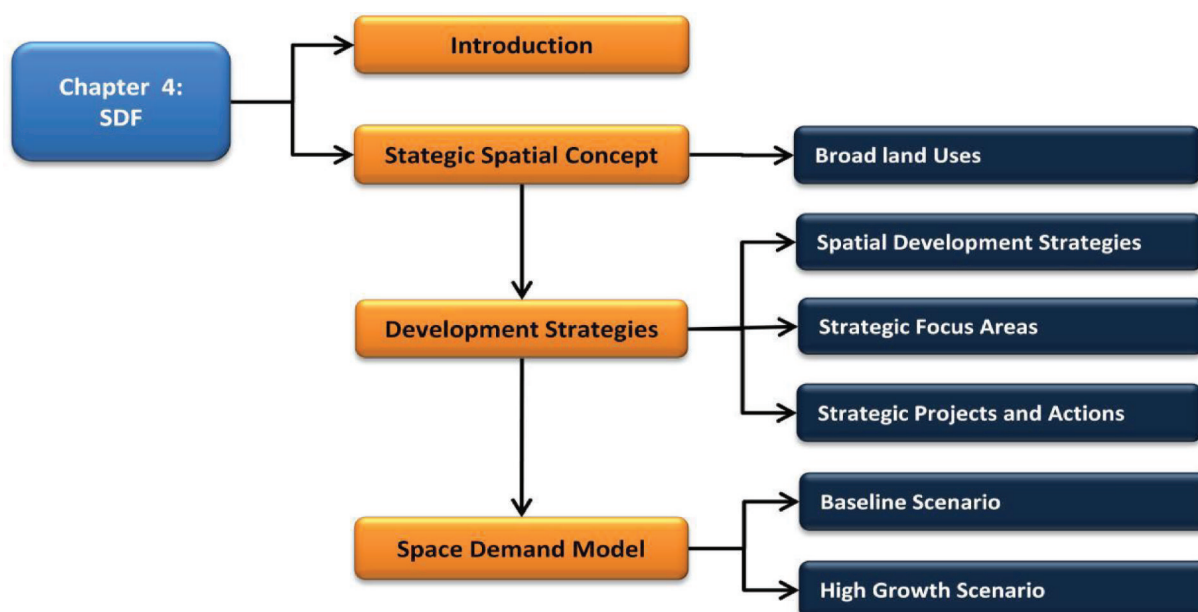


Figure 4-1: Chapter 4 Lay-Out



## 4.2 Strategy Development

### 4.2.1 Introduction

The development strategies of the North West Spatial Development Framework need to be supportive of the objectives of the Vision 2030 National Development Plan, North West Development Plan 2030, and international and national policies, principles and initiatives to reduce poverty and inequality over the next two decades.

The North West Development Plan 2030 provides desired socio economic outcomes, mechanisms to achieve it and conditions necessary to provide the focus for strategic priorities.

**The socio economic outcomes** include:

- Economy and employment
- Improving education, training and innovation
- Social protection

**Mechanisms** necessary to achieve the outcomes include:

- Economic Infrastructure
- Transforming human settlements
- Environmental sustainability and resilience
- Inclusive rural economy

**The conditions** necessary include:

- Building a capable and developmental state
- Fighting corruption
- Building supportive, safe and cohesive communities

In order to provide spatial dimension to the North West Development Plan, the North West Spatial Development Framework needs to support the North West Development Plan and also provide guidance for future spatial development that is aligned to national, provincial, district and local planning.

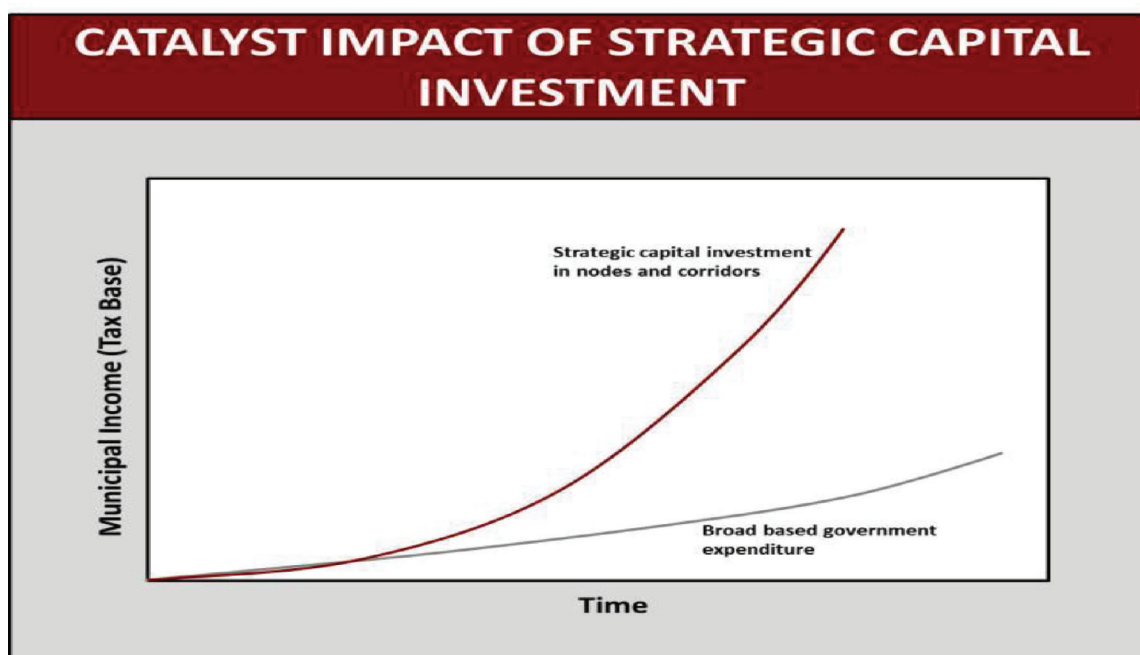
### 4.2.2 Spatial Development Values

In order to plan and manage the spatial implementation of development in the province it is crucial that all stakeholders agree on the core values which will help shape the spatial framework of the province. The core values are intended to achieve integration between stakeholders through better linkages connecting sector programmes, aligned infrastructure, social services, government spending, private sector investment and economic development.

The core values for the North West Province are recommended to be the following:

- **Environmental integrity and sustainability** through achieving a balance between safeguarding natural resources, optimizing the livelihoods of communities and developing a flourishing economy;
- **Optimum use of existing resources** including agriculture, forestry, renewable energy potential, already impacted land (brown field areas) minerals, bulk infrastructure, roads, transportation and social facilities;

- Reduced settlement sprawl and more compact formalized settlement through densification and diverse, mixed land uses;
- **Rapid economic growth** that is sustained and inclusive.
- **Government spending on fixed investment** focused on localities of **economic growth and / or economic potential** in order to gear up private sector investment stimulate sustainable activities and create long-term employment opportunities.
- Development of **productive land uses (creating economic opportunity) could stimulate needed economic growth**, job creation and tax base expansion. This will **increase municipal income** enabling increased public sector investment to be focused towards **social upliftment**.
- Where **low economic potential** exists investments should be directed at projects and programmes to **address poverty and the provision of basic services** in order to address past and current social inequalities.
- Strategic capital investment in future settlement and economic development opportunities should be channeled into activity corridors and nodes that are adjacent or link to the main growth centres in order for them to become regional gateways.
- The development of rural areas (CRDP)
- Integration, synergy and linkages between urban and rural areas supported by appropriate infrastructure;
- **Community based spatial planning** and enforceable land use management based on agreed sustainable community development codes with unified provincial legislation;
- **Correction of the historically distorted spatial patterns** of settlement with optimum use of existing infrastructure, integration of residential and employment opportunities in close proximity to each other;
- Achieving **integrated development** at community level;
- Monitoring and evaluation of achievement in **service delivery**.



### 4.2.3 Provincial Spatial Development Scenarios

When considering future possibilities in the context of historical trends and dynamics there are believed to be at least two possible growth scenarios for the province.

Essentially the “**low growth, inequitable share development scenario**” sees the existing trends continuing. The **baseline scenario** referred to in terms of the land use budget section of the report.

The “**growth intervention, equitable share development scenario**” pre-supposes interventions through development management tools and spatial development plans will result in positive, beneficial change which alters current trends towards a higher growth trajectory and more sustainable outcome. This would involve more compact formalised development in integrated settlement regions, containing productive rural resources linked to employment and economic growth in the primary and secondary nodes and revitalised tertiary and fourth order settlements. This refers to the **high-growth scenario** referred to in terms of the land use budget.

Each of these is discussed in more depth below:

#### Scenario 1: Baseline – Low Growth: Inequitable Share

The main urban centres, immediate adjacent rural areas and the main transport corridors linking them are the areas where urban and peripheral urban growth can be expected over the next 15 to 20 years. The main features of the scenario therefore are expected to be as follows:

- Strong private sector investment in high growth areas with a large onus for infrastructure upgrade.
- Broad based government expenditure aimed at addressing social need in poverty stricken areas.
- The aforementioned stimulates isolated tax base growth; effectively penalises private sector initiative; and ultimately increases the net tax burden.
- Low and negative population growth is anticipated to continue within the core urban areas – Rustenburg, Brits, Mahikeng, Potchefstroom and Klerksdorp – as urbanisation continues. There will be large scale demand for urban and peripheral urban sites with a consequent demand for urban level services.
- Continued and extensive peripheral urban settlement development in the relatively high population regions – Mahikeng, Rustenburg, Madibeng, City of Matlosana and Tlokwe.
- Relative population stagnation is anticipated in the freehold land areas to the western side of the province – Kagisano, Ratlou and Twaing
- Continued moderate levels of population growth is anticipated within the former homeland areas towards the South-West and North-Eastern areas of the province – Ramotshere Moiloa, Moses Kotane, Ditsobotla and Greater Taung.

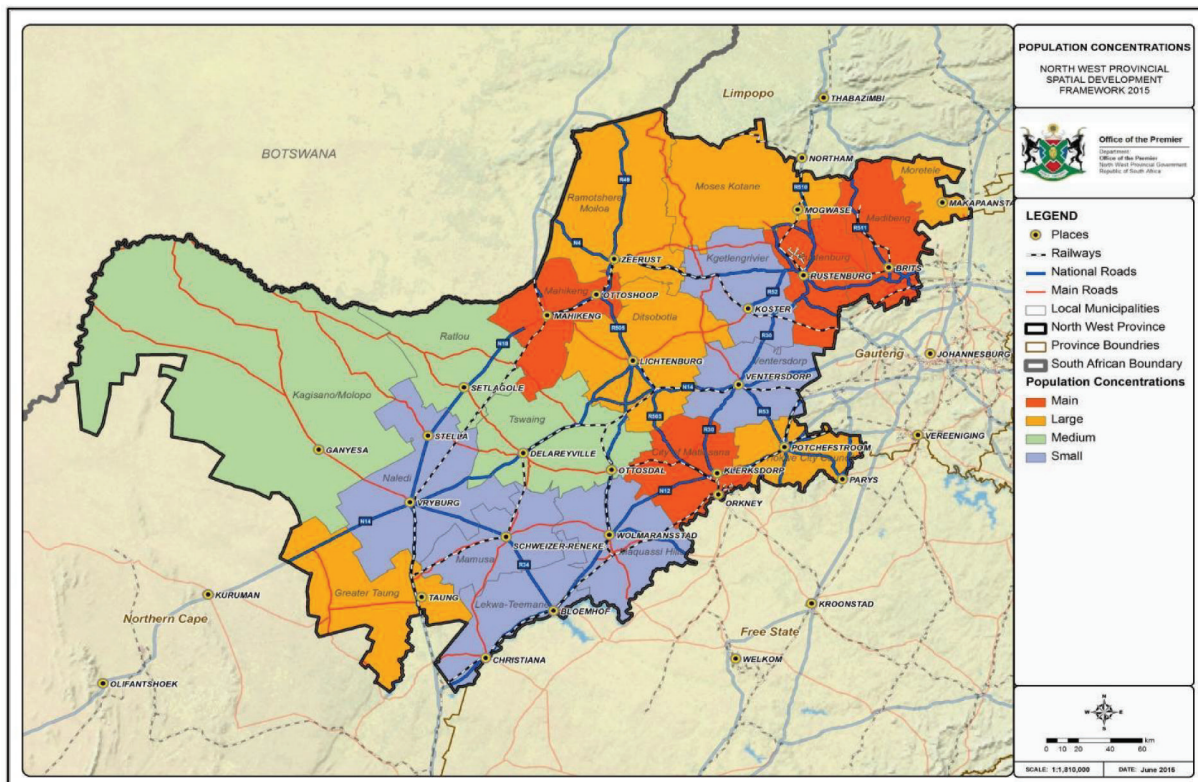
This scenario is expected to continue to fuel the following development impacts:

- It will result in more and more challenges affecting areas that are supposed to be conserved for future generations – biodiversity hot spots could be destroyed.
- In about 15 to 20 years valuable resources such as the forests and other precious resources will shrink and eventually vanish. Agricultural soils will be washed away, there will be no grazing land for rural households, poverty levels will increase and rural land will continue to lose its value.
- If efforts are not made to improve the rural areas to ensure that migration is discouraged, the urban areas could become overpopulated resulting in the depletion of resources, breakdown of infrastructure, and lack of facilities to support them. This situation will result in government reaction rather than planning for future growth.

- Vacant and local commonage land resources will become fully developed with time. As the land release process is complex, it will be difficult for the urban areas to expand resulting in a lack of development. Property values will increase with resultant increased in rents. The costs of living will be pushed to very high levels.
- Peripheral urban settlement sprawl if unchecked would also result in government continuing to pour out resources for infrastructure in unsustainable settlements.
- Existing infrastructure will be overstretched in some of the towns with numerous negative implications as result.
- Infrastructure as well as some key roads has already outgrown their planned capacities.
- The imbalance between population, jobs and economic opportunities within the province will be sustained.
- Economic and employment growth will continue along its current trajectory, maintaining the joblessness cycle within the province.

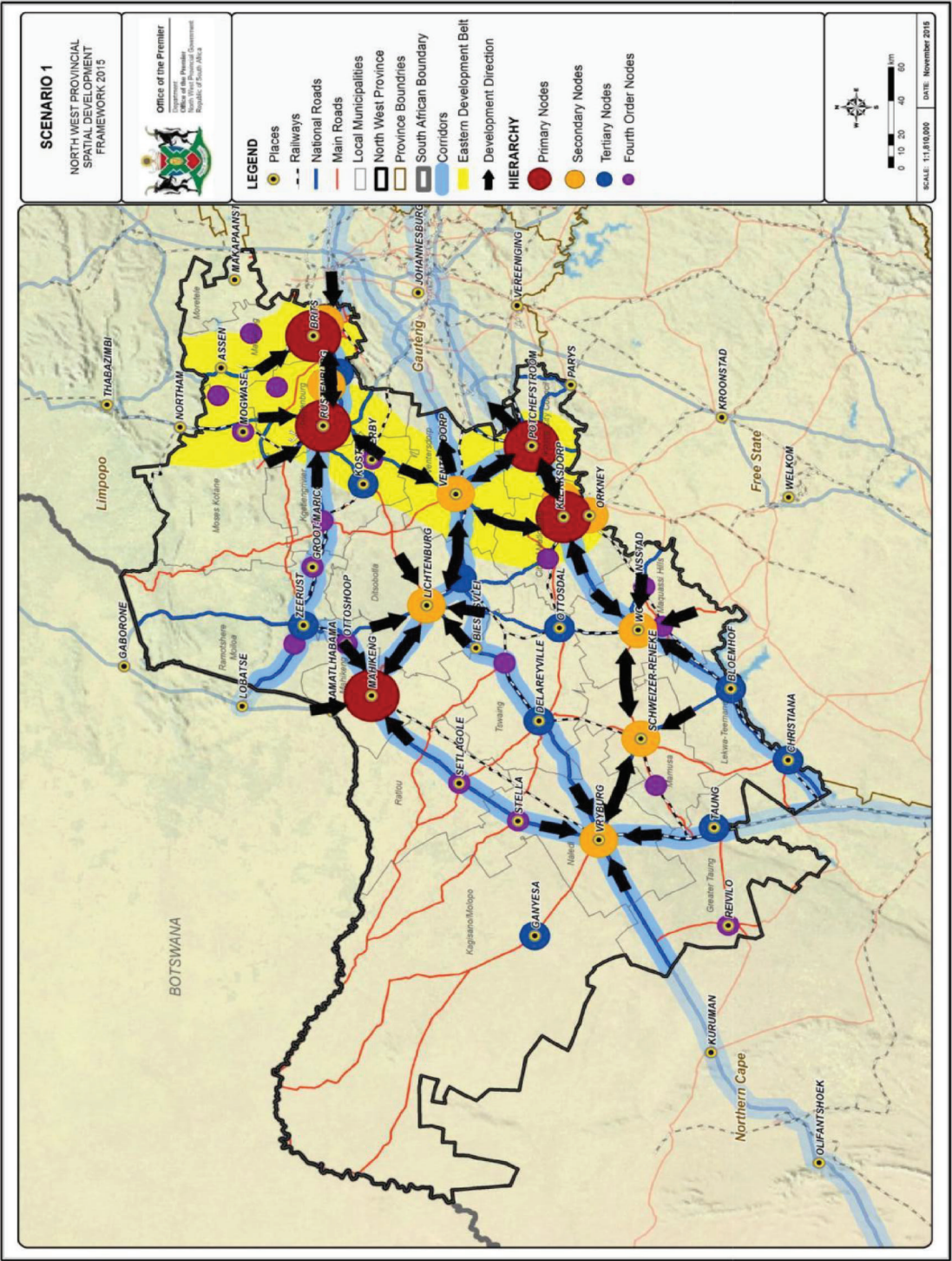
**Evidently, the baseline scenario is not the preferred option to address future growth within the province.**

**Map 4-1 Population Concentrations**





Map 4-2 Development Scenario 1



## Scenario 2: High-Growth – Growth Intervention Development

The high road/ high growth scenario reflects a much more optimistic scenario. However, this scenario will require direct decisive interventions. The high-growth scenario will require exceptional growth rates of approximately 8.7%. It will **require decisive and well thought through accurately aimed public sector interventions**. There should be a refrain from following a “blanket approach” where politics determine expenditure. **Future development should be bound by economic rationale** – meaning that money should be invested in locations where it will have maximum impact. This will result in an improved spatial development pattern, with:

- Strong private sector investment in high growth areas, supported by focused government infrastructure investment to optimise the growth effect and subsequent income-generating, revenue side of the tax equation (i.e. accelerate taxable / productive investment)
- Onus for infrastructure upgrade vests with government and is not shifted to private sector
- Private sector responds, establishing higher confidence levels, which lead to greater investment propensity
- More tax revenue is generated – creating more scope for social investment in low growth areas
- Government investment in low growth / marginal markets should be highly focused and strategically aimed at high potential nodes and corridors – enhancing attractiveness for (income generating) private sector investment (multibillion Rand private sector investments have a much greater and more sensible job creation impact – and success rate – compared with relatively small scale, government-funded entrepreneurial projects)
- The emphasis will gradually shift from government investment in social services and non-revenue generating subsidy housing to new income generating commercial developments, job creation and concomitant tax base expansion – yielding a more equitable and sustainable overall development scenario
- Focused economic development in the high population concentrations within Rustenburg, Madibeng, Mahikeng, City of Matlosana and Greater Taung activity nodes as Economic Focus Zones to be developed in tandem with the first order nodes.
- The aforementioned will stimulate broad based tax base growth; effectively rewarding private sector initiative; and ultimately reducing the tax burden on individual contributors.

This scenario will need to include planning for the following issues:

### Land use management:

- The massive demand for urban and peripheral urban land requires strong, integrated and transparent land use planning and management systems at a local level, where potential land use conflicts can be resolved.
- Land use planning within the rural areas and communal land areas are also vital and conflicts in terms of land allocation, planning and management between local government and traditional authorities should be resolved.

### Settlement planning:

- The extensive demand for urban and peripheral urban sites requires high quality integrated planning between the main government service providers of housing, water, waste and sanitation, education, health, roads and transport.
- It is vital that strong and integrated settlement planning capacity is built at local level to provide well planned, located and serviced urban and peripheral urban sites.
- Improved and integrated settlement planning will be achieved within the next 15 to 20 years, enabling formalisation of compact settlements along effective transport routes.

- Informal township areas should be formalised and effectively serviced and provided with the required social and educational facilities. Accessibility to these townships should also be increased in order to ensure proper linkages to economic / labour nodes.

**Economic development:**

Employment creation is vital in the rural areas and rural towns of the province. It goes without saying that the main task of government is to facilitate business investment, growth and development to create these jobs. The economic sectors of growth and opportunity in the province should be targeted, namely: agriculture and forestry, mining, manufacturing, trade, finance and business services, general government services and construction.

The establishment, nurturing and growth of small businesses, which tends to employ more people relative to the scale of their investment, are especially important, particularly in the context of rural development. Some of the key constraints to business growth and development include lack of land tenure, lack of business, technical or managerial skills, lack of market information and knowledge, lack of access to credit, isolation from markets through poor roads and infrastructure and insufficient demand to support sufficient sales in poor communities. It is critical that resources are targeted at businesses that have a sound business model, a good prospect for success and a clear path to commercial independence.

**Infrastructure:**

The high-growth scenario must be based on successful implementation of integrated infrastructure development which will be geared towards sustaining both rural and urban development initiatives. Strategic transport corridors should link the rural areas with urban areas. Integrated programmes need to be carried out in shared impact areas of potential and economic opportunity.

**Human resource development:**

Lack of co-ordination and capacity constraints in key provincial departments and agencies, compounded by leadership and staff changes in crucial departments and entities has led to the non-implementation of government policy. If no efforts are directed towards redressing this situation in 15 to 20 years, no plans would be implemented and there would be complete chaos with each department championing their cause at the expense of the next department.

**Governance:**

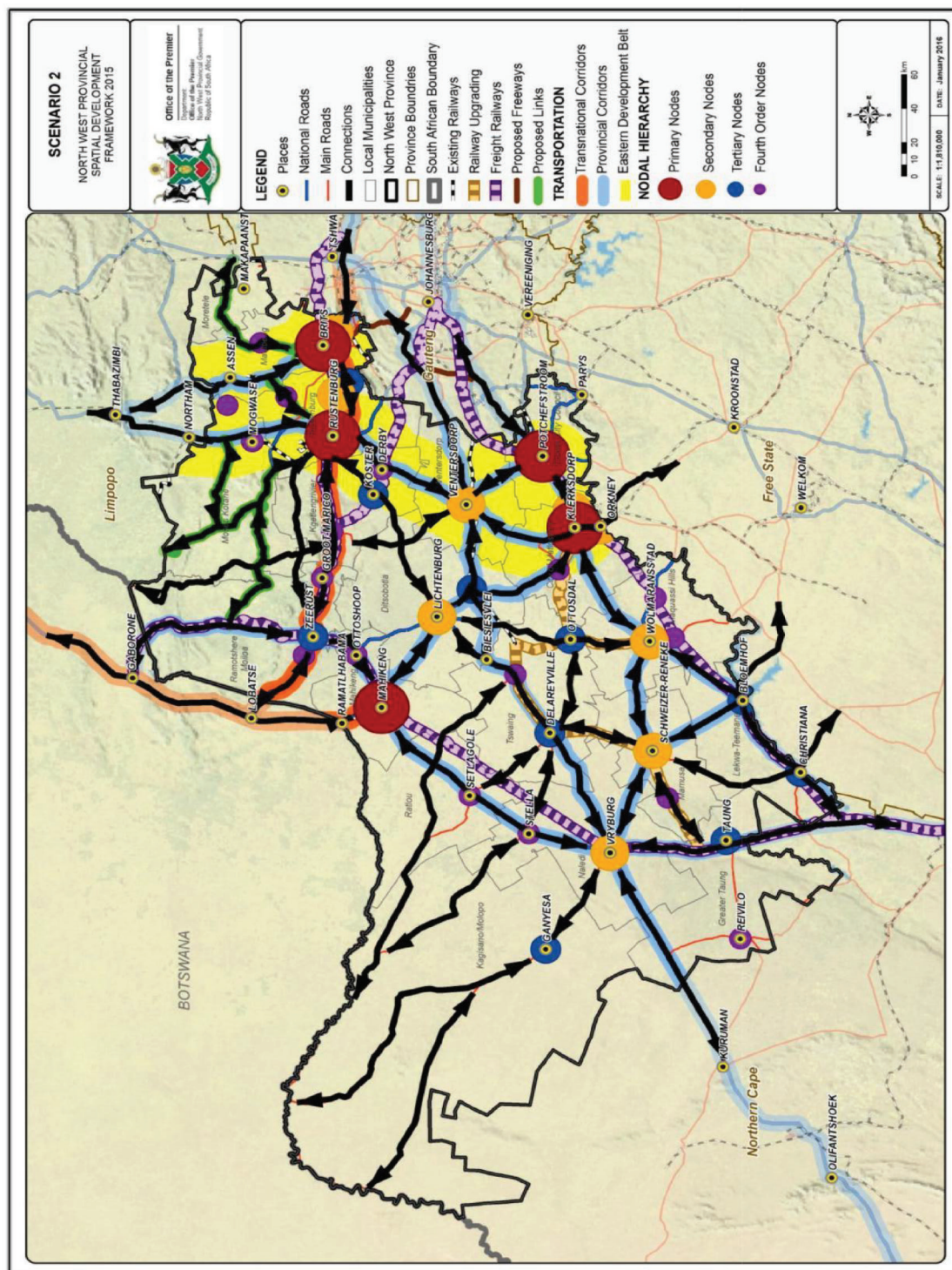
Irreversible physical damage to the environment would increase in future if no action is taken to correct the problem of overlapping legislation and policy instruments. The managed development scenario as prescribed by SPLUMA assumes that a single legislative instrument is established at national and provincial levels to ensure that a wall to wall planning and land use management system is introduced.

The long term vision of formalisation of compact settlements will need co-ordination and cooperation across all government spheres and relevant stakeholders, in particular focusing on peripheral urban and rural settlements.

Lack of coordination and capacity constraints have a direct impact on the quality of development management, resulting in scattered development rather than integration. Issues of lack of coordination also apply in cases where other government spheres are preparing spatial plans and the need for a framework to guide all these processes cannot be over emphasised.



Map 4-3 Development Scenario 2





#### 4.2.4 Development Philosophy

North West Province comprises numerous unique and significant development potential attributes including the environmental quality of life in certain areas, availability of resources, temperate climate and rural development opportunities. Whilst water resources are restricted in certain areas they are abundant in others. There is a large population with potential to be a strong market, with the development of skills and rural economy. The growth of the informal economy presents a substantial opportunity and urbanisation forces are immense and offer opportunities for improved quality of life, access to services and amenities.

A future functional spatial development pattern for North West requires the integration of sustainable natural resources, economic development and job creation and human development to provide the Spatial Development Vision:

**“A sustainable urban and rural spatial development pattern focussed on a modern, ecologically sustainable economy, supported by a suitably skilled labour force and providing for quality of living”**

It is believed the future spatial perspective would comprise a Spatial Development Framework of **managed human settlements** clustered in settlement nodes and corridors alongside productive areas, **managed ecological natural resource areas** and connected to a network of strategic transportation routes, open to the global, national and provincial economy.

In the context of a future development framework which underpins the Spatial Development Framework vision for the North West Province, there are several strategic requirements which need to be addressed. These include the following:

- Harnessing the opportunities provided by urbanisation forces to achieve effective rural development;
- Adopting a flexible approach which suits the province and enables sustainable development rather than inhibits growth and development
- Creating world class infrastructure, services and amenities to attract investment
- Integrated infrastructure development planning responding to long term forecasted requirements
- Pro-active planning which integrates aspiring economic activities into the mainstream economies and urban fabric
- Safeguarding existing resources and creating opportunities for renewable energy development;
- Consensus on where to develop and not develop the province
- Connecting the spatial frameworks to catalytic programmes of the North West Implementation Framework and Plan
- Creating opportunities for increased international, national, provincial and municipal connectivity, linked by strategic transportation routes in the province
- Achieving improved quality of life in our settlements through formalisation, provision of planned amenities and consolidation of land uses, and
- Gearing up of spatial planning capacity, skills, systems and procedures to achieve the vision

Moving forward, the development philosophy for the Province needs to ensure that the SDF is an enabling management tool which supports the strategic “Developmental State” approach in those identified areas where development should be actively promoted in accordance with the policies and strategic objectives of the communities, municipalities and the departments in the province.

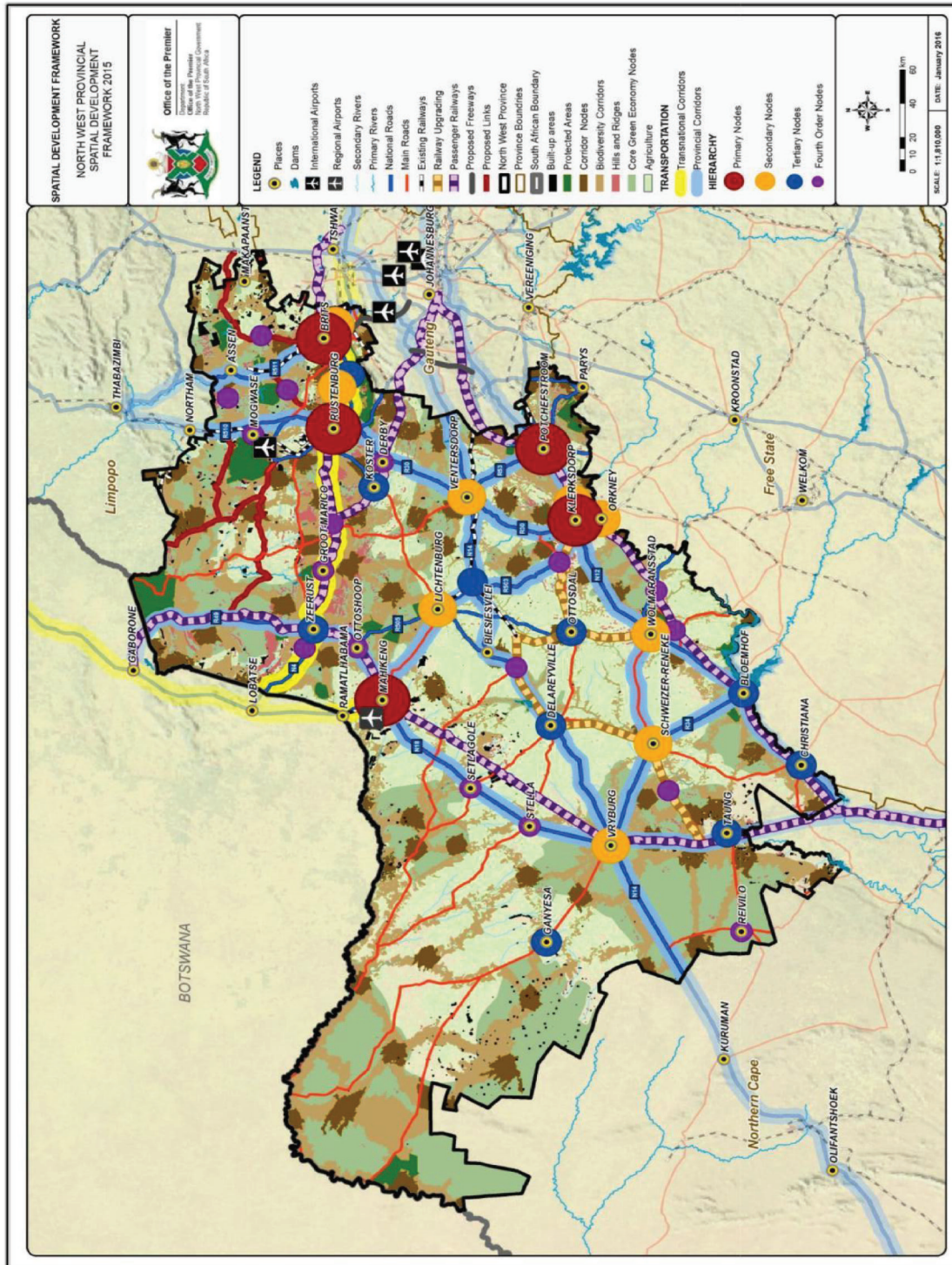
In addition, there is a need to adapt the spatial planning, land use management systems and policy frameworks to meet the unique needs of developmental governance within North West. Fulfillment of the

abovementioned strategic requirements, core values and principles is of paramount importance in order to achieve consensus on the future spatial vision of the province.

#### **4.2.5 Spatial Development Concept**

As a first step towards a holistic spatial development strategy for North West, a **Spatial Development Concept** was formulated. This **Spatial Development Concept models** spatial direction and context to future developments. This framework promotes, clarifies and refines the spatial development principles and development priorities supported by relevant policies and legislation and define the desired spatial form of North West. The **Spatial Development Concept** is depicted on **Map 4-4**.

Map 4-4 North West Spatial Development Concept



### 4.3 Development Strategies

A set of interrelated strategic development objectives provide the foundation for the spatial development strategies for North West 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:**

Focus development on regional spatial development initiatives, development corridors, development zones and nodes

**Strategic Objective 2:**

Protect biodiversity, water and agricultural resources

**Strategic Objective 3:**

Promote Infrastructure Investment

**Strategic Objective 4:**

Support economic development and job creation guiding the spatial development pattern of North West

**Strategic Objective 5:**

Balance urbanisation and the development of rural areas within North West



**Figure 4-2: Strategic Focus Areas**



#### **4.3.1 Strategic Objective 1: Focus development on regional spatial development initiatives, development corridors, development zones and nodes**

##### **4.3.1.1 Spatial Development Strategy**

Focussed development involving:

- The integration of regional and sub regional spatial development initiatives, with the aim of leveraging bilateral investments to have an overall greater regional impact.
- The strengthening of development corridors, development zones and development nodes

##### **4.3.1.2 Strategic Focus Areas:**

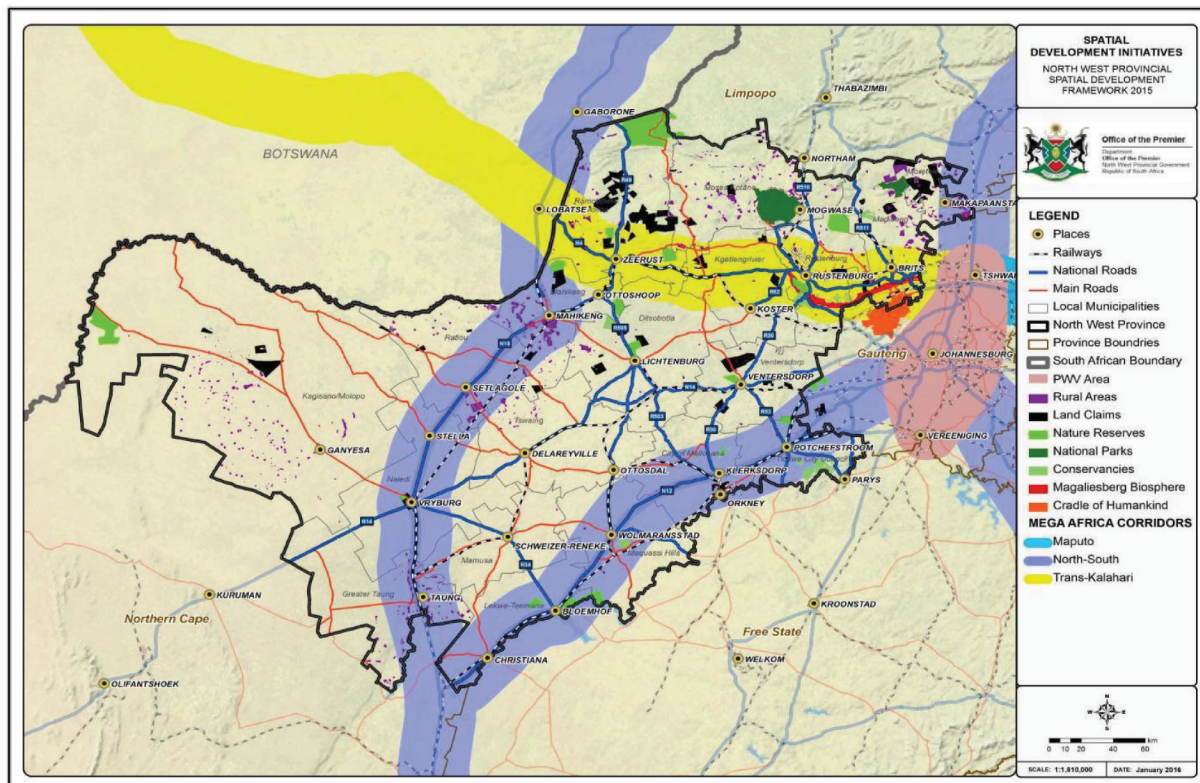
###### **4.3.1.2.1 *Supporting Regional and Sub regional Development initiatives***

Supportive development initiatives on a regional and subregional scale include:

- The Platinum Development Corridor / Trans-Kalahari Mega Africa Corridor (N4) as part of the Coast 2 Coast Corridor (C2C)
- The North-South Mega Africa Corridor linking Cairo with Cape Town including the N1

The following development objectives support regional co-operation:

- Increased sustainable economic growth in targeted sectors, which include:
  - Improved agricultural productivity
  - Increased trade
- Improved management of transboundary resources and tourism
- Effective support for international agreements and programs.

**Map 4-5: Strategic Objective 1: Capitalise on Regional Spatial Development Initiatives**

The following **regional spatial initiative development objectives** need to be achieved:

- The mobility of movement of goods and people within the sub region promoting trade involving:
  - The strengthening of the transnational development corridors to ensure:
    - The efficient movement of goods between Gauteng and Walvis Bay harbour
    - The improvement of the development link between Botswana, Namibia and South Africa
    - The improvement of links between developments within adjoining provinces.
  - The enhancement of cross border trade
- The provision of industries focused on:
  - Exporting through Maputo, Walvis Bay, Cape Town, Richards Bay and Durban harbours.
  - Utilising the strategic locality of industries
  - Providing goods for downstream dispersment to manufacturing and trade within the subregion
- Management of natural assets and development of tourism initiatives enhancing economic links between tourism foci areas, including:
  - The Vredefort Dome World Heritage Site
  - The Magaliesberg Biosphere
  - Fossil hominid sites of South Africa

- Cradle of Humankind (Sterkfontein, Swartkrans, Kromdraai and Environs)
- The Makapan Valley
- Taung Skull Fossil Site.
- The continuous upgrading of international and national airports capacity including:
  - The Pilanesberg Airport promoting international and regional tourism development
  - The Mahikeng Airport in support of an international Cargo Hub

#### 4.3.1.2.2 **Strengthening of development corridors, zones and nodes**

The following long term development objectives support the strengthening of development corridors, development zones and development nodes:

- Enhancing the role and function of the regional and sub regional transportation corridors and links:
  - The **Platinum Corridor** (N4)
  - The **Treasure Corridor** (N12)
  - The **Western Corridor** (N18)
- Provide new provincial corridors such as The **Tlokwe - Mahikeng link** with the aim of providing increased interaction between the existing main development nodes of Tlokwe and Mahikeng promoting governance.
- Increase accessibility between the disadvantaged rural communities associated with the former homeland of Bophuthatswana.
- Enhancing the interaction of regional development corridors, nodes and zones with Gauteng by:
  - Enhancing accessibility and mobility within the **North West Eastern Development Belt** between the regional nodes of Klerksdorp, Potchefstroom, Brits, Rustenburg and the major nodes within Gauteng:
    - Enhancing the mobility function of routes N4, N11 and N12 towards Gauteng
    - Establish the PWV3 and PWV 1 routes
  - Providing passenger railway systems:
    - Mahikeng-Johannesburg passenger rail system
    - Gaborone – Zeerust – Rustenburg- Tshwane
    - Johannesburg – Kimberley- Cape Town
  - Consolidating economic activity at strategic locations within development corridors thereby strengthening existing urban areas and nodes
  - Concentrating investment in areas with potential for sustainable economic development within development corridors
  - Enhancing the accessibility via road, rail and air within the region and sub region to provide regional access for all communities to existing and future economic opportunities
  - Distributing, dispersing development to other development nodes
- Increase regional accessibility and mobility by:
  - Continuously increasing the mobility function of the N4, N12, N14 and N18 routes. This will require by pass roads by SANRAL over the long term

- Continuously upgrading secondary and tertiary routes
- The upgrading of border entry facilities
- The provision of the proposed cargo airport facility at Mahikeng
- The provision of logistic facilities

#### 4.3.1.2.3 *Integrating growth within North West Province*

The above processes involve the development of North West **over time** from:

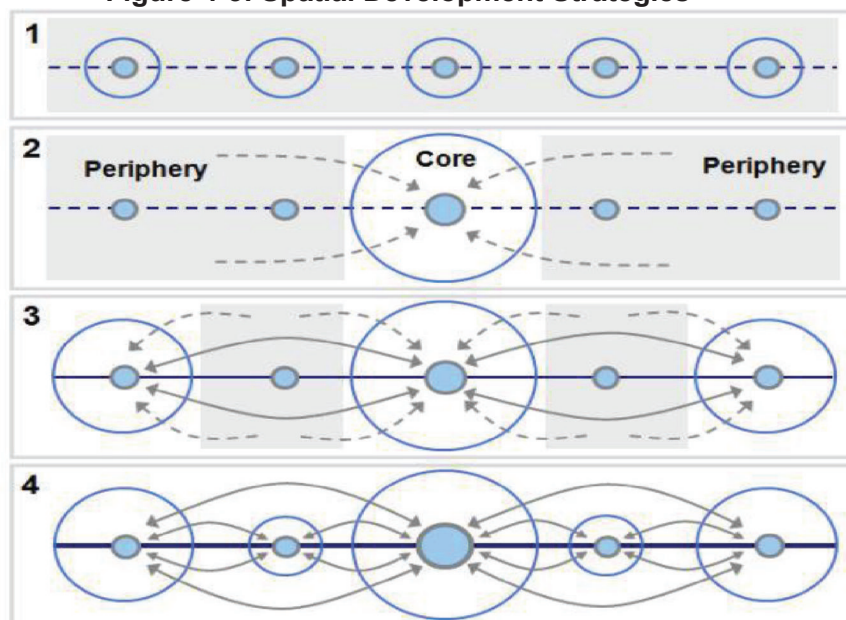
“a low growth, inequitable share development scenario” (See Map 4-2)

to

“a growth intervention, equitable share development scenario” (See Map 4-3)

In **Figure 4-3** theoretically indicates the different stages of development of a development node and corridor over time.

**Figure 4-3: Spatial Development Strategies<sup>1</sup>**



The development stages can be summarised as follows:

- **Stage 1 (Pre-industrial).** The agricultural society, with localised economies and a small scale settlement structure. Each element is fairly isolated, dispersed and characterized by low mobility.
- **Stage 2 (Transitional).** The concentration of the economy in a core begins as a result of capital accumulation and industrial growth. Trade and mobility increase, but within a pattern dominated by the core even if overall mobility remains low.
- **Stage 3 (Industrial).** Through a process of economic growth and diffusion other growth centers emerge. This diffusion is linked with increased interactions between activity nodes and the construction of transport infrastructures.

<sup>1</sup> Friedmann, J. (1966) Regional Development Policy: A Case Study of Venezuela, Cambridge, Mass.: MIT Press.(adapted)

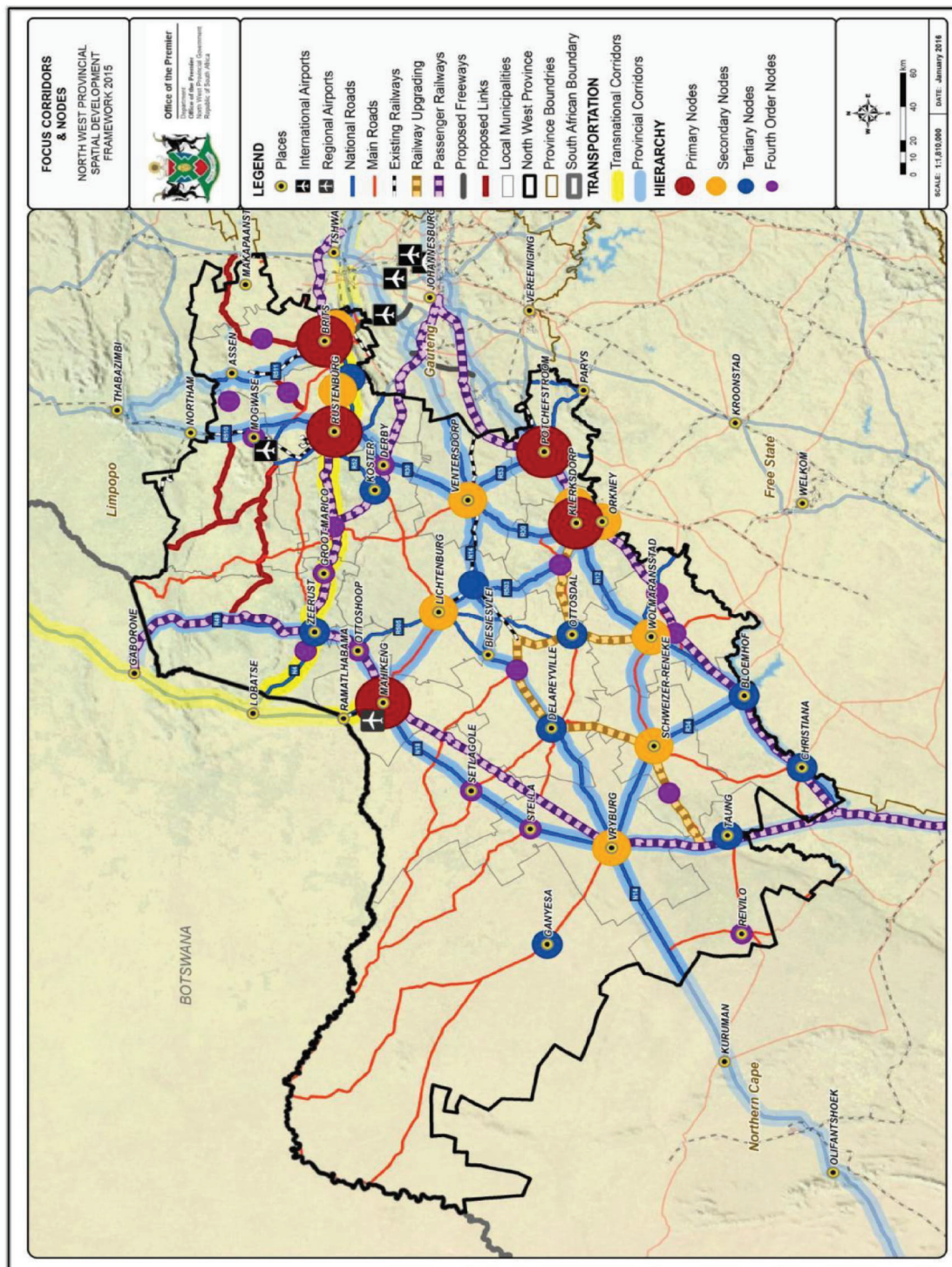


- **Stage 4 (Post-industrial).** The system becomes fully integrated and inequalities are reduced significantly. The distribution of economic activities creates a specialisation and a division of labor linked with intense flows along high capacity transport corridors.

#### 4.3.1.3 Strategic Projects and actions

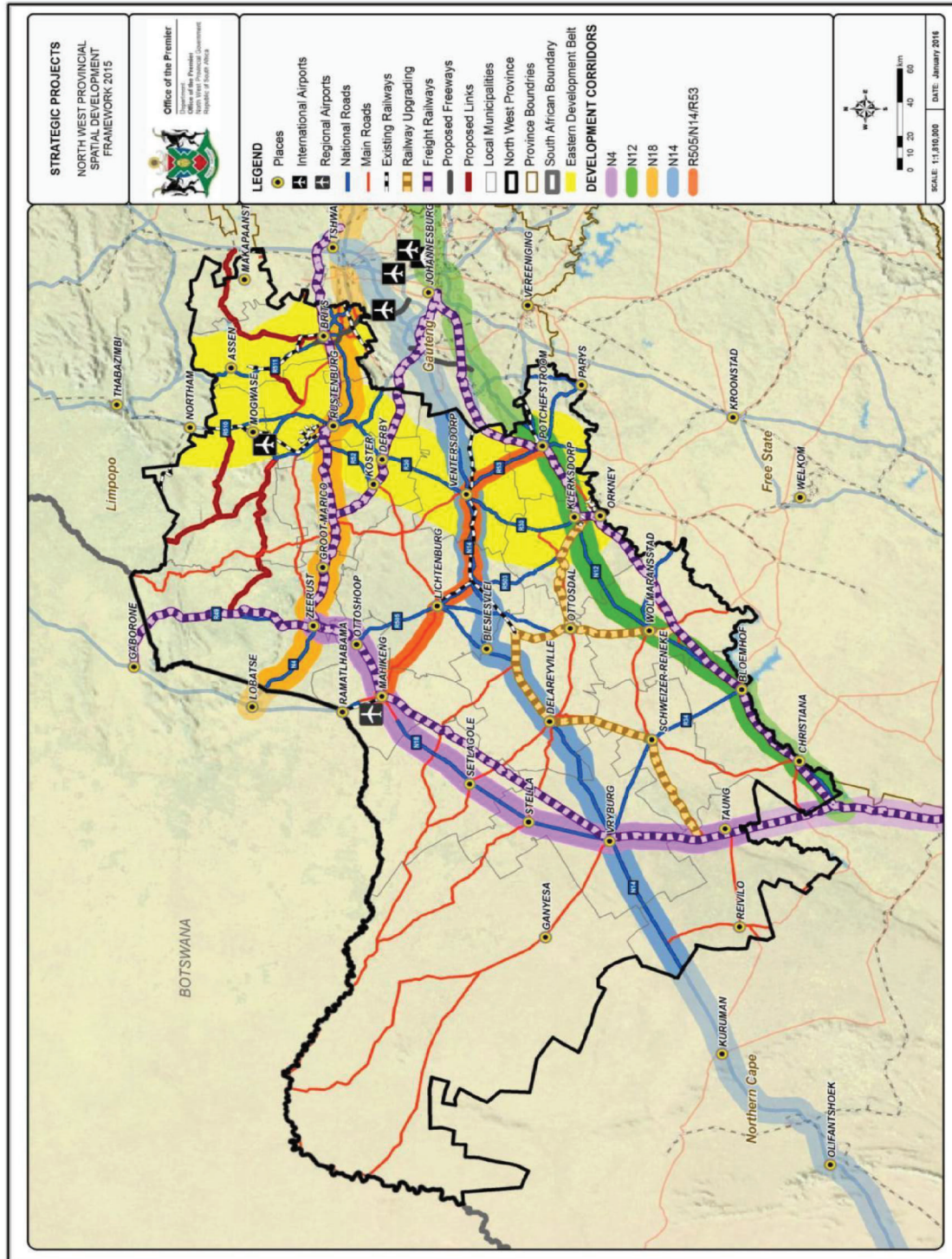
1. Continuous upgrading of the mobility function of the N4, N12 and N18 primary corridors (SANRAL)
2. Continuous upgrading of railway systems including passenger rail
3. Continuous upgrading of the provincial road system (SANRAL)
4. The provision of the proposed cargo airport facility at Mahikeng Airport
5. Upgrading of Ports of Entry (Department of Public Works)

Map 4-6: Development Corridors and Nodes





Map 4-7 Strategic Projects



## 4.3.2 Strategic Objective 2: Protect biodiversity, water and agricultural resources

### 4.3.2.1 Spatial Development Strategies

Developing and implementing strategies by all levels of government, that:

- sustains biodiversity and
- maximises the retention of valuable ecological infrastructure, should be viewed as an important climate change adaptation strategy
- Protect water resources
- Protect high potential and unique agricultural resources

### 4.3.2.2 Strategic Focus Areas:

#### 1. Climate Change and Adaptation Strategies

The following key ecological process issues should be considered in climate change mitigation and adaptation include:

- **“Protected and Core” nodes:**  
The “Protected and Core” nodes as primary biodiversity or environmental nodes need to expand and further the establishment of a Protected Areas Network in support of the Wildlife Economy. These nodes need to be captured in all spatial development frameworks and processes.
- **Water-related processes:**  
Good management of the region’s water resources, especially the ecological infrastructure that delivers this invaluable resource, ensuring the following:
  - Maintaining the water recharge for all the major dolomitic eyes (springs) in the North West by the dolomitic Malmani karst system located approximately between Molemane and Ventersdorp
  - In addition to the river and wetland features, other important areas for water-related processes include:
    - The Magaliesberg Mountain Range an important water source area that supports human settlement north of the range, such as Rustenburg, as well as agriculture, e.g. Buffelspoort Dam.
    - Dolomitic aquifers acting as sponges absorbing rainfall and providing valuable sub-terranean (underground) water reservoirs. Land use activities in these landscapes must not interrupt (reduce) or degrade (water quality) recharge of these aquifers
    - Wetland systems, which play a keystone regulatory role in the hydrology of the province by:
      - a. absorbing and storing freshwater
      - b. maintaining and moderating the flow of rivers
      - c. improving water quality
      - d. maintaining the ecological and structural integrity of river systems
      - e. buffering surrounding landscapes (and associated land uses) from flooding.



- **Climate change mitigation:**

Providing intact and well-functioning natural ecosystems resilient to the impacts of climate change relative to highly modified (e.g. degraded areas) or anthropogenic landscapes (e.g. croplands, mines and settlements).

- **Climate change adaptation:**

Ecological process issues important for climate change adaptation, which need to be considered in spatial planning and development within North West include:

- ***Corridors and connectivity:***

- Maintaining landscape connectivity is a major action that municipalities can implement through land use planning to mitigate climate change impacts within the province and South Africa as a whole.
- Mountains, ridges and rivers, including wetland systems, represent important natural corridors in the North West.

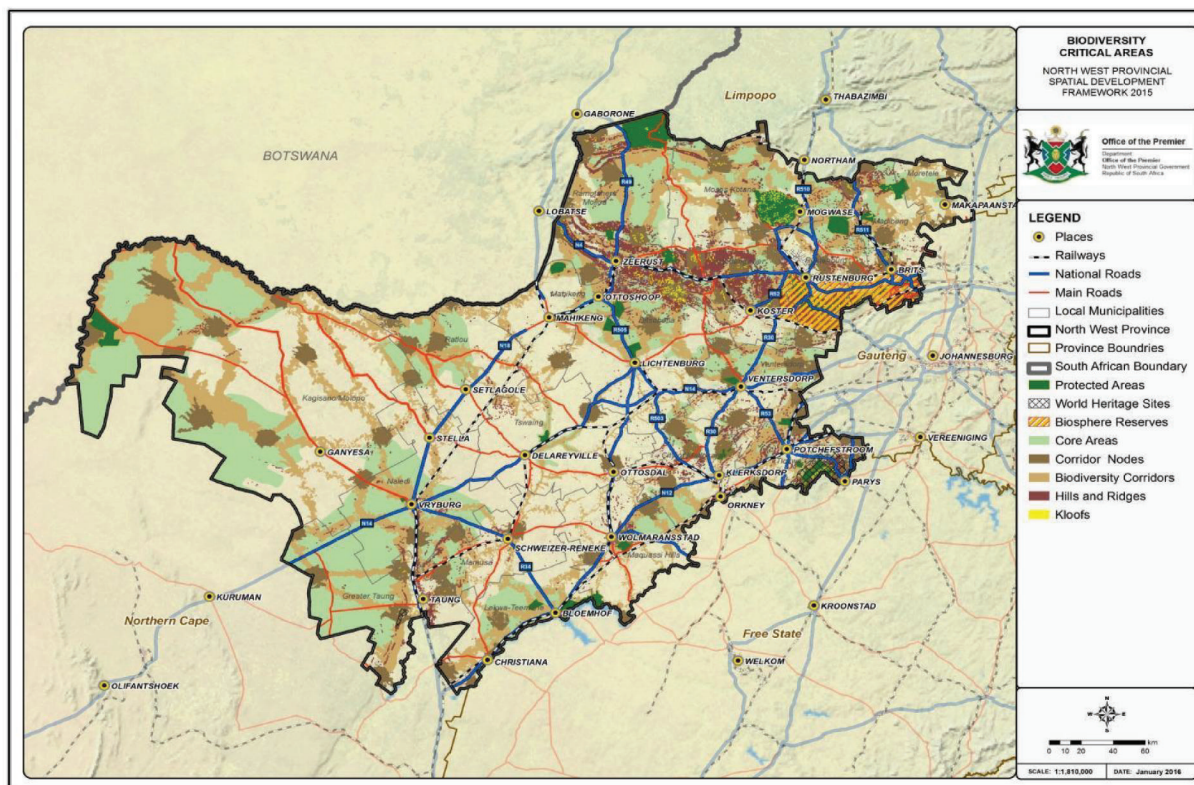
- ***Climate change refugia:***

- Climate change refugia are local areas with significantly different or moderated local or microclimates; a diversity of microclimates that provide species with local refuges in the face of regional climate changes; or, biophysical features that resist invasion by species from neighbouring biomes.
- In the North West these include high altitude grasslands above 1400m; kloofs and south facing mountain slopes; areas with high topographic diversity; wilderness areas; and, quartzite-rich mountains, ridges and koppies.
- These are areas with existing high species diversity; strong biophysical gradients (e.g. altitude, rainfall or temperature) and attributes (e.g. shaded south-facing slopes, nutrient poor soils); or, are large enough to maintain natural free-ranging populations of species.

- ***Areas for minimizing climate change impacts on society:***

- Protection of intact natural habitat, especially wetlands, floodplains and intact riparian habitat is extremely important for reducing the magnitude of flood events as these areas play an important role in regulating hydrological processes, such as storm water run-off. In addition, these areas (especially floodplains) are extremely high risk for communities living in these areas.
- Ensuring that infrastructure and agricultural development is avoided, where possible, in high risk areas to reduce the long term impact of climate change, particularly on poor communities.

### Map 4-8 Critical Biodiversity Areas



## 2. Land Management Objectives

**Table 4-1** Land Management Objectives<sup>1</sup> provides a framework for linking the spatial planning categories (CBA Map categories) to land use planning and decision-making guidelines at a strategic level.

**Table 4-1: A Framework for Linking the Spatial Planning Categories (CBA Map Categories) to Land Use Planning and Decision-Making Guidelines**

CBA Map Category	Land Management Objective
Protected Areas & Critical Biodiversity Area 1 (CBA1)	<p><b>Maintain as natural conservation or production landscapes that maximize the retention of biodiversity pattern and ecological process:</b></p> <ul style="list-style-type: none"> <li>Ecosystems and species fully intact and undisturbed</li> <li>These are areas with high irreplaceability or low flexibility in terms of meeting biodiversity pattern targets. If the biodiversity features targeted in these areas are lost then targets will not be met.</li> <li>These are landscapes that are at or passed their limits of acceptable change.</li> </ul>
Critical Biodiversity Area 2 (CBA2)	<p><b>Maintain as near-natural production landscapes that maximize the retention of biodiversity pattern and ecological process:</b></p> <ul style="list-style-type: none"> <li>Ecosystems and species largely intact and undisturbed.</li> <li>Areas with intermediate irreplaceability or some flexibility in terms of area required to meet biodiversity targets. There are options for loss</li> </ul>

CBA Map Category	Land Management Objective
	<p>of some components of biodiversity in these landscapes without compromising our ability to achieve targets.</p> <ul style="list-style-type: none"> <li>• These are landscapes that are approaching but have not passed their limits of acceptable change.</li> </ul>
Ecological Support Area 1 (ESA1)	<p><b>Maintain as ecologically functional landscapes that retain basic natural attributes (generally natural or near-natural areas):</b></p> <ul style="list-style-type: none"> <li>• Ecosystem still in a natural or near-natural state, and has not been previously developed.</li> <li>• Ecosystems moderately to significantly disturb but still able to maintain basic functionality.</li> <li>• Individual species or other biodiversity indicators may be severely disturbed or reduced.</li> <li>• These are areas with low irreplaceability with respect to biodiversity pattern targets only.</li> </ul>
Ecological Support Area 2 (ESA2)	<p><b>Maintain as ecologically partly-functional landscapes that retain some natural attributes (generally cultivated areas):</b></p> <ul style="list-style-type: none"> <li>• Maintain current land use or restore area to a natural state</li> <li>• Ecosystem NOT in a natural or near-natural state, and has been previously developed (e.g. ploughed).</li> <li>• Ecosystems significantly disturbed but still able to maintain some ecological functionality.</li> <li>• Individual species or other biodiversity indicators are severely disturbed or reduced and these are areas have low irreplaceability with respect to biodiversity pattern targets only.</li> </ul>
Other Natural Areas and No Natural Habitat Remaining	<p><b>Production landscapes:</b> manage land to optimise sustainable utilization of natural areas.</p>

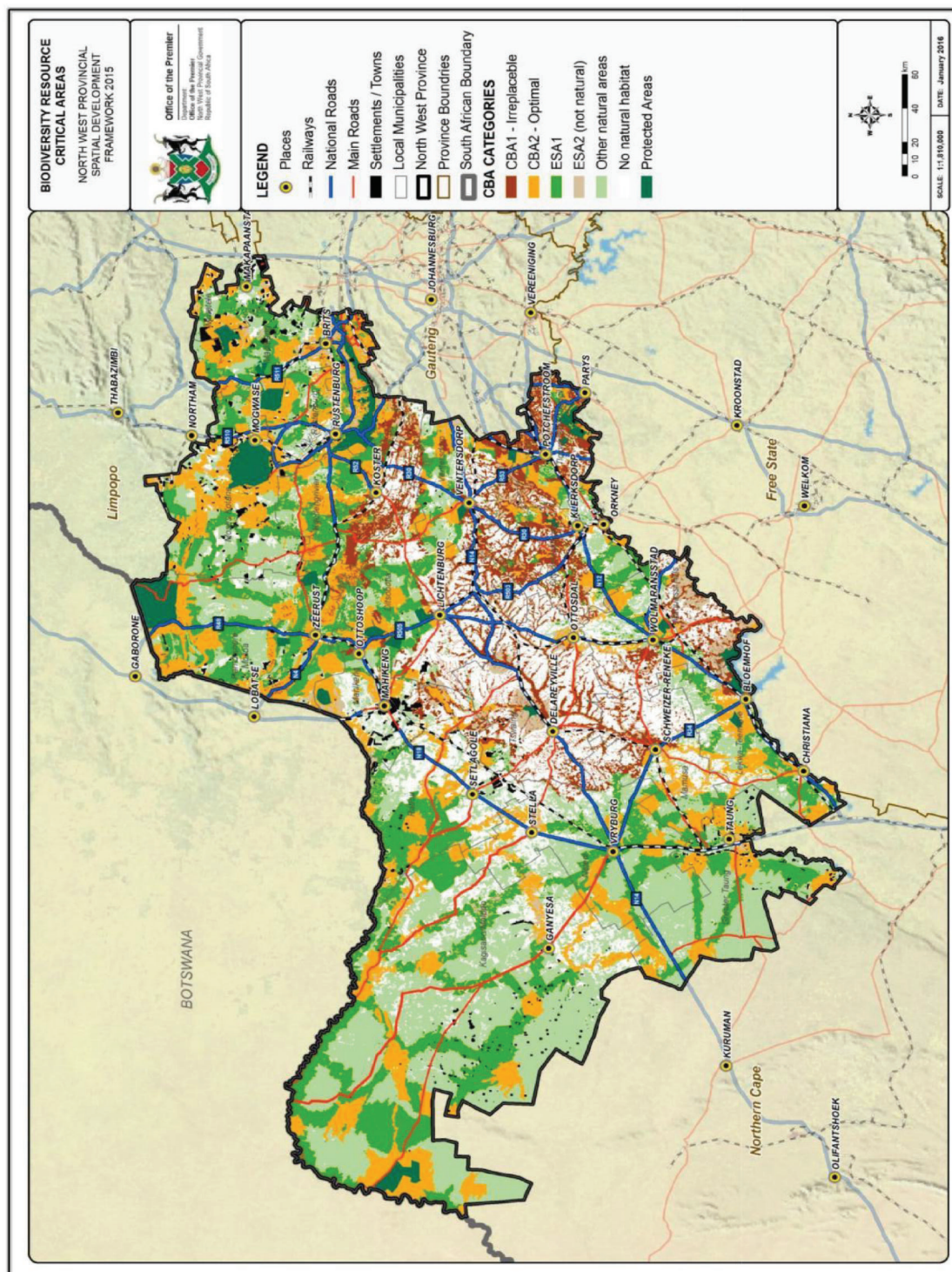
### 3. The protection of high potential and unique agriculture land against development.

Minimise the conflict between agricultural resources and mining and ensure food security

**See Map 4-10:** Agricultural Resource Critical Areas

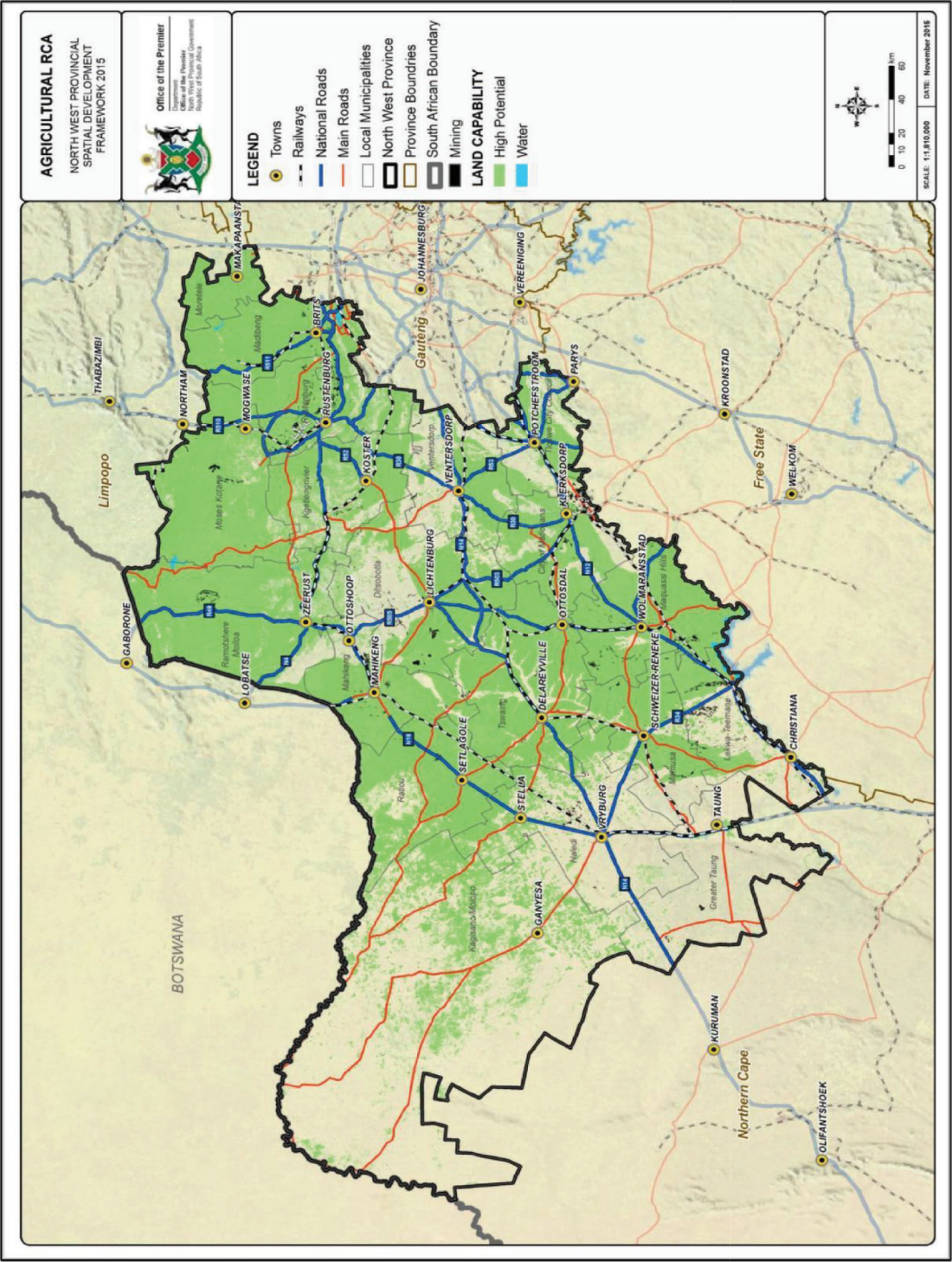


Map 4-9 Biodiversity Resource Critical Areas



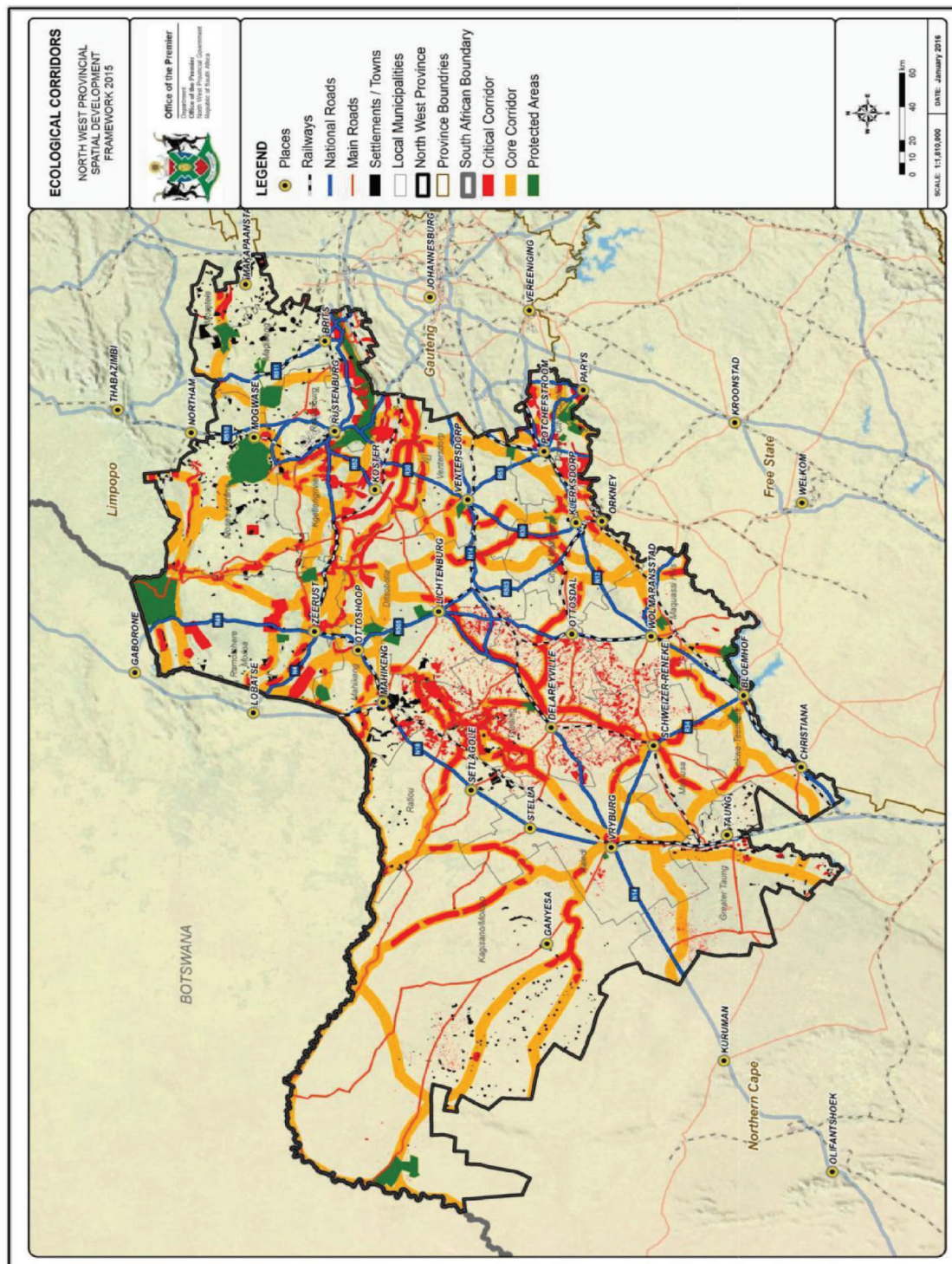


Map 4-10: Agricultural Resource Critical Areas





## Map 4-11 Ecological Corridors



**4.3.2.3 Strategic Projects and Actions**

1. Water Resources Development and Management Plan
2. Strategic Approach to Mining and Agriculture in North West
3. North West Protected Area Expansion Strategy
4. Bojanala District Environmental Management Framework
5. Dr Kenneth Kaunda District Environmental Management Framework
6. Dr Ruth Segomotsi Mompati District Environmental Management Framework
7. Ngaka Modiri Molema District Environmental Management Framework
8. Environmental Management Frameworks for other municipalities within North West
9. Grassland Protection Programme

### 4.3.3 Strategic Objective 3: Infrastructure Investment

To maintain a balance between investment aimed at meeting social needs of communities, and investment aimed at promoting economic development and job creation

#### 4.3.3.1 Spatial Development Strategies

##### Basic Infrastructure

- Ensure efficient supply of water, electricity and waste management services to sustain additional industry growth.
- Eradicate backlogs in water and sanitation, electricity, housing
- Improve basic services
- Provide green infrastructure e.g. water tanks, renewable energy ( e.g. solar)
- Eradicate backlogs and maintain basic services

##### Social Infrastructure

- Social infrastructure/facilities includes education, health and emergency services, social and cultural facilities, social services, civil services, and recreational infrastructure
- Eliminate inequalities among and within communities
- Improve the quality of life especially of poor communities, provide for law and order, and enhance the stability of a community
- Promote equitable access to social services for all communities and contribute to the development of integrated and sustainable human settlements through the application of norms and standards for social infrastructure requirements.
- Ensure that sufficient land is reserved for these essential facilities.

##### Economic Infrastructure

- Focus on projects identified as Strategic Infrastructure Projects (SIPs)<sup>17</sup>
- Concentrate investment in areas with potential for sustainable economic development.

#### 4.3.3.2 Strategic Focus Areas

##### 4.3.3.2.1 *Basic Infrastructure*

**To provide basic infrastructure in support of the social needs of communities**

##### **1. Water Infrastructure**

1. Addressing the challenges in water resource, water source and water services of:

##### **a. On-site Sanitation**

Enhance the operation and management of existing sanitation installations in all municipalities focusing on:

- i. Municipalities with the highest number of households on on-site sanitation:

<sup>17</sup> Presidential Infrastructure Coordinating Commission. (PICC). Provincial and Local Government Conference. A summary of the Infrastructure Plan. Friday, 13 April 2012.



1. Madibeng LM
2. Rustenburg LM
3. Moses Kotane LM
4. Mahikeng LM
5. Moretele LM
6. Greater Taung LM

- ii. Municipalities with a high risk to groundwater sources if the water table is high and human health if groundwater sources are used for consumption focusing on municipalities with the highest number of households reliant on groundwater as source:

1. Mahikeng LM
2. Madibeng LM
3. Ditsobotla LM

**b. Ground Water Quality**

Attend to ground water quality in all regions focusing on regions where problems with groundwater quality are experienced:

- i. The Northern part of the Madibeng LM
- ii. The Northern and central part of the Moses Kotane LM
- iii. Ramotshere Moiloa LM
- iv. The Eastern part of the Tswaing LM
- v. The northern area of the Kagisano-Molopo LM
- vi. Mamusa LM

**c. Ageing Infrastructure**

Replace ageing infrastructure in all municipalities focusing on the towns of Brits, Rustenburg, Potchefstroom, Klerksdorp, Makwassie, Wolmaransstad, Mahikeng and Mmabatho, Lichtenburg, Zeerust and Vryburg.

**d. Illegal Connections and Informal Settlements**

Reduce illegal connections by:

- Providing at least basic levels of services to all consumers
- Upgrading / relocation of informal settlements which tend to be closer to urban areas

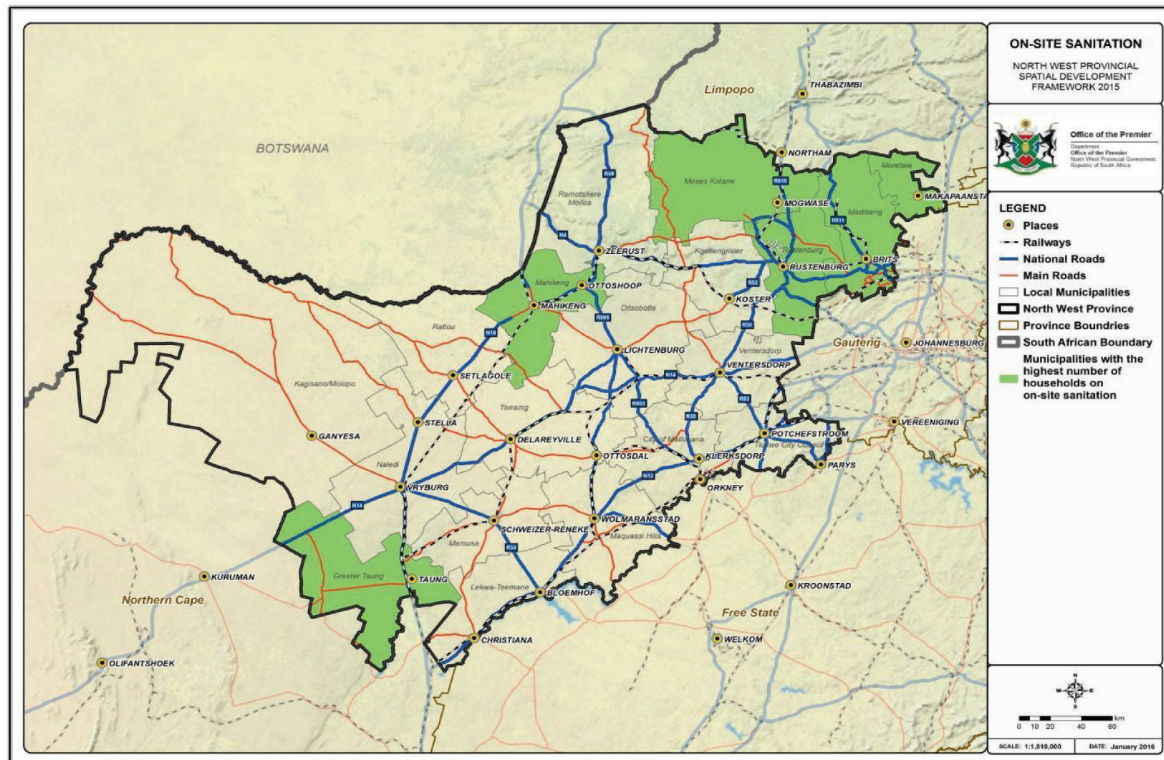
**Thereby:**

- Ensuring sustainable and adequate water provision to consumers
- Reducing the risk (health) of consumers of exposing the pipelines and content to the environment
- Increasing water volumes supposedly allocated for a certain number of consumers
- Maintaining pressure in the water supply pipelines
- Increasing revenue in contributing metered water consumption.

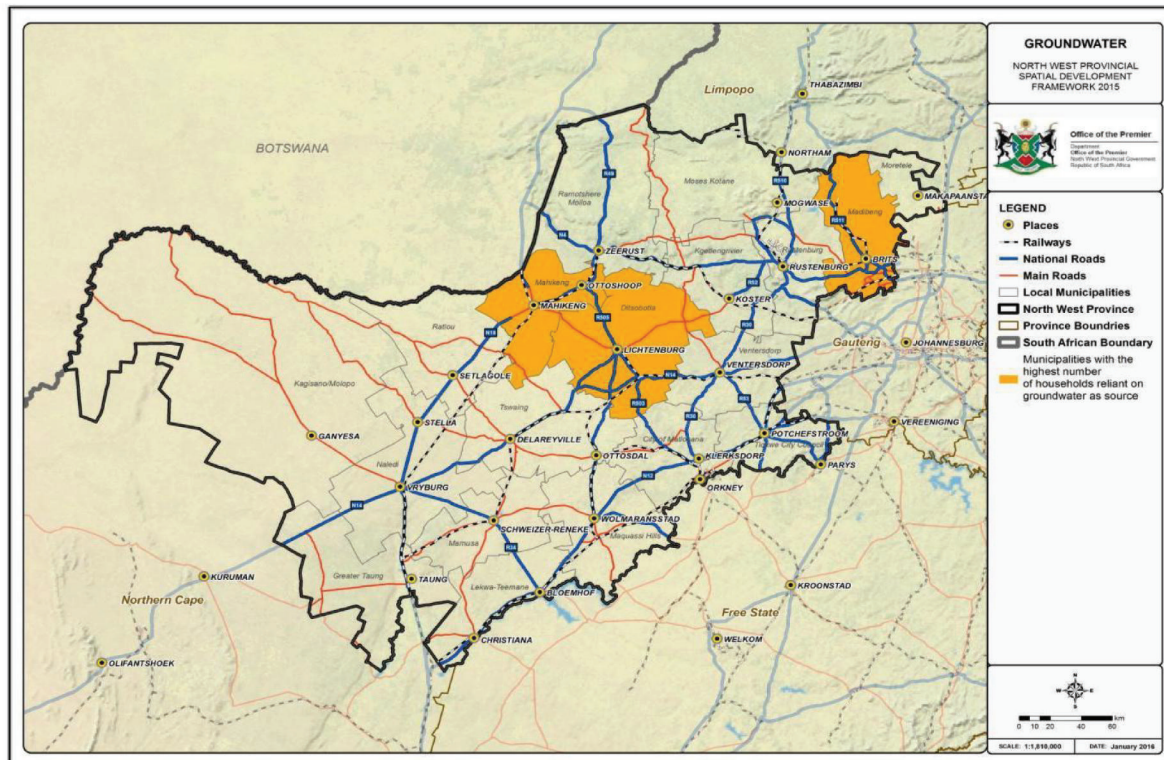
**e. Rural Extent**

Attend to the increasing maintenance costs and staff availability due to the large distances required to travel to and from settlements or components such as pump stations or reservoirs

Map 4-12 On-site sanitation



Map 4-13 Groundwater as source



f. **Surface Water Users and Quality**

Attend to surface water and quality issues in all areas focusing on:

- The agricultural areas of Schweizer Reneke, Ottosdal, Koster and Swartruggens where water quality is affected by runoff from lands which use fertilizer to increase production.
- Wastewater treatment works (WWTW) that are not operated according to its license conditions for effluent quality released back into the environment.
  - Hartbeespoort Dam near Brits, which receives the poor quality water from Gauteng.
  - Spitskop Dam (near Vaalharts)
  - Barberspan Dam (between Delareyville and Sannieshof)

2. Exploit Spatial Opportunities linked to the **use, development and protection** of the water sources within the NWP.

a. **Groundwater Development including:**

- The development of areas that are underlain by high-yield water potential dolomitic geological formations to ensure at least basic water supply to all consumers. (ie. Kagisano-Molopo LM )
- The development of regional groundwater schemes and improvement of existing groundwater supply in areas such as Moretele LM, Madibeng LM, Moses Kotane LM, most of the NMM DM and DrRSM DM.
- Areas where mining operations are active, where dewatering of mines can also be investigated as an opportunity to augment water supply to domestic consumers.
- Water development to support agricultural activities such as crop production and livestock to enhance the economic status of people and encourage further infrastructure developments.
- The development and implement of suitable groundwater management and monitoring programmes by the WSAs in the NWP starting with metering of water abstractions and water use. This would assist greatly in developing water balances for the aquifers utilised for domestic consumption.

b. **Surface Water Development including the further development of:**

- Surface water sources for water use in the larger catchment areas such as the Klipvoor Dam, Vaalkop Dam, Bloemhof Dam and Spitskop Dam.
- Improved operating rules of water resources, sources such as the Crocodile, Elands, Setlagole River, Schoonspruit River, Mooi River and Harts River
- The Vaal River, being one of the larger water sources in South Africa and forming the southern border of the NWP as a developmental opportunity for all water use sectors.
- The Hartbeespoort Dam is part of a water remedial programme – Metsi a Me – to address the hypertrophic status of the Dam.
- Dams along with smaller water bodies and rivers for recreational use and to promote further tourism development.
- Awareness to conserve and protect the natural resources and attract further investment into the NWP.

c. **Water Conservation and Water Demand Management**

Achieving sustainable water supply and sanitation services by utilising local water sources, optimising existing infrastructure and conservation of the water resources by:

- Industries and mining including:
  - Recycling to ensure re-use of water in mining process and limited release of effluent.
  - Utilising treated effluent from WWTW, reducing therefore their need for potable water and creating a revenue stream for municipalities including
    - Rustenburg( existing)
    - Brits, Klerksdorp and Stilfontein
    - The application thereof towards irrigation of public spaces and recreational areas, instead of using treated, potable water.
- Improved efficiency measures by the irrigation sector such as refurbishment of canals and improved irrigation technology making more water available for other developments (urban, agricultural, industrial, etc.) ie. Vaalharts Irrigation Scheme.
- The overall management and operation of water resources in a particular catchment area, or in shared water courses.

d. **Water Re-Use**

The re use of water needs to be done:

- From wastewater treatment works in the province, some of which have a fairly large treatment capacity for the re-use of treated effluent by the municipality or other (such as for irrigation or industrial users) consumers. These include the largest (>10Ml/d design capacity) WWTW within the province:
  - Brits WWTW
  - Klerksdorp WWTW
  - Lichtenburg WWTW (already being utilised by the municipality (for irrigation) and by some of the mines)
  - Mmabatho WWTW
  - Orkney WWTW
  - Potchefstroom WWTW
  - Rustenburg WWTW
  - Stilfontein WWTW

New wastewater works or the upgrading of wastewater works need to consider this option in the designing thereof ie.Koster WWTW.

- Keeping and maintaining the operational standards of the WWTW at a low risk
- Dewatering of mines

e. **Urban Development**

Densification and infill development need to be considered in urban development:

- To provide more cost-effective services to a larger portion of the population
- To allow for existing infrastructure upgrades versus the extension of infrastructure to new areas.



- To reduce the extent of suitable land required for urban development as this poses a challenge for many municipalities.

**f. Irrigation Efficiency**

Savings from irrigation efficiency should be achieved in the following irrigation areas:

- The Vaalharts Irrigation Scheme supporting an estimated 1 040 irrigation farmers and providing industrial water to six municipalities and nine other industrial raw water users
- The Bojanala Platinum DM from the Crocodile (West) and Hartbeespoort Irrigation schemes
- In the Dr Kenneth Kaunda DM, from the Schoonspruit GWS and Mooi River GWS
- The Ngaka Modiri Molema DM from the Marico-Bosveld and Klein Maricopoort Irrigation Schemes
- The Dr Ruth Segomotsi Mompati DM from the Vaalharts Irrigation Scheme.

**g. Rainwater Harvesting**

Rainwater harvesting to assist in alleviating the water requirements from formal water supply infrastructure must include:

- Households equipped with rainwater harvesting tanks
- Raw water for non-potable purposes such as cleaning, washing of clothes or watering the garden.

**h. Water for Development: Tourism and Recreation**

Dams, pans and rivers forming part of conservation areas must be developed to ensure the protection of the water and the surrounding environment. These include the Hartbeespoort Dam, Bloemhof Dam, Vaal River, Barberspan and many other areas utilised for water sports, bird watching, camping, fishing and other activities.

## **2. Energy Infrastructure**

Energy infrastructure within North West must be provided in terms of the Integrated Resource Plan (IRP) intended to drive all new generation capacity development. The Long-term Electricity Planning<sup>18</sup> goal is to ensure sustainable development considering technical, economic and social constraints and externalities. The provision of bulk electricity by Eskom within North West in terms of the Integrated Resource Plan (IRP) needs to:

- Identify the requisite investments in the electricity sector that allows the province and country to meet the forecasted demand
- **Be implemented in terms of a Strategic Grid Plan** (20 years and it is updated every 2 - 3 years), which formulates long term strategic transmission corridor requirements
- Be implemented in terms of The Transmission Development Plan (TDP)<sup>19</sup> (10 years) representing the transmission network infrastructure investment requirements mainly for the introduction of 400 kV lines and transformation to support or relieve the existing networks.
- Transmission power corridors and substations to provide a flexible and robust network that could respond to meet the needs of future Independent power producer and **IRP** Integrated Resource Plan requirements.

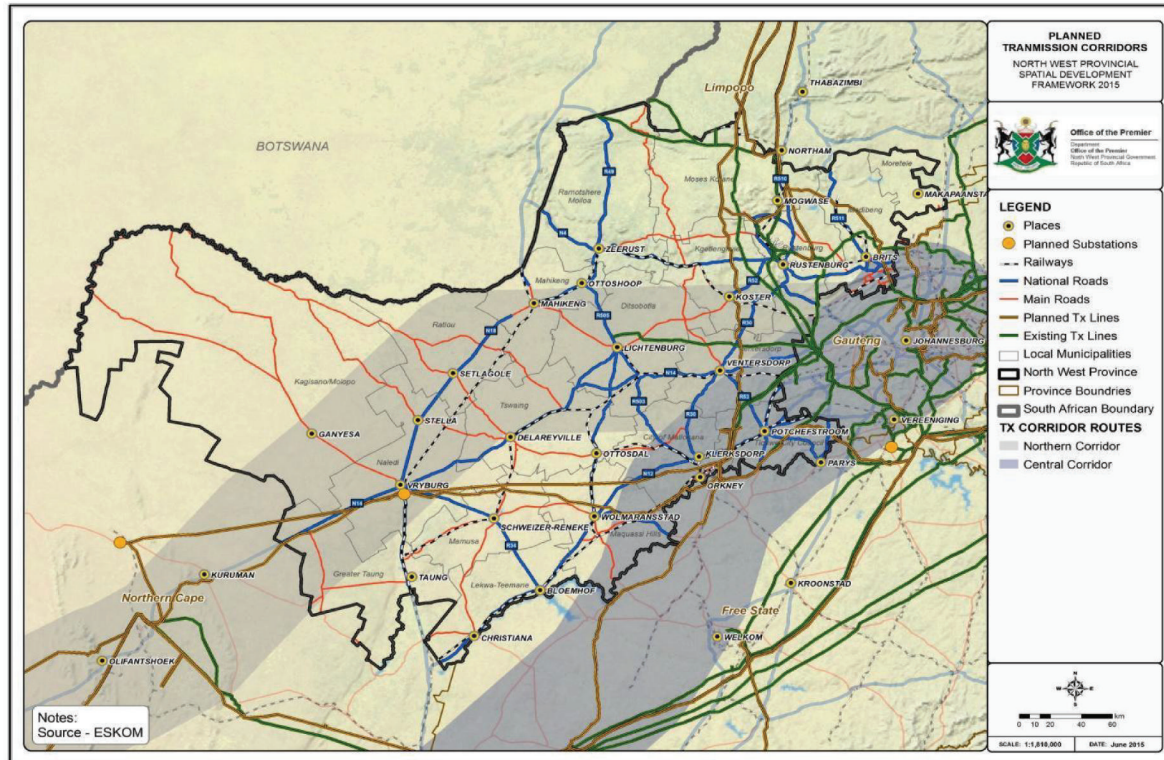
<sup>18</sup> Integrated Resource Plan for Electricity (IRP) 2010-2030. Update Report 2013. 21 November 2013

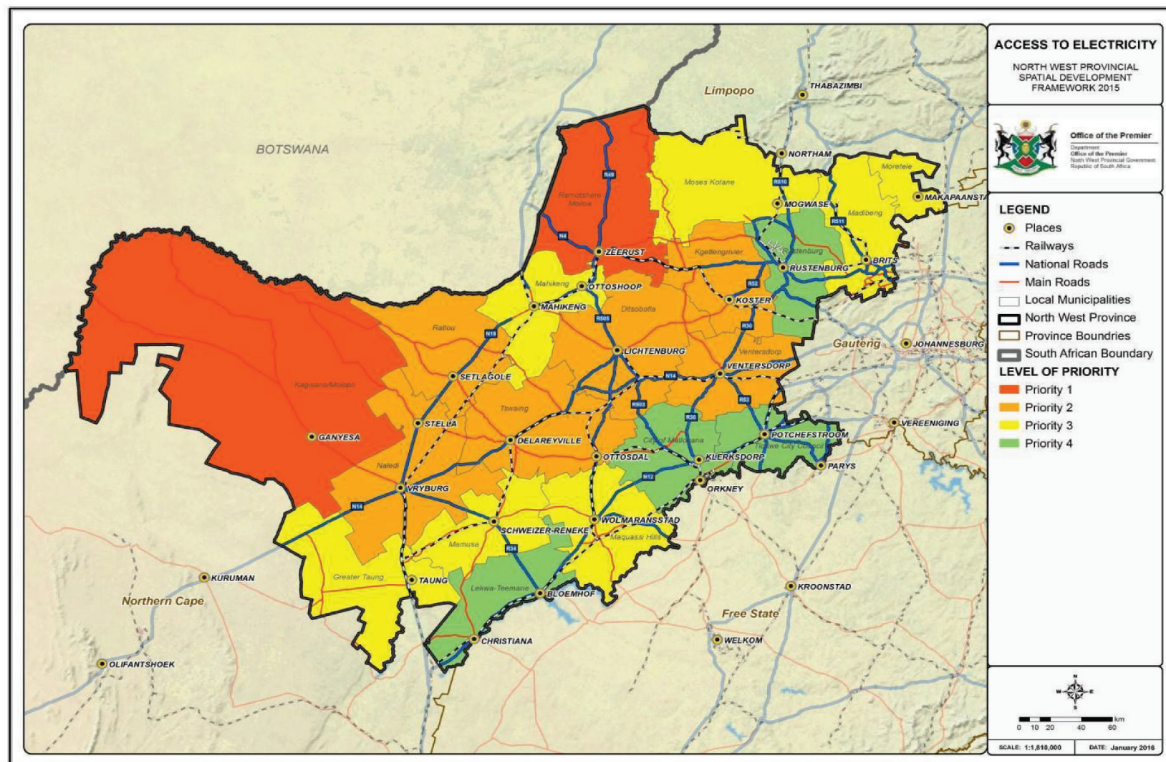
<sup>19</sup> Eskom Transmission development plan 2015-2024

Distribution to all consumers and households by Eskom and municipalities within North West needs to prioritise:

- Areas of high economic activity
- Households within rural areas where access is relatively low

**Map 4-14 Existing and Planned Transmission Power Corridors**



**Map 4-15: Electricity Priority Areas**

### 3. Social Infrastructure

The provision of social infrastructure needs to attend to the following:

- Improve and maintain education, health, sport facilities, etc.
- Eradicate backlogs and improve social infrastructure in all areas
- Provide public and non-motorised transport and facilities to improve accessibility to urban functions and job opportunities
- Implement norms and standards for the provision of education facilities
- Develop and implement a comprehensive infrastructure plan, responsive to needs by 2015, to produce an environment conducive for the public to access health services
- **To eradicate backlogs and improve education:**
  - Distribute the tertiary educational advantages provided by the future University of North West in Tlokwe and Mahikeng over the four municipal districts
  - Distribute the provision of other tertiary education and artisan training facilities to all primary and secondary nodes
  - Initiate the alternative utilisation of facilities e.g. underutilised schools

- To eradicate backlogs and improve health:
  - the aim is to deliver better quality health care (upgrade and maintain facilities):
    - Construct new clinics with accommodation
    - Construct new accommodation for personnel
    - The quality of health services: consolidate and expand the implementation of the Health
    - By improving district hospitals and primary health care facilities
    - By improving human resources
    - Revitalise health infrastructure.

#### 4.3.3.2.2 ***Focusing Investment on Economic Infrastructure:***

- Supporting the following development corridors:
  - The Platinum Development Corridor / Trans-Kalahari Corridor (N4) as part of the Coast 2 Coast Corridor (C2C)
  - The North-South Mega Africa Corridor linking Cairo with Cape Town including:
    - The N1
    - The N12 (**Treasure Corridor**)
    - The N18 (**Western Corridor**)
- Supporting Activity Nodes including :
  - The main activity nodes of Rustenburg, Brits, Mahikeng, Potchefstroom and Klerksdorp
  - Secondary activity nodes of Orkney, Lichtenburg, Stilfontein, Vryburg, Mmabatho, Schweizer-Reneke, Hartbeespoort, Marikana, Wolmaranstad and Ventersdorp
  - Tertiary nodes of Taung, Bloemhof, Zeerust, Coligny, Koster, Ganyesa, Mooi-nooi, Ottosdal, Christiana and Delareyville
  - Fourth order nodes of Setlagole, Reivilo, Setlopo, Leeudoringstad, Lehurutshe, Lethabong / Hartbeesfontein, Sannieshof, Hartbeesfontein, Jericho, Makwassie, Stella, Swartruggens, Groot Marico, Mogwase, Ramokoka, Ottoshoop, Amalia, Derby, Bray

See **TABLE 4-2: INFRASTRUCTURE FOCUS AREAS**

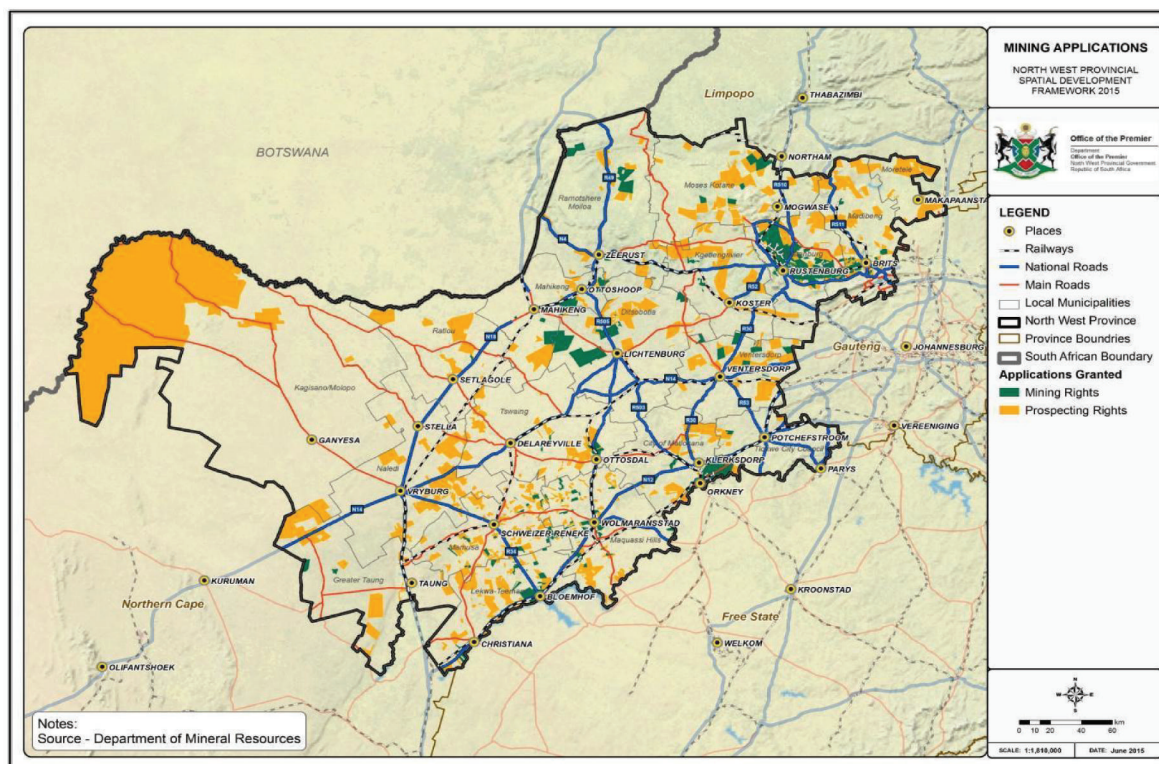
- Supporting rural development and the regeneration of the Villages, Townships and Small Dorpies
- Enhancing the functional diversity of economic activity of these nodes in order to broaden the economic base of the province and to enhance service delivery to local and surrounding rural communities. Typical actions in this regard would include investment in agro industries, commercial and light industrial activity, business activity (office and retail) in well-managed Business Districts (CBDs) and government services
- Tourism related investment should be channeled into main functional areas in North West Province strongly associated with Biodiversity Corridors and Nodes to provide functional tourism routes. Tourism development should focus on the natural and heritage assets and provide for the following:



- The integration of regional tourism development as part of the regional tourism initiatives also providing a system promoting interaction with local tourism initiatives.
- The clustering of the existing tourism activities into corridors and nodes supported by economic infrastructure and a road system to strengthen the 'critical mass' of product and therefore the overall depth of the experience across the region. (North West Tourism Strategic Objective)
- The protection and development of the natural environmental assets for tourism or other development needs to take place within the development parameters set by strategic and detailed environmental assessments
- The development of the following key areas:
  - Wildlife and nature tourism,
  - Activity and adventure tourism,
  - Resort tourism, sports tourism,
  - Conference and meetings,
  - Leisure/entertainment,
  - Industrial and township tourism, and
  - Cultural heritage
- Projects supporting tourism, needs to aim at enhancing community development.
- The development of the wildlife economy should focus on economic activities dependent directly on the biophysical environment of North West. These include:
  - Activities directly linked to nature conservation and management
  - Game viewing in public and private nature reserves
  - Hunting, game sales, game breeding, fishing and livestock farming which is dependent on natural veld and rangelands
  - Traditional and cultural uses of resources such as medicinal plants derived from the wild
    - Ecotourism, adventure tourism, bird watching, hiking, game viewing and associated infrastructure (such as lodging/accommodation, etc) which are reliant on natural areas
    - The provision of goods and services to the wildlife economy e.g. transport, infrastructure, catering, security, veterinary services, fuel, etc.
- Agriculture related investment should focus on supporting and maintaining existing commercial farming activities in the province in the areas where extensive commercial farming and large scale food production currently occurs; as well as enhancing agrarian transformation in the deep rural areas of North West in line with the objectives of the Comprehensive Rural Development Programme ( CRDP). Typical investment in these areas should include:
  - Agri Parks at Springbokpan (NMM District), Vryburg (DrRSM District), Makapanstad (Bojanala District), Klerksdorp (Dr Kenneth Kaunda District)
  - Farming equipment, irrigation systems, agricultural training facilities (colleges) and the establishment of small local fresh produce markets which could lead to the establishment of small scale agro industries focusing on processing and/or packaging of local products before exporting it to larger centres
  - Artisan and other skills training initiatives and facilities
  - Social infrastructure in the form of centrally-located Thusong centres serving the rural areas, and which provide a comprehensive range of community facilities at a one-stop destination among these rural communities

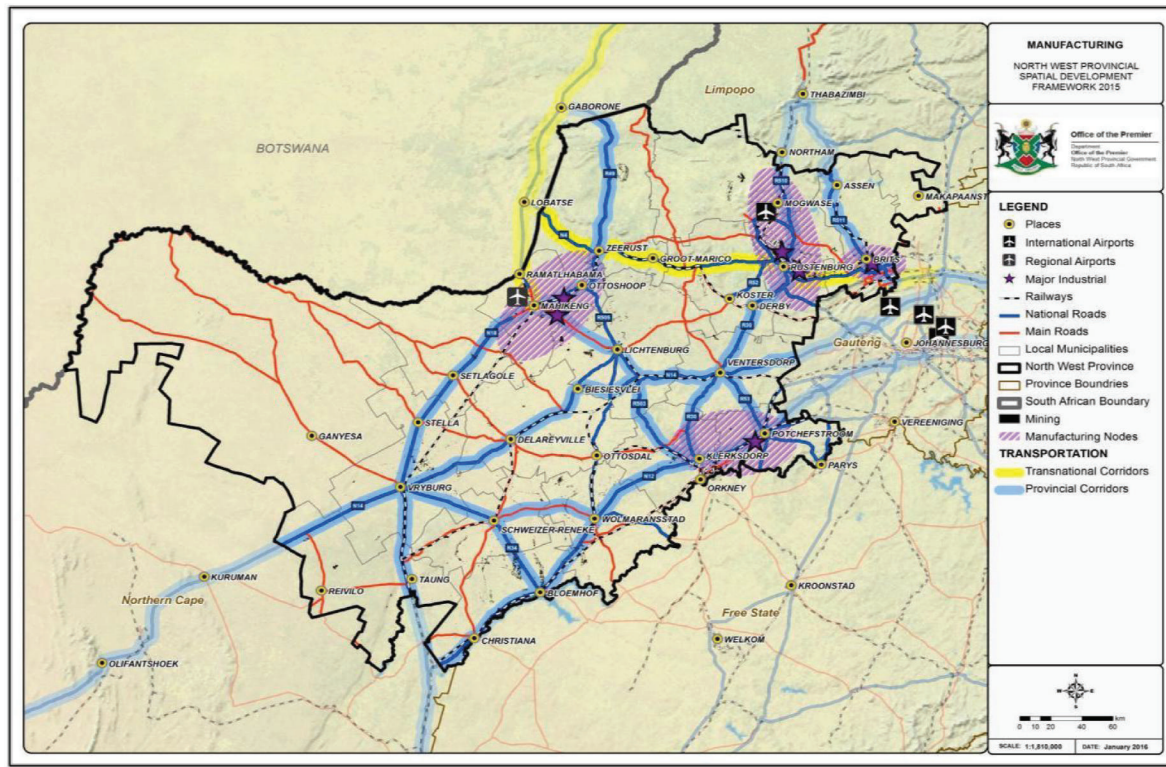
- Rural housing programmes are also to be consolidated around these Thusong centres which will not only improve the utilisation of the community facilities located here, but also create the “critical mass” required to enhance the potential for local economic development – including the fresh produce market and associated agro-processing activities.
- Infrastructure investment aimed at enhancing the mining industry should focus on beneficiation of minerals through the implementation of The Platinum Special Economic Zone. See **Map 4-16 Mining Potential Critical Resources (Mining and Prospecting Applications)**
- Infrastructure investment aimed at manufacturing should be exploited and also expanded to focus on the competitive advantage of this sector within **Madibeng, Rustenburg, Mahikeng, Tlokwe and Matlosana** to support corridor development. This also requires that:
    - Accessibility and mobility links within and between development nodes be enhanced
    - Accessibility to the above nodes be improved

**Map 4-16 Mining Potential Critical Resources (Mining and Prospecting Applications)**

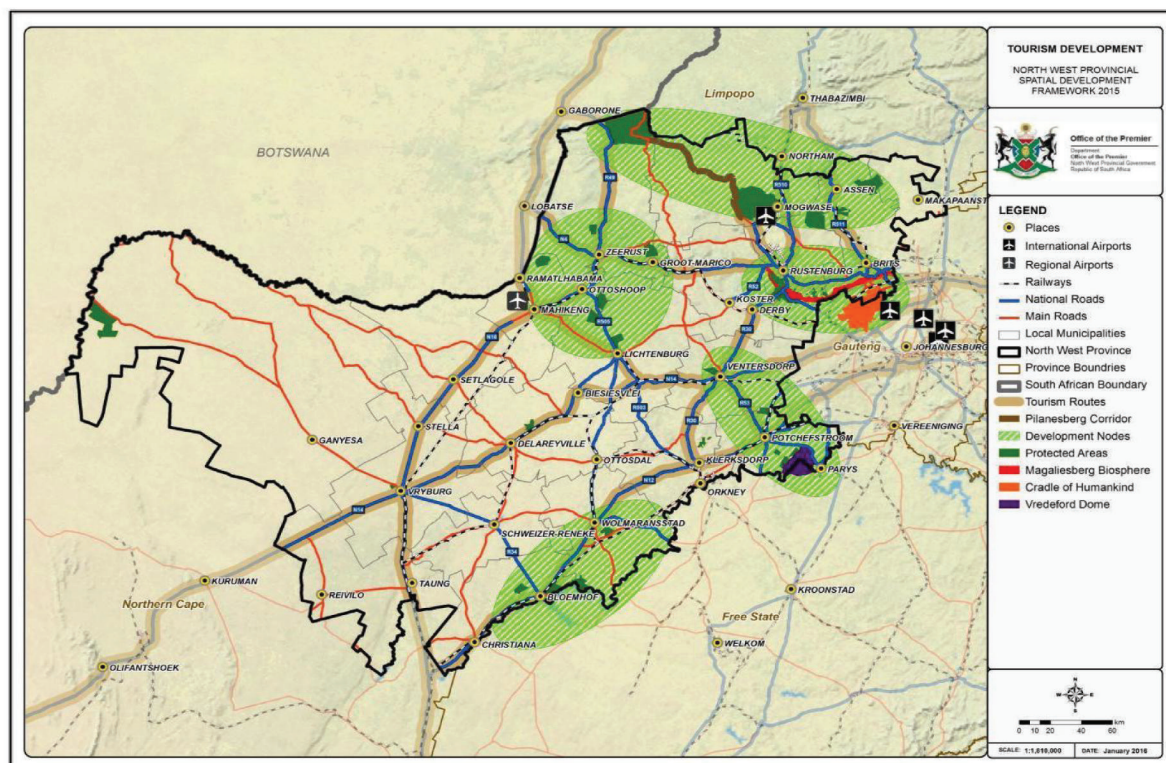




Map 4-17: Manufacturing



Map 4-18 Development of Tourism Routes and Nodes



4.3.3.2.3 ***Integrating Infrastructure into Development Nodes and Densely Populated Large Population Concentrations (rural/long distance commuter areas)***

Infrastructure provision for the development of nodes and densely large population concentrations needs to focus on the areas as contained in **TABLE 4-2**.

**Table 4-2: Infrastructure Focus Areas**

	<b>Node</b>	<b>Basic Infrastructure</b>	<b>Social infrastructure</b>	<b>Economic Infrastructure</b>
<b>Primary and secondary nodes (stimulate growth)</b>	<ul style="list-style-type: none"> <li>• <b>Primary Nodes</b> <ul style="list-style-type: none"> <li>○ Rustenburg</li> <li>○ Brits</li> <li>○ Mahikeng</li> <li>○ Potchefstroom</li> <li>○ Klerksdorp</li> </ul> </li> <li>• <b>Secondary Nodes</b> <ul style="list-style-type: none"> <li>○ Orkney</li> <li>○ Lichtenburg</li> <li>○ Stilfontein</li> <li>○ Vryburg,</li> <li>○ Mmabatho</li> <li>○ Schweizer-Reneke</li> <li>○ Hartbeespoort</li> <li>○ Marikana</li> <li>○ Wolmaranstad</li> <li>○ Ventersdorp</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Ensure efficient supply of water, electricity and waste management services to sustain additional industry growth.</li> <li>• Eradicate backlogs in water and sanitation, electricity, housing.</li> <li>• Improve basic services</li> </ul>	<ul style="list-style-type: none"> <li>• Education, health, sport facilities to enhance human capital development</li> <li>• Training facilities for artisans.</li> <li>• Public transport to long distance commuter areas.</li> <li>• Eradicate backlogs in social infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Roads, rail, pipelines, ICT to stimulate growth in main industries;</li> <li>• Improve access from long distances commuter areas to enhance employment opportunities.</li> <li>• Limit environmental impact</li> </ul>



	Node	Basic Infrastructure	Social infrastructure	Economic Infrastructure
Tertiary and Fourth order Nodes	<ul style="list-style-type: none"> <li>• <b>Tertiary Nodes</b> <ul style="list-style-type: none"> <li>○ Taung</li> <li>○ Bloemhof</li> <li>○ Zeerust,</li> <li>○ Coligny</li> <li>○ Koster</li> <li>○ Ganyesa</li> <li>○ Mooinooi</li> <li>○ Ottosdal</li> <li>○ Christiana</li> <li>○ Delareyville</li> </ul> </li> <li>• <b>Fourth Order Nodes</b> <ul style="list-style-type: none"> <li>○ Setlagole</li> <li>○ Reivilo</li> <li>○ Setlopo</li> <li>○ Leeudoringstad</li> <li>○ Lehurutshe,</li> <li>○ Lethabong / Hartbeesfontein</li> <li>○ Sannieshof</li> <li>○ Hartbeesfontein</li> <li>○ Jericho</li> <li>○ Makwassie</li> <li>○ Stella</li> <li>○ Swartruggens</li> <li>○ Groot Marico</li> <li>○ Mogwase</li> <li>○ Ramokoka</li> <li>○ Ottoshoop.</li> <li>○ Amalia</li> <li>○ Derby</li> <li>○ Bray</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Ensure and maintain efficient supply of water, electricity and waste management services.</li> <li>• Eradicate backlogs in water and sanitation, electricity, housing.</li> </ul>	<ul style="list-style-type: none"> <li>• Education, health, sport facilities to enhance human capital development.</li> <li>• Public transport to long distance commuter areas.</li> <li>• Eradicate backlogs in social infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Provide ICT connectivity.</li> <li>• Strengthen corridors to closest urban functional areas.</li> <li>• Upgrade roads with highest volumes</li> </ul>

	Node	Basic Infrastructure	Social infrastructure	Economic Infrastructure
Densely populated large population concentrations (rural/long distance commuter areas)		<ul style="list-style-type: none"> <li>• Eradicate backlogs and maintain basic services.</li> <li>• Provide green infrastructure e.g. water tanks, renewable energy</li> </ul>	<ul style="list-style-type: none"> <li>• Eradicate backlogs and improve education and health infrastructure</li> <li>• Provide public and non-motorised transport and facilities to improve accessibility to urban functions and job opportunities.</li> <li>• Assess alternative utilisation of facilities e.g. underutilised schools</li> </ul>	<ul style="list-style-type: none"> <li>• Provide ICT connectivity. Strengthen corridors to closest urban functional areas.</li> <li>• Upgrade roads with highest volumes</li> </ul>

Source: CSIR (adapted)<sup>20</sup>

#### 4.3.3.3 Strategic Projects

- Develop and implement a comprehensive provincial infrastructure plan, responsive to needs including:
  - a. Water infrastructure
  - b. Water reclamation
  - c. Roads and transportation
  - d. Energy efficiency-retrofitting
  - e. Education
  - f. Health
- Develop and implement comprehensive Land Transportation Plans for the province, districts and primary nodes.
- Develop and implement Tourism Plans for the province and districts
- Prepare Feasibility Studies for Strategic Cities in Taung, Mahikeng, Dr Kenneth Kaunda Metro, Hartbeespoortdam and Bojanala Eco-Tourism City
- Develop and implement Thusong Centres roll out plan
- Develop and implement Human Capital Investment Plan

<sup>20</sup> CSIR Built Environment (2012) Mpumalanga Infrastructure Master Plan (MIMP). Mpumalanga Department of Public Works, Roads and Transport. 31 August 2012 adapted

**Table 4-3 Capital Infrastructure Investment**

Economic Sector	Project	Location	Related SIP
Agriculture	Horticulture cluster	Bojanala	SIP 11
	Horticulture production (Ikageng CPA, Bareng Batho Agric Projects, Dirang Mmogo)	Dr Kenneth Kaunda	SIP 11
	Beef beneficiation program	Dr Ruth Segomotsi Mompoti	
	Agro-processing & manufacturing project	Dr Ruth Segomotsi Mompoti	SIP 11
	Support to Aquaculture and Sweet Potato projects in Lekwa-Teemane	Dr Ruth Segomotsi Mompoti	
	Groundnut Processing	Ngaka Modiri Molema	
	Oil Processing Plant	Ngaka Modiri Molema	SIP 11
Mining	Mineral beneficiation cluster	Bojanala	
	Platinum Visitor Mining equipment manufacturing hub and mining supply park	Bojanala	
	Leeukop project	Bojanala	
	Sedibelo Platinum Project	Bojanala	
Manufacturing	Construction materials suppliers park	Bojanala	SIP 4
	Vehicle component manufacturing park and distribution dry-port	Bojanala	SIP 4
	Tlokwe Light Industrial Park	Dr Kenneth Kaunda	SIP 4
Tourism and Cultural Industries	Implementation of Heritage Park	Bojanala	
	Development of tourism facilities at Borakolalo Reserve	Bojanala	SIP 4
	Bospoortdam Tourism / Waterfront development	Bojanala	
ICT	Distribution and logistics hub	Bojanala	SIP 4
	Development of N4 integrated mixed land use precincts	Bojanala	SIP 6
	Bulk infrastructure development program to unlock and support rapid development at key development nodes	Bojanala	SIP 6
Transport	Road D1303 between Wolmaranstad and Maquassi Hills	Dr Kenneth Kaunda	
	Road P13/4 from Wolmaranstad to Wesselsbron	Dr Kenneth Kaunda	
	Road D509 Leeuwddoringstad	Dr Ruth Segomotsi Mompoti	
Water Infrastructure Projects	Construction of New Taung Water Treatment Plant	Dr Ruth Segomotsi Mompoti	SIP 18
	Construction of Bulk Water Supply Pipeline from New Taung Water Treatment Plant to various villages	Dr Ruth Segomotsi Mompoti	SIP 18
	Construction of the Bulk Water Supply Line from Bloemhof to Schweizer-Reneke	Dr Ruth Segomotsi Mompoti	SIP 18

#### **4.3.4 Strategic Objective 4: Economic development and job creation supporting and guiding the spatial development pattern of North West**

##### **4.3.4.1 Spatial Development Strategies**

- The synergistic development of agriculture, mining , manufacturing and beneficiation, tourism and cultural industries as economic drivers
- The adoption of four types of strategies to manage future growth, namely:
- Minimising the spatial conflicts that exist between the various industries and biodiversity
- The distribution of economic activities as part of development corridors, development nodes, activity corridors and activity nodes
- The distribution of industrial areas in support of corridor development, (to strengthen the economy of nodes
- Reverse urban decay within all cities, towns and villages promoting investors' confidence and the economic regeneration of these nodes.

##### **4.3.4.2 Growth Strategies**

Four types of strategies are proposed to assist the province to manage future growth, namely:

- Revival strategy
- Kick start strategy
- Growth management strategy
- Maintenance strategy.

Each of these strategies is briefly outlined below.

###### **4.3.4.2.1 Revival Strategy**

**Application:** Older, struggling and under-developed economies.

**Rationale:**

Internal problems are experienced within the local economy. The focus of the strategy is on re-establishing local economic integrity.

**Initiatives:**

- Significant public sector investment – infrastructure, services, public amenities and facilities, linkages and general accessibility.
- Internal clean-up and management
- Crime reduction and improved security initiatives
- Promotion and maintenance of service excellence
- Provision of public land and buildings
- Investment brokerage – take opportunities to the market
- Risk reduction/business recruitment
- Accommodating SMMEs within economic nodes.

###### **4.3.4.2.2 Kick Start Strategy**

**Application:** Developing economies - Previously disenfranchised economies.



**Rationale:**

The strategy focuses on:

- Active risk reduction
- Investment opportunity recruitment
- Emphasis on innovative development products
- Building on existing strengths within these economies.

Apart from inadequate trade and commercial facilities in these areas, public facilities (e.g. schools, libraries, clinics and community centres), are too dispersed to create agglomeration advantages for private sector development. Trade and commercial development requires feet and the grouping of public facilities is an imperative to kick start development in these areas.

**Initiatives:**

- Service excellence
- Public sector commitment – public sector infrastructure and amenities (multiyear public sector investment framework focused on municipal infrastructure, public amenities and social housing to serve as catalyst to kick start private sector investment)
- Growth and expansion fueled by market forces.
- Managed nodal hierarchy development and growth.
- Effective land use management and township layouts.
- Develop market related incentive packages.
- Provide public land.
- SMME business support and formalisation.

**4.3.4.2.3 Growth Management Strategy**

**Application:** Rapidly growing economies.

**Rationale:**

Existing established commercial nodes contribute significantly to economic goals and objective and the fiscus including job creation. It is vitally important that these economies are maintained and should continue to grow. Retail development often serves as catalyst for other types of commercial development, e.g. office sector development and automotive parks, which is not always factored into forecasts that inform spatial plans.

**Initiatives:**

- Managed nodal hierarchy development and growth:
  - Primary nodes – highest order nodes accommodating higher order trade and commercial facilities.
  - Secondary nodes - second order nodes - accommodating smaller trade and commercial facilities (i.e. community type shopping centre and / or a hyper type centre).
  - Lower order nodes will predominantly serve local neighbourhoods.
- Delineate nodal boundaries in order to encourage agglomeration advantages – urban edge.
- Develop a detailed investment strategy, framework and growth plan for each primary node/urban core.
- Investment brokerage – take opportunities to the market
- Maintain and operate public space and infrastructure near investments.

#### 4.3.4.2.4 *Diversification Strategy*

**Application:** Stable growing economies.

**Rationale:**

- Strengthen the economies' position
- Focus on growth and expansion
- Focus on diversification and identification of new opportunities
- Ensure attractive building stock and physical business environment
- Investment marketing.

Stable economies are, more often than not, poised on a knife's edge and may be on the verge of a decline cycle. Focused intervention is required to protect investments and hence, the city's rates base.

**Initiatives:**

- Protect and expand investment and municipal tax base.
- Develop a framework with regard to priority investment areas and liaise with the business community.
- Expand the nodal hierarchy – and the urban property markets accommodated within key nodes.
- Diversify the local economy – focus on forward and backward linkages.
- Uphold business environment and property investment maintenance – contribute to retain and instill business confidence.
- Ensure effective municipal management and service excellence.
- Uphold public sector commitment – maintenance and expansion of existing public infrastructure and amenities.

#### 4.3.4.3 **Strategic Development Guidelines on Municipal Basis**

The subsequent set of tables provides detailed guidelines for future spatial development for each of the local municipal economies.

Table 2.1: Local Municipality Growth Strategy per municipalities

Local Municipalities	Main Towns	GDP Contribution	Economic Growth	Population Size	Population Growth	Employment Growth	Land Demand	Growth Strategy
<b>Bojanala Platinum District Municipality</b>								
Moretele LM	Makapanstad	7.3	3.2%	206 297	0.7%	-1.0%	356.5	Kick Start Strategy
Madibeng LM	Brits	26.8	3.5%	520 531	2.4%	-1.1%	1 655.2	Revival Strategy
Rustenburg LM	Rustenburg	49.3	2.5%	603 880	3.1%	0.7%	2 266.8	Revival Strategy
Kgellengrivier LM	Koster	2.0	2.0%	55 610	2.6%	-2.1%	119.5	Revival Strategy
Moses Kotane LM	Mogwase	14.6	3.2%	268 032	0.6%	-0.5%	737.6	Kick Start Strategy
<b>Ngaka Modiri Molema District Municipality</b>								
Ratlou LM	Setlagole	3.6	1.3%	116 968	0.8%	-1.7%	144.1	Kick Start Strategy
Tswaing LM	Delareyville	8.0	2.6%	134 674	1.9%	-2.1%	175.9	Kick Start Strategy
Mafikeng LM	Mafikeng	50.3	2.4%	321 791	1.3%	-1.1%	678.3	Diversification Strategy
Ditsobotla LM	Lichtenburg	26.5	4.4%	163 260	1.1%	-0.2%	353.9	Revival Strategy
Ramotshere Moiloa LM	Zeerust	11.5	2.0%	165 221	1.2%	-2.0%	285.6	Revival Strategy
<b>Dr Ruth Segomotsi Mompati District Municipality</b>								
Kagisano/Molopo LM	Ganyesa	15.8	1.4%	115 749	0.7%	-3.5%	160.2	Kick Start Strategy
Naledi LM	Vryburg	28.1	1.4%	74 029	1.3%	-3.6%	136.1	Revival Strategy
Mamusa LM	Schweizer-Reneke	13.7	2.0%	66 043	2.1%	-2.0%	117.1	Revival Strategy
Greater Taung LM	Taung	30.4	1.1%	194 645	0.2%	-2.0%	253.9	Kick Start Strategy
Lekwa-Teemane LM	Christiana	12.1	-0.1%	32 296	-0.4%	-4.0%	104.2	Revival Strategy
<b>Dr Kenneth Kaunda District Municipality</b>								
Ventersdorp LM	Ventersdorp	3.8	3.7%	62 460	3.3%	-1.3%	117.4	Revival Strategy
Tlokwe LM	Potchefstroom	31.1	2.4%	152 247	0.9%	1.0%	507.3	Diversification Strategy
City of Mafosana LM	Klekrdorp	56.9	1.2%	419 854	1.0%	-0.6%	1 026.6	Diversification Strategy
Maquassi Hills LM	Wolmaransstad	8.2	4.3%	84 984	1.6%	0.5%	144.2	Revival Strategy

#### 4.3.5 Strategic Objective 5: Balancing urbanisation and the development of rural areas within North West

##### 4.3.5.1 Spatial Development Strategies

This requires the following interrelated spatial development strategies:

1. The development of sustainable cities, and towns where people, jobs, livelihood opportunities and services are aligned creating more functionally integrated, balanced and vibrant urban settlements<sup>1</sup>
2. The integration of urban and rural areas focusing on linkages between rural and urban areas thereby enhancing growth by **facilitating the flow of resources** to where they have the largest net **economic and social benefits**<sup>1</sup>
3. Reviving rural areas<sup>2</sup> into vibrant, equitable and sustainable rural communities<sup>3</sup> **(including small towns (dorpies) , settlements and villages)**

##### 4.3.5.2 Strategic Focus Areas:

#### A. The Development of Sustainable Cities and Towns

##### 1. Urban Areas within North West need to :

- a. Mainly accommodate the urbanisation trend in Primary and Secondary Towns with a regional and sub regional context within which a balanced settlement pattern can take place with regard to:
  - Population distribution
  - The availability of resources particularly water
  - Economic potential for growth

**Table 4-4 Primary and Secondary Towns with a Sub Regional Context**

Town	Order	Significance	Corridors
Rustenburg	Primary	Regional	Platinum Corridor ( N4), Eastern Development Belt
Klerksdorp	Primary	Regional	Treasure Corridor ( N12), Eastern Development Belt
Potchefstroom	Primary	Sub-Regional	Treasure Corridor ( N12), Eastern Development Belt
Mahikeng	Primary	Regional	Western Corridor (N18)
Brits	Primary	Sub-Regional	Platinum Corridor ( N4), Eastern Development Belt
Orkney	Secondary	Sub-Regional	Treasure Corridor ( N12)

<sup>1</sup> Department of Cooperative Governance and Traditional Affairs (COGTA). Integrated Urban Development Framework Draft: September 2014

<sup>2</sup> Chapter 8 of the National Development Plan (NDP) 'Transforming human settlements and the national space economy'

<sup>3</sup> CRDP



Town	Order	Significance	Corridors
Lichtenburg	Secondary	Sub-Regional	N14
Vryburg	Secondary	Regional	N14
Mmabatho	Secondary	Sub-Regional	Western Corridor (N18)
Schweizer-Reneke	Secondary	Sub-Regional	Treasure Corridor ( N12)
Hartbeespoort	Secondary	Sub-Regional	Platinum Corridor ( N4), Eastern Development Belt
Wolmaranstad	Secondary	Sub-Regional	Treasure Corridor ( N12)
Ventersdorp	Secondary	Sub-Regional	N14
Zeerust	Tertiary	Sub-Regional	Platinum Corridor ( N4)
Koster	Tertiary	Sub-Regional	Platinum Corridor ( N4)
Ottosdal	Tertiary	Sub-Regional	N14
Christiana	Tertiary	Sub-Regional	Treasure Corridor ( N12)
Delareyville	Tertiary	Sub-Regional	N14
Stilfontein	Secondary	Local	N14

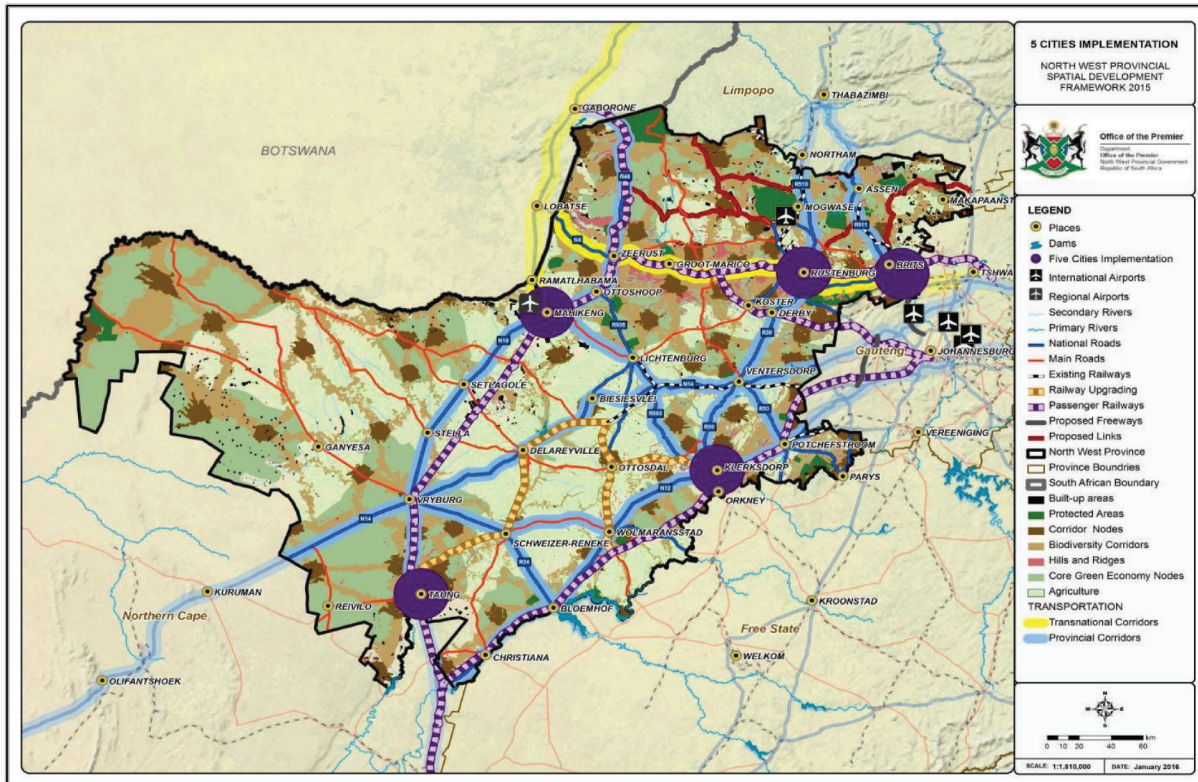
b. Accommodate the Five City Projects Initiative implementation including:

- The City of Mahikeng
- Taung City
- The Metropolitan City of Dr. Kenneth Kaunda
- Hartbeespoortdam City
- Bojanala Eco- Tourism City

c. Within **urban areas** the following spatial guidelines need to apply and incorporated into Spatial Development Frameworks and Plans:

i. Integrated sustainable human settlements by:

- Transforming the existing dysfunctional urban settlement structure and enhancing the sustainability of urban and rural settlements by:
  - Providing all types of housing choices nearer to the place of work
  - Providing employment opportunities in or in close proximity of disadvantaged communities
  - Providing an integrated transportation and road infrastructure
  - Engineering and social services upgrading
  - The upgrading or resettlement of squatter/ informal communities.
- An integrated urban settlement structure within a system of urban activity corridors, nodes, spines supported by a sustainable transportation and road systems
- Formalising informal towns and settlements and provide engineering services

**Map 4-19: 5 Cities Implementation**

- Containing urban sprawl and providing compact urban development, establishing a well determined and enforced urban edge that considers the long term demand for all urban land uses, the preservation of open space, prime and unique agriculture land, areas of natural beauty, heritage sites and critical environmental areas.
- The provision of high densities of mixed land uses within close proximity of economic activity nodes and transportation systems and the enhancement of residential densities
- The provision of housing to:
  - Accommodate the growth in demand for housing, eradication of housing backlogs, upgrading of informal housing areas and a variety of housing choices
  - Focus on the areas of greatest demand
  - Assist in the restructuring of urban areas
  - Implement Breaking New Ground principle
  - Provision of community facilities, taking into consideration the regional, sub-regional, district and local needs of the communities
  - Reducing resource consumption, especially water and energy, and increase efficiencies
  - Providing ownership choices
  - Increase safety and security

- ii. Promoting a strong public transport network and internal and external linkages

- Contributing to a denser and more efficient urban form
  - supporting economic and social development
  - Strengthening rural-urban linkages.
- iii. Integrated infrastructure planning providing for
- resource-efficiency
  - universal access and
  - more inclusive economic growth needs to meet industrial, commercial and household needs
- iv. Inclusive economic development including:
- seizing the potential of new economies through technological innovation,
  - investing in social capital and public services,
  - and focusing on spatial development.
- Inclusive economic development is essential to creating jobs, generating higher incomes and creating viable communities and nations.
- v. Efficient land governance and management providing investor's confidence and a sustainable and enhanced basis for income generation for municipalities

## B. The Integration of Urban and Rural Areas

The integration of urban and rural areas needs to focus on linkages:

### a. Enhancing mobility and Accessibility

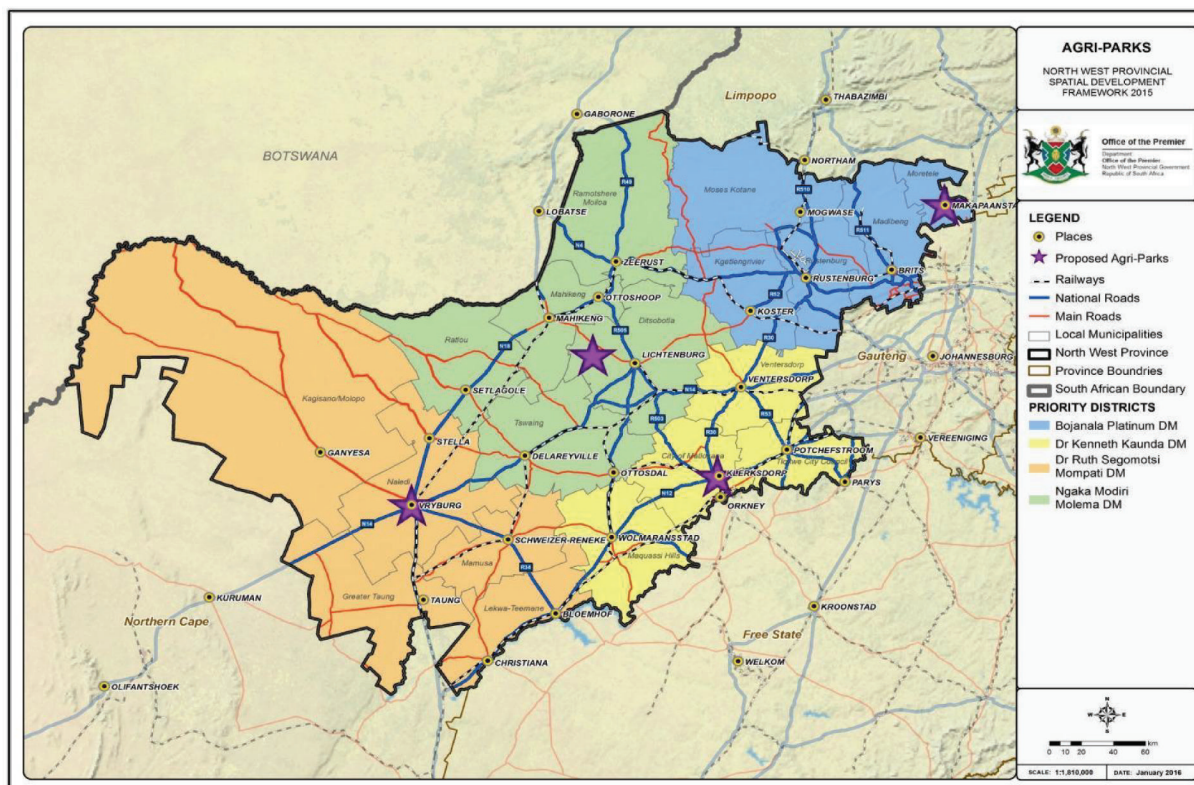
- The small towns, settlements (dense population concentrations) and villages of which the majority are associated with former homelands should link with nearby regional and sub regional nodes of economic potential through the provision of:
  - Efficient roads infrastructure
    - Integrating transportation with urban areas
  - Enhancing mobility on link roads
  - Reviving the rail networks in by:
    - Supporting Government's Road To Rail Policy
      - Reviving railway branch lines supporting rural areas for all users
      - Providing passenger transportation on main lines:
        - N4/ N14 Corridors: Mahikeng - Johannesburg
        - N12 Corridor: Cape Town- Kimberley- Johannesburg
        - Extension of N4 Corridor: Inter- regional connecting Rustenburg, Zeerust, Gaborone

### b. Economic Linkages

Providing economic linkages between urban and rural areas including the development and provisioning of:

- Agri Parks, Production Support Units an Urban and Rural Markets
- ITC Networks

### Map 4-20 Agri-Parks



### C. Reviving Rural Areas

#### a. Villages, Townships and Small Dorpies (VTSD) support

The Villages, Townships and Small Dorpies need to support their respective functions to act as service centres for the surrounding population

**Table 4-5 Rural Development Nodes (Small Towns)**

Town	Order	Significance
Marikana	Secondary	Local
Taung	Tertiary	Local
Bloemhof	Tertiary	Local
Coligny	Tertiary	Local
Ganyesa	Tertiary	Local
Mooi-nooi	Tertiary	Local
Setlagole	Fourth order	Local
Reivilo	Fourth order	Local
Setlopo	Fourth order	Local
Leeudoringstad	Fourth order	Local
Lehurutshe	Fourth order	Local



Town	Order	Significance
Lethabong / Haartebeesfontein	Fourth order	Local
Sannieshof	Fourth order	Local
Hartbeesfontein	Fourth order	Local
Jericho	Fourth order	Local
Makwassie	Fourth order	Local
Stella	Fourth order	Local
Swartruggens	Fourth order	Local
Groot Marico	Fourth order	Local
Mogwase	Fourth order	Local
Ramokoka	Fourth order	Local
Ottoshoop	Fourth order	Local
Amalia	Fourth order	Local
Derby	Fourth order	Local
Bray	Fourth order	Local

- The settlement patterns of the **traditional authority areas** and the development nodes need to be restructured to accommodate development within the sub regional context by:

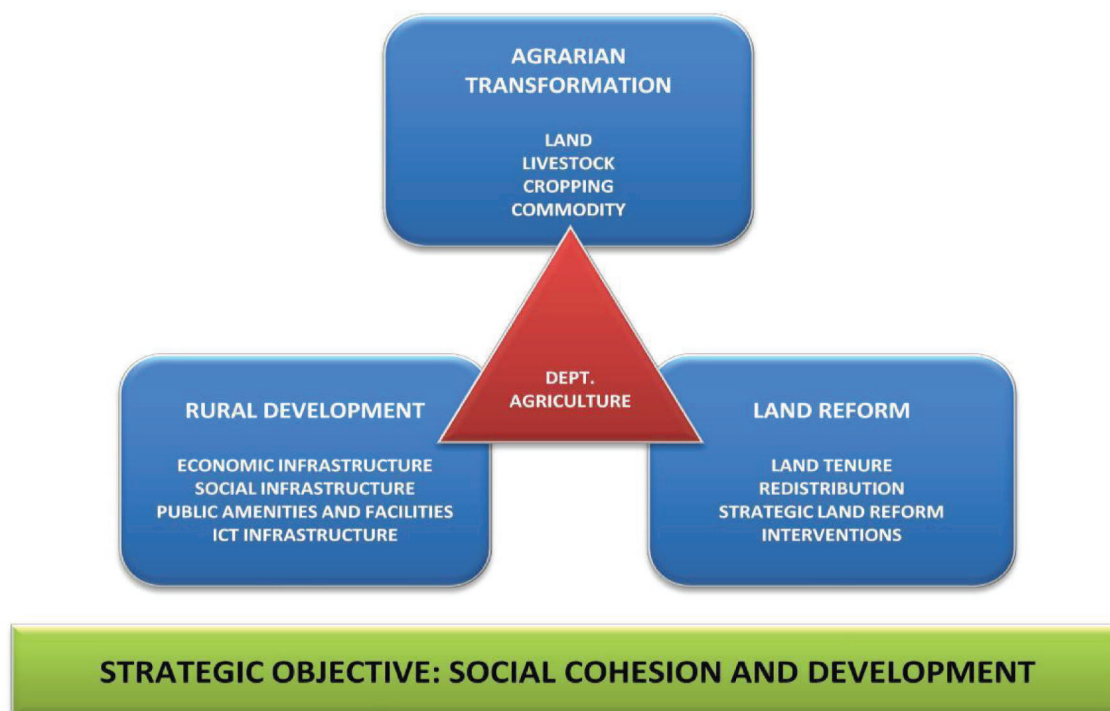
- Integrating economic activities to provide local employment
- Enhancing accessibility to employment nodes by providing efficient roads and transportation systems enabling high mobility of movement
- The towns, villages and dense population concentrations associated with traditional areas should link with nearby nodes of economic potential through the provision of efficient transportation and roads infrastructure

These areas include:

- The Moses Kotana Local Municipality
- Rustenburg Local Municipality
- Madibeng Local Municipality
- Moretele Local Municipality
- Ramoitshe Moiloa Local Municipality
- Ratlou Local Municipality
- Tswaing Local Municipality
- Greater Taung Local Municipality
- Kagisano/ Molopo Local Municipality

- **Rural Development within North West needs to provide:**

- Vibrant, equitable and sustainable rural communities and food security for all

**Figure 4-4: Strategic Objective**

- Consolidate the dispersed rural settlements in the area and optimise existing resources thereby ensuring access to economic activities and community facilities throughout the province.
- Promote **Agrarian Transformation** through:
  - Agri Parks
  - Facilitating the establishment of business initiatives, rural and agro industries, co-operatives, cultural initiatives and vibrant local markets.
  - Empowerment of rural communities to be self reliant
  - Development of mitigation and adaptation strategies to reduce vulnerabilities with special reference to climate change, erosion, flooding and natural disasters
  - Increased production and sustainable use of natural resources
    - Livestock farming and related value chain development
    - Cropping and related value chain development
  - Strengthening rural livelihoods for vibrant local economic development
  - Use of appropriate technology, modern approaches, and indigenous knowledge systems
  - Ensuring food security, dignity and quality of life, requiring:
    - The protection of high potential agriculture land
    - The productive use of farms by successful land claimants
    - A settlement structure which supporting the establishment of rural and agro industries, co-operatives, cultural initiatives and local markets in rural development nodes

- Facilitation of the transition from predominantly subsistence farming to commercial small scale farming.

- Promote **Rural Development** through:

- Improvement and development of economic infrastructure supporting agriculture development
- Developing rural development nodes providing sustainable economic and social infrastructure including
  - Enhancing and maintaining road and transportation linkages to higher order urban nodes as markets of produce and economic and social services providers
- Enhancing distribution networks, access to ports and railways
- Electrification
- Improving communication networks (including ICT)
- Small scale farming development
- Establishment of fresh produce markets at appropriate locations
- Construction of dams and water harvesting

- Promote **Land Reform** through:

- Expediting redistribution of land to historically disadvantaged people and provide access to funding ( and mentoring) for commercial farming
- Increasing the rate of **land tenure reform**, securing access to land, protecting land rights
- Establishing agri villages for local economic development on farms
- Providing in basic needs of farm dwellers including water, sanitation, electricity, housing
- Providing for security of tenure.
  - Increasing the pace of settling of **Land Restitution** claims
  - Effectively supporting the development of skills and competencies of rural people to utilise land in an effective manner (mentoring).
- Dispersed villages should be discouraged. The clustering of villages to allow for the provision of sustainable social and economic infrastructure should be encouraged
- The housing of mining personnel should take place in existing nearby towns

#### 4.3.5.3 Strategic Projects and Actions

##### 4.3.5.3.1 *Urban areas*

1. Comprehensive study on the delineation of urban edges for all municipalities in conjunction with Provincial and National Departments of Agriculture.
2. Regeneration programmes for all first and second order nodes.
3. Integration of Provincial Spatial Development Strategies into District and Local Municipality IDPs, SDFs and Sector Plans.
4. Integrated Land Transportation Plans for the province, four districts and all main concentrations
5. A Provincial Human Settlement Strategy and Integrated Human Settlement Plans for all local municipalities.
6. Provincial and District Sport and Recreation Plans.
7. Community Parks Development programme.
8. MPCC (Thusong Centres) roll out programme.

#### 4.3.5.3.2 *Rural Areas*

1. Rural Area Development Plans to include all areas outside the urban areas viz:
  - a. Agriculture Areas including Small Towns
  - b. Traditional Areas in:
    - The Moses Kotana Local Municipality
    - Rustenburg Local Municipality
    - Madibeng Local Municipality
    - Moretele Local Municipality
    - Ramotshere Moiloa Local Municipality
    - Ratlou Local Municipality
    - Tswaing Local Municipality
    - Greater Taung Local Municipality
    - Kagisano/ Molopo Local Municipality
2. Farmer Production Support Units supporting the Agriparks in all districts
3. Rural strategic projects as set out in **Table 4-6**

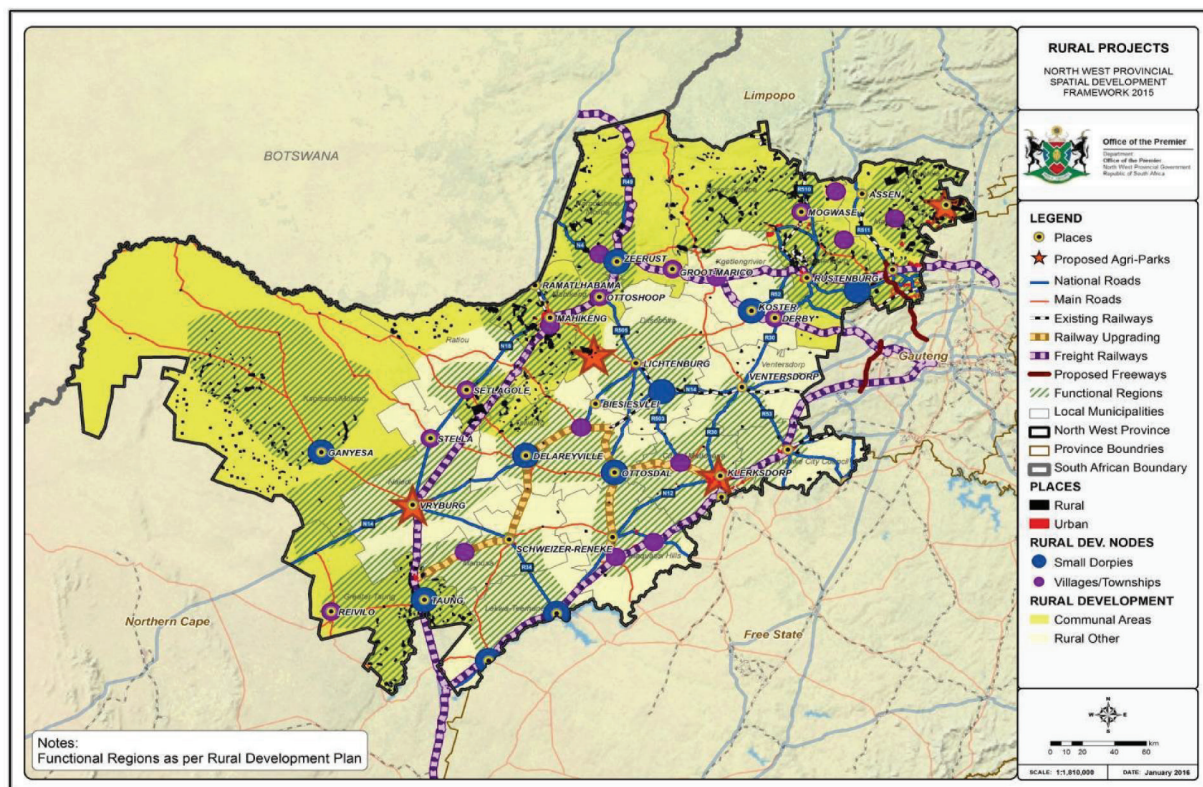
**Table 4-6 Rural Strategic Projects and Programmes**

	Projects
Villages, Townships and Small Dorpies (VTSD) Infrastructure	Rural Development Planning
	Village Development Planning and Programming (Clustering)
	Rural Housing Programme
	Pre-Active demarcation of residential sites for rural settlement in traditional authority areas
	Establishment of Thusong Centres
	Water, Sanitation and Electricity
	Agri Villages
	Schools
	Hospitals, CHC's and Clinics
	Cemeteries and Mortuaries
	Safety and Security
Agriculture Infrastructure	ITC
	Construction and Upgrading of Dams/ Irrigation Systems/ Borehole refurbishment
	Agri-parks ( <b>Springbokpan</b> , Mkanstad, Matlosana, Naledi)
	Agriculture projects ( Intensive and extensive)
	Development of underutilised land in communal areas
	Farmer Production Support Unit



	Projects
Culture and Sport	Cultural tourism- investment in museums and heritage sites.
	Sport fields and stadiums
Mining	Platinum Special Economic Zone – Rustenburg Platinum Belt
	Small scale mining
	Mining Beneficiation
Tourism	Game Lodges (ie. Manyana game Lodge- Mahikeng )
Transportation and Roads	Maintain and upgrade roads and transportation systems between Rural and Urban Areas

Map 4-21: Rural Strategic Projects



## 5 CHAPTER 5: IMPLEMENTATION FRAMEWORK

### 5.1 Introduction

Chapter 5 provides The Implementation Framework for the implementation of the spatial development strategies and projects set out in Chapter 4. The Implementation Plan aims at focussing projects in localities that will support and strengthen the future settlement and development pattern of North West. The Strategic Focus Areas identified in terms of development corridors, development nodes and development zones accommodates the clustering of activities in an integrated and synergistic manner. The layout of Chapter 5 is summarised in **Figure 5-1: Chapter 5 Lay-Out**.

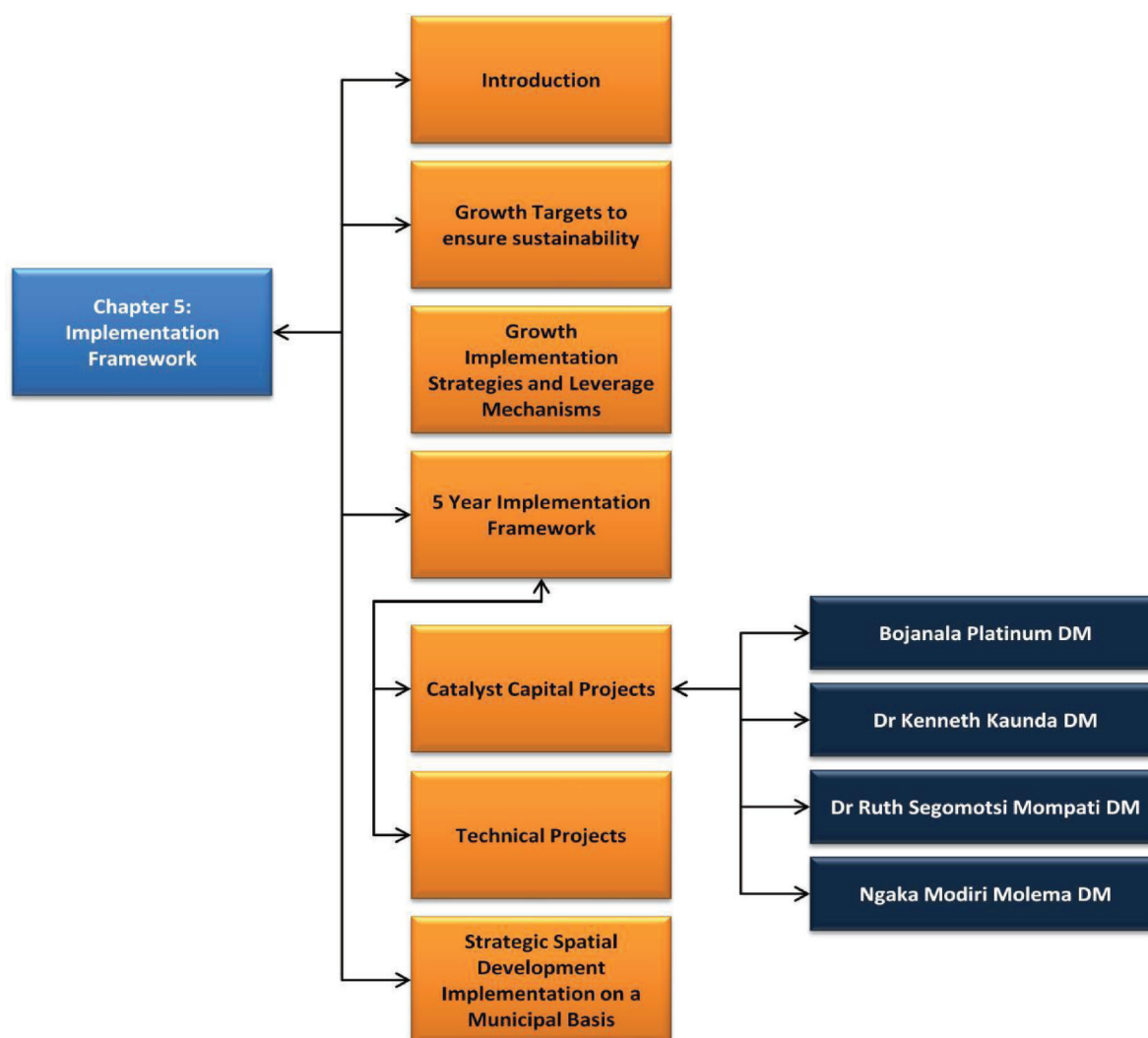


Figure 5-1: Chapter 5 Lay-Out

## 5.2 Growth Targets: What will be required to ensure Sustainability and Job Creation

This section provides a growth target that will be required to ensure economic sustainability and job creation. Scenario modelling reflects the labour absorption rate under current population and labour force growth conditions.

### 5.2.1 Growth Target

**Table 5-1: Labour Absorption Modelling, Annual Gain or Loss (2003 to 2013)**

District	Working Age Population (2013)	Economically Active Population (2013)	Employed Population (2013)	Working Age Population (Annual Contribution/loss)	Economically Active Segment (Job need)	Jobs (Annual Contribution / loss)
Bojanala Platinum	846 406	499 191	384 794	-5.4	-3 436	458
Ngaka Modiri Molema	492 783	218 145	154 503	-3 764	-3 324	-724
Dr Ruth S Mompoti	212 193	75 466	54 231	-7 489	-4 344	-1 880
Dr Kenneth Kaunda	557 111	327 234	258 704	-4 051	-3 973	471
<b>Total</b>	<b>2 108 493</b>	<b>1 120 036</b>	<b>852 232</b>	<b>-15 309</b>	<b>-15 077</b>	<b>-1 674</b>

- **Table 5-1** indicates that existing economic and labour force growth result in the shedding of approximately 1 674 jobs per annum within the provincial economy.
- The economically active population is decreasing by approximately 15 077 people per annum. This is related to the province's inability to create jobs.
- The working age population is decreasing by approximately 15 309 people per annum, whilst the population is increasing – resulting in more pressure on breadwinners.

#### **Strategic Guidelines:**

- ✓ Population growth outstrips the effects of positive economic growth, *i.e.* the economy cannot absorb the labour force.
- ✓ In spite of rural-urban migration, the economy can still not absorb the labour force.
- ✓ There is an unbalance between labour skills and employment opportunities, increasing unemployment. Employment opportunities created in the province should align with the skill set of workers available.
- ✓ Significant government investment in infrastructure is required, coupled with a more favourable business environment, in order to stop the out migration of the working age population.
- ✓ Development is necessary in order to eradicate poverty and increase job creation. At least 14 000 ha should be made available for development over the next 20 years, of which a large segment should be focused on private sector investment.
- ✓ If the existing spatial patterns were extrapolated, the bulk of future growth will be accounted for by non-rateable subsidy housing.
- ✓ This, by default introduced significant sustainability challenges for municipal finances, economic growth and a multitude of related factors.

### 5.2.2 Mechanism to achieve High Growth Scenario

Certain mechanisms should be used to ensure that the province enjoys high growth by shifting from a social needs based policy to infrastructure and economic growth based policy. The following mechanisms should be used to facilitate growth in certain areas and be more restrictive in other areas.

**Diagram 5-1: Development Planning Mechanisms**



Source: Demacon, 2016

#### 5.2.3.1 Land use planning and management

- The massive demand for urban and peripheral urban land requires strong, integrated and transparent land use planning and management systems at a local level, where potential land use conflicts can be resolved.
- Land use planning within the rural areas and communal land areas is also vital and conflicts in terms of land allocation, planning and management between local government and traditional authorities should be resolved.
- At least 10 000 ha should be made available for development over the next 20 years, of which a large segment should be focused on private sector investment.

#### 5.2.3.2 Settlement planning

- According to Human Settlement Planning and Design<sup>1</sup>, settlement planning should focus on the following core aspects:
  - Efficiency of resources
  - Opportunity generation
  - Convenience
  - Choice

<sup>1</sup> CSIR Building and Construction Technology, Pretoria. Human Settlement Planning and Design. Boutek Report No. BOU/E2001 Reprint 2005 Capture Press, Pretoria ISBN 0-7988-5498-7



- Equality of access
  - Quality of place
  - Sensory qualities
  - Sustainability
- The extensive demand for urban and peripheral urban sites requires high quality integrated planning between *inter alia* the main government service providers in housing, water, waste and sanitation, education, health, roads and transport.
  - It is vital that strong and integrated settlement planning capacity is built at local level to provide well planned, located and serviced urban and peripheral urban sites.
  - Improved and integrated settlement planning require structural changes that can only be affected over the medium to longer term – enabling formalisation of compact settlements located in settlement regions, cities, and settlement corridors along effective transport routes.
  - Informal township areas should be prioritised and formalised carefully and selectively based on considerations relating to *inter alia* location and access to jobs; and effectively serviced and provided with the required social and educational facilities. Accessibility to these townships should also be increased in order to ensure proper linkages to economic / labour nodes.

#### 5.2.3.3 Economic development

The North West Province is not only depicting a negative labour force growth, but also a negative working age population growth rate. Employment creation is vital in order to minimize the migration of the working age population. Employment creation is vital in the rural areas and rural towns of the province. It goes without saying that one of the main tasks of government is to facilitate business investment, growth and development to create these jobs. The economic sectors of growth and opportunity in the province should be targeted: agriculture, mining, manufacturing, trade, finance and business services, general government services and construction.

The establishment, nurturing and growth of small businesses, which tend to employ more people relative to the scale of their investment, are critically important, particularly in the context of economic development and job creation objectives. Local economies can be grown in three ways:

- **growing existing businesses,**
- **attracting investment from outside, and**
- **creating new enterprises and linkages with new nodes.**

The vast potential of the largely untaxed informal sector should be utilised. Some of the key constraints to business growth and development include lack of land tenure, lack of business, technical or managerial skills, lack of market information and knowledge, lack of access to credit, isolation from markets through poor roads and infrastructure and insufficient demand to support sufficient sales in poor communities. It is critical that resources are targeted at businesses that have a sound business model, a good prospect for success and a clear path to commercial independence.

#### 5.2.3.4 Infrastructure investment

The high-growth scenario must be based on successful implementation of integrated infrastructure development which will be geared to sustain both rural and urban development initiatives. Strategic transport corridors should link the rural areas with urban areas. Integrated programmes being carried out in shared impact areas of potential and economic opportunity.

#### 5.2.3.5 Human resource development

Lack of co-ordination and capacity constraints in key provincial departments and agencies, compounded by leadership and staff changes in crucial departments and entities have contributed to non-implementation of government policy. If no efforts are directed towards redressing the situation, non-delivery would escalate, service protests action can be expected to increase and economic development will suffer.

#### 5.2.3.6 Facilitative Governance

Irreversible physical damage to the environment would increase in future if no action is taken to correct the problem of overlapping legislation and policy instruments. The managed development scenario assumes that a single legislative instrument is established at national and provincial levels to ensure that a wall to wall planning and land use management system is introduced. The long term vision of formalisation of compact settlements needs co-ordination and cooperation across all government spheres and relevant stakeholders, in particular focusing on peripheral urban and rural settlements.

Lack of coordination and capacity constraints (discontinuity) have a direct impact on the quality of development managements, resulting in scattered and disintegrated development rather than integration. Lack of coordination also applies in cases where various government departments prepare plans with a spatial dimension in relative isolation and the need for a framework to guide all these processes cannot be over emphasised.

Abandoning historically protectionist practices for infrastructure investment and economic growth based practices. This will not only unlock disproportionately larger private sector investment, but also create an important two pronged benefit allowing for:

- Physical expansion of rateable real estate; coupled with
- Creation of new, higher value real estate – which exceeds older real estate in both value and capital appreciation over time.

#### 5.2.3.7 Industrialisation

Development strategies should focus on inter alia, industrialisation in order achieve economic growth and job creation. The creation of strategic Industrial Development Zones (IDZ's) with high levels of accessibility to markets, close proximity to resources and a large labour force will ensure sustainable development. It is crucial to create a conducive environment for private sector investment and to encourage the establishment of SMMEs. According to the SADC Industrialisation Strategy, deeper regional integration reinforced by industrialisation and enhanced competitiveness should provide the context for the region's development. Enabling the productive and distribution capacities of the process will help remove structural impediments and enhance factor productivity.

To increase industrial development, the OECD Global Development Perspective 2013 Report, indicates that the following is necessary:

1. Fostering scientific and technological development
2. Leveraging public procurement
3. Activating learning through foreign direct investment (fdi)
4. Promoting entrepreneurship.

Industrialisation, however, needs large investments from the public and private sector. The BRICS New Development Bank provides financing for infrastructure development and might pose as a

possible investor towards infrastructure development in the North West Province. At the 2014 BRICS Summit at Fortaleza, the BRICS countries signed an agreement on establishing a New Development Bank (NDB), "with the purpose of mobilizing resources for infrastructure and sustainable development projects in BRICS and other emerging and developing economies" (BRICS, 2014).

#### 5.2.3.8 Leverage Mechanisms

**Table 5-2 A Menu of Options**

Policy Mechanisms	Capital Expenditure	Investment Promotion	Private Sector Investment
✓ Favorable nodal expansion policy	✓ Engineering services and infrastructure	✓ UDZ tax incentive scheme	✓ Residential development
✓ Flexible corridor implementation policy	✓ Telecommunication and internet	✓ Fiscal incentives – Incentive Policy.	✓ Commercial development
✓ Residential densification policy	✓ Social amenities and infrastructure	✓ Provision of public land and buildings	✓ Industrial development
✓ Industrial development and diversification policy	✓ Housing development	✓ Service excellence	✓ Industrial cluster development
✓ Industrial park development policy	✓ Network infrastructure – road, rail, airports, ports.	✓ Safety and security	✓ Tourism development
✓ Tourism product development policy	✓ CBD renewal and regeneration	✓ Investment promotion strategy	✓ Mixed use development
✓ Economic agglomeration policy.	✓ Neighbourhood development and upliftment	✓ Bulk service contribution incentive – to be offset against the future rates and taxes to be generated by the proposed development.	✓ Business Incubation facilities
✓ SMME development policy	✓ Security augmentation programmes	✓ Priority investment area framework. Investment should be focused towards strategic nodes and corridors that will result in a multiplier effect that will catalyse additional investment which will contribute to the expansion of the income side of the municipal tax base. Creating additional funds for social upliftment.	✓ Trader Markets.
✓ Risk reduction/business recruitment policy	✓ Clean-up and maintenance of areas.	✓	
✓ Sound land use management policy	✓ Building upliftment programmes.	✓	
✓ Nodal development boundary policy	✓ SMME business support and formalization	✓	
✓ Accurate and speedy regulatory policy - Facilitating prompt decisions such as the approval of building plans and rezoning applications (no red tape/ regulatory burden).	✓ Informal trader facilities.	✓	
✓ Management of Council Owned land Policy	✓ Conversion of bad buildings programme.	✓	
✓ Environmental management policy	✓ NDPG (Neighbourhood Development Partnership Grant)	✓	
✓ Procurement Policy	✓ MIG (Municipal Infrastructure Grant)	✓	
	✓ URG (Urban Renewal Grant)	✓	
	✓ Uphold business environment and property investment maintenance	✓	

## **5.3 Implementation Framework**

### **5.3.1 Strategic Spatial Development Implementation Guidelines**

#### **5.3.1.1 Social development and human settlements guidelines**

Over the next 10 to 20 years, the province will need approximately 371 939 new houses (subsidy and bonded) situated in strategic areas throughout the province. Adequate planning guidelines will be necessary to prevent urban sprawl and the development of informal settlements on high value land. By demarcating sufficient space for future residential development, the sustainability and efficiency of towns and cities can be ensured. The following guidelines seek to provide guidelines for social and human settlement development:

- Ensure the development of integrated, sustainable human settlements
- Ensure equal opportunity and access to jobs
- Support access to basic services and amenities
- Focus on densification rather than greenfield developments
- Minimise urban sprawl
- Formalisation and upgrading of informal settlements
- Focus settlement development on development corridors and close to economic opportunities

#### **5.3.1.2 Rural development guidelines**

Rural development pertains mainly to traditional areas and development outside of the large urban concentrations and include small towns and villages. Levels of inequality and poverty are higher in the rural areas and job opportunities are limited. High levels of rural-urban migration can be found in the province. In order to minimise this trend, job opportunities should be created in the small towns and villages. These job opportunities should relate to agro-processing and manufacturing as well as the tourism sector.

- Ensure land tenure security
- Protect high value arable land
- Promote linkages between agriculture, agro-manufacturing and tourism potential
- Promote rural tourism
- Maintain rural infrastructure
- Focus on skills development
- Increase linkages to economic hubs
- Promote game farming and game breeding

#### **5.3.1.3 Infrastructure development guidelines**

Infrastructure development is a key component to ensure efficient spatial development. The province covers a vast land area with settlements scattered throughout the area. This often leads to a lack of services in rural areas and long travel distances – hampering economic growth. Infrastructure development plays a critical role in creating job opportunities and stimulating economic growth.

- Increase efficiency of transport network and enhance connectivity
- Eliminate infrastructure backlogs with regards to water, sanitation, electricity, transport
- Focus on infrastructure projects that will increase economic growth and attract private sector investment
- Promote regional integration through the development of strategic infrastructure projects.
- Ensure the maintenance and adequate management of infrastructure to improve sustainability



- Proactive Infrastructure development and planning is crucial in the upgrading of informal settlements and the creation of new settlements
- Focus on infrastructure development in core economic growth areas – increasing agglomeration advantages
- Upgrade existing infrastructure in zones of economic opportunity.

Urban renewal programmes should be concentrated in major nodes rather than the establishment of new remote settlements far removed from job opportunities.

#### 5.3.1.4 Economic development guidelines

The economy is lagging behind and large scale interventions are needed to ensure high growth rates needed to increase the employment opportunities created. The North West is currently losing its economic active population to other provinces due to its inability to create sufficient employment opportunities. The province should increase its manufacturing sector to avoid exporting raw materials and missing out on beneficial value chains.

- Employment generation
- Ensure that the employment opportunities created, falls within the skills categories of workers
- Minimise the outflow of the economic active population
- Focus on the comparative advantages of municipalities
- Focus economic development on specific areas, creating economic hubs with agglomeration advantages
- Diversifying the economy
- Develop agro-industries to enhance local beneficiation and to create a multiplier effect
- Create job-creating industries and competitive enterprises in areas with a small economic base to increase economic growth and sustainability of the community
- Promote tourism as economic driver

#### 5.3.2 Catalytic Capital Projects and Programmes

The proposed spatial distribution of catalytic urban development, economic development, engineering services, social services, housing, tenure upgrading and relevant projects or programmes that need to be focussed on during the following 5 years are provided for each municipality. This focuses on providing project development synergy through the implementation of:

- The clustering of catalytic capital projects within municipalities within :
  - First and second order Nodes
  - Rural Development Zones( including third and fourth order nodes)
  - Agriculture, forestry and mining zones
  - Conservation areas
- Road links that need to be planned or constructed to support the development of nodes and corridors and movement of people and goods through the province
- Rail links ( passenger and freight) that need to be planned or constructed to enhance the mobility of people and goods within the province

The Implementation plans or programmes that will support the projects are also indicated.

### 5.3.3 Municipal Implementation Frameworks

The following section summarises the strategic development guidelines and catalytic capital projects and programmes needed for each local municipality within the respective district.

#### 5.3.3.1 Bojanala District

##### 5.3.3.1.1 Moretele Local Municipality

##### 5.3.3.1.1.1 Development Guidelines

Moretele Local Municipality is situated north of Gauteng, specifically the townships of Hammanskraal and Soshanguve. Moretele Local Municipality is **mostly rural in nature**, consisting of villages ruled by traditional leaders. The area accommodates a large, though dispersed, consumer market. The municipality has a **negative employment growth rate** of -1.0%, this can mainly be attributed to the large workforce that is lost to Gauteng that has more job opportunities.

The largest node is **Makapanstad**. Economic activity is mainly limited to informal trading and government services. It would be beneficial to begin the Kick Start Strategy for the municipality in Makapanstad. Once development has taken place in Makapanstad, and the economy is growing at a steady rate, albeit from a small base, development can expand to other areas.

#### **Status:**

Developing rural economy with limited growth potential

#### **10 Year Land Budget:**

The following table indicates the development potential for Moretele Local Municipality.

**Table 5-3: Moretele Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Moretele	21.6	1.2	10.4	71.1	252.2	356.5

Source: Demacon, 2016

#### **Development Guidelines:**

- **Formalisation** of trade
- Consumer demand driven economic activities
- Formalisation of land tenure
- **Densify** human settlement development around Makapaanstad / Mathibestad to form one large urban concentration
- Ensure **access to basic services** in the northern areas
- Ensure equal opportunity and access to jobs by creating job opportunities in the small towns such as Dikebu and Moretele, and providing transport to larger settlements such as Makapaanstad with more job opportunities.
- Focus on **densification** rather than greenfield developments
- Skill development in the manufacturing and agro-processing sectors
- Strengthen the **agriculture value chain** – by processing the produce in the municipality, the multiplier effect will increase, creating a need for certain non-basic services, e.g. retail and consulting services.
- **Promote linkages** between agriculture, agro-manufacturing and tourism potential. The municipality is situated in close proximity to Dinokeng Game Reserve as well as Borakalalo National Park, and the Rooiberg area, creating tourism opportunities for Moretele LM.

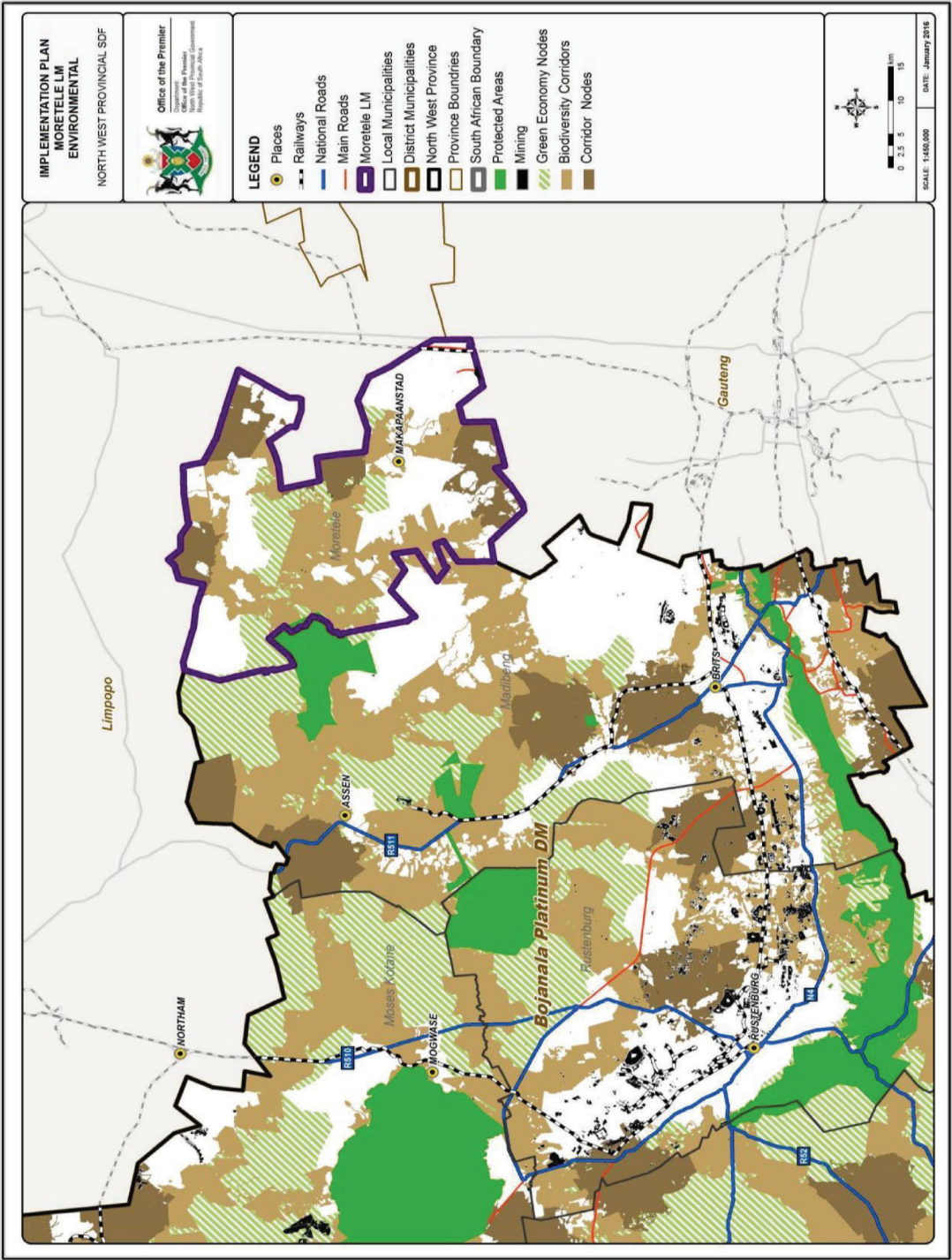
- Focus and **intensify economic development** on Makapaanstad / Mathibestad, creating economic hubs with agglomeration advantages.
- Create **job-creating industries** and **competitive enterprises** in areas with a small economic base to increase economic growth and sustainability of the community

#### 5.3.3.1.1.2 Implementation Plans and Programmes

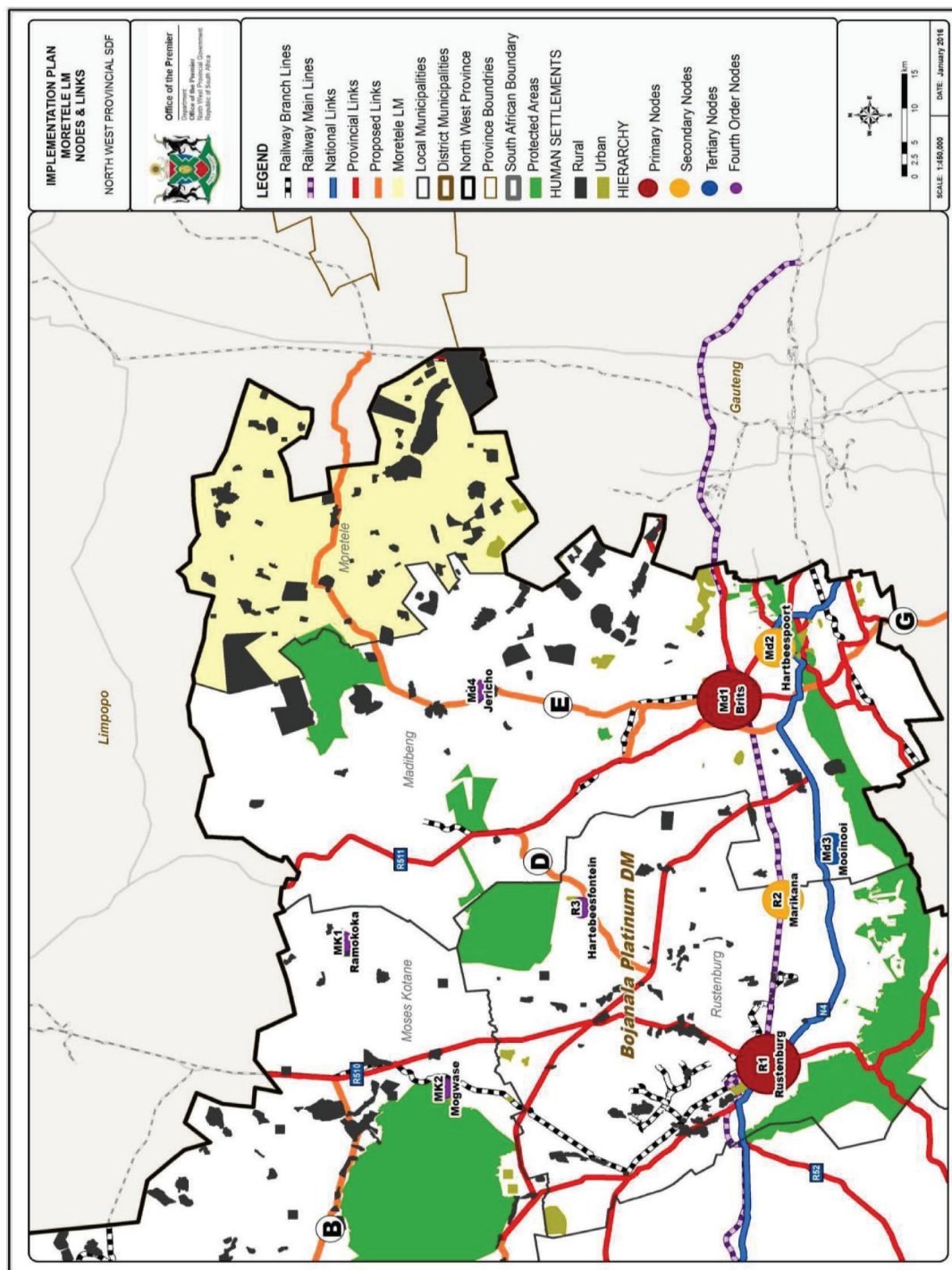
Table 5-4 Moretele Implementation Plan						
Item No	Node/Link/Zone	Node/Link Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
1	Mr Prioritised Rural (Map 5-3)	Moretele Rural	Moretele Rural Development	Moretele SDF Bojanala District Rural Development Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
2			Makapanstad/Mathibestad Densification and CBD Regeneration. Makapanstad Agripark	Makapanstad/Mathibestad Village Development Planning Makapanstad Agripark Implementation Plan	Villages, Townships and Small Dorpies Programme	Agripark Programme
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
4			Social Services Upgrading	Social Services Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
5			Local Economic Development	Local Economic Development Plan	Villages, Townships and Small Dorpies Programme / CRDP	Comprehensive Rural Development programme
6			Sustainable Human Settlements	Moretele Sustainable Human Settlements Plan	Provincial Human Settlement Master Plan / Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes.
7			Tourism : Borakolalo Nature Reserve	Bojanala Tourism Plan	North West Provincial Tourism Plan	
8			Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
9			Land Restitution			Restitution of Land Rights Programme
10	Biodiversity (Map 5-1)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework	North West Province Biodiversity Sector Plan	
	Rural Areas	Rural Areas	Rural Area Development • Agriculture	Bojanala Platinum District Rural Area Development Plan	Villages, Townships and Small Dorpies Programme	
11	Proposed Provincial Links	E	Enhance accessibility to N1 and N4. Enhance district and local accessibility Enhance access to Borakolalo NR	Moretele (Bojanala District) Roads and Transportation Plan	Villages, Townships and Small Dorpies Programme	



Map 5-1 : Bojanala Platinum District Implementation Framework (Biodiversity) – Moretele LM

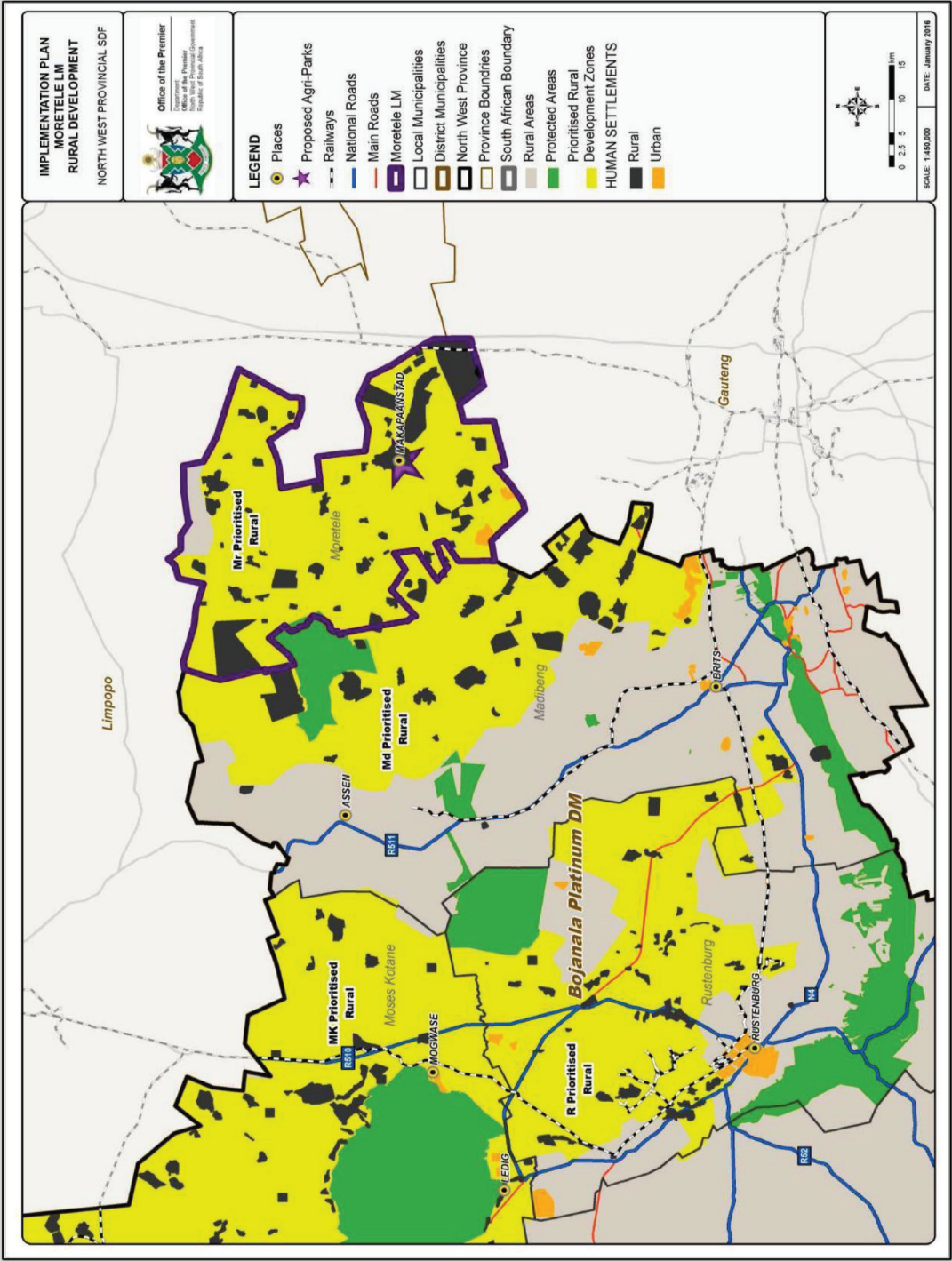


**Map 5-2: Bojanala Platinum District Implementation Framework (Nodes & Links) – Moretele LM**





Map 5-3: Bojanala Platinum District Implementation Framework (Rural Development) – Moretele LM



### 5.3.3.1.2 **Madibeng Local Municipality**

#### 5.3.3.1.2.1 **Development Guidelines**

Madibeng local municipality consists of the following nodes:

- Brits
- Jericho
- Mooiooi
- Greater Hartebeespoort
- Majakaneng area

These nodes are concentrated in the southern parts of the municipality. The northern parts of the municipality display a more rural nature with dispersed settlements and low densities. The urbanised southern part of the municipality is situated in close proximity to the large urban concentrations of Pretoria and Rustenburg. A large segment of people living in Hartebeespoort (20km north of Pretoria) work in Pretoria and it therefore mainly functions as a residential town with tourism potential.

Brits forms the most important node of the municipality and as such, the greatest potential to ensure the successful implementation of the Revival Strategy would be to focus development on Brits, rather than diluting economic potential.

#### **Status:**

Developing and expanding economy with strong and diverse urban nodes

#### **10 Year Land Budget:**

The following table indicates the development potential for Madibeng Local Municipality.

**Table 5-5: Madibeng Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Madibeng	52.5	2.3	12.4	495.8	1092.20	<b>1 655.2</b>

Source: Demacon, 2016

#### **Development Guidelines:**

- Expand the manufacturing value chain in Brits to increase the multiplier effect, thereby increasing the economic base of the whole municipality.
- Provide and maintain **affordable housing options** in Brits and Letabale, ensuring sufficient housing for the mainly unskilled and semi-skilled workforce required for the manufacturing sector.
- The economies of Mooiooi and the Majakaneng area are more concentrated (based on mining only), creating a vulnerable and volatile environment. Focusing on **strengthening the public services** and **diversifying the economy** will help to decrease the outflow and reduce the leakage from the area, as well as enhancing the economic mobility.
- Diversification of Mooiooi's economy should be **serviced based** and focus on trade and social services such as health care, school, etc.
- **Adequate affordable housing options** for the mine workers in Mooiooi and the Majakaneng area should be provided
- Development in Hartebeespoort should focus more on **high end services** related to tourism and retail.



- Housing options in Hartebeespoort will entail high end, low to medium density residential development.
- Protect the **scenic nature** of the Hartebeespoort area
- Develop Jericho as a service node
- **Intensify human settlement development** on Brits and surrounding areas- creating a dense urban form.
- Develop **Hartebeespoortdam City**
- Provide **access to basic services** in rural areas
- **Densification** around economic cores
- **Formalisation** and **upgrading** of informal settlements
- The municipality has **high agricultural potential** with fertile soil and adequate water. There exists potential to develop the agriculture sector further.
- The Crocodile River plays a very big role in the agricultural sector within the municipality. For this reason, the protection and sustainable use of this river is of vital importance.
- The agricultural development should be focused on areas with high agricultural value.
- High value agricultural land should be demarcated for agriculture and not houses.
- A **definite urban edge** must be established to ensure the protection of agricultural land around Brits and Hartebeespoort.
- Development opportunities exist in the **agro-processing industry**, ensuring that Madibeng's resources are processed locally, rather than exported to Gauteng.
- Due to the mining activities in Madibeng local municipality, **mining related industries** could help to create job opportunities and increase Madibeng's comparative advantage.
- Increase **investment in tourism**, especially in the area south of Brits where the bulk of heritage and conservation sites are located.
- Market tourism to the local population
- **Increase accessibility** through an integrated transport network, linking the smaller towns and villages to the larger Brits / Hartebeespoort area.
- Improve **municipal service delivery** and **operational excellence**
- Investment brokerage – take opportunities to the market
- Focusing on **labour intensive industries** will help to decrease unemployment and eradicate unemployment
- Minimise the outflow of the economically active population

#### 5.3.3.1.2.2 Implementation Plans and Programmes




Table 5-6 Madibeng Implementation Plan						
Item No	Node/ Link/ Zone	Node /Link Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
1		Brits (Map 5-5)	Brits Urban Regeneration	Brits Urban Regeneration Plan		
2			Sustainable Human Settlements	Madibeng Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP) Integrated Resource Plan for Electricity (IRP) 2010-2030.
4			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
5			Local Economic Development • Vehicle component Manufacturing Park & Distribution Dry Port	Madibeng (Bojanala) LED Strategy		
6		Hartbeespoort (Map 5-5)	Hartbeespoortdam City Development	Hartbeespoortdam City Development Plan	North West 5 City Project	
7			Hartbeespoort Tourism Development	Hartbeespoort Tourism Development Plan Heritage Park Development Plan	NW Tourism Plan	
8			Sustainable Human Settlements	Madibeng LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/NDPG
9			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP) Integrated Resource Plan for Electricity (IRP) 2010-2030.
10			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
11		Mooi-nooi (Map 5-5)	Local Economic Development	Madibeng (Bojanala) LED Strategy		
12			Mooi-nooi / Majakaneng Upgrading	Mooi-nooi / Mjakaneng Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
13			Sustainable Human Settlements	Madibeng Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/NDPG
14			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP) Integrated Resource Plan for Electricity (IRP) 2010-2030.

Table 5-6 Madibeng Implementation Plan


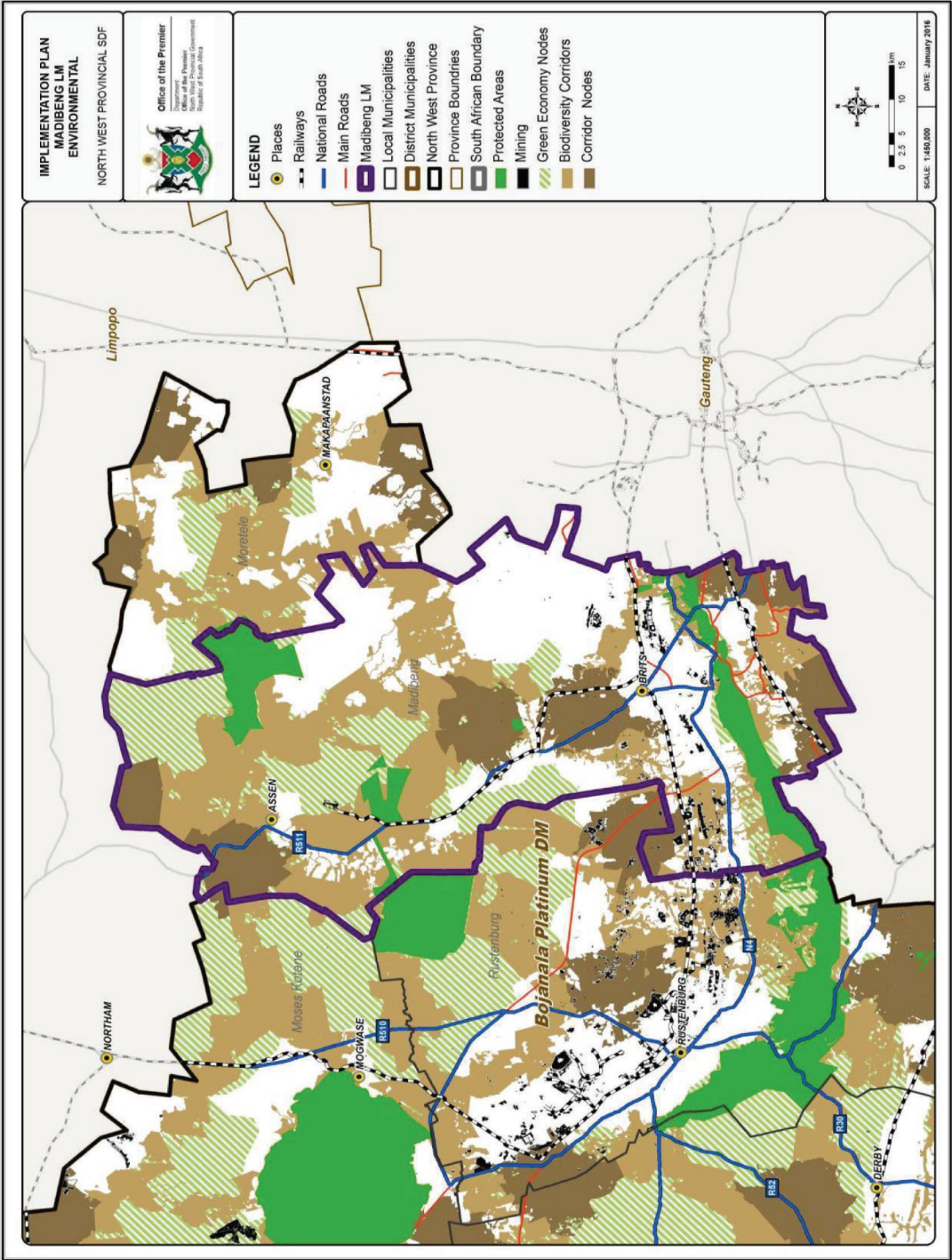
Item No	Node/ Link/ Zone	Node /Link Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
15			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
16			Local Economic Development	Madibeng (Bojanala) LED Strategy		
17			Jericho Settlement Development	Jericho Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
18			Sustainable Human Settlements	Madibeng Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes Mining Towns Human Settlement Transformation NDPG
19			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP) Integrated Resource Plan for Electricity (IRP) 2010-2030
20			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
21			Local Economic Development	Madibeng ( Bojanala) LED Strategy		
22			Madibeng Rural Development	Madibeng Rural Development Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
23			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
24			Social Services Upgrading	Social Services Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
25			Local Economic Development	Madibeng ( Bojanala) LED Strategy	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
26			Human Settlement Transformation	Madibeng Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan /Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes
27			Restitution			Restitution of Land Rights Programme
28	Rural Areas	Rural Areas	Rural Area Development • Agriculture • Mining	Bojanala Platinum District Rural Area Development Plan	Villages, Townships and Small Dorpies Programme	

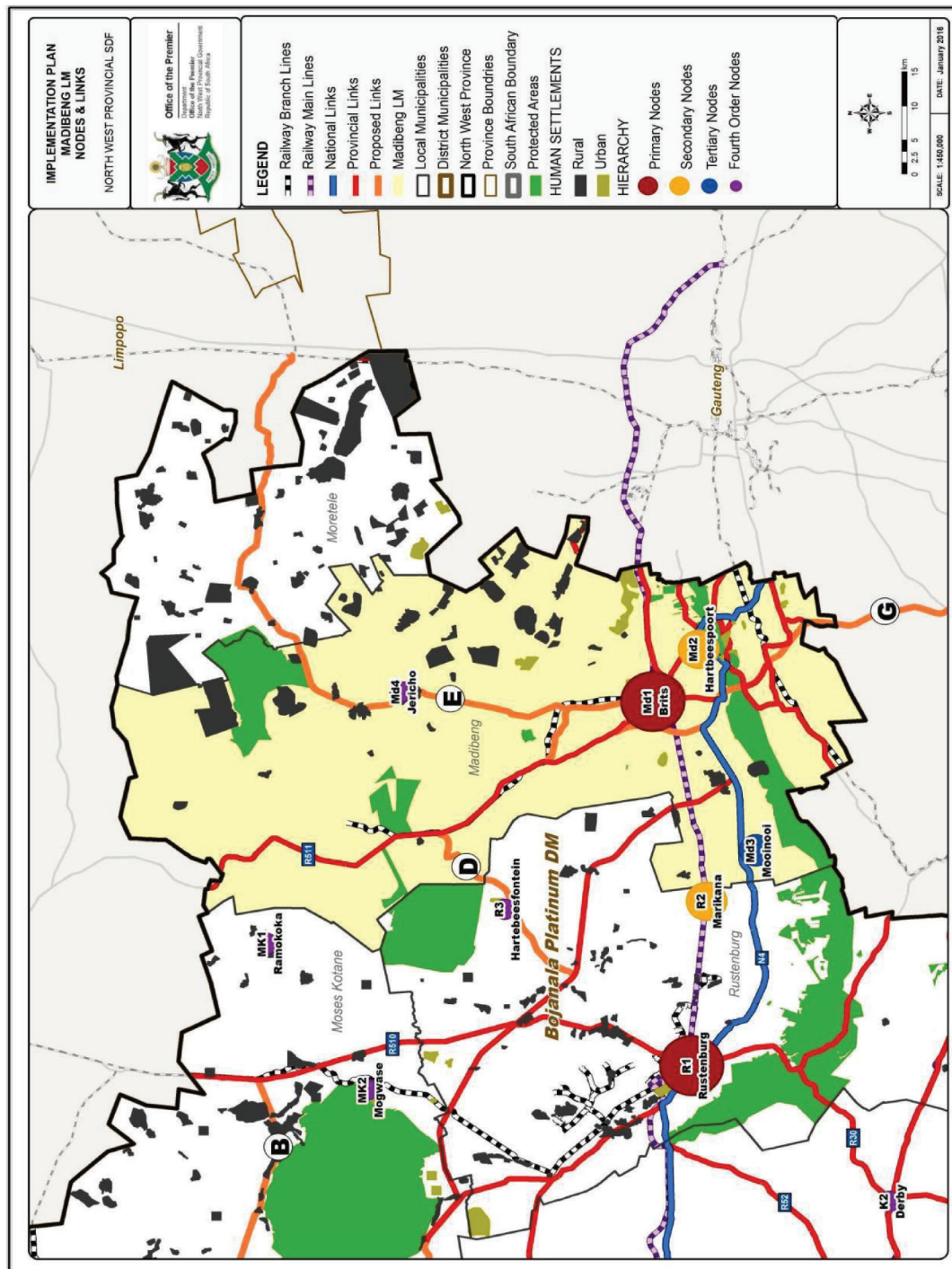
Table 5-6 Madibeng Implementation Plan						
Item No	Node/ Link/ Zone	Node /Link Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
29	Biodiversity (Map 5-4)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework	North West Province Biodiversity Sector Plan	
30	Protected Areas	Protected Areas	Nature Conservation/ Tourism/ Wildlife Economy • Magaliesburg Biosphere	District Environmental Management Framework Bojanala Tourism Development Plan	North West Province Biodiversity Sector Plan	
31	National Links		Upgrading and Maintenance of National roads			SANRAL
32	Provincial Links		Upgrading and Maintenance of Provincial roads			
33	Proposed Provincial Links	<b>D, E, G</b>	Enhance accessibility to Brits, N1, N4 and Gauteng. (PWV3W and PWV 3E) Enhance district and local accessibility.	Madibeng (Bojanala District) Roads and Transportation Plan	Villages, Townships and Small Dorpies Programme	SANRAL
34	Railway Main Lines		Passenger / Freight Link			
35	Railway Branch Lines		Unlocking economic potential			



Map 5-4 : Bojanala Platinum District Implementation Framework (Biodiversity) – Madibeng LM

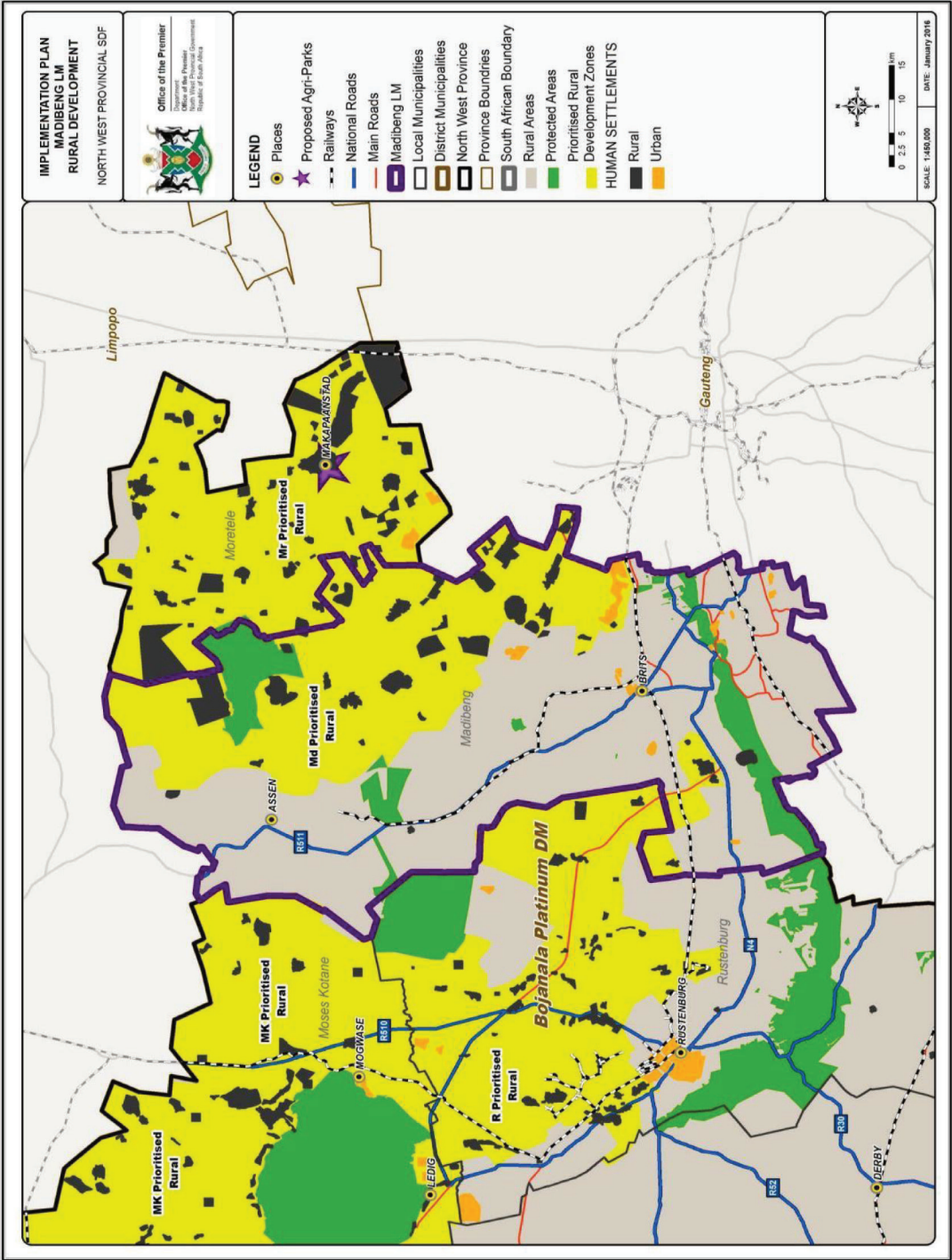


Map 5-5: Bojanala Platinum District Implementation Framework (Nodes &amp; Links) – Madibeng LM





Map 5-6: Bojanala Platinum District Implementation Framework (Rural Development) – Madibeng LM



### 5.3.3.1.3 Rustenburg Local Municipality

#### 5.3.3.1.3.1 Development Guidelines

Rustenburg local municipality consists of the following nodes:

- Rustenburg
- Tlhabane
- Tlaseng
- Hartbeesfontein
- Phatsima
- Phokeng and surrounding areas
- Boitekong
- Marikana

Of the nodes, **Rustenburg** is by far the largest and most important relating to economic growth and availability of services. The other nodes mostly function as residences for the mine workers and have limited retail and business services. The Revival Strategy proposed for the local municipality hinges on focusing development on the town of Rustenburg. There is, however, scope in areas such as Boitekong and Phokeng to ensure better living conditions for the people living there.

#### **Status:**

Well diversified city economy with an urban core and strong decentralised centres / nodes

#### **10 Year Land Budget:**

The following table indicates the development potential for Rustenburg Local Municipality.

**Table 5-7: Rustenburg Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Rustenburg	48.2	9.1	40.1	775.5	1393.90	2 266.8

Source: Demacon, 2016

#### **Development Guidelines:**

- Development should take note of the **spatial expansion requirements** of the Greater RBN with opportunity for better alignment to address historically miss-aligned and isolated development practices.
- **Capital investment** in the municipality must focus on existing infrastructure, rather than the creation of new infrastructure in remote areas.
- **Formalisation** of trade
- **Residential densification** in the larger nodes
- Formalisation and upgrading of informal settlements
- Providing **access to basic services**
- Accommodate **SMMEs** within the economic nodes of Rustenburg, Boitekong and Phokeng
- **Minimise urban sprawl**
- **Intensify development** around the N4 Development Corridor
- Ensure **adequate housing** in Rustenburg for the people migrating from the rural areas
- Focus on **skills development** in the mining, trade and business sectors to diversify the economy
- Increase **efficiency of transport network** and enhance connectivity



- Focus on **infrastructure development** that will help to attract private sector investment in the core Rustenburg area
- Create a **favourable business environment** to promote the establishment of new industries
- Create **economic hubs** in Phokeng and Boitekong
- Develop **agro-industries** to enhance local beneficiation and to create a multiplier effect
- Intensify development in areas with high development potential or economic growth
- Promote **infill development**
- Protect high value agriculture land
- **Kick start development** in Boitekong and Phokeng to establish new potential growth nodes
  - multiyear public sector investment framework focused on municipal infrastructure, public amenities and social housing to serve as catalyst to kick start private sector investment
- Create employment opportunities closer to where people are living
- Identify and develop **priority biodiversity areas**
- Develop and **promote the tourism areas** of Vaalkop Nature Reserve, the Kgaswane Nature Reserve, the Magaliesburg Protected Environment, and other critical biodiversity areas
- Develop the **eco-tourism** sector

#### 5.3.3.1.3.2 Implementation Plans and Programmes



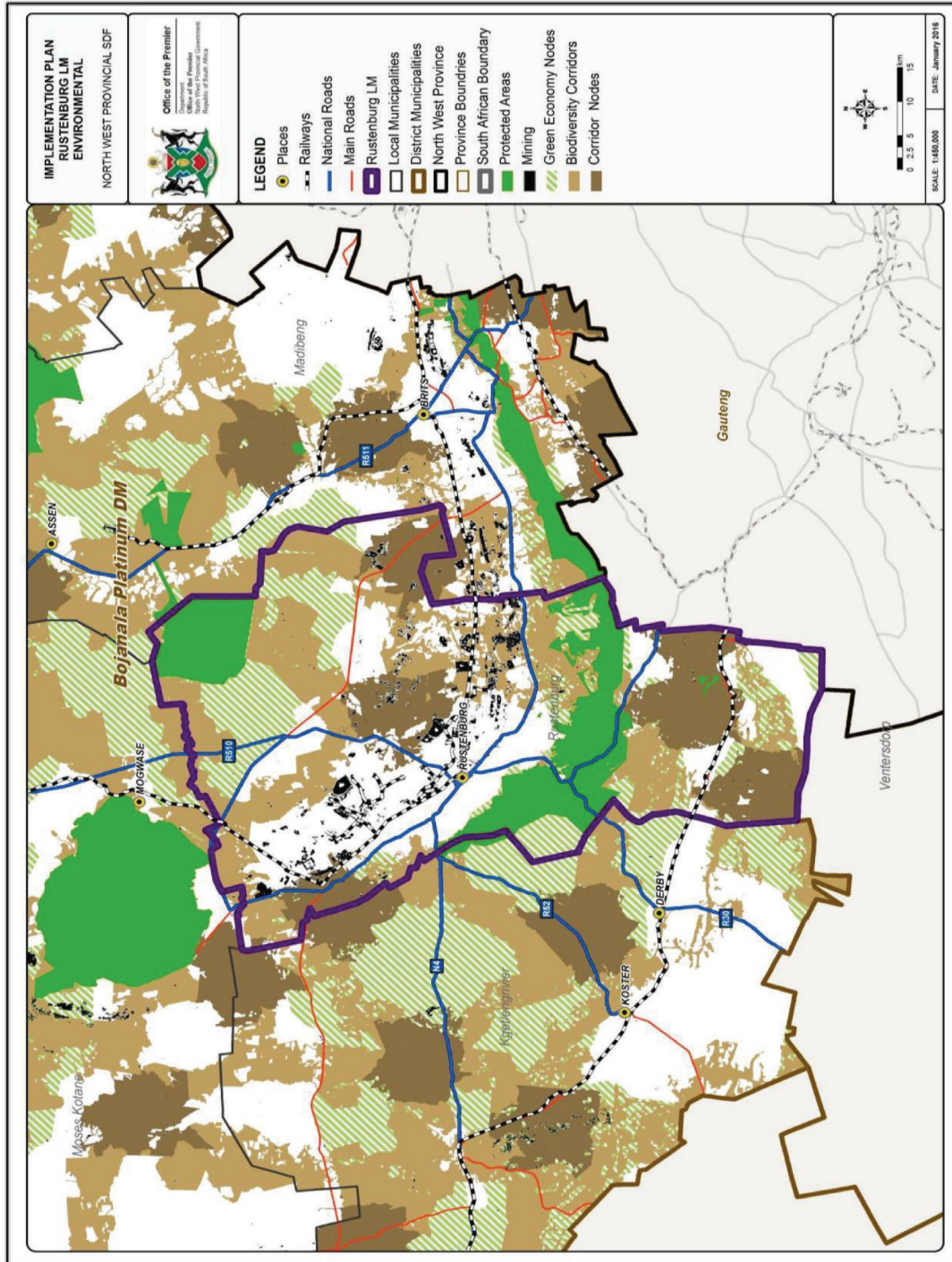
Table 5-8 Rustenburg Implementation Plan						
Item No	Node/ Link/ Zone	Node /Link Description	Project Focus	Municipal	Implementation Plan (Programme)	
					Provincial	National
1		Rustenburg (Map 5-8)	Rustenburg Urban Regeneration Plan	Rustenburg Urban Regeneration Plan		NDPG
2			Nodal Development • Boitekong and Phokeng • Tiabane and Phokeng	Boitekong, Phokeng, Tiabane and Phokeng Nodal Development Plans		
3			Sustainable Human Settlements	Rustenburg LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes Mining Towns Human Settlement Transformation
4			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (WWRP) Integrated Resource Plan for Electricity (IRP) 2010-2030
5			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
6			Local Economic Development	Rustenburg (Bojanala) LED Strategy		
7			Sustainable Human Settlements	Rustenburg LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
8			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (WWRP) Integrated Resource Plan for Electricity (IRP) 2010-2030
9			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
10			Local Economic Development	Rustenburg (Bojanala) LED Strategy		
11		Hartebeesfontein (Map 5-8)	Hartebeesfontein Settlement Development	Villages, Townships and Small Dorpies Programme		
12			Human Settlement Transformation	Rustenburg LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
13			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (WWRP) Integrated Resource Plan for Electricity (IRP) 2010-2030
14			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
15			Local Economic Development	Rustenburg (Bojanala) LED Strategy		

Table 5-3 Rustenburg Implementation Plan						
Item No	Node/ Link/ Zone	Node /Link Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
16	Rustenburg Rural R Prioritised Rural (Map 5-9)	Rustenburg Rural Development • Phatsima		Rustenburg Rural Development Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
17		Engineering Services Upgrading		Consolidated Engineering Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
18		Social Services Upgrading		Social Services Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
19		Human Settlement Transformation		Rustenburg Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan /Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes
20		Local Economic Development		Rustenburg (Bojanala) LED Strategy	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
21		Restitution				Restitution of Land Rights Programme
22		Tourism Development: • Vaalkop dam NR • Magaliesberg NA • Bospoort dam		Bojanala Tourism Development Plan		
23	Rural Areas	Rural Area Development • Agriculture • Mining		Bojanala Platinum District Rural Area Development Plan	Villages, Townships and Small Dorpies Programme	
24	Biodiversity (Map 5-7)	Environmental Management		District Environmental Management Framework / Tourism Development Plan	North West Province Biodiversity Sector Plan	
25	Protected Areas	Nature Conservation/ Tourism/ Wildlife Economy • Vaalkop dam NR • Magaliesberg NA • Bospoort dam		District Environmental Management Framework / Tourism Development Plan	North West Province Biodiversity Sector Plan	
26	National Links	Upgrading and Maintenance of National roads				SANRAL
27	Provincial Links	Upgrading and Maintenance of Provincial roads				

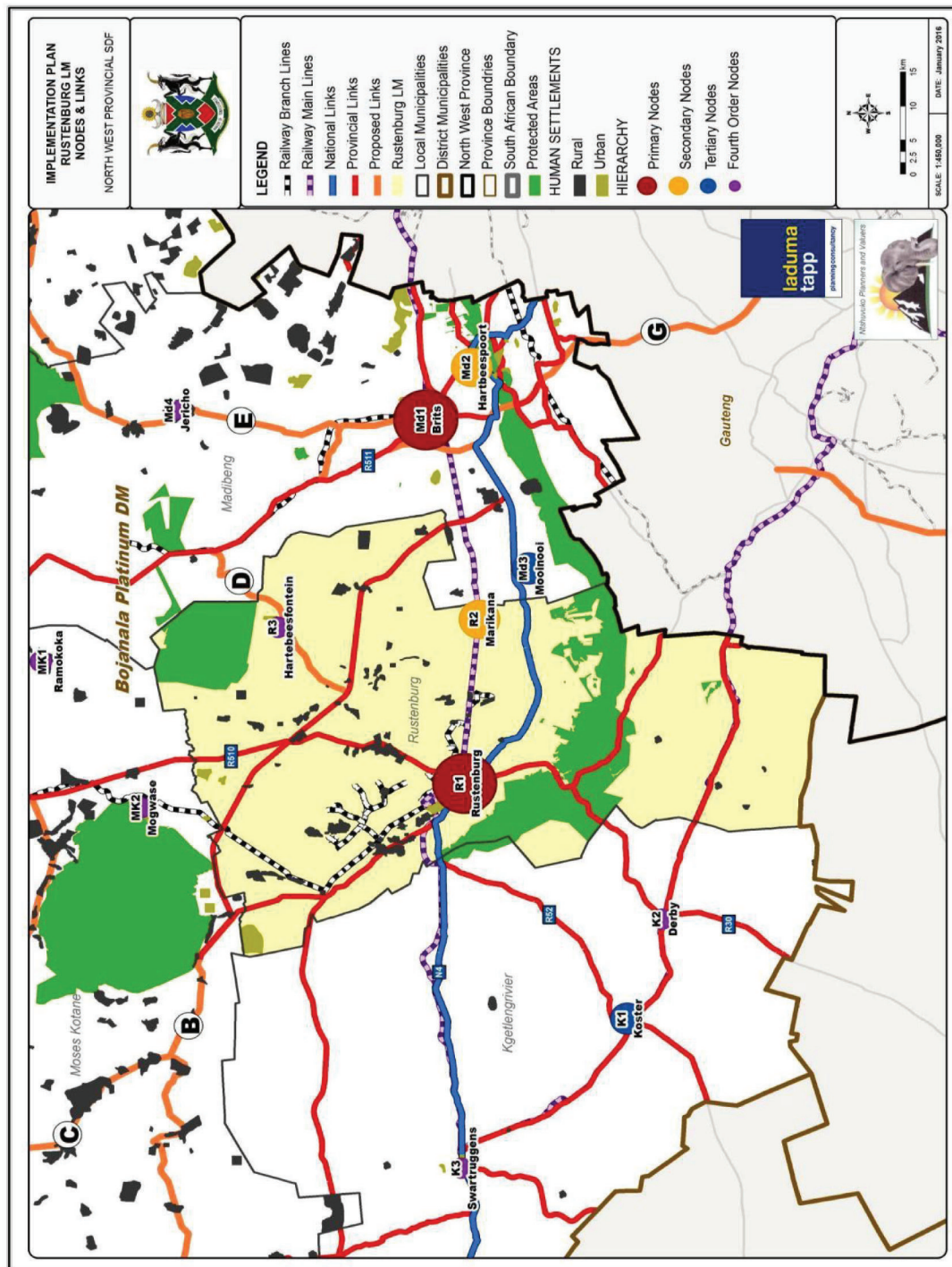
Table 5-8 Rustenburg Implementation Plan						
Item No	Node/ Link/ Zone	Node /Link Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
28	Proposed Provincial Links	<b>D</b>	Enhance accessibility to Rustenburg, N4 and Gauteng Enhance district and local accessibility	Rustenburg (Bojanala District) Roads and Transportation Plan	Villages, Townships and Small Dorpies Programme	
29	Railway Main Lines		Passenger / Freight Link			
30	Railway Branch Lines		Unlocking local economic potential			



Map 5-7 : Bojanala Platinum District Implementation Framework (Biodiversity) – Rustenburg LM

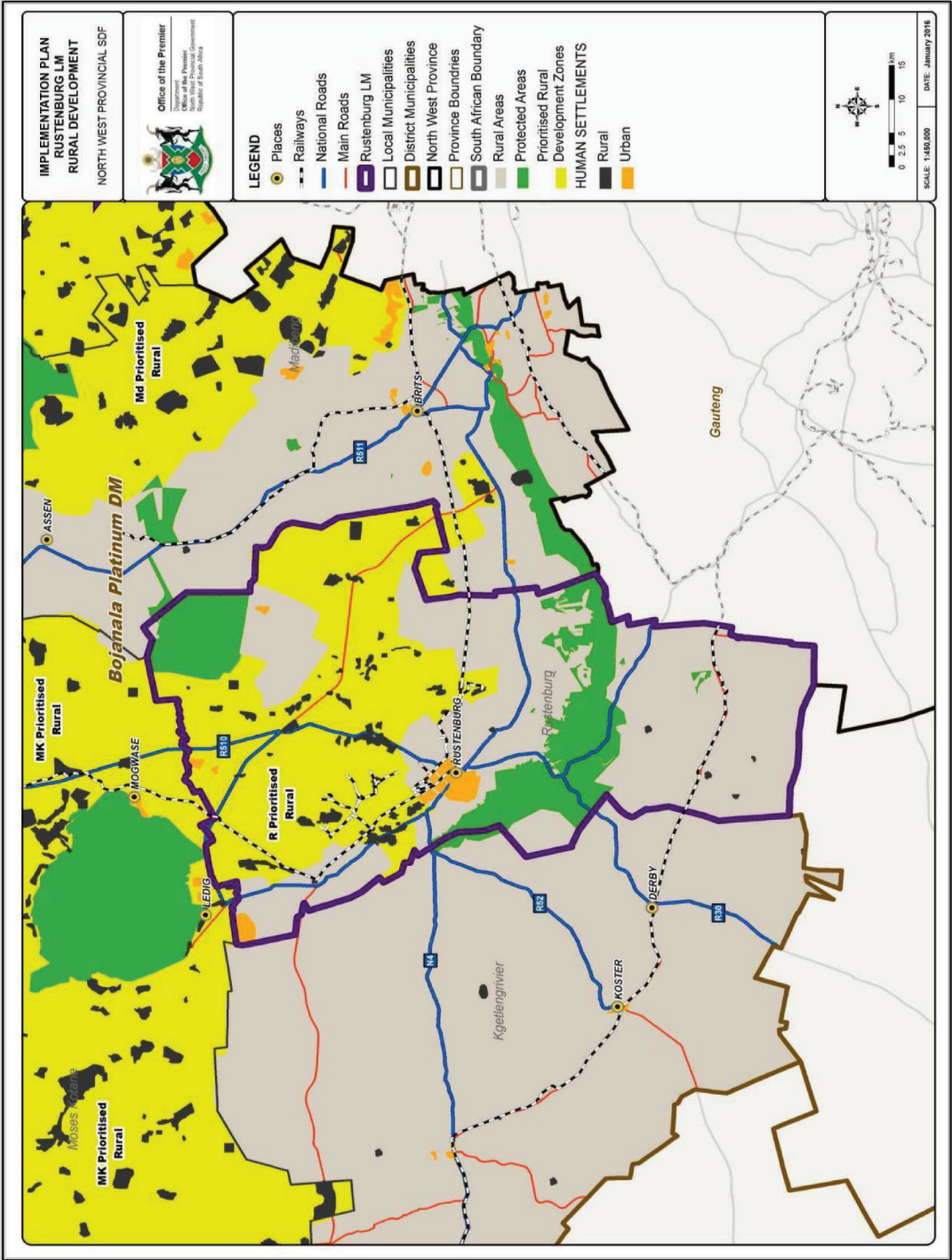


Map 5-8: Bojanala Platinum District Implementation Framework (Nodes &amp; Links) – Rustenburg LM





Map 5-9: Bojanala Platinum District Implementation Framework (Rural Development) – Rustenburg LM



#### 5.3.3.1.4 **Kgetlengrivier Local Municipality**

##### 5.3.3.1.4.1 **Development Guidelines**

Kgetlengrivier is a mostly rural with small towns functioning as service centres for the population, mostly engaged in agricultural activities. The nodes are **Koster**, **Swartruggens** and **Derby** in the southern areas and **Borelelo** in the northern areas.

The municipality has a **scattered population profile**, with low densities and a rural nature. Due to the relatively high population growth; job creation and basic service delivery will be crucial to ensure that the economically active population does not leave the municipality, seeking better living conditions and job opportunities in larger urban concentrations.

##### **Status:**

Developing rural economy with small service centres

##### **10 Year Land Budget:**

The following table indicates the development potential for Kgetlengrivier Local Municipality.

**Table 5-9: Kgetlengrivier Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Kgetlengrivier	0.8	1.3	2.1	30.7	84.60	<b>119.5</b>

Source: Demacon, 2016

##### **Development Guidelines:**

- Although municipality does not have a large amount of nature reserves, it is situated close to prominent nature reserves such as Pilanesberg Nature Reserve and Magaliesberg Nature Reserve – creating potential for the development of the tourism sector.
- The municipality has potential in the **game farming and tourism sector**. Rather than seeking to develop Koster into a large urban centre, the focus should be on the tourism sector.
- The western and northern areas lend themselves to game farming, whilst the eastern areas have potential for leisure tourism.
- A more **established tourism sector** will automatically lead to an **increased need** for certain services in Koster, e.g. retail facilities, abattoirs, and taxidermists.
- **Protect the natural environment**
- Group public facilities and social amenities to create **agglomeration advantages**
- Increase **public sector investment** in the nodes, rather than dispersing investment throughout the municipality
- **Formalise trade**
- Provide **adequate housing opportunities** close to employment opportunities and services
- Create **employment intensive industries** relating to the tourism and agriculture sectors to minimise unemployment and decrease poverty
- Develop industries that **utilise local resources**, especially slate, to create a multiplier effect and expand the economy
- Promote **rural-urban migration** to create denser population concentrations
- Focus on skills development in the tourism and agriculture sectors
- Protect high value arable land.

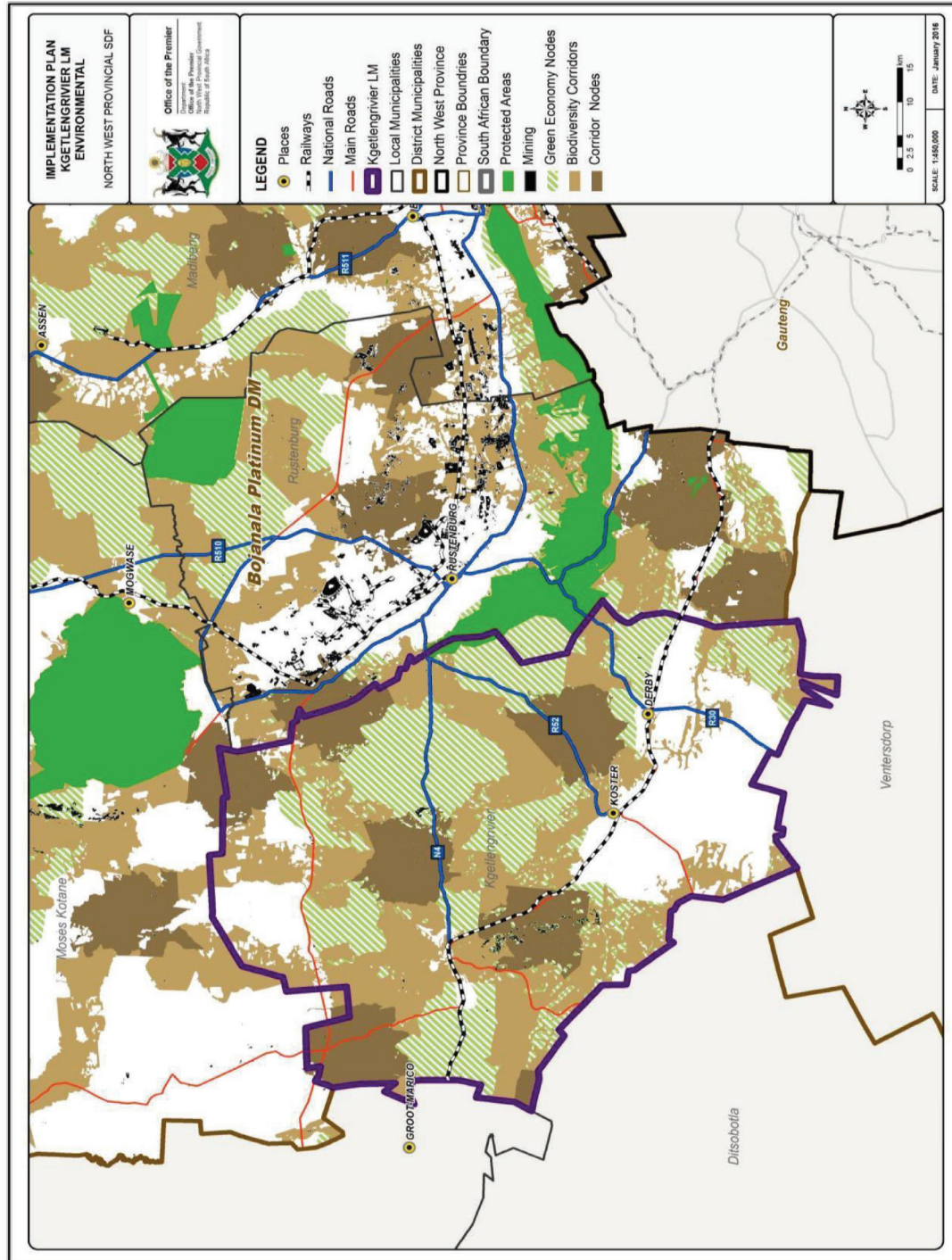
##### 5.3.3.1.4.2 **Implementation Plans and Programmes**



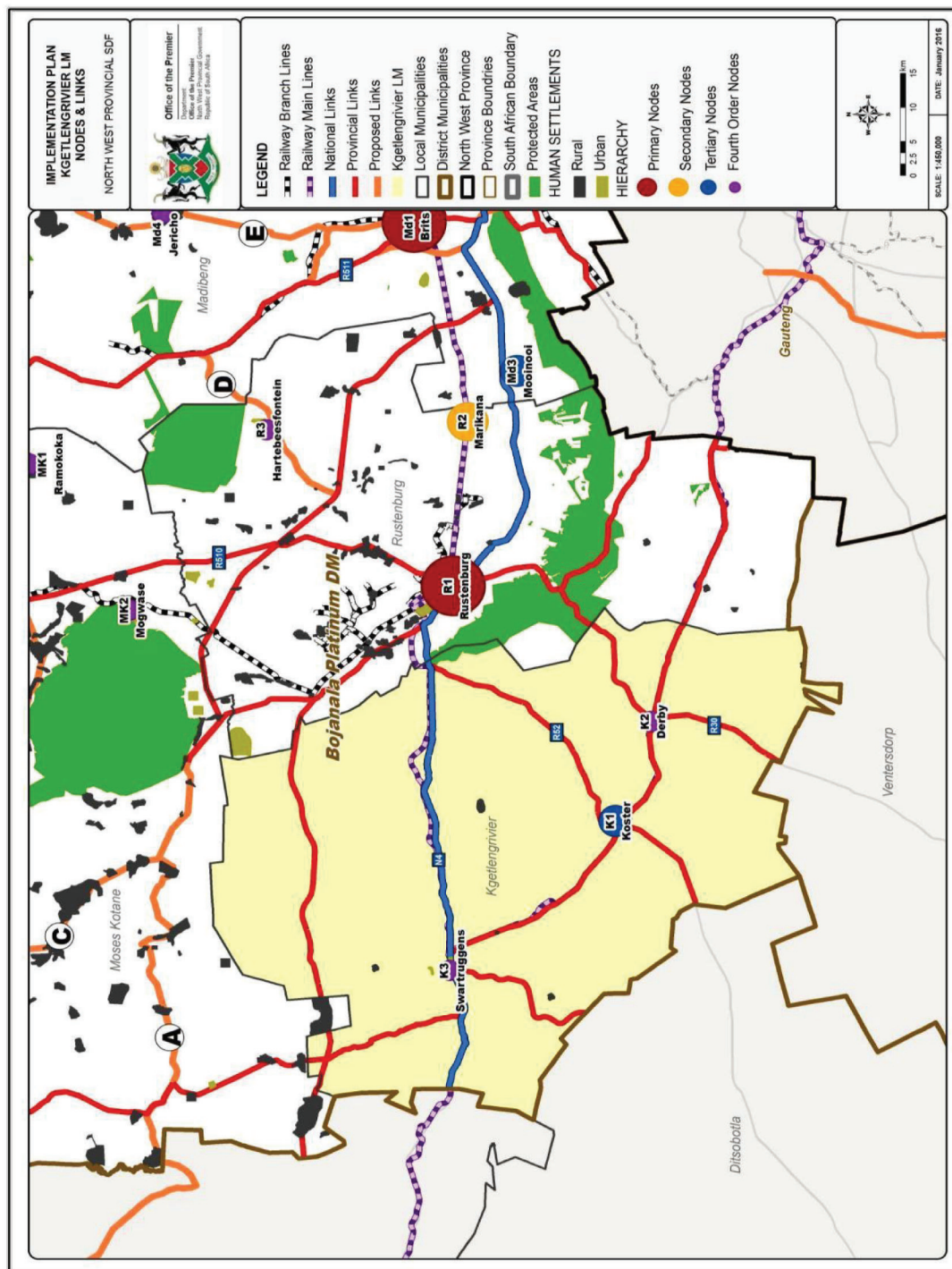
Table 5-10 Kgetlengrivier Implementation Plan						
Item No	Node/ Link/ Zone	Node /Link Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
1		Koster (Map 5-11)	Koster Town Development	Koster Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
2			Sustainable Human Settlements	Kgetlengrivier LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
4			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
5			Local economic development	Kgetlengrivier (Bojanala) LED Strategy		
6		Derby (Map 5-11)	Derby Settlement Development	Derby Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
7			Sustainable Human Settlements	Kgetlengrivier LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
8			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
9			Social Services Upgrading	NW Infrastructure Plan	NW Infrastructure Plan	
10			Local economic development	Kgetlengrivier (Bojanala) LED Strategy		
11		Swartruggens (Map 5-11)	Swartruggens Settlement Development	Swartruggens Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
12			Sustainable Human Settlements	Kgetlengrivier LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
13			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
14			Social Services Upgrading	NW Infrastructure Plan	NW Infrastructure Plan	
15			Local economic development	Kgetlengrivier ( Bojanala) LED Strategy		

Table 5-10 Kgetlengrivier Implementation Plan						
Item No	Node/ Link/ Zone	Node /Link Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
16	Rural Areas	Rural Areas	Rural Area Development • Agriculture	Bojanala Platinum District Rural Area Development Plan	Villages, Townships and Small Dorries Programme	
17	Biodiversity (Map 5-10)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
18	National Links		Upgrading and Maintenance of National roads			SANRAL
19	Provincial Links		Upgrading and Maintenance of Provincial roads			
20	Railway Main Lines		Passenger / Freight Link			

Map 5-10 : Bojanala Platinum District Implementation Framework (Biodiversity) – Kgetlengrivier LM

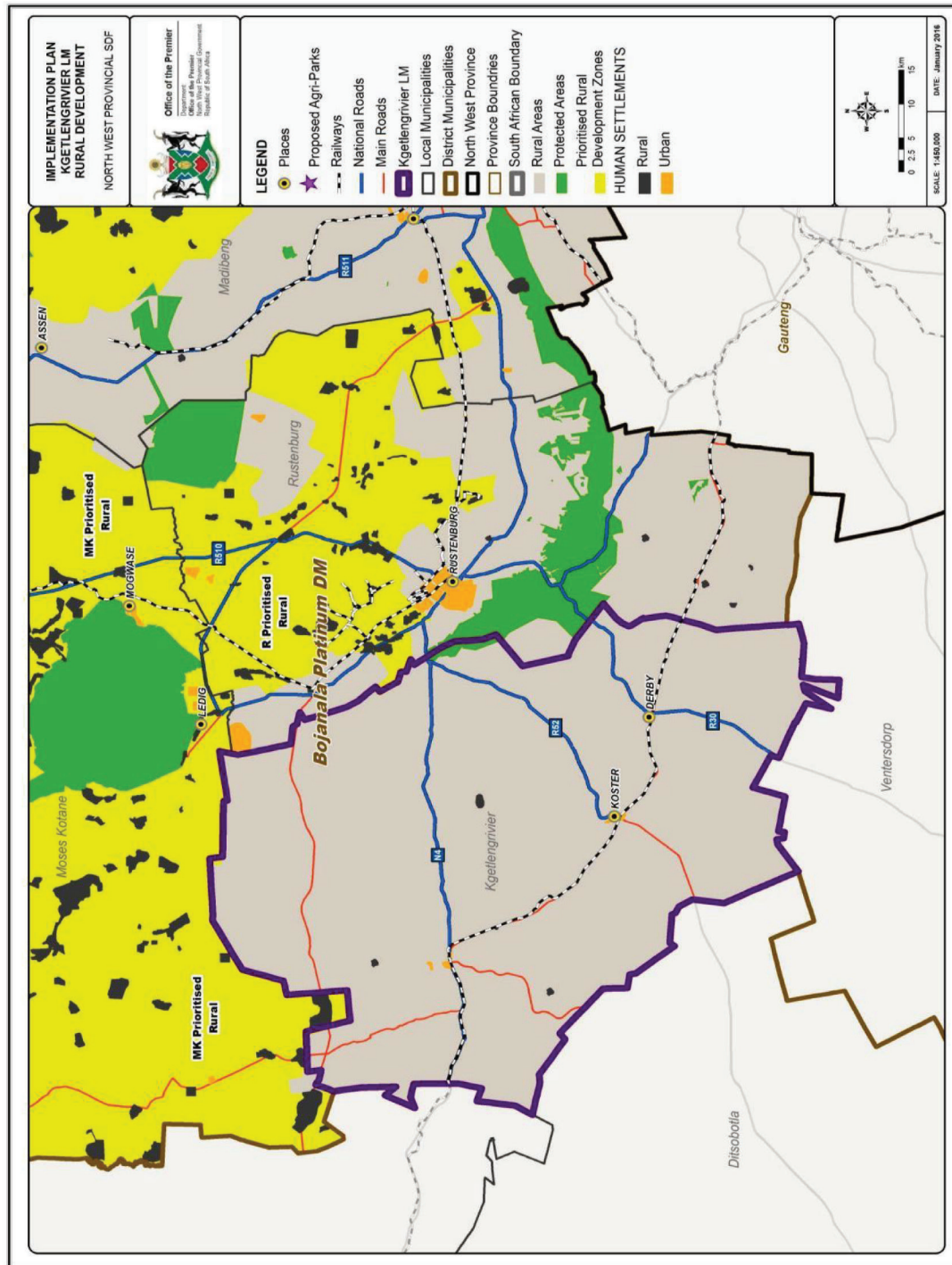


**Map 5-11: Bojanala Platinum District Implementation Framework (Nodes & Links) – Kgetlengrivier LM**





Map 5-12: Bojanala Platinum District Implementation Framework (Rural Development) – Kgetlengrivier LM



### 5.3.3.1.5 **Moses Kotane Local Municipality**

#### 5.3.3.1.5.1 **Development Guidelines**

Moses Kotane local municipality is situated in the northern part of the North West Province. The economy is mostly **tourism orientated**, with the **Madikwe Game Reserve, Sun City** and **Pilanesberg Nature Reserve** situated within the municipality.

The **population is dispersed** and the only node of size, is **Mogwase**. The natural landscape limits accessibility throughout the region. Inadequate trade and commercial facilities exist in the municipality, and public facilities are too dispersed to create agglomeration advantages for private sector development. Trade and commercial development requires feet and the **grouping of public facilities** is an imperative to kick start development in these areas.

#### **Status:**

Underdeveloped economy with a focus on tourism

#### **10 Year Land Budget:**

The following table indicates the development potential for Moses Kotane Local Municipality.

**Table 5-11: Moses Kotane Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Moses Kotane	9.4	3.9	5.7	143.3	575.30	<b>737.6</b>

Source: Demacon, 2016

#### **Development Guidelines:**

- There is a **noticeable conflict** between the **long term prospect of tourism** and the **short term prospect of mining**. It is nearly impossible to rehabilitate the area of open mines to its former natural glory.
- The **Pilanesberg Nature Reserve**, encompassing Sun City, forms the main tourist attraction for the municipality, as such, it should be protected and managed to prevent the degradation of agriculture and especially mining to the natural environment. The mines in the area are detrimental to the water resources in the area and prevent the expansion of natural heritage sites in the area – leisure tourist numbers have been reported to dwindle in recent years.
- The **buffer zone** around Pilanesberg Nature Reserve and other reserves in the area **should not be encroached** by mining or certain agricultural activities.
- There is a proposed **Platinum Beneficiation SEZ** that has the potential to attract investment to the municipality and help to increase its economic contribution.
- The adequate development of basic public services and infrastructure is crucial for the establishment of the SEZ.
- Focus on relevant skills development, especially in the mining, tourism and trade sectors
- **Adequate housing** should be provided
- The promotion of **mixed use developments** and **affordable housing** in close proximity to mining activities is important.
- Formalise and upgrade informal settlements
- **Group public facilities and social amenities** to create agglomeration advantages
- Increase public sector investment in the nodes, rather than dispersing investment throughout the municipality
- **Formalise** trade
- Intensify development in Mogwase to **increase the economic base**

- Promote **infill development** and **densification** in Mogwase to establish a sustainable urban core.
- Focus on **densification** rather than greenfield development
- Increase **accessibility** between the rural areas
- Create employment intensive industries to minimise unemployment and decrease poverty
- Develop industries related to mining and tourism that utilise local resources to create a multiplier effect and expand the economy
- Promote **rural-urban migration** to create denser population concentrations
- Protect high value agriculture land
- Promote tourism facilities to the local market as well

#### 5.3.3.1.5.2 Implementation Plans and Programmes

Table 5-12 Moses Kotane Implementation Plan									
Item No	Node/ Link/ Zone	Node /Link Description	Project Focus	Implementation Plan (Programme)					
				Municipal	Provincial	National			
1		Ramokoka (Map 5-14)	Ramokoka Settlement Development	Ramokoka Precinct Development Plan	Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG			
2			Sustainable Human Settlements	Moses Kotane LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG			
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)			
4			Social Services Upgrading	NW Infrastructure Plan	NW Infrastructure Plan				
5			Local economic development	Moses Kotane (Bojanala) LED Strategy	Villages, Townships and Small Dorpies Programme				
6		Mogwase (Map 5-14)	Bojanala Eco Tourism City	Bojanala Eco Tourism City Development Plan	North West 5 City Project				
7			Mogwase Settlement Development	Mogwase Precinct Development Plan	Villages, Townships and Small Dorpies Programme				
8			Sustainable Human Settlements	Moses Kotane LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG			
9			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)			
10			Social Services Upgrading	NW Infrastructure Plan	NW Infrastructure Plan				
11		Moses Kotane Rural	Local economic development	Moses Kotane (Bojanala) LED Strategy	Villages, Townships and Small Dorpies Programme				
12			Mogwase (Bojanala) Eco-Tourism City	Mogwase (Bojanala) Eco-Tourism City Development Plan	North West City Development				
13			Platinum Beneficiation SEZ	SEZ Development Plan		SEZ Programme			
14			Moses Kotane Rural Development	Moses Kotane Rural Development Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme			
15			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme			



Table 5-12 Moses Kotane Implementation Plan						
Item No	Node/ Link/ Zone	Node /Link Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
16			Social Services Upgrading	Social Services Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
17			Sustainable Human Settlements	Moses Kotane LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan /Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes
18			Local economic development	Moses Kotane ( Bojanala) LED Strategy	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
19			Restitution			Restitution of Land Rights Programme
20	Rural Areas	Rural Areas	Rural Area Development <ul style="list-style-type: none"><li>• Agriculture</li><li>• Mining</li></ul>	Bojanala Platinum District Rural Area Development Plan	Villages, Townships and Small Dorpies Programme	
21	Biodiversity (Map 5-13)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework / Tourism Development Plan	North West Province Biodiversity Sector Plan	
22	Protected Areas	Protected Areas	Nature Conservation/ Tourism/ Wildlife Economy <ul style="list-style-type: none"><li>• Sun City</li><li>• Pilaesberg NR</li></ul>	District Environmental Management Framework / Tourism Development Plan	North West Province Biodiversity Sector Plan	
23	Provincial Links		Upgrading and Maintenance of Provincial roads			
24	Proposed Provincial Links	A, B, C	Enhance accessibility to Rustenburg, N4 and Gauteng. Enhance district and local accessibility	Moses Kotane (Bojanala District) Roads and Transportation Plan	Villages, Townships and Small Dorpies Programme	
25	Railway Branch Lines		Unlocking economic potential			
26	Airport		Pilaesberg International Airport	Pilaesberg International Airport Development Plan	Tourism Development	

**CONTINUES ON PAGE 258 - PART 3**



# **NORTH WEST NOORDWES**

***EXTRAORDINARY • BUITENGEWOON***

**PROVINCIAL GAZETTE  
PROVINSIALE KOERANT**

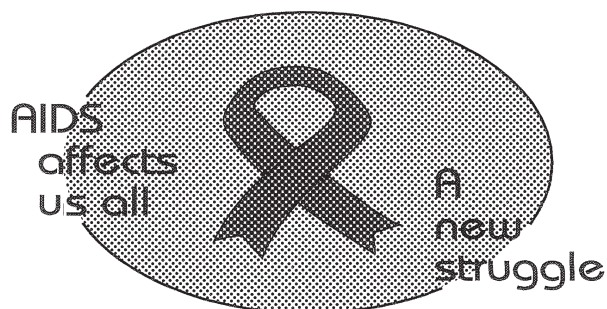
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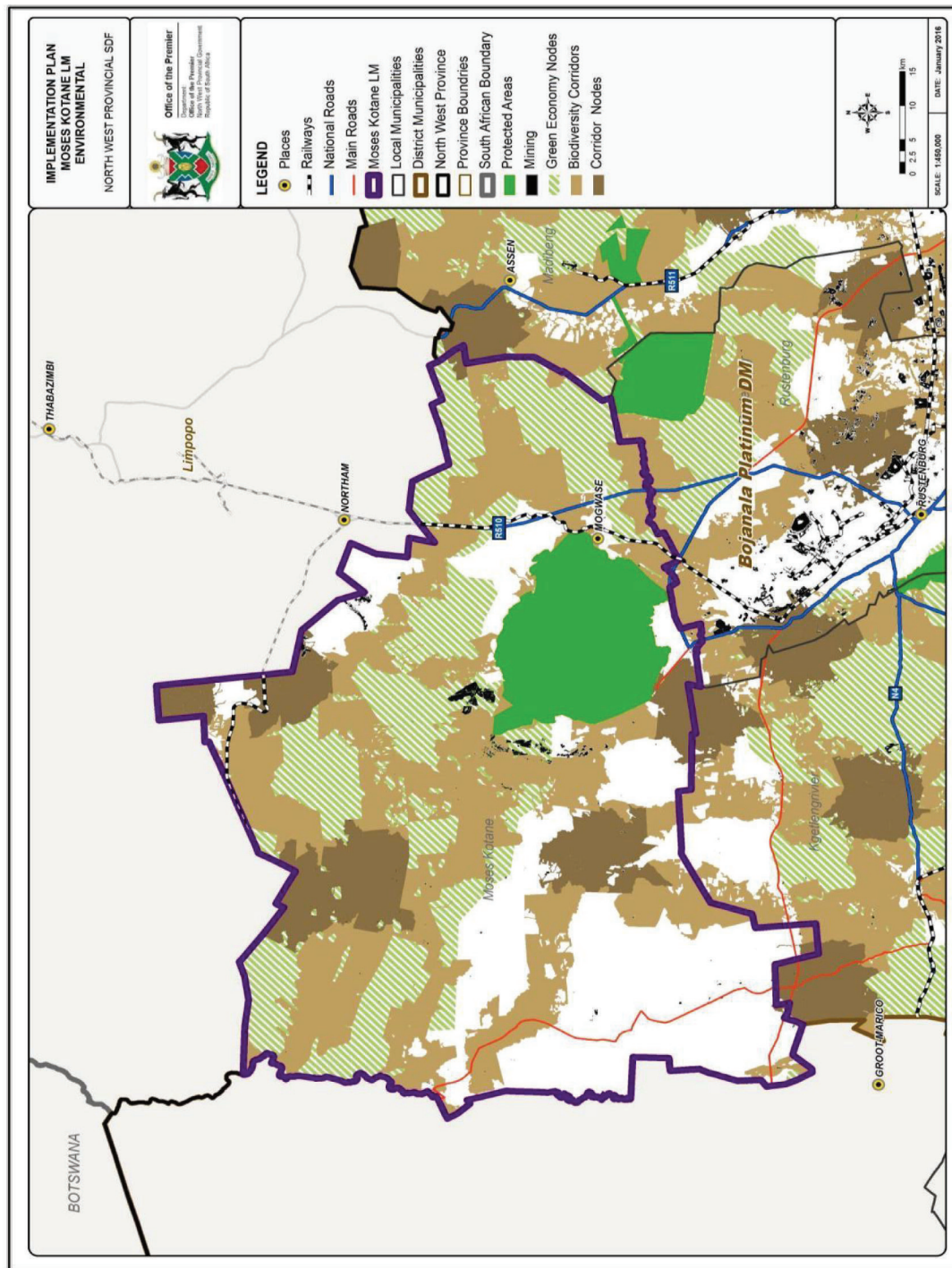


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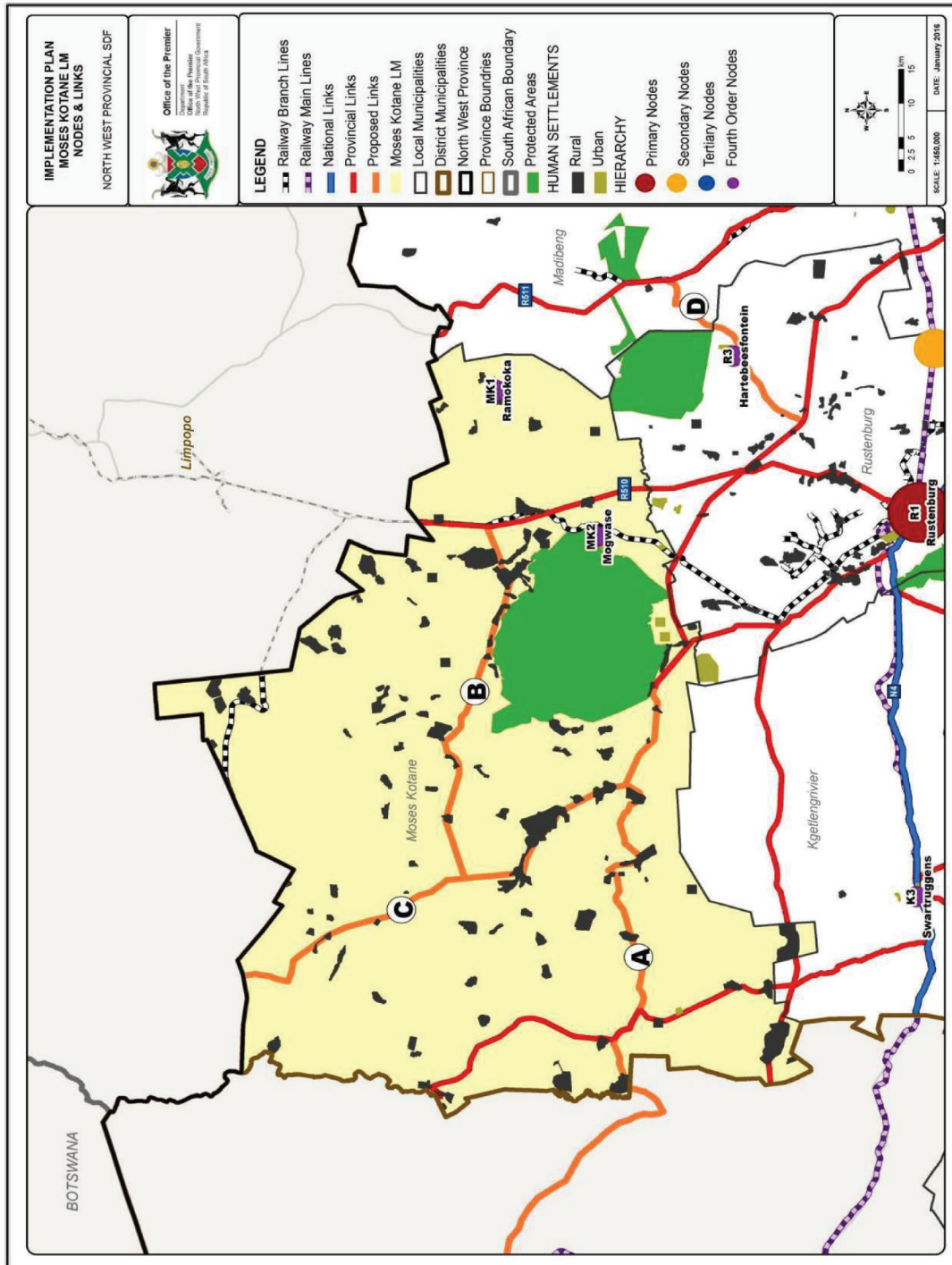


Map 5-13 : Bojanala Platinum District Implementation Framework (Biodiversity) – Moses Kotane LM

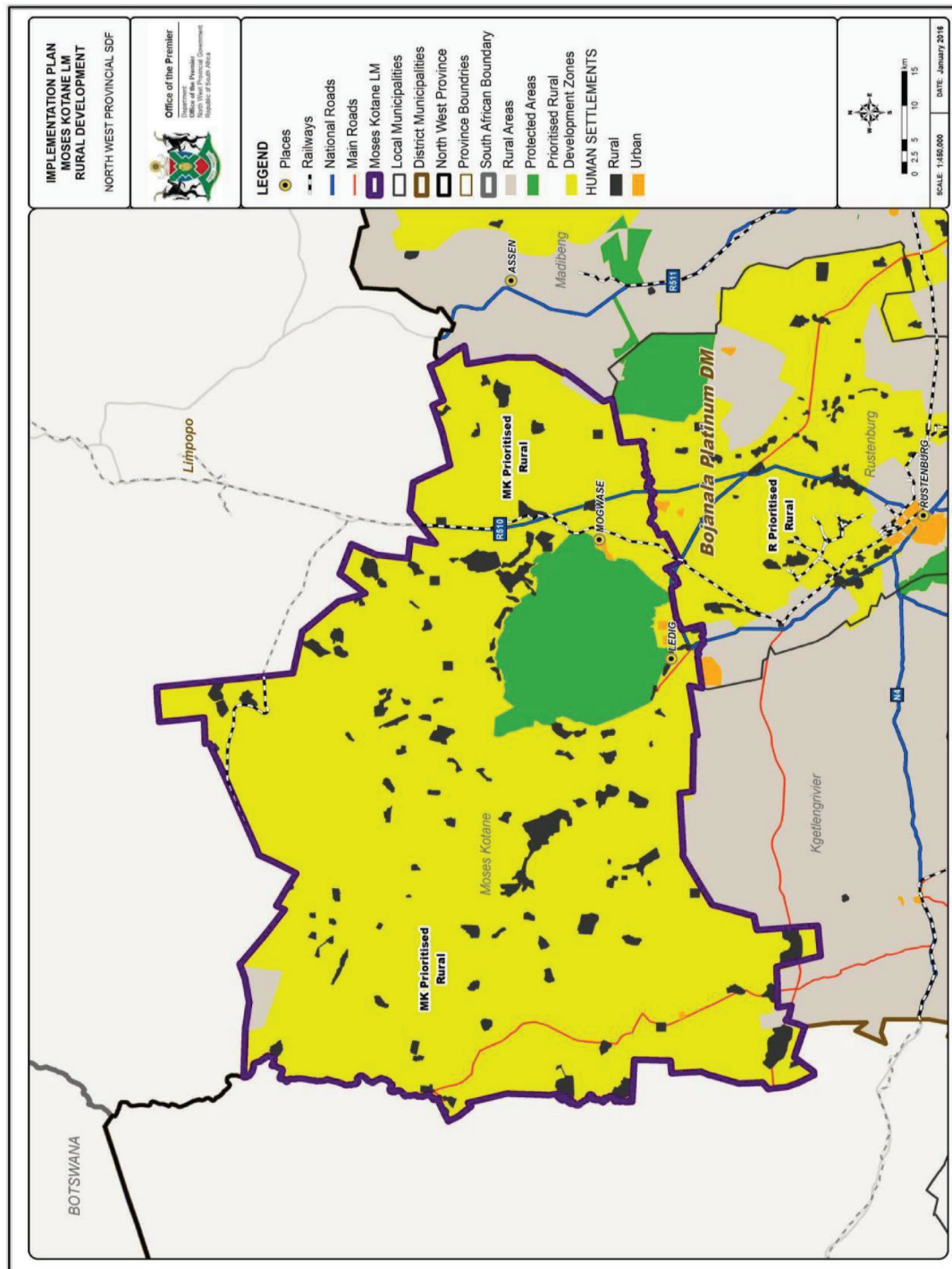




Map 5-14: Bojanala Platinum District Implementation Framework (Nodes & Links) – Moses Kotane LM



Map 5-15: Bojanala Platinum District Implementation Framework (Rural Development) – Moses Kotane LM



### 5.3.3.2 Ngaka Modiri District

#### 5.3.3.2.1 Ratlou Local Municipality

##### 5.3.3.2.1.1 Development Guidelines

Ratlou local municipality is mostly rural in nature with **Setlagole**, situated in the southern part of the municipality, the only sizeable node. Other smaller nodes within the municipality are **Disaneng**, **Kraaipan** and **Madibogo**. The municipality has a small economic base, dispersed population and low densities.

The municipality needs to establish and expand the urban core of the municipality and investment should be focused in core nodes such as Setlagole to strengthen the node and limit dispersion.

#### **Status:**

Underdeveloped rural economy with small urban nodes

#### **10 Year Land Budget:**

The following table indicates the development potential for Ratlou Local Municipality.

**Table 5-13: Ratlou Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Ratlou	3.7	0.1	3.8	24.0	112.5	144.1

Source: Demacon, 2016



#### **Development Guidelines:**

- Future demand in the municipality is low. Focusing on **backlog eradication** relating to housing and services should be the main concern.
- Integrating rural towns and villages in the urban system by promoting and enhancing **rural-urban linkages** in order to reduce disparities.
- Focus delivery of basic services in core areas to create **agglomeration advantages** and to attract people rather than dispersing them throughout the vastly rural municipality
- Position **Setlagole Commercial Hub** as a catalyst for local economic development
- Focus development on Setlagole rather than diluting investment potential
- Unlock the potential of **tourism nodes**
- **Increase accessibility** throughout the district
- **Densify**, rather than disperse, residential and commercial activities
- Focus on skills development in the agriculture and trade sectors
- Protect high value arable land
- Prioritise **water infrastructure** development
- Promote the establishment of **SMMEs** to create employment opportunities.

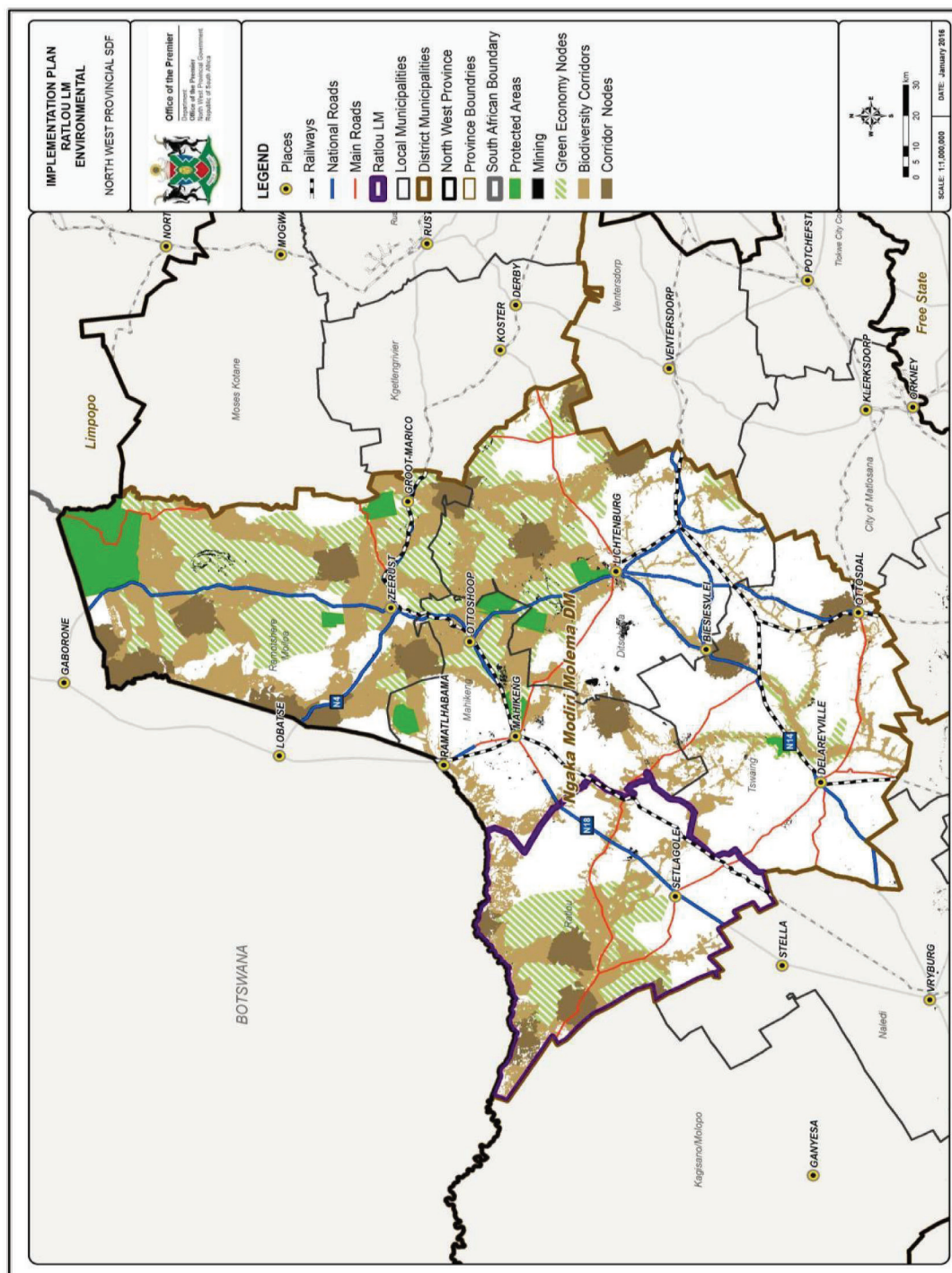
##### 5.3.3.2.1.2 Implementation Plans and Programmes

Table 5-14 Ratlou Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
1		Setlagole (Map 5-17)	Setlagole Settlement Development	Setlagole Precinct Development Plan	Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
2			Sustainable Human Settlements	Ratlou LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	Integrated Water Resource Planning (IWRP)
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	
4			Social Services Upgrading	NW Infrastructure Plan	NW Infrastructure Plan	
5			Local economic development	Ratlou (Ngaka Modiri) LED Strategy		
6		Ratlou Rural	Ratlou Rural Development	Ratlou Rural Development Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
7			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
8			Social Services Upgrading	Social Services Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
9			Local economic development	Ratlou (Ngaka Modiri) LED Strategy	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
10			Sustainable Human Settlements	Ratlou Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan /Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes
11			Restitution			Restitution of Land Rights Programme
12	Biodiversity (Map 5-16)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework / Tourism Development Plan	North West Province Biodiversity Sector Plan	
13	Rural Areas	Rural Areas - agriculture	Rural Area Development <ul style="list-style-type: none"> <li>• Agriculture</li> <li>• Mining</li> </ul>	Ngaka Modiri Molema District Rural Development Plan	Villages, Townships and Small Dorpies Programme	
14	National Links		Upgrading and Maintenance of National roads			SANRAL



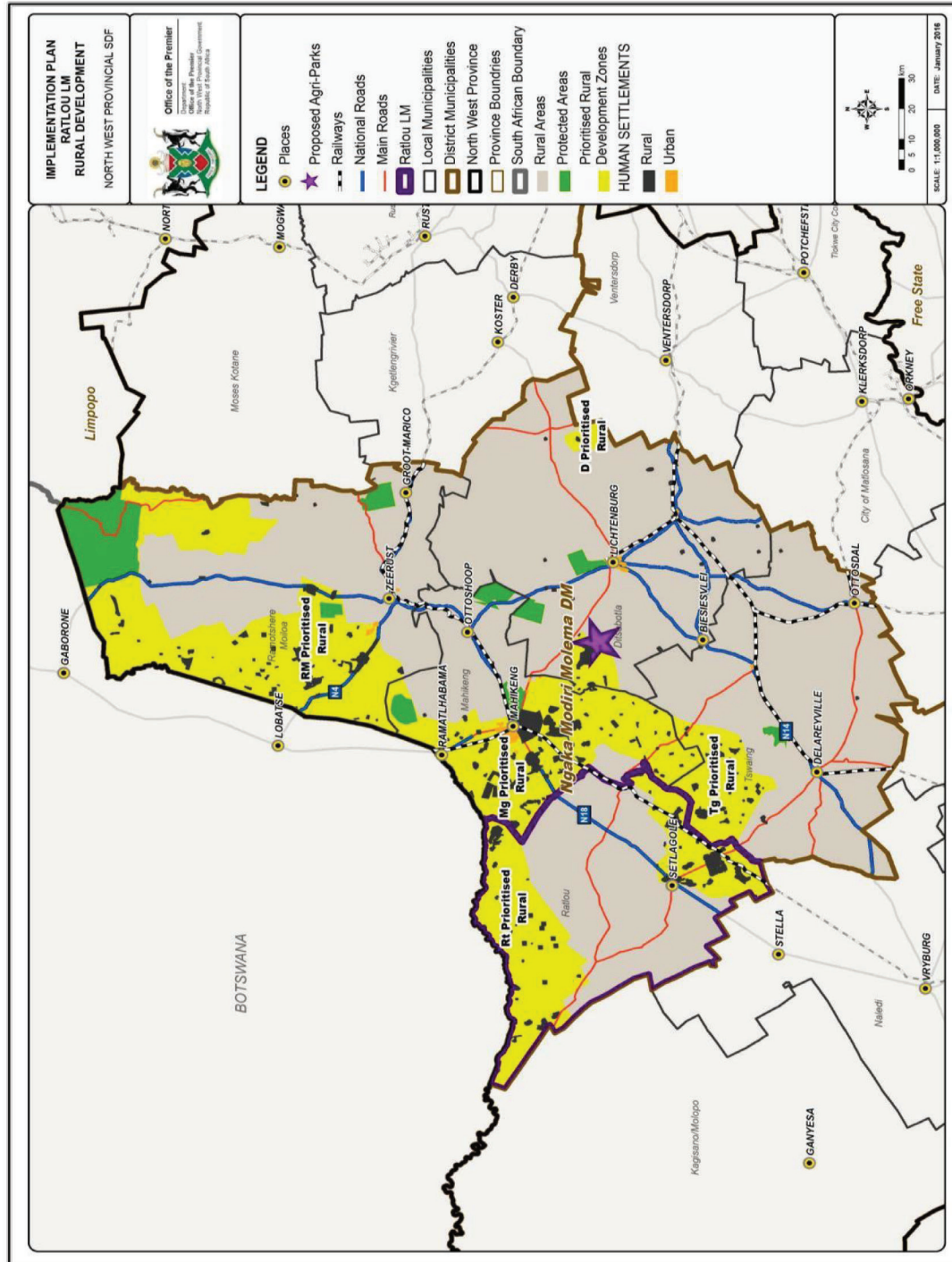
Table 5-14 Ratlou Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
15	Provincial Links 		Upgrading and Maintenance of Provincial roads			
16	Railway Branch Lines 		Unlocking economic potential			

Map 5-16: Ngaka Modiri Molema District Implementation Framework (Environmental) – Ratlou LM





Map 5-18: Ngaka Modiri Molema District Implementation Framework (Rural Development) – Ratlou LM





### 5.3.3.2.2 **Tswaing Local Municipality**

#### 5.3.3.2.2.1 **Development Guidelines**

The nodes in Tswaing local municipality include:

- Delareyville
- Sannieshof
- Ottosdal

These nodes are all small and mostly function as **service centres** for the farmers in the larger area. The remainder of the municipality is rural with a **dispersed population**. There is potential for the expansion of the tourism sector, with Barberspan Bird Sanctuary situated between Delareyville and Sannieshof. The closest primary nodes include Vryburg (approximately 80km) and Klerksdorp (approximately 120km). Given the size of the nodes as well as location, Delareyville should be the primary development core.

#### **Status:**

Productive agricultural region with scattered service centres.

#### **10 Year Land Budget:**

The following table indicates the development potential for Tswaing Local Municipality.

**Table 5-15: Tswaing Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Tswaing	8.0	0.2	6.7	31.2	129.8	175.9

Source: Demacon, 2016

#### **Development Guidelines:**

- Tswaing has limited growth potential and as such, development and investment should focus on **strengthening the agriculture sector**.
- The **protection of water resources** is critical to ensure the sustainability of agriculture
- Focus on water management
- **Security of land tenure** is essential
- Providing **adequate and sufficient services** in Delareyville to farmers in the larger area will help to increase their productivity
- Eradicate **housing backlog**
- Provide basic services
- Focus development and investment on Delareyville rather than diluting it in the municipality
- Refurbish and upgrade existing infrastructure
- Protect high value agriculture land
- Maintain existing infrastructure
- Develop and promote the **tourism sector**, especially in the larger Barberspan Bird Sanctuary area.
- Attract the local population to tourism facilities that will lead to an increase in demand for related services and goods.
- Formalise trade
- Create a favourable environment for private sector investment

#### 5.3.3.2.2.2 **Implementation Plans and Programmes**

Table 5-16 Tswaing Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
1		Delareyville (Map 5-20)	Delareyville Town Development	Delareyville Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
2			Sustainable Human Settlements	Tswaing LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
4			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
5			Local economic development	Tswaing (Ngaka Modiri Molema) LED Strategy		
6		Ottoisdal (Map 5-20)	Ottoisdal Upgrading	Ottoisdal Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
7			Sustainable Human Settlements	Tswaing LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
8			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
9			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
10			Local economic development	Tswaing (Ngaka Modiri Molema) LED Strategy		
11		Sannieshof (Map 5-20)	Sannieshof Settlement Development	Sannieshof Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
12			Sustainable Human Settlements	Tswaing LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
13			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
14			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
15			Local economic development	Tswaing (Ngaka Modiri Molema) LED Strategy		

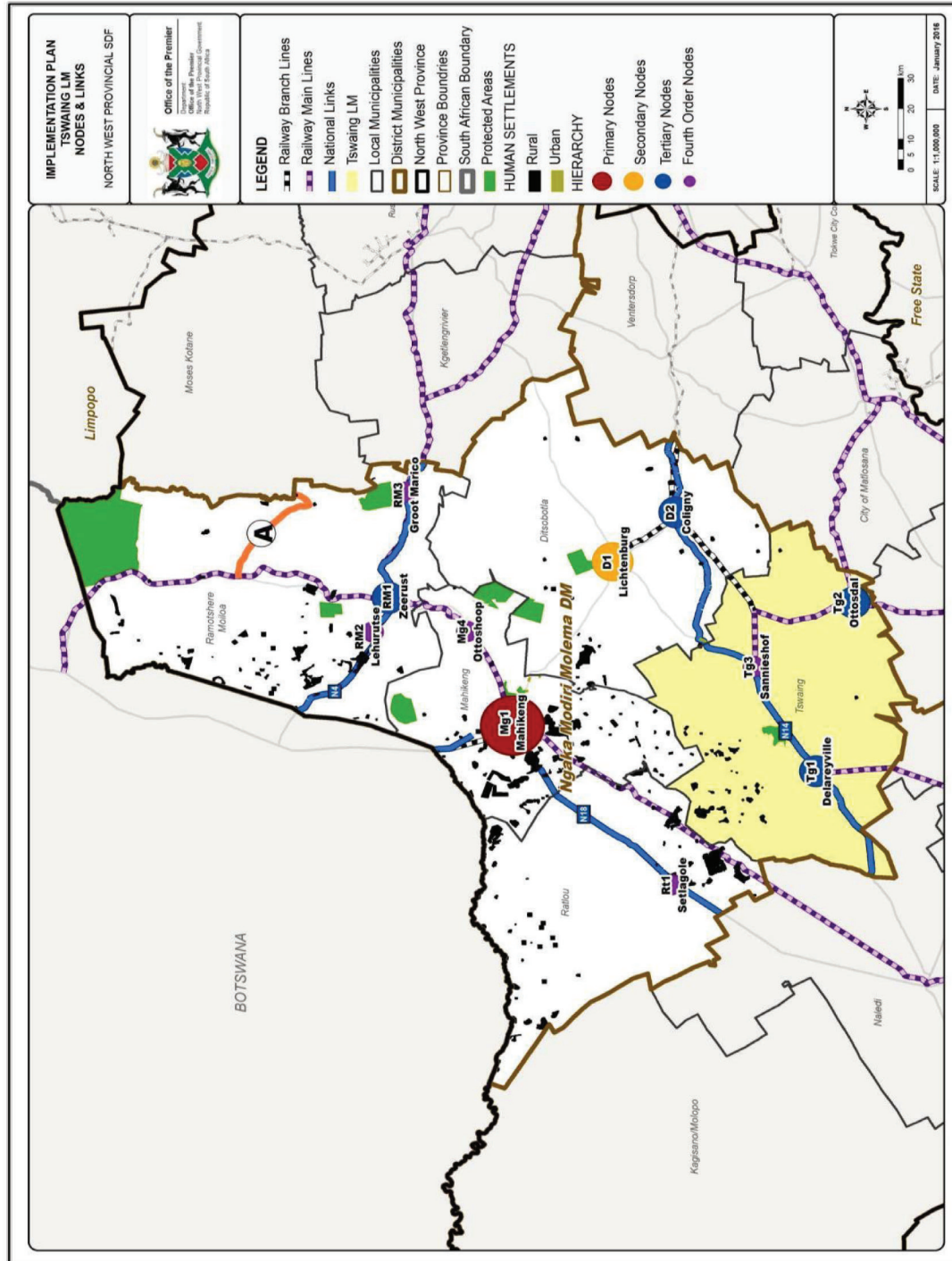
Table 5-16 Tswaing Implementation Plan

Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
16	Tg Prioritised Rural (Map 5-21)	Tswaing Rural	Tswaing Rural Development	Ngaka Modiri Molema District Rural Development Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
17			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
18			Social Services Upgrading	Social Services Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
19			Local economic development	Tswaing (Ngaka Modiri Molema) LED Strategy	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
20			Sustainable Human Settlements	Tswaing Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan /Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes
21			Restitution			Land Redistribution Programme
22	Biodiversity (Map 5-19)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
23	Protected Areas	Protected Areas	Nature Conservation/ Tourism/ Wildlife Economy	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
24	Rural Areas	Rural Areas	Rural Area Development <ul style="list-style-type: none"> <li>• Agriculture</li> <li>• Mining</li> </ul>	Ngaka Modiri Molema District Rural Development Plan	Villages, Townships and Small Dorpies Programme	
25	National Links		Upgrading and Maintenance of National roads			SANRAL
26	Provincial Links		Upgrading and Maintenance of Provincial roads			
27	Railway Main Lines		Passenger / Freight Link			
28	Railway Branch Lines		Unlocking economic potential			

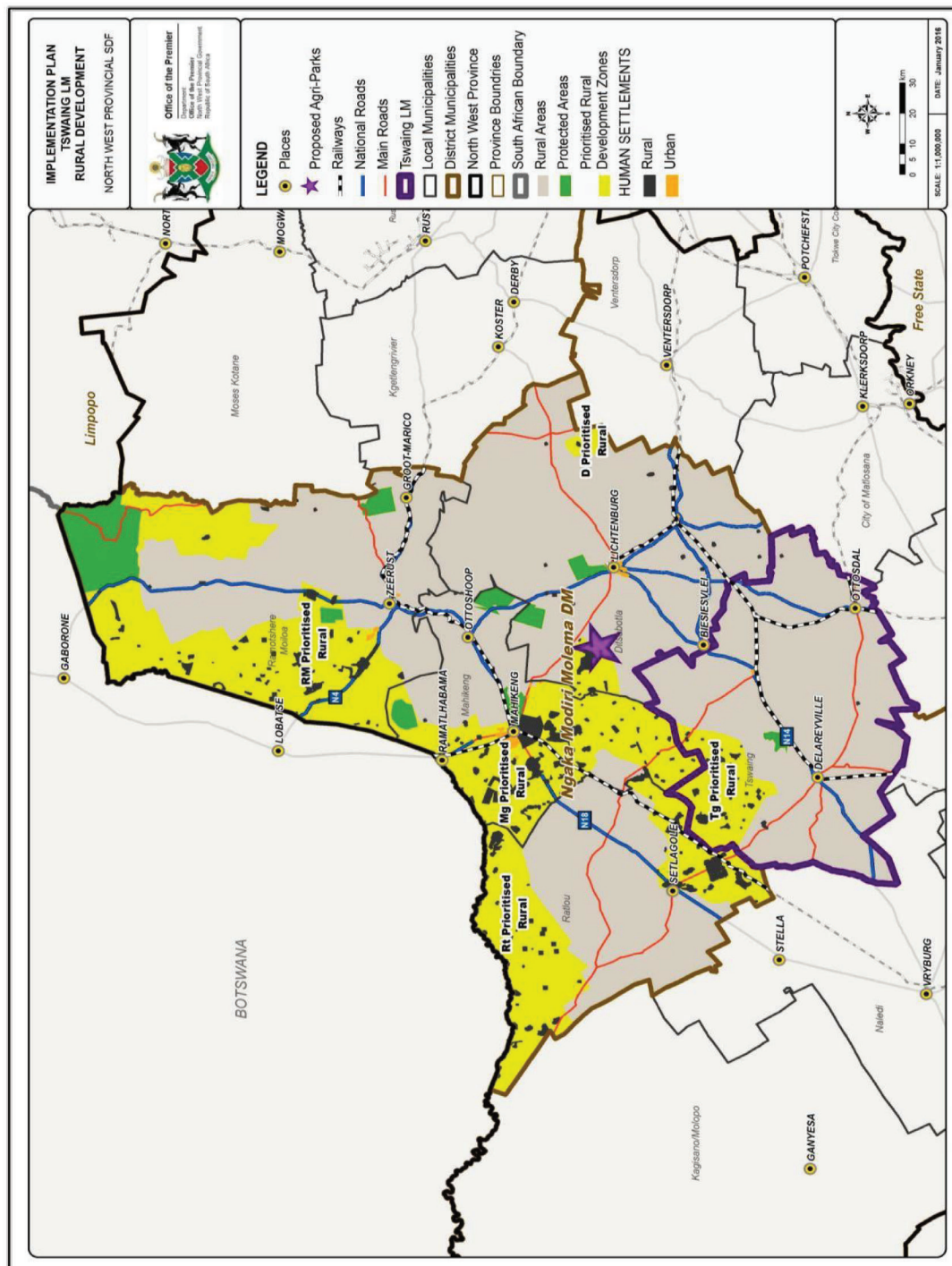
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Map 5-20: Ngaka Modiri Molema District Implementation Framework (Nodes & Links) – Tswaing LM



Map 5-21: Ngaka Modiri Molema District Implementation Framework (Rural Development) – Tswaing LM



### 5.3.3.2.3 **Mahikeng Local Municipality**

#### 5.3.3.2.3.1 **Development Guidelines**

Mafikeng local municipality is the **administrative capital** of the province with **Mafikeng** and **Mmabatho** forming a large urban concentration. Another smaller node, **Ottoshoop**, is situated in the eastern parts of the municipality. Although Mafikeng is the capital of the North West Province, the remainder of the municipality still has a largely **rural nature** with vast amount of tribal land.

The municipality borders Botswana in the north-west, creating an ideal link between Gauteng and Botswana.

The southern section of the municipality is more rural in nature with small communities scattered throughout. Providing basic services to these areas will be expensive.

Due to the growth trajectory of the municipality, the municipality can follow the Diversification and Management Strategy to ensure that the economy does not start to lag behind. A key component of this strategy will be linking Mmabatho and Mafikeng and ensuring integration relating to business, commercial and public services.

#### **Status:**

Local economy with a strong regional service function rapidly expanding to city status

#### **10 Year Land Budget:**

The following table indicates the development potential for Mafikeng Local Municipality.

**Table 5-17: Mahikeng Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Mahikeng	38.2	2.3	9.4	187.4	441.0	678.3

Source: Demacon, 2016

#### **Development Guidelines:**

- **Focus investment in the core urban areas** of Mafikeng and Mmabatho to create agglomeration advantages, fastening economic growth.
- Mafikeng, although it has capital status, still have large areas with **unregulated and informal development**, creating an insufficient urban network.
- Investing in **infrastructure development** and **maintenance** within Mafikeng will help to strengthen the economy's position.
- Ensure **attractive building stock** and **physical business** environment to attract private sector investment
- A definite urban edge is needed to **prohibit urban sprawl**
- Create a sustainable urban form through **zoning and adequate planning**
- Promote the **Industrial Development Zone** and create a conducive environment for private sector investment.
- Provide **tax incentives** to attract private sector investment
- Focus on **skills development** in the finance, business, manufacturing and trade sectors to enable the large economically active population to obtain employment
- **Diversify the economy** by focusing on backward and forward linkages to existing industries.
- Provide **access to basic services**
- Develop **adequate affordable housing opportunities** for the growing urban population and to address the housing backlog

- Develop agro-industries
- **Formalise** the economy
- Protect and develop **water infrastructure**
- There is opportunity to promote tourism in the municipality
- Protect critical biodiversity areas
- Protect high value agriculture land

#### 5.3.3.2.3.2 Implementation Plans and Programmes




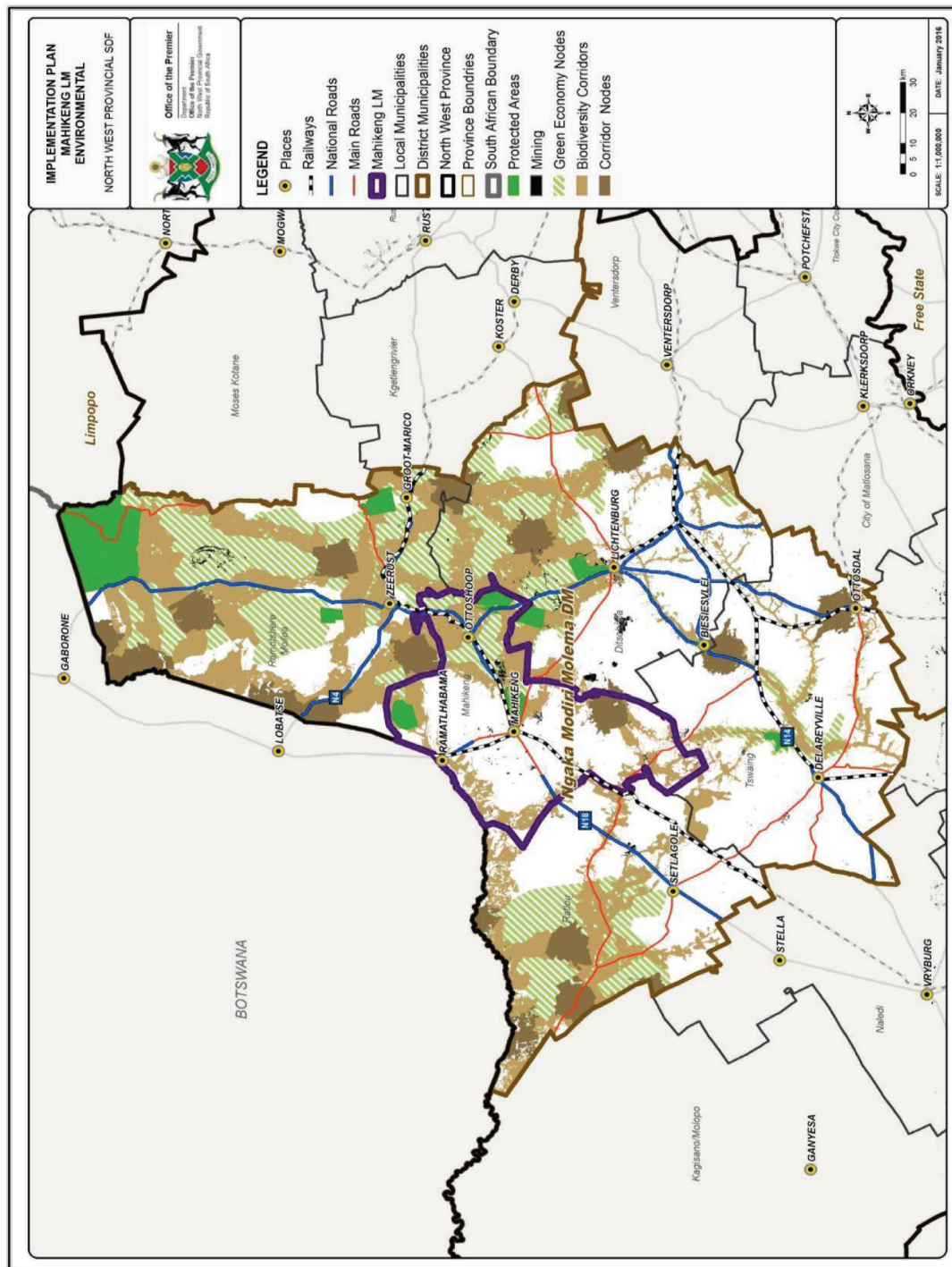
Table 5-18 Mahikeng Implementation Plan									
Item No	Node/Link/Zone	Node Description	Project Focus	Municipal		Provincial		National	
				The City of Mahikeng Development Plan		North West 5 City Project			
1		Mahikeng (Map 5-23)	The City of Mahikeng	Mahikeng Urban Regeneration Plan					
2			Mahikeng Urban Regeneration	Mahikeng LM Sustainable Human Settlement Plan		Provincial Human Settlement Master Plan		National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation	
3			Sustainable Human Settlements	Consolidated Engineering Infrastructure Plan		NW Infrastructure Plan		Integrated Water Resource Planning (IWRP)	
4			Engineering Services Upgrading	Social Services Infrastructure Plan		NW Infrastructure Plan			
5			Social Services Upgrading	Mahikeng (Ngaka Modiri) LED Strategy					
6		Mmabatho (Map 5-23)	Local economic development	Mmabatho Local Development Plan		Villages, Townships and Small Dorpias Programme			
7			Mmabatho Town Development	Mahikeng LM Sustainable Human Settlement Plan		Provincial Human Settlement Master Plan		National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG	
8			Sustainable Human Settlements	Consolidated Engineering Infrastructure Plan		NW Infrastructure Plan		Integrated Water Resource Planning (IWRP)	
9			Engineering Services Upgrading	Social Services Infrastructure Plan		NW Infrastructure Plan			
10			Social Services Upgrading	Mahikeng (Ngaka Modiri) LED Strategy					
11		Setlopo (Map 5-23)	Local economic development	Setlopo Precinct Development Plan		Villages, Townships and Small Dorpias Programme			
12			Setlopo Settlement Development	Mahikeng LM Sustainable Human Settlement Plan		Provincial Human Settlement Master Plan		National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG	
13			Sustainable Human Settlements	Consolidated Engineering Infrastructure Plan		NW Infrastructure Plan		Integrated Water Resource Planning (IWRP)	
14			Engineering Services Upgrading	Social Services Infrastructure Plan		NW Infrastructure Plan			

Table 5-18 Mahikeng Implementation Plan									
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)					
				Municipal	Provincial	National			
15			Local economic development	Mahikeng (Ngaka Modiri) LED Strategy					
16			Ottoshoop Settlement Development	Ottoshoop Precinct Development Plan	Villages, Townships and Small Dorpies Programme				
17			Sustainable Human Settlements	Mahikeng LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG			
18			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)			
19			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan				
20			Local economic development	Mahikeng (Ngaka Modiri Molema) LED Strategy					
21			Mahikeng Rural Development	Mahikeng Rural Development Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme			
22			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme			
23			Social Services Upgrading	Social Services Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme			
24			Local economic development	Mahikeng (Ngaka Modiri Molema) LED Strategy	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme			
25			Sustainable Human Settlements	Mahikeng Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan /Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes			
26			Restitution			Land Redistribution Programme			
27			Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan				
28			Nature Conservation/ Tourism/ Wildlife Economy	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan				

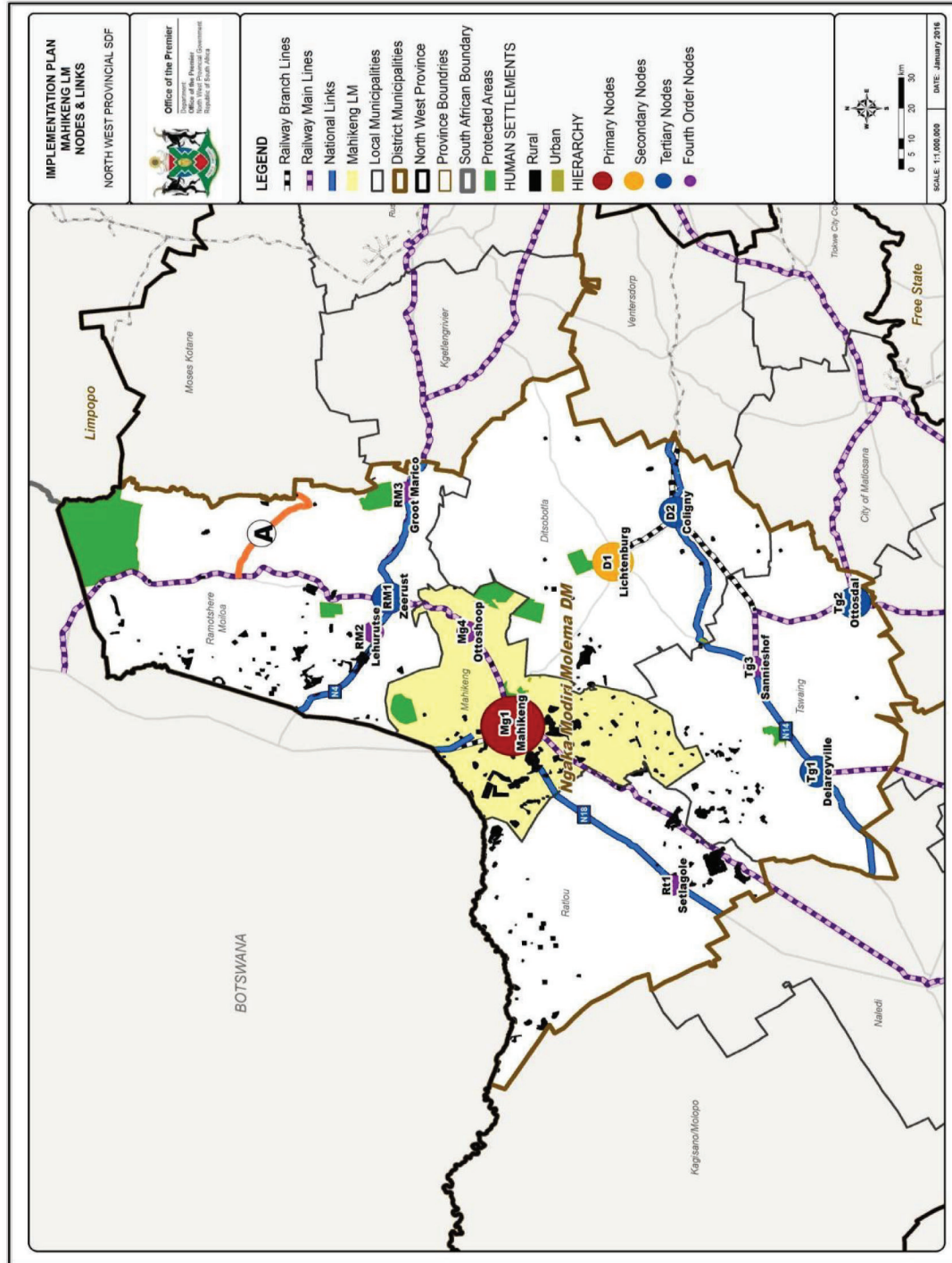
Table 5-18 Mahikeng Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
29	Rural Areas	Rural Areas	Rural Area Development • Agriculture • Mining	Ngaka Modiri Molema District Rural Development Plan	Villages, Townships and Small Dorpias Programme.	
30	National Links		Upgrading and Maintenance of National roads			SANRAL
31	Provincial Links		Upgrading and Maintenance of Provincial roads			
32	Railway Main Lines		Passenger / Freight Link			
33	Railway Branch Lines		Unlocking economic potential			
34	Airport		Mahikeng Airport International Cargo Hub	Mahikeng Airport Development Plan	Provincial Human Settlement Master Plan /Villages, Townships and Small Dorpias Programme	

Map 5-22: Ngaka Modiri Molema District Implementation Framework (Environmental) – Mahikeng LM

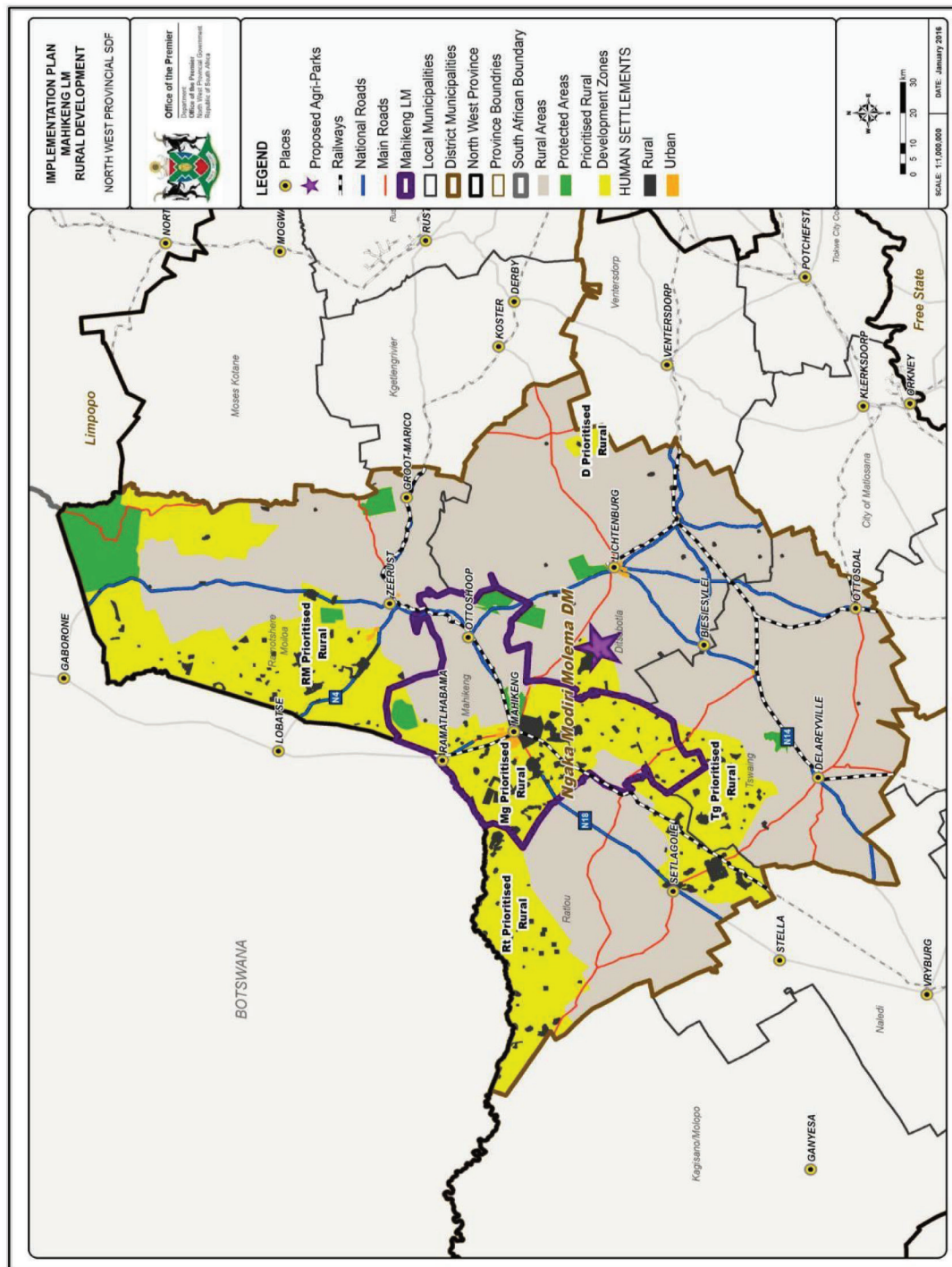




Map 5-23: Ngaka Modiri Molema District Implementation Framework (Nodes & Links) – Mahikeng LM



Map 5-24: Ngaka Modiri Molema District Implementation Framework (Rural Development) – Mahikeng LM



#### 5.3.3.2.4 **Ditsobotla Local Municipality**

##### 5.3.3.2.4.1 **Development Guidelines**

Ditsobotla local municipality is situated east of Mahikeng Local Municipality, with the following nodes:

- Lichtenburg
- Coligny
- Biesiesvlei

**Biesiesvlei** forms a small service centre, while **Coligny**, although larger, still functions mainly as a service centre. **Lichtenburg**, on the other side, is a relatively large urban concentration with an expanding business and services sector, and manufacturing sector.

Bakerville, Itsooseng, Mabaalstad, and Bokkral are small, scattered communities that use Lichtenburg as their main node for employment and retail opportunities.

Although the municipality is under administration, the economy is still growing at **4.4%**, making it the fastest growing economy in the province. A Growth Management Strategy will ensure that infrastructure and services are maintained and upgraded to provide a positive environment for further development. Focusing investment on Lichtenburg will create agglomeration advantages, attracting more private sector investment and development.

##### **Status:**

Economy rooted in agriculture becoming more diversified with a strong urban core

##### **10 Year Land Budget:**

The following table indicates the development potential for Ditsobotla Local Municipality.

**Table 5-19: Ditsobotla Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Ditsobotla	25.8	3.8	14.4	84.2	225.7	353.9

Source: Demacon, 2016

##### **Development Guidelines:**

- Focus investment on Lichtenburg to **strengthen the economic core** of the municipality
- Provide **affordable housing opportunities** for the expanding urban population
- Provide **access to basic services**
- **Upgrade infrastructure** such as roads, water and sanitation
- Upgrade **informal settlements**
- Concentrate community facilities and social services in Lichtenburg
- Protect the **high value agriculture land** and limit the impact of mining and quarrying on the high value agriculture land
- Protect critical biodiversity areas
- **Create industries in relevant sectors**, e.g. produce and cement, to create employment opportunities and limit the outflow of the economically active population
- Ensure a **positive environment** for private sector investment
- Focus on **creating a value chain** to increase multipliers
- Focus **skills development** on the agriculture, manufacturing and business sectors
- Focus on **intensive labour driver industries**
- Create an **efficient and adequate municipal administration**

- **CBD revitalisation and upgrading of the road infrastructure** will help to attract development to the area
- Provide security of land tenure.

**5.3.3.2.4.2 Implementation Plans and Programmes**





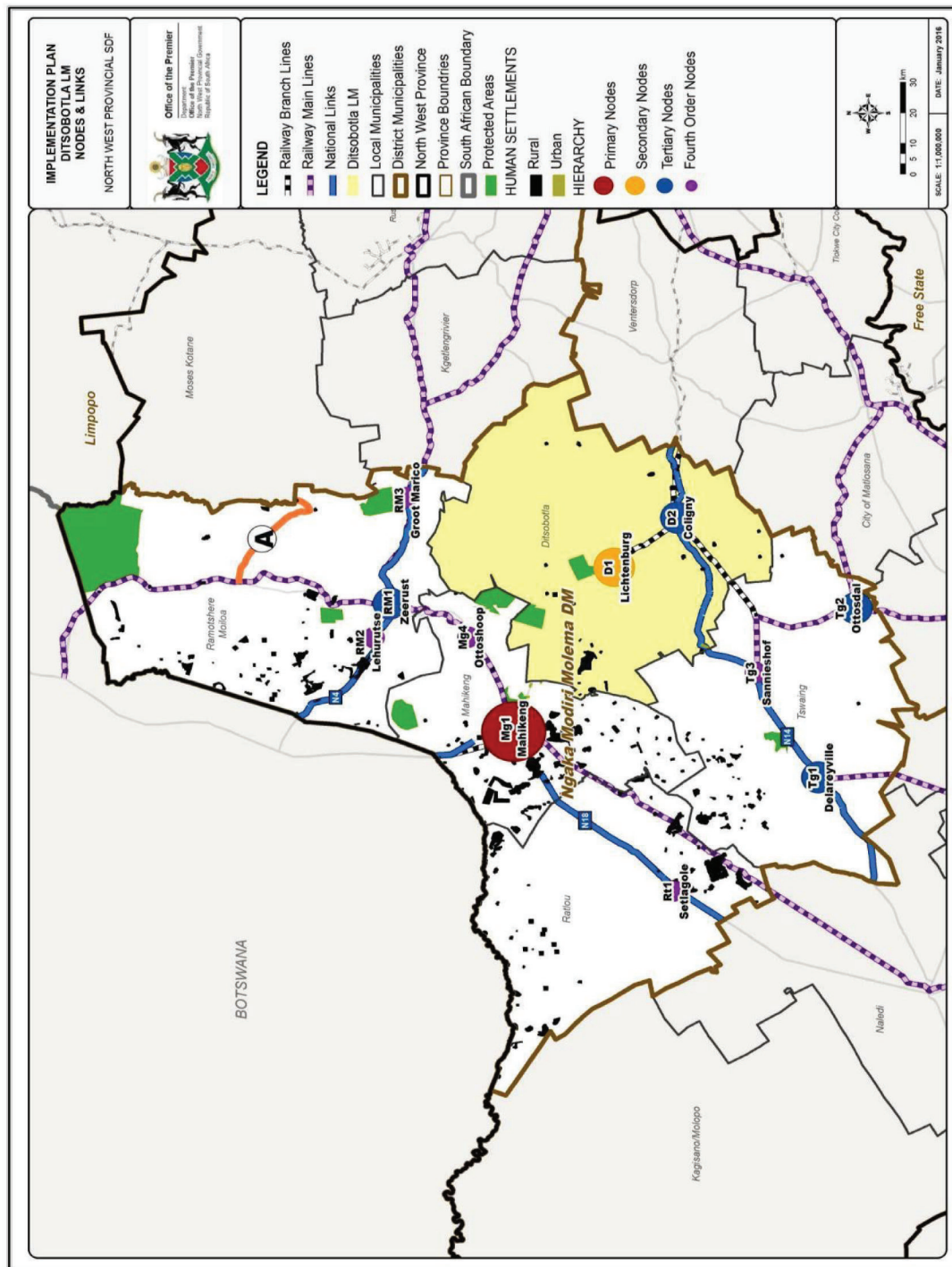
Table 5-20 Ditsobotla Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
1		Lichtenburg (Map 5-26)	Lichtenburg Town Development	Lichtenburg Local Development Plan	Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
2			Sustainable Human Settlements	Ditsobotla LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	Integrated Water Resource Planning (IWRP)
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Agripark Programme
4			Lichtenburg Agripark	Lichtenburg Agripark Implementation Plan	Villages, Townships and Small Dorpies Programme	
5			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
6			Local economic development	Ditsobotla (Ngaka Modiri) LED Strategy		
7		Coligny (Map 5-26)	Coligny Upgrading	Coligny Precinct Development Plan	Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
8			Sustainable Human Settlements	Ditsobotla LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	Integrated Water Resource Planning (IWRP)
9			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	
10			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
11			Local economic development	Ditsobotla (Ngaka Modiri Molema ) LED Strategy		
12		Ditsobotla Rural	Ditsobotla Rural Development	Ditsobotla Rural Development Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
13			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
14			Social Services Upgrading	Social Services Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
15			Local economic development	Ditsobotla (Ngaka Modiri) LED Strategy	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme

Table 5-20 Ditsobotla Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
16			Sustainable Human Settlements	Ditsobotla Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan /Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes
17			Restitution			Land Redistribution Programme
18	Biodiversity (Map 5-25)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
19	Protected Areas	Protected Areas	Nature Conservation/ Tourism/ Wildlife Economy	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
20	Rural Areas	Rural Areas	Rural Area Development <ul style="list-style-type: none"> <li>• Agriculture</li> <li>• Mining</li> </ul>	Ngaka Modiri Molema District Rural Development Plan	Villages, Townships and Small Dorpies Programme	
21	National Links		Upgrading and Maintenance of National roads			SANRAL
22	Provincial Links		Upgrading and Maintenance of Provincial roads			
23	Railway Branch Lines		Unlocking economic potential			



Map 5-26: Ngaka Modiri Molema District Implementation Framework (Nodes &amp; Links) – Ditsobotla LM







### 5.3.3.2.5 **Ramotshere Moiloa Local Municipality**

#### 5.3.3.2.5.1 **Development Guidelines**

Ramotshere Moiloa local municipality is situated in the north, bordering Botswana. The nodes are:

- Zeerust
- Groot Marico

These nodes are situated in the southern part of the municipality. The remainder of the municipality forms a **vast rural area** with **dispersed population** and **low densities**. The natural environment lends itself to the establishment of nature reserves with **Madikwe Nature Reserve** situated in the northern part of the municipality.

Due to the mostly rural nature of the municipality, it will be beneficial to concentrate development on established nodes.

#### **Status:**

Rural economy with large amounts of tribal land

#### **10 Year Land Budget:**

The following table indicates the development potential for Ramotshere Moiloa Local Municipality.

**Table 5-21: Ramotshere Moiloa Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Ramotshere Moiloa	13.7	0.7	2.8	65.3	203.1	285.6

Source: Demacon, 2016

#### **Development Guidelines:**

- Protect high value agricultural land.
- **Invest in agriculture** to increase crop production in areas with high agricultural potential
- **Protect water sources** and **develop water infrastructure** to ensure sustainability
- Develop agro-industries that **promote local beneficiation** to create employment opportunities, to create a value chain and increase economic development.
- Focus invest in infrastructure and services in Zeerust to strengthen the urban core and create a **strong economic core** that provides employment opportunities and services to the population
- Provide **access to basic services**
- **Promote and enhance the tourism sector** – approximately 20% of the municipality is game farms. Although they are relatively scattered and far away from rural settlements, there is potential to develop the tourism sector and create tourism related services that will provide employment opportunities.
- Protect the natural environment and prohibit mining in the agriculture and tourism areas
- Formalise the informal economy and **incorporate the informal traders** in the economy
- Provide affordable housing opportunities in Zeerust and smaller nodes to **increase densities**.

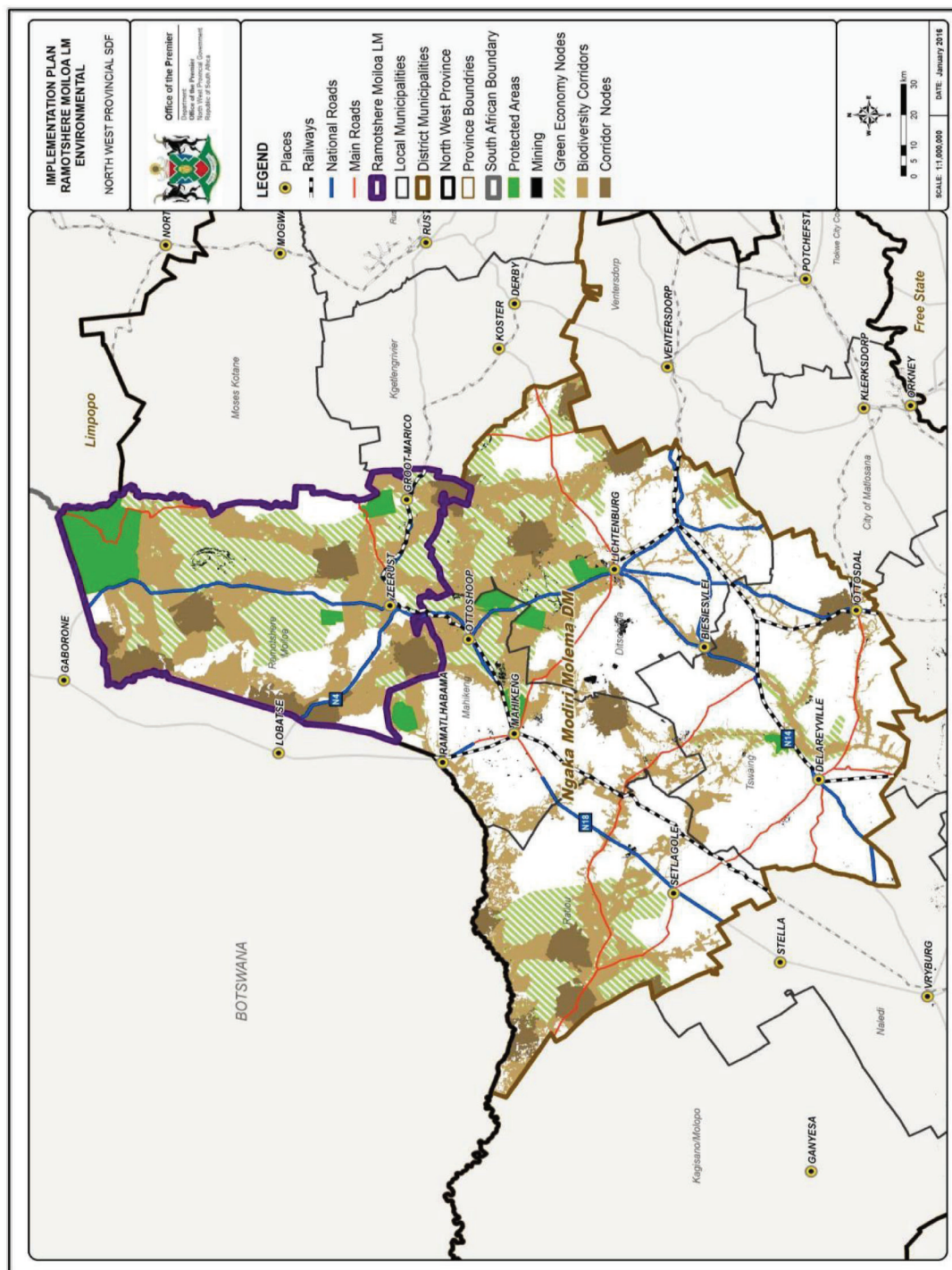
#### 5.3.3.2.5.2 **Implementation Plans and Programmes**

Table 5-22 Ramotshere Moiloa Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
1		Zeerust (Map 5-29)	Zeerust Town Development	Zeerust Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
2			Sustainable Human Settlements	Ramotshere Moiloa LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
4			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
5			Local economic development	Ramotshere Moiloa (Ngaka Modiri) LED Strategy		
6		Lehurutse (Map 5-29)	Lehurutse Settlement Development	Lehurutse Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
7			Sustainable Human Settlements	Ramotshere Moiloa LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
8			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
9			Social Services Upgrading	NW Infrastructure Plan	NW Infrastructure Plan	
10			Local economic development	Ramotshere Moiloa (Ngaka Modiri Molema ) LED Strategy		
11		Groot Marico (Map 5-29)	Groot Marico Settlement Development	Groot Marico Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
12			Sustainable Human Settlements	Ramotshere Moiloa LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
13			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
14			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
15			Local economic development	Ramotshere Moiloa (Ngaka Modiri Molema ) LED Strategy		

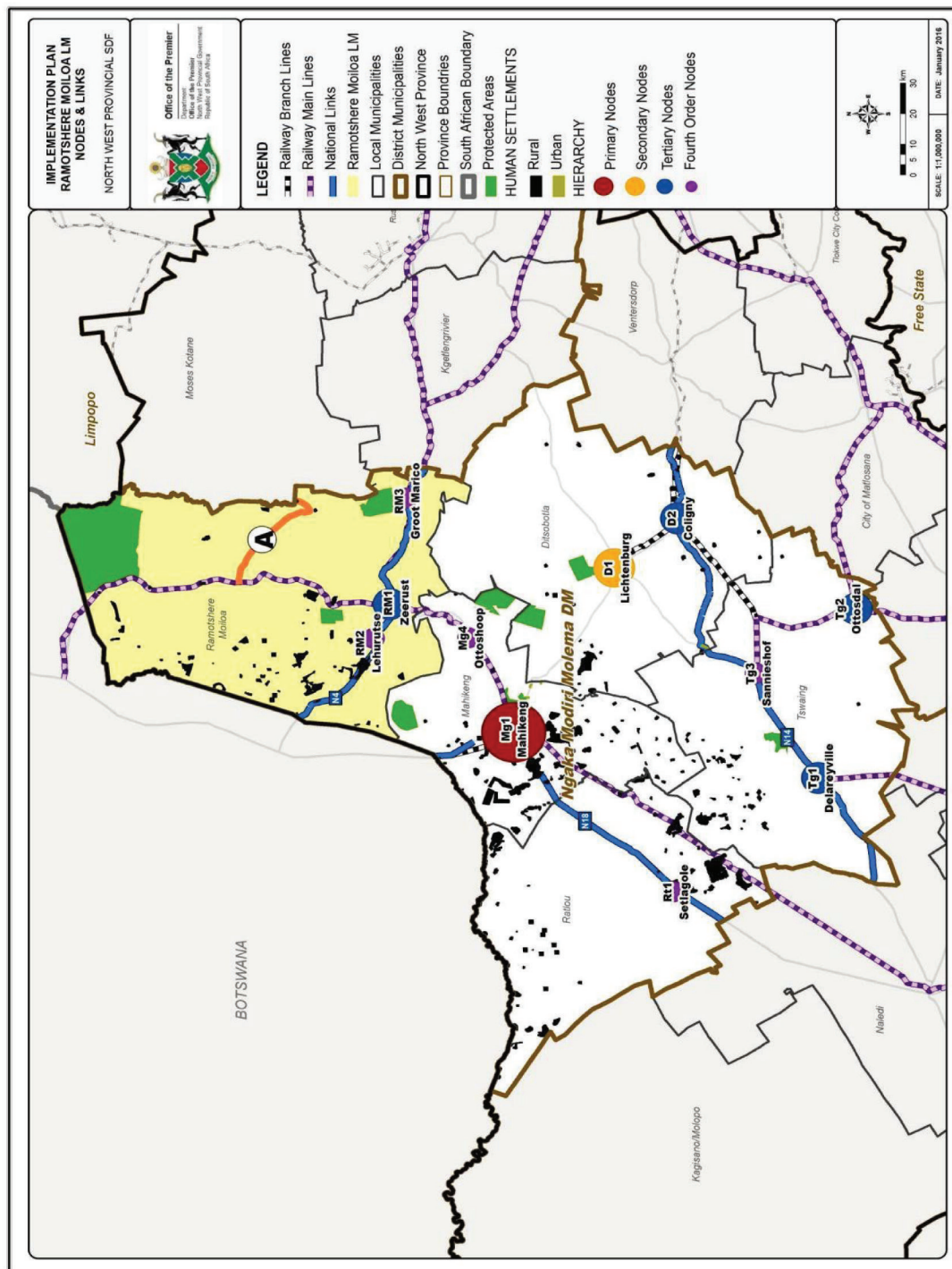
Table 5-22 Ramotshere Moiloa Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
16	<b>RM Prioritised Rural (Map 5-30)</b>	Ramotshere Moiloa Rural Development		Ramotshere Moiloa Rural Development Plan	Villages, Townships and Small Dorpias Programme	Comprehensive Rural Development programme
17		Engineering Services Upgrading		Consolidated Engineering Infrastructure Plan	Villages, Townships and Small Dorpias Programme	Comprehensive Rural Development programme
18		Social Services Upgrading		Social Services Infrastructure Plan	Villages, Townships and Small Dorpias Programme	Comprehensive Rural Development programme
19		Local economic development		Ramotshere Moiloa (Ngaka Modiri Molema) LED Strategy	Villages, Townships and Small Dorpias Programme	Comprehensive Rural Development programme
20		Sustainable Human Settlements		Ramotshere Moiloa LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan /Villages, Townships and Small Dorpias Programme	National Housing Code (2009) and housing delivery programmes
21		Restitution				Land Redistribution Programme
22	<b>Biodiversity (Map 5-28)</b>	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
23	<b>Protected Areas</b>	Protected Areas	Nature Conservation/ Tourism/ Wildlife Economy	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
24	<b>Rural Areas</b>	Rural Area Development • Agriculture • Mining		Ngaka Modiri Molema District Rural Development Plan	Villages, Townships and Small Dorpias Programme	
25	<b>National Links</b>	Upgrading and Maintenance of National roads				SANRAL
26	<b>Provincial Links</b>	Upgrading and Maintenance of Provincial roads				
27	<b>Proposed Provincial Links</b>	Enhance accessibility to N4 and Gauteng. Enhance district and local accessibility		Ramotshere Moiloa (Ngaka Modiri Molema) Roads and Transportation Plan	Villages, Townships and Small Dorpias Programme	
28	<b>Railway Main Lines</b>	Passenger / Freight Link				



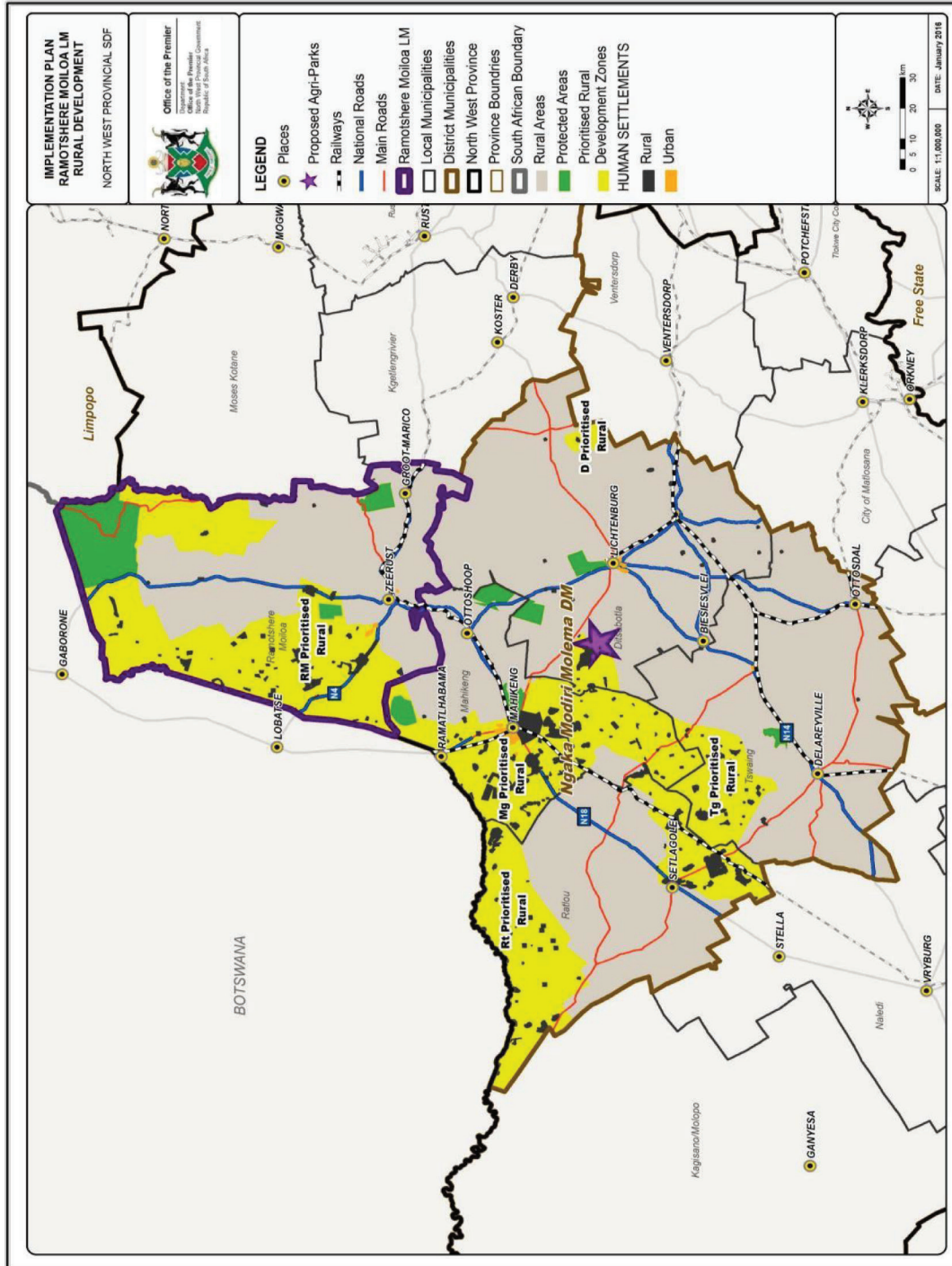
Map 5-28: Ngaka Modiri Molema District Implementation Framework (Environmental) - Ramotshere Moiloa LM



Map 5-29: Ngaka Modiri Molema District Implementation Framework (Nodes &amp; Links) - Ramotshere Moiloa LM



Map 5-30: Ngaka Modiri Molema District Implementation Framework (Rural Development) - Ramotshere Moiloa LM





### 5.3.3.3 Dr Ruth Segomotsi Mompoti District

#### 5.3.3.3.1 *Kagisano / Molopo Local Municipality*

##### 5.3.3.3.1.1 Development Guidelines

Kagisano / Molopo local municipality has the following nodes:

- Ganyesa
- Piet Plessis
- Pomfret

The municipality displays a **mostly rural nature**, with no large nodes and small communities scattered throughout the large municipality. The closest primary node is Vryburg, situated south of the municipality. The greatest chance to ensure the successful development and growth of the municipality, will be to focus development on identified nodes, albeit from a small base, thereby creating concentration points.

#### **Status:**

Underdeveloped economy with limited development potential

#### **10 Year Land Budget:**

The following table indicates the development potential for Kagisano / Molopo Local Municipality.

**Table 5-23: Kagisano / Molopo Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Kagisano/Molopo	4.3	0.2	1.5	31.9	122.3	160.2

Source: Demacon, 2016

#### **Development Guidelines:**

- **Severe environmental constraints** exist in the municipality, limiting development potential
- Provide **access to basic services**
- Formalise selected rural nodes to create sustainable development
- Develop **affordable housing** in the nodes of Ganyesa, Piet Plessis and Pomfret to strengthen them
- Focus **public sector investment** on these nodes
- **Protect** high value agricultural land
- Focus on developing the agriculture sector
- Protect high biodiversity areas
- **Minimise loss of natural habitat** and prevent over grazing through educating the population
- Develop **water service infrastructure**
- **Protect** and **maintain** current water infrastructure
- There is **potential for tourism development** in the municipality that will help to attract private sector investment to the municipality and create a need for related services and goods.

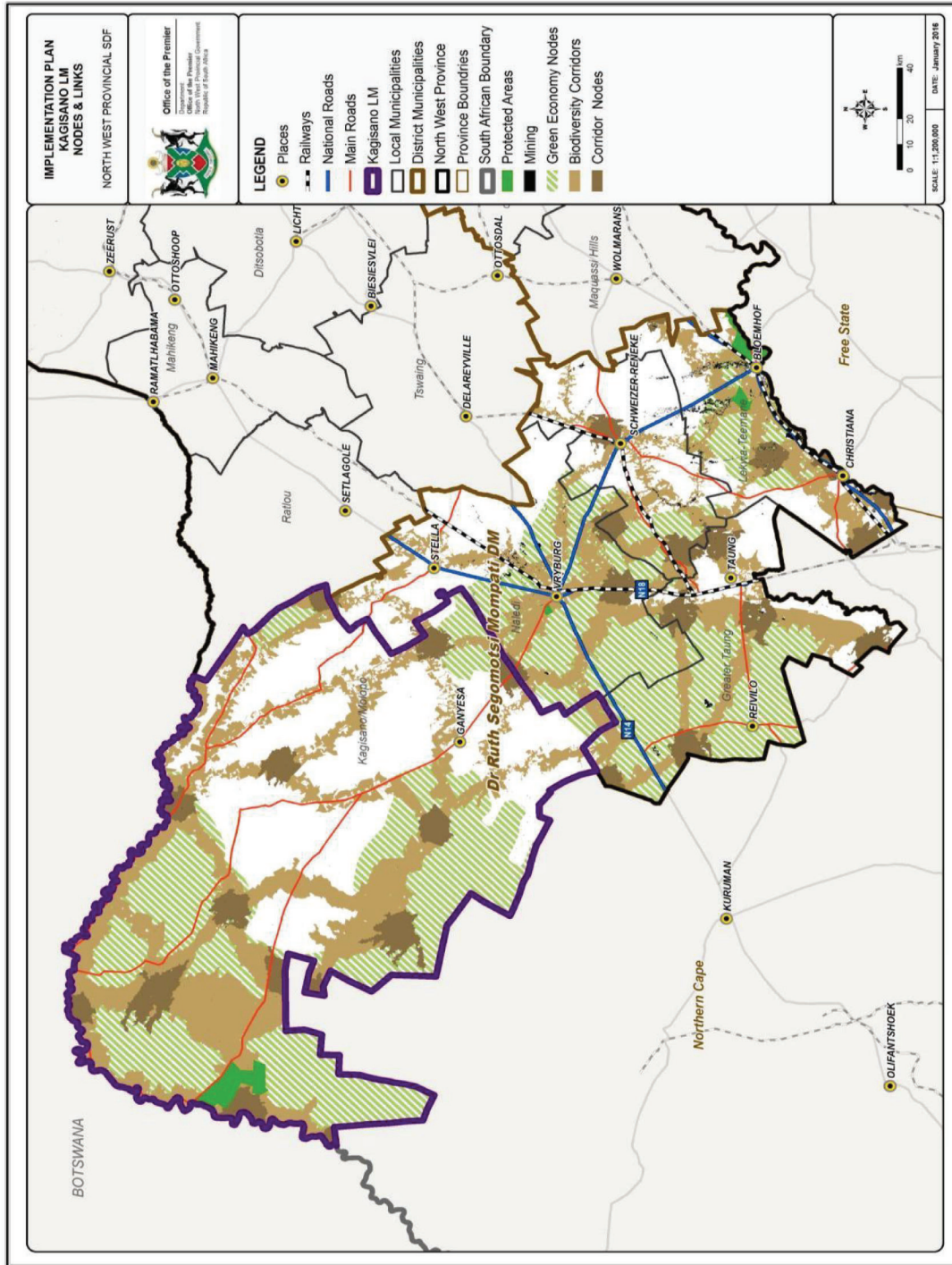
##### 5.3.3.3.1.2 Implementation Plans and Programmes



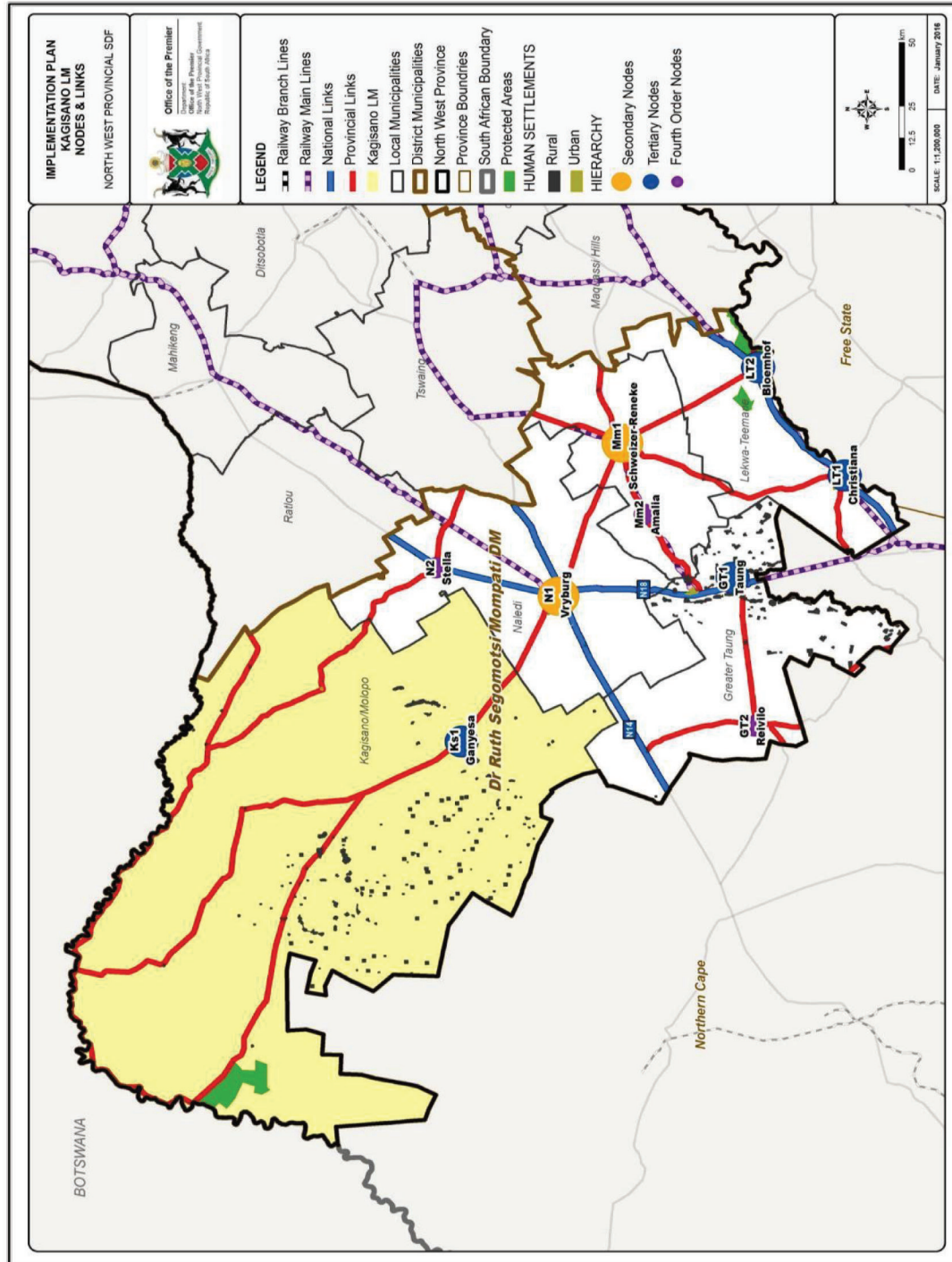
Table 5-24 Kagisano Implementation Plan									
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)			National		
				Municipal	Provincial				
1		Ganyesa (Map 5-32)	Ganyesa Upgrading	Ganyesa Precinct Development Plan	Villages, Townships and Small Dorpies Programme				
2			Sustainable Human Settlements	Kagisano LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan		National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG		
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan		Integrated Water Resource Planning (IWRP)		
4			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan				
5			Local economic development	Kagisano (Dr Ruth Segomotsi Mompoti) LED Strategy					
6	Ks Rural (Map 5-33)	Kagisano Rural	Kagisano Rural Development	Kagisano Rural Development Plan	Villages, Townships and Small Dorpies Programme		Comprehensive Rural Development programme		
7			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	Villages, Townships and Small Dorpies Programme		Comprehensive Rural Development programme		
8			Social Services Upgrading	Social Services Infrastructure Plan	Villages, Townships and Small Dorpies Programme		Comprehensive Rural Development programme		
9			Local economic development	Kagisano (Dr Ruth Segomotsi Mompoti) LED Strategy	Villages, Townships and Small Dorpies Programme		Comprehensive Rural Development programme		
10			Sustainable Human Settlements	Kagisano LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan /Villages, Townships and Small Dorpies Programme		National Housing Code (2009) and housing delivery programmes		
11			Restitution				Land Redistribution Programme		
12	Biodiversity (Map 5-31)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan				
13	Protected Areas	Protected Areas	Nature Conservation/ Tourism/ Wildlife Economy	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan				
14	Rural Areas	Rural Areas - agriculture	Rural Area Development • Agriculture • Mining	Dr Ruth Segomotsi Mompoti District Rural Area Development Plan	Villages, Townships and Small Dorpies Programme				

Table 5-24 Kagisano Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
15	Provincial Links		Upgrading and Maintenance of Provincial roads			

Map 5-31: Dr Ruth Segomotsi Mompoti District Implementation Framework (Environmental) – Kagisano LM

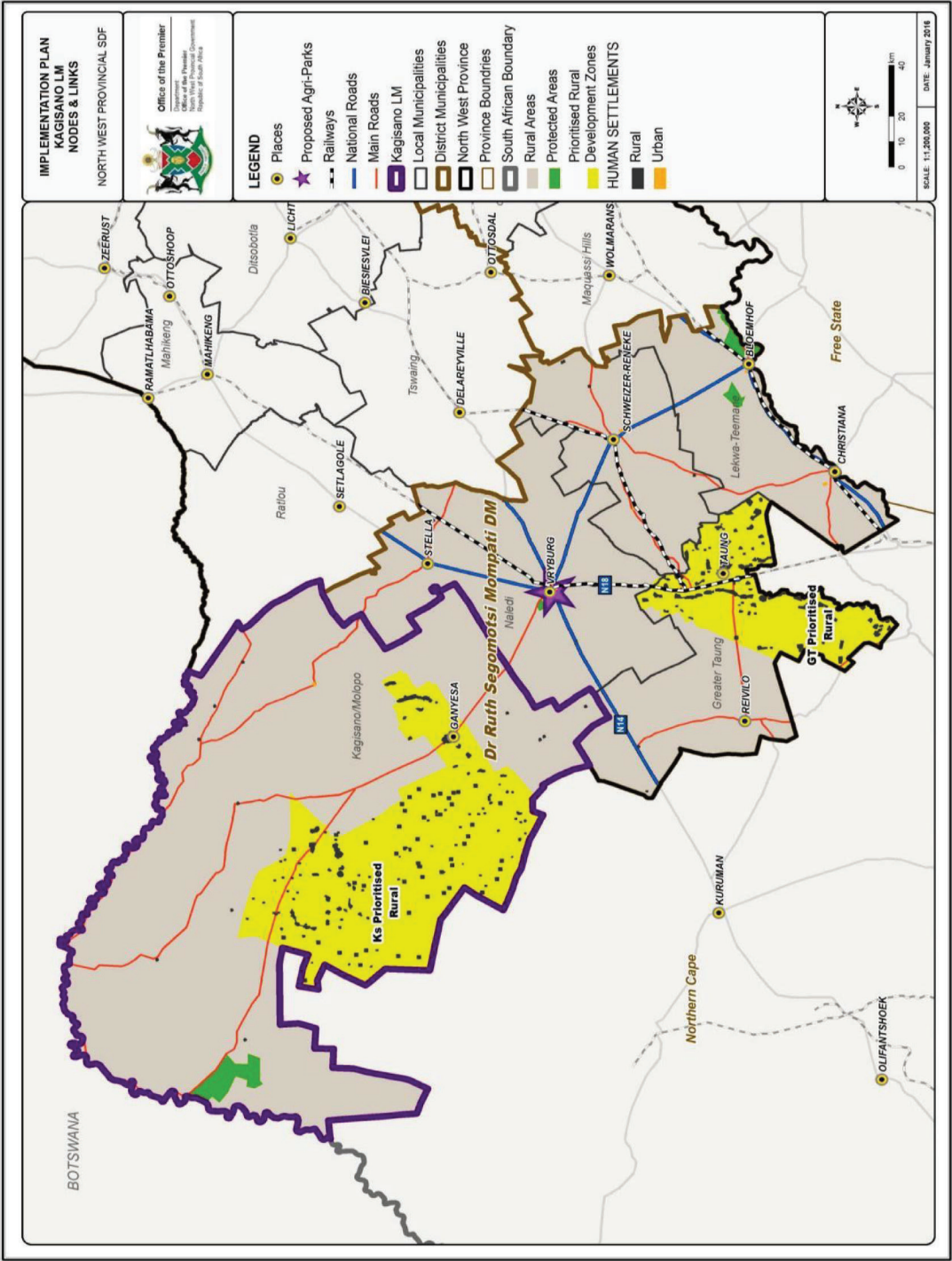


Map 5-32: Dr Ruth Segomotsi Mompoti District Implementation Framework (Nodes &amp; Links) – Kagisano LM





Map 5-33: Dr Ruth Segomotsi Mompoti District Implementation Framework (Rural Development) – Kagisano LM



### 5.3.3.3.2 **Naledi Local Municipality**

#### 5.3.3.3.2.1 **Development Guidelines**

**Vryburg** forms an important node in the Naledi local municipality. The other node of size, is **Stella**, situated in the northern parts of the municipality.

Although Vryburg is an old and established node, a Revival Strategy is necessary to increase economic growth and attract new investment to the area. With time, this development will spill over to the other areas in Vryburg.

#### **Status:**

Developing economy vested in agriculture

#### **10 Year Land Budget:**

The following table indicates the development potential for Naledi Local Municipality.

**Table 5-25: Naledi Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Naledi	4.8	0.2	2.3	38.9	89.9	136.1

Source: Demacon, 2016

#### **Development Guidelines:**

- The locality of Vryburg town relative to the **N14** and **N18** creates development potential that should be exploited.
- Investment should be focused on Vryburg itself, rather than diluting it through the municipality.
- **Reviving the CBD** will help attract private sector investment
- Maintain and upgrade existing **infrastructure**
- Provide **access to basic services**
- Concentrate community facilities and social services in Vryburg to create a denser urban settlement
- Focus on **densification**, rather than greenfield developments in rural areas
- Protect high value agricultural land
- Develop agro-processing industries that focus on the **beneficiation of local goods and produce** that will create a value chain in Vryburg, rather than exporting the live cattle and unprocessed produce to other provinces, e.g. Gauteng
- Protect scarce water resources
- Develop and maintain **water service infrastructure**
- Focus **skills development** on related industries – agriculture, manufacturing, trade – to help curb unemployment.
- Develop **labour intensive industries** to limit the outflow of the labour force
- Provide **affordable housing** within a clearly demarcated urban edge to prevent sprawl
- Due to drier conditions, the potential for commercial farming is on the decline. It is proposed that these areas should be utilised for **game farming** that will attract people to the area and create a demand for related services such as taxidermists, etc.
- Develop **tourism infrastructure** through public-private partnerships
- **Stella** should be utilised as a **service point** – maintaining and upgrading existing infrastructure is important, as well as providing basic services to the larger community.
- **Create a conducive environment** in Vryburg to **attract private sector investment**.
- **Formalise** trade.

#### 5.3.3.3.2.2 **Implementation Plans and Programmes**



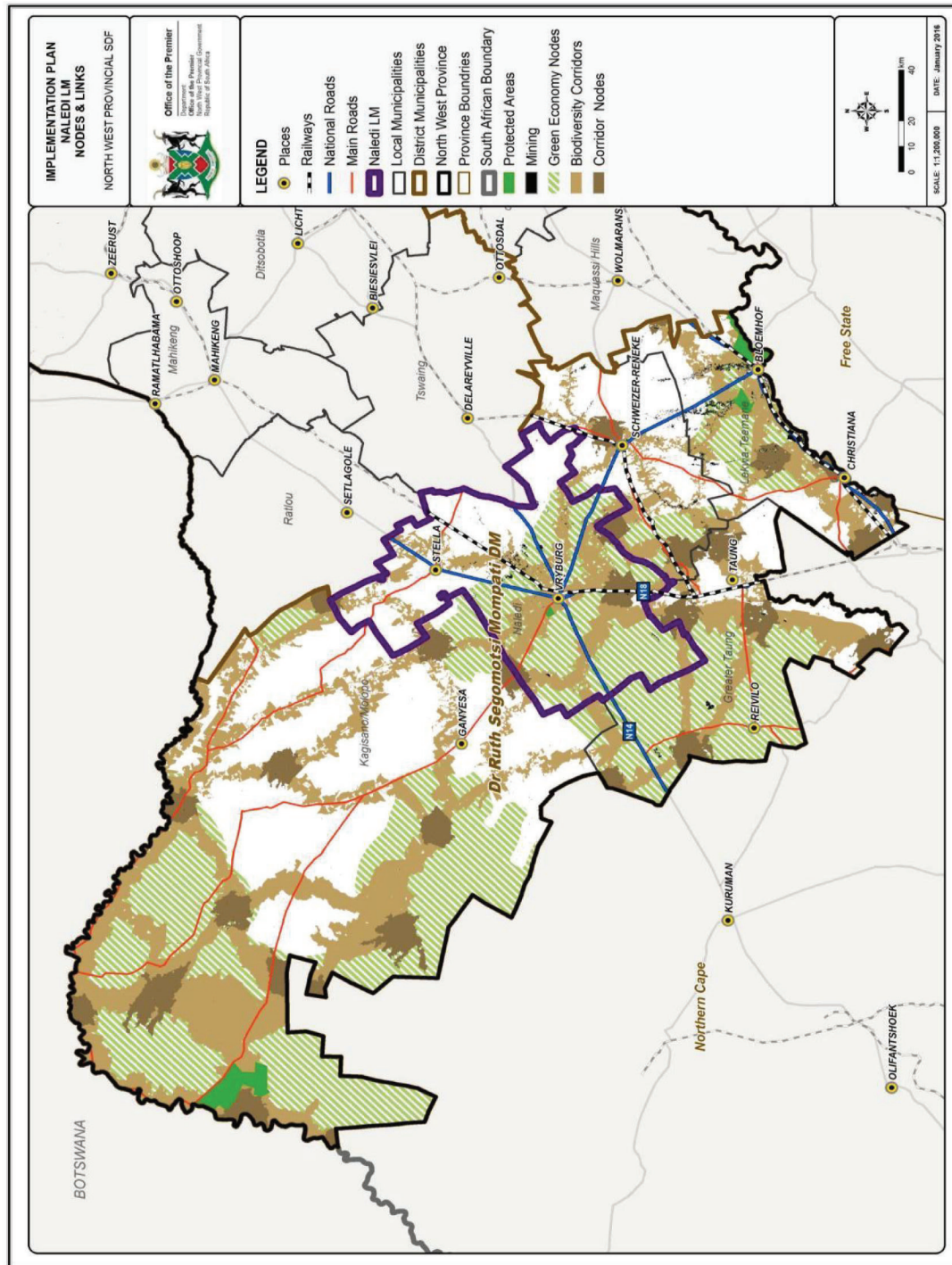
Table 5-26 Naledi Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
1		Vryburg (Map 5-35)	Vryburg Town Development	Vryburg Local Development Plan	Villages, Townships and Small Dorpies Programme	
2			Naledi/Vryburg Agripark	Naledi/Vryburg Agripark Implementation Plan	Villages, Townships and Small Dorpies Programme	Agripark Programme
3			Sustainable Human Settlements	Naledi LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
4			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
5			Vryburg Agripark	Vryburg Agripark Implementation Plan	Villages, Townships and Small Dorpies Programme	Agripark Programme
6			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
7			Local economic development	Naledi (Dr Ruth Segomotsi Mompoti) LED Strategy		
8		Stella (Map 5-35)	Stelle Settlement Development	Stelle Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
9			Sustainable Human Settlements	Naledi LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
10			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
11			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
12			Local economic development	Naledi (Dr Ruth Segomotsi Mompoti) LED Strategy		
13	Biodiversity (Map 5-34)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
14	Rural Areas	Rural Areas	Rural Area Development <ul style="list-style-type: none"><li>• Agriculture</li><li>• Mining</li></ul>	Dr Ruth Segomotsi Mompoti District Rural Area Development Plan	Villages, Townships and Small Dorpies Programme	

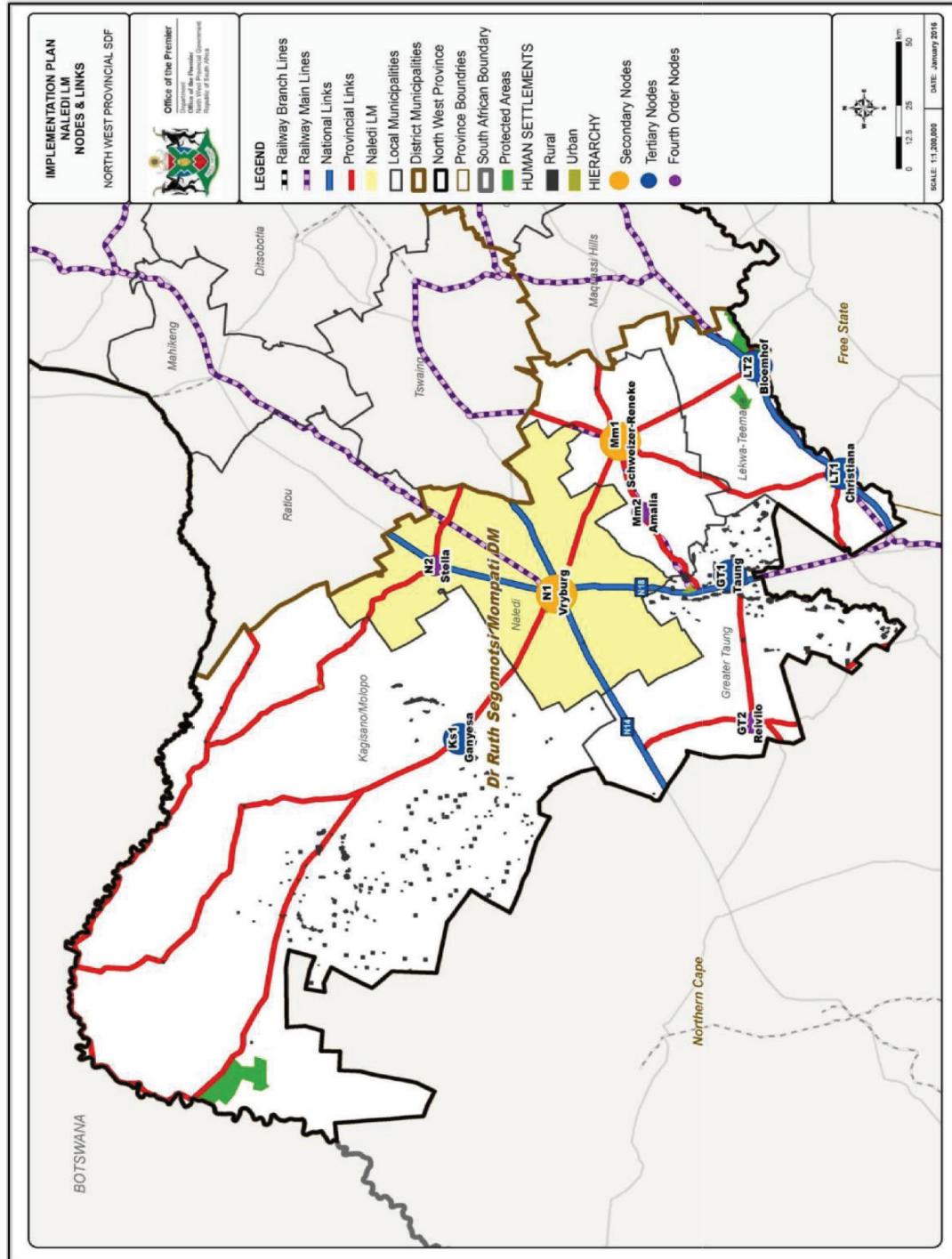
Table 5-26 Naledi Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
15	National Links		Upgrading and Maintenance of National roads			SANRAL
16	Provincial Links		Upgrading and Maintenance of Provincial roads			
17	Railway Main Lines		Passenger / Freight Link			
18	Railway Branch Lines		Unlocking economic potential			



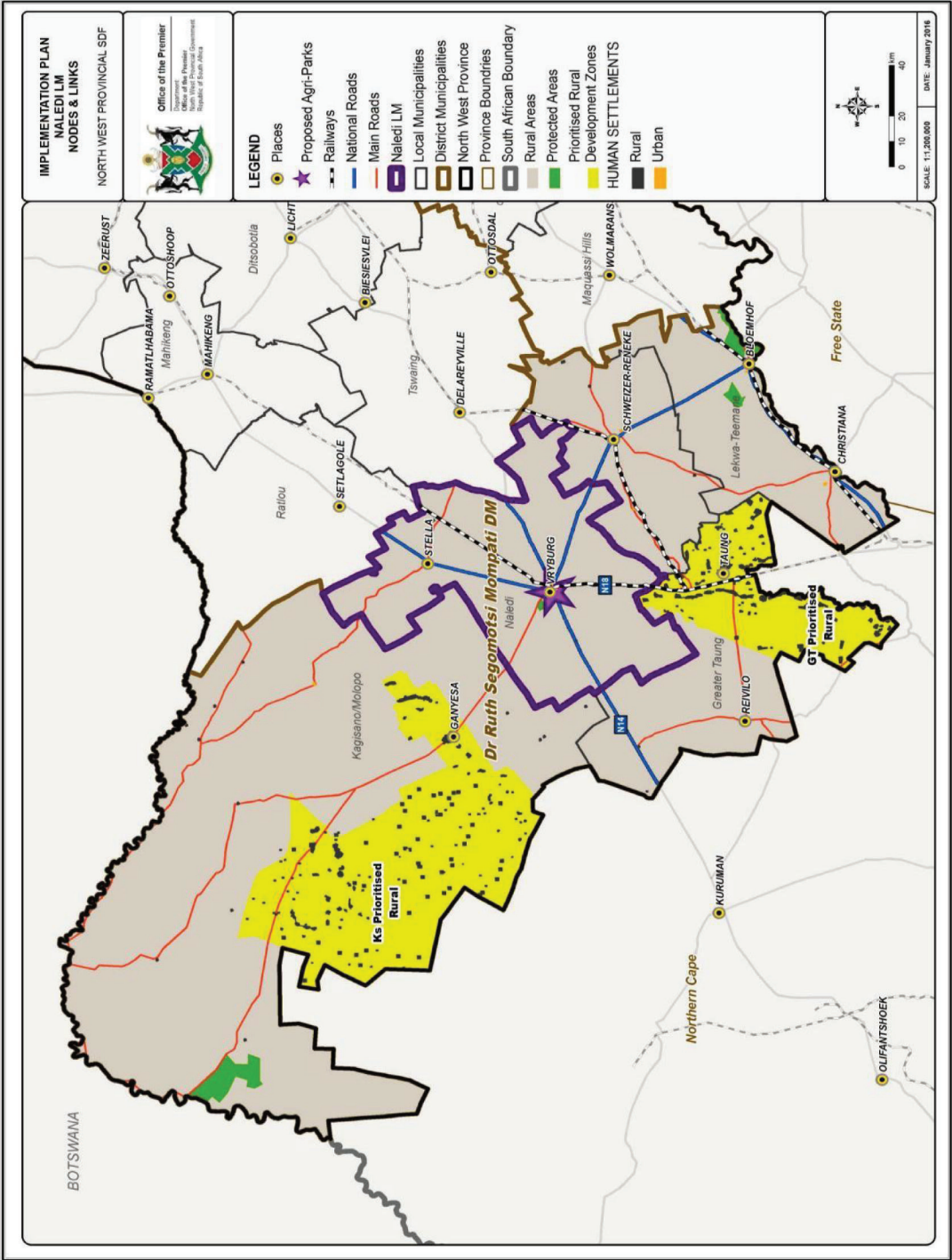
Map 5-34: Dr Ruth Segomotsi Mompoti District Implementation Framework (Environmental) – Naledi LM



Map 5-35: Dr Ruth Segomotsi Mompoti District Implementation Framework (Nodes &amp; Links) – Naledi LM



Map 5-36: Dr Ruth Segomotsi Mompoti District Implementation Framework (Rural Development) – Naledi LM





### 5.3.3.3.3 **Mamusa Local Municipality**

#### 5.3.3.3.3.1 **Development Guidelines**

The following nodes are situated in Mamusa local municipality:

- Schweizer-Reneke
- Migdol
- Amalia
- Gloudina

The only node of size currently, is **Schweizer-Reneke** which forms the administrative head of the municipality. The other nodes have a small economic base as well as small populations, mostly functioning as service centres for the rural municipality.

A Revival Strategy will help to bring growth and investment to the municipality. Although basic service delivery should take place throughout the municipality, the majority of development and investment should focus on one core node of which Schweizer-Reneke would be ideal.

#### **Status:**

Developing agricultural economy

#### **10 Year Land Budget:**

The following table indicates the development potential for Mamusa Local Municipality.

**Table 5-27: Mamusa Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Mamusa	4.1	1.0	2.9	26.9	82.2	117.1



Source: Demacon, 2016

#### **Development Guidelines:**

- Focus public sector investment in Schweizer-Reneke to create higher densities and to create a concentration of services
- Maintain infrastructure and basic services in the smaller nodes, e.g. Migdol, Amalia, Gloudina
- Focus on **backlog eradication** in the smaller nodes, whilst creating **new affordable housing opportunities** in Schweizer-Reneke.
- Concentrate basic service delivery in Schweizer-Reneke
- **Protect** high value agricultural land
- Provide support to the agricultural community
- Focus on **skills development** in the agricultural and trade sectors
- Develop the **tourism sector** in the areas not suited for agriculture
- Ensure **land tenure security**
- **Promote linkages** between agriculture, agro-manufacturing and tourism potential
- Maintain rural infrastructure
- **Increase linkages** to economic hubs
- Due to drier climates and resultant lower value agricultural land, it would be beneficial to **promote game farming and game breeding** attracting people and money to the municipality
- Ensure the maintenance and adequate management of infrastructure to improve sustainability
- **Proactive infrastructure development and planning** is crucial in the upgrading of informal settlements and the creation of new settlements

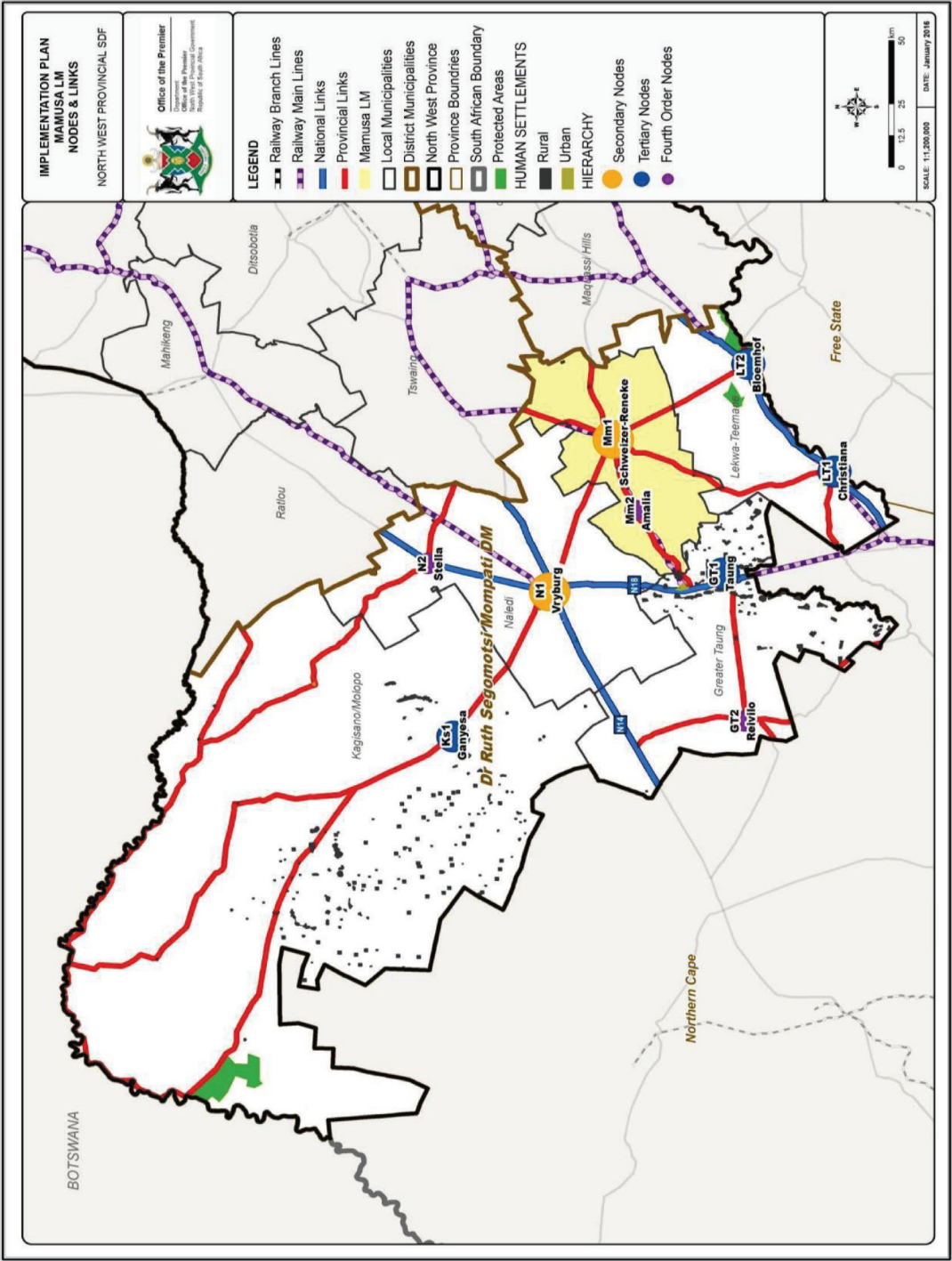
#### 5.3.3.3.3.2 **Implementation Plans and Programmes**



Table 5-28 Mamusa Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
1		Schweizer-Reneke (Map 5-38)	Schweizer-Reneke Town Development	Schweizer-Reneke Local Development Plan	Villages, Townships and Small Dorpies Programme	
2			Sustainable Human Settlements	Mamusa LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
4			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
5			Local economic development	Mamusa (Dr Ruth Segomotsi Mompoti) LED Strategy		
6		Amalia (Map 5-38)	Amalia Settlement Development	Amalia Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
7			Sustainable Human Settlements	Mamusa LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
8			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
9			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
10			Local economic development	Mamusa (Dr Ruth Segomotsi Mompoti) LED Strategy		
11		Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
12		Rural Areas	Rural Area Development <ul style="list-style-type: none"><li>• Agriculture</li><li>• Mining</li></ul>	Dr Ruth Segomotsi Mompoti District Rural Area Development Plan	Villages, Townships and Small Dorpies Programme	
13			Upgrading and Maintenance of Provincial roads			
14			Passenger / Freight Link			

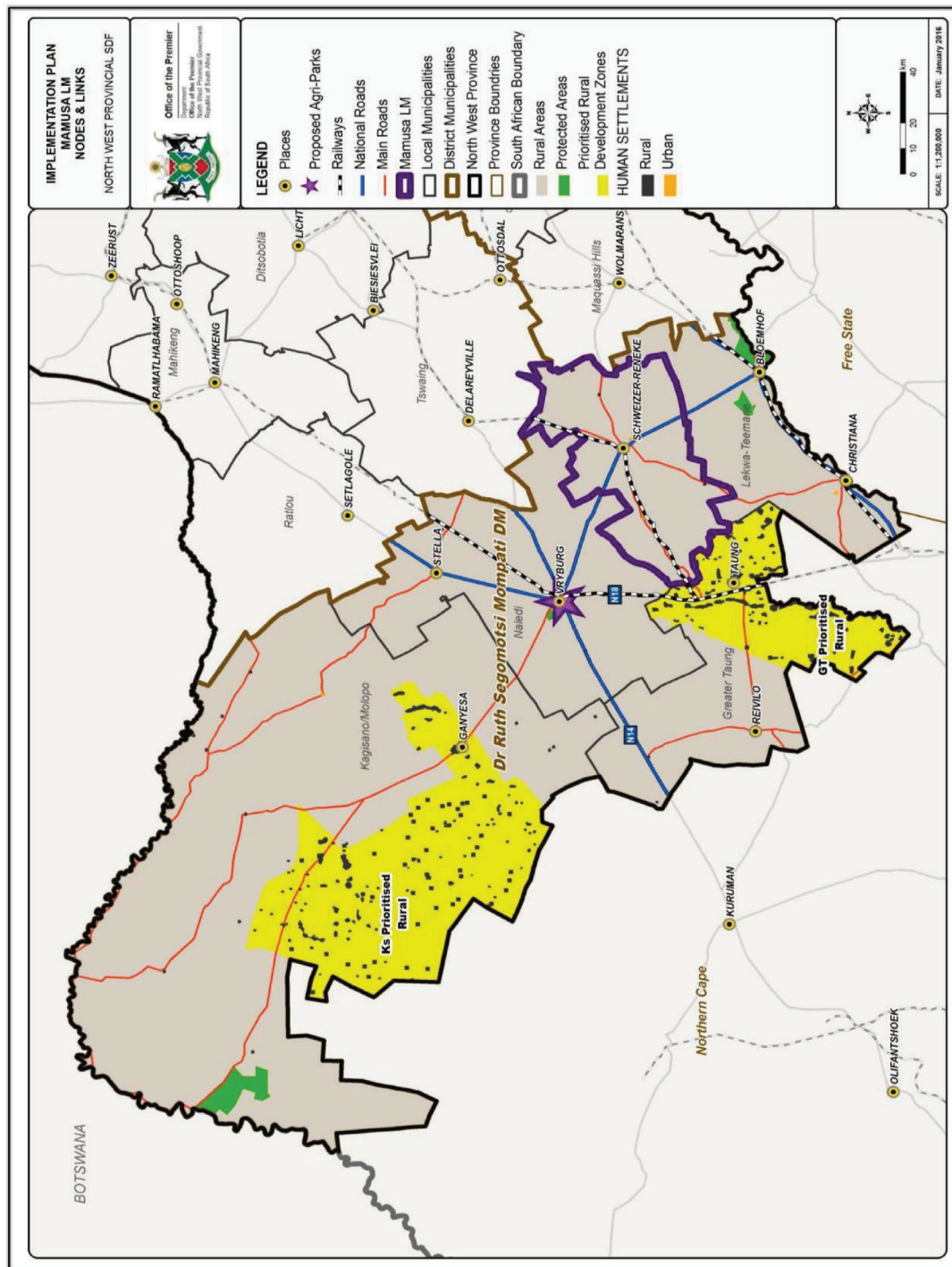


Map 5-38: Dr Ruth Segomotsi Mompoti District Implementation Framework (Nodes & Links) – Mamusa LM





Map 5-39: Dr Ruth Segomotsi Mompoti District Implementation Framework (Rural Development) – Mamusa LM





#### 5.3.3.3.4 **Greater Taung Local Municipality**

##### 5.3.3.3.4.1 **Development Guidelines**

Greater Taung has the following nodes:

- Taung
- Boipelo
- Reivilo
- Pudimoe

The municipal area is predominantly rural and contains **widely scattered villages**. The villages, although scattered, are mostly concentrated in the eastern part of the municipality. Focused public investment and incentives are needed in the municipality to attract business and commercial development to the municipality.

Due to the vast rural nature of the municipality, focusing development on Taung will provide the most benefit for the whole municipality.

##### **Status:**

Rural economy with a developing urban node

##### **10 Year Land Budget:**

The following table indicates the development potential for Greater Taung Local Municipality.

**Table 5-29: Greater Taung Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Greater Taung	15.4	0.6	2.4	45.2	190.3	253.9

Source: Demacon, 2016

##### **Development Guidelines:**

- **Formalise** trade
- Focus economic investment in Taung to **increase Taung's economic base**.
- Create a **conductive environment** in Taung to attract private sector investment.
- Focus on **backlog eradication** in the smaller nodes.
- Provide **access to basic services**
- Concentrate community facilities and social services in Taung to create an agglomeration of services, increasing access and attracting people to Taung
- Agriculture plays an important role in the economy, and agricultural land should be **protected**
- Develop **agro-industries** that promote local beneficiation to create employment opportunities, to create a value chain and increase economic development.
- The agro-industries should be located close to Taung that has higher densities and a larger concentrated labour force
- Focus on **skills development** relating to agriculture and related industries
- Promote **tourism development** especially in the following areas: Taung Dam, Spitskop Dam and Nature Reserve, and the Taung Heritage Route
- Ensure land tenure security
- **Maintain** and **upgrade** current infrastructure
- Develop **affordable housing** to cater to the growing population. Focus housing development in the nodes, rather than creating a dispersed settlement pattern. Developing housing in the nodes will ensure access to services and job opportunities

- Maintain and upgrade the **water services** to ensure sustainability of limited resources
- Explore the development of boreholes to expand the water services.

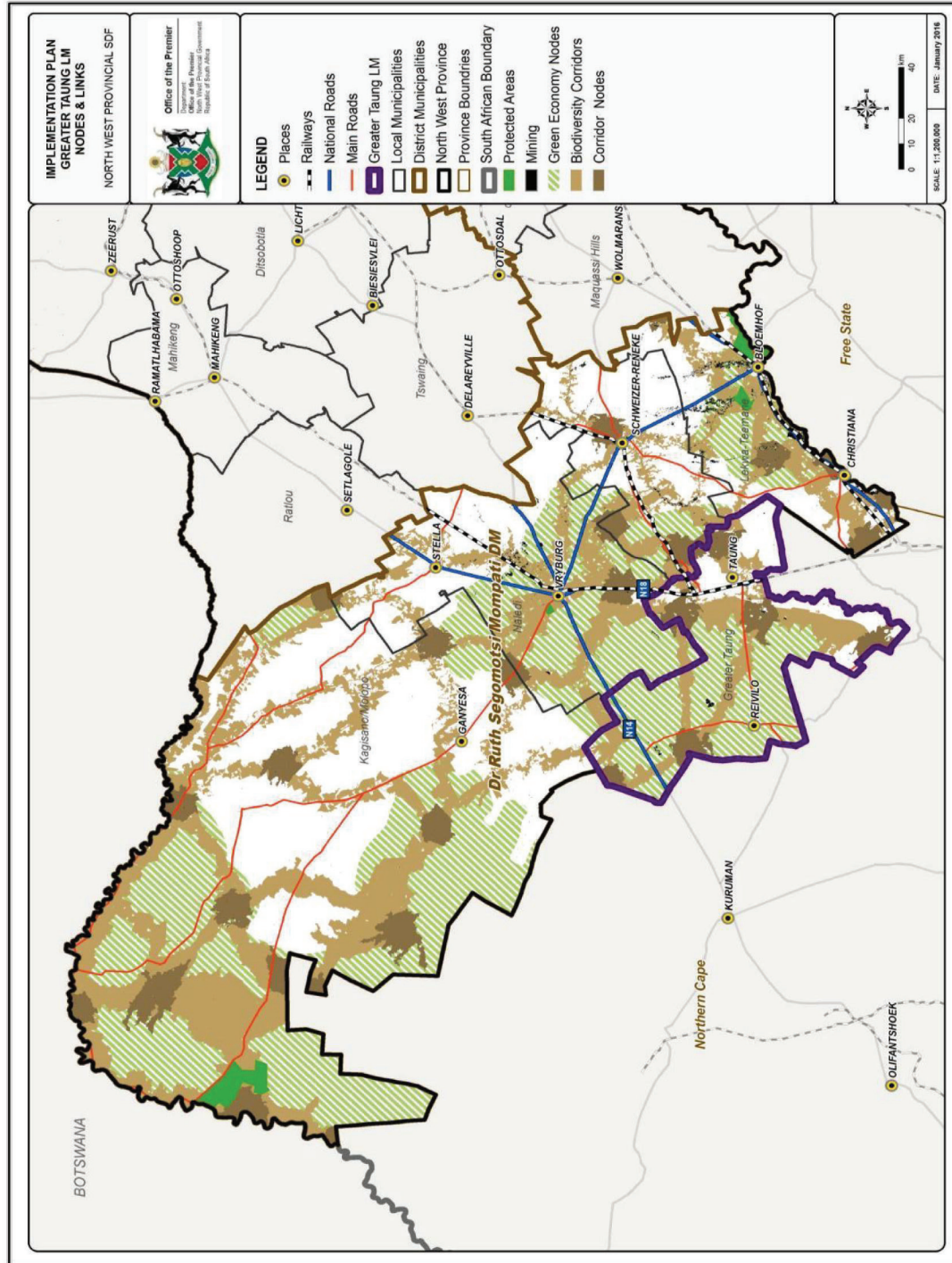
#### 5.3.3.3.4.2 Implementation Plans and Programmes

Table 5-30 Greater Taung Implementation Plan						
Item No	Node/Link/Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
			Taung City	Taung Development Plan	North West 5 City Project	
1			Taung Upgrading	Taung Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
2		Taung (Map 5-41)	Sustainable Human Settlements	Greater Taung LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
4			Taung Agripark	Taung Agripark Implementation Plan	Villages, Townships and Small Dorpies Programme	Agripark Programme
5			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
6			Local economic development	Greater Taung (Dr Ruth Segomotsi Mompati) LED Strategy		
7			Reivlo Settlement Development	Reivlo Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
8		Reivlo (Map 5-41)	Sustainable Human Settlements	Greater Taung LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
9			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
10			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
11			Local economic development	Greater Taung (Dr Ruth Segomotsi Mompati) LED Strategy		
12		Greater Taung Rural	Greater Taung Rural Development	Greater Taung Rural Development Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
13			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
14			Social Services Upgrading	Social Services Infrastructure Plan	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme

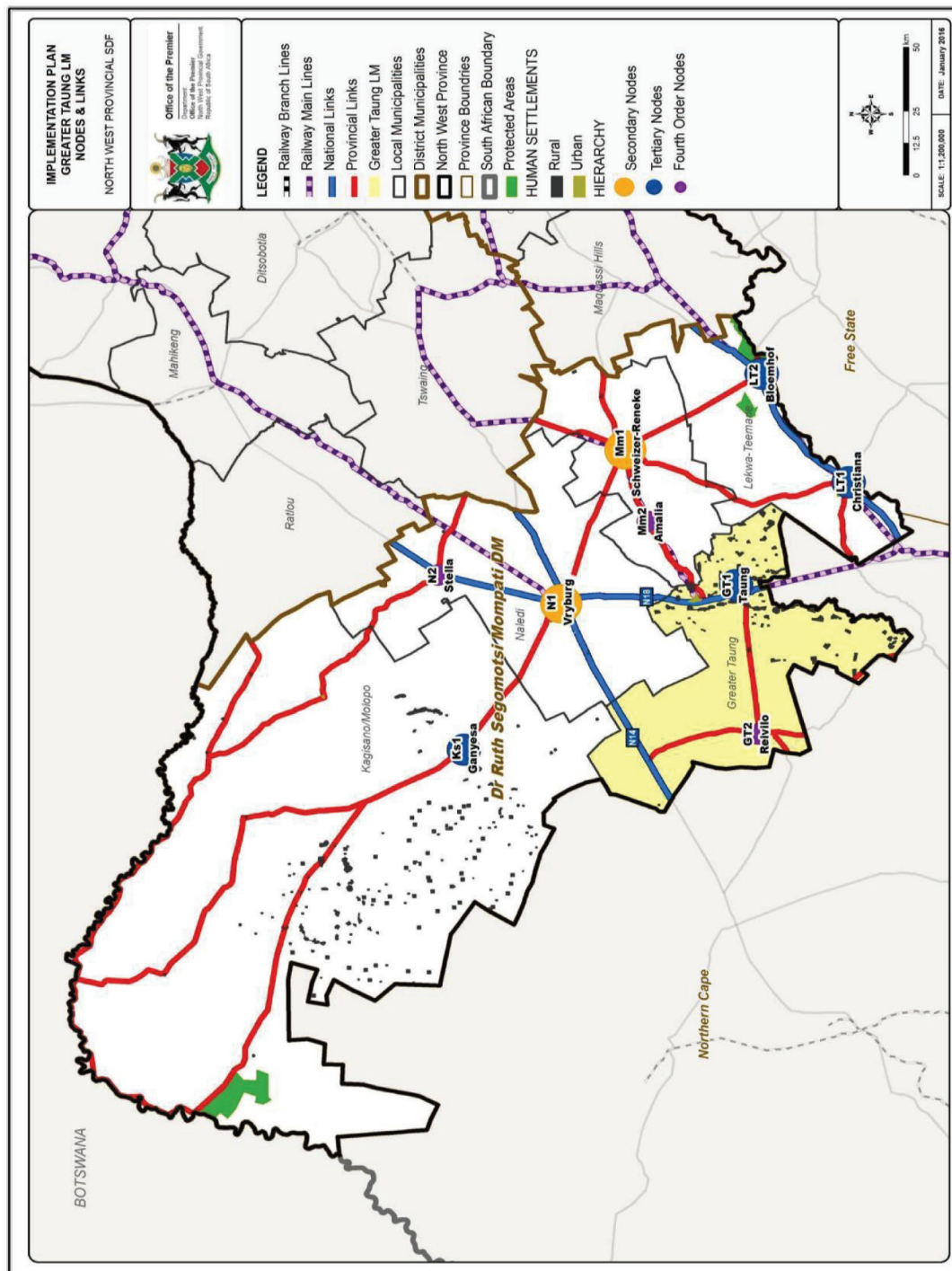
Table 5-30 Greater Taung Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
15			Local economic development	Greater Taung (Dr Ruth Segomotsi Mompati) LED Strategy	Villages, Townships and Small Dorpies Programme	Comprehensive Rural Development programme
16			Sustainable Human Settlements	Greater Taung LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan /Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes
17			Restitution			Land Redistribution Programme
18	Biodiversity (Map 5-40)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
19	Rural Areas	Rural Areas	Rural Area Development <ul style="list-style-type: none"> <li>• Agriculture</li> <li>• Mining</li> </ul>	Rural Area Development - Agriculture	Rustenburg Rural Development Plan	Villages, Townships and Small Dorpies Programme
20	National Links		Upgrading and Maintenance of National roads			SANRAL
21	Provincial Links		Upgrading and Maintenance of Provincial roads			
22	Railway Main Lines		Passenger / Freight Link			



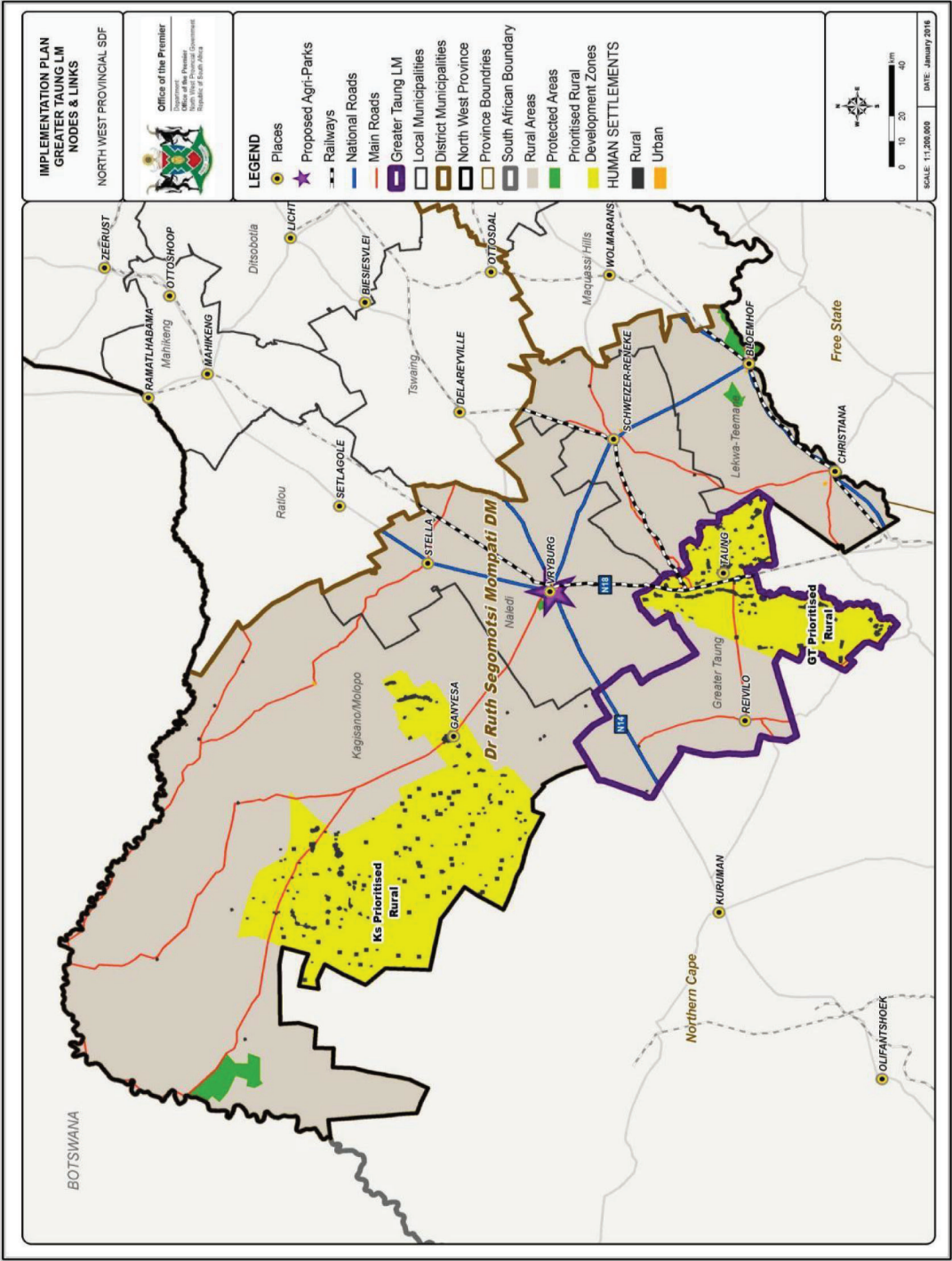
Map 5-40: Dr Ruth Segomotsi Mompoti District Implementation Framework (Environmental) – Greater Taung LM



Map 5-41: Dr Ruth Segomotsi Mompoti District Implementation Framework (Nodes &amp; Links) – Greater Taung LM



Map 5-42: Dr Ruth Segomotsi Mompoti District Implementation Framework (Rural Development) – Greater Taung LM





#### 5.3.3.3.5 **Lekwa-Teemane Local Municipality**

##### 5.3.3.3.5.1 **Development Guidelines**

The main nodes situated in Lekwa-Teemane local municipality is:

- Christiana
- Bloemhof

The municipality is relatively small with **Bloemhof** and **Christiana** situated on the N12 in the south eastern part of the municipality. The remainder of the municipality is mostly rural with **low population densities**.

As a result of the small size of the municipality, focusing the dominant segment of public sector investment on Bloemhof and Christiana, will enable the municipality to increase its economic growth rate and to create more employment opportunities in order to limit the people leaving the municipality seeking jobs in larger urban concentrations.

##### **Status:**

Agriculture economy with limited growth

##### **10 Year Land Budget:**

The following table indicates the development potential for Lekwa-Teemane Local Municipality.

**Table 5-31: Lekwa-Teemane Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Lekwa-Teemane	7.7	0.1	1.0	26.0	69.4	104.2

Source: Demacon, 2016




##### **Development Guidelines:**

- The focus should be on **protecting** the high value agricultural land
- Focus on the **beneficiation of agricultural produce** to create a multiplier effect and limit the outflow of products in their basic form
- The creation of agro-industries should be concentrated in Bloemhof and Christiana
- Ensure **land tenure security**
- Rather than diluting investment throughout the municipality, focus public sector investment in Bloemhof and Christiana – a more effective way of establishing economic growth.
- **Formalise trade**
- **Formalise housing**
- Focus on **backlog eradication** and **providing access to basic services**
- Develop and expand the **tourism potential** of Bloemhof Dam and surrounding areas.
- Increase the promotion of tourism
- The **protection of water resources** is critical to ensure the sustainability of agriculture
- Focus on **water management**

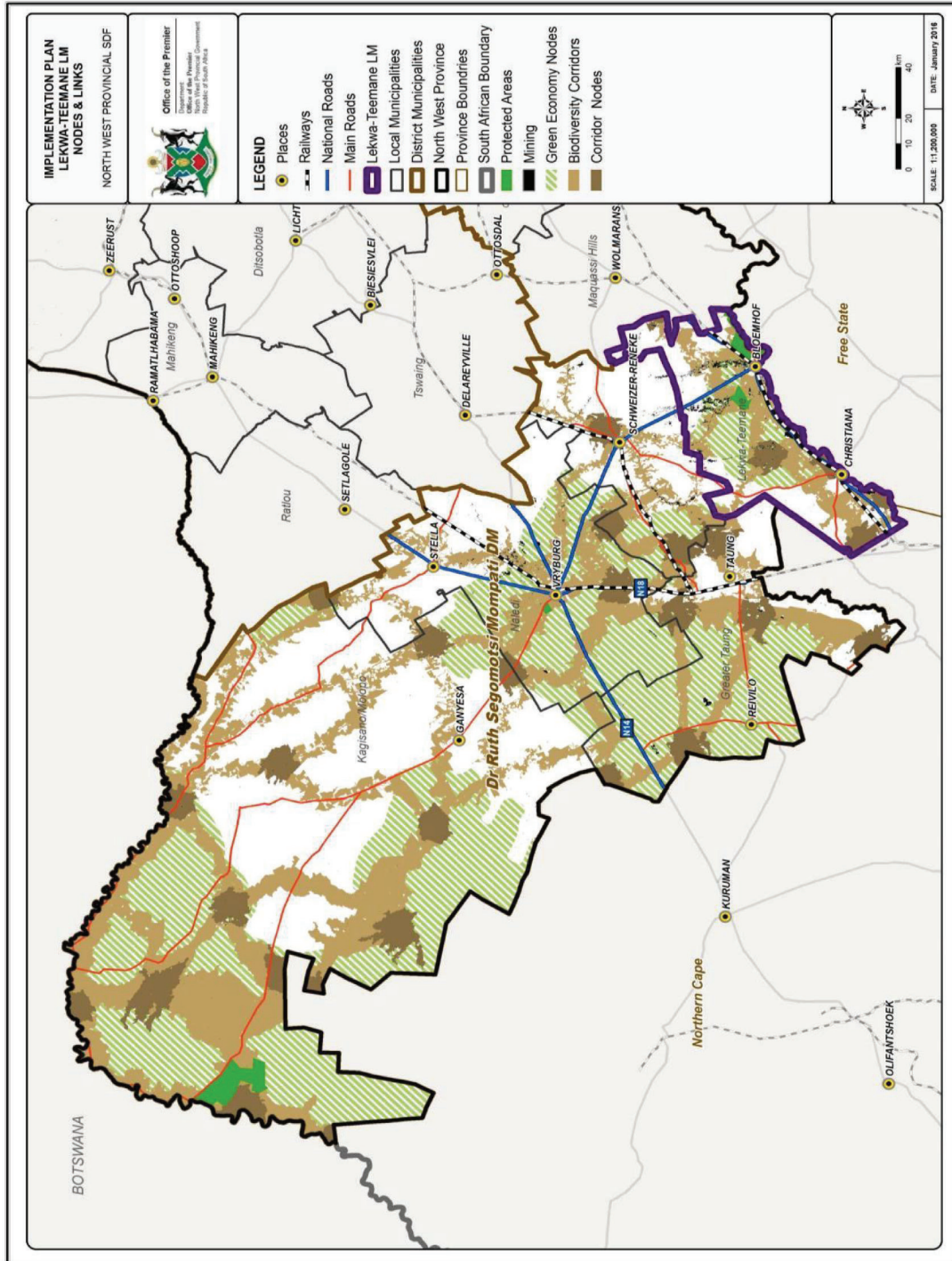
##### 5.3.3.3.5.2 **Implementation Plans and Programmes**



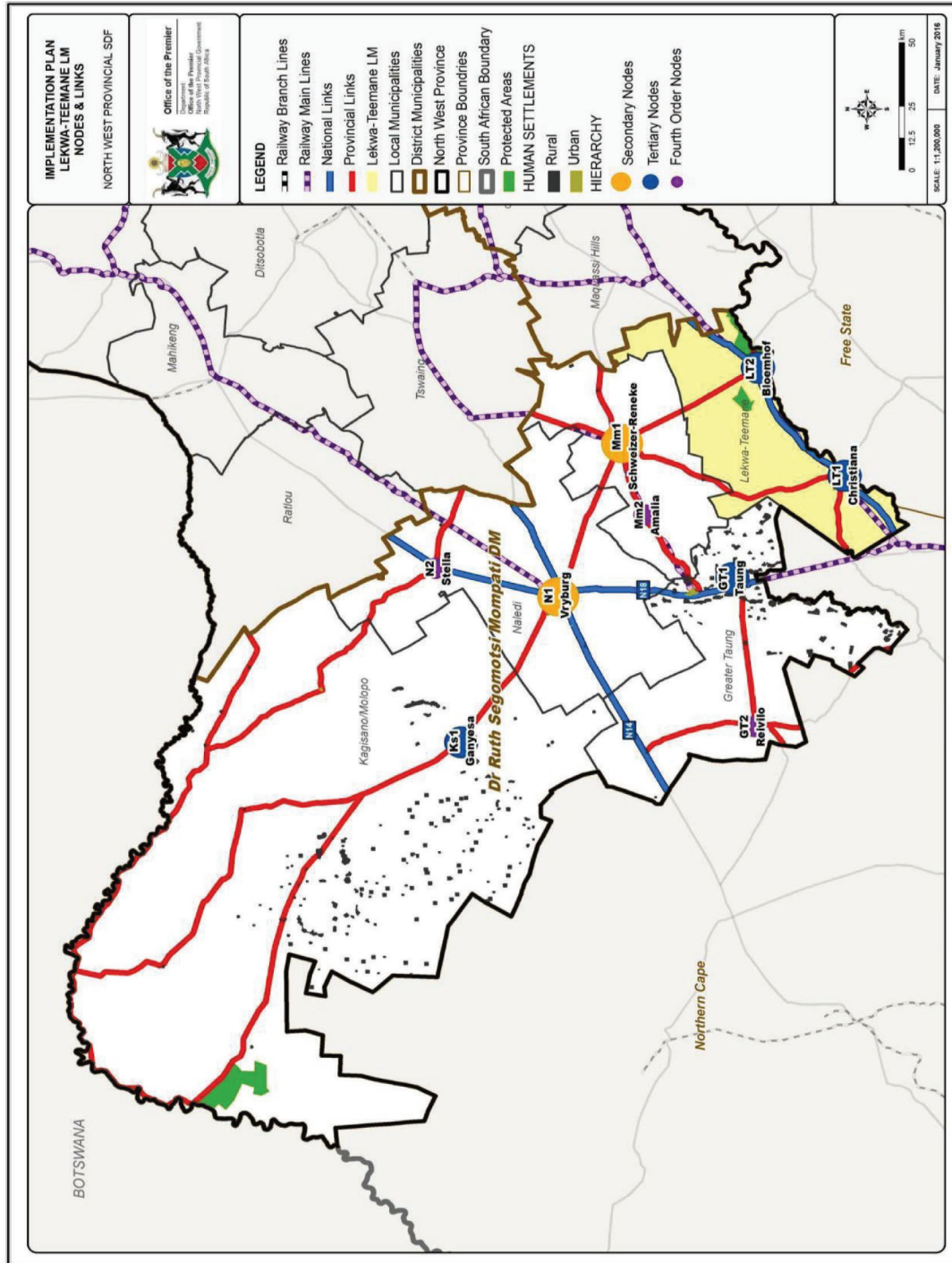
Table 5-32 Lekwa Teemane Implementation Plan									
Item No	Node/Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)					
				Municipal	Provincial	National			
1		Christiana (Map 5-44)	Christiana Town Development	Christiana Precinct Development Plan	Villages, Townships and Small Dorpies Programme				
2			Sustainable Human Settlements	Lekwa Teemane LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG			
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)			
4			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan				
5			Local economic development	Lekwa Teemane (Dr Ruth Segomotsi Mompoti) LED Strategy					
6		Bloemhof (Map 5-44)	Bloemhof Town Development	Bloemhof Precinct Development Plan	Villages, Townships and Small Dorpies Programme				
7			Sustainable Human Settlements	Lekwa Teemane LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG			
8			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)			
9			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan				
10			Local economic development	Lekwa Teemane (Dr Ruth Segomotsi Mompoti) LED Strategy					
11	Biodiversity (Map 5-43)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan				
12	Protected Areas	Protected Areas	Nature Conservation/ Tourism/ Wildlife Economy	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan				
13	Rural Areas	Rural Areas	Rural Area Development <ul style="list-style-type: none"><li>• Agriculture</li><li>• Mining</li></ul>	Rural Area Development - Agriculture	Rustenburg Rural Development Plan	Villages, Townships and Small Dorpies Programme			

Table 5-32 Lekwa Teemane Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
14	National Links 		Upgrading and Maintenance of National roads			SANRAL
15	Provincial Links 		Upgrading and Maintenance of Provincial roads			
16	Railway Main Lines 		Passenger / Freight Link			

Map 5-43: Dr Ruth Segomotsi Mompoti District Implementation Framework (Environmental) – Lekwa Teemane LM

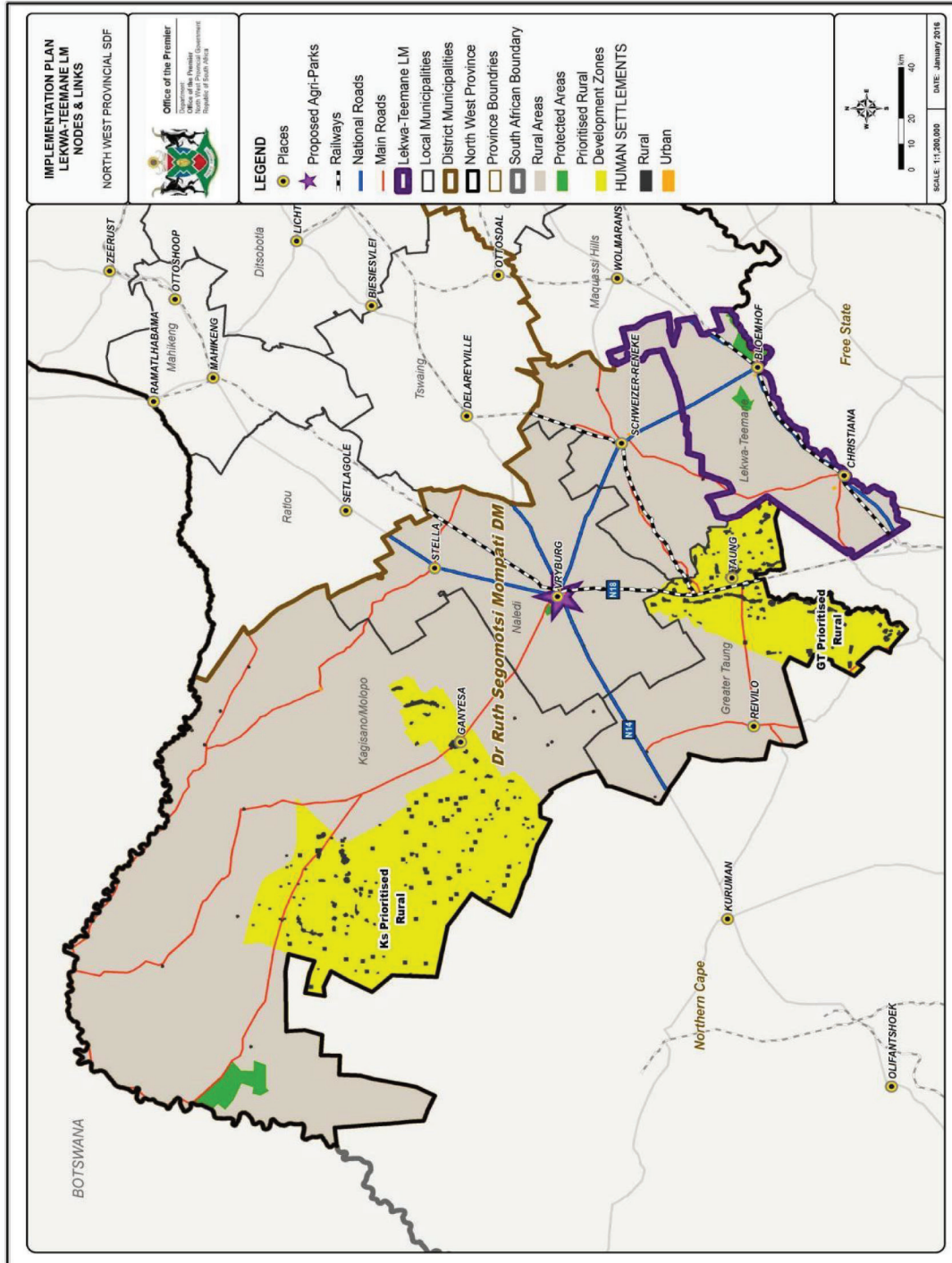


Map 5-44: Dr Ruth Segomotsi Mompoti District Implementation Framework (Nodes &amp; Links) – Lekwa Teemane LM





Map 5-45: Dr Ruth Segomotsi Mompoti District Implementation Framework (Rural Development) – Lekwa Teemane LM



### 5.3.3.4 Dr Kenneth Kaunda District

#### 5.3.3.4.1 Ventersdorp Local Municipality

##### 5.3.3.4.1.1 Development Guidelines

Ventersdorp local municipality is mostly dependent on **agriculture** as **economic and employment contributor**. The dominant node in the municipality is **Ventersdorp**, functioning mainly as service centre for the agriculture orientated population.

Small population concentrations are scattered throughout the rural municipality, creating difficulties relating to basic service delivery.

Ventersdorp is an old, established town that forms an important part of the municipality. There is, however, much that can be done to fasten its development and attract private sector investment that will increase the revenue base. The greatest portion of public investment should be focused on Ventersdorp as the hub of the local economy to achieve scale economies and to optimise the beneficial impact of infrastructure development.

#### **Status:**

Developing agricultural economy with a focused urban node

#### **10 Year Land Budget:**

The following table indicates the development potential for Ventersdorp Local Municipality.

**Table 5-33: Ventersdorp Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Ventersdorp	5.0	0.2	2.4	24.5	85.3	117.4

Source: Demacon, 2016

#### **Development Guidelines:**

- **Limit the degradation of land** through over grazing and settlement development.
- Create clear boundaries for critical biodiversity areas and agricultural development.
- **Protect high value agricultural land** in eastern and southern areas – cultivated land as well as high grazing capacity
- Ensure **land tenure security**
- Define a **clear urban edge** to prevent urban sprawl
- **Formalise** informal housing
- Provide **access to basic services**
- **Formalise** trade
- **Integrate informal traders** into the economy
- There is potential for **agro-processing** and **small scale industries**. The municipality is favourably located on the N14 linking North West to Gauteng with high accessibility to the markets in Gauteng.
- Strengthen **SMMEs**
- Focus on industries that are **labour intensive** to create the maximum employment opportunities
- Focus **skills development** on high priority sectors – agriculture, tourism and trade
- Unlock **development opportunities** on the **N14**
- Provide **affordable housing opportunities** in Ventersdorp rather than creating formal settlements in rural areas.

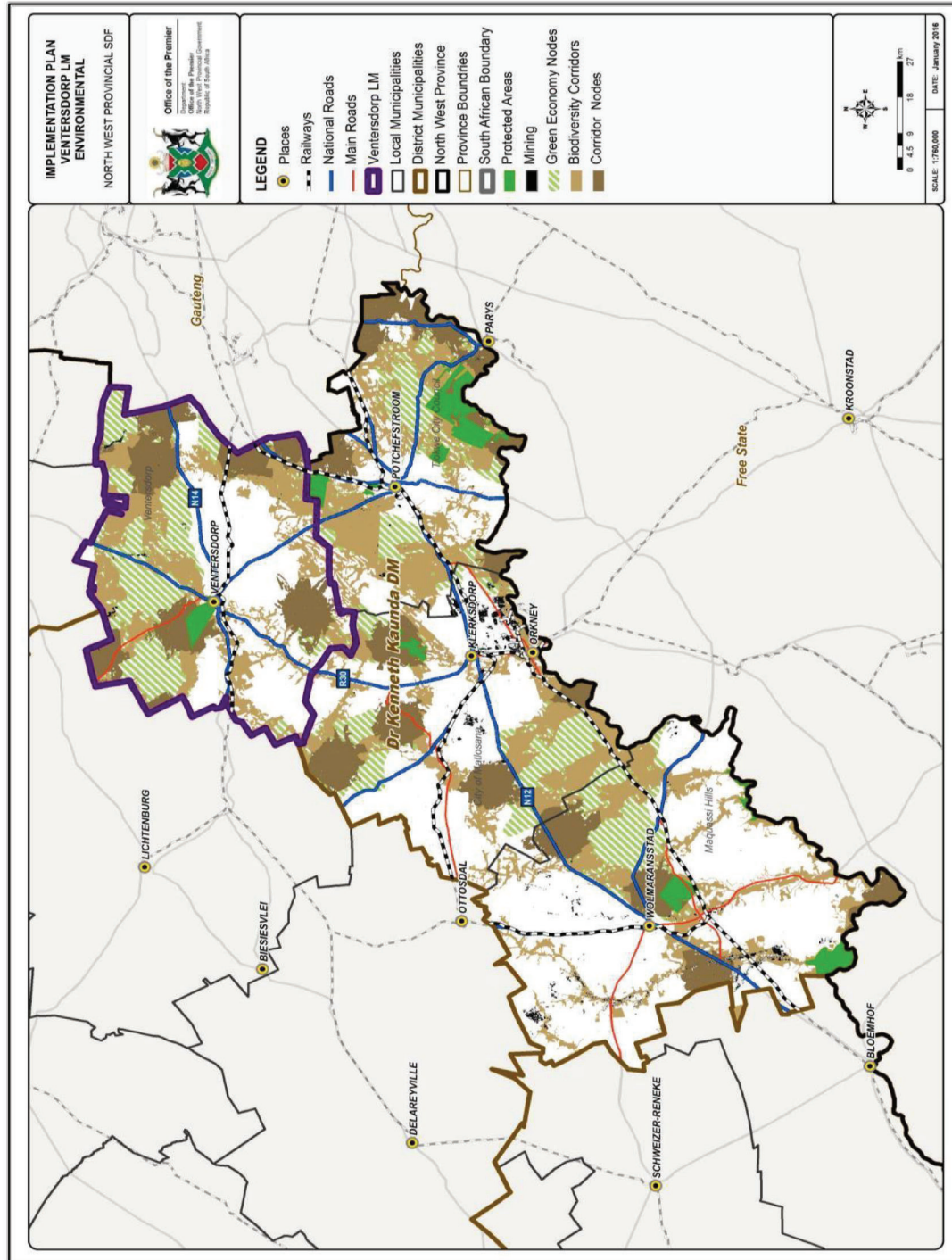
- **Improve the service function** of Ventersdorp
- Focus on **rural-urban integration** to improve accessibility of jobs to the rural settlements.
- Promote **business development**
- Identify land for **mixed use development**

#### 5.3.3.4.1.2 Implementation Plans and Programmes

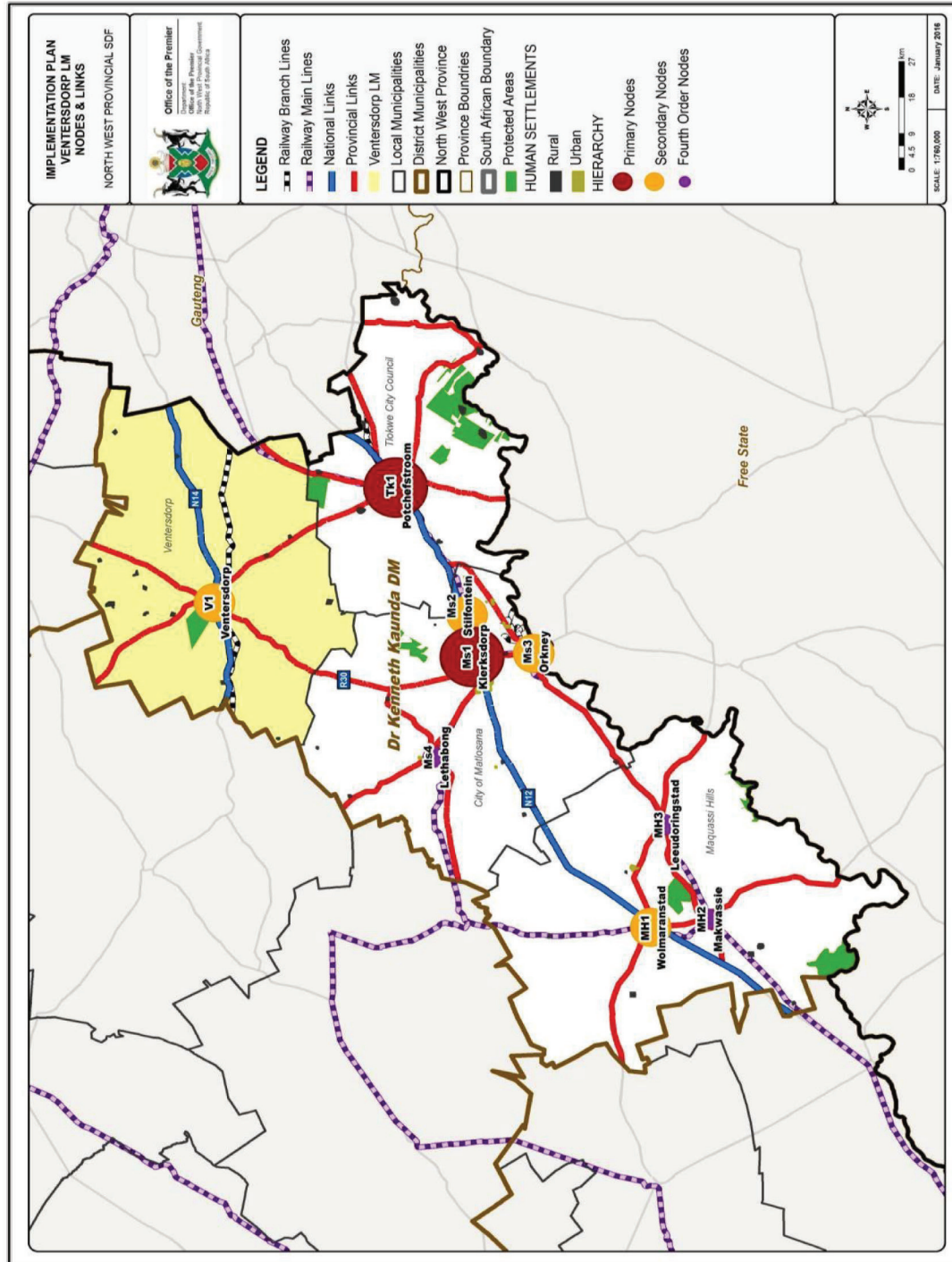
Table 5-34 Ventersdorp Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
1		Ventersdorp (Map 5-47)	Ventersdorp Town Development	Ventersdorp Local Development Plan	Villages, Townships and Small Dorpies Programme	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG Integrated Water Resource Planning (IWRP)
2			Sustainable Human Settlements	Ventersdorp LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	
4			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
5			Local economic development	Ventersdorp (Dr Kenneth Kaunda) LED Strategy		
6	Biodiversity (Map 5-46)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
7	Protected Areas	Protected Areas	Nature Conservation/ Tourism/ Wildlife Economy	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
8	Rural Areas	Rural Areas	Rural Area Development <ul style="list-style-type: none"><li>• Agriculture</li><li>• Mining</li></ul>	Dr Keneth Kaunda District Rural Area Development	Villages, Townships and Small Dorpies Programme	
9	National Links		Upgrading and Maintenance of National roads			SANRAL
10	Provincial Links		Upgrading and Maintenance of Provincial roads			
11	Railway Main Lines		Passenger / Freight Link			
12	Railway Branch Lines		Unlocking economic potential			



Map 5-46: Dr Kenneth Kaunda District Implementation Framework (Environmental) – Ventersdorp LM



Map 5-47: Dr Kenneth Kaunda District Implementation Framework (Nodes &amp; Links) – Ventersdorp LM



#### 5.3.3.4.2 **Tlokwe Local Municipality**

##### 5.3.3.4.2.1 **Development Guidelines**

Tlokwe local municipality borders Gauteng and City of Matlosana Local Municipality. The main node in the municipality, linking Gauteng to the south, is **Potchefstroom**. Potchefstroom is a developed town with finance and business services sector as the main sector. With the well-developed infrastructure of Potchefstroom, it has been able to sustain a positive economic growth rate throughout the transition period in South Africa and, together with its abundance of water and electricity, holds great opportunities for future growth.

The **North West University Potchefstroom Campus** attracts investment and capital to the municipality, making Potchefstroom ideal for the Diversification and Maintenance Strategy.

##### **Status:**

Diversifying economy with a strong urban core functioning as a leading national educational hub

##### **10 Year Land Budget:**

The following table indicates the development potential for Tlokwe Local Municipality.

**Table 5-35: Tlokwe Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Tlokwe	23.4	3.4	8.2	158.7	313.6	507.3

Source: Demacon, 2016

##### **Development Guidelines:**

- The municipality has a **strong educational base** and can be seen as a leading national tertiary hub, with a myriad of opportunities associated with student housing and relevant services
- Ensure better **functional integration**
- The municipality has **high value agricultural land** that should be promoted and protected
- Ensure land tenure security
- Delineate a **clear urban edge** to prevent development on high value agricultural land and to promote densification
- Potchefstroom provides a strong urban core with highly skilled employees and entrepreneurial skills, mainly as a result of the NWU Potchefstroom Campus. Opportunities exist to diversify the economy and focus on tertiary services such as the finance and business services sector
- Potchefstroom is situated close to Gauteng and Klerksdorp – forming part of the **Gauteng City Region**, creating opportunities for industrial development, lifestyle estate development and services such as health care, retail and education
- Focus on **diversifying** and **promoting** the manufacturing sector
- **Diversify the local economy** – focus on forward and backward linkages.
- Uphold business environment and property investment maintenance – contribute to **retain and instill business confidence**
- **Integrate the informal market** into the economy. There is potential in the second economy that can be exploited and help to increase the economic base
- Promote **nodal development** and **retail / commercial development** in second economy areas
- **Formalise** housing
- Provide **affordable housing in appropriate locations** to ensure that the property values of high income areas (mostly situated in the eastern parts of Potchefstroom) are not affected

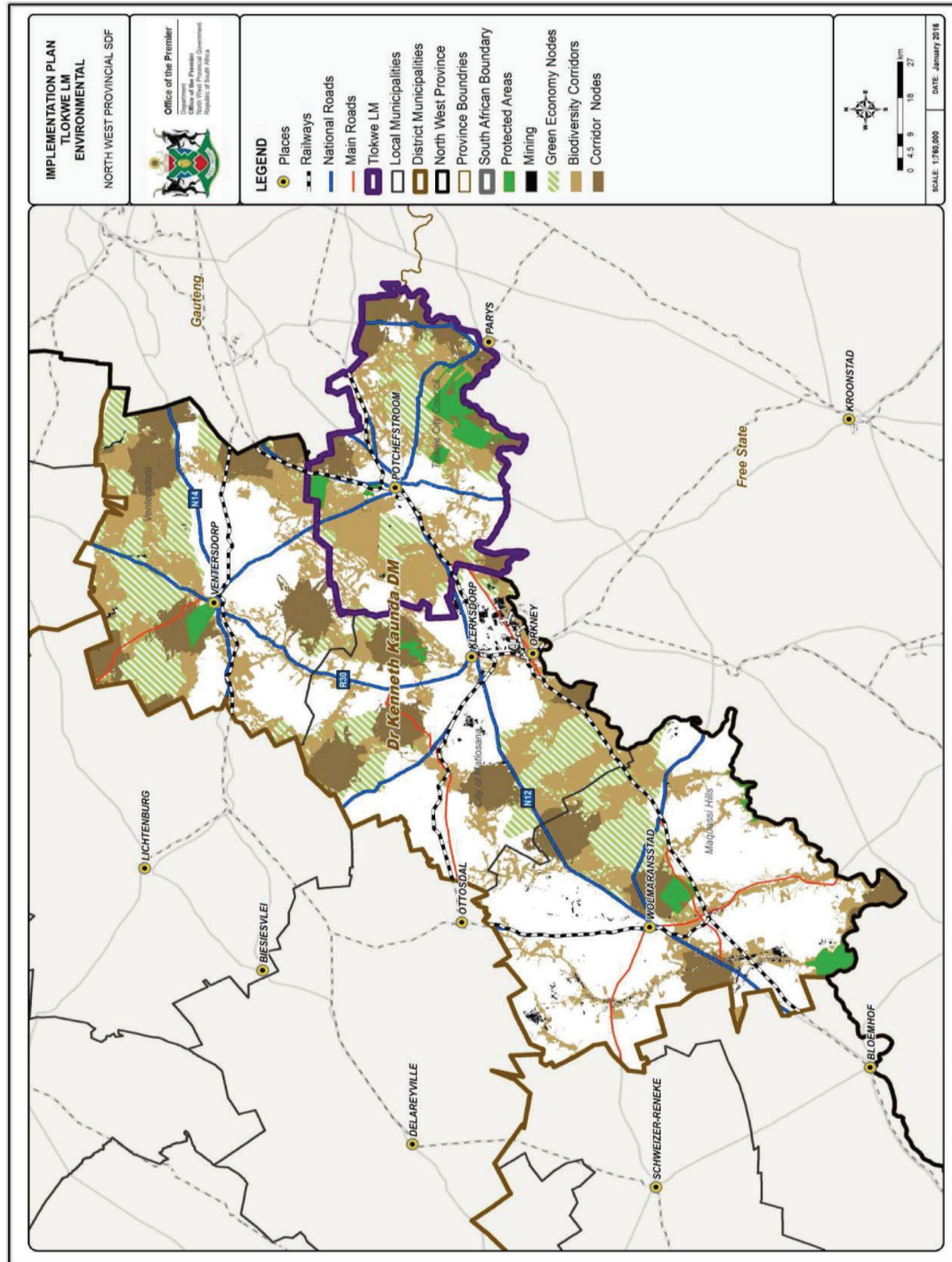
- Promote **mixed use developments**
- Revitalisation of the CBD
- Promote **tourism development** in the following areas:
  - The Vredefort Dome which has been listed as a World Heritage Site,
  - The Boskop Dam Nature Reserve,
  - The Prozesky Bird Sanctuary, and
  - The proposed Highveld National Park
- Ensure **proper maintenance** and **upgrading** of infrastructure
- Create a **conductive environment** that will attract private sector investment.

#### 5.3.3.4.2.2 Implementation Plans and Programmes

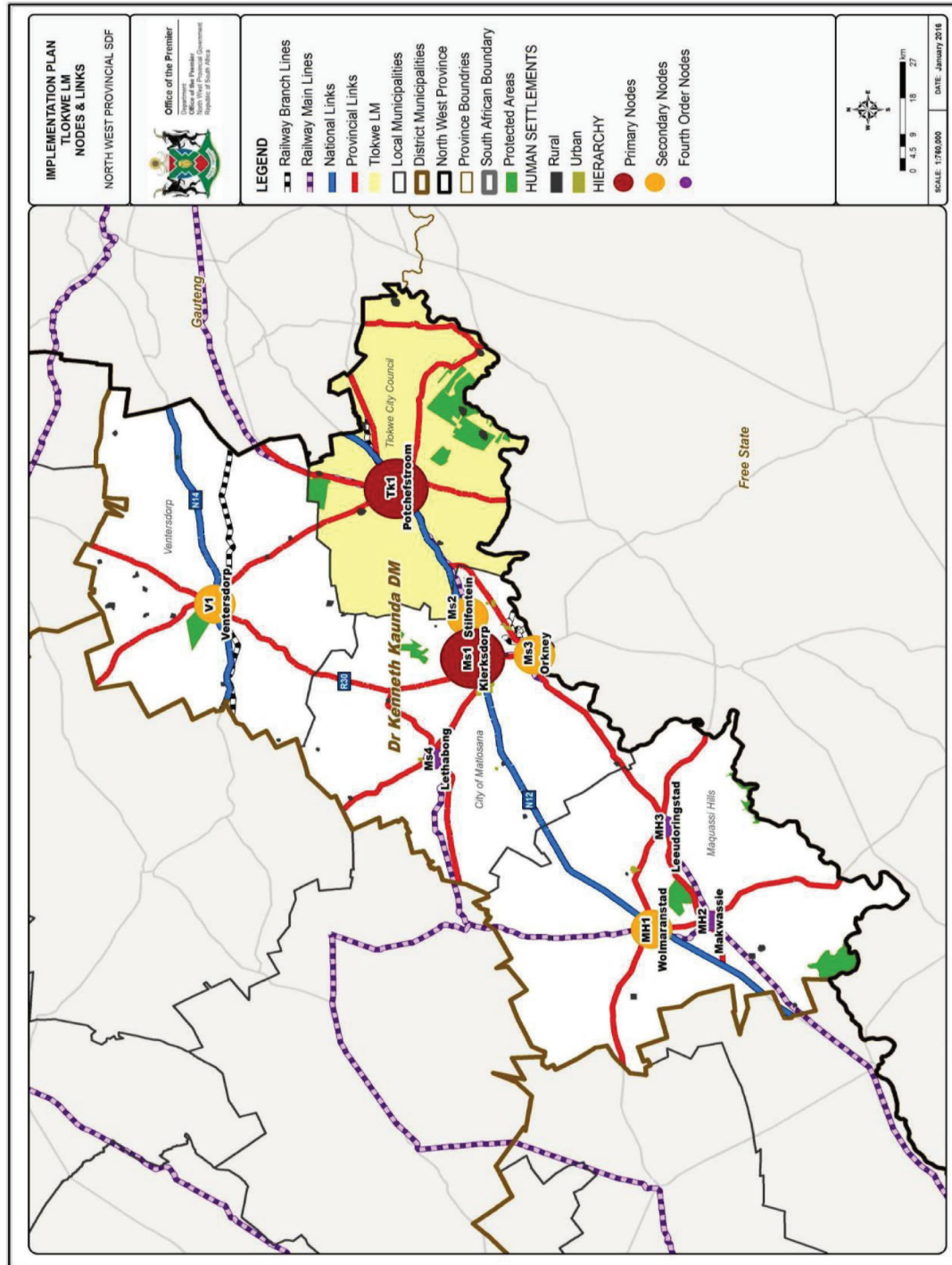


Table 5-36 Tlokwe Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
1		Potchefstroom (Map 5-49)	Potchefstroom Urban Regeneration	Potchefstroom Urban Regeneration Plan		
2			Sustainable Human Settlements	Tlokwe Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
4			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
5			Local Economic Development	Tlokwe (Dr Kenneth Kaunda) LED Strategy		
6	Biodiversity (Map 5-48)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
7	Protected Areas	Protected Areas	Nature Conservation/ Tourism/ Wildlife Economy <ul style="list-style-type: none"> <li>• The Vredefort Dome World Heritage Site,</li> <li>• The Boskop Dam Nature Reserve,</li> <li>• The Prozesky Bird Sanctuary</li> <li>• The proposed Highveld National Park</li> </ul>	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
8	Rural Areas	Rural Areas	Rural Area Development <ul style="list-style-type: none"> <li>• Agriculture</li> <li>• Mining</li> </ul>	Dr Keneth Kaunda District Rural Area Development	Villages, Townships and Small Dorries Programme	
9	National Links		Upgrading and Maintenance of National roads			SANRAL
10	Provincial Links		Upgrading and Maintenance of Provincial roads			
11	Railway Main Lines		Passenger / Freight Link			

Map 5-48: Dr Kenneth Kaunda District Implementation Framework (Environmental) – Tlokwe LM



Map 5-49: Dr Kenneth Kaunda District Implementation Framework (Nodes & Links) – Tlokwe LM



#### 5.3.3.4.3 **City of Matlosana Local Municipality**

##### 5.3.3.4.3.1 **Development Guidelines**

The main nodes in the City of Matlosana local municipality are:

- Klerksdorp
- Orkney
- Lethabong

The remainder of the municipality is mostly rural with low densities. **Klerksdorp** forms the main economic hub and functions as **employment provider** for a large part of the municipality. Klerksdorp forms one of the **dominant regional service centre** of the province and as such, the greatest potential to ensure the successful development would be to focus on Klerksdorp, rather than diluting economic potential.

##### **Status:**

Mining town and provincial service centre

##### **10 Year Land Budget:**

The following table indicates the development potential for City of Matlosana Local Municipality.

**Table 5-37: City of Matlosana Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
City of Matlosana	39.7	6.4	8.5	311.9	660.1	<b>1 026.6</b>

Source: Demacon, 2016

##### **Development Guidelines:**

- Public sector investment in the municipality should be concentrated in Klerksdorp to strengthen the economy and create agglomeration advantages, attracting people and private sector investment
- Mining, an important contributor to local economic employment, is not only volatile but declining in real terms over time and this in turn affects the downstream demand for housing etc. Focusing on new **labour intensive industries** is needed to minimise the effect of declining mining activity.
- Focus on **diversifying the economy** with service based sectors
- The **spatial plan** should encourage and facilitate economic diversification, expansion and business investment and development of housing, health care facilities, retail and education
- To expand the **manufacturing value chain**, intense attention will have to go to water infrastructure development and maintenance
- Klerksdorp forms part of the **Gauteng City Region** and as such there is potential to expand the focus on **rural estate living**. Facilities and amenities that enhance lifestyle can take advantage from its location relative to Gauteng. These facilities and amenities include high standard health care facilities, retail facilities, etc. This will in turn create rateable assets and jobs in other sectors of the economy.
- Develop Metropitan City of Dr Keneth Kaunda
- Promote **public-private sector partnerships**
- The municipality has a large informal component that needs to be formalised
- Housing development should not only focus on backlog eradication, but provide suitable options for future demand



- Ensure effective integration between Kanana, Jouberton, Ellaton and Matlosana to ensure **high levels of accessibility** to services and employment opportunities
- Incorporate **informal trade** into the formal economy
- Provide **access to basic services** in the township areas
- Maintain and upgrade infrastructure
- Create employment opportunities to minimise the outflow of the economically active population to Gauteng
- Focus on **skills development** in the manufacturing, mining, trade and business sectors to ensure that people seeking employment has the required skill set to obtain employment in Matlosana
- Enhance the **image of the city** to attract investment from the private sector
- Protect high value agricultural land – the municipality has high value arable land, focusing on **water service infrastructure** is necessary to ensure the sustainability and expansion of the agriculture sector
- Facilitate growth in the agriculture sector
- Facilitate growth in the tourism sector
- Support the development of **SMMes**

#### 5.3.3.4.3.2 Implementation Plans and Programmes

Table 5-38 City of Matlosana Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
1			The Metropolitan City of Dr Keneth Kaunda	The Metropolitan City of Dr Keneth Kaunda Development Plan	North West 5 City Project	
2		Klerksdorp (Map 5-51)	Matlosana N12 Development	The Metropolitan City of Dr Keneth Kaunda Development Plan	North West 5 City Project	
3			Klerksdorp Agripark	Klerksdorp Agripark Implementation Plan	Villages, Townships and Small Dorpies Programme	Agripark Programme
4			Klerksdorp Urban Regeneration	Klerksdorp Urban Regeneration Plan		
5			Sustainable Human Settlements	City of Matlosana Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation
6		Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)	
7		Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan		
8		Local Economic Development	City of Matlosana (Dr Kenneth Kaunda) LED Strategy			
9		Stifontein (Map 5-51)	Stifontein Town Development	Stifontein Local Development Plan	Villages, Townships and Small Dorpies Programme	
10			Sustainable Human Settlements	City of Matlosana Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
11			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	
12			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
13			Local Economic Development	City of Matlosana (Dr Kenneth Kaunda) LED Strategy		



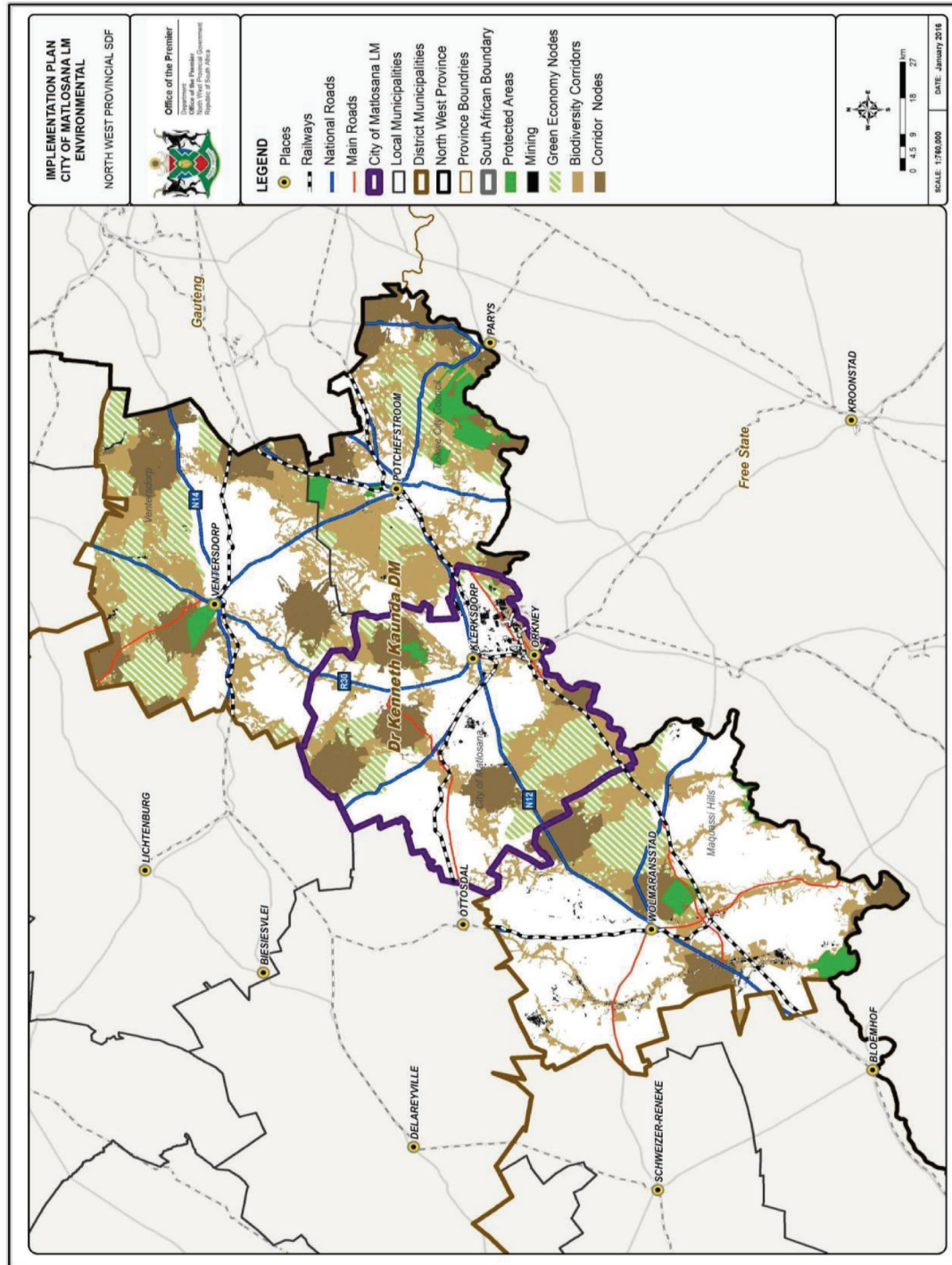
Table 5-38 City of Matlosana Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
14	 Ms3	Orkney (Map 5-51)	Orkney Town Development	Orkney Local Development Plan	Villages, Townships and Small Dorpies Programme	
15			Sustainable Human Settlements	City of Matlosana Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
16			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	
17			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
18			Local Economic Development	City of Matlosana (Dr Kenneth Kaunda) LED Strategy		
19			 Ms4	Lethabong (Map 5-51)	Lethabong Settlement Development	Lethabong Precinct Development Plan
20	Sustainable Human Settlements	City of Matlosana LM Sustainable Human Settlement Plan			Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
21	Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan			NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
22	Social Services Upgrading	Social Services Infrastructure Plan			NW Infrastructure Plan	
23	Local economic development	City of Matlosana (Dr Kenneth Kaunda) LED Strategy				
24	Biodiversity (Map 5-50)	Biodiversity Corridors and Nodes			Environmental Management	District Environmental Management Framework/ SDF
25	Protected Areas	Protected Areas	Nature Conservation/ Tourism/ Wildlife Economy • Faan Mentjies Nature Reserve	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
26	Rural Areas	Rural Areas	Rural Area Development • Agriculture • Mining	Dr Keneth Kaunda District Rural Area Development	Villages, Townships and Small Dorpies Programme	

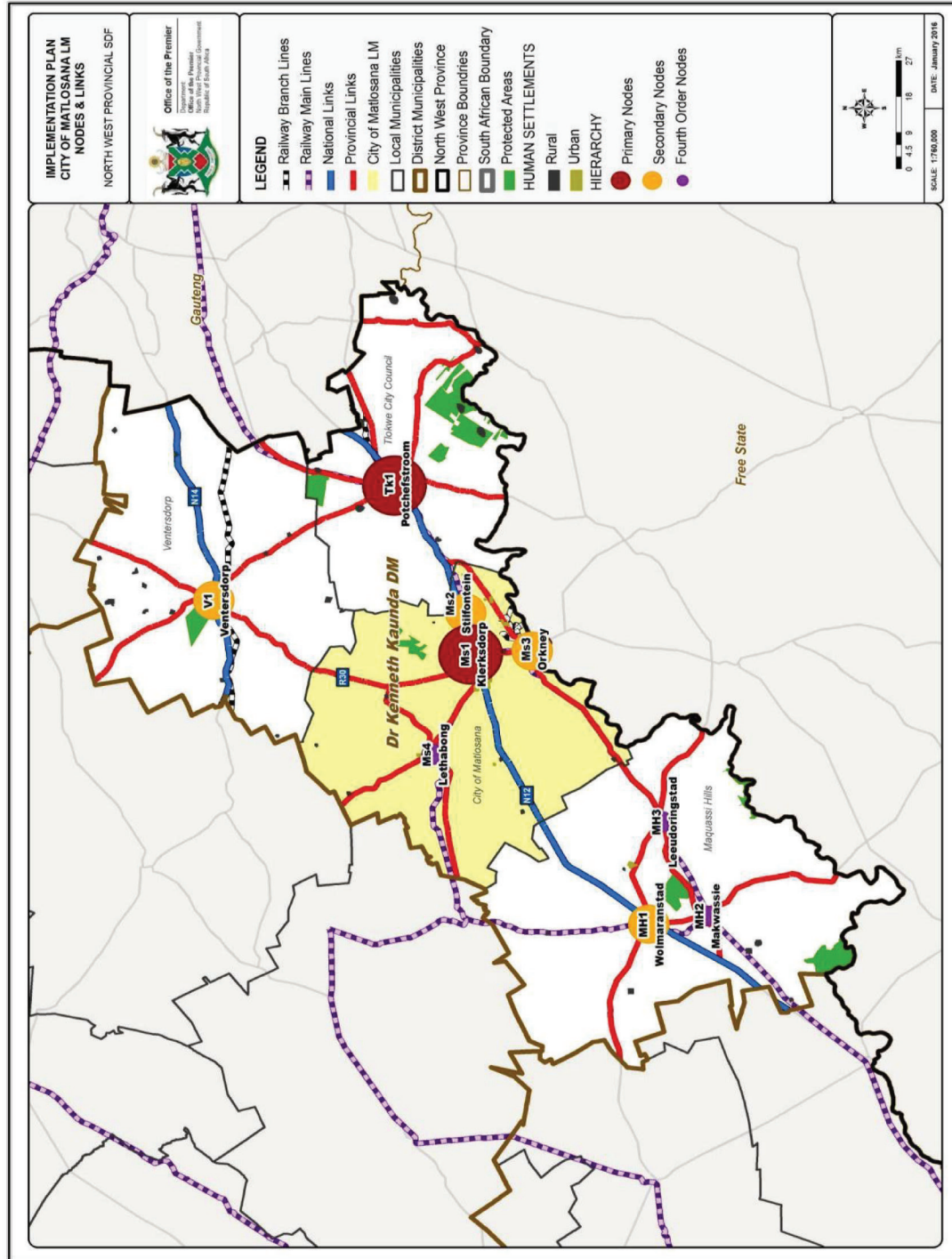
Table 5-38 City of Matlosana Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
27	National Links		Upgrading and Maintenance of National roads			SANRAL
28	Provincial Links		Upgrading and Maintenance of Provincial roads			
29	Railway Main Lines		Passenger / Freight Link			



Map 5-50: Dr Kenneth Kaunda District Implementation Framework (Environmental) – City of Matlosana LM



Map 5-51: Dr Kenneth Kaunda District Implementation Framework (Nodes &amp; Links) – City of Matlosana LM



#### 5.3.3.4.4 **Maquassi Hills Local Municipality**

##### 5.3.3.4.4.1 **Development Guidelines**

The main nodes of Maquassi Hills local municipality are:

- Wolmaransstad
- Leeudoringstad
- Makwassie
- Witpoort
- Kgakala

**Wolmaransstad** is situated in the central part of the municipality and is ideally suited to service the mainly **rural municipality** categorised by **low densities**. Due to its location, Wolmaransstad will be the most suited for the largest part of investment. It will be the best opportunity to create employment opportunities and to attract private sector investment to the municipality. Diluting economic investment will not create the economic growth needed to revive the municipality.

##### **Status:**

Rural regional economy with dispersed small scale nodes, low growth, limited development

##### **10 Year Land Budget:**

The following table indicates the development potential for Maquassi Hills Local Municipality.

**Table 5-39: Maquassi Hills Local Municipality 10 Year Land Budget (Ha)**

Municipal Area	Industrial	Office	Trade	Bonded / FLISP	Subsidy	Total
Maquassi Hills	6.2	0.3	4.0	31.7	102.0	144.2

Source: Demacon, 2016

##### **Development Guidelines:**

- Development in the municipality should focus on **agriculture**
- Protection and development of **water infrastructure** is crucial to ensure the expansion and sustainability of agriculture and related industries in the municipality.
- Protect high value agricultural land
- Provide **land tenure security**
- Protect high biodiversity areas
- There is potential to develop **agro-industries** that will limit the outflow of agricultural products that are processed in other areas, create employment opportunities and improve economic growth
- Establish agro-industries in core economic hubs close to a large labour force
- Wolmaransstad has **high levels of accessibility** with the N12, R502 and R505 going through the town – creating development opportunities
- **Infrastructure investment** should ideally be concentrated on Wolmaransstad
- Strengthen the **service function** of Wolmaransstad
- Concentrate community and social services in Wolmaransstad to attract people and create **higher densities**
- Limit investment in Makwassie, Kgakala and other smaller rural nodes to the **provision of basic services** and **eradicating backlogs**
- Promote the establishment of **game farms / hunting farms** to increase tourism in the municipality.

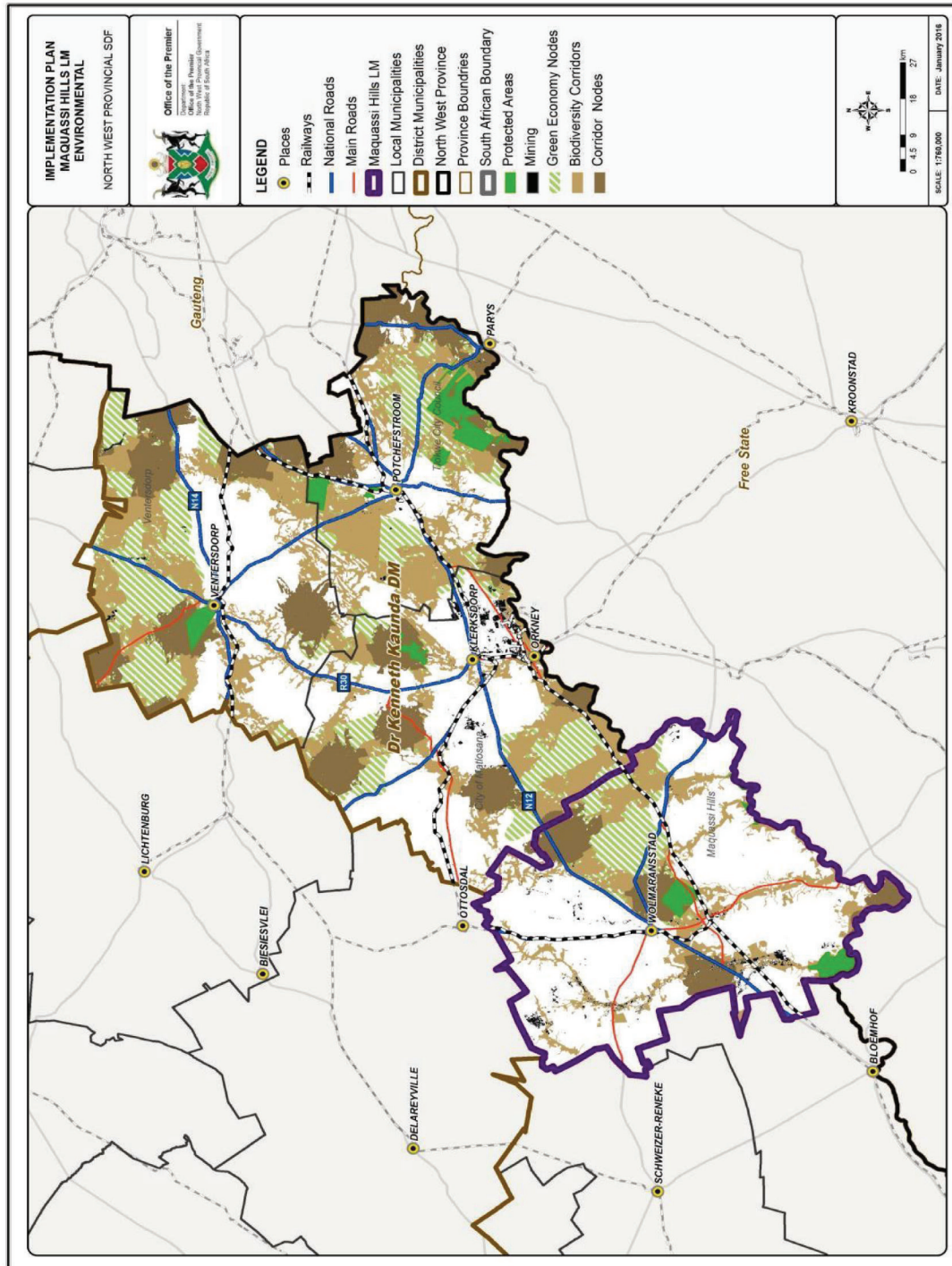
##### 5.3.3.4.4.2 **Implementation Plans and Programmes**

Table 5-40 Maquassi Hills Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
1	MH1	Wolmaranstad (Map 5-53)	Wolmaranstad Town Development	Wolmaranstad Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
2			Sustainable Human Settlements	Maquassi Hills Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
3			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	
4			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
5			Local Economic Development	Maquassi Hills (Dr Kenneth Kaunda) LED Strategy		
6	MH2	Makwassie (Map 5-53)	Makwassie Settlement Development	Makwassie Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
7			Sustainable Human Settlements	Maquassi Hills LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
8			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
9			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
10			Local economic development	Maquassi Hills (Dr Kenneth Kaunda) LED Strategy		
11	MH3	Leeudoringstad (Map 5-53)	Leeudoringstad Settlement Development including Kgakala	Leeudoringstad/ Kgakala Precinct Development Plan	Villages, Townships and Small Dorpies Programme	
12			Sustainable Human Settlements	Maquassi Hills LM Sustainable Human Settlement Plan	Provincial Human Settlement Master Plan	National Housing Code (2009) and housing delivery programmes /Mining Towns Human Settlement Transformation/ NDPG
13			Engineering Services Upgrading	Consolidated Engineering Infrastructure Plan	NW Infrastructure Plan	Integrated Water Resource Planning (IWRP)
14			Social Services Upgrading	Social Services Infrastructure Plan	NW Infrastructure Plan	
15			Local economic development	Maquassi Hills (Dr Kenneth Kaunda) LED Strategy		

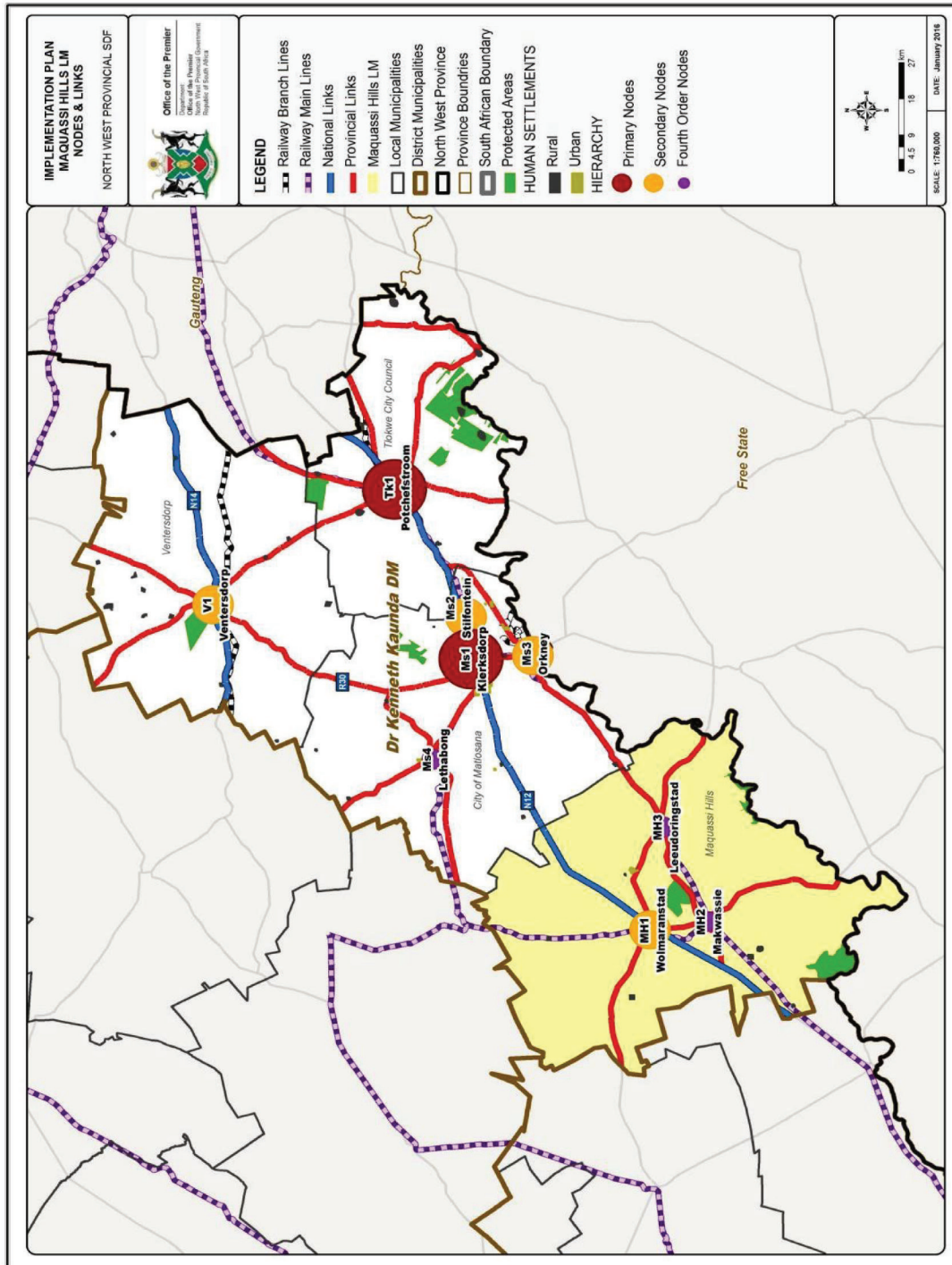


Table 5-40 Maquassi Hills Implementation Plan						
Item No	Node/ Link/ Zone	Node Description	Project Focus	Implementation Plan (Programme)		
				Municipal	Provincial	National
16	Biodiversity (Map 5-52)	Biodiversity Corridors and Nodes	Environmental Management	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
17	Protected Areas	Protected Areas	Nature Conservation/ Tourism/ Wildlife Economy • Wolwespruit NR • Bloemhofdam NR	District Environmental Management Framework/ SDF	North West Province Biodiversity Sector Plan	
18	Rural Areas	Rural Areas - agriculture	Agriculture Witpoort rural development node	Rural Area Development - Agriculture	Keneth Kaunda Rural Development Plan Villages, Townships and Small Dorpies Programme	
19	National Links		Upgrading and Maintenance of National roads			SANRAL
20	Provincial Links		Upgrading and Maintenance of Provincial roads • D1303 between Wolmaranstad and Maquassi Hills • P 13/4 from Wolmaranstad to Wesselsbron • D509 Leeuwardingstad		NW Infrastructure Plan	
21	Railway Main Lines		Passenger / Freight Link			

Map 5-52: Dr Kenneth Kaunda District Implementation Framework (Environmental) – Maquassi Hills LM



Map 5-53: Dr Kenneth Kaunda District Implementation Framework (Nodes & Links) – Maquassi Hills LM



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Printed by and obtainable from the Government Printer, Bosman Street, Private Bag X85, Pretoria, 0001.  
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