LEPHALALE LOCAL MUNICIPALITY

SPATIAL DEVELOPMENT FRAMEWORK REVIEW

2025

Lephalale Local Municipality
Spatial Development Framework Review 2025

Draft SDF Report

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ABBREVIATIONS & ACRONYMS

BSC	Bachelor of Science
BUR	Bed Utilization Rate
CBA	Critical Biodiversity Area
CBD	Central Business District
CEF	Capital Expenditure Framework
COGHSTA	Cooperative Governance, Human Settlement & Traditional Affairs
COVID-19	Coronavirus Disease 2019
CRDP	Comprehensive Rural Development Programme
CRU	Comprehensive Residential Unit
DC	Development Corridor
DDM	District Development Model
DRDLR	Department of Rural Development & Land Reform
ECSA	Engineering Council of South Africa
ESA	Ecological Support Area
FPSU	Farmer Production Support Unit
GIS	Geographical Information System
IDP	Integrated Development Plan
IUDF	Integrated Urban Development Framework
LED	Local Economic Development
LLM	Lephalale Local Municipality
LM	Local Municipality
LUMS	Land Use Management Scheme
LUS	Land Use Scheme
LSDF	Local Spatial Development Framework

MaB	Man and the Biosphere Programme (UNESCO)
MSA	Municipal Systems Act, 32 of 1998
MSDF	Municipal Spatial Development Framework
MYHSDP	Multi-Year Human Settlements Development Plan
NDP	National Development Plan
NEMA	National Environmental Management Act, 107 of 1998
NSDF	National Spatial Development Framework
PA	Protected Area (in terms of the Protected Areas Act 57 of 2003)
PMC	Project Management Committee
PMT	Project Management Team
PSC	Project Steering Committee
PSDF	Provincial Spatial Development Framework
RSA	Republic of South Africa
SACNASP	South African Council of Natural Scientific Profession
SACPLAN	South African Council Planners
SADC	Southern African Development Community
SALGA	South African Local Government Association
SDA	Strategic Development Area
SDF	Spatial Development Framework
SDG	Sustainable Development Goals (United Nations)
SG	Surveyor General
SIP	Strategic Infrastructure Project
SPLUMA	Spatial Planning and Land Use Management Act, No. 16 of 2013
Stats SA	Statistics South Africa
TRP	Town & Regional Planning
UIA	Upgrading Intervention Area
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
WDM	Waterberg District Municipality

1. INTRODUCTION

1.1. Background

The Lephalale Local Municipality (LLM) MSDF adopted the Lephalale Local Municipal Spatial Development Frameworks (MSDF), in March 2017 including its Local Spatial Development Frameworks (LSDF). This is a review of the SDF 2025 is intended to update the 2017 approved version. Sections 20 and 21 of the Spatial Planning and Land Use Management Act (SPLUMA), 16 of 2013, requires municipalities to prepare Municipal Spatial Development Frameworks (MSDFs) every five (5) years as part of the IDP Process. Section 26 (e) of the Municipal Systems Act (MSA), 2000 (Act 32 of 2000) states that each municipality is required to prepare an Integrated Development Plan (IDP) with a Spatial Development Framework as a core component.

There has been significant global, national, spatial and economic developments and changes; various policies and strategic documents developed; impact of COVID-19. Several recent policy plans, including the Limpopo Development Plan 2020-2025, the District Development Model (DDM), the Consolidated Rural Development Programme (CRDP), the Medium-Term Strategic Framework 2019-2024, the National Development Plan, the newly adopted National Spatial Development Framework, and the 2019 Human Settlements Framework for Spatial Transformation and Consolidation, have yet to find expression in the proposed MSDF. It is imperative to consider the recent settlement changes across Lephalale when devising plans for the future of the Municipality, i.e., how mining, climate change, and energy are approached globally and locally have changed over time. These changes could impact how the Municipality plans and coordinates its development in the future. Furthermore, the 2017 Lephalale SDF data was from the 2011 census data and the 2016 community survey, which has become outdated and weakens the evidence used to develop other plans, policies, and projects in the municipality.

Therefore, it is necessary to re-evaluate the current SDF and find new ways to achieve spatial justice, sustainability, efficiency, and resilience fairly and ethically. This can be done through enhanced strategic spatial targeting and effective projects and programmes that consider the needs of all communities.

The review of the Lephalale SDF will assist in guiding development projects in the direction of more specific locations where development will contribute to a more sustainable social and economic environment. The alignment of the Municipal Vision and Mission, strategies, and programmes is achieved through strategic planning in and through the Municipal Spatial Development Framework and Land Use Policies. The strategic planning and plans are further mobilised through long and short-term planning interlinked with sector plans and projects and fringed with budget.

The project's main objective is to review, compile, and package the Municipal Spatial Development Framework (MSDF), including the Local Spatial Development Frameworks (LSDFs). This is a Status Quo Report that will form part of the final SDF process.

1.2. Legislative Mandate

Spatial Planning and Land Use Management Act, Act 16 of 2013 (SPLUMA) requires the Municipality to prepare Municipal Spatial Development Frameworks (MSDFs) once every five years as part of the IDP (RSA, 2013).

Section 20(1) requires that the MSDF be consistent with the National Spatial Development Framework (NSDF). Section 21 (3) stipulates the role of the MSDF to be to coordinate, integrate and align:

- Provincial and district plans and development strategies with policies of the national government;
- the plans, policies and development strategies of municipal departments; and
- the plans, policies and development strategies of neighbouring municipalities.

The content of an MSDF is specified in Section 21 of SPLUMA and determines that an MSDF must (RSA, 2013, the primary aim of this proposed initiative is to achieve the following:

- Promote sustainable and functional human settlement, maximise resource efficiency and enhance regional identity.
- Addressing the historical spatial imbalance through the inclusion of neglected areas
- Directing investment
- Guide the government's sphere in making any decision relating to spatial planning and land use management.
- Strengthening investor confidence and other related primary objectives.
- Ensuring that land is utilised sustainably as a productive resource for the next generation.
- Ensuring that the same land meets the individual needs, i.e., security of tenure, basic services, and others.
- Ensuring that the municipality administers the land effectively and efficiently.

2. LEPHALALE MSDF REVIEW APPROACH & PROCESS

2.1. Approach

The proposed review of the Lephalale SDF, 2025, is not intended to disregard the current 2017 SDF but should analyse its spatial impact and extract best practices from the current document. The positive aspects will be incorporated into the reviewed SDF.

The project team's goal is to ensure that the municipality's values and vision underpin all our activities during the project implementation; the emphasis will be on transparency and accessibility. Participatory methodologies will ensure sustainability, buy-in, and ownership.

2.2. The Role of the LSDF

The Lephalale MSDF plays both a directive and coordinating role in the municipality's planning and implementation. It sets the strategic direction for sector and municipal planning in the Municipality. The MSDF provides a strategic link between provincial, district, and municipal spatial planning, contextualising the NSDF to reflect Lephalale's realities, aspirations, and challenges. It is a tool to guide the spatial targeting of investment and spending in the Municipality to facilitate alignment of planning and implementation.

Section 22 (1) of SPLUMA states that a Municipal Planning Tribunal or any authority required or mandated to make a land development decision in term of SPLUMA or any other law relating to land development, may not make decision which is inconsistent with municipal spatial development framework. The SDF is a framework that guides decisions on land development providing confidence for investment purposes. It does not confer use rights to any property.

2.3. Review Process

Figure 1 below graphically outlines the key proposed project phases. The project is divided into seven phases, including the Inception Phase. This review of the Lephalale SDF is compiled according to the Guidelines for the Development of Provincial, Regional and Municipal Spatial Development Frameworks and Precinct Plans, published by the Department of Rural Development and Land Reform in 2017. Different participatory methods will be used in the various stages of the proposed initiative, and it must be noted that the process is not linear but circular, where phases overlap. This is a draft Status Quo Report. An inception meeting was held on the 21st of February, 2024. The meeting was represented by officials from Pfukani-Kusile Consulting and Lephalale Local Municipality, represented by the Development Planning Department.

This is phase focuses on the spatial analysis of the municipality. The aim is to draw conclusions from the local municipality and regional spatial analysis and identify trends, opportunities, and challenges to inform spatial proposals.

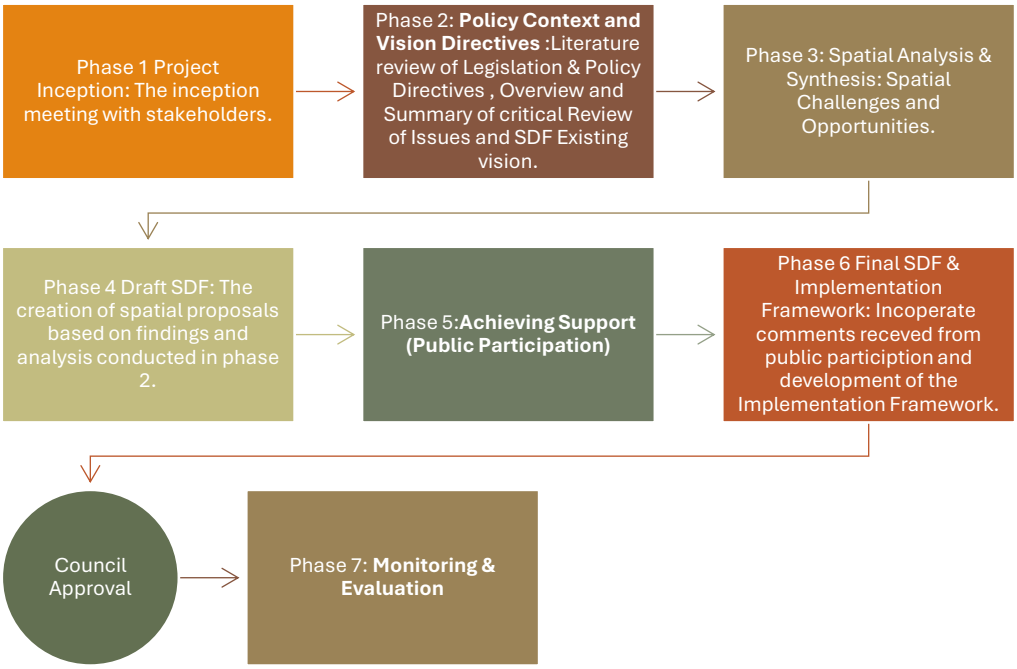


Figure 1. Project Phases

2.4. Status Quo Report Outline

This a status quo report which consists of the following parts

Part 1: Introduction
Part 2: Policy Review
Part 3: Bio-Physical Analysis
Part 4: Socio-Economic Analysis
Part 5: Built Environment Analysis
Part 6: Overall Synthesis

2.4.1. Policy Context and Vision Directives

The policy context and vision directives form the foundation for developing the LLM MSDF. This phase will also include the following:

- Analyse the existing MSDF, 2017, to determine what achievements resulted or identify where changes are required.
- An analysis of current legislation, policy and institutional structures and arrangements that provide strategic direction to spatial planning.
- The compilation and mapping of existing and planned strategies and interventions where relevant at a municipal scale, with the understanding that to avoid an inward focus on local issues, local-specific interventions will not be included if these are not relevant at the provincial scale, and review and synthesis of legislative & policy context.
- Review sector plans and policies.
- Review the most recent IDP and all relevant municipal and surrounding sector plans in terms of the strategic focus and the key challenges identified.
- Hold discussions with Lephalale Municipality stakeholders on the key spatial issues that need to be addressed to discuss and collaboratively review the vision for the municipal area.

2.4.2. Spatial Analysis and Synthesis

The spatial analysis will consider relevant sectors and identify issues of misalignment. Emphasis will be placed on municipal and regional trend analysis and identifying spatial issues and drivers. Considering the deficiency and datedness of some spatial data items, attempts will be made to update/find updated data.:

- Conduct a strategic analysis of the municipality's socio-economic situation and built environment elements in terms of legacy, current, and future challenges.
- Analysis of the Biophysical environment
- Analysis of the Socio-Economic environment
- Analysis of the Economic Environment
- Analysis of the Infrastructure and Services Environment
- Hold discussions with Lephalale Municipality stakeholders on the key spatial issues that need to be addressed to discuss and collaboratively review the vision for the municipal area.

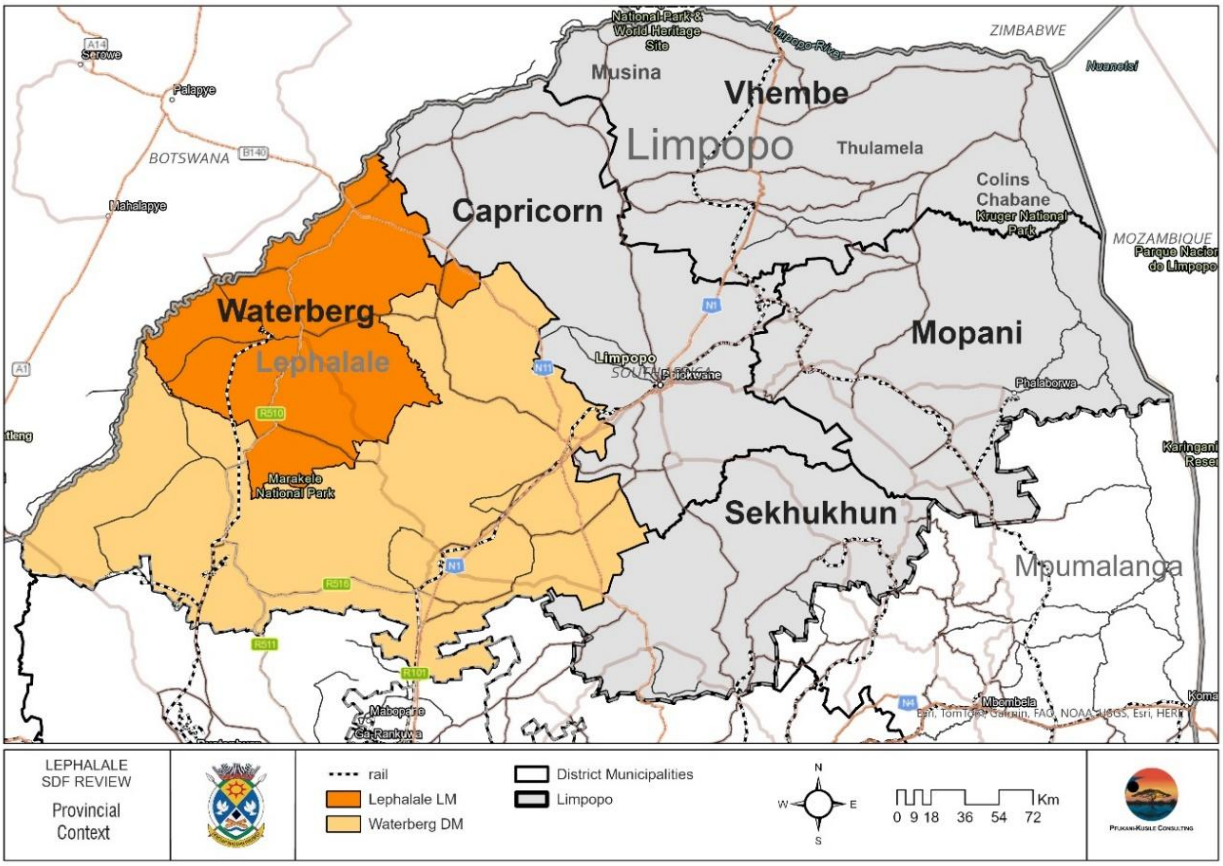
Other activities:

- Involve sector departments through discussions on relevant sector plans and policies.
- Outline the spatial directives from the national, provincial, and municipal spatial policy review.
- Draft the status quo report.
- Present to the municipality and the PSC.
- Facilitate the comments and report.

2.5. Study Area

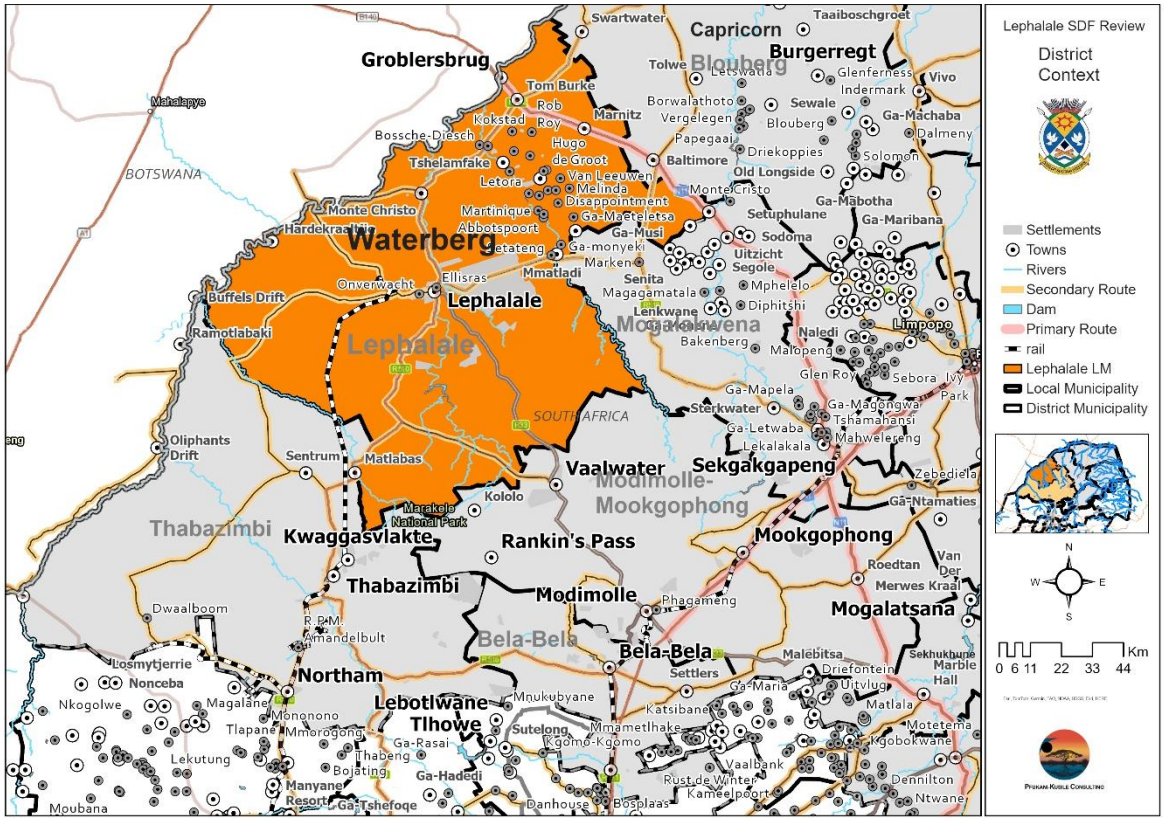
Lephalale LM is one of the five (5) local municipalities within the Waterberg District Municipality (WDM) in the Limpopo Province. Lephalale is a regional node due to availability of coal in the area and its subsequent importance to energy generation as manifested initially by the Matimba and Medupi power stations. The Limpopo Province is an important portal province with several border crossings providing access to/from the larger SADC region. Limpopo is the northernmost province of South Africa, bordering three neighbouring countries, namely Botswana, Zimbabwe, and Mozambique.

The Lephalale LM is located in the Northwestern region of the Waterberg District, sharing a national border with Botswana. Border posts to Botswana, namely, Stockport, Grobler's Bridge (Martin's Drift), Zanzibar, Platjan and Pontdrift. The municipality's land area covers about 14,000 $KM^{2.}$ The review must consider and incorporate the Neighbouring District and Local municipality planning considerations (See Map 1 below).

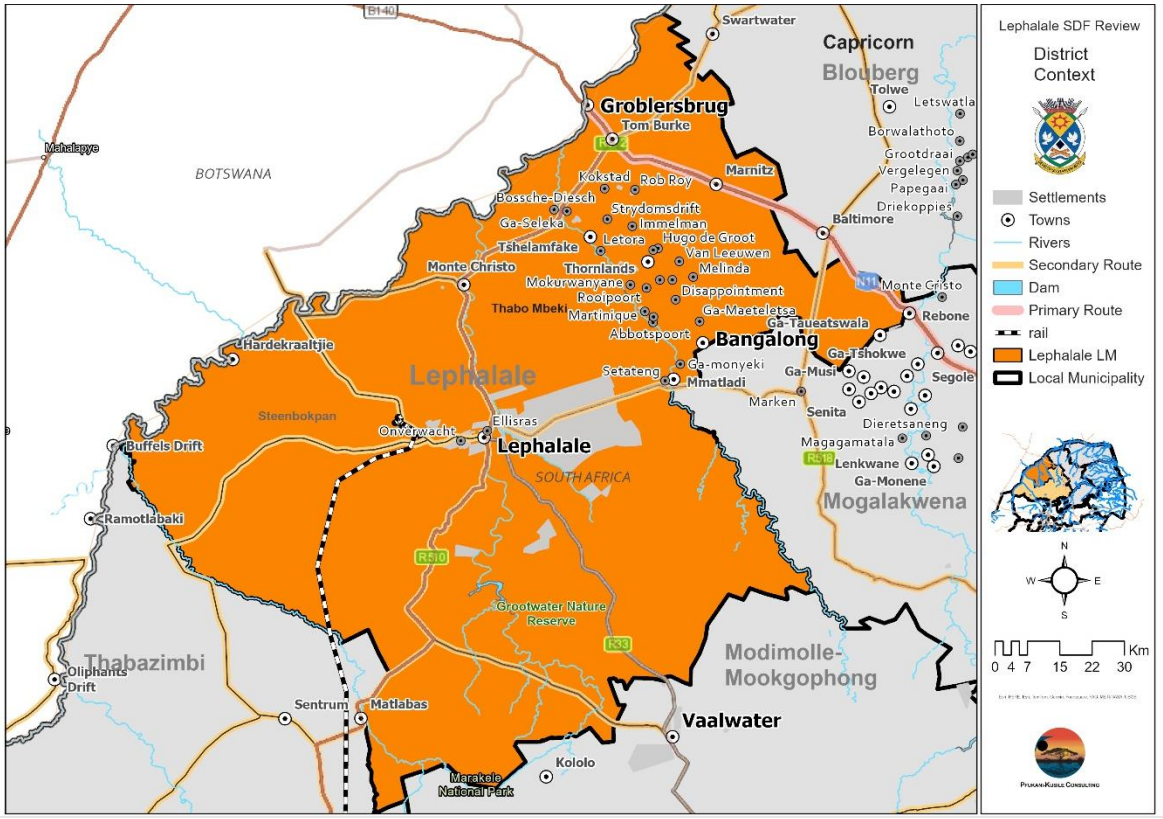


Map 1. Provincial Context

Map 2 illustrates the nearby local municipalities of Thabazimbi, Bela-Bela, Modimolle-Mookgophong, and Mogalakwena. The Municipality, as can be seen in Map 3, is subdivided into three main areas: the Elisrus/ Onverwacht/ Marapong nodal area, the Steenkbokpan area, and a collection of small, scattered settlements situated in the northeastern part of the municipality. The rural areas consist of the regions led by Ga-Seleka Traditional Leadership, Shongoane Traditional Leadership, and Thabo Mbeki townships. The land is used for various purposes, including mining and agriculture. Many mining sites occupy a significant portion of the land, divided into lots that feature agricultural zones. Additionally, mining sites occupy a substantial portion of LLM's land and are divided into lots with agricultural zones.



Map 2. District Context



Map 3. Local Municipal Context

3. POLICY CONTEXT AND VISION DIRECTIVES

3.1. Global Context

A range of strategic planning instruments, policies and position papers set the strategic direction for development at an international level. The Lephalale SDF implementation is guided by key policies outlined below.

3.1.1. Sustainable Development Goals (SDGs)

All United Nations member states adopted the 2030 Agenda for Sustainable Development 2015. Its foundation lies in seventeen Sustainable Development Goals (SDGs), which provide a guide or blueprint for all countries to achieve sustainable futures relating to other interconnected socio-spatial challenges (refer to Figure 2 below).

Figure 2. United Nations Sustainable Development Goals (source: UN, n.d.).

SDG 11: Sustainable Cities and Communities is specifically important in the case of Lephalale LM, as development of the municipality requires a careful balance between environmental sustainability and sustainable economic growth. There needs to be consideration about the protection and conservation of biodiversity whilst simultaneously ensuring that development does occur that would respond to poverty in the region.

Based on an assessment conducted by South Africa on the progress of SDG implementation, which resulted in the South African Sustainable Development Goals Country Report (2019), a range of priorities were identified to facilitate the achievement of the SDGs in the country (as seen in Figure 3 below). The highlighted priorities in Figure 3 relate specifically to the current spatial challenges affecting Lephalale LM.

SOCIAL GOALS PRIORITIES:	ECONOMIC GOALS PRIORITIES:
▪ Improve social protection ▪ Improve access to basic services ▪ Expand ECD Programmes ▪ Promote higher quality and industry-relevant education and training ▪ Address the unequal share of unpaid care and domestic work ▪ Promote innovative and sustainable health financing ▪ Improve frontline health care services ▪ Prioritise social determinants of health ▪ Correct gaps in legislation and policy which address discrimination	▪ Promote effective governance, robust leadership and participative citizenry ▪ Build an effective policy environment ▪ Encourage innovation and entrepreneurship ▪ Increase local and international investment ▪ Implement high-quality economic regulation of network industries ▪ Decouple economic growth from resource use and reduction in waste generation
ENVIRONMENTAL GOALS PRIORITIES:	**GOVERNANCE, PEACE, JUSTICE AND SECURITY GOALS PRIORITIES:**
▪ Continue to strengthen the national climate change response environment ▪ Revisit and Stabilise water sector institutional environment ▪ Improve water infrastructure asset management ▪ Stabilise water sector revenue environment ▪ Improve water sector information and data management ▪ Actively manage marine development trade-offs ▪ Overcome data challenges in the ocean economy ▪ Mainstream ecosystems and biodiversity into national planning ▪ Address programme and data gaps around energy affordability ▪ Fast-track off-grid electrification ▪ Accelerate informal settlement upgrading	▪ Focus on the developmental aspects of the White Paper on Safety and Security ▪ Increase access to justice for all ▪ Strengthen and broaden South Africa's participation in international bodies ▪ Strengthen mechanisms to prevent illicit financial flows ▪ Combat corruption and bribery ▪ Promote and protect the right of public access to information

Figure 3. SDG priorities in South Africa and highlighting priorities specific to Lephalale LM (Stats SA, 2019).

3.1.2. Agenda 2063: The Africa We Want

The African Union (AU) Agenda 2063 is a master plan to support the African continent as a global economic powerhouse. The Agenda comprises 7 Aspirations and 20 supporting goals to achieve this. The Agenda is made up of 7 Aspirations:

1. A prosperous Africa based on inclusive growth and sustainable development.
2. An integrated continent politically united and based on the ideals of Pan-Africanism and the vision of the African Renaissance.
3. An Africa of good governance, democracy, respect for human rights, justice, and the rule of law.
4. A peaceful and secure Africa.
5. Africa with a strong cultural identity, common heritage, values, and ethics.
6. An Africa whose development is people-driven, relying on the potential offered by African people, especially its women and youth, and caring for children.
7. Africa is a strong, united, resilient, and influential global player and partner.

Goals 4, 5, and 7 (aspiration 1), Goal 10 (aspiration 2), and Goals 17 and 18 (aspiration 6) directly affect the SDF for Lephalale Local Municipality.

Goal 4 Transformed Economies: highlighting the need for Lephalale to support sustainable, resilient, and inclusive growth driven by STI (Science, Technology, and Innovation) manufacturing/industrialisation and value addition. Additionally, it focuses on the tourism sector, which is identified to have great potential in Lephalale.

Goal 5: Modern Agriculture for increased productivity and production: Lephalale has a notable competitive comparative advantage in its Agricultural production capability. This Goal supports the increase in agricultural production, which will contribute to developing an inclusive rural economy through employment creation.

Goal 7 Environmentally sustainable and climate resilient economies and communities: relating to the need to support sustainable natural resource management and conservation of biodiversity. As well as sustainable consumption and production patterns.

Goal 10: World-class infrastructure criss-crosses Africa to improve infrastructure and communications connectivity between Lephalale and other regions (domestic and international). This is especially relevant to SIP 1: Unlocking the northern mineral belt with Waterberg as the catalyst (National Infrastructure Plan).

Goal 17 Full Gender Equality in All Spheres of Life: touched on the importance of empowering women and children in all aspects of life.

Goal 18 Engaged and Empowered Youth and Children: speaks to Lephalale's need to promote youth and children's economic involvement and empowerment.

3.1.3. Regional Indicative Strategic Development Plan (RISDP) 2020-2030

The Regional Indicative Strategic Development Plan (RISDP) 2020–2030 is a 10-year strategic plan to operationalise the Southern African Development Community's (SADC) Vision 2050. SADC Vision 2050 sets out to create:

"...peaceful, inclusive, competitive, middle- to high-income industrialised region where all citizens enjoy sustainable economic well-being, justice, and freedom by the year 2050. By 2050, there will be a peaceful, inclusive, competitive, middle- to high-income industrialised region where all citizens enjoy sustainable economic well-being, justice, and freedom".

The RISDP 2020–2030 and Vision 2050 are made up of 6 strategic priority areas:

- The Foundation: Peace, Security, and Good Governance
- Pillar I: Industrial Development and Market Integration
- Pillar II: Infrastructure Development in Support of Regional Integration
- Pillar III: Social and Human Capital Development
- Cross-cutting issues: Gender, Youth, Environment and Climate Change, and Disaster Risk Management.

3.1.4. Man and The Biosphere Program (UNESCO)

UNESCO's Man and the Biosphere Programme (MaB) is an intergovernmental scientific programme that aims to establish a scientific basis for improving relationships between people and their environments.

The programme identified three strategic objectives for 2015-2025: Conserve biodiversity, restore and enhance ecosystem services, and foster the sustainable use of natural resources.

- Contribute to building sustainable, healthy, and equitable societies, economies and thriving human settlements in harmony with the biosphere.
- Facilitate biodiversity and sustainability science, education for sustainable development (ESD) and capacity building.
- Support mitigation and adaptation to climate change and other aspects of global environmental change.

There are six recognised Biosphere Reserves (also referred to as Biosphere Regions) in South Africa, one of which directly affects Lephalale LM – the Waterberg Biosphere region. The Waterberg area was approved as a bioregion in 2001 by UNESCO due to its unique characteristics. The Waterberg is an escarpment of sandstone buttresses and outcrops, with rivers, streams and wetlands stretching for 150km in an arc from Thabazimbi (in the west) to Mokopane (in the east) (source: Waterberg Biosphere, n.d.).

The ‘Situational Analysis’ will elaborate further on the impacts of the biosphere on Lephalale's biophysical environment.

Figure 4. Photos of the Waterberg Biosphere Region (source: Waterberg Biosphere Reserve, n.d.)

3.2. National Strategic Direction

National legislation and policy provide the framework and agreement for intergovernmental structures, relationships, and operations. The following list of laws relates to the organisation of intergovernmental structures.

3.2.1. Spatial Planning and Land Use Management Act, No. 16 of 2013

The Spatial Planning and Land Use Management Act (SPLUMA) was promulgated on the 5th of August 2013. The Regulations in terms of the Spatial Planning and Land Use Management Act, Act 16 of 2013, were published on the 23rd of March 2015. SPLUMA came into effect on the 1st of July 2015. The enactment of SPLUMA implies that this Act now forms the major vehicle for development applications, implicating the restructuring and review of the current spatial planning and land use management systems. The Act gives the local municipality authority over all land use applications in its area of jurisdiction. The Act does not repeal the Town Planning and Townships Ordinance 15 and 20 of 1986. However, no current legislation may defer or be inconsistent with the provisions in the SPLUMA. The SPLUMA is National Legislation, and the Ordinances are Provincial Legislation.

The general principles endorsed by this Act stipulate that spatial planning, land use management and land development must promote and enhance the principles of Spatial Justice, Spatial Sustainability, Spatial Efficiency, Spatial Resilience, and Good Administration (refer to Table 1 below).

Table 1. SPLUMA Principles.

SPLUMA Principle	Description of SPLUMA Principle
Spatial Justice	Past spatial and other development imbalances must be redressed through improved access to and use of land by disadvantaged communities and persons.

Spatial Sustainability	Spatial planning and land use management systems must promote the principles of socio-economic and environmental sustainability through: • Encouraging the protection of prime and unique agricultural land. • Promoting land development in locations that are sustainable and limit urban sprawl. • Considering all current and future costs to all parties involved in providing infrastructure and social services to ensure the creation of viable communities.
Efficiency	Land development must optimise existing resources and the accompanying infrastructure, while development application procedures and timeframes must be efficient and streamlined to promote growth and employment.
Spatial Resilience	Securing communities and livelihoods from spatial dimensions of socioeconomic and environmental shocks through mitigation and adaptability accommodated by flexibility in spatial plans, policies, and land use management systems.
Good Administration	All spheres of government must ensure an integrated approach to land use and land development, and all departments must provide their sector inputs and comply with prescribed requirements when preparing or amending SDFs. This principle is the fulcrum of this framework largely because the implementation of the spatial planning vision and objectives is not only highly dependent upon a strong coordinating role of the central government but is also predicated upon good governance mechanisms, incorporating meaningful consultations and coordination to achieve the desired outcomes across the various planning spheres and domains.

SLPUMA proposes a hierarchy of national, regional, provincial, and municipal spatial development frameworks (SDFs), implying that a package of plans will be undertaken from the national to municipal level to direct land use management while providing uniform regulation throughout South Africa.

General provisions which apply to the preparation of all scales of SDFs are set out in Section 12(1) of SPUMA, which are as follows:

(a) Interpret and represent the spatial development vision of the responsible sphere of government and competent *authority*.
(b) Be informed by a long-term spatial development vision.
(c) Represent the integration and trade-off of all relevant sector policies and plans.
(d) Guide planning and development decisions across all sectors of government.
(e) Guide a provincial department or municipality in taking any decision or exercising any discretion in terms of this act or any other law relating to spatial planning and land use management systems.
(f) Contribute to a coherent, planned approach to spatial development in the national, provincial, and municipal spheres.
(g) Provide clear and accessible information to the public and private sector and provide direction for investment purposes.
(h) Include previously disadvantaged areas, areas under traditional leadership, rural areas, informal settlements, slums and land holdings of state-owned enterprises and government agencies and address their inclusion and integration into the relevant sphere's spatial, economic, social and environmental objectives.
(i) Address historical spatial imbalances in development.
(j) Identify the long-term risks of spatial patterns of growth and development and the policies and strategies necessary to mitigate those risks.

(k) Provide direction for strategic developments and infrastructure investment, promote efficient, sustainable and planned investments by all sectors and indicate priority areas for investment in land development.
(l) Promote a rational and predictable land development environment to create trust and stimulate investment.
(m) Take cognisance of any environmental management instrument adopted by the relevant environmental management authority.
(n) Give effect to national legislation and policies on mineral resources and sustainable utilisation and protection of agricultural resources; and
(o) Incorporate the outcomes of substantial public engagement, including direct participation through public meetings, public exhibitions, public debates and discourses in the media and any other forum or mechanisms that promote such direct involvement.

3.2.2. Municipal Systems Act, No. 32 Of 2000

Municipal Systems Act No. 32 Of 2000 (MSA) provides a legal structure for municipalities to function in, defining municipalities as a political and administrative structure to govern the local community. It enables municipalities with the legal right and obligation to provide access to services and promote development. Section 26 (e) of the Municipal Systems Act states that an SDF should accompany the municipal IDP and that the SDF should provide guidelines for compiling a land use management system within the affected municipality.

As per the MSA, the SDF should be used as the IDP process's spatial direction-giving and targeted investment coordination instrument. The functions of municipalities are stipulated to:

- Ensure that national and provincial legislation is aligned with municipal structure, functioning and decision-making;
- Develop plans, policies and strategies with set delivery targets;
- Prepare and implement budgets;
- Monitoring of the provision of services;
- Recover and impose any applicable charges to members of the community;
- Promote development and a safe and healthy environment and;
- Pass and implement by-laws.

3.2.3. National Development Plan: Vision 2030

The Republic of South Africa Presidency established the National Planning Commission (NPC) in May 2011. It comprises 26 commissioners, 25 private citizens in a part-time capacity, and one full-time commissioner, Trevor Manuel. The NPC was instructed to obtain an independent and critical view of South Africa. The objective was to produce a vision and a plan to enable a better quality of life for all South Africans by 2030. The NDP responds to three main challenges: reducing poverty, inequality, and unemployment.

Chapter 8 of the NDP Focuses on “Transforming Human Settlements”, where specific provisions are made regarding reversing and addressing the spatial legacy of Apartheid spatial planning. The Chapter identifies the following as the main spatial challenges facing the South African landscape:

- Dysfunctional settlement patterns
- Challenges facing towns and cities
- Uncertain prospects of rural areas
- Challenges of providing housing and basic services and reactivating communities
- Weak spatial planning and governance capabilities

Map 4. The NDPs Proposed National Schema for National Spatial Targeting.

Rural areas: Important providers of services and goods that need restructuring.

In the case of Lephalale – a predominantly rural municipality – it is important to investigate what the NDP proposes for intervention in rural areas. The NDP speaks to the importance of rural communities and the country's dependence on rural goods and services (namely food, water, minerals, energy, biodiversity, natural and cultural experiences, labour, and land).

The NDP calls for:

- Greater provision of security and services in rural areas.
- Prioritising and supporting agricultural production to boost job creation and the local economy, which can develop into a "sustainable competitive industry" over time.
- Differentiated interventions are needed for the different types of rural settlements.
- Appropriate infrastructure is important for unlocking developmental potential.

Rural restructuring zones are areas with large populations experiencing change (e.g., new settlement formation). These areas are more densely populated in former homelands where the population dynamism and number of people provide a sufficient base for viable markets. These rural zones may also be areas of agriculture, tourism, or mining potential. Rural areas that have been officially identified as restructuring zones after meeting the above criteria need the following:

- Management
- institutional development
- land and tenure reform
- infrastructure provision
- economic stimulus

3.2.4. National Spatial Development Framework 2050

The National Spatial Development Framework (NSDF) 2050 is a long-term strategic spatial plan that provides a desired spatial pattern and development trajectory for the country in 2050. The NSDF, mandated by SPLUMA (Act 16 of 2013), forms the primary national spatial policy and directly aligns with the NDP. It acknowledges that radical spatial transformation is needed to break from colonial and apartheid spatial legacies and calls for adopting a 'National Transformation Logic'.

The 2050 NSDF's vision is "All our People Living in Shared and Transformed Places in an Integrated, Sustainable, and Competitive National Economy," its mission is "Making our Common Desired Spatial Future Together Through Better Planning, Investment, Delivery, and Monitoring."

The National Spatial Development Framework (NSDF) identifies Lephalale LM as a Regional Development Anchor within the Limpopo province, and the area from Lephalale to Gauteng forms an Eco-Resource Production Region. Figure 5 and Figure 6 highlight high-level recommendations for Lephalale as a Regional Anchor and Eco-Resource Region, respectively.

Box 4: NSDF Element in Limpopo: Regional Development Anchors
Makhado, Thohoyandou, Giyani, Phalaborwa, Lephalale, Bela Bela, Burgersfort

NSDF high level recommendations for Regional Development Anchors:

- Prioritise and strengthen strategically located regional development anchors in productive rural regions and priority national development, trade and transport corridors to provide a range of services within the specific towns/cities and surrounding network of settlements and productive rural regions
- Support and strengthen strategically located regional development anchors through (1) targeted settlement planning and development, (2) higher-order social infrastructure provision, and (3) focused support for small and medium-sized enterprise development, industrialisation and economic diversification.
- Use the investment and enhanced social service provision in regional development anchors to encourage officials working in these rural regions to stay in these settlements and contribute to the local economy, instead of commuting to larger towns or cities on a daily or weekly/monthly basis.
- Clearly identify the role of specific settlements as gateways and interchanges on the regional public transportation network and incorporate these as such into the planning of 'functional rural regions'.
- Strengthen the connectivity of traditional areas and rural settlements with (1) higher-order urban settlements and (2) economic systems in functional rural regions, by making use of the road and rail network and regional corridor development.
- Plan social infrastructure provision within a regional-rural setting using the 'Social Services Wheel' and use such investment to establish and create well-functioning, compact and lively rural settlements and 'regional rural systems'.

Figure 5. High level recommendations for Regional Development Anchors in Limpopo (source: LSDF, 2022).

Box 6: NSDF Element in Limpopo: Eco-Resource Production Region

Regions stretch from Gauteng to Lephalale; from Gauteng through Polokwane, Makhado and Thohoyandou; from Mpumalanga to Phalaborwa; mining areas throughout the Province

NSDF high level recommendations for Eco-Resource Production Region:

- Enhance (1) the productive capacity, (2) environmental and livelihood quality, (3) cultural heritage, and (4) natural resource-access of these regions through effective agrarian practices and enterprise development programmes that are focussed on natural resource restoration and custodianship.
- Discourage further land and settlement development, and carefully manage existing settlements and land uses in productive agricultural regions that play a crucial role in national strategic water production, national food security and rural livelihoods.
- Pursue effective management and custodianship of national strategic water source production regions.
- Ensure efficient rural-rural connectivity in rural regions to enhance the prospects of making a living in these areas.
- Rehabilitate degraded land and ensure effective land use management, settlement consolidation, improved rural connectivity and an eco-resource related enterprise focus to (1) provide opportunities for livelihoods and industry development, and (2) support national water availability.
- Enhance and further expand the value and contribution of the Oceans and Aqua Economy Areas to (1) local livelihoods, and (2) regional and national economic development.

NSDF high level recommendations for Mining and Energy Production Areas:

- In the case of new mines, where (1) the levels of automation and mechanisation are low, and (2) sizeable numbers of workers will still be required, housing provision and/or settlement expansion should preferably take place in existing regional development anchors and/or small towns where adequate basic municipal and social services are available.
- In deciding on the licencing of new mining operations, (1) national and regional development priorities, and (2) the cumulative impacts of the envisaged mining and related settlement activities and further such activities on the creation of 'functional rural regions' should ideally be considered. Where possible, mining companies should be prompted to become actively involved in the development of such 'functional rural regions' that can survive post the mining era. Instead of spatially scattered piecemeal investments, mining companies, individually, or collectively could, by agreement with the DMRE and the provincial and local governments involved, invest in key 'regional-rural development focused' (1) hard, transport and connectivity, and (2) soft, social services-infrastructure.
- In undertaking such regional-rural development focused investment, collaborative, long-term regional planning, which includes (1) scenario development, (2) population migration projections, (3) diversification strategies, (4) cost/benefit-modelling of regional infrastructure provision, municipal service delivery, and the cumulative impacts of the mining activities, and (5) the optimisation of regional and local development opportunities, would be of great value, and should ideally be undertaken.
- The DMRE must ensure that rehabilitation and negative-impact-mitigation, as provided for in the MPRDA, must extend beyond agreements on paper and be enforced on the ground.

Figure 6. High level recommendations for Eco-Resource Production Regions in Limpopo (source: LSDF, 2022).

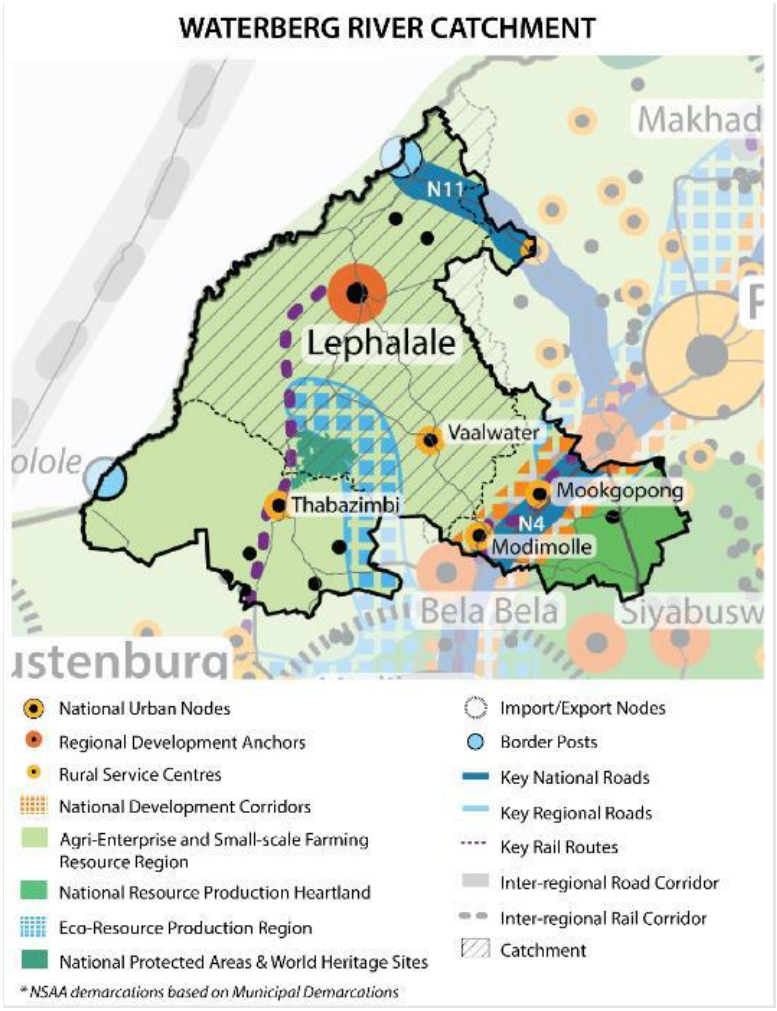
National Spatial Action Areas

The NSDF further outlines several interventions, one focusing on National Spatial Action Areas (NSAAs), as illustrated in Map 5. Five NSAAs are proposed to realise radical spatial transformation at scale and manage current and emerging national risks. Three of the NSAAs extend into Limpopo, while a small portion of a fourth also transcends the provincial boundary (DALRRD, 2022).

Lephalale is part of the Waterberg River Catchment National Resource Risk Area. The Waterberg River Catchment National Resource Risk Area is of interest (refer to Map 5 below). This NSAA highlights :

- Manage sustainable use of resources to sustain national urban networks.
- Managing competing land uses, e.g. mining, agriculture and ecotourism Strengthen infrastructure networks to facilitate regional, national and cross-border flows
- Prioritising resource management.

Figure 5 and 6 above outline the actions required in the National Spatial Action Areas by the NSDF subframes (applicable to Lephalale).



Map 5. National Spatial Action Area in Lephalale (NSAA) (DALRRD, 2022).

NSDF Regional-Rural Development Model

The NSDF calls for a strong polycentric model of well-connected nodes in urban metropolitan regions that offer a range of services (i.e. high-order medical, education, government, safety, and security) and housing types,

encouraging development through a Regional-Rural model (Figure 7). More rural regions must be anchored by at least one core service town or city and offer a range of services (i.e. high-order medical, education, government, safety, and security) and housing types, which are functionally integrated into the rest of the urban region. The NSDF also demands the combination of national, regional, and local-focused economic activities that support the creation, strengthening and maintenance of well-being, inclusive economic growth, and the regional economy.

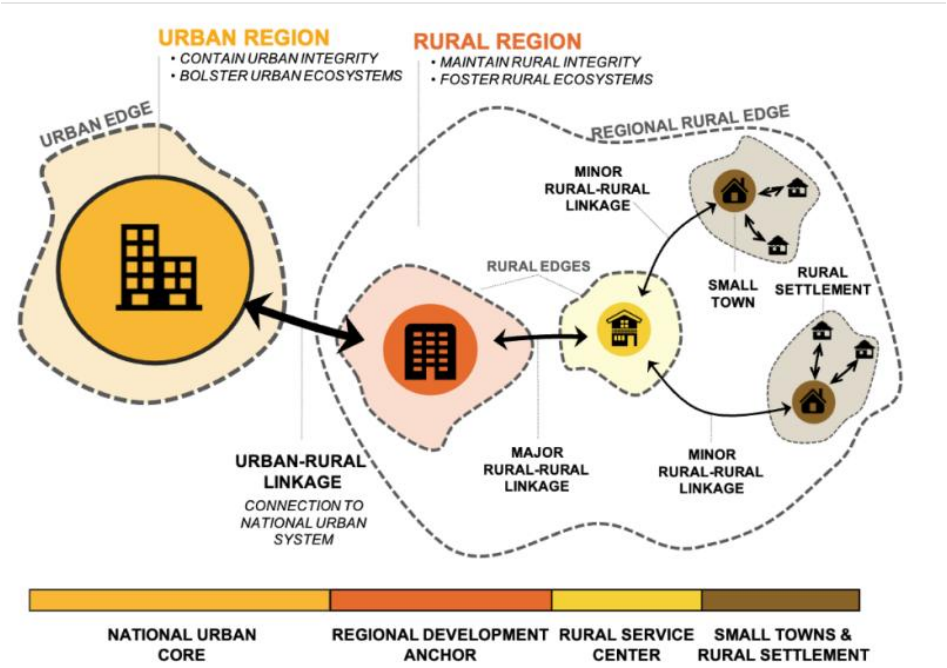


Figure 7. NSDF Regional-Rural Development Model.

The NSDF includes very specific guidelines regarding a differentiated approach of providing a different mix and scale of social services to different settlement typologies (DALRRD, 2022). The settlement typology proposed in the NSDF coupled with the social service recommendations should be considered and applied to the Limpopo settlement network. The national Department of Public Works and Infrastructure (NDPWI) is the process of finalising a strategic spatial plan to guide the development of government precincts in an integrated way. Government Precinct containing a range of social services are currently in the process being planned, assessed or implemented in the following cities / towns in Limpopo (NDPWI response to enquiry, 2022). Lephalale is identified as a regional development anchor for the location of Government Precincts. A feasibility analysis is to be completed for this proposal.

3.2.5. Medium Term Strategic Framework, 2019-2024

The National Medium-Term Strategic Framework (MTSF) 2019-2024 is the detailed five-year implementation plan for the National Development Plan (NDP), which aims to eradicate poverty and reduce inequality in South Africa by 2030. The five years, 2019-2024, refer to the national electoral term. The 2019-2024 MSDF is the second step towards achieving the NDP's 2030 vision for South Africa, followed by the 2014-2019 MSTF.

The MTSF was developed to enable a systematic and evidence-based monitoring and evaluation of the implementation of the NDP. It stipulates actions for the Government and the targets that should be achieved. It also offers a framework for other national, provincial, and local government plans. The 2019-2024 MTSF guides the implementation of the Seven Apex Priorities, announced by President Ramaphosa in the State of the Nation Address (SONA) in June of 2019.

The Apex Priorities are:

- Priority 1: A capable, ethical, and developmental state
- Priority 2: Economic transformation and job creation
- Priority 3: Education, skills, and health
- Priority 4: Consolidating the social wage through reliable and quality basic services
- Priority 5: Spatial integration, human settlements, and local government
- Priority 6: Social cohesion and safe communities
- Priority 7: A better Africa and world

3.2.6. National Infrastructure Plan (NIP) 2050

The National Infrastructure Plan (NIP) 2050 offers a strategic vision and plan that links top NDP objectives to actionable steps and intermediate outcomes. Its purpose is to promote dynamism in infrastructure delivery, address institutional blockages and weaknesses that hinder success over the longer term, and guide the way towards building stronger institutions that can deliver on NDP aspirations.

NIP 2050 identifies the most critical actions needed to improve public infrastructure delivery. It will impact the short term, but longer-term imperatives are also in view. The NIP 2050 focuses on four critical network sectors that provide a platform: energy, freight transport, water, and digital infrastructure. Municipal infrastructure's importance in supporting community liveability is prioritised.

In 2012, the Cabinet developed and adopted the first National Infrastructure Plan, which included 18 identified Strategic Integrated Projects (SIPs) (PICC, 2012). The following are important in Limpopo and Lephalale.

- SIP 1: Unlocking the northern mineral belt with Waterberg as the catalyst. With an emphasis on investment in heavy haul rail links to Richard's Bay through the Lephalale – Ermelo – Richard's Bay Rail Corridor.
    - Unlock mineral resources.
    - Rail, water pipelines, energy generation and transmission infrastructure.
    - Thousands of direct jobs across the areas unlocked.
    - Urban development in Waterberg - the first major post-apartheid new urban centre will be a "green" development project.
        - The development of 'Lephalale Green City'
        - Joe Slovo Integrated Human Settlements Development area
    - Rail capacity to Mpumalanga and Richards Bay.
    - Shift from road to rail in Mpumalanga.
    - Logistics corridor to connect Mpumalanga and Gauteng.
- SIP 6: Integrated Municipal Infrastructure Project: A programme to develop capacity to assist Vhembe, Sekhukhune, Capricorn, and Mopani district municipalities in addressing all the infrastructure maintenance backlogs and upgrades required.
- 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.
- SIP 8: Green energy in support of the South African economy.
- SIP 9: Electricity generation to support socio-economic development (including Medupi power station).
- SIP 11: Increased investment in Agri-logistics and rural infrastructure.
- SIP 17: Regional Integration for African cooperation and development.
- SIP 18: Water and sanitation infrastructure.

On 24 July 2020, in terms of the Infrastructure Development Act, 23 of 2014, the Presidential Infrastructure Coordinating Commission designated SIPs 19 to 36 (PICC Council, 2020). SIPs 19 and 21 are of specific significance for Limpopo:

- SIP 19: Water and Sanitation
    - b. Phase 2A of the Mokolo Crocodile River (West) Augmentation Project: Limpopo
    - d. Olifants River Water Resource Development Project - Phase 2: Limpopo
    - h. Groot Letaba River Water Development Project - Nwamitwa Dam: Limpopo
- SIP 21: Transport
    - b. N1 Musina Ring Road: Limpopo
    - c. N1 Polokwane Eastern Ring Rd Phase 2: Limpopo

3.2.7. National Transportation Master Plan 2050

The aim of the National Transportation Master Plan 2050 (NATMAP) is to address problems surrounding transport systems in South Africa, to achieve a long-term, sustainable, coordinated, efficient, and cost-effective transport plan investment strategy that will streamline transport planning vertically (among the planning authorities) and horizontally (across all modes). The key paradigm shifts stemming from the Master Plan are to:

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

Spatial proposals of which the following are significant for Lephalale include (DoT, 2017):

Rail priorities and programmes for various long/medium distance high/medium-speed corridors are:

- Matlabasa – Vaalwater - Modimolle New Rail Link
- Lephalale Botswana New Rail link
- Waterberg Mpumalanga–KwaZulu-Natal rail link (part of SIP1): Unlocking the northern mineral belt with Waterberg as catalyst. Rail requirements of the Waterberg region. Transnet is seeking a prefeasibility study on the Waterberg infrastructure and feasibility studies on rail infrastructure linking the coal-mining town of Lephalale in Limpopo to Ermelo in Mpumalanga, a key coal-logistics junction.

Proposed interventions for road infrastructure:

- Upgrading of coal haulage roads (SIP 1)
- N1 (Gauteng–Limpopo–Free State–Western Cape)

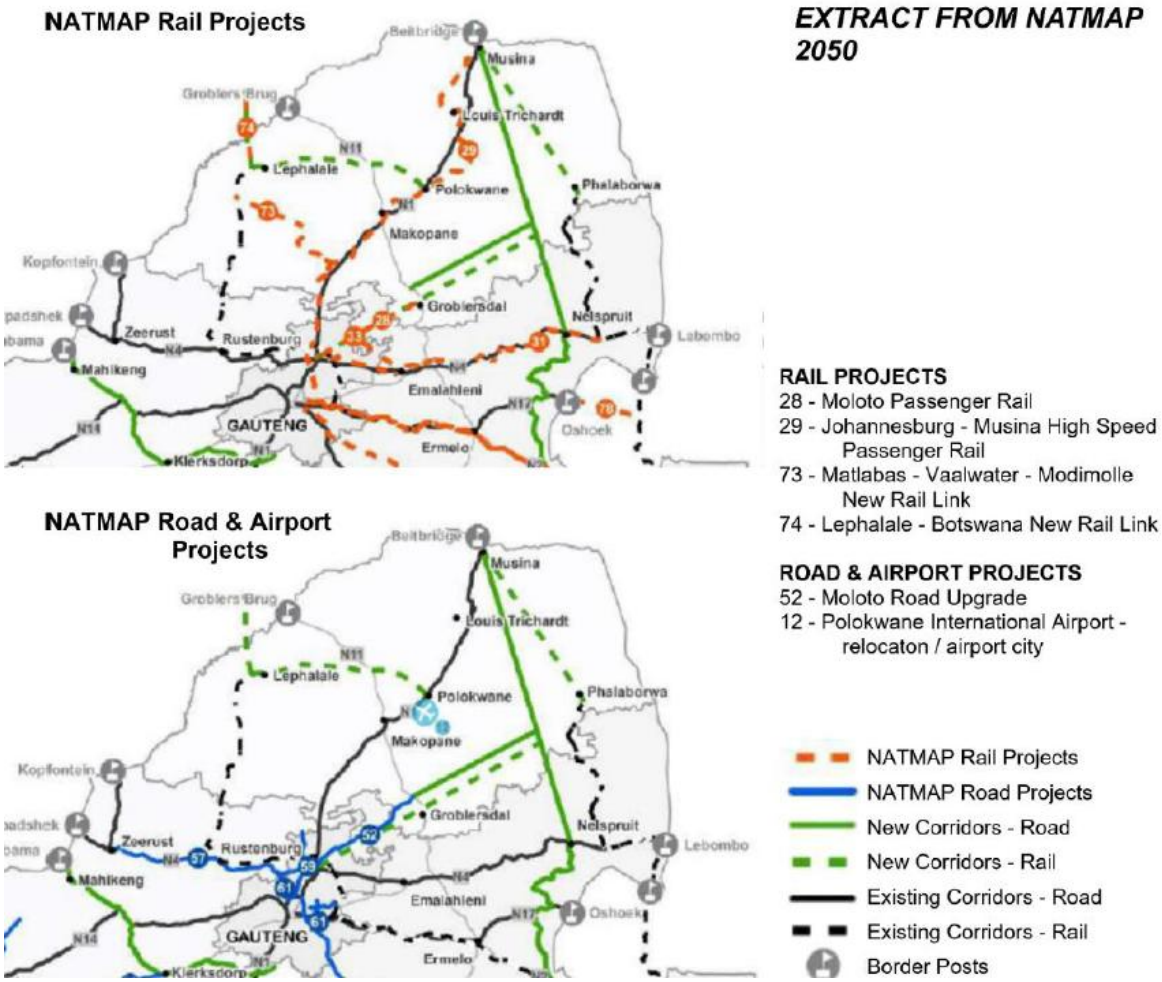


Figure 8. Proposed projects from NATMAP 2050 (DoT, 2017),

3.2.8. Priority Human Settlement and Housing Development Areas, 2020

Priority Housing and Human Settlements Development Areas (PHSHDAs) intend to support sustainable human settlements and spatial transformation objectives by addressing specific housing delivery needs. Processes of intergovernmental cooperation, integrated planning, and coordinated programmed implementation are adopted to fast-track housing delivery. The locations and configurations of the identified PHSHDAs impact the provincial space economy and are to be guided by the provisions of the NSDF and the Limpopo SDF.

The PHSHDAs will be implemented through the national housing programmes, namely:

- Enhanced People's Housing Process (Zenzeleni),
- Informal Settlements Upgrading,
- Integrated Residential Development Programme and
- Social Housing Programme.

Government Gazette no. 42464, published in May 2019, listed Lephalale as one of the Priority Housing Development Areas (PHDAs). Table 2 below shows the PHDA areas in Lephalale and the specific areas approved for Preliminary Declaration as of 1 January 2019 within the municipality. Table 3 shows that Lephalale/Marapong is identified as PHSHDA 10 and outlines the housing yield for all provincial PHSHDAs.

Table 2. PHDA areas in Lephalale.

Priority Housing Development Areas

Limpopo Province		
Lephalale		
29	**PHDA Name**	**Lephalale**
	Municipality Name	Lephalale
	Main Place	Marapong, Lephalale, Lephalale NU
	Sub Place	Lephalale NU, Marapong Ext4, Marapong SP1, Marapong Ext2, Marapong Ext1, Marapong Ext3, Marapong SP2, Grootgeluk Mine, New Town, Lephalale Ext18, Lephalale Ext16, Lephalale Ext29
	Ward No	1, 2, 3, 4 & 13

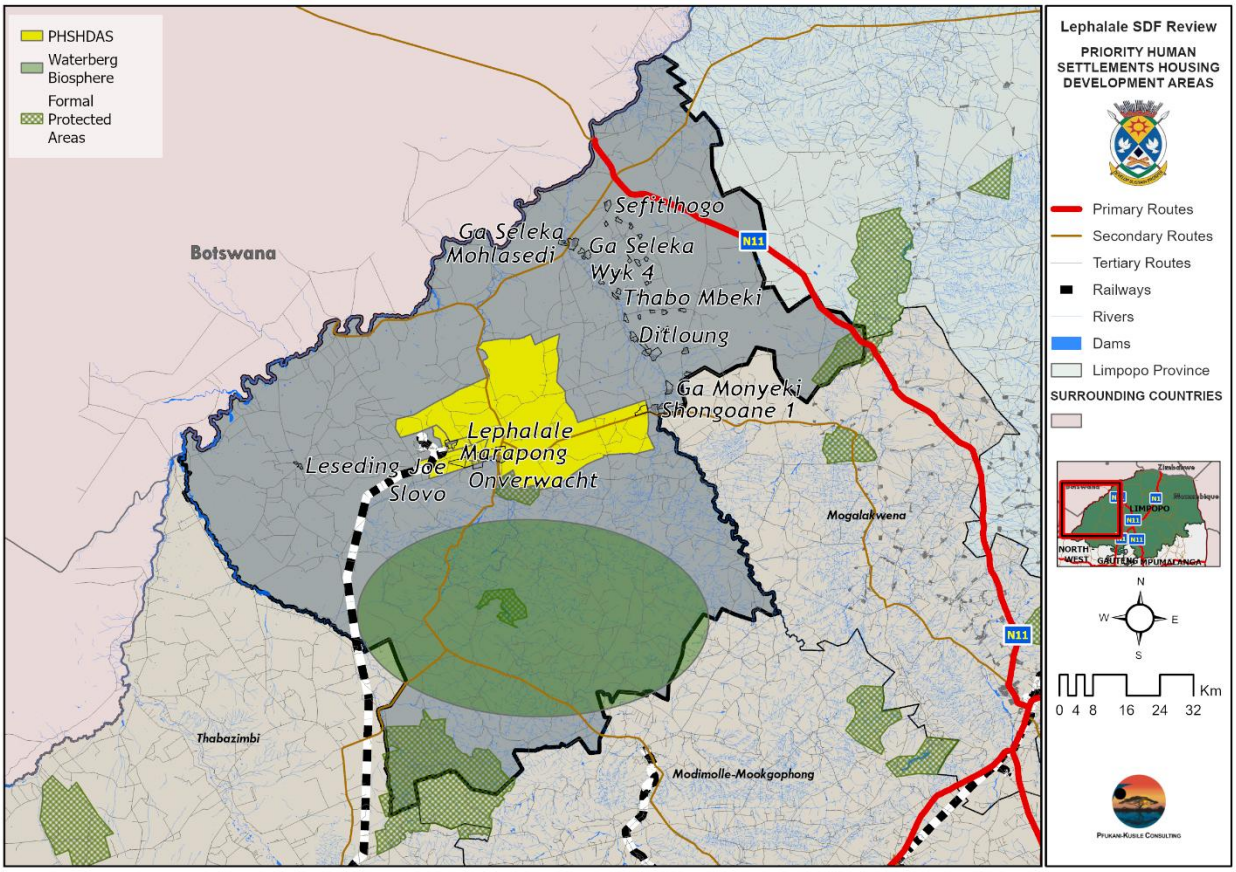
Priority Housing Development Areas (Approved for Preliminary Declaration, 1 January 2019)

Limpopo Province		
Lephalale		
36	**PHDA Name**	**Lephalale/ Marapong**
	Municipality Name	Lephalale
	Main Place	Lephalale NU
	Sub Place	Marapong
	Ward No	1,4 & 13

Table 3. Housing Yield and Assembly in Limpopo PHSHDAs (source: Limpopo SDF, 2022).

District municipality	Local Municipality	PHSHDA		Total area of land (ha)	Land release required (ha)	Housing yield/ number of units/opportunities			
		Number	Name			Total	Low density	Medium density	High density
Capricorn	Polokwane	1 & 2	Polokwane CBD and surrounds & R71 Corridor	2,816.00	235.00	66,580	16,700	49,880	
Mopani	Greater Giyani	3	Greater Giyani	515.49		8,172	4,187	226	3,759
Mopani	Greater Tzaneen	4	Nkowankowa Node			[4]Not	available		
Mopani	Greater Tzaneen	5	Tzaneen Core			Not	available		
Sekhukhune	Fetakgomo Tubatse	6	Fetakgomo/Tubatse Development Area	257.55	23.05	9,220	2,552	3,908	2,760
Vhembe	Musina/Makhado	7	Musina-Makhado SEZ	60.85		2,110	280	1,070	760
Vhembe	Musina	8	Musina Town	221.60	88.20	8,504	60	6,464	1,980
Vhembe	Thulamela	9	Thohoyandou Node	614.25	452.00	11,210	5,600	2,000	3,610
Waterberg	Lephalale	10	Lephalale/Marapong	838.00	146.00	20,176		12,388	7,788
Waterberg	Thabazimbi	11	Greater Northam	473.63	130.60	6,580	1,220	3,680	1,680
Total				**5,797.37**	**1,074.85**	**132,552**	**30,599**	**79,616**	**22,337**

Source: Calculated from Housing Development Agency, 2022 Draft PHSHDA development plans



Map 6. Lephalale PHSHDA.

3.2.9. Integrated Urban Development Framework (IUDF), 2016

The Integrated Urban Development Framework (IUDF) is a policy initiative devised in response to the UN Sustainable Development Goals (SDGs), in particular to Goal 11: Making cities and human settlements inclusive, safe, resilient, and sustainable. The IUDF, which is an initiative co-ordinated by the Department of Cooperative Governance and Traditional Affairs (COGTA), builds on several chapters of the NDP, notably expanding on Chapter 8: Transforming human settlements and the national space economy.

The vision of the IUDF is to support a functional and developmental local government system, which delivers on its Constitutional and legislative mandates within a system of cooperative governance. The IUDF presents four strategic goals, nine levers and three cross-cutting issues (refer to Figure 9). The IUDF proposes integrated urban planning as the basis for achieving integrated urban development, which follows a specific sequence of urban policy actions.

The four strategic goals are further explained:

- Spatial integration: To forge new spatial forms in settlement, transport, social and economic areas. •
- Inclusion and access: To ensure people have access to social and economic services, opportunities, and choices.
- Growth: To harness urban dynamism for inclusive, sustainable economic growth and development.
- Governance: To enhance the capacity of the state and its citizens to work together to achieve spatial and social integration. Rural-Urban Linkage The IUDF addresses the need to view urban and rural areas as coexisting, interrelated areas, that complement each other in production, trade, information flow and

governance. Their connection encompassing linkages of economic activities, flow of people, and resources (refer to Figure 10 below).

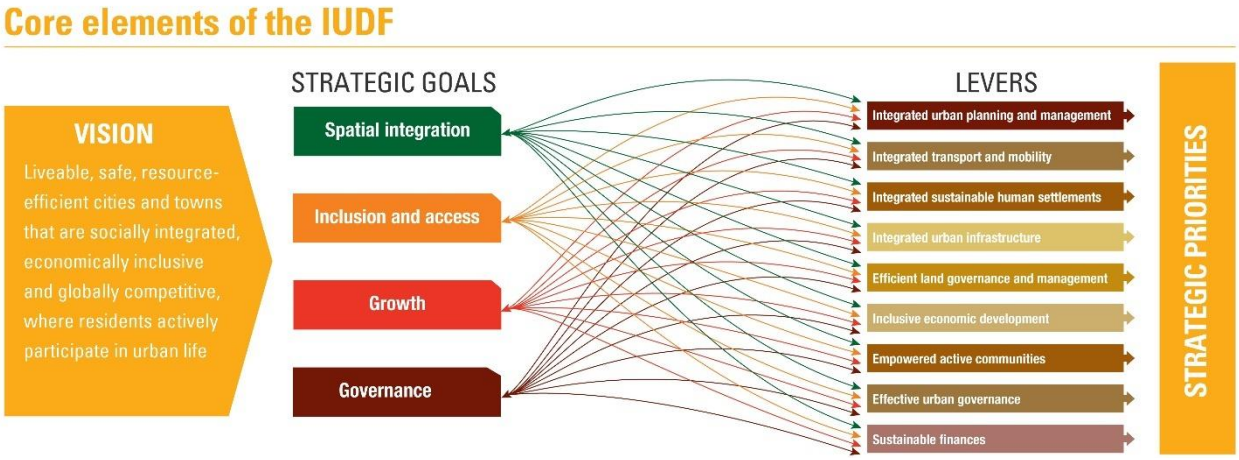


Figure 9. IUDF Vision, Strategic Goals and Levers (IUDF, 2016).

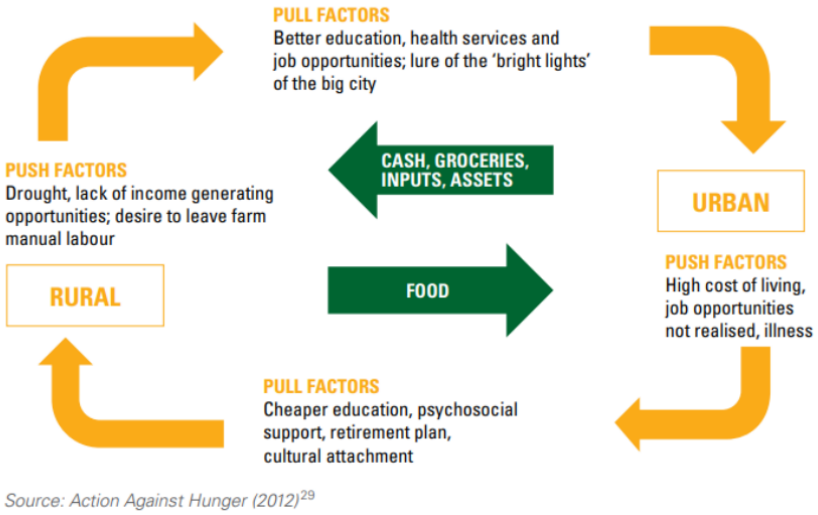


Figure 10. Rural-Urban Push and Pull Factors.

There are several policy levers in the IUDF that address rural development:

Policy Lever 2. Integrated Transport and Mobility speaks to:

- The need to support rural-urban linkages to support economic and social development through integrated transport and mobility.
- Integrated transport and mobility will create denser and more efficient urban forms, contributing to compact and connected cities, and in turn supporting economic development, investment, and social development.
- This lever is critical in achieving Lever 5, and Lever 6.

Policy Lever 5. Efficient Land Governance and Management speaks to the need to:

- Speed up security of land tenure and to ensure policy addresses the tenure security of vulnerable persons working in rural areas (e.g. farm workers).

- Improve relations between Traditional Authority and the Municipality through policy that guides land governance.

Policy Lever 6. Inclusive Economic Development speaks to:

- Initiate differentiated economic development strategies for cities and towns, especially in cases where municipalities have large rural populations and focus is directed towards diluting tension with traditional leaders instead of essential economic development tasks that should be carried out.
- Such as creating urban-rural linkages, support of rural development initiatives (like the CRDP) and supporting informal livelihoods.

3.2.10. Comprehensive Rural Development Programme (CRDP), 2009

The Comprehensive Rural Development Programme (CRDP) aims to uplift and empower rural communities to reduce rural poverty through "optimal use and management of natural resources through an integrated agrarian transformation and the strategic investment in economic and social infrastructure that will benefit rural communities".

The vision of the CRDP is to create vibrant, equitable and sustainable rural communities with a view to contributing to:

- The redistribution of 30% of the country's agricultural land;
- improving food security of the rural poor;
- creation of business opportunities, decongesting and rehabilitation of over-crowded former homeland areas;
- and expanding opportunities for women, youth, people with disabilities and older persons who stay in rural areas.

Initiatives such as Agri Parks and District Rural Development Plans developed from the CRDP.

The CRDP vision is presented in a three-prong strategy framework, seen in Figure 11.

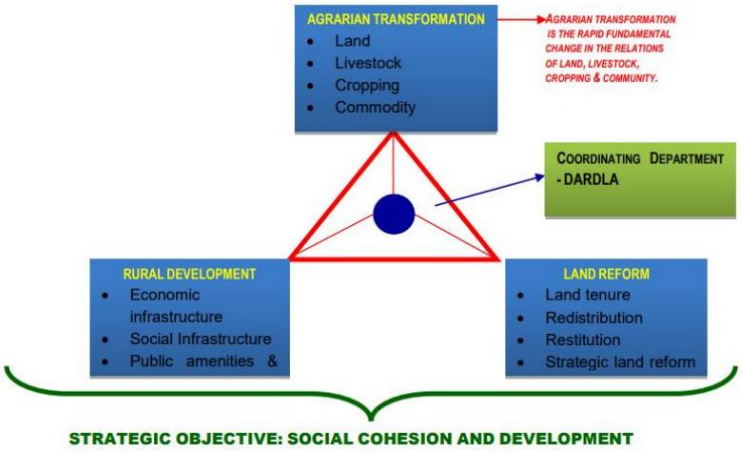


Figure 11. CRDP Three-Prong Framework.

3.3. Provincial Strategic Direction

Limpopo provincial legislation and policy provide the framework and agreement for intergovernmental structures, relationships, and operations. The following list of laws relates to the organisation of the intergovernmental structure.

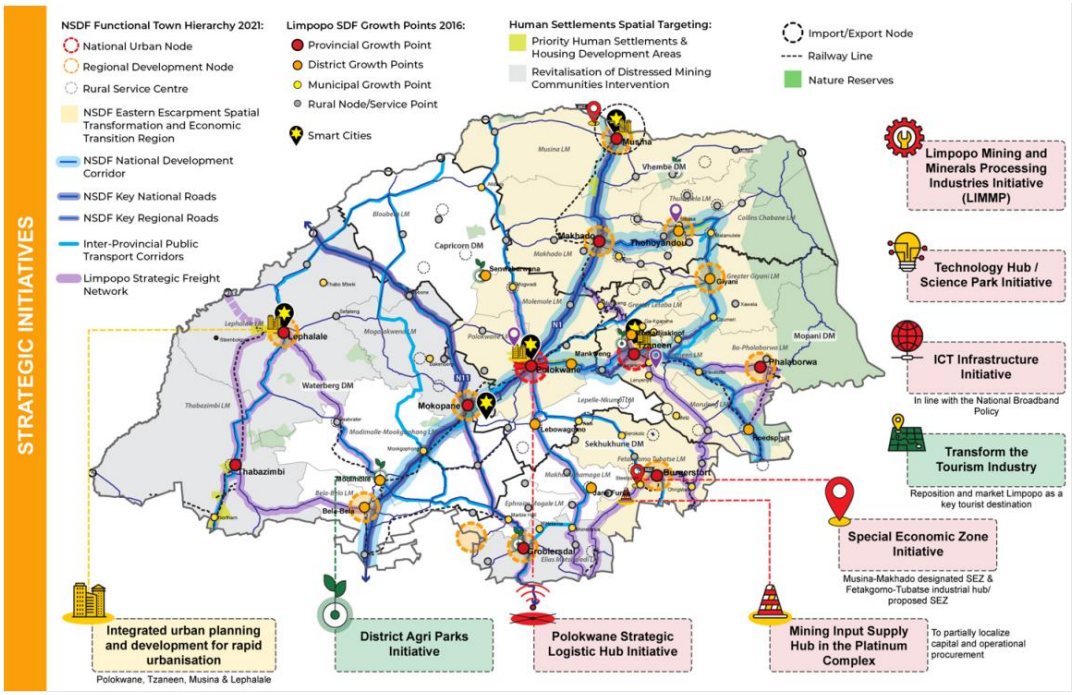
3.3.1. Limpopo Provincial Spatial Development Framework, 2022

Spatial vision:

"*The Limpopo PSDF envisions a provincial spatial structure where the natural environment and valuable agricultural land are protected for future generations, with a strong, diverse and growing economy, and that offers its residents high-quality living environments and good job opportunities*".

The provincial spatial structuring elements consist of regional connectivity and movement lines, provincial land use distribution, the provincial land tenure system and its impact on settlement form, and the resultant hierarchy of settlements, their role, form and growth patterns.

- Connectivity and movement
- Land tenure
- Provincial macro land use pattern
- Settlement forms
- Settlement role
- Human Settlements and Housing
- Social infrastructure
- Spatial governance



Map 7. Limpopo PSDF Strategic Initiatives (source: Limpopo SDF, 2022).

Map 7 above summarises the provincial SDF's Strategic Initiatives – illustrating the identified growth points, human settlement spatial targeting areas, and the 2021 NSDF functional nodal hierarchy for the province.

Initiatives and proposals for Lephalale LM include:

- Lephalale is a rural-urban market centre (RUMC) within the Agri-Parks programme

3.3.2. Limpopo Development Plan, 2020-2025

Limpopo Development Plan (LDP) targets three broad areas for improvement and development: socio-economic, infrastructural and institutional. The plan aims to focus its economic transformation drive on mining, agriculture, tourism, and manufacturing and empower SMMEs and Cooperatives. It also aims to strengthen support for identified provincial Growth Points.

Key elements of the Limpopo Development Plan are:

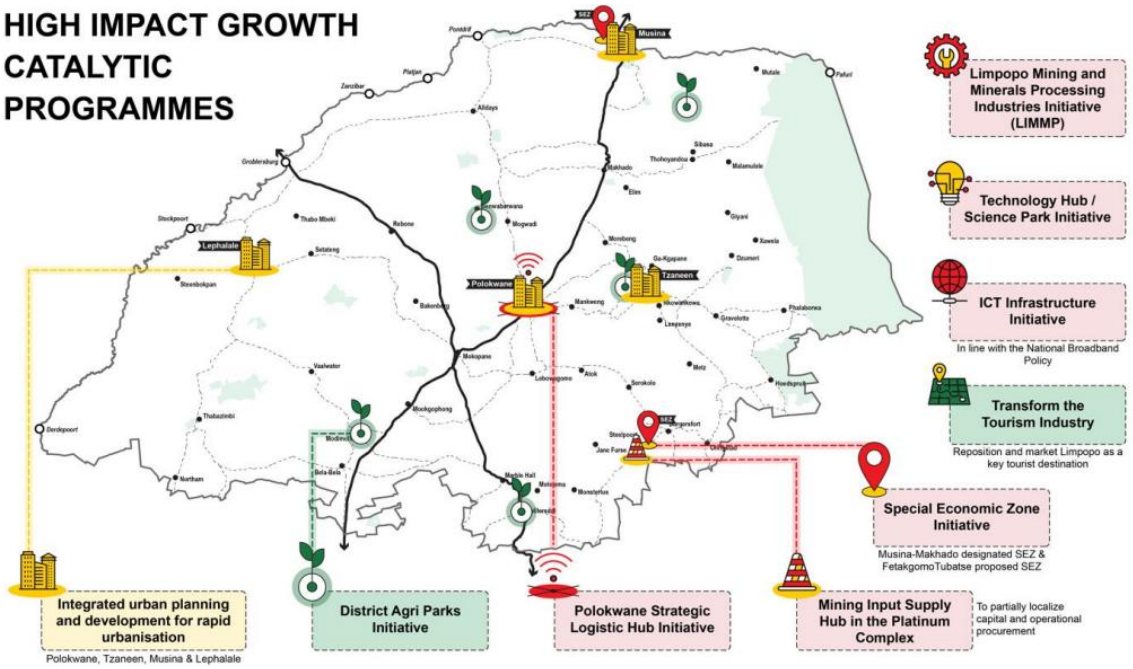
- industrialisation (beneficiation of mining and agricultural products and produce)
- mining (local suppliers, improved training and access to sector value chains for entrepreneurs)
- infrastructure development
- Agri-processing
- SMME promotion and
- ICT and the knowledge economy (establish a WAN footprint).

The development priorities of the LDP are illustrated in Figure 12 below.

Figure 12. LDP 2020-2025 Development Priorities.

3.3.2.1. High Impact Growth Catalytic Programs

Nine strategic initiatives planned in the Province were defined as the High Impact Growth Catalytic Programmes for Limpopo Province. These are illustrated in Map 8 below. Lephalale, Polokwane, Tzaneen, and Musina are identified under the 'Integrated Urban Planning and Development for Rapid Urbanisation' programme.



Map 8. Limpopo High Impact Growth Catalytic Programs (source: PSDF, 2020).

3.3.2.2. Provincial Nodal Strategy and Growth Point Programme

The Provincial Growth Point Programme, also referred to as the provincial nodal strategy, was initiated following the adoption of the 2016 Limpopo SDF. The programme applied the spatial nodal hierarchy in allocating public funds and investment, listing ten provincial growth points with specific investment focuses. The current administration identified five of the ten provincial growth points – one municipality per district – to be prioritised during the current LDP term (2020-2025). One of these five priority provincial growth points is Lephalale in the Waterberg District.

The focused investment for Lephalale LM is: 'Energy (Coal & Gas), developed Green City Strategy.'

3.3.3. Limpopo Multi-Year Human Settlements Development Plan, 2019 - 2024

The Limpopo Multi-Year Human Settlements Development Plan (MYHSDP) 2019–2024 aligns with the outcomes set for the Medium-Term Strategic Framework (MTSF) 2019–2024. The MYHSDP is a multi-programmed approach that directs the province's human settlement planning. This plan prioritises spending on human settlement programmes in urban areas and spatial targeting areas. The national and provincial spatial targeting areas are illustrated in Map 5 and Map 8.

Human settlement development aligns with the gazetted Strategic Infrastructure Project No. 1 (SIP1) "Unlocking the northern mineral belt with Waterberg as the catalyst". SIP1's projects originally included more than 50,000 housing units focused around Steenbokpan in Lephalale due to the envisaged expansion in coal mining and the construction of additional power stations. Currently, investment is focused on establishing a green city by developing the Joe Slovo Integrated Human Settlements project (Altoostyd) and Marapong community residential units.

3.3.4. Limpopo Industrial Master Plan, 2020-2030

The Limpopo Industrial Master Plan (LIMP) contains specific spatially focused economic growth proposals. In "pursuit of increasing manufacturing activities," it supports industrial clusters based on existing manufacturing and industrial activity to be implemented in each Growth Point.

Lephalale Growth Point is supported as a 'Coal and Energy Cluster' in the LIMP.

3.3.5. Limpopo Tourism Growth Strategy and Implementation Plan, 2018/19-2023/24

Map 9. Spatial targeting areas at the Lephalale municipal scale (source: MYHSDP 2019-2024).

The following proposed projects/ initiatives have a spatial implication, which should be considered in the Lephalale SDF review:

- Develop tourist routes in each biosphere reserve (Soutpansberg-, Waterberg-, and Kruger to Canyons Biosphere Regions).
- Facilitate establishing and maintaining routes that depict Limpopo's diverse cultural experiences.
- National parks, biosphere reserves, provincial nature reserves, heritage sites, and transfrontier conservation areas are protected and managed according to legislation and protocols.
- The impact of developments that have the potential to change the character of the mega conservation areas in Limpopo should be controlled and managed (e.g. mining and township development within green corridors)

3.3.6. Limpopo Industrial Master Plan, 2020-2030

The Limpopo Industrial Masterplan (LIMP), 2020-2030, encompasses precise spatially targeted proposals for economic growth. It acknowledges the Growth Points and endorses the implementation of specific industrial clusters to enhance manufacturing activities. Lephalale is identified as Coal and Energy Industrial Cluster.

Catalytic Projects list in the plan include Public-Private Partnerships: Mega LED Projects where Logistics Hub is proposed in Lephalale.

3.4. District Strategic Direction

This section discusses the frameworks and agreements for structures, relationships, and operations within the Waterberg District Municipality, provided by legislation and policy.

3.4.1. Waterberg District Municipality Spatial Development Framework, 2021

The Waterberg SDF 2021 proposes the following spatial vision for the district:

"*A spatially functional and equitable district that is a conducive living environment for all, an energy hub and an eco-tourism destination*".

Objectives of the Waterberg SDF are as follows:

- *A spatially functional District:* Optimises the use of resources and achieves a sustainable balance between macro land uses;
- *Developing integrated sustainable human settlements:* that redress spatial imbalances and promote inclusive and sustainable land development;
- *Investment in targeted nodes*: Ensure that development in higher-order urban nodes is prioritised and that such nodes provide a range of development opportunities according to the comparative advantages and needs of the communities;
- *Sustainable rural livelihoods*: Improve rural areas by creating integrated and sustainable livelihoods;
- *A connected District*: Ensure a well-functioning District that is connected and provides digital connectivity, convenience and economic prosperity;
- *Integrated and consolidated service delivery*: Ensure a functional district and conducive living conditions for all the residents by following an integrated approach to providing engineering infrastructure for all spheres of government.

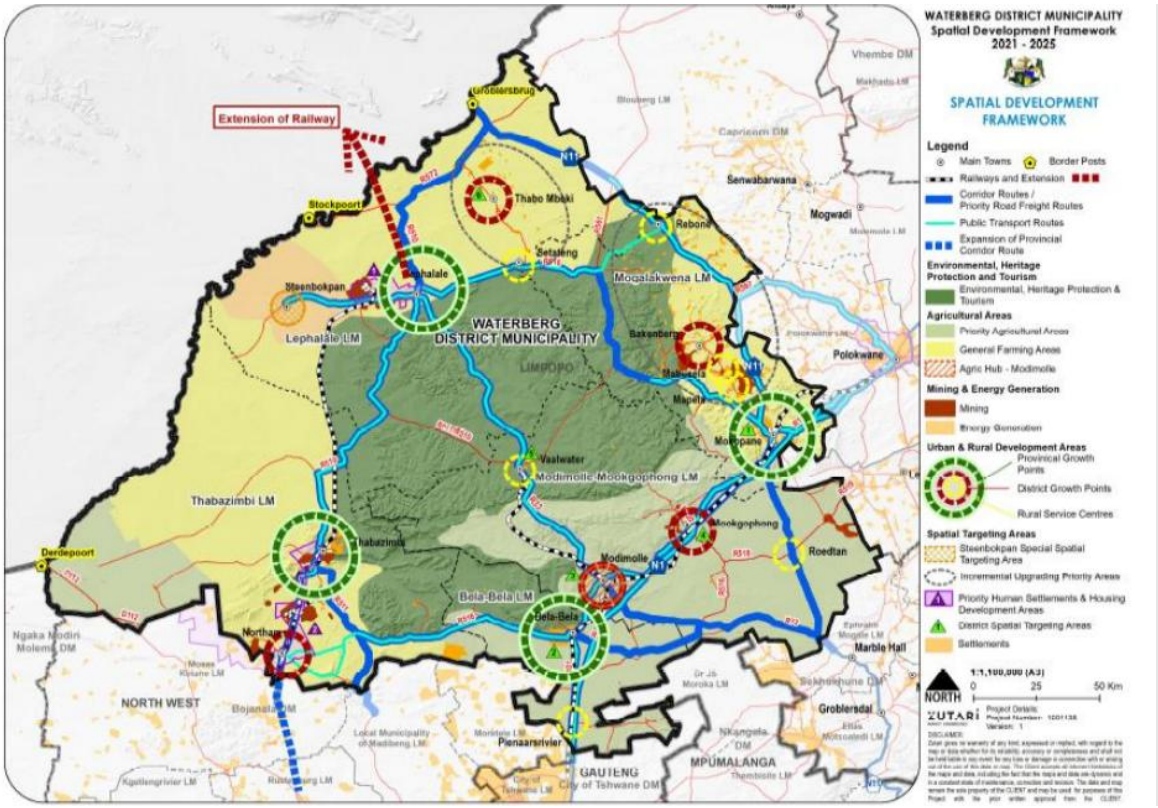
Special Targeting Areas:

The District SDF provides a composite view of new and existing areas where development is prioritised (refer to 10 below). These are referred to as Special Spatial Targeting Areas, "…unique areas where development can be expected due to natural and economic development pressure or should be stimulated because of other national priorities." (Waterberg SDF, 2021: p.256).

Spatial targeting involves "consolidating the bulk of public investment in economic, social and engineering infrastructure at the…growth points/ nodes" based on the NSDF rationale of spatial targeting.

Special Spatial Targeting Areas play a role in spatial transformation and address imbalances of marginalised communities. Two of the three areas fall under the Lephalale LM and should be considered in this revision of the Municipal SDF, namely:

- Steenbokpan Industrial Node
- Thabo Mbeki/ Setateng Incremental Service Upgrading Area



Map 10. Waterberg District Municipality SDF, 2021 Composite Plan (source: Waterberg District, 2021).

The nodal hierarchy proposed in the Waterberg SDF is as follows (bolded areas fall within Lephalale LM):

- Provincial Growth Points: **Lephalale/ Marapong**;
- District Growth Points: **Thabo Mbeki**

Routes and Linkages

The R33 East-West Corridor is highlighted as an important freight route linking the coalfields at Lephalale with the power stations in Mpumalanga Province.

Environment and Tourism

The Waterberg Biosphere, located in the central parts of the district, and proclaimed Nature Reserves play an important role in tourism in the region and Province

Agriculture

A Farmer Production Support Units (FPSUs) is proposed at Thabo Mbeki.

FPSUs are centres of agricultural input supplies, extension support, mechanization support, local logistics support, primary produce collection, and through-put to Agri-hubs. The FPSUs have limited sorting, packaging, storage, processing for local markets with through-put of excess product to Agri-hubs.

- Parameters: 10 – 30 Km reach depending on density from where agricultural activity takes place.

3.4.2. Waterberg Integrated Development Plan 2021/22 – 2025/26

Concerning Lephalale LM, the Waterberg IDP 2021/22-2025/26 notes the following:

- The high population growth rates in Lephalale can be attributed to the growth of the mining and energy sectors. In contrast, the decline in the Modimolle/Mookgopong can be attributed to the absence of opportunities due to lesser traffic on the R101.
- The Lephalale Local Municipality increased the most in terms of population, with an average annual growth rate of 2.6% between 2011 and 2019
- The Lephalale Local Municipality had the lowest unemployment rate of 11.6% in 2018, which decreased from 17.8% in 2008.
- The mining industry in the municipal area contributes to the economic development of the district and province. The Waterberg area is the largest production area of platinum in the province of Limpopo, and the mining of coal and petroleum development in Lephalale has increased demand for electricity generation commodities.
- Lephalale local municipality has been identified by the Limpopo economic growth and development plan as an energy cluster and has attained the status of a national development node. The coalfields, which boast more than 40% of the total coal reserve of South Africa, are located in Lephalale. The coal resource in the Waterberg field is estimated at 76 billion tons, which is more than 40% of the national coal reserve. Minerals found in the district include chrome, platinum, nickel, tin, tungsten, coal, iron and many other metals that have contributed to the flourishing of the mining industry in the district. Mining is the highest GDP contributor in the district by 47.4%.

3.4.3. Waterberg One Plan & District Development Model

Waterberg DM is using the District Development Model (DDM) as a method to "improve co-operative governance and promote integrated planning, budgeting and implementation based on stakeholder and community involvement, and thereby build a capable and ethical Developmental State with strong local government that can respond to current and future needs and effectively implement national priorities" (LLM IDP, 2023). The One Plan, an intergovernmental plan for each District or Metropolitan area, is the main instrument of the DDM. The One Plan is a long-term strategic framework guiding investment and delivery and is important in implementing the provincial SDF priorities at the District scale.

The Waterberg One Plan is a visionary and transformative plan addressing the following interrelated DDM key transformation focus areas, content themes or principles, namely:

- *Demographic change and people development*: The process of understanding the current population profile and development dynamics by which a desired demographic profile and radical improvement in the quality of life of the people is achieved through skills development and the following 5 transformations (economic positioning, spatial restructuring and environmental sustainability, infrastructure engineering, housing and services provisioning, and governance and management).
- *Economic Positioning* creates a competitive edge, enabling domestic and foreign investment attraction and job creation based on an inclusive and transformed economy. Economic positioning informs spatial restructuring and must be sustained by protecting, nurturing, and harnessing the natural environment and resources.
- *Spatial Restructuring and Environmental Sustainability*: the process by which a transformed, efficient, and environmentally sustainable spatial development pattern and form is created to support a competitive local economy and integrated sustainable human settlements. Spatial restructuring informs infrastructure investment in terms of the quantum location and layout of infrastructure networks.
- *Infrastructure Engineering*: the process by which infrastructure planning and investment, especially bulk infrastructure installation, occurs to support the transforming spatial pattern and form, meet the needs of a competitive and inclusive local economy and integrated human settlements, and ensure demand for housing and services is met in a sustainable way over the long-term.

- *Integrated Services Provisioning* is the process by which integrated human settlement, municipal, and community services are delivered in partnership with communities to transform spatial patterns and development for planned integrated sustainable human settlements with an integrated infrastructure network. This also requires holistic household-level service delivery in the context of a social wage and improved jobs and livelihoods.
- *Governance and Management*: the process by which leadership and management are exercised, in that planning, budgeting, procurement, delivery, financial and performance management takes place in an effective, efficient, accountable, and transparent manner. It also includes spatial governance, achieving the spatial transformation goals through assessing and directing land development, effective land use management, and releasing municipal/public land. In relation to each transformation focus area, the One Plan articulates the following:
    - The current situation (diagnostic assessment).
    - The desired future or vision.
    - The strategies and interventions needed to move from the current situation to the desired end state.
    - The Implementation commitments by all three spheres of government and key stakeholders will enable the identified strategies/interventions to be implemented.

3.4.4. Waterberg Bioregional Plan, 2016

The Waterberg Bioregional Plan covers the Waterberg District in the Limpopo Province of South Africa. The Waterberg District Municipality is the primary implementing agent of the Bioregional Plan. The spatial component of the Bioregional Plan is based on a provincial systematic biodiversity plan, the Limpopo Conservation Plan version 2 (LCPv2), undertaken by the Limpopo Department of Economic Development, Environment and Tourism (LEDET).

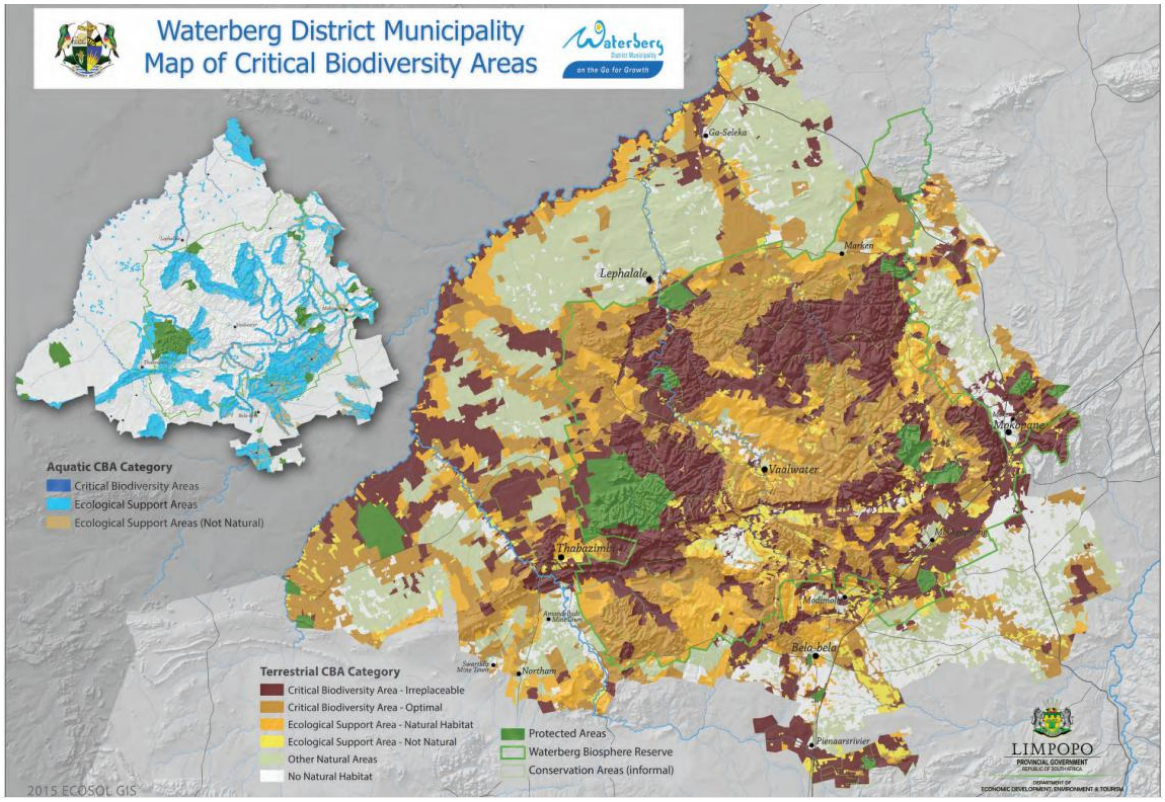
The bioregional plan informs land-use planning, environmental assessments and authorisations, and natural resource management within the Waterberg District. It does this by providing a map of biodiversity priority areas (refer to Maps 11 and 12), referred to as Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs), with accompanying land-use planning and decision-making guidelines (refer to Table 4).

The bioregional plans serve to guide the assignment of SDF categories such as:

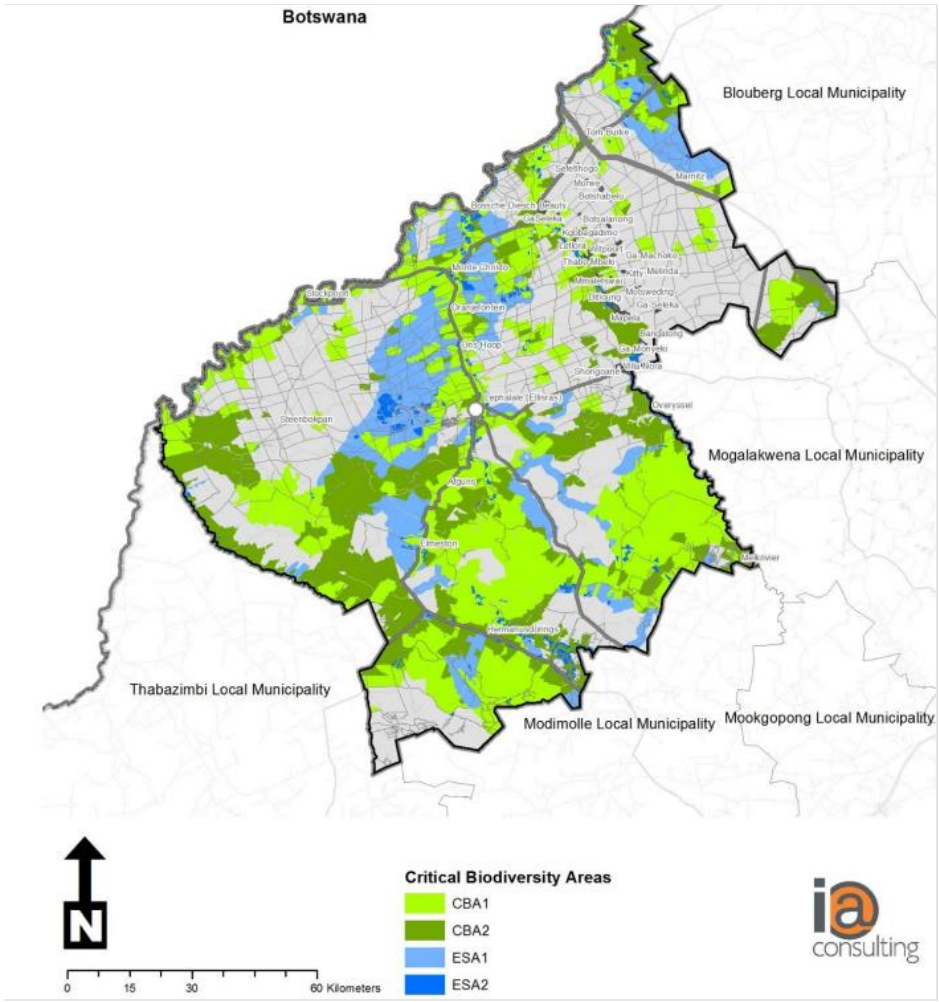
- Environmental Conservation
- Tourism
- Open Space
- Agriculture

Bioregional plans can also inform SDF components such as:

- Strategic Environmental Assessments
- Demarcation of the Urban Edge
- Urban Open Space Systems.



Map 11. Waterberg Critical Biodiversity Areas (source: LEDET, 2019).



Map 12. Lephalale Critical Biodiversity Areas (source: LLM SDF, 2017).

Table 4. Land Use Guidelines for CBAs and ESAs (source: LLM SDF, 2017).

No	Land use Zone	Associated Land use Activities	CBA1	CBA2	ESA1	ESA2
1	Environmental Conservation	Conservation management, low-intensity eco-tourism activities and sustainable consumptive activities.	Y	Y	Y	Y
2	CBA Map Overlay Zone / Bioregional Planning Overlay Zone	These are areas that are designated as biodiversity priority areas, namely CBAs and ESAs;	Y	Y	Y	Y
3	Tourism and Accommodation	Low Impact Tourism / Recreational and Accommodation.	R	R	Y	Y
		High Impact Tourism / Recreational and Accommodation (e.g. golf estates).	N	N	N	R
4	Rural Residential	Low density rural housing or eco-estates.	R	R	R	R
		Traditional Areas (existing) and Rural Communal Settlement (New).	N	N	R	R
5	Agriculture	Extensive Game Farming	Y	Y	Y	Y
		Extensive Livestock Production	Y	Y	Y	Y
		Game Breeding / Intensive Game Farming	N	N	N	N
		Arable Land - Dryland and Irrigated Crop Cultivation	N	N	R	Y
		Plantation Forestry: Timber Production.	N	N	N	Y
		Agricultural Infrastructure - Intensive Animal Farming (e.g. feedlot, dairy, piggery, chicken battery).	N	N	N	N
6	Municipal Commonage	Local agri-economic development.	N	R	R	Y
7	Open-Space	Public or Private Open-Space, including recreational areas, parks etc.	Y	Y	Y	Y
8	Residential	Low, low-medium, medium-high, and high density urban residential development. (= NW = Urban & Business Development)	N	N	N	N
9	Urban Influence	An amalgamation of land use zones, including Institutional, Urban Influence, General Mixed Use, Low Impact Mixed Use, Suburban Mixed Use and General Business. (= NW = Urban & Business Development	N	N	N	N
10	Low or High Impact and General Industry	Low Impact, General Industry and High Impact Industry (Urban & Business Development).	N	N	N	N
12	Transport Services	Transportation service land uses e.g. airports, railway stations, petro-ports and truck stops, bus and taxi ranks and other transport depots. = NW = Linear Engineering Structures)	R	R	R	R
13	Roads and Railways	Existing and planned linear infrastructure such as hardened roads and railways, including activities and buildings associated with road construction and maintenance, e.g. toll booths, construction camps and road depot sites. (Linear Engineering Structures)	R	R	R	R
14	Utilities	Linear engineering structures, such as pipelines, canals and power lines. (Linear Engineering Structures)	R	R	R	R
		Small-scale Infrastructural installations, including wastewater treatment works and energy sub-stations	N	R	R	R
		Large-scale Infrastructure installations, including bulk water transfer schemes, impoundments (Water Projects & Transfers), and energy-generation facilities (powers stations).	N	N	N	N
		Renewable Energy (PV farms and solar arrays)	N	N	N	N
		Renewable Energy (wind farms)	N	R	R	R
15	Quarrying and Mining	Prospecting and Underground Mining	N	R	R	R
		Quarrying and opencast mining (includes surface mining, dumping & dredging).	N	N	N	N
		Hydraulic Fracturing	N	N	R	R
Y	YES, permitted and actively encouraged activity					
N	NO, not permitted, actively discouraged activity					
R	RESTRICTED to compulsory, site-specific conditions & controls when unavoidable, not usually permitted					

3.4.5. Waterberg District Integrated Transport Plan 2014

An Integrated Transport Plan is essential to ensure that several parts and elements of the transport system compliment each other so the total output can benefit the user. Municipalities are dependent on a functional transport system as there are people who are heavily reliant on public transport. Lephalale is an economic hub of the municipal area and the focus for development mainly around the Central Business District (CBD). Spatial disparities result in the inefficient provision of basic services and this is followed by

exorbitant transport costs. To improve the transport issues, a modal integration concept for Lephalale would be ideal. This will assist in concentrating public transport amenities within a common geographical space. This will make it easier for passengers to access different modes of transport in close proximity to each other. The Lephalale Local Municipality could, during the preparation of their Local Integrated Transport Plan explore the market potential for the conveyance of passengers by rail from Lephalale to Pretoria via Thabazimbi. In turn the rail network will be maintained by Transnet Freight Rail.

District transport objectives

- Improve funding, accessibility, and safety in transport systems.
- Maintain and upgrade roads and facilities for public use
- Promote inclusivity, non-motorised transport, and tourism.
- Encourage job creation and small business development in the transport sector.

District transport strategies

- Regulate and improve public transport.
- Enhance rural accessibility and infrastructure.
- Promote sustainability and safety.
- Integrate planning and drive economic growth.
- Enforce operating license laws effectively

3.5. Municipal Strategic Direction

This section discusses the frameworks and agreements for structures, relationships, and operations within Lephalale Local Municipality, provided by legislation and policy.

3.5.1. Lephalale Integrated Development Plan, 2023-27

The long-term vision for Lephalale LM is: "*A Vibrant City and the Energy Hub.*"

The IDP mission statement is:

"*We are committed to integrated development, provision of quality, sustainable and affordable services, financial viability, good governance, local economic development, and job creation*."

Values that underpin the IDP include:

i. *Community orientation*: Provide and deliver sustainable services for the whole community.
ii. *Transparency*: Invite and encourage public sharing and democratic participation in the council's activities.
iii. *Commitment*: Focus on the council's core activities consistently.
iv. *Integrity*: Conduct the council's business in a fair, responsible, flexible, equitable and honest manner.
v. *Accountability*: Report regularly to all stakeholders regarding the council's performance.
vi. *Environmental care*: With all the development in Lephalale, the municipality will focus on protecting the environment.
vii. *Empowerment*: To be seen to be empowering our people, knowledge is power.
viii. *Performance orientation*: Continually evaluates and measures performance against set target

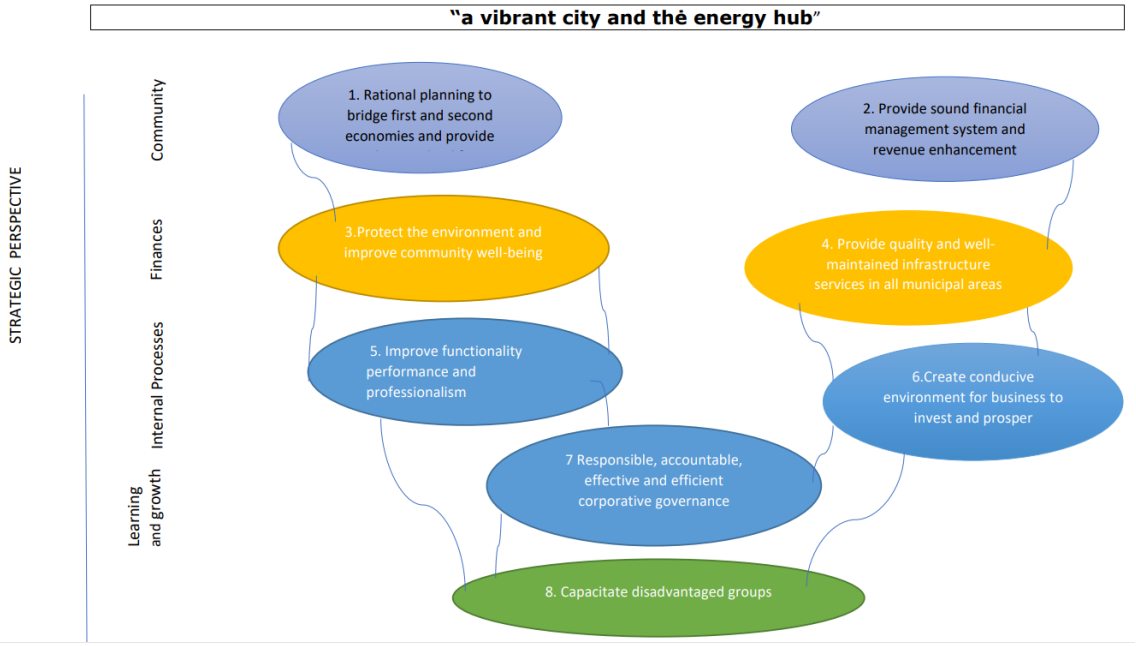


Figure 13. Strategy Map of Strategic Objectives (source: IDP, 2023-27).

The table below provides an overview of the key challenges identified in the IDP. The revised SDF must consider and address these challenges through its proposals and interventions.

Table 5. Summary of challenges identified in the LLM IDP 2023-27.

Spatial challenges	• Lack of Municipal land for development in urban areas. • Illegal land use activities on agricultural land. • Poor planning in rural areas due to lack of land use management scheme/system implementation. • Illegal occupation of land/ land invasion. • Dysfunctional spatial patterns. • Backyard dwellers in Marapong. • Fragmented nature of current urban development found in Lephalale between Marapong, Onverwacht and the town. • Enforcement of LDSF for rural areas. • Non-integrated GIS.
Environmental challenges	• Air and water quality and protection of rivers, wetlands, and streams around the municipal area. • Retention and promotion of natural vegetation and ecosystem as a control measure against soil erosion. • Provide drop-off, garden sites, transfer stations, material recovery facilities, and buy-back centres for recycling. • Illegal waste dumping in urban and rural areas. • Provision of refuse removal service in all the rural villages. • The challenge ranges from unavailability of land to inadequate funds to provide the service. • The municipality faces the serious challenge of illegally dumping garden waste in areas such as Marapong and Onverwacht, as garden sites are needed in the mentioned areas.
Water Challenges	• The catchment in which Mokolo Dam is located is currently in deficit. • Dry boreholes due to lack of rain.

	• Aged bulk infrastructure in some urban and rural areas. • Non-availability of groundwater in rural areas. • Unplanned growth of rural village extensions makes it difficult to provide water to all. • Insufficient water tanks in informal settlements and farms. • Implementation of water conservation and water demand management programme. • Insufficient budget for operations and maintenance of water infrastructure in rural villages. • Mushrooming of informal settlements in urban areas. • Poor quality of underground water in rural areas.
Sanitation Challenges	• Aged infrastructure for bulk and internal sewer reticulation. • Inadequate budget for operation and maintenance of sewer infrastructure. • Insufficient capacity for wastewater treatment works. • The organisational structure is not strategically aligned to execute operational requirements, and Oxidation Pond in Marapong is operating above capacity.
Electricity Challenges	• Upgrading the internal electricity network from aluminium to copper cables for easy maintenance. • Overhead line from Onverwacht and back from town to Onverwacht substation. • Cable theft in urban and rural areas. • Inconsistent Eskom billing of KWA and KVA to the Municipality. • Unplanned housing extensions in rural villages. • Lack of capacity by the mechanical department.
Roads and Stormwater Challenges	• The roads and stormwater infrastructure in the municipality indicate that 821.83km of the roads are gravel. • Most of the infrastructure in the Municipality is between 15 and 25 years old, implying that within the next six years, many of these unpaved roads will have reached their end of expected useful life. • 21% of the road infrastructure with a current replacement cost of R112.8 million (excluding annual inflation of ±7.8%) is in poor condition. In comparison, 23% of the infrastructure with a current replacement cost of R123.8 million is in poor condition. • The Marapong and Thabo-Mbeki area has no stormwater infrastructure at all.
Human Settlements Challenges	• There is a lack of well-located, developed land for housing (most of the well-located and well-suited land is privately owned and insufficient for housing subsidies). • High number of people with housing needs. • Lengthy procedure in dissemination between Limpopo Provincial Government and local authorities regarding housing matters. • Huge infrastructure requirements and projected construction costs in vastly scattered rural settlements. • Municipality does not own land around provincial growth point areas. • Illegal occupation of land (informal settlements). • Traditional leaders allocate residential sites without consultation with the Municipality, guidance, and land use management system application.
Education Challenges	• Inadequate or lack of water. • Illiteracy rate in the district. • Some disabled learners are kept at home. • Movement/established Informal Settlements. • Demarcation of circuits not in line with municipal boundaries. • Partnership between locals, private sector, and FETs on skills development.

	• Increased teenage pregnancy.
Health Challenges	• High rate of teenage pregnancy • Alcohol and substance-related abuse • Ineffective HIV/AIDS and TB awareness campaigns • Ineffective health inspectors • Lack of rehabilitation centre and or nursing home (Hospice) • Perinatal mortality remains on the rise • Mental health treatment facility
Social Challenges	• Poverty-stricken families • Job losses
Safety and Security Challenges	• Monitor the proper utilisation of licenses and permits issued to liquor sellers. • Illegal operation of unlicensed shebeens and taverns. • Access to certain crime scenes due to bad conditions of roads and lights. • Domestic violence (women and child abuse). • Crime awareness and substance abuse. • Implementation of municipal by-laws. • Laws regulating spaza shops (municipality Vs communities). • No Apollo lights /streetlights in villages (infrastructure). • No animal pounds. • De-bushing open spaces in urban areas. • Alcohol and drug abuse amongst the youth.
Local Economic Development Challenges	• High rate of unemployment. • Large volume of unskilled community members, especially youth. • Less interest in educational programmes by unskilled community members. • Youth have less interest in agricultural initiatives within municipal areas. • Failure to effectively implement and monitor the progress of LED strategies. • Lack of capacity for business planning to link Municipal and sector department/IDP infrastructure and service delivery into LED strategy and sustainable implementation for growth and development.

3.5.2. Lephalale SDF, 2017: Spatial Vision and Development Objectives

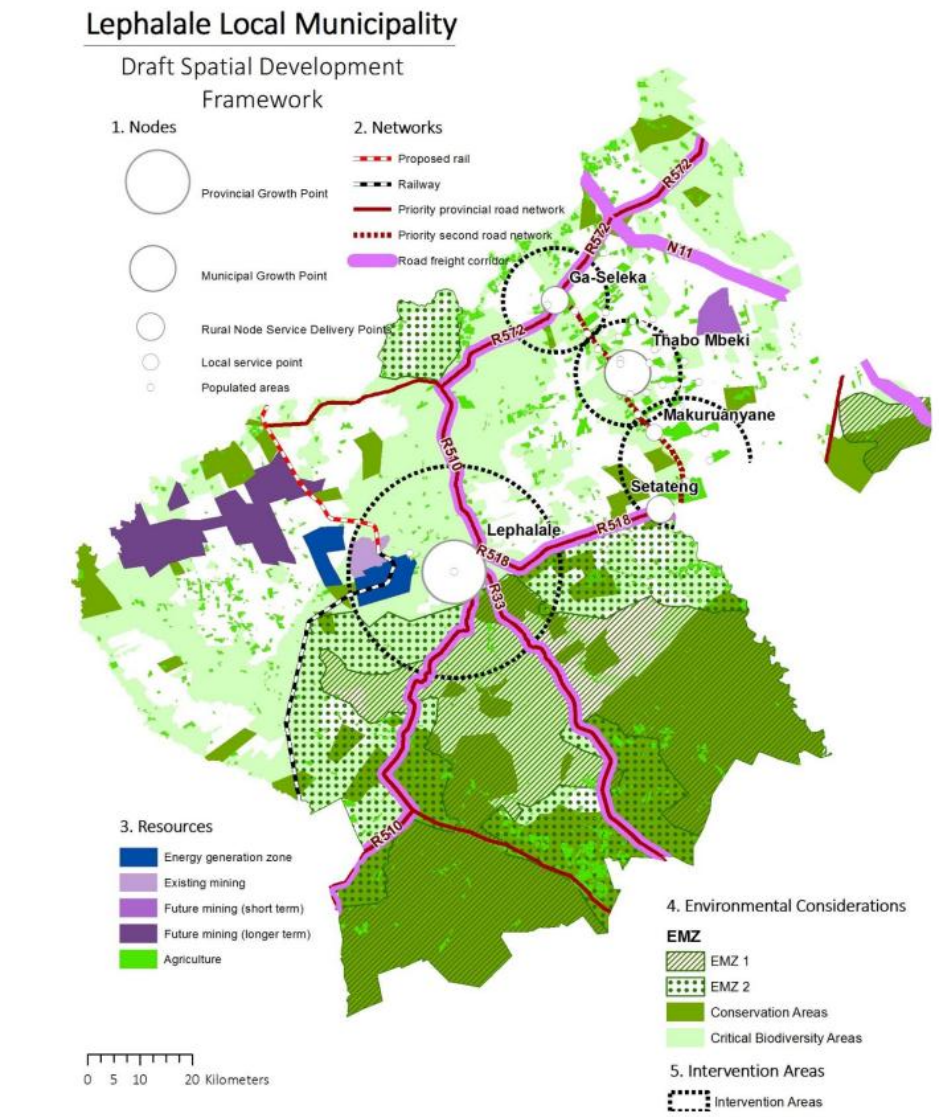
The 2017 SDF vision for Lephalale is as follows:

"Lephalale To build a vibrant city and be the energy hub of Africa".

- We are committed to rural development, providing quality, sustainable, affordable services, financial viability and good governance, local economic development, and job creation.
- Capacitate disadvantaged groups
- Protect the environment and improve community well-being
- Create a conducive environment for businesses to invest and prosper
- Enhance revenue and financial management
- Rational planning to bridge first and second economies and provide adequate land for development
- Provide quality and well-maintained infrastructural services in all municipal areas
- Responsible, accountable, effective and efficient corporate governance
- Improve functionality, performance and professionalism".

Vision for the Rural Focus Area:

"Ensure sustainable livelihoods for those households residing in the rural areas of the municipality through proper planning and adequate linkage to rural development programs and products while at the same time protecting valuable environmental and agricultural resources".



Map 13. Lephalale Spatial Development Framework, 2017.

Nodal Hierarchy

Provincial growth point: Lephalale/Onverwacht/Marapong

- The node forms the spatial centre of the massive Waterberg Coal and Energy potential, which is important to the district, the province, and the country.
- The private sector will undertake the bulk of future economic development. Still, it should be supported by public investment in sufficient, high-quality engineering infrastructure and additional social services to serve the fast-growing local population.

Municipal growth point: Thabo Mbeki

- Geographic centre of the rural priority area within Lephalale.

- Proposed prioritising this area to provide engineering infrastructure, higher-order community facilities, and economic infrastructure where relevant.

Rural Service Delivery Points: Ga-Seleka and Shongoane

- Both form the main village amid many small scattered villages isolated/ removed from the provincial road network.
- Serves as a central nodal point among these villages where services will be clustered to benefit the broader area.
- The focus of investment should be on community infrastructure, not economic infrastructure.

Networks and strategic links are identified in line with the 2012 SDF:

Development Corridors (DC) are links or transport routes between nodes with an increased intensity of development (mixed land use) in a linear form along the entire route/corridor or at strategic intersections with lower-order routes along such a corridor.

The following corridors have been identified:

- DC 1 – the Setateng/Lephalale/Steenbokpan Development Corridor. This DC is the most important corridor in the study area, and it links the largest part of Limpopo (from Polokwane) with Lephalale. It would especially link "external areas" with the core of the envisaged energy hub. It also has a very important "internal function" to fulfil. In linking Polokwane with Lephalale PGP, the eastern rural residential settlements are connected with the Lephalale PGP. With the view of the energy hub in mind, it is more important to note that this DC stretches beyond Lephalale PGP to link with Steenbokpan – the new/proposed Local Service Point (LSP) – in the western parts of the study area.
- DC 2 – the Gauteng/Vaalwater/Lephalale Development Corridor. This DC links Gauteng and other parts of the Waterberg via Vaalwater with the Lephalale PGP. As in the case of DC1, this corridor links "external areas" with the core of the envisaged energy hub and serves the Waterberg biosphere and associated tourism activities. Hence, this corridor should focus on tourism and nature conservation activities, linking the "inland" of the biosphere with the "outside world".
- DC 3 – the Mokopane/Tom Burke/Botswana Development Corridor. This DC is distinguished from the other two corridors by its character as a national route between Botswana and Limpopo. At this point, it also links Lephalale with Botswana and serves as a major "export route" for products such as red meat. Therefore, the Strategic Links (SL3 & SL4) between Lephalale and Tom Burke also play an important role. This DC is consequently maintained as an important export corridor running through the study area and may hold future potential for development should closer links with Botswana be established due to the prospective development of the energy hub in Lephalale.

Strategic Links (SL) are link roads or transport routes between nodes and Development Corridors that provide connectivity between such points. They may also link internal nodes with outside areas (e.g., other municipalities or outside nodes).

Table 6. SDF 2017 Proposed Strategic Links.

Strategic Link and Description	Strategic Importance
SL1 - R516 and R510 – From Vaalwater to Lephalale	Alternative link between Vaalwater and Lephalale and link from Thabazimbi.
SL2 - R510 – From Thabazimbi to Lephalale	Link from Thabazimbi to Lephalale
SL3 - R510 – From Lephalale to Stockpoort	Link from Lephalale to Stockpoort and Tom Burke LSP's
SL4 - R572 – From R510 to Tom Burke/DC3	Link Lephalale and rural areas with DC3 and Tom Burke LSP.
SL5 - Road between SL 4 and SL 10, finally lining to DC 1 through rural settlements.	Link rural settlements and Thabo Mbeki MGP with Lephalale PGP via DC1
SL6 - District road between R510 and Steenbokpan	Link Steenbokpan with Thabazimbi and Vaalwater
SL7 - District road between Steenbokpan and Stockpoort	Link Steenbokpan with Stockpoort and Botswana
SL8 - Urban arterial route between DC1 & DC2, running through Lephalale PGP	Connect PGP with passing DC's and provide for internal connectivity between neighbourhoods/strategic areas within PGP. Also strategic link to proposed airport
SL9 - Urban arterial route between DC1 & DC2, running through Lephalale PGP	Connect PGP with passing DC's and provide for internal connectivity between neighbourhoods/ strategic areas within PGP, especially Marapong with Onverwacht and Altoostyd.
SL10 - District road between Marnitz running through rural settlements and finally linking with R518 which becomes DC 1.	Link Marnitz with rural settlements and DC1.
SL11 - District road between R510 (from Vaalwater & Thabazimbi) and Stockpoort passing close to existing PGP.	Link road for purposes of haul road transport.
SL12 - Road between Lephalale PGP (passing Marapong) up to District Road.	Linking Lephalale PGP and DC1 with SL 11. Linking PGP with Stockpoort.

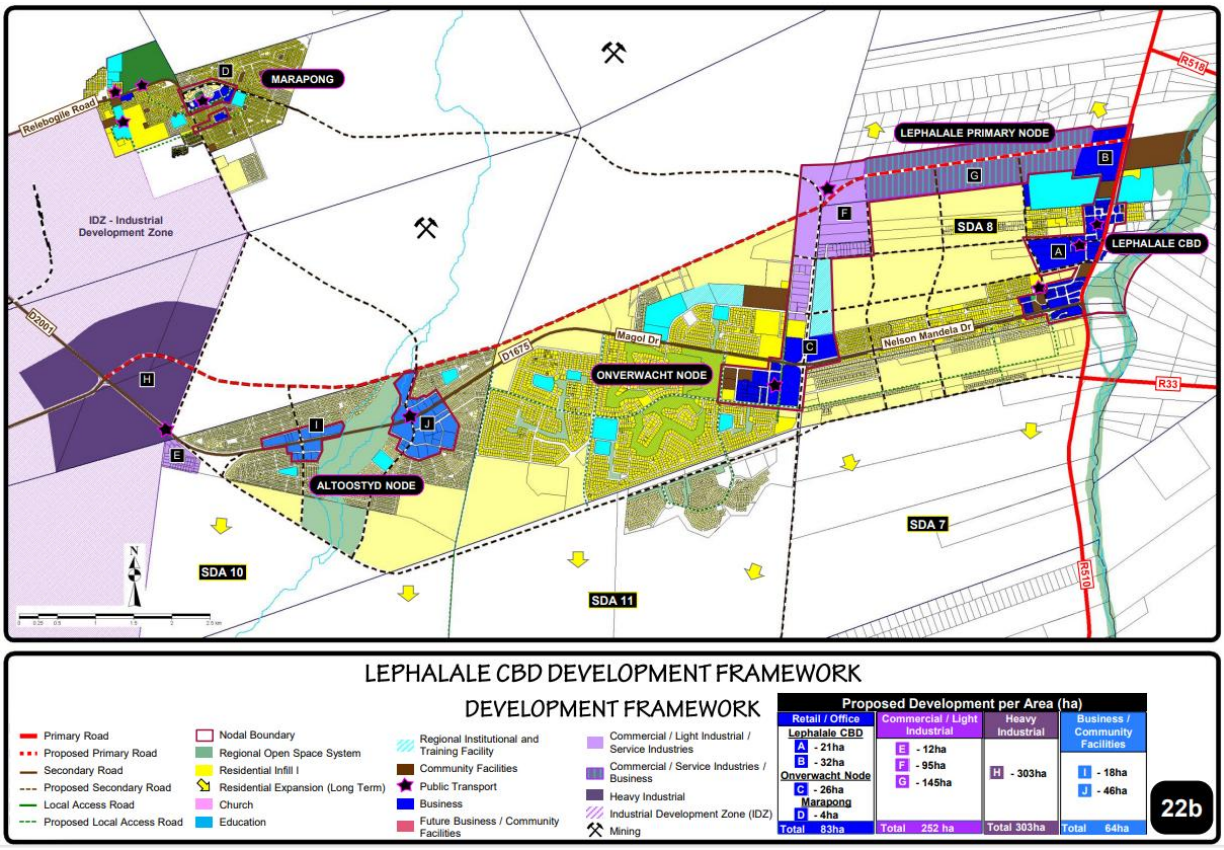
In addition to the above development corridors and strategic links, an important component of the SDF network element is the proposed railway from the coalfields to the Thabazimbe rail link. Provincial and national roads should be maintained to allow them to function as rad freight corridors. The district road D3110 from Ga-Seleka to Setateng is very important, ensuring connectivity throughout that subregion.

The 2017 SDF also promoted transit-oriented Development (TOD) in the Lephalale/Onverwacht/Marapong node through a Growth and Development Strategy.

3.5.3. Lephalale CBD Development Plan, 2013

The Lephalale CBD Development Plan was developed in 2013 and aimed at revitalising the Central Business District (CBD) such that the living conditions of Lephalale and Marapong areas were upgraded, "creating a functional urban environment and rehabilitating the dysfunctional components of the CBD areas with economic development". In setting out to shape the spatial structure and influence future development of the CBD area, the Plan proposed interventions for the CBD's spatial, economic, social and environmental aspects.

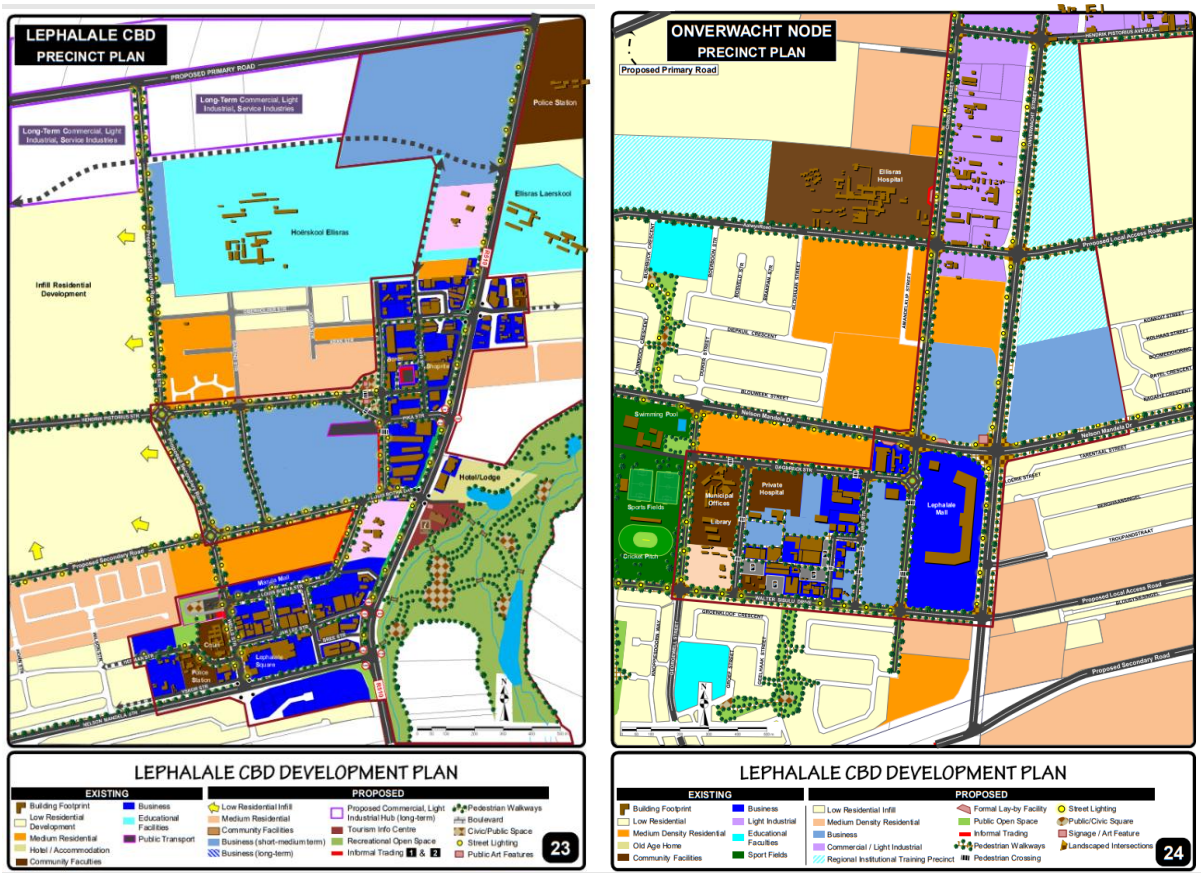
The CBD Plan (refer to 14 below) proposes the construction of a northern and southern bypass route, which forms extensions of the existing regional network and directs the regional traffic around Lephalale Town. The north bypass is proposed as a priority for construction as it will likely stimulate the northward expansion of Lephalale CBD and the Onverwacht light industrial area, creating a new Primary Activity node and economic development anchor in the north. Once developed, the strip serves as an interface between mining activities in the north and the town while protecting the residential areas.



Map 14. Lephalale CBD Development Framework.

Development Principles (DPs) of the CBD Development Plan:

- DP 1. To protect and optimally utilise the regional open space system;
- DP 2. To construct the northern bypass road;
- DP 3. To consolidate the Lephalale CBD and Onverwacht activity node into a new Primary Activity Node and establish a number of supporting secondary activity nodes;
- DP 4. To link Marapong with Lephalale Town;
- DP 5. To consolidate the bulk of business activity within the primary and secondary activity nodes;
- DP 6. To promote commercial and light industrial activities in the northern parts of the primary activity node;
- DP 7. To consolidate heavy industrial activities within the Industrial Development Zone (IDZ);
- DP 8. To maintain existing community facilities in the primary activity node and to promote the consolidation of new community facilities in the Altoostyd node;
- DP 9. To prioritise residential infill residential development within the existing urban footprint between the Altoostyd node, the northern bypass and Lephalale CBD, and to support residential densification around activity nodes;
- DP 10. To enhance the aesthetic quality of nodes by implementing urban design guidelines and
- DP 11. To upgrade and expand engineering service infrastructure to accommodate and guide the imminent growth of Lephalale Town



Map 15. Precinct Plans for Onverwacht and Lephalale CBD nodes (source: CBD Development Plan, 2013).

3.5.4. Lephalale Integrated Infrastructure Master Plan, 2021

Purpose of Plan:

The purpose of the IIMP, is to provide a short-, medium-, and long-term plan that first understands the current infrastructure of the municipality, and how capable it is with meeting the coming demands. The municipality has received increased growth due to the current mining and business economic activity. This has put pressure on the bulk reticulation infrastructure within the municipality. The document outlines the strategic framework for the development and improvement of infrastructure in the Lephalale Municipality. The plan also emphasizes the

importance of environmental sustainability and community involvement in the planning and implementation processes. It breaks these items down as follows:

1. Outline the spatial development growth patterns of the municipality.
2. Determine the status quo of the municipality's existing infrastructure (water, sewer, electricity, roads, storm water, and solid waste), and whether it is capable of meeting current demands.
3. Determine future infrastructure demands (water, sewer, electricity, roads, storm water, and solid waste), to meet the spatial development needs of the short-, medium-, and long term.
4. Outline the institutional capacity needed to meet the short-, medium-, and long-term plans to meet the infrastructure demands.

WATER

There are currently 8 water schemes in the municipality. These schemes cater for both the Urban area, and Rural region and the two farming areas of Marnitz, and Tom Burke. The two areas serviced in the Urban Areas are Lephalale and Marapong. While in the Rural region, there are a total of 40 settlements that are catered for.

The supply of the Urban areas is through the Mokolo Dam, while the Rural Regions are supplied via groundwater sources. These settlements rely on a communal storage reservoir or tanks where water is reticulated with street standpipes. Some households have installed private boreholes. As a result, there is a need to update the

infrastructure provision in this area through identifying assets, and potential funders to replace the aging infrastructure.

i. Water Supply: The plan outlines strategies to ensure a sustainable and reliable water supply for the growing population and industrial activities in Lephalale. This includes the development of new water sources, upgrading existing infrastructure, and implementing water conservation measures.
ii. Sanitation: Improving sanitation facilities is a priority. The plan includes projects to expand and upgrade sewage treatment plants, as well as initiatives to promote proper sanitation practices in communities.
iii. Water Quality: Ensuring the quality of water is crucial. The plan highlights the need for regular monitoring and maintenance of water quality standards to protect public health.
iv. Infrastructure Development: The plan proposes the construction of new pipelines, reservoirs, and water treatment facilities to enhance the water distribution network and meet future demands.
v. Environmental Sustainability: The plan emphasizes the importance of sustainable water management practices to minimize the environmental impact of water extraction and usage.
vi. Community Involvement: Engaging local communities in water management initiatives is essential. The plan encourages community participation in water conservation efforts and decision-making processes.

Water Supply Schemes

The Settlements in the LLM area with the water supply schemes as per the DWS database can be seen below. There are essentially 8 schemes without farming that are included under 1 scheme. The main schemes are:

1. The “urban” scheme that supplies Lephalale and Marapong (Lephalale Urban Scheme)
2. The “rural” schemes that supply the 40 rural settlements i.e.
    - Ga-Pahladira Rural Water Scheme - 1 settlement
    - Ga-Seleka Water Scheme - 11 settlements
    - Mmaletswai Rural Water Scheme -13 settlements
    - Setuteng water scheme - 4 settlements
    - Witpoort Water Scheme -11 settlements
3. Marnitz and Tom burke schemes.

No	Water Scheme Name	Settlement Name
1	Ga-Phahladira RWS	Ga-Phahladira
2	Ga-Seleka RWS	Botshabelo
	Ga-Seleka RWS	Tshemelamfake
	Ga-Seleka RWS	Ga-Seleka
	Ga-Seleka RWS	Kauletsi
	Ga-Seleka RWS	Lebu
	Ga-Seleka RWS	Madibaneng
	Ga-Seleka RWS	Magadimela
	Ga-Seleka RWS	Sefihlongo
	Ga-Seleka RWS	Moong
	Ga-Seleka RWS	Morwe
	Ga-Seleka RWS	Mothlasedi
3	Lephalale LM Farms Supply	Farms Lephalale LM
4	Lephalale Urban RWS	Lephalale
	Lephalale Urban RWS	Marapong
	Lephalale Urban RWS	Marapong Squatter
5	Marnitz Supply	Marnitz
6	Mmaletswai RWS	Dipompopong
	Mmaletswai RWS	Ditaung
	Mmaletswai RWS	Mmaletswai
	Mmaletswai RWS	Mokuruanyane Neckar
	Mmaletswai RWS	Ga-Mocheko
	Mmaletswai RWS	Ga-Maeteletsa
	Mmaletswai RWS	Hlagalakwena
	Mmaletswai RWS	Keletse le Mma
	Mmaletswai RWS	Kiti
	Mmaletswai RWS	Mokuruanyane Abbottspoort
	Mmaletswai RWS	Motsweding
	Mmaletswai RWS	Reabetswe
7	Setuteng RWS	Bangalong
	Setuteng RWS	Ga-Monyeki
	Setuteng RWS	Matladi
	Setuteng RWS	Setateng
8	Tom Burke Supply	Tom Burke
9	Witpoort RWS	Botsalanong
	Witpoort RWS	Thabo Mbeki
	Witpoort RWS	Tlapa le Borethe
	Witpoort RWS	Witpoort CBD
	Witpoort RWS	Kgobagodimo
	Witpoort RWS	Kopanong
	Witpoort RWS	Lepurupurung
	Witpoort RWS	Letlora
	Witpoort RWS	Segale
	Witpoort RWS	Senoela
	Witpoort RWS	Mongalo

Planned Projects

Specific projects highlighted by the LLM are as follows:

- Conversion of 600mm diameter pipeline from raw water to clean water (ZWTW to Matimba power station).
- New 600mm diameter pipe line – T-off from line in 1 above to 3.5Ml reservoir in Marpong.
- New pipeline between 3.5Ml reservoir in Marapong to 1.5 Ml reservoir in Marapong.
- Replacement of AC pipes.
- Structural investigation into 8.5Ml reservoir in Marapong.
- Additional 8Ml reservoir with pipeline from 3.5Ml reservoir to new 8Ml reservoir for Marapong.
- Eight (8) additional Jo-Jo tanks for Marapong East.
- Exxaro planning to build 5000 houses North of Marapong.
- Construction of the pipeline to transfer treated waste water from the larger Zongesien WWTW to Steenbokpan was started. Upgrading of Zongesien WWTW to 16Ml/d not started.
- Upgrading of Witpoort WWTW and sewer reticulation.
- Upgrading of water supply in Witpoort (full house connections).

Sanitation Schemes

The following table is a summary of the sanitation schemes and WWTW in the LLM area as per the DWS database:

Scheme/WWTW Name	DWS Scheme Number	Water Management Area
Exxaro WWTW	LPWDMSTW026	Mokolo
Nelsonskop (Eskom) WWTW	LPWDMSTW003	Mokolo
Marapong (Zongesien) WWTW	LPWDMSTW002	Mokolo
Paarl WWTW	LPWDMSTW004	Mokolo
Witpoort WWTW	LPWDMSTW015	Lephalale

Sewer Pump Stations

Settlement	Number of pump stations
Marapong	2
Lephalale	17
Altoostyd	-
Witpoort	3
Onverwacht	18
Steenbok pan	1

Projects planned or underway

- Treated effluent pipe from Paarl WWTW to Grootgeluk Mine – Installation of 450 mm diameter pipe (215 l/s) to supply Grootgeluk with treated effluent up to 2030.
- Treated effluent pipe from Marapong WWTW to Grootgeluk Mine – Installation of a 250 mm diameter pipe to supply all the treated effluent from the Marapong WWTW to Grootgeluk Mine up to 2030.
- Upgrading of Marapong WWTW.
- Formalising of informal areas in Marapong.

- Witpoort- WWTW = ponds old 240kl/d new addition of 500kl/d in process. Total = approximately 750kl/d.
- Witpoort – sewer reticulation line in process of being installed - outflow to ponds- Septic tanks will be connected to water borne system.
- Zongesien WWTW 1,5Ml expansion started -not completed.
- Altoostyd developers must assist to expand Paarl WWTW.
- New sanitation projects- 637 pits at Shongoane, 122 pits at Seleka.
- 1 honey sucker owned by LLM – home owners must pay private suckers to clean- LLM no O+M budget to clean pits.
- Witpoort WWTW – 2 operators at plant- need team at villages.
- LLM priorities for sanitation:
    - Re engineer water borne system to remove various small PSs - example PS 19 and 20 very close
    - Replace AC pipes (continuation) o Upgrade of Zongesien WWTW to 16Ml/d - Plan is to gravitate portion of Altoostyd sewer to Marapong
    - Upgrade Paarl WWTW- currently 10Ml/d - licence is 10Ml/d - no metering. Altoostyd developers must contribute towards Paarl WWTW upgrading
    - PS 23 is in riverbed – investigation and changes required o Main lines to PS 1 capacity is inadequate
    - Line to Paarl WWTW from PS1 was upgraded recently

ELECTRICITY

NSK has been appointed to contribute to the Lephalale Local Municipality (LLM) Integrated Infrastructure Master Plan (IIMP) as part of its constitutionally mandated role. LLM currently lacks an Electricity Master Plan (EMP) and a Municipal Power Resource Network and Renewable Energy (MPRNRE) plan for its entire area. Given its electricity distribution license, the municipality generates revenue from electricity services, and the EMP will provide recommendations to enhance the efficiency, financial viability, and institutional structure of its electrical department.

The Masterplan serves as a network planning process to assess infrastructure capacity in meeting industry standards for existing loads, future demand, and reliability. It will also address non-revenue electricity losses and strategies to mitigate them. The successful development of these plans will facilitate sustainable infrastructure growth, cost-effective development, and integration with the municipality's broader goals.

Additionally, the EMP will outline a clear business model with strategic actions for key infrastructure initiatives in the Integrated Development Plan (IDP), tackling financial risks, institutional needs, and long-term sustainability. Ultimately, the plan aims to improve service delivery and eliminate electricity infrastructure backlogs. The study's primary goal is to provide LLM with a medium- to long-term roadmap for maintaining and expanding its electrical

infrastructure to meet future demand. It also evaluates existing infrastructure, proposes refurbishment and expansion, and identifies locations for new developments.

i. Electricity Supply: The plan outlines strategies to ensure a reliable and sustainable electricity supply to meet the growing demands of residential, commercial, and industrial sectors.
ii. Infrastructure Upgrades: The plan includes projects to upgrade and expand the existing electricity distribution network. This involves the construction of new substations, upgrading transmission lines, and improving the overall efficiency of the electricity grid.
iii. Renewable Energy: Promoting the use of renewable energy sources is a significant focus. The plan encourages the development of solar and wind energy projects to diversify the energy mix and reduce dependence on fossil fuels.
iv. Energy Efficiency: The plan emphasizes the importance of energy efficiency measures. This includes initiatives to reduce energy consumption, promote the use of energy-efficient appliances, and implement smart grid technologies.
v. Economic Impact: The development of the electricity infrastructure is expected to have a positive impact on the local economy by attracting investment, creating jobs and supporting the growth of various industries.
vi. Environmental Sustainability: The plan highlights the need for environmentally sustainable practices in the development and operation of electricity infrastructure. This includes minimizing the environmental impact of energy projects and promoting the use of clean energy sources.
vii. Community Involvement: Engaging local communities in the planning and implementation of electricity projects is essential. The plan encourages community participation and aims to ensure that the benefits of improved electricity infrastructure are shared with residents.

ROADS

Lephalale LM has a road network spanning 1 055km with 233km paved and 822km unpaved. While these roads provide adequate connectivity to national, provincial and district routes, the municipality faces several challenges. Many primary roads are in poor condition due to insufficient maintenance, which disrupts the movement of goods, services and people within and beyond the area. Contributing factors to this deterioration include limited funding, shortages in human resources, a lack of equipment and inadequate capacity to sustain the existing infrastructure.

The transport strategy for Lephalale Local Municipality (LLM) highlights key areas for improvement. Studies are recommended to assess pedestrian safety along major routes, particularly at intersections on Nelson Mandela Drive and O.R. Tambo Road (R510). These may lead to upgrades or the construction of pedestrian bridges. Additionally, safety reviews for non-motorized transport (NMT) near schools and high-risk areas are necessary, along with ongoing maintenance of NMT facilities.

For freight transport, collaboration with Transnet is encouraged to align with SANRAL's long-term plans. Regular engagement through existing forums and transport initiatives is advised, along with the provision of adequate truck stops on major roads, while restricting heavy vehicle movement on lower-order roads.

Regarding public transport, the municipality should provide security services and enforce regulations to ensure vehicles are roadworthy and operators comply with legal requirements. Given LLM's role in energy generation, maintaining and enhancing transport linkages is crucial. Continuous review of NMT, road conditions, and public

transport connectivity is necessary, and regular engagement with the Waterberg District Municipality is recommended to support these efforts.

i. Road Network Expansion: The plan emphasizes the need to expand the existing road network to accommodate the growing population and economic activities. This includes the construction of new roads and the extension of existing ones.
ii. Road Maintenance: Regular maintenance of roads is highlighted as a priority to ensure safe and efficient transportation. The plan includes initiatives for the repair and upgrading of deteriorating road surfaces.
iii. Connectivity: Improving connectivity between different parts of the municipality is a key focus. The plan aims to enhance access to residential, commercial, and industrial areas by developing strategic road links.
iv. Economic Development: The development of road infrastructure is seen as a catalyst for economic growth. Improved roads are expected to attract investment, support local businesses, and create job opportunities.
v. Safety Measures: The plan includes measures to improve road safety, such as the installation of traffic signals, pedestrian crossings, and road signage. It also emphasizes the importance of road safety education for the community.
vi. Environmental Considerations: The plan addresses the environmental impact of road construction and maintenance. It promotes the use of environmentally friendly materials and practices to minimize negative effects on the environment.

STORMWATER INFRASTRUCTURE

Lephalale's road network is primarily rural, with stormwater drainage systems reflecting this characteristic. Onverwacht and Lephalale have paved residential streets with drainage infrastructure, whereas most municipal roads in rural areas rely on surface-level drainage, open channels, and occasional culverts. Some residential areas, such as Marapong and Thabo-Mbeki, lack stormwater drainage infrastructure. Township developers must manage stormwater flow both upstream and within developments by implementing effective drainage systems that align with municipal guidelines. Minor drainage systems often serve multiple land use areas, so it is recommended that these be designed for a five-year recurrence interval storm. A watershed along the western

boundary of Onverwacht has influenced stormwater infrastructure development, with sections of major drainage systems constructed near Mokolo River due to space constraints in existing developments.

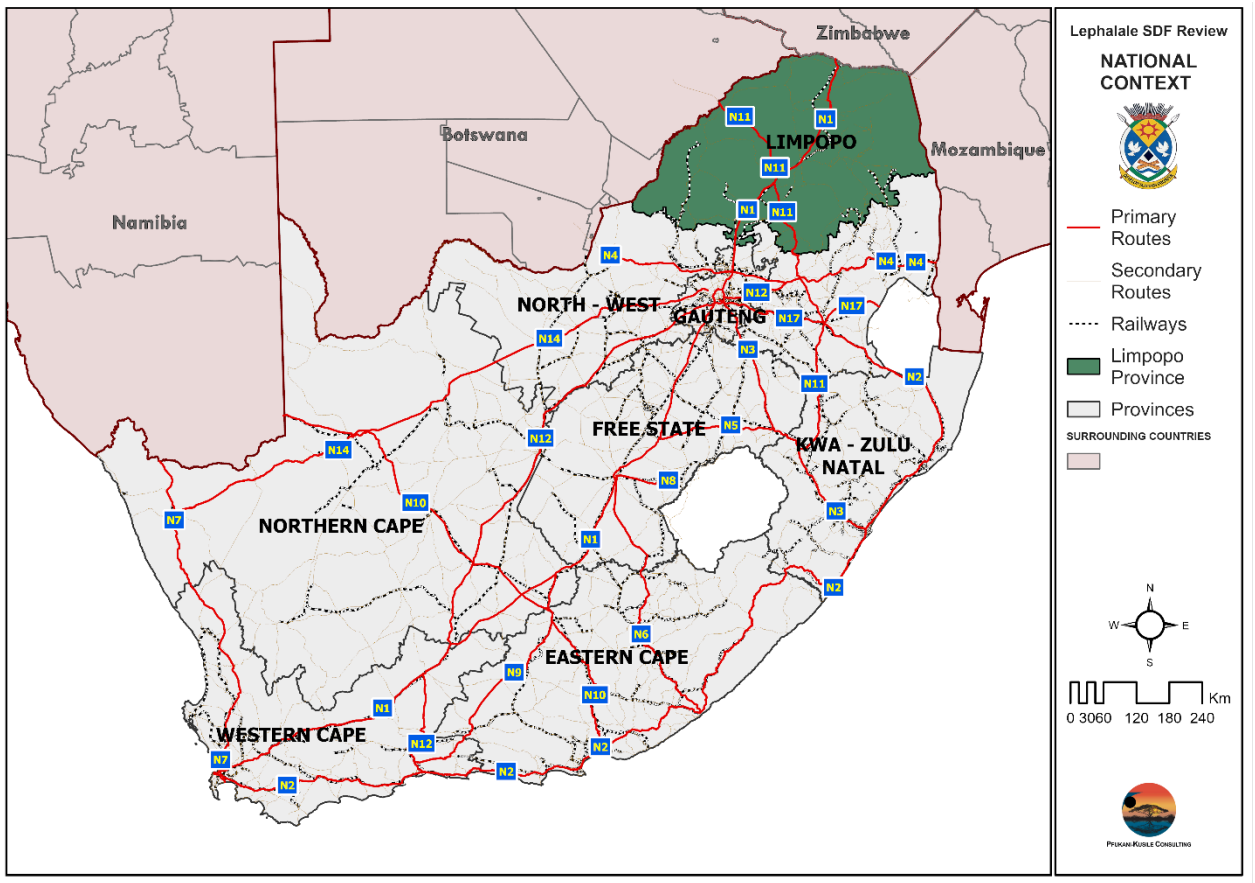
i. Stormwater Infrastructure: The plan outlines the need for the development and maintenance of stormwater infrastructure to manage runoff and prevent flooding. This includes the construction of new stormwater drains, culverts, and retention ponds.
ii. Flood Prevention: The plan emphasizes the importance of flood prevention measures to protect residential, commercial, and industrial areas from potential flood damage. This involves the implementation of flood control systems and the improvement of existing drainage networks.
iii. Environmental Impact: The plan highlights the need to minimize the environmental impact of stormwater runoff. This includes measures to reduce soil erosion, protect natural watercourses, and promote the use of green infrastructure solutions such as permeable pavements and rain gardens.
iv. Community Involvement: Engaging local communities in stormwater management initiatives is essential. The plan encourages community participation in the planning and implementation of stormwater projects and promotes public awareness of the importance of proper stormwater management.
v. Sustainability: The plan emphasizes the importance of sustainable stormwater management practices. This includes the use of innovative technologies and best practices to ensure the long-term effectiveness and resilience of stormwater infrastructure.

Purpose of Plan:

4. SITUATIONAL ANALYSIS

4.1. Regional Context

Lephalale Local Municipality is in the northwestern part of the Waterberg District of Limpopo. It borders with four local municipalities (Blouberg, Modimolle, Mogalakwena and Thabazimbi). Its north-western border is also part of the International Border between South Africa and Botswana. The Lephalale Municipality is the biggest Municipality in the Limpopo province (covering 14 000km^2). Lephalale is 280 km from Tshwane and a recognised gateway to Botswana and other Southern African Countries. The town Lephalale (Ellisras/Onverwacht/Marapong) is located approximately 40 km from the border of Botswana.



Map 16. Lephalale Regional Context Map.

4.2. Local Context

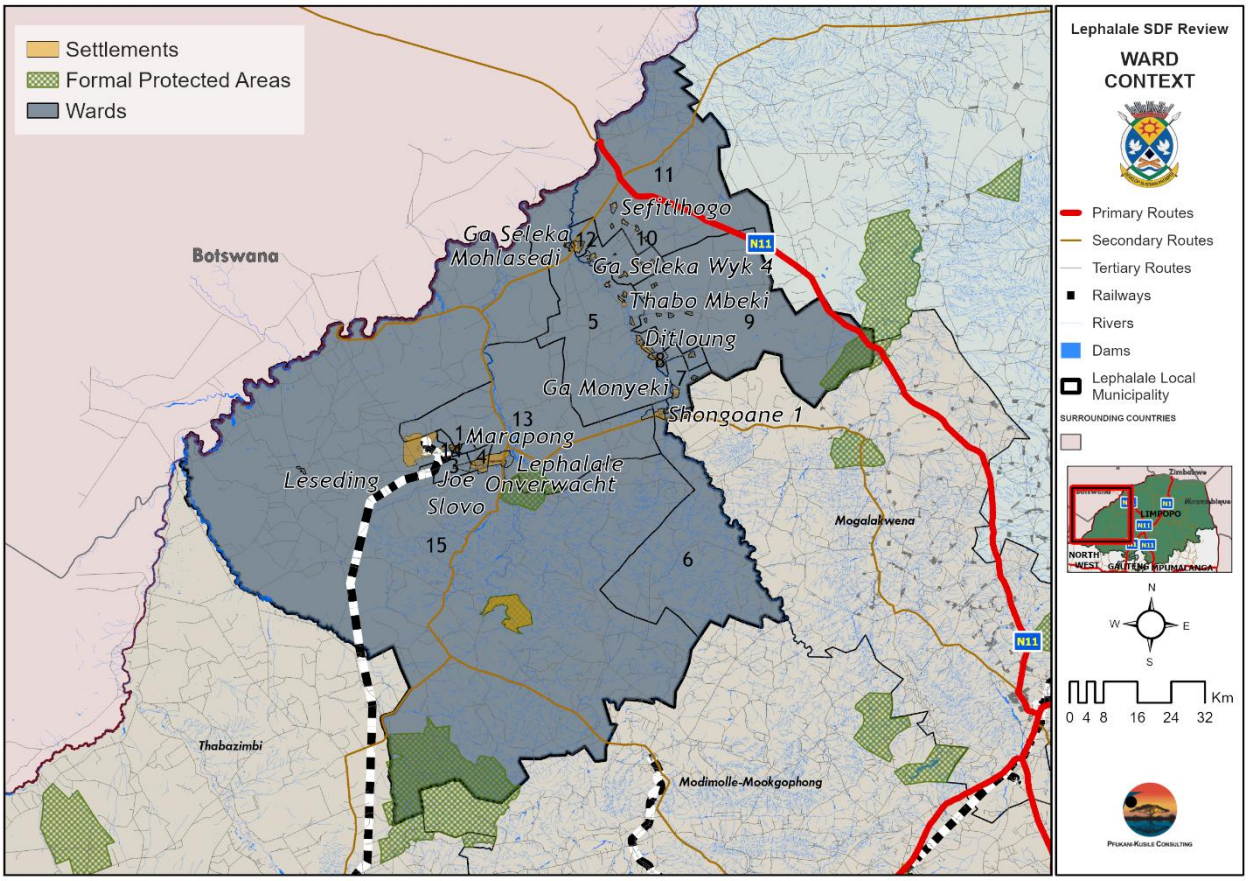
The urban form of Lephalale Local Municipality consists of 38 villages, 1 formal town, and 2 townships. The municipality's different land uses include businesses, offices, industrial parks, residential, and institutional uses. The urban areas (formal towns and townships) include:

- Lephalale Town/CBD
- Marapong Township
- Onverwacht/ Ellisras Township

4.3. Institutional Context

4.3.1. Municipal Wards and Composition

Lephalale Local Municipality comprises 15 wards, presented in Map 17 below.



Map 17. Lephalale LM Ward Context.

4.3.2. Land Ownership and Tenure

According to the IDP 2023-27, private ownership is the most prevalent form of land tenure in Lephalale LM (56,38%) and applies to Lephalale town, to almost all the local service points and all farms.

Communal land ownership applies to all the population concentration points and all 38 scattered villages, making up almost 10% of the municipal surface area. Although communal land is technically vested in the national government, residents use it.

A third form of land tenure applies in Marapong Township: a deed of grant, a proclamation that became obsolete after the first democratic election 1994. A deed of grant is less than full ownership. Since 1994, some grant deeds have been converted to full ownership in the Extended Benefit Scheme. The Limpopo Department of Local Government and Housing owns large tracts of land in Marapong. The IDP points out the urgent need for ownership of this land to be transferred to the local Municipality.

Land ownership in Lephalale is illustrated in Figure 14 below. According to the IDP 2023-27, 92% of rural areas are communal land under traditional authority. This challenges the municipality's authority over its jurisdiction of the rural regions, making access, planning, and control difficult.

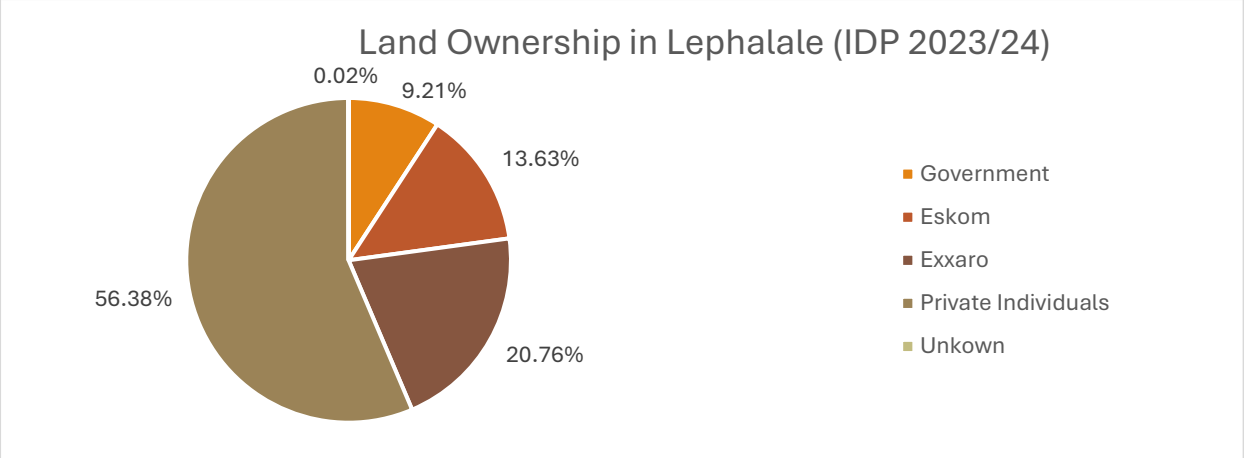
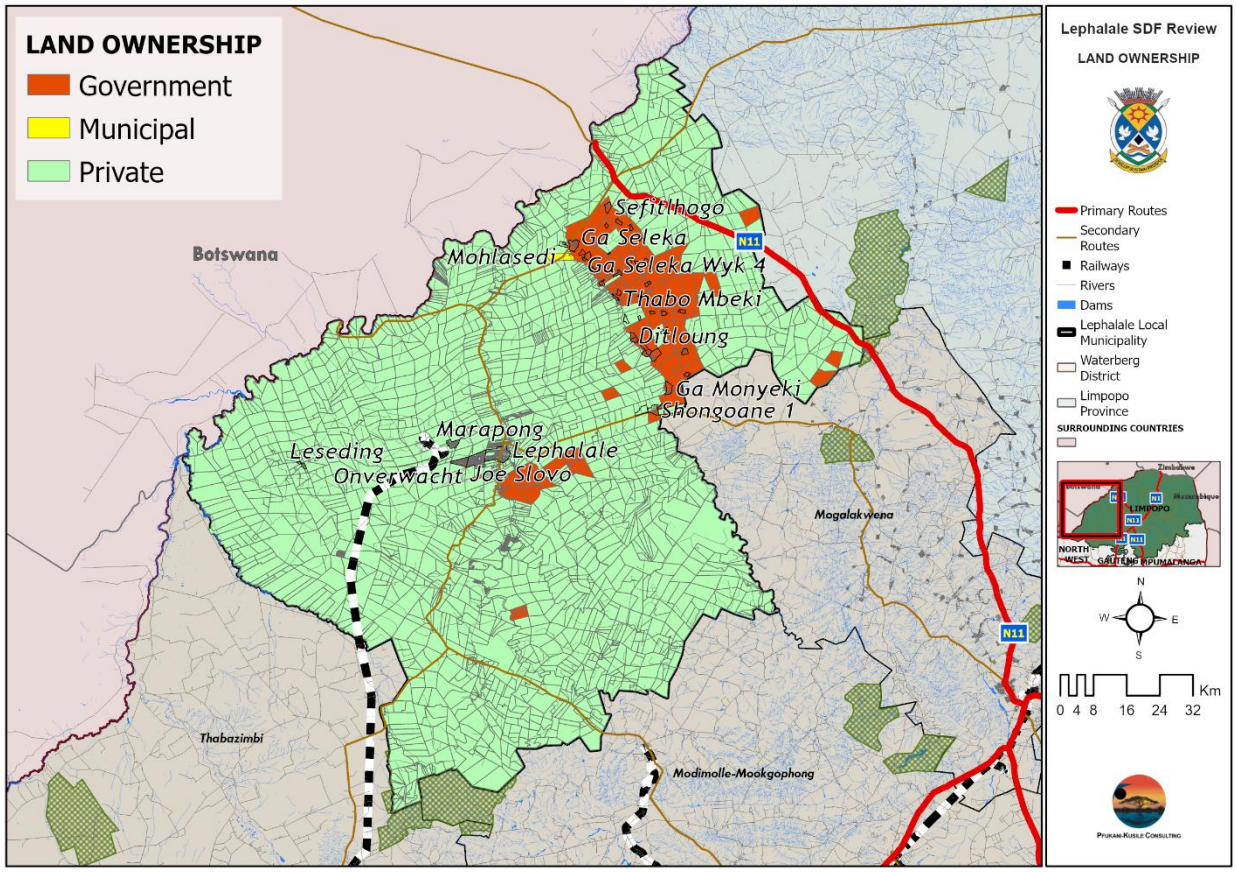
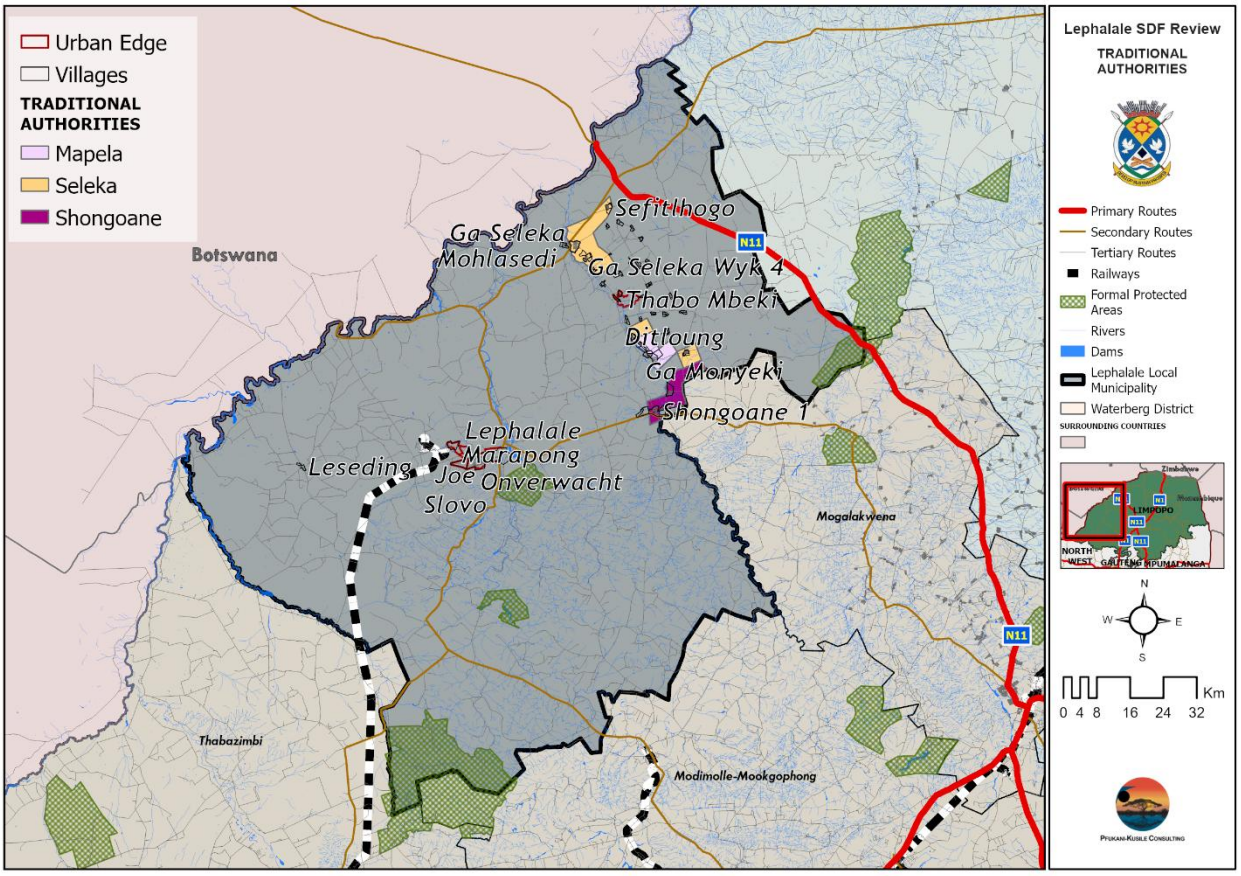


Figure 14. Land Ownership in Lephalale (source: Lephalale IDP 2023-27).



Map 18. Lephalale Land Ownership Distribution.



Map 19. Land Owned by Traditional Authorities.

4.3.3. Land Claims

Approximately 197 831ha, representing 14,1% of the total municipal land area, is subjected to land claims (IDP 2023-27). Almost 200 land claims were lodged with the Land Restitution Commission in 2001, however of these:

- Only 28 claims in Lephalale have been gazetted.
- Only 52 of these claims were accepted, 28 of which have been settled (refer to Table 7), and the rest are in different stages of investigation and negotiation (refer to Table 8).

Table 7. Settled Restitution Land Claims in Lephalale LM (source: IDP 2023-27).

Fin yr	Claim project	Approval date	No of rights restored	Rural	Urban	Landowner	Total	
						Private	State	
04/05	Morongwa community	04/08/13	1	1		319		319
05/06	Tale Ga-Morudu Tripe Phase 2	06/01/31	2	0		3415		3415
06/07	Mosima,Majadibodu and Mabula, Mosima	06/07/10	8	3		9412		9412
	Batlhalerwa community: Shongoane Phase 1	06/11/29	11	1		7720		7720
07/08	Batlhalerwa community: Shongoane Phase 2	07/05/25	2	0		1535		1535
	Batlhalerwa community: Shongoane Phase 3	08/03/17	5	0		5830		5830
			309	23		31190		31190
08/09	Majadibodu community: Phase 2	08/04/11	3	0		1713		1713
	Mabula – Mosima Community; Phase 3	08/04/16	2	0		959		959
	Mabula- Mosima	09/01/27	1	0		859		857

Table 8. Outstanding Land Claims in Lephalale LM (source: IDP 2023-27).

KRP NUMBERS	PROPERTY DESCRIBTION	CLAIMANT	STATUS
2.KRP 6280	New Belgium 608 LR	Mr. L.E Seemise	Further Investigation
3.KRP 1799	Manamane 201 KQ & others	Lucas Mfisa 073 0925 482 Samuel Mfisa 082 830 900	Further Investigation
4.KRP 1617	De Draai 374 LR & Salem 671 LR	Mr. Bellingani D. P	Further Investigation
5.KRP 2432	Essex 71 LR & Other	Mr. Mocheko K. A	Further Investigation
6 KRP 519	Rooikop 277 LR	Mr. Kok JF	Further Investigation
7.KRP 515	Steenbokskloof 331 LR & Other Farms	Mr. Kluyts HPJ	Further Investigation
8.KRP11316	Zeekoeigat 42 LQ& Other Farms	Mr. Lebodi MJ	Further Investigation
9.KRP 1564	Melkbosch125 LR & Others	Kgoshi ZT Seleka	Under Investigations
10.KRP11283	New Belgium 608 LR	Mr. Gouws JF	Under Investigations
11.KRP 1588	Spektakel 526 L.R	Monyeki N. I	
12. KRP 2479	Bellevue 74 LQ	Maluleka F. F	Further Investigation
13.KRP 1614	Nora 471 LR	Shongoane M. A	Further Investigation
14. KRP 12327	Waterval(unclear)	Tlhabadira RM	Further Investigation
15. KRP 2432	Essex 71 LR & others	Seleka Tribe	Further Investigation
16. KRP 6630	Rooipoort 660 LQ	Nkwana FA	Further Investigation
17. KRP 2480	Bellevue 74 KQ	Molele PV	Further Investigation
18. KRP 7297	Unclear	Tayob AB	Further Investigation
19.KRP 11913	Serville 587 LG	Schabart CP	Further Investigation
20. KRP 12319	Unclear	Shadi Lebipi	Further Investigation

Apart from the land claims (restitution), the IDP 2023-27 indicates that there are 344 land redistribution projects in Lephalale Municipality, comprising 62,590 hectares. Most land claims (105) in total are under investigation. The IDP (2023-27) states that "at this stage, the potential impact of these claims on land use planning and management and socio-economic development is unknown".

4.4. Bio-Physical Environment

Lephalale Local Municipality falls within the Waterberg Biosphere region, making it a biodiverse region with properties that must be actively protected and conserved through socio-ecological land management practices that encourage sustainable development and conservation. The municipality is known as "the heartland of the Waterberg bushveld". It boasts scenic natural sites (such as mountains, clear streams and rolling hills), culturally historic geology sites (rock painting), and rich flora and fauna biodiversity (LLM IDP 2023-27). The rich natural character of LLM supports local economic development and is projected to grow further in ecotourism-related economic activities (IDP 2023-27).

4.4.1. Topography and Hydrology

Terrain Type

Lephalale's terrain is derived from slope and relief. Level plains characterise the majority of the municipality with some relief. This type of terrain presents few complications when it comes to service provision and development. High hills, open low mountains, and low mountains characterise the southeastern part of the municipality. This type of terrain is not conducive to development but rather lends itself to conservation and tourism-related land uses and activities—these areas fall within the Waterberg Biosphere.

Hydrology and Water Bodies

Lephalale municipality has four main river channels in the Limpopo River catchment area. The Mokolo River (previously known as the Mogol River) and the Lephalale River (also referred to as the Phalala River) run through the municipal area to the north, with the Matlabas River running along the south-eastern boundary and the Mogalakwena River along the eastern boundary. All four rivers feed into the Limpopo River, which forms the north-western border of South Africa with Botswana.

Flooding is a common occurrence in Lephalale and is related to climate change (i.e. increased rain intensity), soil degradation, destroyed wetland ecosystems, and ineffective stormwater systems. Flooding in the municipality presents a health, sanitation and safety risk to communities, with climatic conditions in Lephalale favourable for incubating and transmitting water-borne diseases.

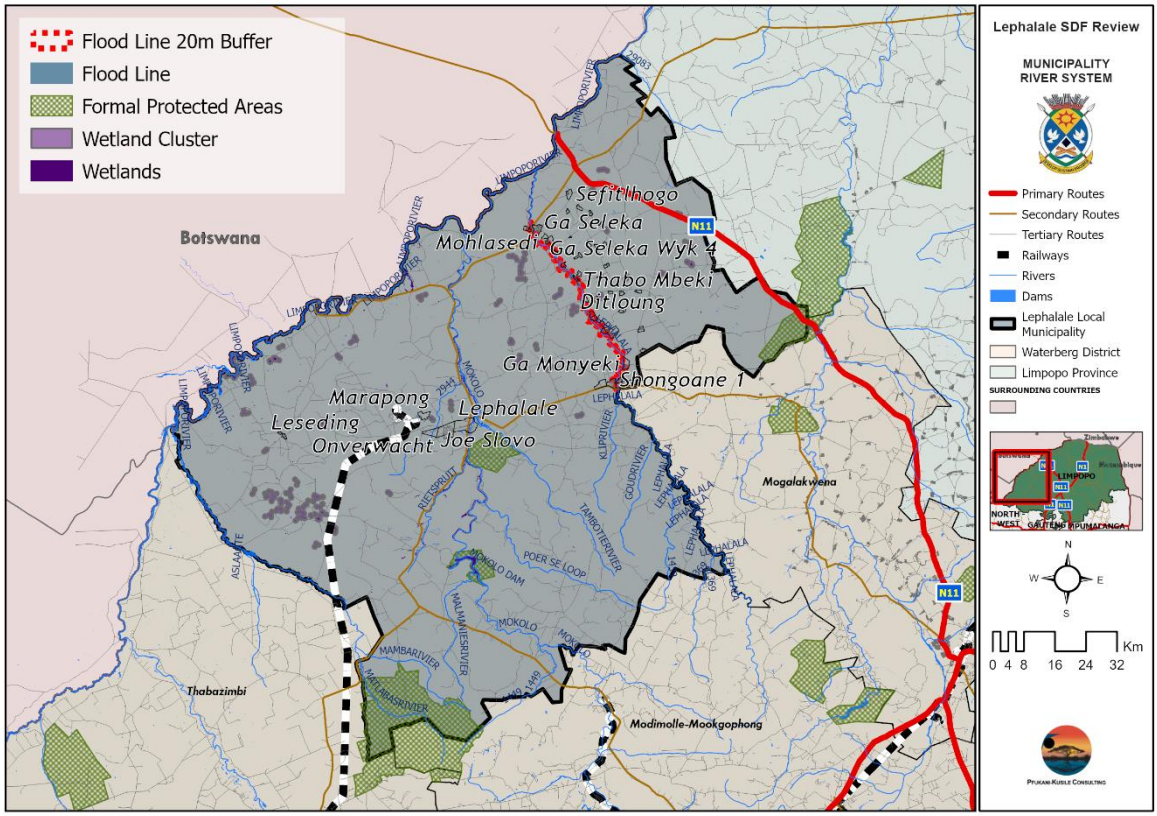
Lephalale is the municipality worst affected by floods in Waterberg District due to overflowing from the Mokolo and Lephalale Rivers. The following communities are most vulnerable to flooding events (Waterberg IDP 2021-26):

- ThaboMbeki Township 177 victims,
- Mamojela Park informal settlement ±3000 people are being evacuated,
- Mogol farming communities along D171 route and Beska bridge,
- Mokuruanyane, Kauletsi, Martinique, Abbotspoort, Shongoane 1-3 and Ga-Seleka

The Lephalale SDF 2017 noted that a "study commission in 2010 developed a 1:100-year flood line for the Lephalale River between the R518 and R572" and found that almost all villages located alongside the river are at risk should the river flood—approximately 1500 structures are affected. Table 9 below highlights which settlements are affected by the Lephalale flood line, with Thabo Mbeki being the most affected.

Table 9. Settlements Affected by the Lephalale Flood Line (source: LLM SDF 2017).

Settlement	Structures
Abbotspoort	69
Beauty	174
Bossche Diesch	45
Ditloung	19
Ga-Monyeki	27
Kauletsi	3
Farms and rural areas	178
Letlora	24
Martinique	16
Matladi	1
Necker	28
Nkotomeng	10
Setateng	53
Shongoane	3
Thabo Mbeki	**832**
Tshelamake	12
Villa Nora	8
Total	1 502



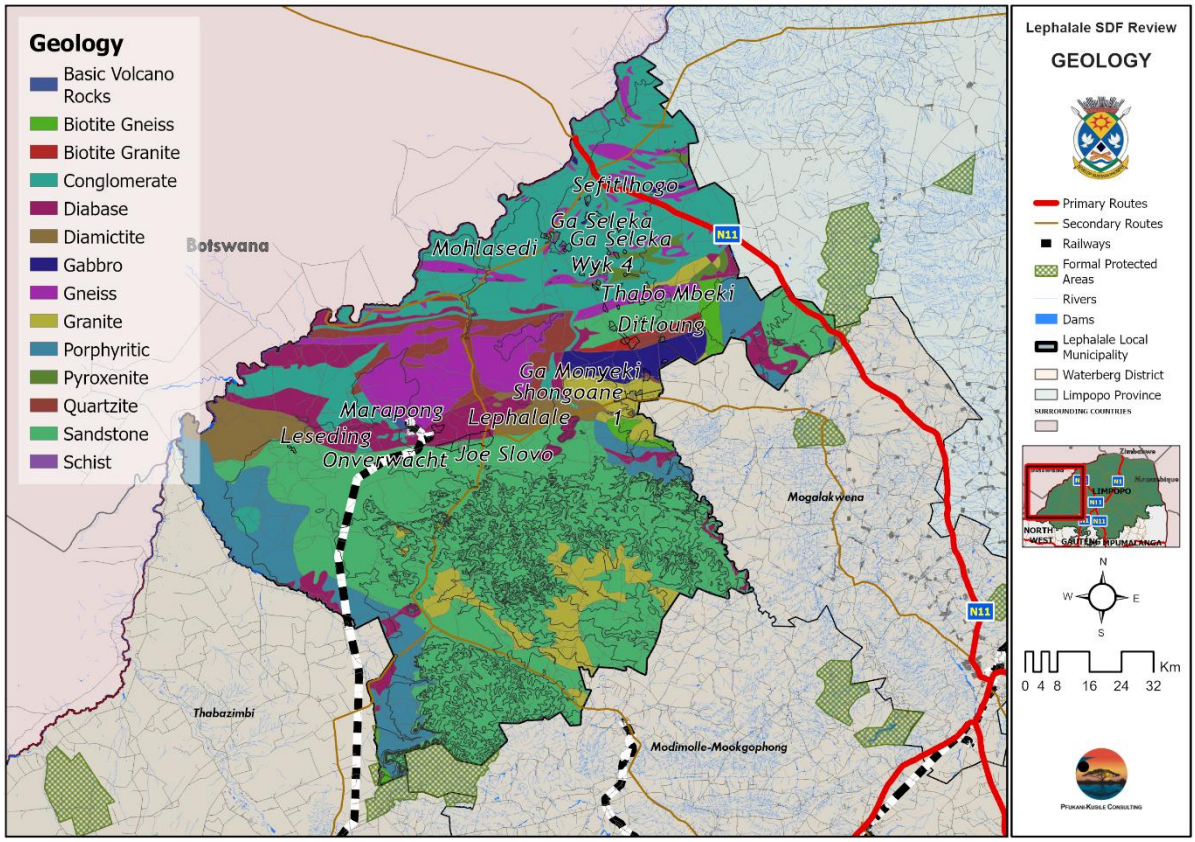
Map 20. Lephalale Wetlands.

4.4.2. Geology, Slope and Soil

4.4.2.1. Geology

Regarding the geology profile, the municipality is largely comprised of Arenite (the southern portion of the municipality), Gneiss and Sedimentary formations (affecting the Rural Area) and Shale, affecting the eastern part of the municipality. None of these major geological formations impose limitations to development and, hence, do not require specific land use management or spatial planning considerations. Rather, the geology in the municipality creates different terrain, soil, and slope types across the landscape – which, in turn, have specific implications for spatial planning and land management.

- It is to be noted that for this SDF, a broad overview of the area's geology has been provided; however, should future development occur, it must be subject to further detailed geotechnical analysis.



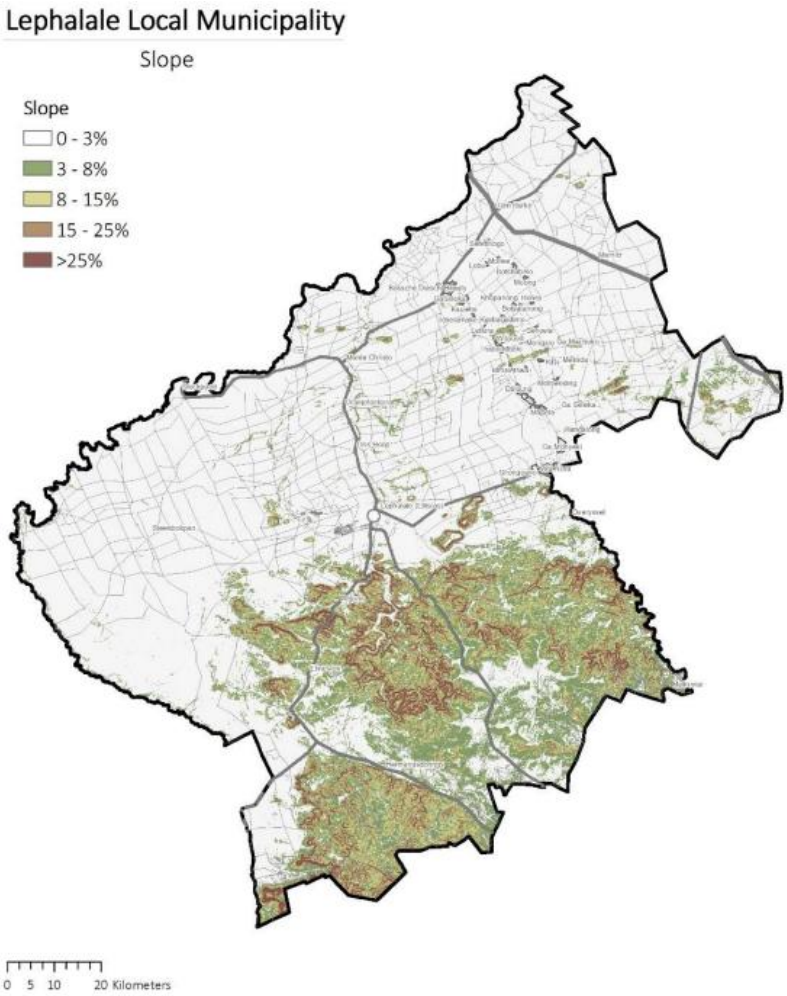
Map 21. Lephalale Geology Profile.

4.4.2.2. Slope

Steep slopes are a development constraint and should be indicated as such in the Spatial Development Framework. In general, the municipality is quite flat and conducive for development, except for the south-eastern part of the municipality (refer to Map 22 and Table 10 below). Some small hills also occur in the north where small, scattered village settlements are found.

Table 10. Slope Degrees and Development Potentials (source: LLM SDF. 2017).

Degree of slope (%)	Development Potential
0% - 3%	Generally suitable for all development and uses
3% - 8%	Suitable for medium density residential development, agriculture, industrial and institutional uses
8% to 15%	Suitable for moderate to low-density residential development, but great care should be exercised in the location of any commercial, industrial or institutional uses.
15% to 25%	Only suitable for low-density residential, limited agricultural and recreational uses.
Over 25%	Only used for open space and certain recreational uses.



Map 22. Lephalale Slope Profile (source: LLM SDF, 2017).

4.4.2.3. Soil

Table 11 below illustrates the soil types found in Lephalale. The LLM 2017 SDF notes that most of the Municipality consists of freely drained, structure-less soils.

Table 11. Lephalale Soil Classification (source: LLM SDF, 2017).

Soil Class	Favorable properties	Limitations
Freely drained, structure less soils	Favorable physical properties	• May have restricted soil depth • Excessive drainage • High erodibility • Low natural fertility
Swelling clay soils	High natural fertility	• High swell-shrink potential; very plastic and sticky
Lithosols (shallow soils on hard or weathering rock)	May receive water runoff from associated rock	• Restricted soil depth; associated with rockiness
Non soil land classes	May be water-intake areas	• Restricted land use options
Undifferentiated structure less soils	Favorable physical properties	• One or more of: - low base status, - restricted soil depth - excessive or imperfect drainage - high erodibility
Association of Classes 17 and 19: Structure less and textural contrast soils	May have favorable physical properties Somewhat high natural fertility Relative wetness favorable in dry areas	• Restricted depth • Imperfect drainage • High erodibility Slow water infiltration • Seasonal wetness

4.4.3. Biodiversity and Ecosystems

Biodiversity is the characteristics of a site or area comprising the variety within and among biotic communities, whether influenced by humans or not, at any spatial scale, from microsites and habitat patches to the entire biosphere. At the most basic level, biodiversity can be defined as the variety of life (De Long, D.C, 1996: 745). Biodiversity is important not only because of its intrinsic value but also because it is the natural capital that enables human communities to build sustainable livelihoods and attain an adequate quality of life. It is one of the critical elements supporting the ecological infrastructure on which socioeconomic development and human well-being depend. The different biodiversity categories and their function are defined in Table 12 below.

Table 12. Biodiversity Categories and Definitions.

Categories	Definition
Protected Areas (PAs)	Areas formally protected by law and recognised under the Protected Areas Act 57 of 2003, including contract-protected areas declared through the biodiversity stewardship programme.
Critical Biodiversity Areas (CBAs)	Areas that are required to meet biodiversity targets for species, ecosystems, or ecological processes. These include: • All areas required to meet biodiversity pattern targets and to ensure the continued existence and functioning of species and ecosystems, special habitats and species of conservation concern; • Critically Endangered ecosystems; and • Critical linkages (corridor 'pinch-points') to maintain connectivity. CBAs are areas of high biodiversity value and must be kept in a natural state with no further loss of habitat or species.
Ecological Support Areas (ESAs)	Areas that are not essential for meeting biodiversity targets but play an important role in supporting the functioning of protected areas or CBAs and delivering ecosystem services. In the terrestrial assessment, they support landscape connectivity and strengthen resilience to climate change. ESAs must be maintained in at least a functional and often natural state, supporting their identified purpose. They include features such as riparian habitat surrounding rivers or wetlands, corridors, over-wintering sites for Blue Cranes, etc.
Other Natural Areas (ONAs)	Areas not identified as priorities in the current systematic biodiversity plan retain most of their natural character and perform a range of biodiversity and ecological infrastructural functions.
Moderately or Heavily Modified Areas (also referred to as "transformed areas").	Moderately or Heavily Modified Areas (also referred to as 'transformed'): Areas that have been heavily modified by human activity so that they are no longer natural and do not contribute to biodiversity targets. Some of these areas may still provide limited biodiversity and ecological infrastructural functions, but their biodiversity value has been significantly and, in many cases, irreversibly compromised.

4.4.3.1. Protected Areas (PAs)

Lephalale contains fifty-three (53) Protected Areas (PAs) within its boundary (refer to Figure 15 below). Thus, these gazetted areas are required to be conserved as natural landscapes, which restricts any development expansion in these areas, except low-impact eco-tourism in strategic areas.

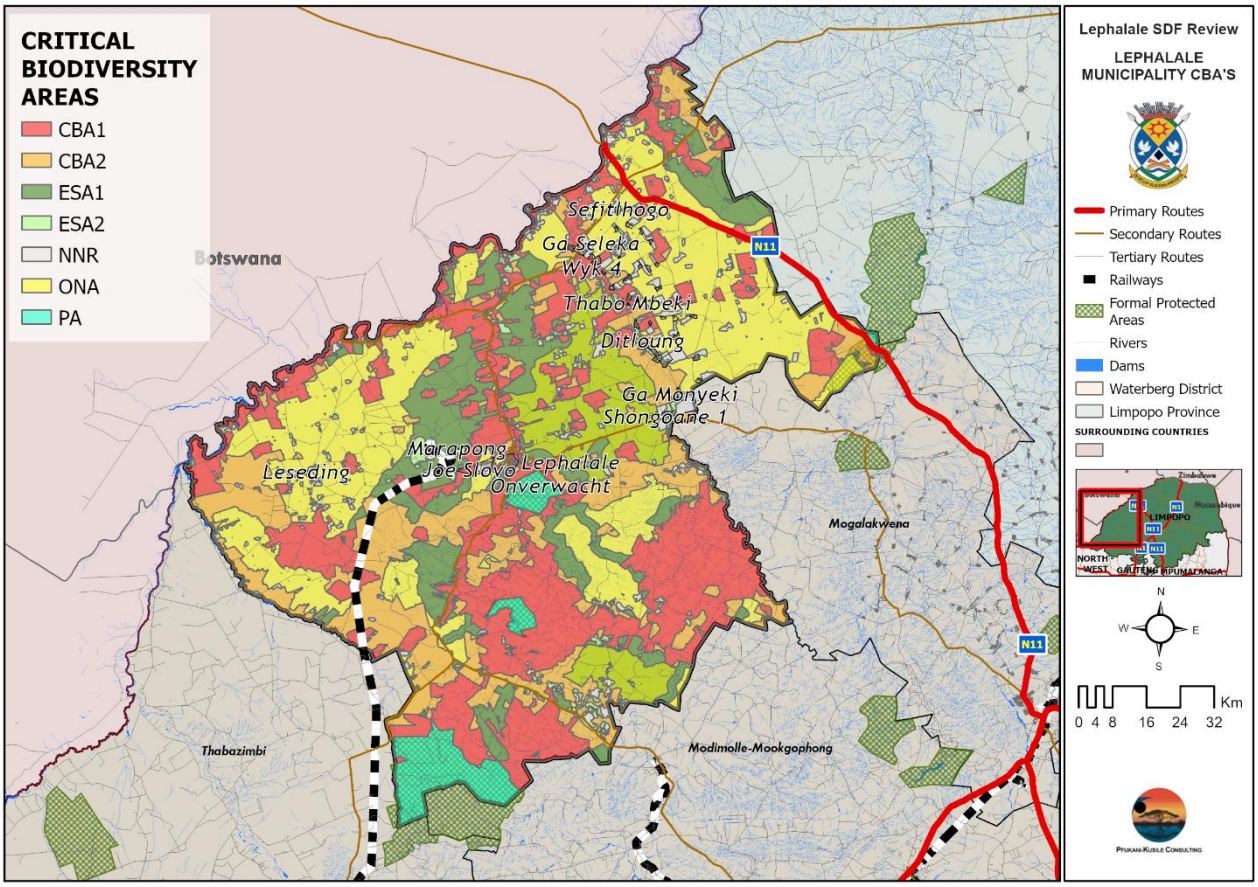
	Name	Type	Date of declaration	Hectare
1	Waterberg Biosphere Reserve	Biosphere Reserve	2001/01/01	308 024.66
2	Wonderkop Nature Reserve	Nature Reserve	1993/03/03	0.07
3	Danie Steenkamp Private Nature Reserve	Nature Reserve	1964/01/29	1 140.30
4	Alexander Estate Private Nature Reserve	Nature Reserve	1968/05/29	2 982.38
5	HUWI iii Private Nature Reserve	Nature Reserve	1967/09/13	2 499.27
6	Bettieshof Nature Reserve	Nature Reserve	1973/12/12	931.82
7	Chriwilma Private Nature Reserve	Nature Reserve	1974/05/15	1 303.58
8	Duplo Private Nature Reserve	Nature Reserve	1964/01/29	1 493.10
9	E. H. Rachmann Private Nature Reserve	Nature Reserve	1965/07/28	937.90
10	Elizabeth Private Nature Reserve	Nature Reserve	1958/02/26	2 504.03
11	Emaria Private Nature Reserve	Nature Reserve	1955/08/17	1 165.13
12	Gideon Troskie Private Nature Reserve	Nature Reserve	1958/02/26	3 183.83
13	Gys Vlok Nature Reserve	Nature Reserve	1974/05/15	1 109.39
14	Harmse Private Nature Reserve	Nature Reserve	1955/08/17	513.74
15	HUWI ii Private Nature Reserve	Nature Reserve	1967/09/13	3 723.06
16	I. J. van Vuuren Private Nature Reserve	Nature Reserve	1964/01/29	4 845.38
17	J. C. R. Pretorius Private Nature Reserve	Nature Reserve	1968/05/29	2 372.47
18	J. G. Erasmus Private Nature Reserve	Nature Reserve	1962/08/29	1 761.94
19	Jacob van der Merwe Private Nature Reserve	Nature Reserve	1969/05/21	705.17
20	Jacobs Private Nature Reserve	Nature Reserve	1959/11/02	2 248.20
21	Jancornel Private Nature Reserve	Nature Reserve	1956/11/07	3 293.09
22	Jee Lee Private Nature Reserve	Nature Reserve	1970/02/25	1 941.15
23	Krupel Private Nature Reserve	Nature Reserve	1967/09/13	1 472.02
24	Kindjie Private Nature Reserve	Nature Reserve	1965/01/27	1 260.28
25	Koedoe Private Nature Reserve	Nature Reserve	1962/08/29	1 226.18
26	Korvanleo Private Nature Reserve	Nature Reserve	1955/08/17	1 973.99
27	Kroondal Private Nature Reserve	Nature Reserve	1960/01/27	1 797.11
28	Moepel Private Nature Reserve	Nature Reserve	1968/05/29	2 267.08
29	Mokolo Nature Reserve	Nature Reserve	2014/02/25	8 071.32
30	Palala Private Nature Reserve	Nature Reserve	1954/09/08	0.62
31	Olifantspad Private Nature Reserve	Nature Reserve	1967/09/13	1 122.83
32	Not Currently Available	Nature Reserve	1962/08/29	1 890.53
33	Ons Toekoms Private Nature Reserve	Nature Reserve	1954/09/08	2 855.32
34	Pat Cloete Private Nature Reserve	Nature Reserve	1970/02/25	2 909.88
35	Pearson Private Nature Reserve	Nature Reserve	1955/08/17	3 324.91
36	Spruytskloof Private Nature Reserve	Nature Reserve	1967/09/13	1 204.97
37	Phillippus Private Nature Reserve	Nature Reserve	1959/02/11	936.88
38	Rinda Private Nature Reserve	Nature Reserve	1969/05/21	2 919.29
39	Safari No 1 Private Nature Reserve	Nature Reserve	1965/01/27	4 864.87
40	Safari No 2 Private Nature Reserve	Nature Reserve	1965/01/27	2 587.07
41	Rusoord Private Nature Reserve	Nature Reserve	1958/02/26	1 015.80
42	Zandfontein Private Nature Reserve	Nature Reserve	1962/10/29	2 443.53

	Name	Type	Date of declaration	Hectare
43	Zeekoei Private Nature Reserve	Nature Reserve	1960/01/27	1 197.75
44	Spoorsny Private Nature Reserve	Nature Reserve	1964/01/29	2 015.99
45	Tweerivier Private Nature Reserve	Nature Reserve	1967/02/15	862.12
46	Familie Private Nature Reserve	Nature Reserve	1964/01/29	664.11
47	Welgevonden Game Reserve	Nature Reserve	2014/02/25	15 050.74
48	Austin Roberts Private Nature Reserve	Nature Reserve	1954/09/08	3 431.22
49	Waterval Game Reserve	Nature Reserve	1952/12/31	3 431.22
50	Driehoek Private Nature Reserve	Nature Reserve	1958/02/26	4 455.02
51	HUWI i Private Nature Reserve	Nature Reserve	1967/09/13	10 684.17
52	Louis Kotze Private Nature Reserve	Nature Reserve	1964/01/29	5 011.31
53	Marakele National Park	National Park	1994/02/11	28 235.49

Figure 15. Protected Areas in Lephalale (source: SDF 2017).

4.4.3.2. Critical Biodiversity Areas (CBAs)

Map 23 below categorises the biodiversity areas concerning the degree or intensity of biodiversity on the land. Development proposed by the SDF must adhere to the guidelines outlined in the Waterberg Bioregional Plan, 2016. The CBA profile of LLM is very mixed, with pockets of Protected Areas, CBA1, CBA2, ESA1, ESA2, Other Natural Areas (ONA) and No Natural Remaining (NNR).



Map 23. Lephalale LM Biodiversity Status.

4.4.4. Disaster Management

According to the IDP 2023-27, Lephalale LM is prone to disasters that emanate from veldt and informal settlements fires, floods, drought epidemics, and crime. The function of disaster management for Lephalale is run by the Waterberg District Municipality, which have compiled and adopted a disaster management plan.

The District Disaster Management Committee (DDMC) has been established and was followed by the establishment of Five (5) Local Disaster Management Committees (LDMC's), one for each local municipality in the district. The Waterberg District Disaster Management Centre is located in Lephalale.

The risks and vulnerability of Lephalale include the following:

1) Natural Hazards:

- Lightning strikes causing fires and /or damage to infrastructure
- Veld fires
- Flooding and heavy rainfall events

2) Human settlements:

- Flooding of settlements – especially in settlements in the rural areas
- Fires in informal settlements
- Drought
- Diseases

3) Technological Hazards:

- Hazardous material spills and accidents (road, rail and air)
- Mine tremors

4) Vulnerabilities:

- Residents living in unsafe areas (mine dumps, along major routes etc.)
- Residents in informal settlements close to hazards.
- Residents not trained in disaster risk reduction actions and preparedness.
- Lack of awareness of disaster risks.

4.4.5. Agricultural Land Capability

Populated areas of Lephalale are more suited to grazing than crop cultivation. The area of arable land in the municipality best suited for agriculture (and crop cultivation) falls under the Waterberg Biosphere Region. Thus, restrictions on land use and intensity of activity can occur in this environmentally sensitive conservation area.

Challenges to crop farming

Changes in commodity prices: Crops such as cotton, tobacco, maize, and sorghum have been badly affected by low international prices and overproduction, and plantings have been reduced significantly, often with negative financial and employment implications. Alternative crops like sunflower, wheat, soya beans, groundnuts, and paprika are internationally traded commodities and thus sensitive to the rand/dollar exchange rate.

Impact of Water Scarcity and the Waterberg Biosphere Development Restrictions

Water scarcity development restrictions:

- Areas previously under dry land and irrigation are being consolidated and converted for extensive livestock production.

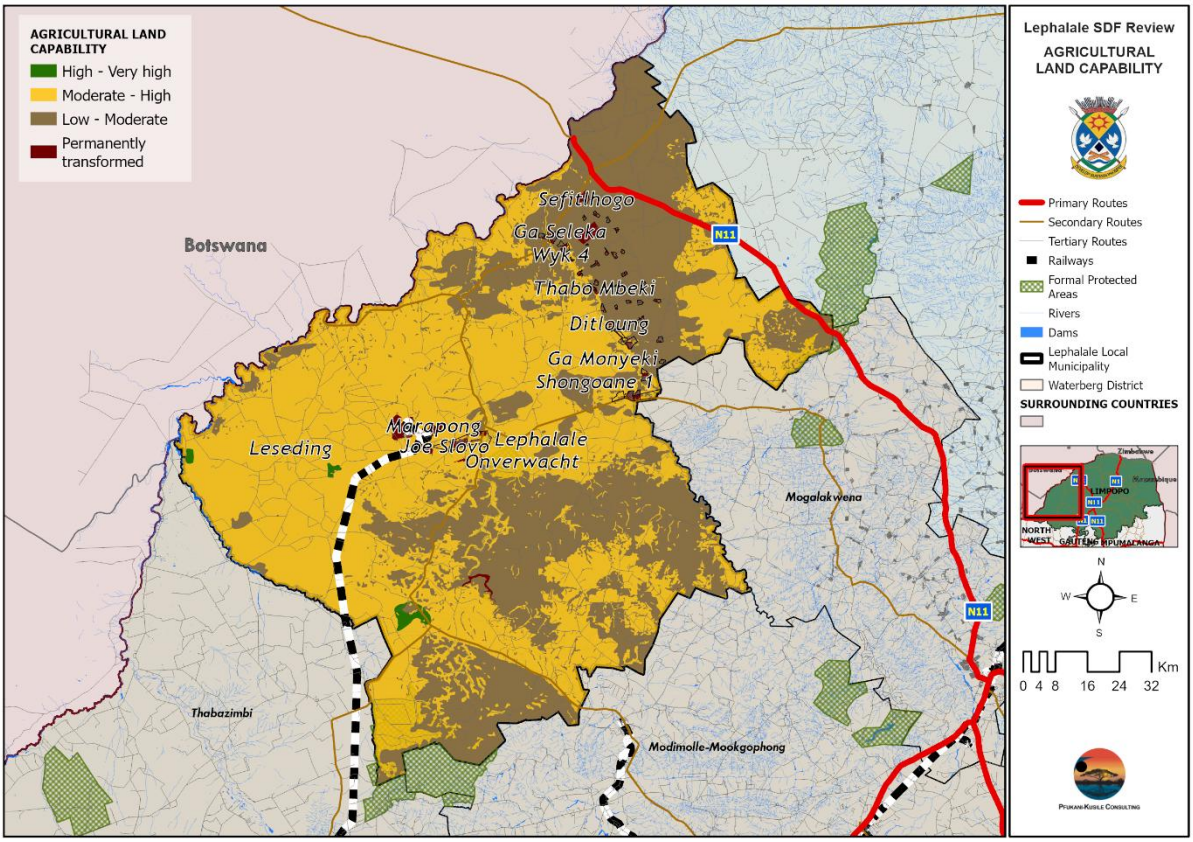
Waterberg Biosphere development restrictions:

- Former cultivated land and livestock grazing is being converted to game ranching and eco-tourism. Even within the game ranching industry, owners diversify into lodges and eco-tourism.

Subsistence agriculture and small markets

- Subsistence agriculture is important in rural villages, with cultivated land alongside almost every village.
- Small markets exist in larger villages, where produce such as cabbage, tomatoes, and broiler chickens is sold.

The rural development plan for Waterberg District Municipality has earmarked Ga-Seleka as a possible location for the Farmer Production Support Unit (FPSU), which will be linked to the Agri-Hub located in Modimolle.



Map 24. Agricultural Land Capability

4.4.6. Bio-physical Challenges and Opportunities

Challenges:

- Development is to be prevented or restricted on mountainous terrain areas found in the south-eastern edge of Lephalale, as the development of these areas will be costly and may contribute to environmental instability and degradation (i.e. soil erosion and soil creeps).
- Land in Lephalale within the Waterberg Biosphere boundary must be protected and conserved. Hence, the development of these areas is not advised.
- Due to increased costs (costs of inputs, cost of land, etc.) and environmental risks (erratic rainfall, soil degradation, bush encroachment), economically viable crop production options are diminishing rapidly (Lephalale IDP, 2023-27).

Opportunities:

- A flood line should be incorporated into the LSDF for the municipal area to inform future township establishment and land allocation. This will prevent major flooding events in settlements surrounding river bodies. The flood line should be included as an overlay zone when developing the land use scheme for the area.
- Stormwater management is needed, especially in areas prone to flooding from river overflows.
- Scenic landscape areas should be protected and integrated into the municipal open space system.
- The Municipality can perform duties that enhance sound environmental management practices, which include EIA-related issues, and hence can intervene in areas requiring remedial attention. i.e., eradicating

alien vegetation, soil erosion control and aspects that require special management, such as pollution control and land use management (Lephalale IDP 2023-27).

4.5. Socio Economic Analysis

This section provides an overview of the social and economic characteristics that make up the population of Lephalale LM. This will update the information in the previous SDF 2017, using the most recent Census Data published by Stats SA for the 2022 year where available. Where the 2022 Census, data does not reflect key statistical information, data will be supplemented from the 2011 Census, the 2016 Community Survey and Quantec EasyData resource base.

4.5.1. Population and Household Indicators

Lephalale LM is the largest local municipality in the District in terms of land area (km^2). However, in terms of population, it is the third largest Local Municipality with 125 198 people, following Mogalakwena and Modimolle-Mookgophong.

The IDP 2023-27 explains that the population increase in Lephalale may be linked to the skills development centres and job opportunities available because of the Waterberg coalfield. The community survey suggested a population increase considerably higher than the provincial growth rate of 0.84% per year for the last five years.

Lephalale has a much lower population and household density than Limpopo and Waterberg DM.

Table 13. Population and Household Indicators for Limpopo, Waterberg DM and Lephalale LM (source: Census 2022, Stats SA).

2022	**Limpopo**	**Waterberg DM**	**Lephalale LM**
Population (no. persons)	6 572 721	762 862	125 198
Households (no.)	1 811 565	248 526	43 832
Av. household size (no. persons/ household	3,6	3,1	2,9
Area (km^2)	125 806 km^2	44 914 km^2	13 794km^2
Population density (no. persons/km^2)	52,2	17,1	9,1
Household density (no. houses/km^2)	14,4	5,5	3,2
Male	3099416(47,2%)	374 965 (49,2%)	62 761 (50,1%)
Female	3473304(52,8%)	387 897 (50,8%)	62 437 (49,9%)

Between 2011 and 2022, Lephalale experienced steady population growth coupled with an increase in the number of households in the municipality. However, the average household size decreased between 2011 and 2022.

Table 14. Population and Household Trends for Lephalale from 2011 to 2022 (source: Stats SA)

Lephalale LM	**2011**	**2022**
Population (no. persons)	118 864	125 198
Households (no.)	30 639	43 832
Av. household size (no. persons/ household)	3,9	2,9
Area (km^2)	13 794km^2	13 794km^2
Population density (no. persons/km^2)	8,6	9,1
Household density (no. houses/km^2)	2,2	3,2
Male	62 819 (54,3%)	62 761 (50,1%)
Female	52 948 (45,7%)	62 437 (49,9%)

The projected growth in population and the number of households means that the municipality will experience increased pressure on bulk infrastructure and service provision, requiring the municipality to plan to mitigate future

provision shortcomings and infrastructure failures. Lephalale's annual population growth rate of 0.47% is less than that of the country, which sits at 1.8% growth annually.

The household growth rate is relatively high, with an annual rate of 3,3%, which projects an additional 7 886 households by 2027 and 17 191 houses by 2032. Thus, development must meet the future demand.

Table 15. Projected Growth in Population and Housing over the next 5 and 10 years.

	2022 (Stats SA)	**Average Annual Growth rate**	**2027 Projection (5yr)**	**2032 Projection (10yr)**
Population	125 198	0,47%	128 195	131 263
Households	43 832	3,31%	51 718	61 023

Notes: Calculations based on the growth experienced between 2011 and 2022, using the published Stats SA figures.
Growth Rate = $[(past/present)^{1/n}-1] *100$

4.5.2. Age & Gender Structure

The population distribution by age categories and gender of the Municipality is presented in Figure 16 below. It demonstrates the following:

- Young children (ages 0 to 14) comprise 28,8% of the population.
- Youth (ages 15 to 34 years old) make up 37,2% of the total population of Lephalale.
- Working age (between 15 and 64 years old) contributes to 66,4% of the population.
- older people (65 and up) comprise 4,9% of Lephalale's population.
- Males (50,1%) make up a slightly higher percentage than females (49,9%).

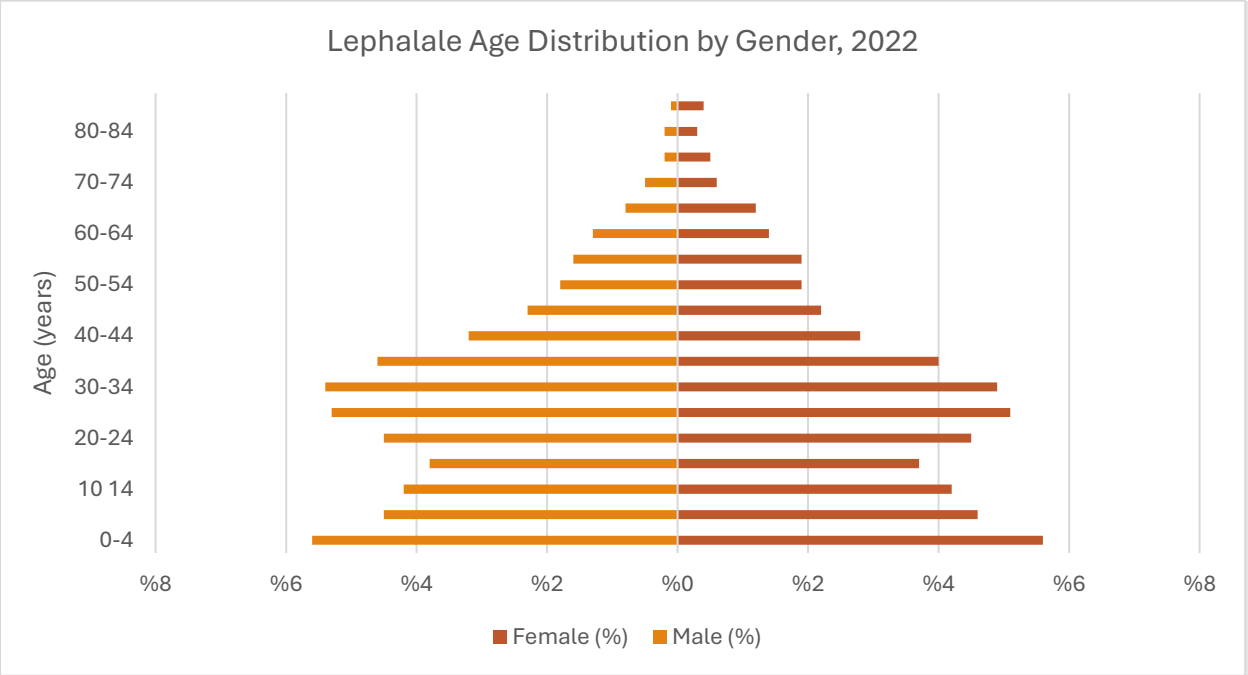


Figure 16. Lephalale Population Pyramid (data source: Stats SA, 2022)

4.5.3. Race

The vast majority of the population of Lephalale LM are Black African, making up 92,3% (Figure 17). White people make up 7%, and Indian or Asian and Coloured groups together make up less than 2% of the population.

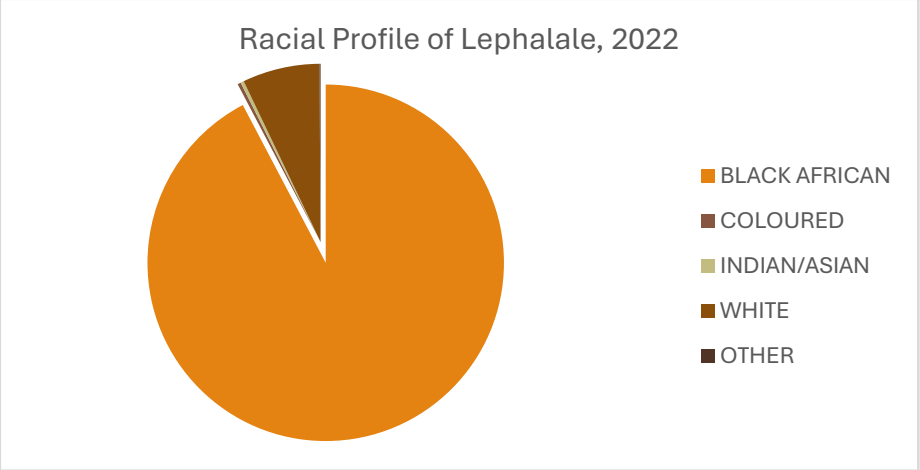


Figure 17. Racial Profile of Lephalale, 2022 (source: Stats SA, 2022).

4.5.4. Education Levels

There has been a notable increase in the number of people having completed grade 12 (standard 10) in Lephalale from 2011 and 2022, as well as a decrease in the number of people having received 'no schooling'. This indicates a positive increase in education levels in the municipality between 2011 and 2022.

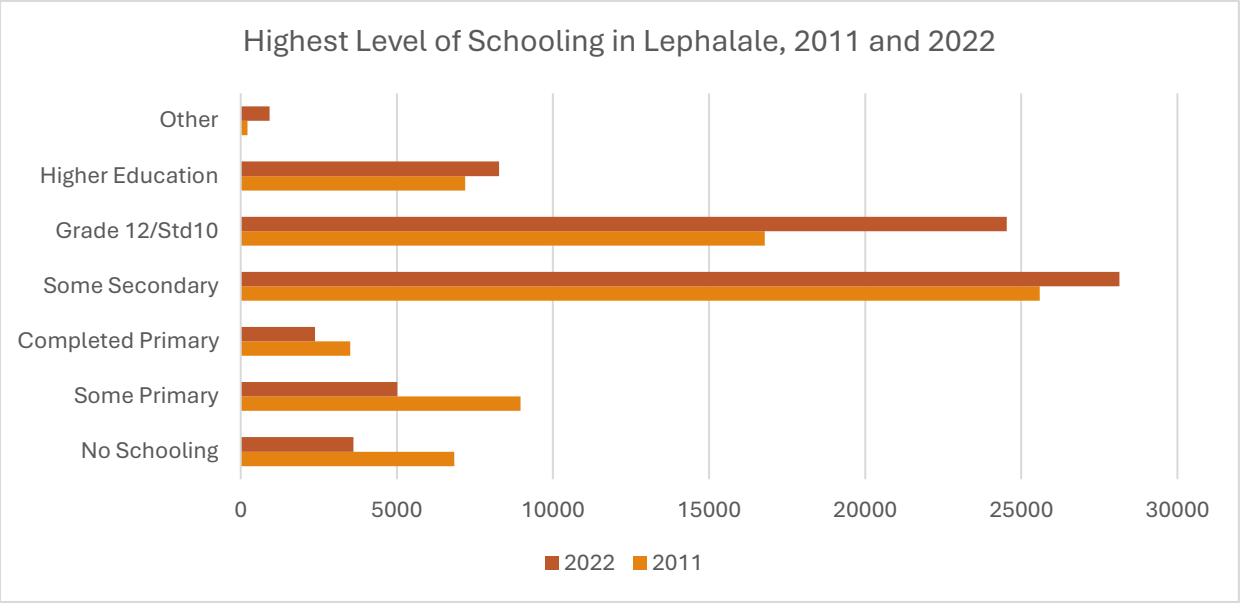


Figure 18. Lephalale Highest Level of Education in 2011 and 2022 (data source: Stats SA, 2022).

4.5.5. Employment Status

The 'labour force' or the 'economically active' population measures the total number of people willing and able to work (including those unemployed and employed) between the ages of 15 and 64 (the working age). More than 20% of the Municipality was unemployed in 2022, an increase in unemployment since 2011. However, this unemployment rate is lower than the district average of 27,32% in 2022. The rise in Lephalale's unemployment rate (and the District in general) can be linked to a number of factors, including economic recession, impacts of the Covid-19 pandemic, corruption, lack of job creation, technological improvements, digital divide, and skills mismatch, amongst others.

The ‘labour absorption rate’, also referred to as the employment rate, has increased slightly between 2011 and 2022, meaning that more work-seekers are getting employed in 2022 compared to 2011. Lephalale's labour absorption rate is also higher than Waterberg’s average, indicating that more workers are likely to find employment in Lephalale than experienced on average in the District Municipality.

Table 16. Labour participation, unemployment and absorption rates for Lephalale and Waterberg, 2011 & 2022 (source: Quantec EasyData, 2022).

	Lephalale LM		Waterberg DM	
Year	**2011**	**2022**	**2011**	**2022**
Labor force participation rate	52,86%	57,52%	53,76%	56,98%
Unemployment rate	16,94%	22,72%	20,07%	27,32%
Labour absorption rate/ employment-to-population ratio	43,90%	44,45%	42,97%	41,41%

Table 17. Employment Profile of Lephalale, 2022 (source: Quantec EasyData, 2022).

Lephalale Local Municipality	**2011**	**2022**
Working age (no. persons)	65 512	78 749
Labour force/economically active (no. persons)	34 628	45 296
Employed – Total (no. persons)	28 761	35 006
Employed – Formal (no. persons)	22 005	27 782
Employed – Informal (no. persons)	6 757	7 223
Unemployed (no. persons)	5 886	10 291
Not economically active (no. persons)	30 883	33 452

4.5.6. Household Income and Affordability Levels

The household incomes presented in Figure 19 below for Lephalale LM are based on the statistics provided from the 2011 Census (Stats SA) and are those reflected in the Lephalale IDP 2023-27 and the SDF (2017). Whilst these figures evidently need updating, the household income patterns nevertheless indicate relative affordability within the municipality.

Based on projected future development within the municipality, it is anticipated that income levels will experience a shift. The LLM SDF 2017 estimates that by 2020:

- The middle-income group of households could represent almost 40% of the population
- The higher-income group is almost 29%.
- The lower income group is expected to decline to 31% in 2020, from 38,3% in 2011.

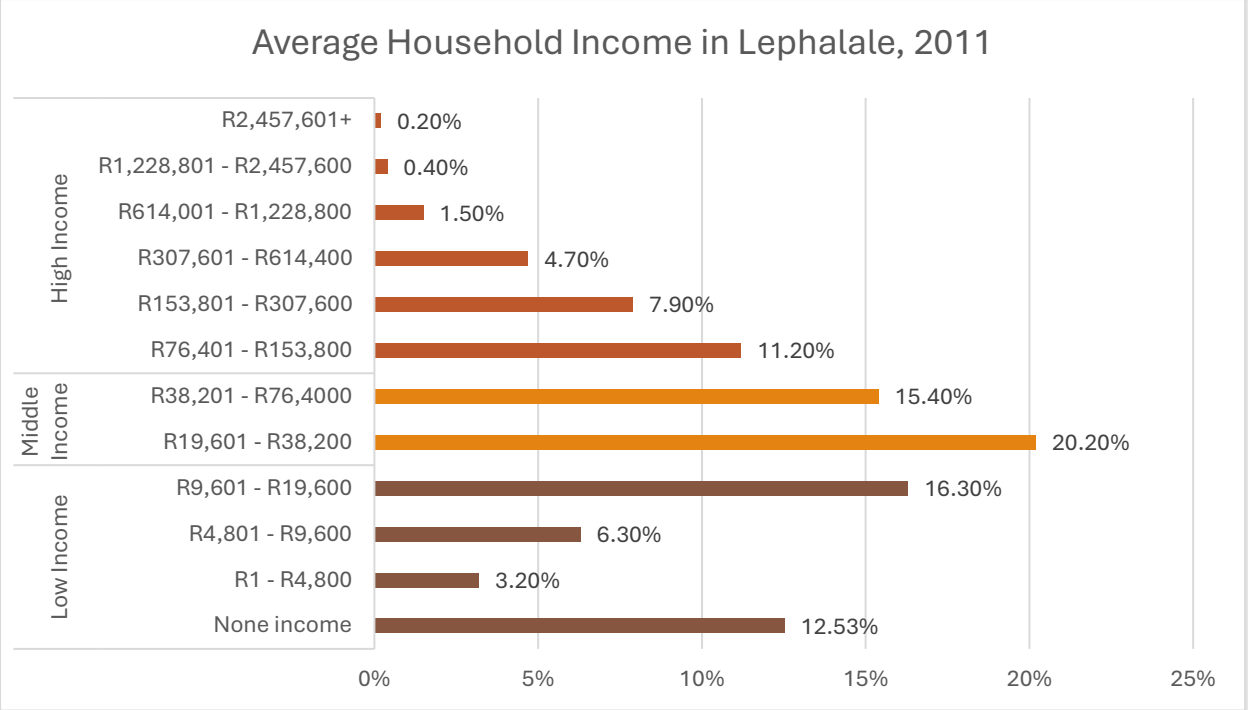


Figure 19. Household Income for Lephalale, 2011 (source: Census 2011, Stats SA).

4.5.7. Socio-economic Challenges and Opportunities

Between 2011 and 2022, Lephalale experienced a steady population growth coupled with an increase in the number of households in the municipality. These numbers are projected to continue increasing over the next few years due to the skills development centres and job opportunities created by the Waterberg Coalfield.

Whilst education levels have shown improvement between 2011 and 2022, the municipality still experienced an increase in unemployment levels, which can be linked to widespread issues like economic recession, impacts of the Covid-19 pandemic, corruption, lack of job creation, technological improvements, digital divide, skills-mismatch amongst others. Lephalale shows a higher 'labour absorption rate' than Waterberg's average, indicating that more workers are likely to find employment in Lephalale than experienced on average in the District Municipality.

4.6. Economic Profile

4.6.1. Economic Sectors and GVA

The Gross Value Added (GVA) reflects the level of economic activities within an area delineated in the different economic sectors. It is calculated as the difference between output and consumption in the economy. It is the difference between the value of goods and services produced and the cost of raw materials and other inputs used up in production by all sectors of an economy.

Figures 20 and 21 below present the contribution of each local municipality to the District's GVA in 2022. Figure 21 shows that Lephalale made up 13,95% of Waterberg's total GVA in 2022, making it the second largest municipal producer after Thabazimbi LM.

Figure 22 below shows that the mining industry consistently produced the highest GVA output for Lephalale Local Municipality in 2011, 2016, and 2022.

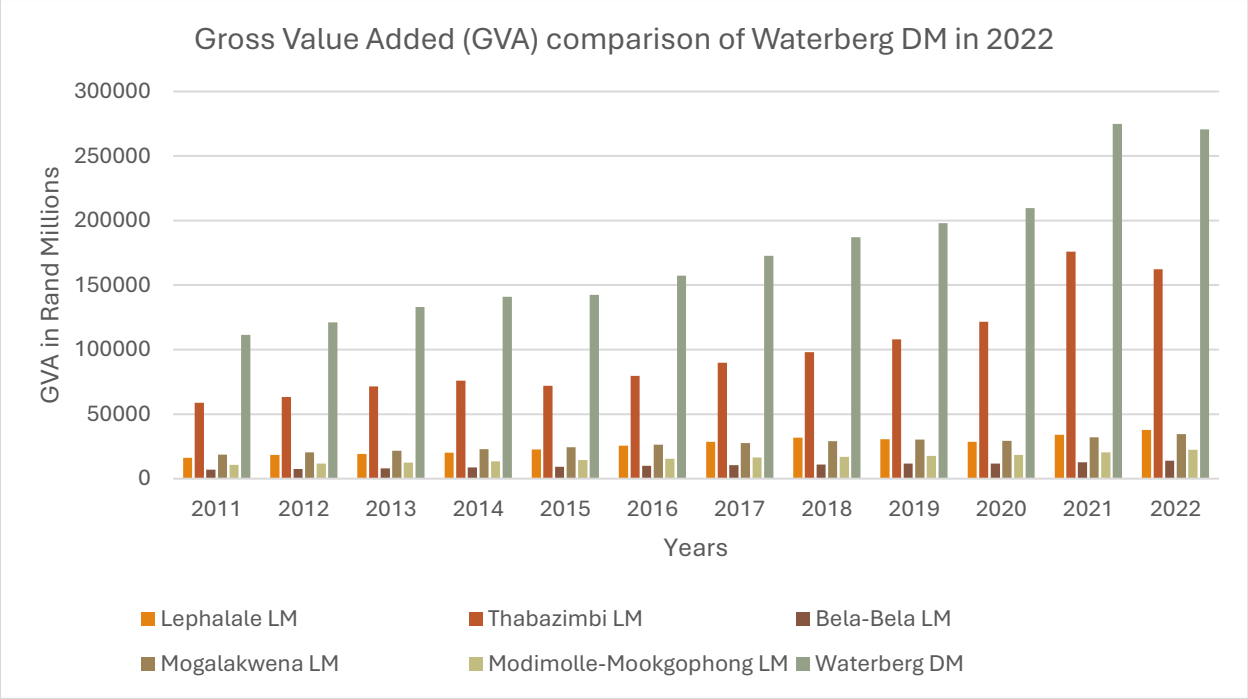


Figure 20. GVA comparison of Local Municipalities in Waterberg, 2022 (source: Quantec EasyData, 2022).

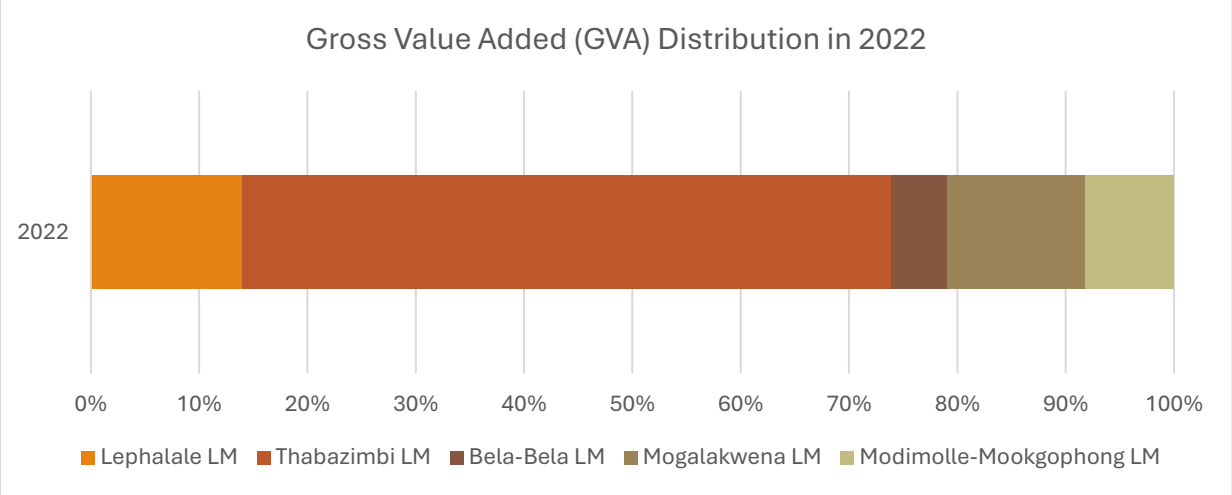


Figure 21. Municipal Distribution of GVA in Waterberg DM, 2022 (source: Quantec EasyData, 2022).

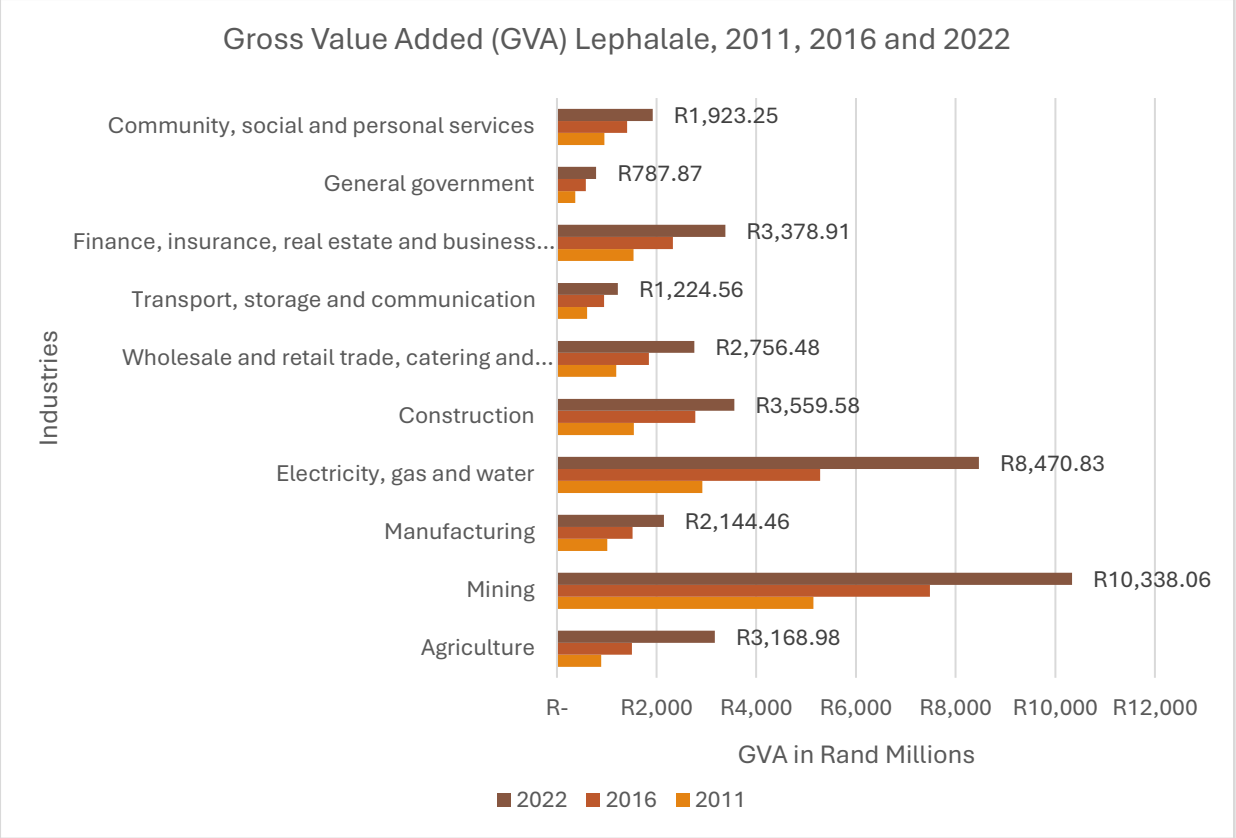


Figure 22. Lephalale GVA per Industry (source: Quantec EasyData, 2022).

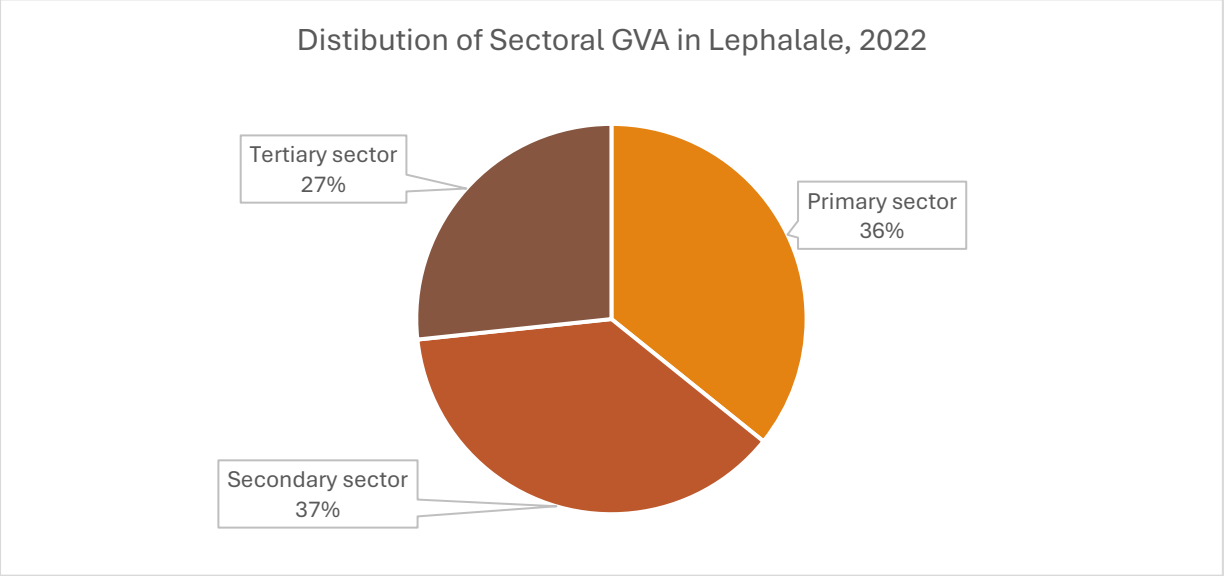


Figure 23. Distribution of Sectoral GVA in Lephalale, 2022 (source: Quantec EasyData, 2022).

4.6.2. Employment per Sector

When comparing Lephalale's most productive economic sector (based on GVA) with its biggest sectoral employer, there is a negative correlation—meaning that the sector producing the highest GVA does not employ

the largest number of people in the Municipality. The Secondary Sector produces the highest GVA but is the smallest employer, whilst the Tertiary sector is the smallest GVA producer but the highest employer.

Despite having the largest GVA output, the mining industry is only the fifth largest employer (Figures 22 and 23 respectively). The highest employer is the agriculture industry.

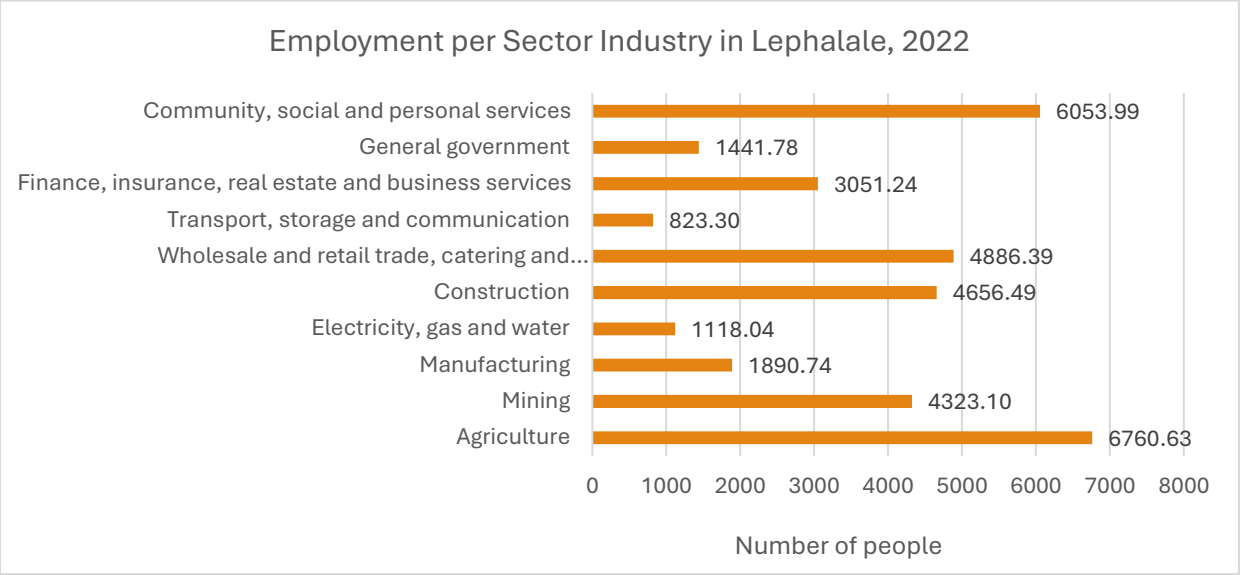


Figure 24. Employment per Industry in Lephalale, 2022 (source: Quantec EasyData, 2022).

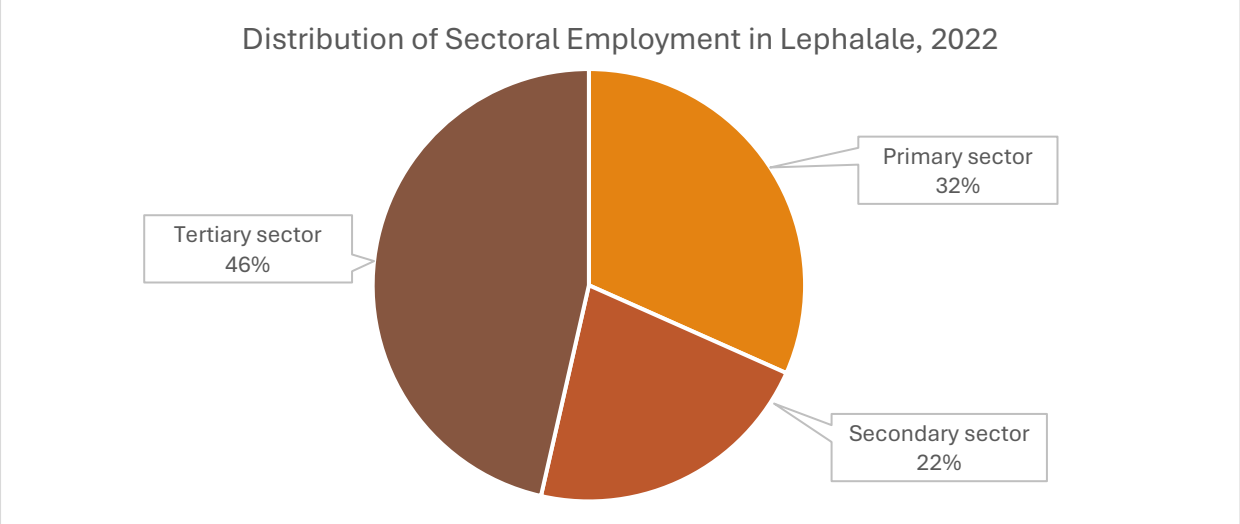


Figure 25. Distribution of Sectoral Employment in Lephalale, 2022 (source: Quantec EasyData, 2022).

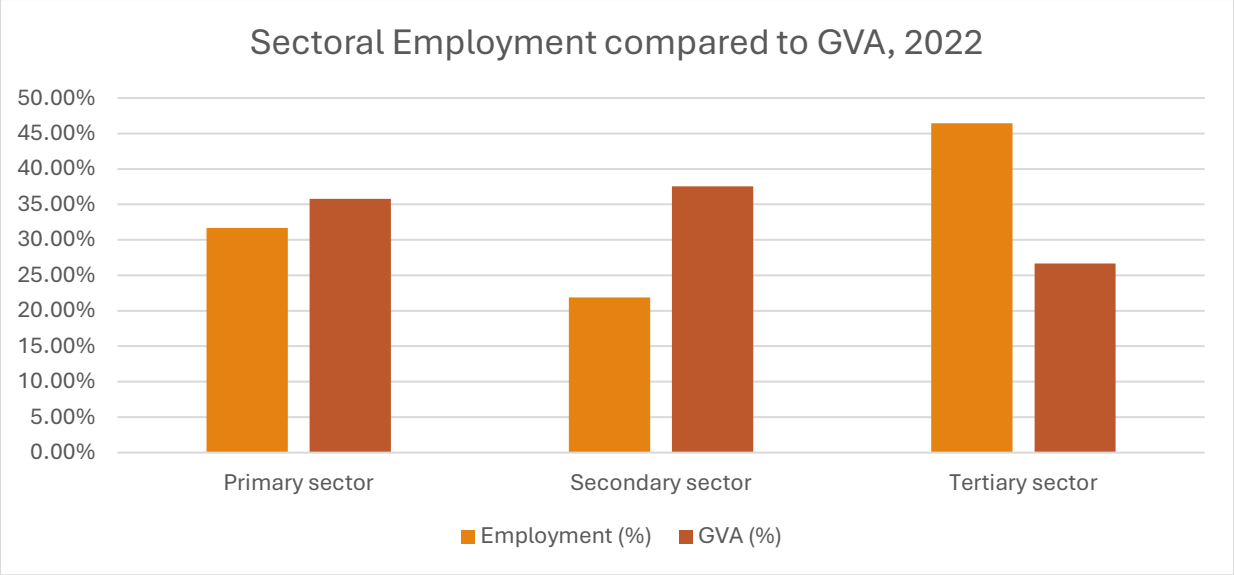


Figure 26. Sectoral Employment compared to GVA, 2022 (source: Quantec EasyData, 2022).

4.7. Built Environment Analysis

4.7.1. Transport and Movement Network

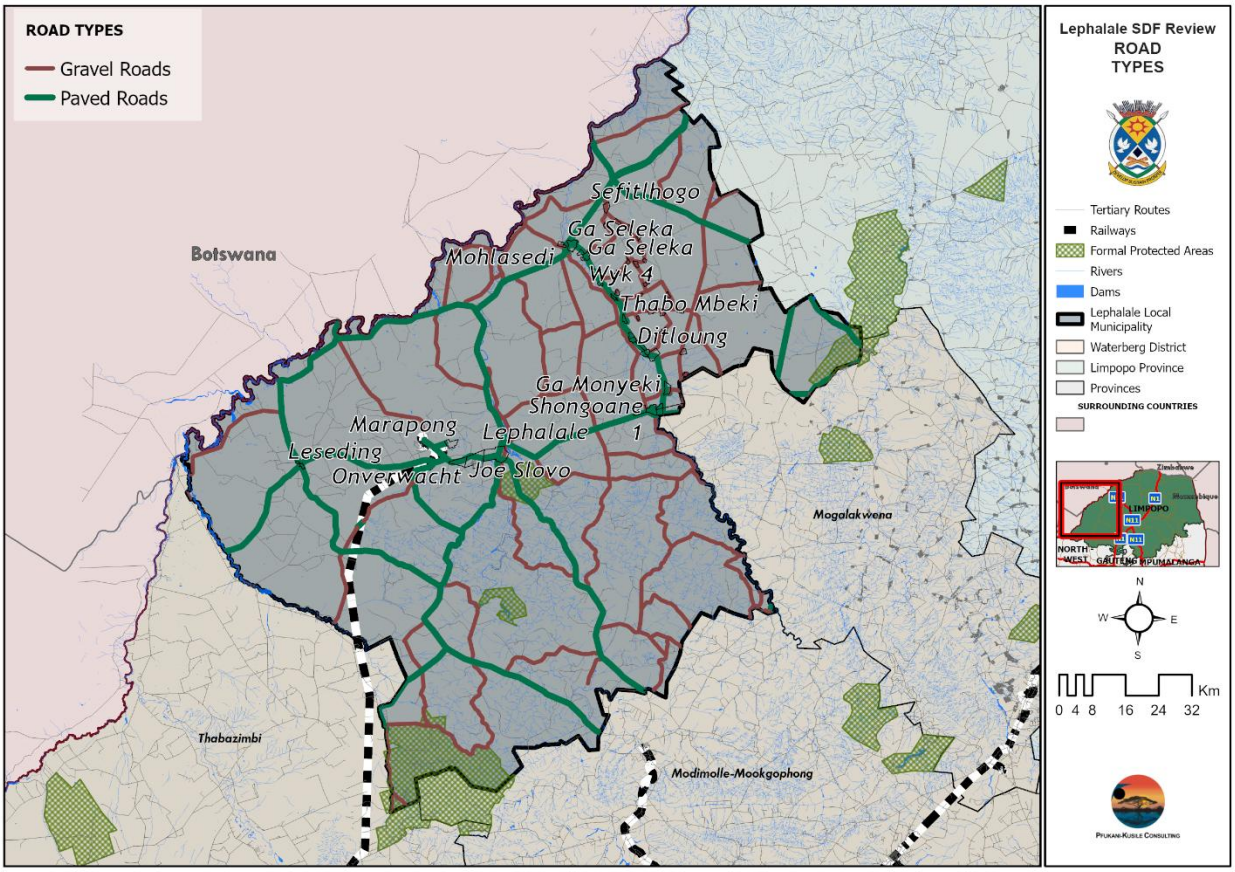
4.7.1.1. Transport and the Economy

According to the Lephalale IDP 2023-27 (p. 92): "Lephalale requires more transport relative to its development trajectory than any other Municipality in Waterberg District… because the economy is spatially 'challenged…the sparsely distributed rural settlements which are not functionally linked, and the fragmented nature of current urban development found in Lephalale between Marapong, Onverwacht and town will always enhance the need for transport". Furthermore, poor rural road conditions and lack of maintenance restrict or challenge the mobility of goods and services to rural areas.

LLM (IDP 2023-27) intends to provide a sustainable transport system that adopts methods like 'greening' while utilising the existing lack of reliable public transport to 'leapfrog' to new and better technologies and systems.

4.7.1.2. Roads

Road Types



Map 25. Road Types in Lephalale

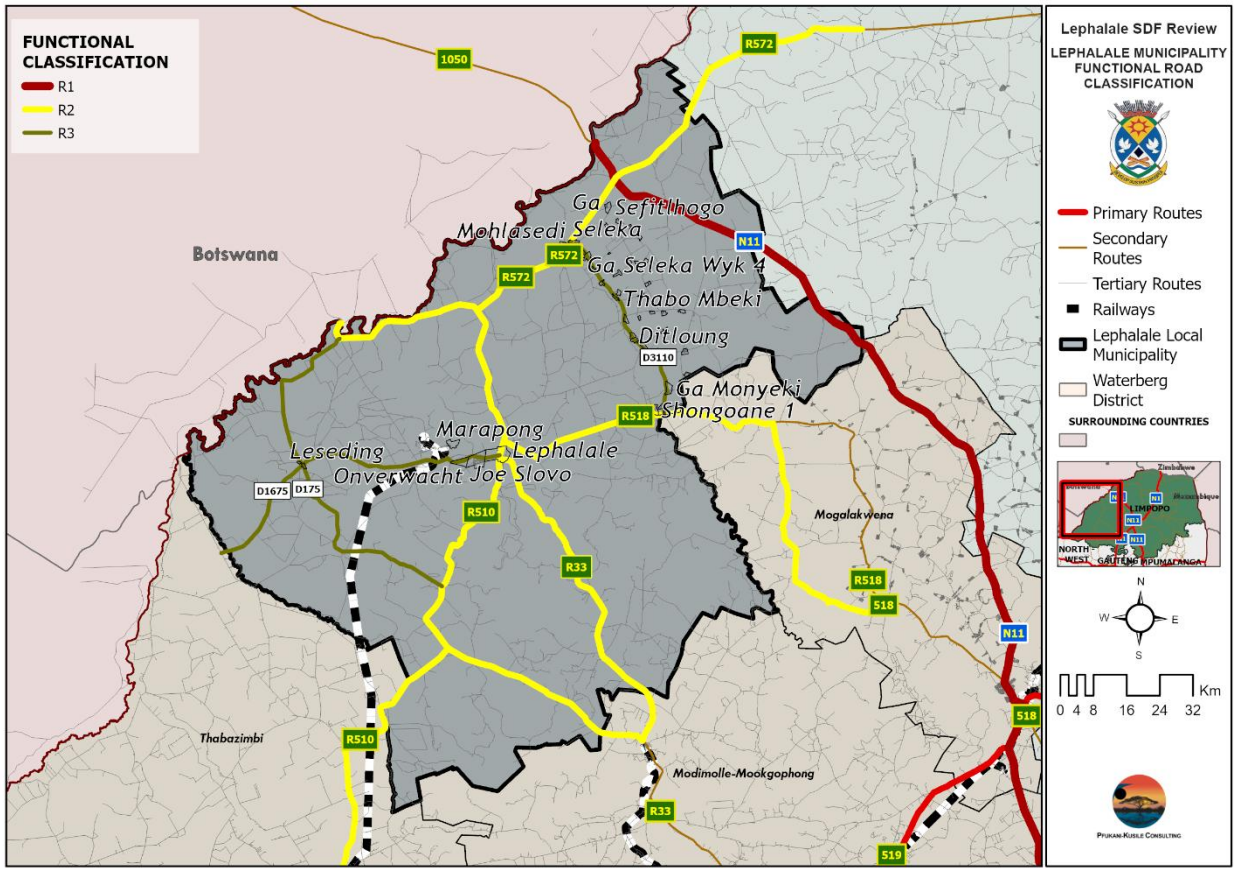
Lephalale LM has 1,055 km of roads within its network, of which 233 km are paved and 822 km unpaved (IDP 2023-27). These paved roads are mainly found in Marapong, Onverwacht, and Lephalale; however, the municipality intends to pave all municipal/local roads.

Primary roads and internal circulation routes (particularly in rural areas) are in a poor state due to limited maintenance, possibly due to a lack of funds, human resources, equipment, and capacity to maintain the existing infrastructure. Furthermore, the increase in economic activities has resulted in the rapid degrading of many roads, which concerns the municipality.

The Lephalale IDP 2023-27 states the following:

- Most of the infrastructure in the Municipality is between 15 and 25 years old, implying that within the next six years, many of these unpaved roads will have reached their end of expected useful life.
- 21% of the road infrastructure with a current replacement cost of R112.8 million (excluding annual inflation of ±7.8%) is in poor condition. In comparison, 23% of the infrastructure with a current replacement cost of R123.8 million is in poor condition.

Road connectivity and function



Map 26. Lephalale Functional Road Hierarchy Classification.

Roads in Lephalale are sufficiently connected to National, Provincial and District roads, facilitating various economic and infrastructure developments:

- The R33 regional road connects Lephalale and Modimolle to deliver equipment and machinery for constructing the Medupi power station, developing the Grootegeluk coal mine, and other planned developments.
- Freight movement is mainly via the following major routes: R33, R510, R517, R518, R572 and N11. However, for abnormally heavy loads, the R33 gradient is too steep for transport, with the R510 and R517 regional being more favoured.
- Railways serve the coal, iron ore and chrome mines in the Limpopo and North-West Provinces.

Improved access to Lephalale will soon become a high priority for road, rail, and air transport (Lephalale Municipality, 2019). Strategic links and development corridors are outlined previously in section *3.5.2 Lephalale SDF, 2017*.

Table 18. Provincial and District Roads classification (source: Road Agency Limpopo).

Roads	Description	Functional Road Hierarchy Classification
N11	From Ladysmith (Kwa Zulu Natal), via Middleburg in Mpumalanga, linking N1 at Mokopane via Lephalale to the Botswana Border.	R1
R518 (P19/2)	The east-west corridor from Lebowakgomo is in the southeast, linking with N1 in Mokopane and ending at Lephalale CBD.	R2

R510	The north-south corridor stretches from the N4 highway in Rustenburg via Thabazimbi and the Lephalale CBD to the Botswana border.	R2
R33 (P198/1)	North-South corridor passing via N1, linking Vaalwater to Lephalale CBD	R2
R516	East-West from Bela-Bela connecting N1 and R33 traffic to R511 and R510	R2
R517	East-West from Vaalwater provides a link between R33 towards R510	R2
R572	North-East from Tomburke to Stockport, it links N11 to R33.	R2
D1675	West from Lephalale town provides a link from R33 to Steenbokpan	R3
D175	North-West it extends from the R572 to provide a link to Buffels-Drift	R3
D3110	Serves as a district collector and links the R518 and R572	R3

4.7.1.3. Public Transportation Network

Urban sprawl coupled with low-density development has resulted in an urban pattern whereby most people in Lephalale live far from the CBD of the Municipality. 65% or more of the population live in the 38 rural villages of Lephalale, many located 40km or more from the CBD (IDP 2023-27). Thus, implementing an effective public transport system is a costly mission. Existing public transport facilities are inadequate to serve the population's needs and, in some cases, poorly located.

The municipality currently has the following public transport infrastructure (IDP 2023-27):

- Three formal taxi ranks and two informal taxi ranks
- Four formal minibus taxi facilities and three informal facilities
- One bus rank
- Bus shelters provided at some of the villages are only able to accommodate five people

Problems the municipality faced in its effort to provide efficient and effective public transport include, amongst others (IDP 2023-27):

- Problems include poor road conditions,
- lack of infrastructure such as lay-bys,
- inadequate formalised taxi and bus ranks,
- taxis and buses that are not user-friendly to people with disability,
- poor customer service,
- There are too many pick-up points per route, resulting in passengers having to travel for a long time before reaching their destinations,
- poor conditions for taxis and buses.

The IDP 2023-27 states that the problems mentioned above can only be addressed through the preparation of a number of Statutory Plans, such as:

- Current Public Transport Record (CPTR),
- Operating Licensing Strategy (OLS),
- Rationalization Plan (Rat Plan) and
- Integrated Transport Plan (ITP).

4.7.1.4. Stormwater Infrastructure

Stormwater status

Similarly to Lephalale's road network, the associated stormwater drainage facilities are also rural and can be summarised as follows:

- Onverwacht and Lephalale mostly have paved residential streets with kerbs, side channels, inlets, and drainage infrastructure.
- Most municipal roads in and between the rural areas convey stormwater at surface level, in open side channels, and occasionally through culverts underneath the road.
- The residential streets in Marapong, Thabo-Mbeki, and Thabo-Mbeki Ext 1 currently lack stormwater drainage infrastructure (Lephalale Municipality, 2019).

Impact of poor stormwater management/system

The impact of ineffective stormwater management is a structural, environmental and safety concern for the municipality. Stormwater is the primary source of soil erosion and road damage in LLM. Thus, uncontrolled stormwater and free drainage systems must be avoided(IDP 2023-27). Damage caused by stormwater includes:

- Destruction of a bridge or culvert crossing, damage to shoulders and road edges, and destabilisation of sub-grade and base course layers.
- Where roads are unpaved, washing away the wearing course results in rapid road degeneration, and using the road by motorised transport rapidly becomes impossible.

According to the IDP 2023-27, "the budget for the road maintenance programme for unpaved municipal roads should adequately allow for maintenance of the related stormwater drainage facilities to maintain accessibility for non-motorized travel as well". The stormwater backlog in the rural areas is unknown, and the area on the southern side of Thabo Mbeki and Seleka Wyk 2 (Mmatshwana) is frequently flooded by the Palala River during heavy rains when the river overflows. The unknown status arguably challenges the municipality in implementing disaster management.

Designing for stormwater drainage

The IDP 2023-27 proposes that township developments should cater to frequent or minor storms using conventional guidelines (see Table 19 below). In many instances in Lephalale, minor storm drainage systems will serve more than one land use, and it is proposed that the Municipality should generally require these systems be designed to accommodate the five-year recurrence interval storm.

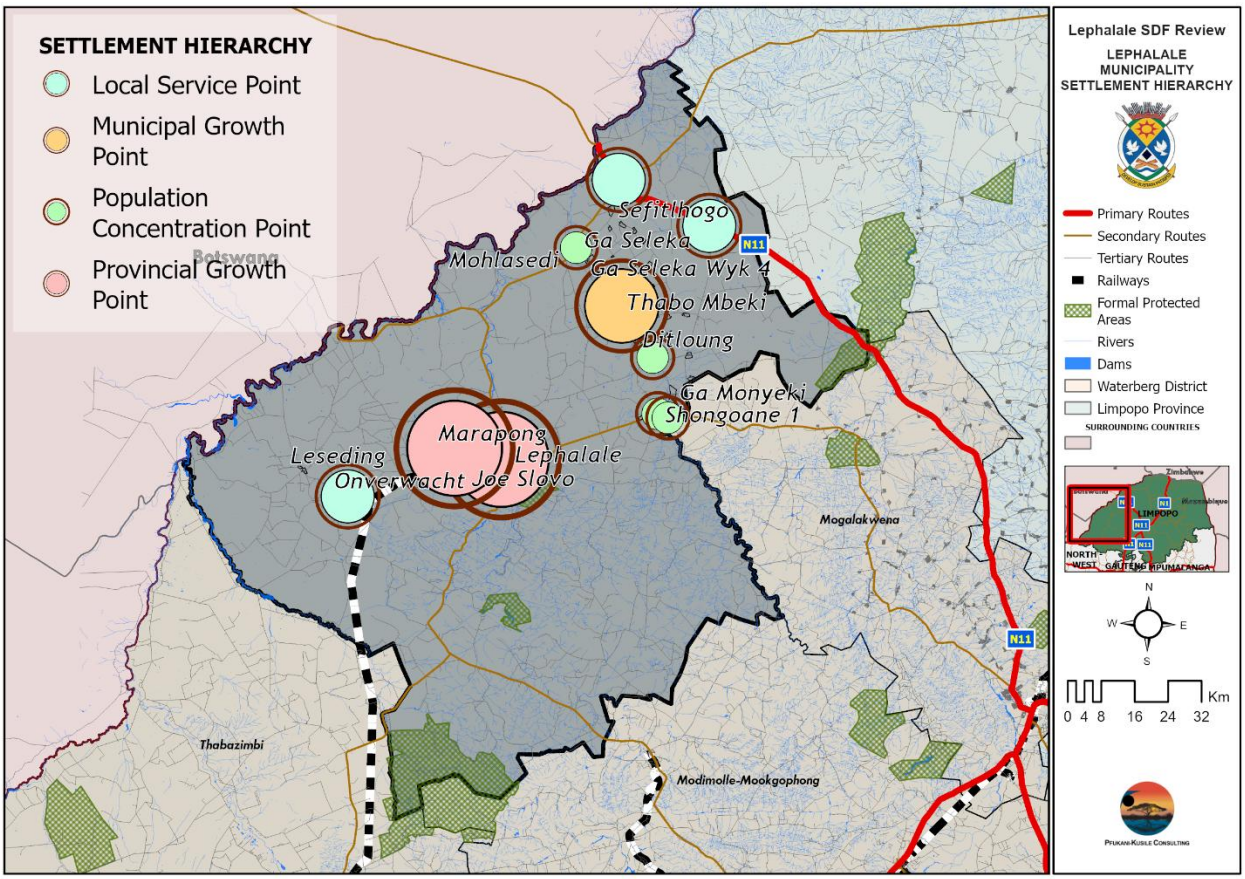
A watershed is located along the western boundary of the Onverwacht development area. Sections of the major storm infrastructure have been installed where it traverses the existing Ellisras extensions near the Mokolo River. Existing developments and restricted space necessitate this. Two rivers drain Lephalale municipality: the Mokolo River, which parallels the east side of the R510 through Ellisras town, and the Palala River, which parallels the west side of the D3110. Both rivers drain northwards to the Limpopo River.

Table 19. Flood Desing Frequency Guidelines (LLM IDP 2023-27).

Land Use	Design flood recurrence interval
Residential	1-5 years
Institutional (e.g. school)	2-5 years
General commercial and industrial	5 years
High-value central business district (CBD)	5-10 years

4.7.2. Spatial structure

Lephalale Local Municipality's spatial structure is rural, with 65% of the population living in rural areas. The landscape is characterised by low-density urban sprawl.



Map 27. Lephalale Spatial Structure.

4.7.2.1. Settlement hierarchy

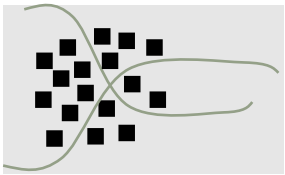
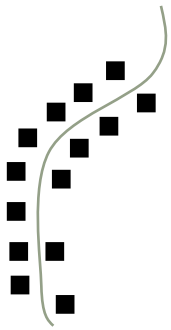
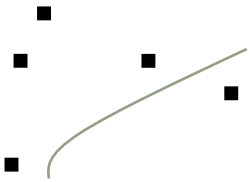
Table 20. Lephalale Nodal Hierarchy.

Type	Characteristic	Areas/nodes
Provincial growth point	Focuses on growth within the local municipality but has little influence on the district and its other locals.	Lephalale/ Onverwacht/ Marapong
Municipal growth point		Thabo Mbeki
Population Concentration Points (PCPs)	Provide services to local and surrounding communities.	Ga-Seleka, Setateng, Abbotspoort, Shongoane,
Local Service Points	Provide services to dispersed surrounding rural populations.	Steenbokpan, Marnitz, Tomburke

4.7.2.2. Settlement patterns

The types of settlement patterns currently found in the province are clustered or nucleated settlements, linear settlements, and scattered or dispersed settlements. Table 21 illustrates those types of patterns below.

Table 21. Lephalale Settlement Types and Patterns.

Settlement Patterns		Settlement Patten explained
Clustered or nucleated settlements 	 Marapong	***Clustered or nucleated settlements*** are settlements where houses or structures are grouped closely. These settlements often form around a central feature (e.g., a road intersection, a church, a public space, etc.). These settlement types emerged mostly as higher-order nodal areas in the settlement hierarchy. Examples: Lephalale, Thabo Mbeki
Linear Settlements 	 Lephalale CBD	***Linear settlements are characterised by forming houses or structures along a road, river,*** etc.
Scattered or dispersed settlements 	 Lephalale	***Scattered or dispersed settlements*** occur when the houses or structures are built far apart, and the settlement does not appear to follow a particular pattern.

4.7.3. Human Settlements

4.7.3.1. Housing projects and potential development areas

According to the Lephalale IDP 2023-27, the following housing projects are underway:

- Lephalale Integrated Human Settlements Project (IHSP): The CoGHSTA Project at Altoostyd will deliver 5 575 future housing units. The types of units available are spread across the total housing spectrum.
- The Marapong Community Residential Units (CRU) project has secured a target of 514 residential units.

The IDP 2023-27 calculates the following amount of land needed for housing development in the urban and rural nodes, respectively:

- In the urban node, 292 Ha of land will be required for housing purposes. The vacant area between Lephalale Town, Onverwacht, Altoostyd and Marapong was identified for future development.
- In the rural node, 855 Ha of land will be required for housing. This will address the people on the waiting list, families living within the flood line, and future growth.

4.7.3.2. Dwelling Typologies

Figure 27 below demonstrates that most (87%) of dwellings in Lephalale are formal housing structures, and 11% are informal housing structures. Traditional dwelling structures comprise less than 1% of housing in Lephalale Local Municipality.

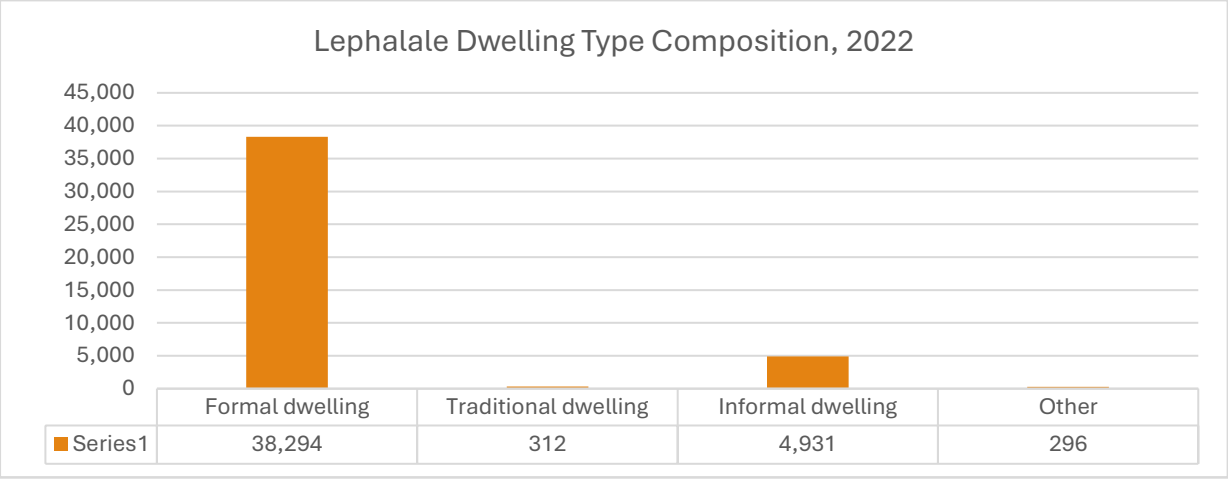


Figure 27. Lephalale Dwelling Types (data source: Stats SA, 2022).

4.7.3.3. Housing Ownership

The 2022 Census does not have information available on housing Ownership. The most recent 2016 housing ownership in Lephalale is illustrated in Figure 28. This shows that just under 39% of the municipal population own fully paid homes, and almost 21% of the population occupy housing rent-free.

According to the LLM IDP 2023-27, many households in rural areas own their houses, whilst rented housing occurs only in Onverwacht, Marapong and Lephalale towns. Hostel accommodation type exists for Exxaro and contractors for the Medupi project.

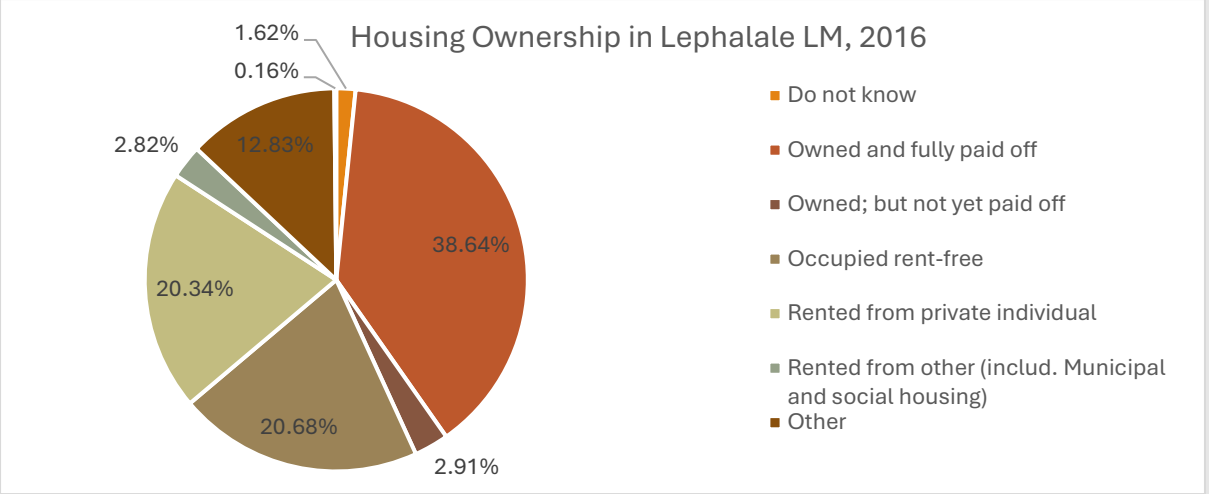


Figure 28. Housing Ownership in Lephalale, 2016 (source: Community Survey, 2016).

4.7.3.4. Housing Backlog

The existing housing backlog is approximately 27 128 housing units (LLM IDP 2023-27), further broken down in Table 22 below. According to the IDP 2023-27, there are 14 0027 families on the housing waiting list and 5243 squatters in five different areas (refer to Table 23). Housing backlogs result from population increase, inadequate and ineffective housing development, and a historical legacy of deprivation and marginalisation.

Table 22. Housing backlog in Lephalale Municipality (source: IDP 2023-27).

Housing Type	Number of Units
Rural	3 452
BNG/IRPD	8 369
Social	936
Backyard rental	2 098
Informal settlements (households)	8 670
CRU	524
GAP	1 584
Undetermined	3 120
TOTAL = ±27 167 housing unit backlog (estimated shortage)	

The IDP 2023-27 recommends that all the role players in the housing sector be encouraged to pool resources to eradicate the backlog. The LLM should focus on unlocking land for future development in urban areas and planning for future housing development in rural areas.

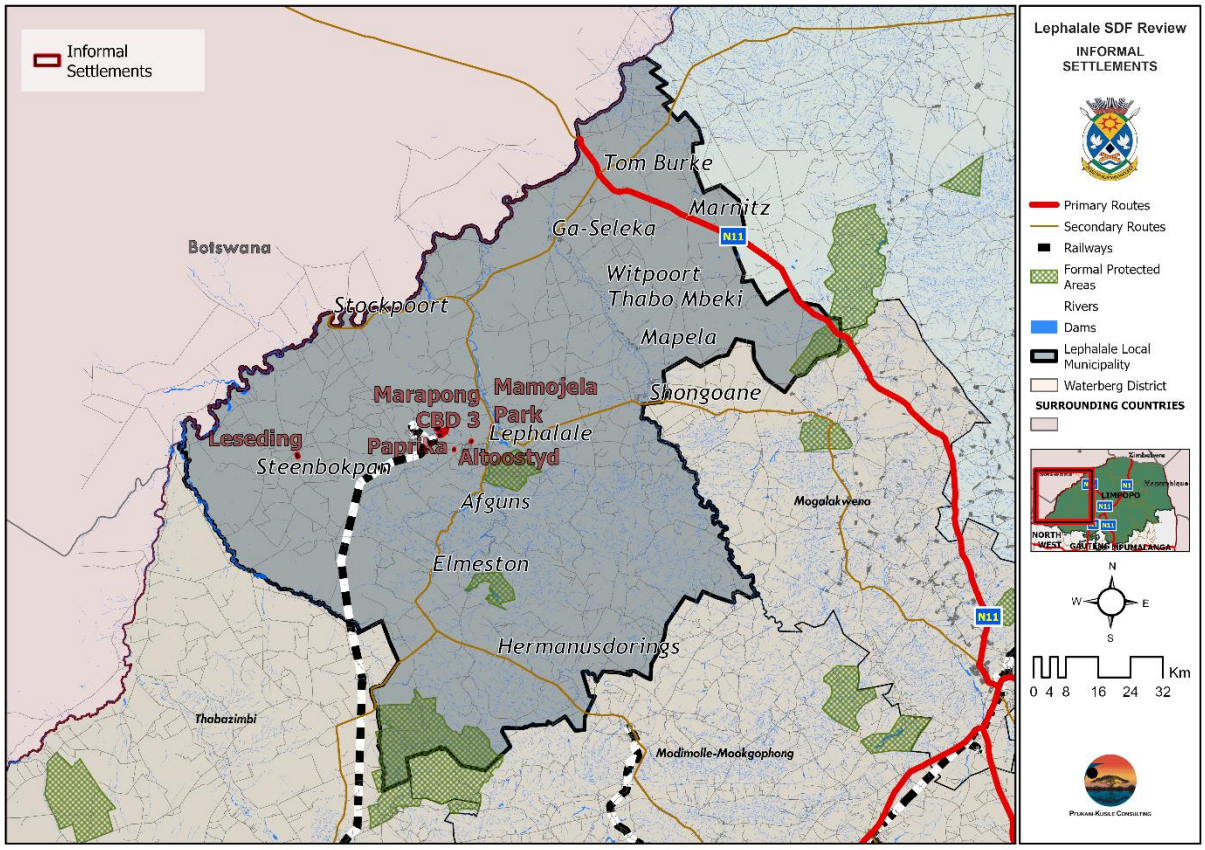
4.7.3.5. Informal Settlements

Informal settlements in the municipality are spreading and developing adjacent to established towns and townships, especially the nodal areas where mining activities occur. There are informal settlements in Steenbokpan, Marapong, Onverwacht, and Ellisras town. Five areas where informal settlements are concentrated (refer to Table 23) have a household total of 8,670 (Lephalale IDP, 2023). According to the Lephalale IDP 2023-27, informal settlements are expected to grow in the upcoming years.

The IDP 2023-27 notes that, on average, informal households have one dependent younger than 18 years old, with fewer dependents over 18 years old, which indicates that informal settlers in Lephalale have most likely migrated from elsewhere.

Table 23. Informal Structures and Households (source: IDP 2023-27).

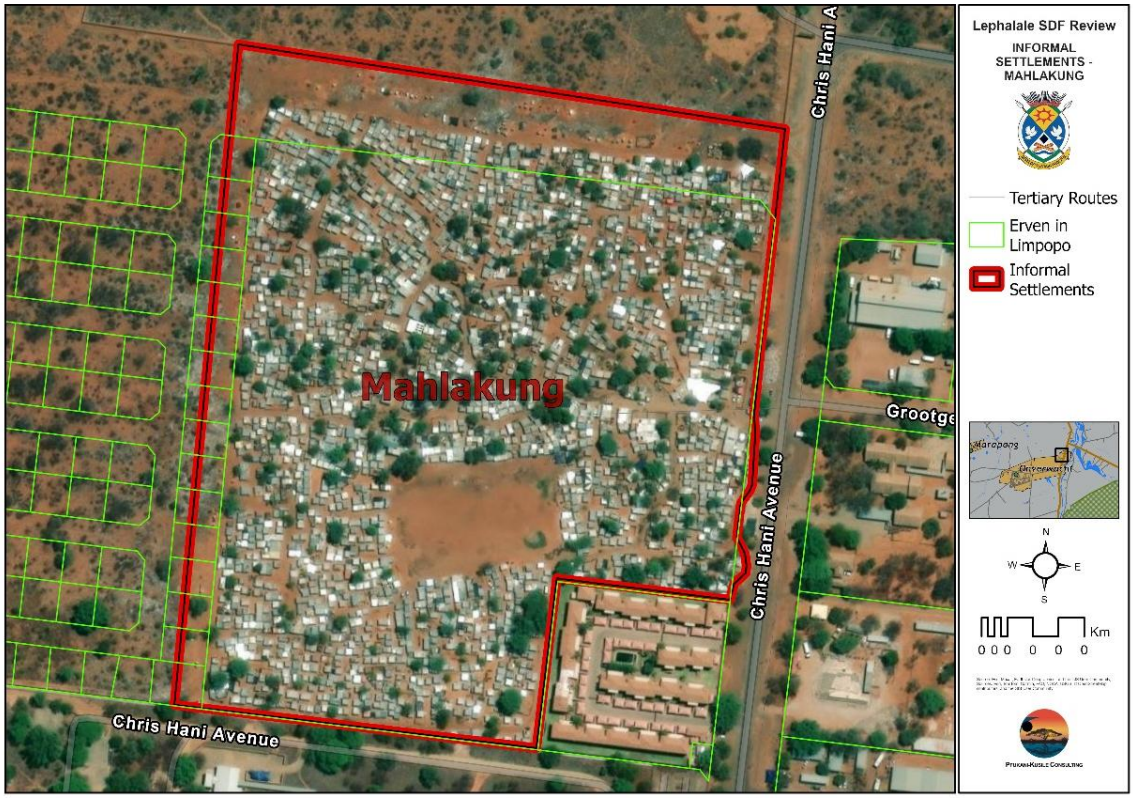
Settlement	No. of structures	%	No. of households	%	HH/structure
Mahlakung	676	13%	676	10%	1,3
Mamojela Park	611	12%	611	7%	1,0
Marapong	1 128	22%	1 797	21%	1,6
Paprika	1 752	33%	2 701	31%	1,5
Thulare Park	1 076	21%	2 654	31%	2,5
Grand Total	**5 243**	**100%**	**8 670**	**100%**	**1,7**



Map 28. Informal Settlements in Lephalale.

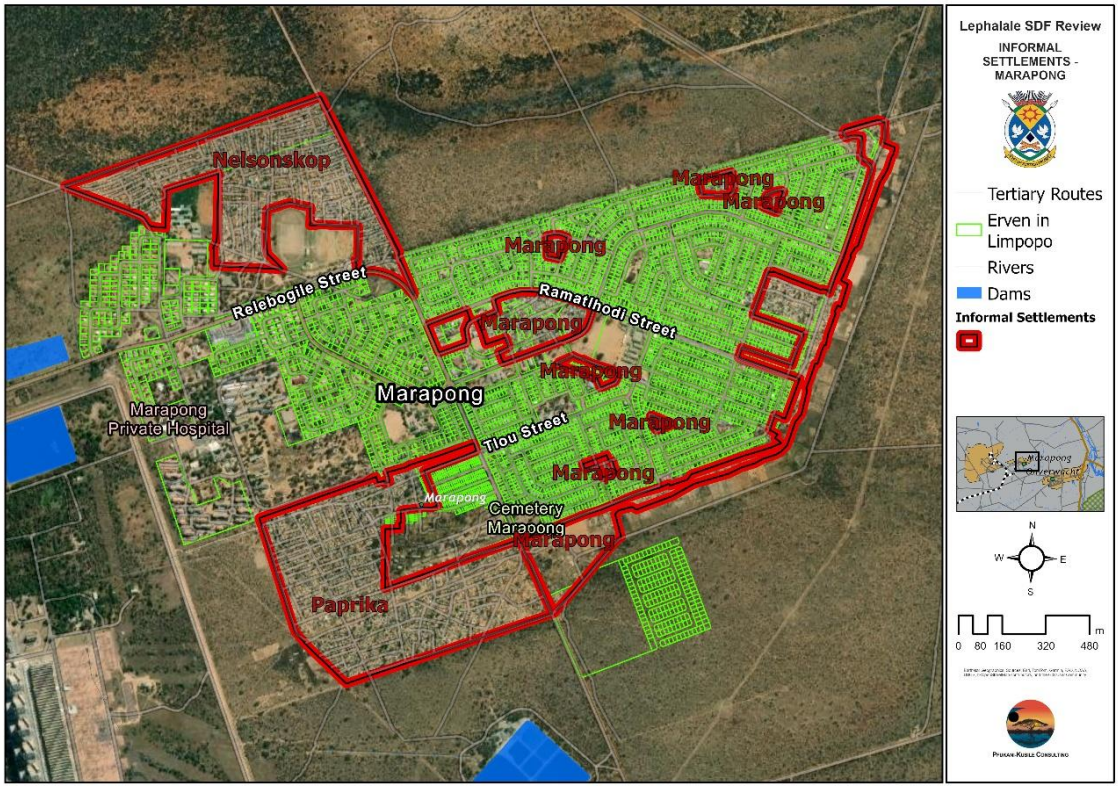
Map 29. Aerial Map of Altoostyd Informal Settlement

Map 30. Aerial Map of Leseding Informal Settlement



Map 31. Aerial Map of Mahlakung Informal Settlement.

Map 32. Aerial Map of Mamojela Park Informal Settlement.



Map 33. Aerial Map of Marapong Informal Settlement.

4.7.3.6. Planned Human Settlement Projects 2023-27 (LLM IDP, 2023-27)

The Lephalale IDP 2023-27 outlines the following key human settlement related projects to be prioritised for the next five financial year periods.

Table 24. Planned Human Settlement Projects 2023-27 (source: LLM IDP 2023-27)

Project/program	Area/ward	Date budgeted for	Stakeholder/ funder
Upgrading of informal settlements and fast tracking of CRU	Multiple areas	2024/25, 2025/26	CoGHSTA
Township establishment of Steve Biko (town planning and land surveying)	Steve Biko	2024/25	LLM
Tenure security: Proclamation of Marapong x 2, & 4	Marapong	2024/25, 2025/26	CoGHSTA
Re-planning of Marapong Ext 3 (Proclamation)	Marapong	2024/25	CoGHSTA
Development of Captain Nkebe Thulare township	Marapong	2024/25	PPP
Formalization of Lesedi	Steenbokpan area	2024/25	CoGHSTA
Township Establishment for the formalisation of Mamojela Park Informal Settlement off-site development	Grootforntein area	2024/25	CoGHSTA
Nelsonskop Housing Development Project	-	2024/25	PPP
Land transfer to LLM by Eskom, 994.23 ha	Marapong – Node 1	2024/25	LLM/Eskom

Land Acquisition, 528Ha, private land	Onverwacht – Node 1	2024/25, 2025/26, 2026/27	IGR/PPP
Relocation of Leseding/ Steenbokpan Community to Altoostyd project Steenbokpan – Node 3 Develop Phase 1 Altoostyd, to cater for the Lesedi Community, e.g., BNG = 639 units.	Marapong/Onverwacht–Node 1	2024/25	LLM/ CoGHSTA & HDA
Land acquisition in Nodal Development No. 1 under current SDF and concomitant bulk infrastructure investment requirements for the development of the city.	-	2024/25	LLM
Land acquisition for resettlement of Mahlakung Informal Settlement, Mamojela Park, Captain Thulare, Paprika, etc.	Multiple locations	2024/25	LLM/ CoGHSTA & HDA

4.7.4. Engineering Services

The provision of basic infrastructure services remains a challenge for Lephalale LM. Table 25 below presents the current service delivery status quo as in the SDBIP Quarter 3 report (source: IDP 2023-2, p. 116).

Table 25. Number of Households with Access to Basic Services (source: LLM IDP 2023-27).

SERVICE DELIVERY STATUS QUO				
	Total HH	**Access**	**Backlog**	**Backlog %**
Electricity	47 671	7 281 – Urban 38 136 – Eskom	2 254	4.2%
Total Household access		**45 417**		
Water	47 671	31 296	16 375	34%
Sanitation	47 671	21 389	26 282	55%
Refuse removal	47 671	8 231 - urban 4 640 - rural	34 799	74%
		12 71		

4.7.4.1. Water

Lephalale has two main water sources, with raw water (surface water source) mainly supplying the urban nodes of Lephalale (Lephalale, Onverwacht, Altoostyd and Marapong), whilst rural nodes are supplied by groundwater sources (Waterberg IDP 2021-26):

- Surface water source: Mokolo Dam
- Ground water source: Rural Water Supply Scheme (±132 boreholes)

Table 26 lists the types and quantities of water infrastructure in Lephalale LM (IDP 2023-27).

Table 26. Water Infrastructure in Lephalale (source: LLM IDP 2023-27).

Asset Type	Quantity	Remarks
Boreholes (number)	138	
Reticulation pipes (length in m)	424 973m	386 311m of uPVC pipes, 136 702m of AC pipes, and 1 960m of HDPE pipes
Bulk pipelines (length in m)	34 69m	28 593m of uPVC pipes and 6 046m of AC pipes
Reservoirs (number)	121	
Water Treatment Works (number)	2	Witpoort and Maletswai
Pump stations (number)	38	

Figure 29 below illustrates that most people (43,6%) in Lephalale have access to piped tap water inside their dwellings, 27,4% have access to piped tap water in their yards, 17,3% have access to a communal water source, and 11,7% do not have access to piped water.

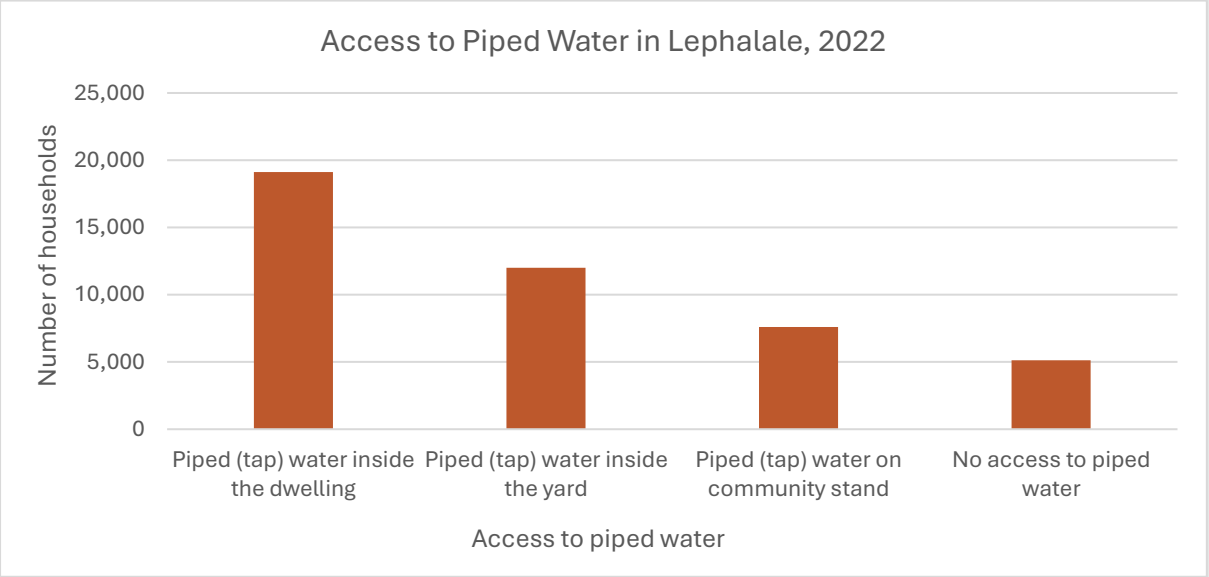


Figure 29. Access to Piped Water in Lephalale, 2022 (source: Stats SA, 2022).

4.7.4.2. Sanitation

Lephalale LM has moderate levels of inadequate sanitation. The majority of urban areas have flush toilets connected to an existing sewerage system (49,3%). In rural areas, most communities utilise pit toilets that do or do not have formal ventilation (45,7%).

There has been a small increase in households with access to flush toilets, from 45% in 2011 to 49,3% in 2022. Furthermore, in 2022, 45,7% of households use a pit latrine toilet, a slight decrease from the 2011 Census average of 46,8% of households.

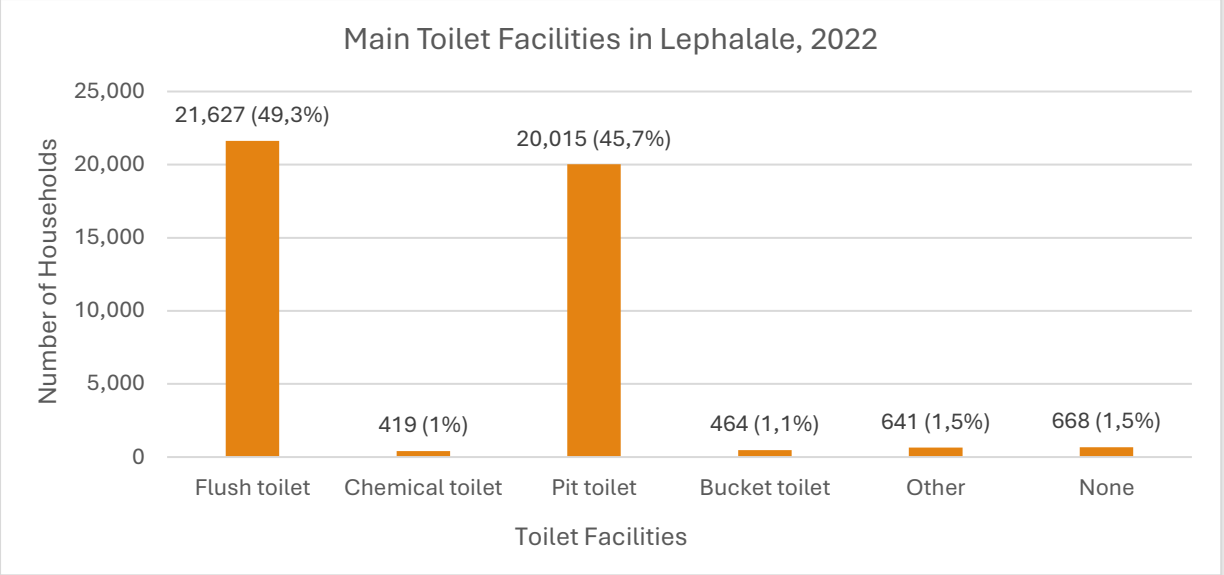


Figure 30. Main Toilet Facilities in Lephalale, 2022 (source: Stats SA, 2022).

According to the 2022 Census, 46,5% of households have refuse removed by the local authority at least once a week, with only 7,4% of households having no refuse removal at all—these are mainly located in the rural areas of Lephalale LM.

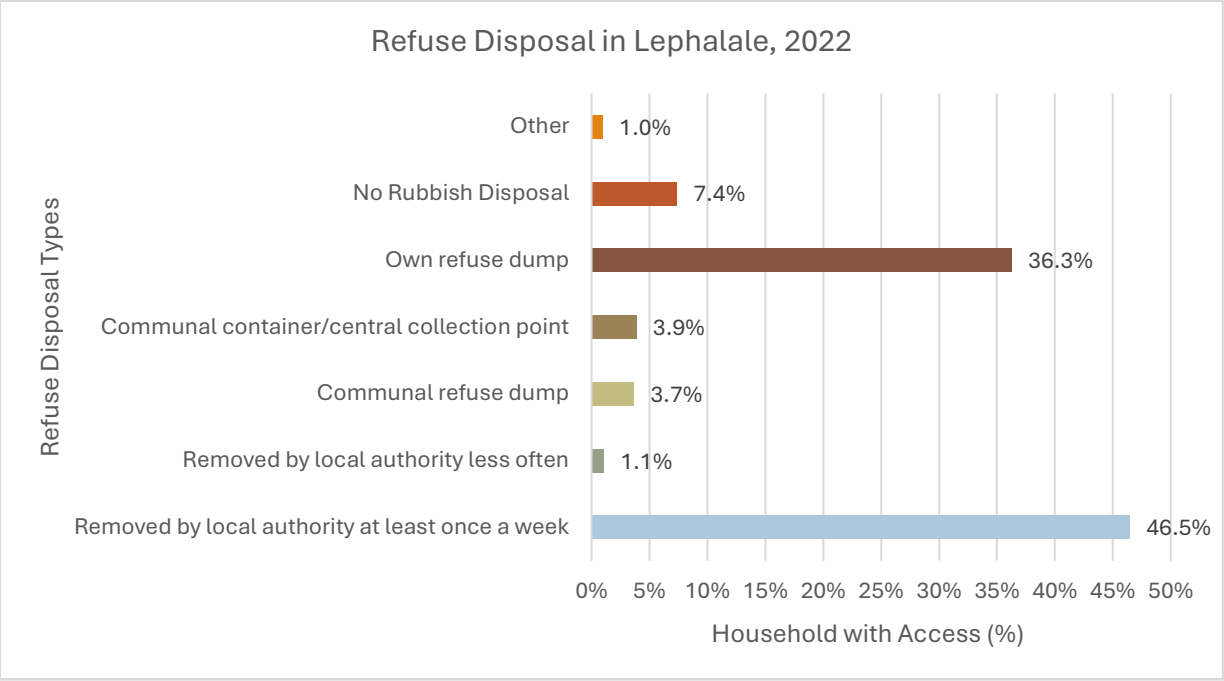


Figure 31. Refuse Disposal in Lephalale, 2022 (source: Stats SA, 2022).

4.7.4.3. Electricity

The majority of households, 93%, use electricity for lighting, and 5,1% use candles as their source of energy for lighting (refer to Figure 32). As seen in Figure 33, there are three main sources of energy used for cooking in Lephalale: electricity (43,3%), gas (29,6%), and wood (24,1%).

Lephalale has three electrical substations that are responsible for supplying electricity to the Lephalale CBD, Onverwacht and Marapong (each substation is 40MVA 132kV/33kV transformers):

- Waterberg substation (capacity 40mva/33kva: 2x20mva)
- Lephalale substation (capacity 35mva/11kva: 10mva, 10mva, 10mva, 5mva)
- Marapong substation (2.5mva/11kva) – operating at full capacity

Upgrade or augment the existing substations to meet the electricity needs in the near future (as new developments are constructed and implemented in the municipality).

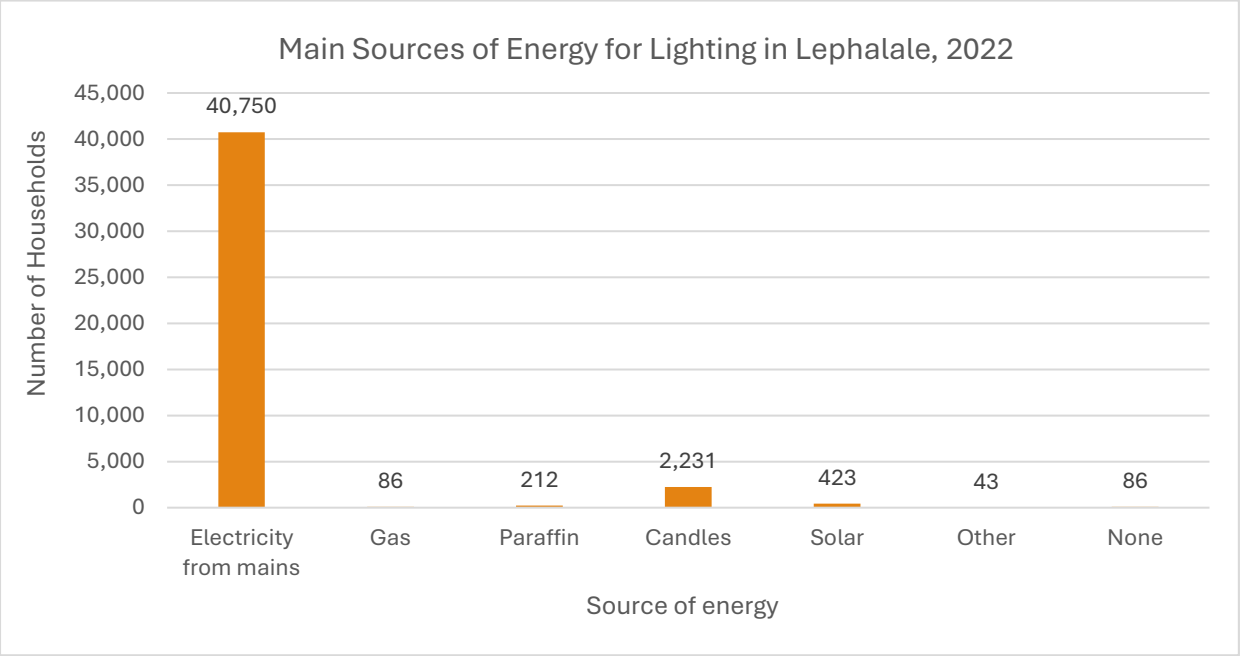


Figure 32. Main Sources of Energy for Lighting in Lephalale, 2022 (source: Stats SA, 2022).

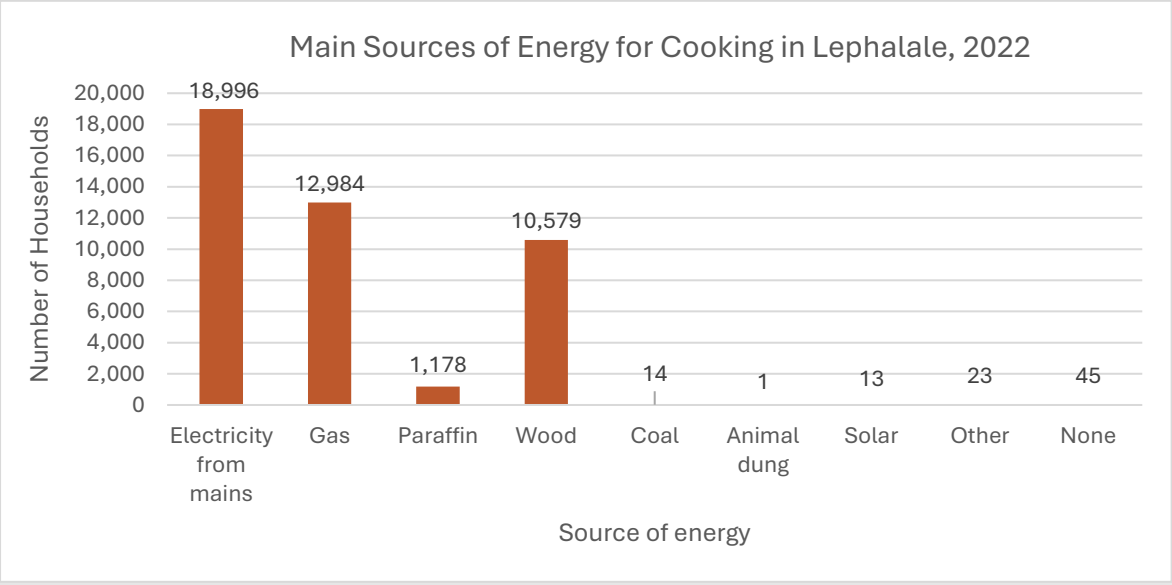


Figure 33. Main Sources of Energy for Cooking in Lephalale, 2022 (source: Stats SA, 2022).

4.7.4.1. Planned Engineering Services and Bulk Infrastructure Projects 2023-27 (LLM IDP, 2023-27)

The Lephalale IDP 2023-27 outlines the following key Engineering Services and Bulk Infrastructure projects to be prioritised for the next five financial year periods.

Table 27. Planned Engineering Services and Bulk Infrastructure Projects 2023-27 (source: LLM IDP 2023-27).

Project/program	Area/ward	Date budgeted for	Stakeholder/ funder
Mokuruanyane Regional Water Scheme Bulk Pipeline Phase 1&2.	Mokuruanyane	n.d.	WSIG (schedule 6)
Ga-Seleka and Witpoort RWS Phase 5 (to be completed)	Ga-Seleka and Witpoort	2023/24	MIG
Thabo Mbeki water supply Maintenance and Upgrading	Thabo Mbeki	n.d.	DWS/ WSIG
Extension and augmentation of water supply in Witpoort RWS phase 6	Witpoort	2023/24	MIG
Extension 1 and augmentation of water supply in Mokuruanyane cluster	Mokuruanyane	2024/25	MIG
Water reservoirs	Steenbokpan	n.d.	LLM
Bulk water supply pipeline	Marapong	2023/24	WSIG
Bulk infrastructure development	Marapong CRU	2024/25	HSDG
Bulk infrastructure development	Joe Slovo Integrated Human Settlements	2024/25, 2025/26	HSDG
Bulk Infrastructure development	Thabo Mbeki Ext 2 – Node 2	2024/25, 2025/26, 2026/27	IGR/PPP
Construction of internet connection towers in 38 villages	Steenbokpan	2024/25, 2025/26, 2026/27	PPP

4.7.5. Social Infrastructure

This section reviews important social infrastructure in Lephalale LM, scrutinising the spatial distribution, quantity, and condition of existing facilities.

Where appropriate, information from policy documents (IDPs and the PSDF) and recommendations outlined in The Neighbourhood Planning and Design Guide[1] (Department of Human Settlements, 2019) will be applied to justify and support the analysis.

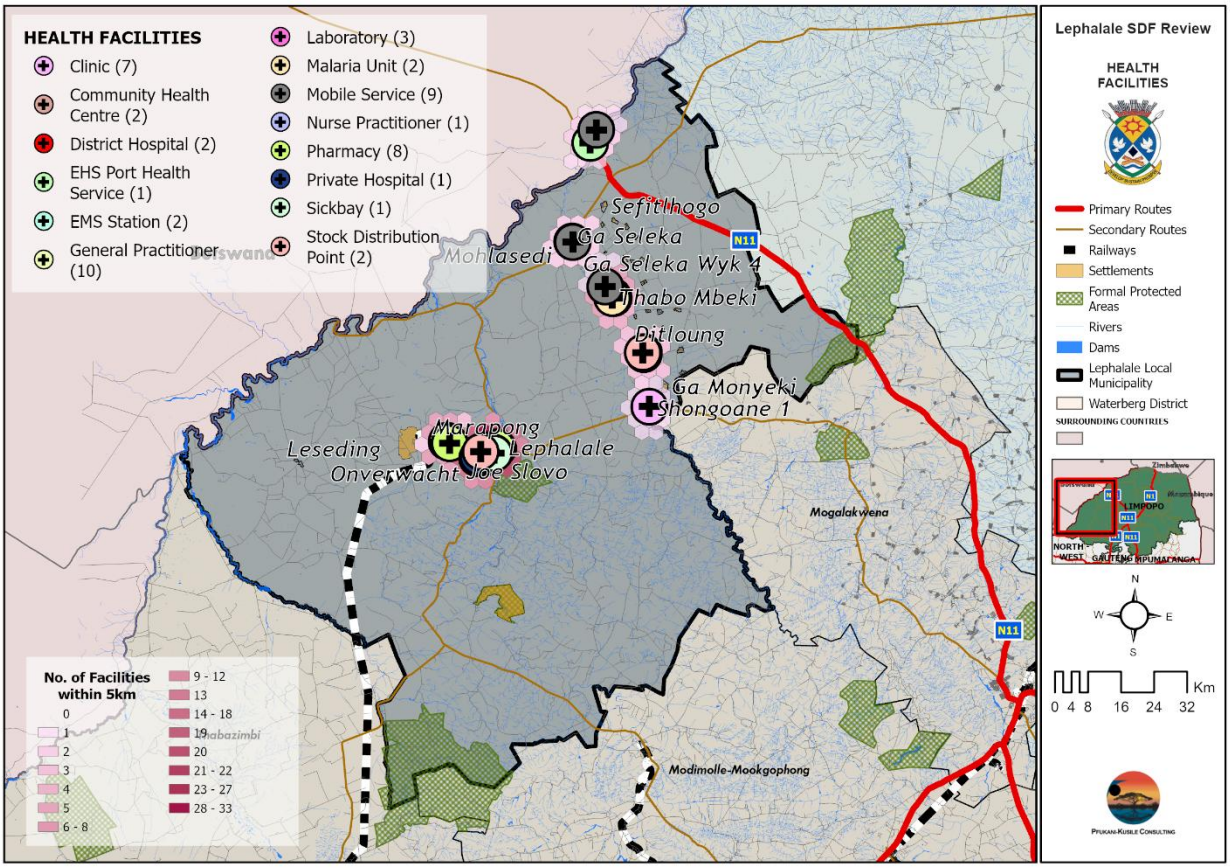
4.7.5.1. Health Facilities

According to the IDP 2023-27, based on land use demand within the limitation of existing land use and land size data, health facilities are spatially well distributed in the Municipality (refer to Map 30 below). Accessibility of health facilities in rural areas is well distributed and within reasonable distance from residential areas.

[1] 1 The Neighbourhood Planning and Design Guide is a document published by the Department of Human Settlements (DHS) in 2019. This document is a revised version of its predecessor, the Guidelines for Human Settlement Planning and Design – more commonly known as the 'Red Book'.

It is proposed in the IDP 2023-27 that healthcare facilities must align with the hierarchy of settlements. Thus:

- High-order facilities such as hospitals and community health centres should only be in 1st—or 2nd-order settlements (growth points and population concentrations), and they can be provided in larger villages in the clusters only if required by the department's standards.
- Community health centres and similar-order facilities should primarily be located in urban and rural towns and larger villages within the proposed first—and second-order settlements.
- Depending on the size of the community, community health centres could also be in large villages (3rd order settlements).
- Clinics could be located at any town or larger settlement within 1st and 2nd order settlements, depending on the department standards. Clinics can also be in 3rd-order settlements (settlements with larger populations) and only 4th and 5th-order settlements if the number of villages and the population residing in these villages require it.
- The norm should be that mobile services are provided to the 4th and 5th-order settlements, mostly small villages.



Map 34. Health Facilities in Lephalale.

Existing health facilities in Lephalale LM are as follows (IDP 2023-27):

- Three hospitals: Ellisras and Witpoort (public) and Onverwacht Mediclinic (private). Total Hospital bed availability for Lephalale is 240 beds for the 3 Hospitals, with an average %BUR of 75% per month.
- Hospital referrals: Witpoort for Seleka- Shongoane and Abbotspoort clinics
- Ellisras for Marapong, Steenbokpan and Ellisras town clinics (6 clinics in total)

- A 24-hour Marapong community health centre has been established in the old private hospital donated by Exxaro to provide adequate service for the population, which has grown threefold since the clinic was originally established.
- Specialised in-Hospital clinics: Colposcopy and 2nd trimester CTOP(Reproductive clinic)
- Five mobile clinics in small villages.

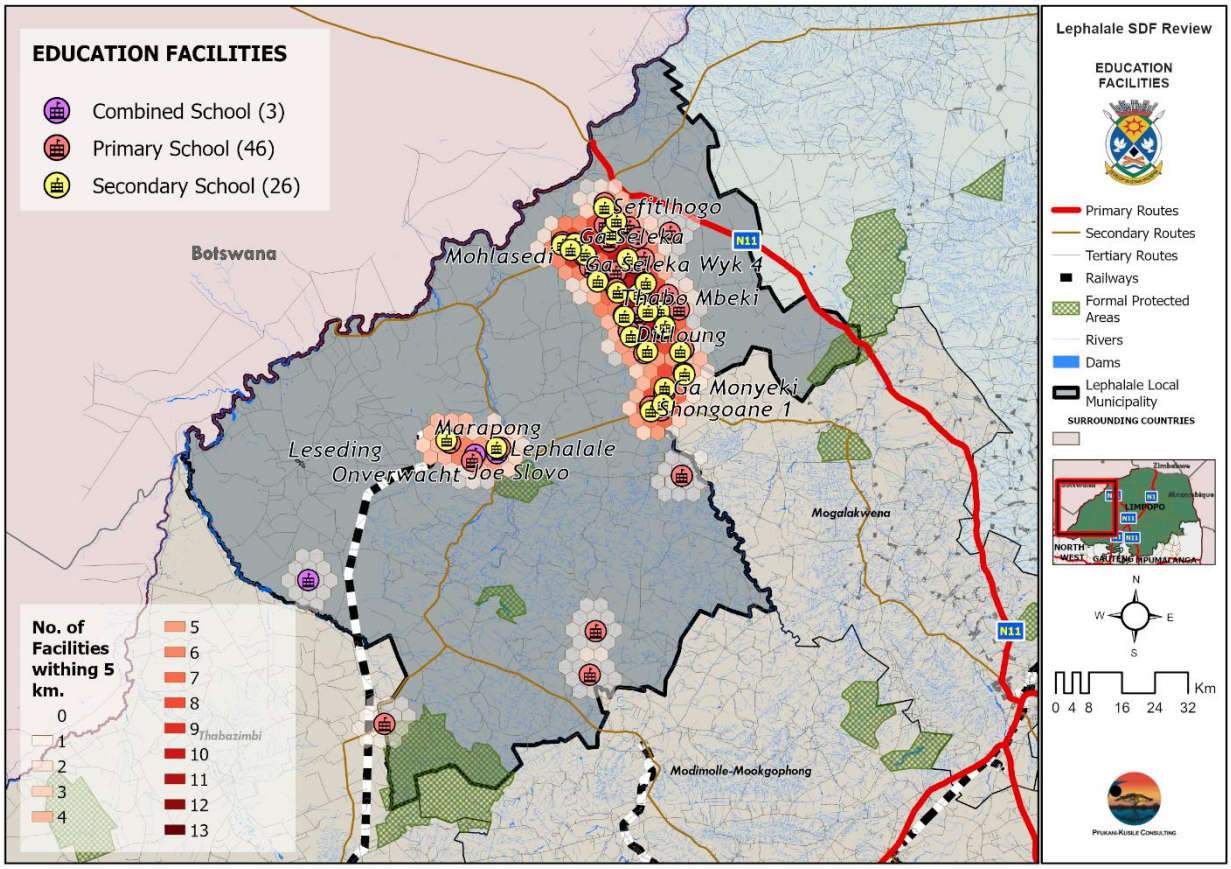
4.7.5.2. Education Facilities

According to the IDP 2023-27, education facilities are spatially well distributed in the Municipality based on land use demand within the limitation of existing land use and land size data. However, Map 31 below illustrates that schools (both primary and secondary) are concentrated along the Lephalale River. This can be attributed to the fact that a large number of villages are located along the river channel. However, this may put some of the facilities at risk of flooding.

Based on the population threshold of Lephalale at 125 198 (as of the 2022 Census), the municipality requires approximately 30 primary and 20 secondary schools accessible within a 5km maximum distance (DHS, 2019). The Table 28 below lists the development projects for education facilities per the IDP 2023-27.

Table 28. IDP 2023-27 Strategic Development Project: Education Facilities.

Type of Facility	Name of Village/Area	Date budgeted for	Funder
Development of 3 Technical Sec Schools	-	2024/25 – 2025/26	Dept of Education/ PPP
Primary School and High School	Steve Biko	2024/25 – 2025/26	Dept of Education/ PPP
Primary School and High School	Marapong	2024/25 – 2025/26	DoE
Secondary Schools (2)	Altoostyd	2024/25 – 2025/26	DoE
Private School	Farm Waterkloof 502 LQ Portion 121	-	PPP
Primary School	Seleka 4	2024/25	PPP
TVET satellite college	Thabo Mbeki	2024/25, 2025/26, 2026/27	DoE
Satellite University	N/A	2025/26	DoE/PPP



Map 35. Education Facilities in Lephalale.

4.7.5.3. Safety, Security and Disaster Management

Police Stations

According to The Neighbourhood Planning and Design Guide (Department of Human Settlements, 2019), the ideal maximum distance to a police station in rural areas is 24 km.

Within the Lephalale LM cluster, there are seven (7) South African Police Stations (SAPS) (listed below). Most areas will have access to at least one SAPS within the ideal maximum distance of 24 km, apart from communities to the west of the municipality, where access is much poorer.

The following police stations are found in Lephalale LM (IDP 2023-27):

- Lephalale SAPS
- Villa Nora SAPS
- Cumberland SAPS
- Hoopdal SAPS
- Witpoort SAPS
- Tomburke SAPS
- Tolwe SAPS

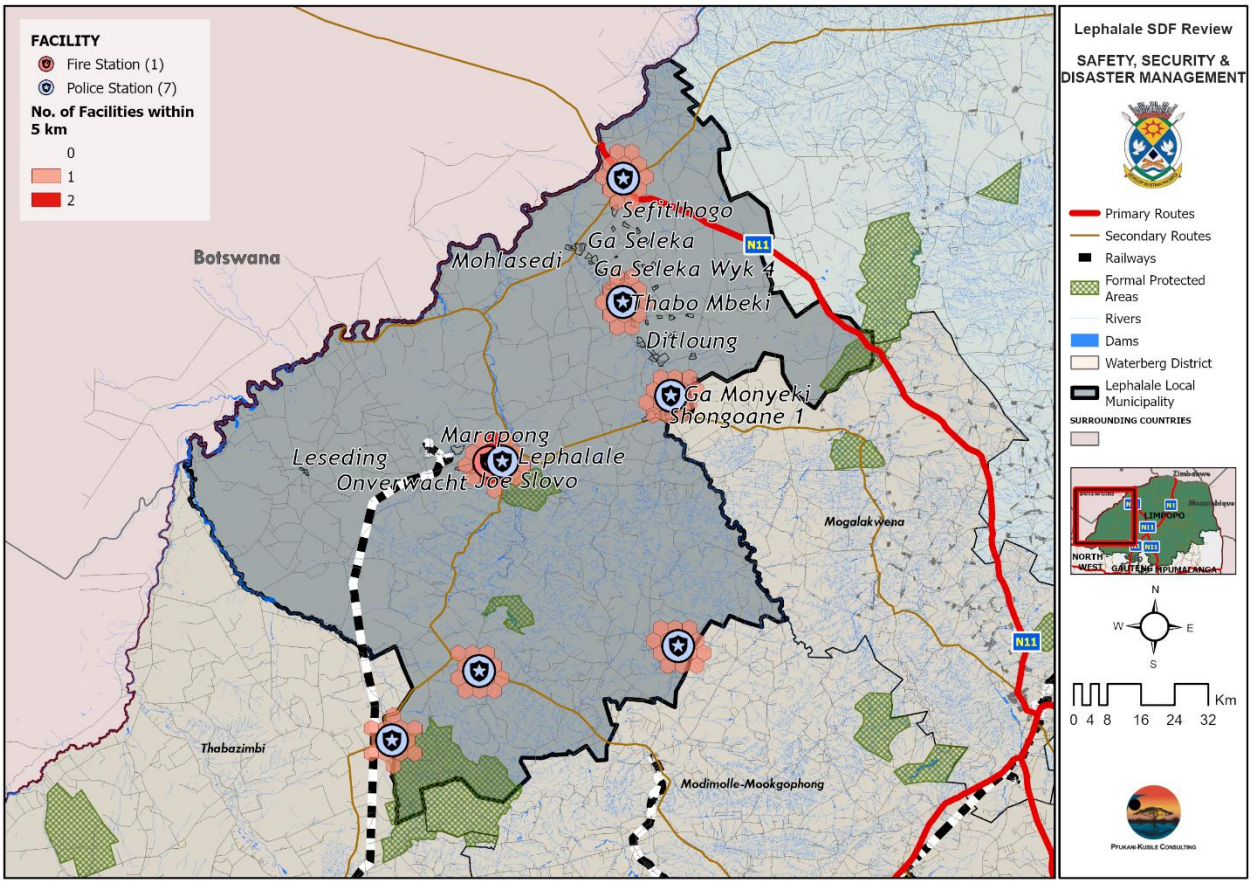
The following safety and security challenges are prevalent (IDP 2023-27):

- Monitor the proper utilisation of licenses and permits issued to liquor sellers.
- Illegal operation of unlicensed shebeens and taverns.
- Access to certain crime scenes due to bad conditions of roads and lights.

- Domestic violence (women and child abuse).
- Crime awareness and substance abuse.
- Implementation of municipal by-laws.
- Laws regulating spaza shops (municipality Vs communities).
- No Apollo lights /streetlights in villages (infrastructure).
- No animal pounds.
- De-bushing open spaces in urban areas.
- Alcohol and drug abuse amongst the youth.

Fire Stations

One fire station in Lephalale LM is located centrally in the municipality in Onverwacht, as seen in Map 32. According to The Neighbourhood Planning and Design Guide (DHS, 2019), a drive time of 23 minutes is the ideal maximum response time for a fire station in rural areas. The majority of the municipality can be reached 23 minutes from the central location of Onverwacht, indicating that response time is reasonable in the case of a fire.



Map 36. Safety, Security and Disaster Management Facilities in Lephalale.

4.7.5.4. Community Facilities

Parks

There are public parks with children's playground equipment in the urban areas. Some of these parks are maintained, although the standard in Marapong is lower than that in Onverwacht and the town. There are only two parks; the third is nearing completion in all rural villages, although most of the population resides in those settlements.

Sports facilities

The municipality has several sports facilities; however, their access status and conditions vary.

The Mogol Sports Centre and Marapong Stadium are open to the public and can be used by the community. Two enclosed sports fields, one at Ga-Monyeki village and the other in Thabo-Mbeki Township, cater to sporting activities for the rural community. However, the standard of these facilities is not satisfactory. Sports facilities in both Onverwacht and Marapong are privately owned and have limited public access.

Post Offices

Despite the growing dependence on technology and devices for receiving email and text messages, the post office continues to deliver essential services to communities. Particularly in Lephalale, a high rural population with limited access to alternate services, the post office is important for consumers who need mail and parcels delivered and access benefits, local newspapers, bills, letters, and invitations.

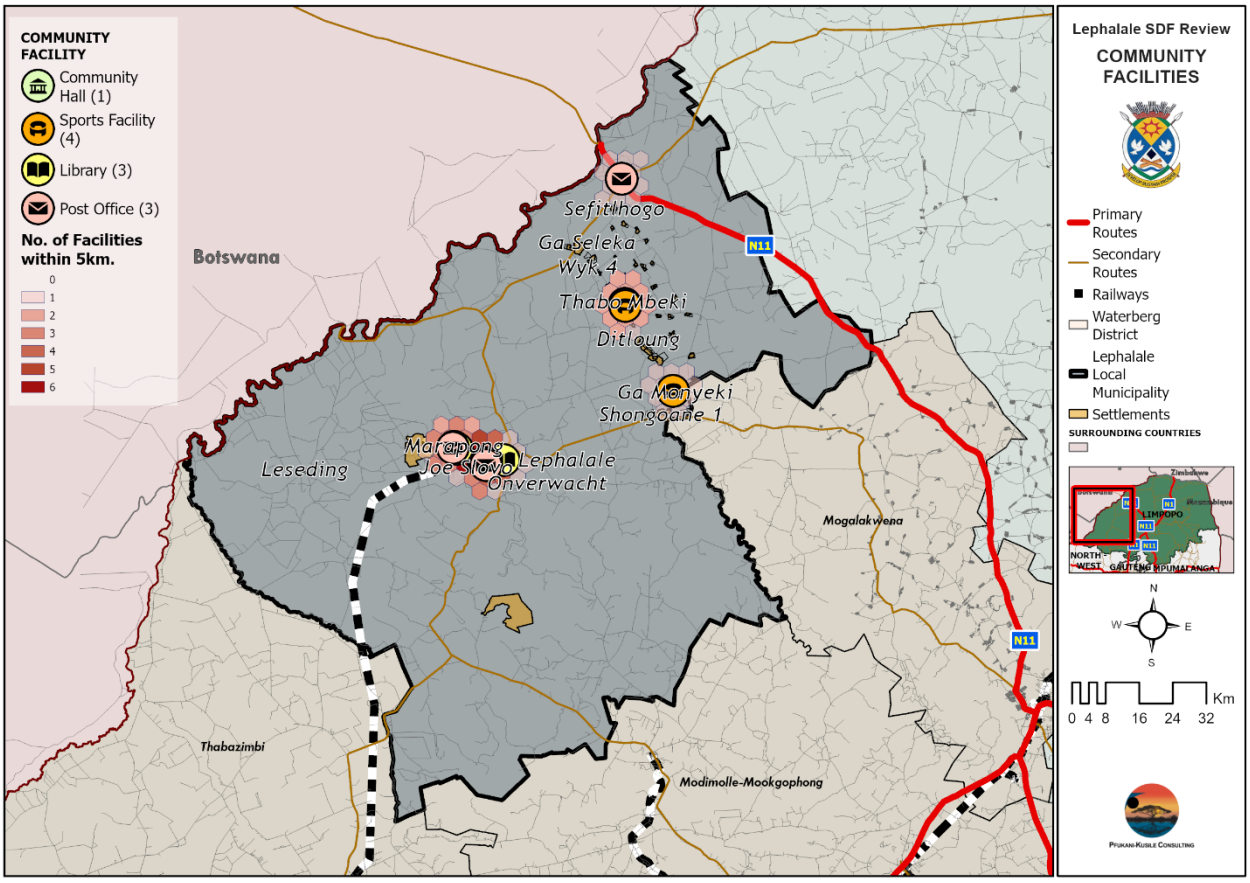
Post offices are located in Lephalale, Onverwacht and Tomburke. One of the challenges to postal service identified in the IDP 2023-27 is delivering to the rural areas of the municipality. This can be related to poor road conditions and limited road networks, which restrict accessibility and ease of movement. According to the Neighbourhood Planning and Design Guide (DHS, 2019), the ideal maximum distance to travel for postal services is between 5-10km, and a single postal facility is to service a population of between 10 000 to 20 000 people. Hence, post offices are not adequately provisioned in Lephalale LM (approximate shortfall of 3 post offices).

Community Halls and Libraries

There are currently no functional community halls in Lephalale; however, the construction of community halls in the following areas is indicated and budgeted for in the IDP 2023-27, as seen in Table 29 below. The municipality has four (4) libraries, with two proposed for development (refer to Table 29).

Table 29. IDP 2023-27 Strategic Development Project: Social Facilities

Type of Facility	Name of Village/Area	Date budgeted for	Funder
Community Hall	Madibaneng village	2024/25	PPP
Community Hall	Sefitlhogo village	2024/25	PPP
Community Hall	Letlora village	2024/25	PPP
Community Hall	Kitty village	2024/25	PPP
Community Hall	Senoela/Tlapaleborethe villages	2024/25	PPP
Community Hall	Motsweding/Dipompong village	2024/25	PPP
Library	Ga- Seleka Village	2024/25	PPP
Mobile Library (Minibus)	Steenbokpan	2024/25	PPP



Map 37.Lephalale Community Facilities.

4.7.5.5. Planned Social Infrastructure Projects 2023-27 (source: LLM IDP 2023-27)

The Lephalale IDP 2023-27 outlines the following key Social Infrastructure projects to be prioritised for the next five financial year periods.

Project/program	Area/ward	Date budgeted for	Stakeholder/ funder
Ellisras Hospital Upgrade	Ellisras	2023/24	DoH
Development of 3 Technical Sec Schools	-	2024/25 – 2025/26	Dept of Education/ PPP
Construction of early childhood centre	Shongoane 1 village	2024/25, 2025/26	PPP
Primary School and High School	Steve Biko	2024/25 – 2025/26	Dept of Education/ PPP
Primary School and High School	Marapong	2024/25 – 2025/26	DoE
Secondary Schools (2)	Altostyd	2024/25 – 2025/26	DoE
Private School	Farm Waterkloof 502 LQ Portion 121	-	PPP
Primary School	Seleka 4	2024/25	PPP
TVET satellite college	Thabo Mbeki	2024/25, 2025/26, 2026/27	DoE
Satellite University	N/A	2025/26	DoE/PPP
Community Hall	Madibaneng village; Sefitlhogo	2024/25	PPP

Project/program	Area/ward	Date budgeted for	Stakeholder/ funder
	village; Letlora village; Kitty village; Senoela/ Tlapaleborethe villages; Motsweding/ Dipompong village		
Library	Ga- Seleka Village	2024/25	PPP
Mobile Library (Minibus)	Steenbokpan	2024/25	PPP
Design & development of park	Thabo Mbeki	2024/25, 2025/26, 2026/27	MIG
Marapong Sports, Art and Culture precinct (Phase2): Reconstruction and upgrading of stadium at Marapong to include indoor sports facilities	Marapong	2023/24	MIG
Establishment of grade A, testing centre	Thabo Mbeki Ext 2	2024/25	LLM/DoT

4.8. Overall Synthesis

The Table below summarises the key challenges and opportunities presented in the Situational Analysis.

Table 30. Synthesis of Challenges and Opportunities.

CHALLENGES	OPPORTUNITIES
Institutional • A large portion of rural land is under traditional authority, making access, planning and control difficult for the municipality. • Just over 50% of land is under private ownership, which may limit development potential.	Institutional • Revitalisation of underutilised land – land reform farms and land in areas under Traditional Authorities. • Integrating traditional council and municipal land use management and service provision decision-making. • Incentivised collaborative governance with regard to land use planning, public investment, and settlement patterns with private sector and traditional authorities.
Bio-Physical • The location of villages close to rivers and flood lines increases the likelihood of disasters caused by flash floods and heavy rainfalls (influence of climate change and wetland degradation).	Bio-Physical • Land availability regarding agricultural potential and environmentally sensitive areas in the nodal area must be clearly defined.
Socio-economic and Economic • Whilst education levels have shown improvement between 2011 and 2022, unemployment has increased.	Socio-economic and Economic • The tourism industry has the potential to be expanded and capitalised on. • Future job opportunities are expected to be created by the Waterberg Coalfield and will likely attract more people into the municipality.
Built Environment • Urban sprawl and low-density development make providing an efficient public transport system costly. • Informality is anticipated to increase with people moving to Lephalale for job opportunities.	Built Environment • The Municipality needs to provide a spatial perspective that addresses the actual land use development trends and tendencies within the three focal areas to inform the development of planning scenarios and the provision of bulk infrastructure.

CHALLENGES	OPPORTUNITIES
	• The CSIR Service Wheel will be used as a guide when proposing social facilities in the SDF; this will ensure adequate facilities to meet the population's needs.

5. SPATIAL PROPOSALS

This section outlines the spatial concept for future development of the Lephalale SDF area, starting with the spatial vision of the SDF in relation to the findings of the spatial synthesis. Thereafter the revised supporting Development Objectives, Conceptual Framework and Spatial Strategies/Projects will be expanded on.

5.1. Purpose and Compliance

A Municipal Spatial Development Framework (SDF) must give spatial expression to the vision encapsulated in the Municipal IDP and the SPLUMA development principles. The general principles endorsed by the SPLUMA Act are that spatial planning, land use management and land development must promote and enhance Spatial Justice, Spatial Sustainability, Efficiency, Spatial Resilience and Good Administration. As far as the minimum content of a municipal Spatial Development Framework is concerned, SPLUMA (No. 16 of 2013), Section 21 stipulates that it must:

a. include a written and spatial representation of a five-year spatial development plan for the spatial form of the municipality;
b. include a longer-term spatial development vision statement for the municipal area, which indicates a desired spatial growth and development pattern for the next 10 to 20 years.

5.2. Approach

As part of the development of the municipal SDF, a spatial vision needs to be reviewed to guide the planning process. To ensure the spatial vision is realistic and credible, it should be reviewed based on the development realities and challenges identified in the synthesis and analysis of the municipal environment. The spatial vision should inspire and motivate all role players towards an agreed-upon future.

The approach followed in the review of the current vision included the following:

- An assessment of the Municipality's IDP vision and priority development areas.
- During finalisation, assessing the current SDF vision and priority development areas will include a vision development working session with relevant role-players.

5.3. Spatial Vision

In order to develop a spatial vision for the Lephalale SDF Review 2025, the vision and mission statements of the Limpopo SDF (2022), the previous Lephalale SDFs (2012 and 2017) and the current Lephalale IDP 2023-27 are reviewed as a starting/foundational point.

5.3.1. Limpopo Provincial Spatial Development Framework, 2022

The Limpopo PSDF envisions a provincial spatial structure where the natural environment and valuable agricultural land are protected for future generations, with a strong, diverse and growing economy, and that offers its residents high quality living environments and good job opportunities.

5.3.2. IDP 2023-27 Vision and Municipal Mission Statement

Vision statement: *"A vibrant City and the Energy Hub"*.

Mission statement: *"We are committed to rural development, provision of quality, sustainable and affordable, financial viability and good governance, local economic development and job creation".*

Integrated Development	Quality, Sustainable and Affordable Services	Financial Viability	Local Economic Development, and Job Creation
• optimise connectivity and access by way of a comprehensive Municipal movement network linking all urban and rural nodes to one another	• Establish a functional system of economic and service delivery nodes in the urban and rural parts of the Municipality	• Ensure Financial sustainability • Continually evaluates and measures performance against set target	• Optimally utilise the mining potential in the Municipality in such a way that a sustainable balance is maintained between mining, agriculture and the natural environment • Support of Local Business

Supporting Values:

- Community orientation: Provide and deliver sustainable services and activities for the whole community.
- Transparency: Invite and encourage public sharing and democratic participation in the Council's activities.
- Commitment: Focus and concentrate on the Council's core activities in a consistent manner.
- Business orientation: Subscribe to, and comply with, the best business practices.
- Integrity: Conduct the Council's business in a fair, responsible, flexible, equitable and honest manner.
- Accountability: Report regularly to all stakeholders regarding council's actual performance.
- Environmental care: With all the development in Lephalale the municipality will focus on taking care of the environment.
- Empowerment: To be seen empowering our people knowledge is power

5.3.3. Lephalale Spatial Development Framework (SDFs), 2012 and 2017

The 2012 Lephalale SDF provided the following spatial vision for the entire municipality:

> "*A **properly planned** area, with a **vibrant city** which serves as **energy hub** for the wider region, conducive for **development of all economies** with proper **protection of their environment** and to ensure sustainable **delivery of engineering services***".

The 2017 SDF provided the following spatial vision which focused on a spatial future for the Rural Focus Area:

> *"Ensure **sustainable livelihoods** for those households residing in the rural areas of the municipality through **proper planning, adequate linkage to rural development programs and products** while at the same time **protecting** valuable **environmental and agricultural resources**".*

Planning	Adequate linkage to rural development programs	Protecting Valuable Environmental and Agricultural Resources
• Building capabilities knowledge skills • Equity and spatial concentration in the distribution of basic services within the communities, i.e., water, sanitation, roads, waste removal and other services.	• Compile Community Based Rural Development Plans for identified Rural Intervention Areas.	• Actively protect, manage and rehabilitate the natural environmental resources in the district in order to ensure a sustainable equilibrium between the competing mining and agricultural industries.

A visioning workshop was held with representatives from Lephalale Municipality in October 2024. The development of the SDF vision statement took into account the following elements derived from the Lephalale IDP and NSDF:

- Contribute to realisation of the NSDF
- Spatial transformation and restructuring; create structure in Traditional Areas/ rural areas, particularly due to the large extent thereof in the Province
- Local Economy and Job opportunities
- Industrial development
- Climate change
- Innovation
- Inter-regional and regional linkages to enhance links with growth points
- Improvement of human resources

5.3.4. Lephalale SDF 2025 Draft Vision

From the above issues identified by the IDP 2023-27, the Limpopo PSDF (2019) and 2017 SDF, the proposed future draft Spatial Vision for Lephalale Municipality SDF 2025 is as follows:

Short-term vision (5-10 years)

*"**Integrated development** that fosters **sustainable rural development** by ensuring **equitable access** to **quality social facilities** and **promoting Local Economic Development**"*

Long-term vision (10-20 years)

"A vibrant City and Provincial Energy Hub, focused on the delivery of sustainable and inclusionary development"

Integrated development	*Sustainable rural development*	*Equitable access to quality, affordable basic services and promoting Local Economic Development*
•Consolidating government investment (spatial targeting) of prioritised urban and rural nodes. •Enhance inter- and intra-district transport linkages. •consolidate human settlement projects in sustainable Priority Housing Development Areas at the identified urban and rural nodes.	•Enhance spatial efficiency by defining a range of urban and rural nodes in the district around which to consolidate economic development and infrastructure investment. •Consolidate and protect environmentally sensitive areas to ensure long term environmental sustainability.	•Ensure equitable access to social facilities and promotion of Local Economic Development by way of targeted investment based on a spatial logic at all the priority nodes within the Municipality.

Figure 34. Lephalale SDF 2025 Spatial Vision Components.

5.4. Growth Projections and Land Use Budget

5.4.1. Growth Projections: 2022 – 2030 – 2040

Table 31 shows the historic, current and projected future population and households for Lephalale LM based on Census 2022 data. The following is to be noted in this regard:

- The existing (2022) population for Lephalale is estimated at 125 198 people. Given the population growth rate of 0,87% per annum (IDP 2025/26), the population is projected to increase to about 160 158 people by 2030 (34 960 people increment) and to about 171 243 people by 2040 (11 085 people increment).
- The total population increment for the municipality from 2022 up to 2040 is around 46 045 people. This translates to an annual increment of 4 370 people up to 2030 and about 1 108 people per annum between 2030 to 2040.
- The existing 40 584 households in Lephalale is expected to increase by 2 152 households to a total of 42736 households by 2030, and by a further 3949 households up to 2040, to bring the total number of households to 46 685 by 2040.
- The total household increment for the LM from 2022 up to 2040 is 6 101 households.

Table 31. Lephalale Incremental Population and Households 2022-2040.

	2022 (Census)	2030 (Projection)	2040 (Projection)
Lephalale Population (no.)	125 198	160 158	171 243
Incremental population (no.)	-	34 960	11 085
Incremental population p.a. (no.)	-	4 370	1 108,5
Lephalale Household (no.)	40 584	42 736	46 685
Incremental households (no.)	-	2 152	3 949
Incremental households p.a. (no.)	-	269	394,9

Figures above are based on the accepted population and household projections as indicated in the Lephalale IDP 2025/26.

5.4.2. Land Use Budget: 2022 – 2030 – 2040

Table 32 below reflects the land use budget for Lephalale LM for the period 2022-2030 and 2030-2040 respectively. Following is a brief summary of the main features to be noted in this regard:

- During the period 2022-2030 the new households will require an estimated 85,7 ha of additional land for housing purposes.
- The projected addition to the population for the 2022-2030 period (around 34 960 people) will require the development of 13 small creches, 5 primary school and 3 secondary school, collectively requiring about 27,26 ha of land.
- In total an additional 148,22 ha is approximately needed to accommodate all urbanisation purposes by 2030.
- For the period 2030-2040 the projected 11 085 additional (incremental) people representing 3 949 additional households requires an estimated 157,30 ha of additional land for housing purposes.
- In total an additional 171,3 ha is approximately needed to accommodate all urbanisation purposes by 2040.

Table 32. Lephalale Land Use Budget 2022-2030-2040.

	2022 population					Increment: 2022 -2030			Increment: 2030 - 2040			Total 2040 complex (2022-2040)			Community Facilities 2022-40
Community Facilities	**Requirement**			**CF provided**	**Surplus/ deficit**	**Requirement**			**Requirement**			**Requirement**			**Surplus (+) /deficit (-)**
	No.	**ha**	**%**	**No.**	**No.**	**No.**	**ha**	**%**	**No.**	**ha**	**%**	**No.**	**ha**	**%**	**No.**
Number of Units	40584	**1616,5 ha**	**68%**	**-**	**-**	2 152	**85,7ha**	**37,82%**	3 949	**157,30**	**71,83%**	46 685	**1859,5 ha**	**66,25%**	
Population	125198					34 960			11 085			171 243			
Nett residential density (du/ha)		40 - 100 du/ ha					40-100 du/ha						40-100 du/ha		
Multi-use Retail & Business		**73,12ha**	**4%**	**-**	**-**		**20,42ha**	**13,78%**		**6,48ha**	**3,78%**		**100,02 ha**	**4,64%**	
Education		**94,92ha**	**5,17%**	**95**			**27,26ha**	**18,39%**		**7,08ha**	**4,13%**		**129,26 ha**	**6%**	
Small creche	46	0,92		18	-28	13	0,26		4	0,08		63	1,26		-45
Primary (large, incl. Gr R)	18	54		48	+30	5	15		1	3		24	72		-24
Secondary (med)	10	40		29	+19	3	12		1	4		14	56		-27
Health services		**3ha**	**0,16%**	**15**			**2ha**	**1,35%**		**0ha**	**0%**		**5ha**	**0,23%**	
Local clinic (0,5ha)	3	1,5		6	+3	1	0,5		0	0		4	2		+2
Community health centre (public)	1	1,5		1	0	1	1,5		0	0		2	3		-1
Hospital	0	0		3	+3	0	0		0	0		0	0		+3
Safety and Security		**4,5ha**	**0,25%**	**9**			**0ha**	**0%**		**0ha**	**0%**		**4,5ha**	**0,21%**	
Police Station	2	1,5		7	+5	0	0		0	0		2	1,5		+5
Correctional service	1	2		2	+1	0	0		0	0		1	2		+1
Fire Station	2	1		0	-2	0	0		0	0		2	1		-1
Social/cultural/civic		**30,66ha**	**1,67%**	**16**			**9,84ha**	**6,64%**		**0,32ha**	**0,19%**		**40,82ha**	**1,89%**	
Local library	3	1,2		5	+2	1	0,4		0	0		4	1,6		+1
Municipal/tribal office	1	0,5		3	+2	0	0		0	0		1	0,5		+2
Post office/ICT Access Point	8	0,16		2	-6	2	0,04		1	0,02		11	0,22		-9
Community hall	8	2,4		1	-7	2	0,6		1	0,3		11	3,3		-10
Cemeteries (med)	3	26,4		5	+2	1	8,8		0	0		4	35,2		+1
Sports and Recreation		**13,74ha**	**0,75%**	**18**			**3ha**	**2,02%**		**0,12ha**	**0,07%**		**16,86ha**	**0,78%**	
Sports facilities (public stadiums and sport	2	0,24		3	+1	0	0		1	0,12		3	0,36		-

fields)															
Public Open Space (natural & green parks)	9	13,5		15	+6	2	3		0	0		11	16,5		+4
Streets			**20%**					**20%**			**20%**			**20%**	
TOTAL		**1836,44ha**	**100%**				**148,22 ha**	**100%**		**171,3 ha**	**100%**			**100%**	

Notes: Standards based on CSIR Guidelines for Large Towns/Regional Service Centres.

5.5. Development Objectives & Spatial Strategies

Considering the revised Limpopo Provincial Spatial Vision and Provincial Spatial Outcomes, the Development Objectives of the Lephalale SDF 2025 need to adequately address pressing spatial issues and challenges identified in the spatial analysis and synthesis section. Moreover, achieving the identified spatial development objectives serve as fundamental points of departure to realising the Spatial Vision of the SDF for Lephalale LM. The five (5) proposed Development Objectives are outline in greater detail in this section, in addition to identified detailed strategic actions necessary to achieve each Objective.

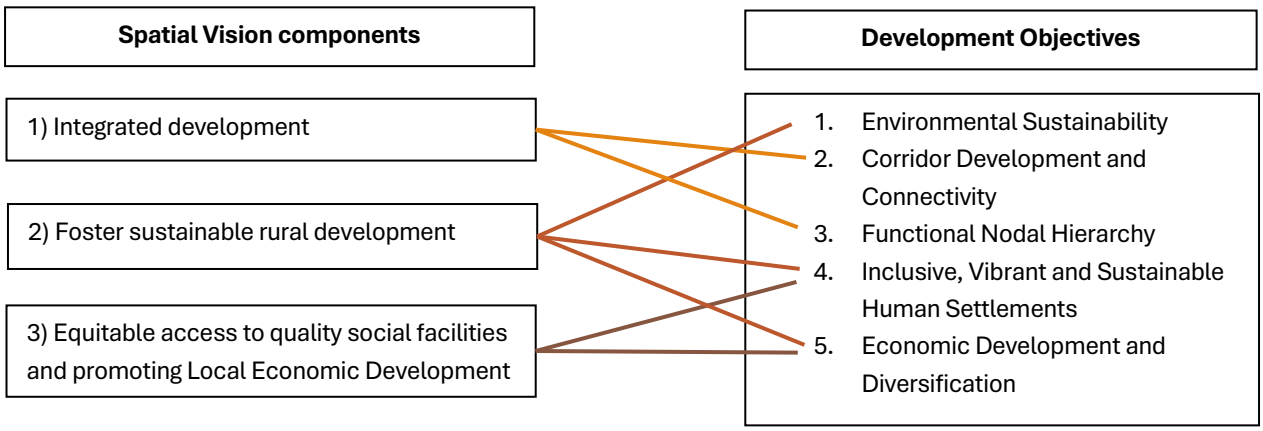
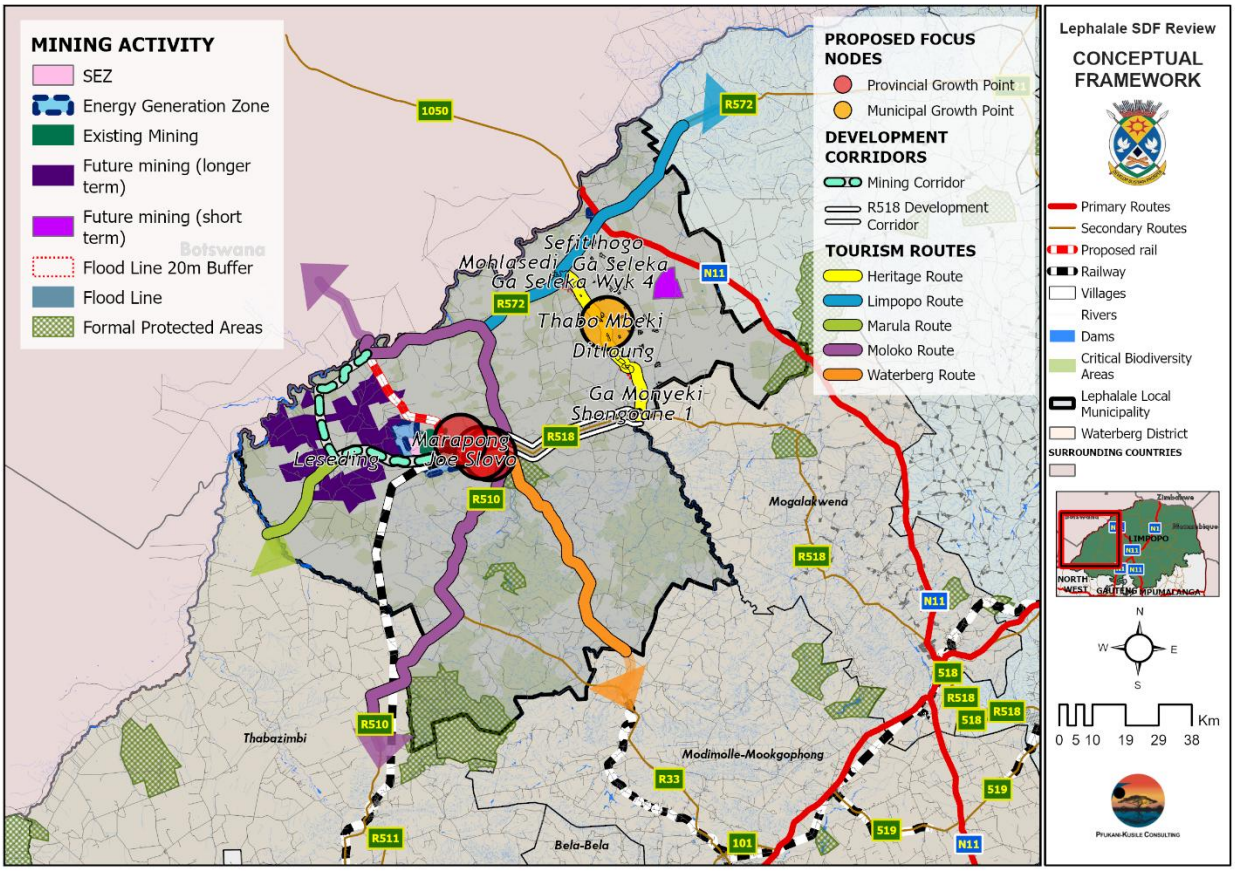


Figure 35. Proposed SDF 2025 Development Objectives.

5.6. Conceptual Framework

The conceptual framework for Lephalale Local Municipality reflects an integrated development approach, supported by a functional hierarchy of nodes and focus areas delineated by development edges to control urban sprawl and prevent development of settlements in areas that present structural hazards (e.g. flooding events). The components of the conceptual framework and related Development Objectives are illustrated in greater detail below.



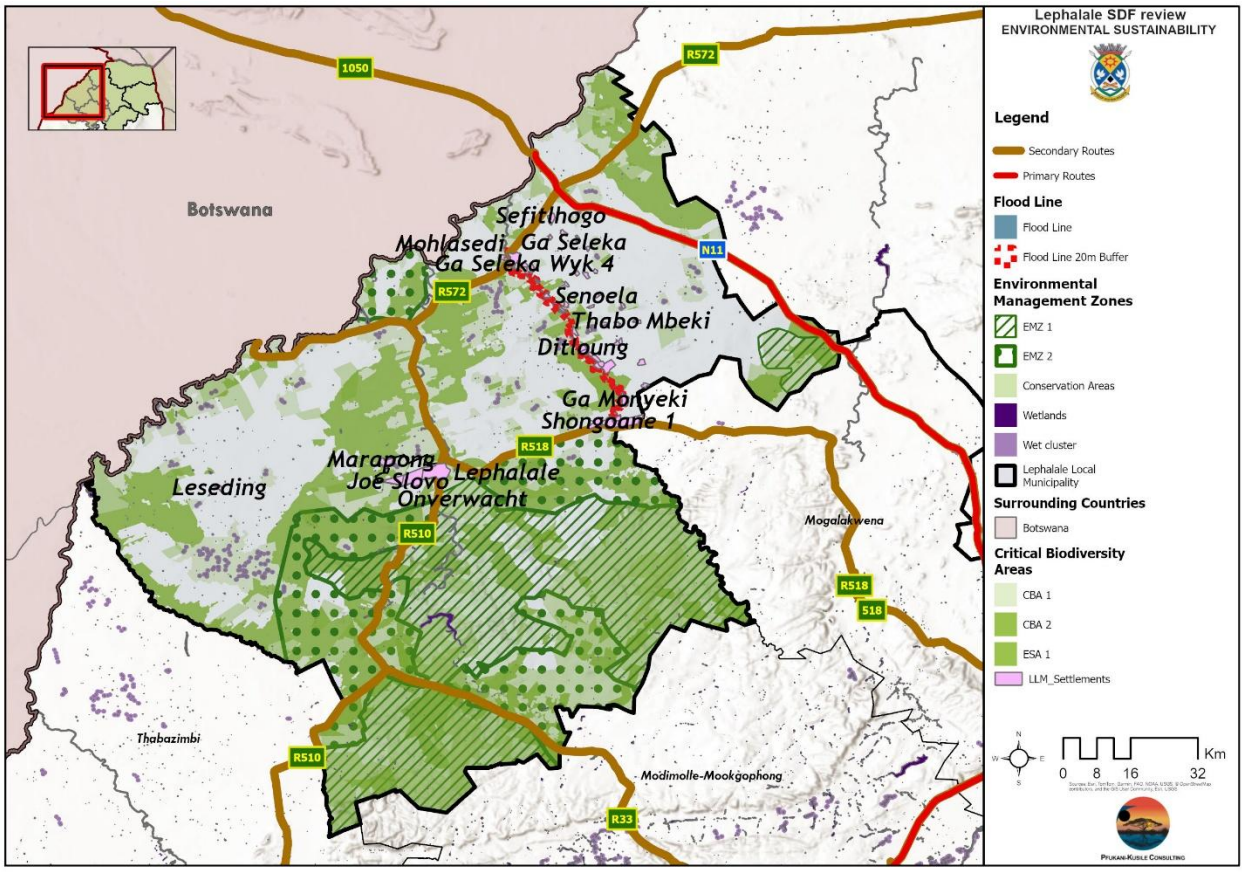
Map 38. Lephalale Conceptual Framework.

DO 1. Environmental Sustainability

Table 33. DO1.Environmental Sustainability: Strategy/Development Actions.

Development Objective	Strategy/Development Actions
Achieve a sustainable balance between conservation of the natural environment and urban and rural development. • Actively protect, enhance, and manage environment assets of the Municipality. • Sustainable land use practices and a 'conservation development approach' should be adopted. • The delineation of urban and rural edges to ensure that important environmental features (i.e. river channels) and biodiversity areas (CBAs, ESAs, and Protected Areas) are protected from development and urban sprawl. • Promote sustainable utilization of mining and agricultural resources.	**1.1** Coordination/ alignment with Limpopo Tourism and Parks Board to ensure demarcation, protection, and proclamation of established conservancies around existing Protected Areas.
	1.2 Demarcation of an Environmental Conservation Zone (ECZ): zone which should be strictly managed in order to protects biodiversity and ecosystems as contemplated in NEMA and the Waterberg Biosphere Region.
	1.3 Demarcation of an Environmental Tourism Zone (ETZ) which includes: zone representing areas with high, natural, visual and cultural quality that has significant potential for the development of eco-tourism and/or low-intensity culture-based tourism.
	1.4 Actively maintain the integrity of declared CBA areas in order to ensure the continued existence and functioning of species and ecosystems. The following strategies apply to CBA's: • Further loss of natural habitat should be avoided in these areas • Degraded or disturbed CBA 1s and CBA 2s should be prioritized for rehabilitation through programmes such as Working for Water and Working for Wetlands. • Control of illegal activities, such as hunting and dumping, which impact on biodiversity, should be prioritized in these areas. • The introduction and breeding of invasive alien species should not be permitted in CBAs and ESAs. • The restriction of animal movement (e.g. cheetah, African wild dog) due to impenetrable fences should be discouraged.
	1.5 Optimise existing mining activity and potential in a sustainable manner. • New or proposed mining activity may only commence after the necessary consents of the Department of Minerals and Energy had been obtained, and land owner written consent has been obtained, where needed.
	1.6 Optimise existing agricultural activity and potential in a sustainable manner. • Medium to high agricultural potential land should be protected from urban expansion and utilized

	for agriculture-related activities (including commercial and subsistence farming.



Map 39. DO1. Environmental Sustainability.

DO 2. Corridor Development and Connectivity

Table 34. DO 2. Corridor Development and Connectivity: Strategy/Development Actions.

Development Objective	Strategy/Development Action

Establish and maintain a multi-modal movement network optimizing regional connectivity and local accessibility
 	
❖ Maintain and improve regional and local linkages to establish a network of connected nodes and settlements.
❖ Development corridors (DC) and Strategic Links (SL) to be established with specific themes to strengthen connectivity and provide opportunity for development between nodes of economic activity and routes of greater importance.
❖ Optimise regional connectivity whilst still supporting local accessibility.
	2.1 Development Corridors (DCs): The following three development corridors are identified for Lephalale LM.
	• **DC.1 Primary Development Corridor – R518** (Setateng/ Lephalale/ Steenbokpan DC):
	  • Most important corridor in the study area and it links the largest part of Limpopo (from Polokwane) with Lephalale.
	  ○ Additionally linking the eastern rural residential settlements with the Lephalale Provincial Growth Point (Ellisras/ Onverwacht/ Marapong Cluster).
	  • Links "external areas" with the core of the envisaged energy hub.
	  • Stretches beyond Lephalale PGP, to link with Steenbokpan in the western parts of the study area.
	
	• **DC.2 Tourism Corridor – R33** (Gauteng/ Vaalwater/ Lephalale DC):
	  • Links Gauteng and other parts of the Waterberg via Vaalwater with the Lephalale Provincial Growth Point (Ellisras/Onverwacht/Marapong Cluster).
	  • This corridor link "external areas" with the core of the envisaged energy hub as well as serving the Waterberg biosphere and associated tourism activities
	
	• **DC.3 Import-Export Corridor – N11** (Mokopane/ Tom Burke/ Botswana DC):
	  • National route between Botswana and Limpopo.
	  • Links Lephalale with Botswana and serves as major "export route" for products such as red meat.
	  • May hold future potential for development should closer links with Botswana be established, due to the prospective development of the energy hub in Lephalale.
	Supported by the SL3 and SL4

	2.2 Tourism routes connecting the main tourist anchors and tourist sites which require upgrading and maintenance. • The Mokolo route R510 • Marula route D1675 • Limpopo route R572 • Waterberg route R33 • Heritage route D3110
	2.3 Strategic Linkages (SL): these routes all require road upgrading and maintenance. In the case of gravel roads (particularly in rural areas), retarring is necessary. • Strategic Links (SLs) identified in the Table below.

	2.4 Support the development of the proposed Mmamabula Lephalale Rail Link from coalfields linking to the Thabazimbe rail link (Botswana Railways and Transnet partnership.
	2.5 Prioritize the planning and development of the Northern bypass route north of Lephalale Town (proposed in the CBD Plan, 2013). • To function in directing/attracting development northwards, closer to Marapong. • Assist in consolidating the nodes of Lephalale, Onverwacht and Altoostyd.
	2.5 Provincial and national roads should be maintained in good order to allow for the function as rad freight corridors. • The district road D3110 from Ga-Seleka to Setateng is very important ensuring connectivity throughout that sub-region. **2.6** Upgrade and expand the Groblersbrug Border Post. The Border Post (along the N11 towards Martin's Drift Border Post in Botswana) has experienced dramatic increase in freight traffic in recent years (IDP, 2023-27). The single-lane Grobersberg bridge and limited truck parks on the South African side, has caused delays and congestion along the N11. Numerous strategies can be proposed for the short and long term (however more detailed feasibility studies required): • Development of more truck parks and ancillary uses (filling stations, small retail, overnight accommodation etc.) • Border post can be moved further south from the bridge. • The bridge infrastructure itself can be expanded to accommodate more lanes and traffic volume (long-term).

Table 35. Lephalale SDF Proposed Strategic Links.

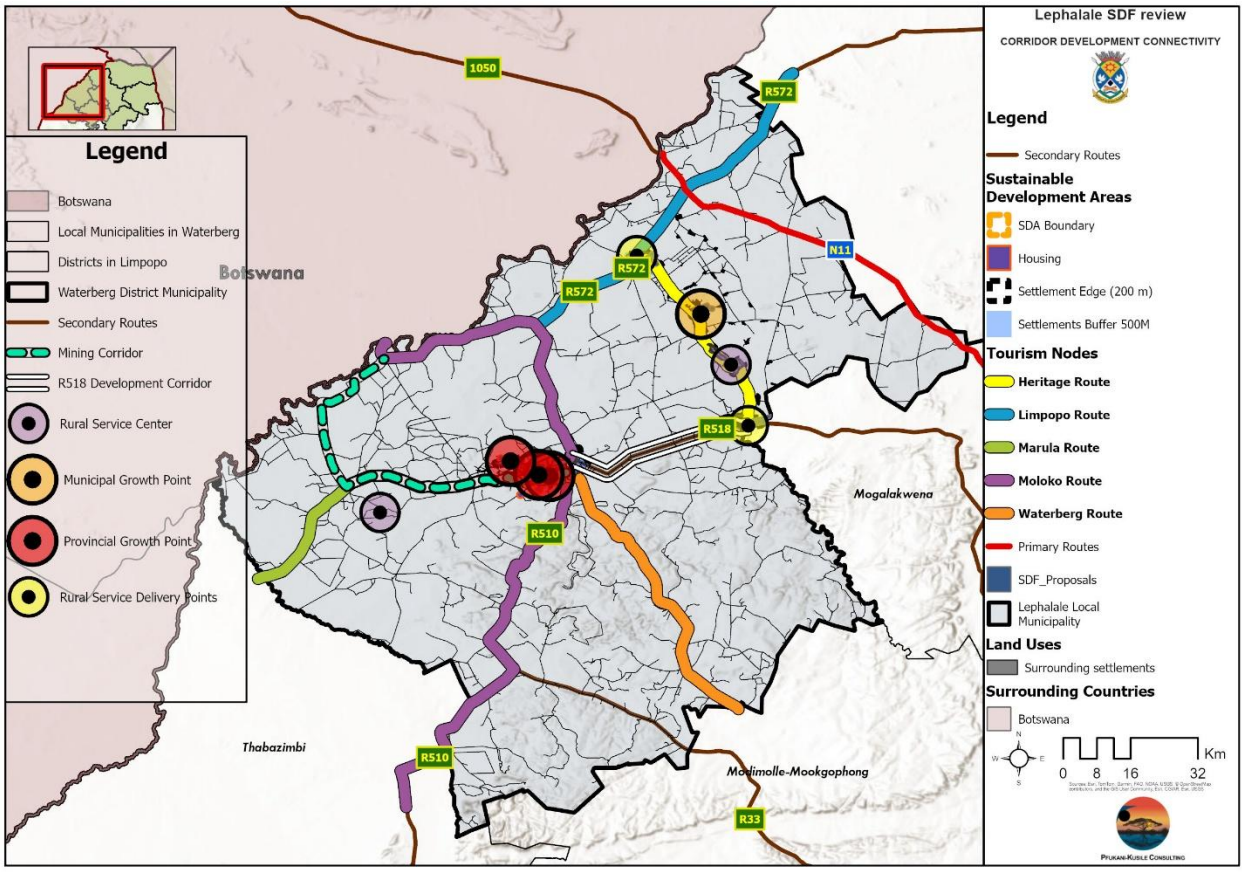
Strategic Link	Description
SL1) R516 and R510 – From Vaalwater to Lephalale LSP.	Alternative link between Vaalwater and Lephalale and link from Thabazimbi.
SL2) R510 (O.R Tambo Road) – From Thabazimbi to Lephalale	Link from Thabazimbi to Lephalale
SL3) R510 – From Lephalale to Stockpoort	Link from Lephalale to Stockpoort and Tom Burke LSP's
SL4) R572 – From R510 to Tom Burke/DC3	Link Lephalale and rural areas with DC3 and Tom Burke
SL5) Road between SL 4 and SL 10, finally lining to DC 1 through rural settlements	Link rural settlements and Thabo Mbeki MGP with Lephalale PGP via DC1
SL6) District road between R510 and Steenbokpan	Link Steenbokpan with Thabazimbi and Vaalwater
SL7) District road between Steenbokpan and Stockpoort	Link Steenbokpan with Stockpoort and Botswana
SL8) Urban arterial route between DC1 & DC2, running through Lephalale PGP	Connect PGP with passing DC's and provide for internal connectivity between neighbourhoods/strategic areas within PGP. Also strategic link to proposed airport
SL9) Urban arterial route between DC1 & DC2, running through Lephalale PGP	Connect PGP with passing DC's and provide for internal connectivity between neighbourhoods/ strategic areas within PGP, especially Marapong with Onverwacht and Altoostyd
SL10) District road between Marnitz running through rural settlements and finally linking with R518 which becomes DC 1.	Link Marnitz with rural settlements and DC1.

SL11) District road between R510 (from Vaalwater & Thabazimbi) and Stockpoort passing close to existing PGP.	Link road for purposes of haul road transport.
SL12) Road between Lephalale (passing Marapong) up to District Road.	Linking Lephalale and DC1 with SL 11. Linking PGP with Stockpoort.

Strategic Links (SL) are links or transport routes between nodes and development corridors, or between settlements, which provide an important or strategic level of connectivity between important destinations. It may also link internal nodes with outside areas (e.g. other municipalities or outside nodes). Although they are not corridors for development, strategic links may hold potential for development at certain strategic intersections.

Different types of Strategic Links include:

- Strategic Links (SL) – strategic link to ensure high mobility and improved connectivity between different nodes, growth points and residential areas.



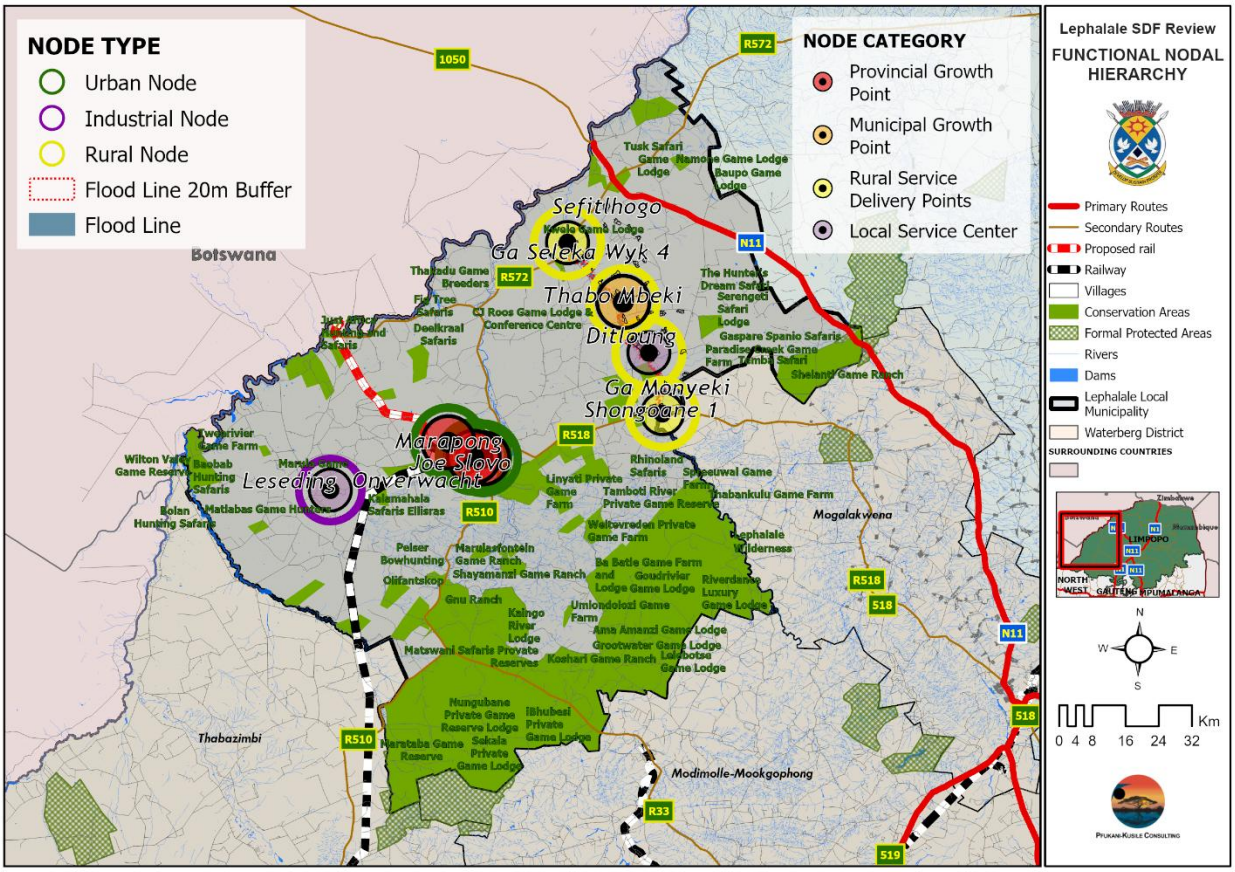
Map 40. DO2. Corridor Development and Connectivity.

DO 3. Functional Nodal Hierarchy

Table 36. DO 3. Functional Nodal Hierarchy: Strategy/Development Actions.

Development Objective	Strategy/Development Action
Develop a functional hierarchy of primary, secondary, and rural activity nodes in Lephalale LM to enhance spatial efficiency. Additionally, nodes of specific economic activity, namely agriculture, business (formal and informal), tourism, resource extraction nodes should be consolidated.	3.1 Ensure alignment of functional nodal hierarchy of settlement and growth points with the Limpopo PSDF and in terms of real growth demands.
	3.2 Establish nodal hierarchy concept in Lephalale by focusing infrastructure development and funding allocation within the nodes identified under the focus areas. a) Urban Focus Area nodes: Lephalale, Onverwacht, and Marapong b) Rural Focus Area nodes: Thabo Mbeki, Shongoane, Ga-Saleka, and Abbotspoort.
	3.3 Maintain and enhance the Lephalale/ Onverwacht/ Marapong function as a Regional Service Centre and the Primary Activity Node cluster.
	3.4 Thabo Mbeki to be supported as the Municipal Growth Point and Population Concentration Point.
	3.5. Ga-Seleka and Shongoane to be supported as Rural Service Delivery Points.
	3.6. Steenbokpan and Abbotspoort to be supported as a Local Service Point (LSP).
	3.6. Steenbokpan to be supported as an Industrial Activity Node.

Settlement Name	Limpopo SDF Classification	Lephalale IDP Classification	Lephalale SDF 2017 Classification	SDF 2025 Proposed Classification
Lephalale	Provincial Growth Point	1st order node Growth Points	Provincial Growth Point	Provincial Growth Point
Marapong	Provincial Growth Point	1st order node: Growth Points	Provincial Growth Point	Provincial Growth Point
Onverwacht	-	1st order node: Growth Points	Provincial Growth Point	Provincial Growth Point
Thabo Mbeki	Municipal Growth Point	2nd order node: Population Concentration Point (PCP)	Municipal Growth Point	Municipal Growth Point and PCP
Ga-Seleka	Rural Nodal/Service Point	2nd order node: Population Concentration Point (PCP)	Rural service delivery point	Rural service delivery point
Shongoane	-	2nd order node: Population Concentration Point (PCP)	Rural service delivery point	Rural service delivery point
Steenbokpan	Industrial Node	3rd order node: Local Service Point	-	Local Service Point and Industrial Node
Abbotspoort	-	-	-	Local Service Point

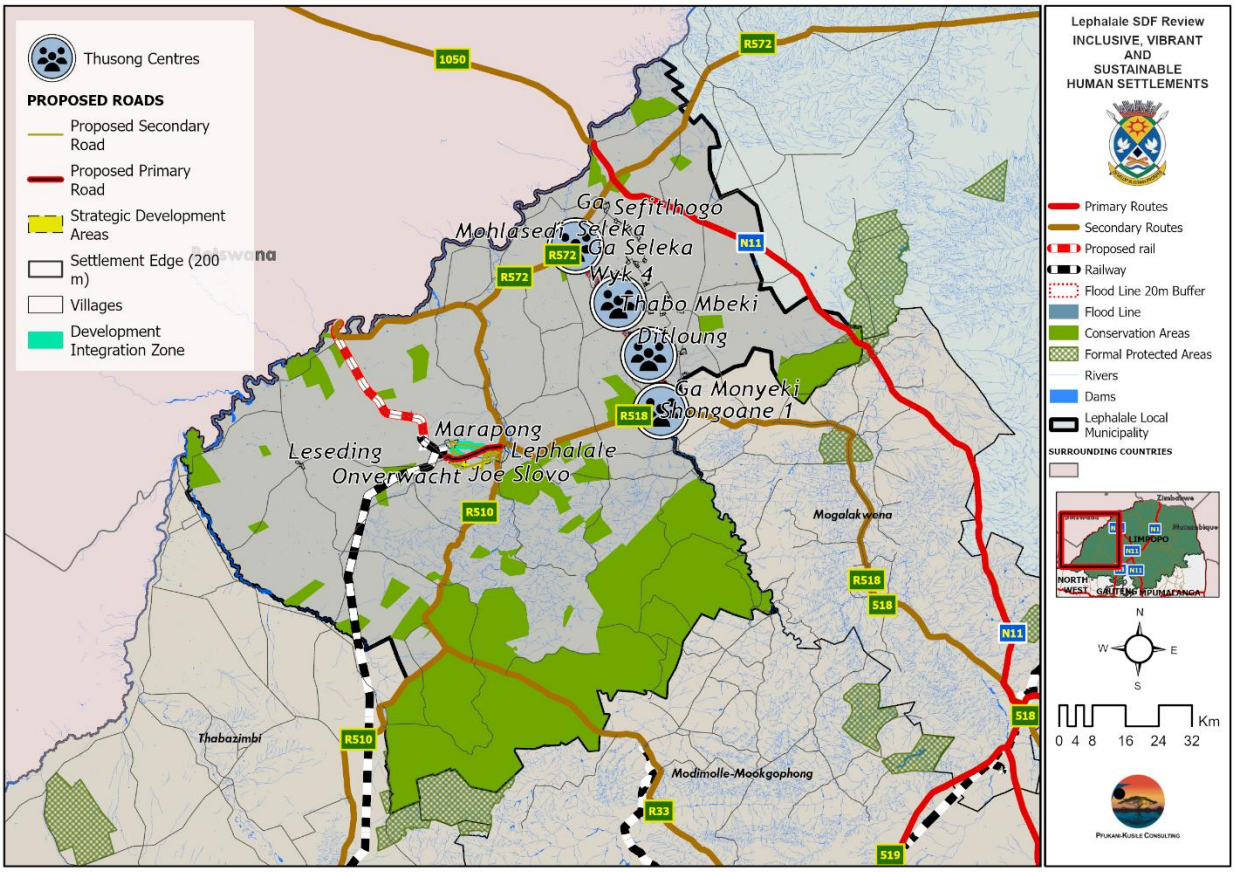


Map 41. DO3. Functional Nodal Hierarchy.

DO 4. Inclusive, Vibrant, and Sustainable Human Settlements

Table 37. DO 4. Inclusive, Vibrant and Sustainable Human Settlements: Strategy/Development Actions.

Development Objective	Strategy/Development Action
Consolidate the urban structure of Lephalale LM around the identified activity nodes and delineated development edge through way of infill development, upgrading, and service provision. ❖ Delineate urban and rural development edges around settlements and identified nodes to direct future growth, limit urban sprawl, promote optimum use of land and infrastructure, and conserve environmentally sensitive areas and agricultural land. ❖ Consolidate the urban structure of Lephalale around the identified activity nodes by way of residential infill development in Strategic Development Areas (SDAs) and upgrading or services and land use control in identified Upgrading Intervention Areas (UIA). ❖ Optimise service delivery by providing a full range of social services at identified activity nodes, in accordance with the nationally approved Thusong Centre concept. ❖ This Objective is focused on addressing infrastructure gaps, promoting balanced development and supporting spatial justice.	**4.1** Delineate urban and rural development edges around settlements and identified nodes to direct future growth, limit urban sprawl, promote optimum use of land and infrastructure, and conserve environmentally sensitive areas and agricultural land. • Zones and areas within the development edge include: the DIZ, SDAs, UIAs, and existing settlement areas (urban and rural). • Development edges are especially important for housing/residential development.
	4.2 Development Integration Zone (DIZ): spatial integration through development of vacant land between Marapong and Onverwacht. Land use development in this demarcated Zone should focus on a mixture of commercial, light industry, and where appropriate residential development. This zone will be located within the proposed development edge
	4.3 Strategic Development Areas (SDAs): • Infill development to consist primarily of low to medium density residential land use, with supporting services, amenities, and public transport infrastructure
	4.4 Upgrading Intervention Areas (UIAs): represents informal settlements and areas prioritized for intervention. • UIAs to be located within the proposed development edge • Strategies for UIAs include formalization (township establishment), incremental upgrading, street naming, and upgrading of services. This process much engage the community.
	4.5 Prioritise consolidation of community infrastructure in the Rural Focus Area in line with the concept of multi-purpose Thusong Centres. • Development of Thusong Centres in: Thabo Mbeki, Ga-Seleka, Shongoane and Abbotspoort. • Thusong Centres positioned close to residential development, accessible by main mobility spines and connected to public transport system. • These centres need to be supported by public transport infrastructure, mixed use development and social facilities (i.e. parks, sporting facilities, community centres etc.).



Map 42. DO4. Inclusive, Vibrant and Sustainable Human Settlements.

Development edge is defined as a demarcated line and interrelated policy that serves to manage, direct, and limit urban and settlement expansion.

Infill Development should be encouraged on municipal owned properties to promote efficient usage of land, utilization of existing infrastructure, walkability and safeguard against urban sprawl and land invasion.

Strategic Development Areas (SDAs) or growth areas are specific demarcated areas or precincts with unique opportunities to give form to a desired objective, and further represent areas/precincts where future growth opportunities are identified, including greenfield and infill development.

Upgrading Intervention Areas (UIAs) are areas compromised by uncoordinated and unplanned settlement of people, which require intervention from the authorities in terms of upgrading services and land use control to ensure sustainable development and prevention of further urban sprawl.

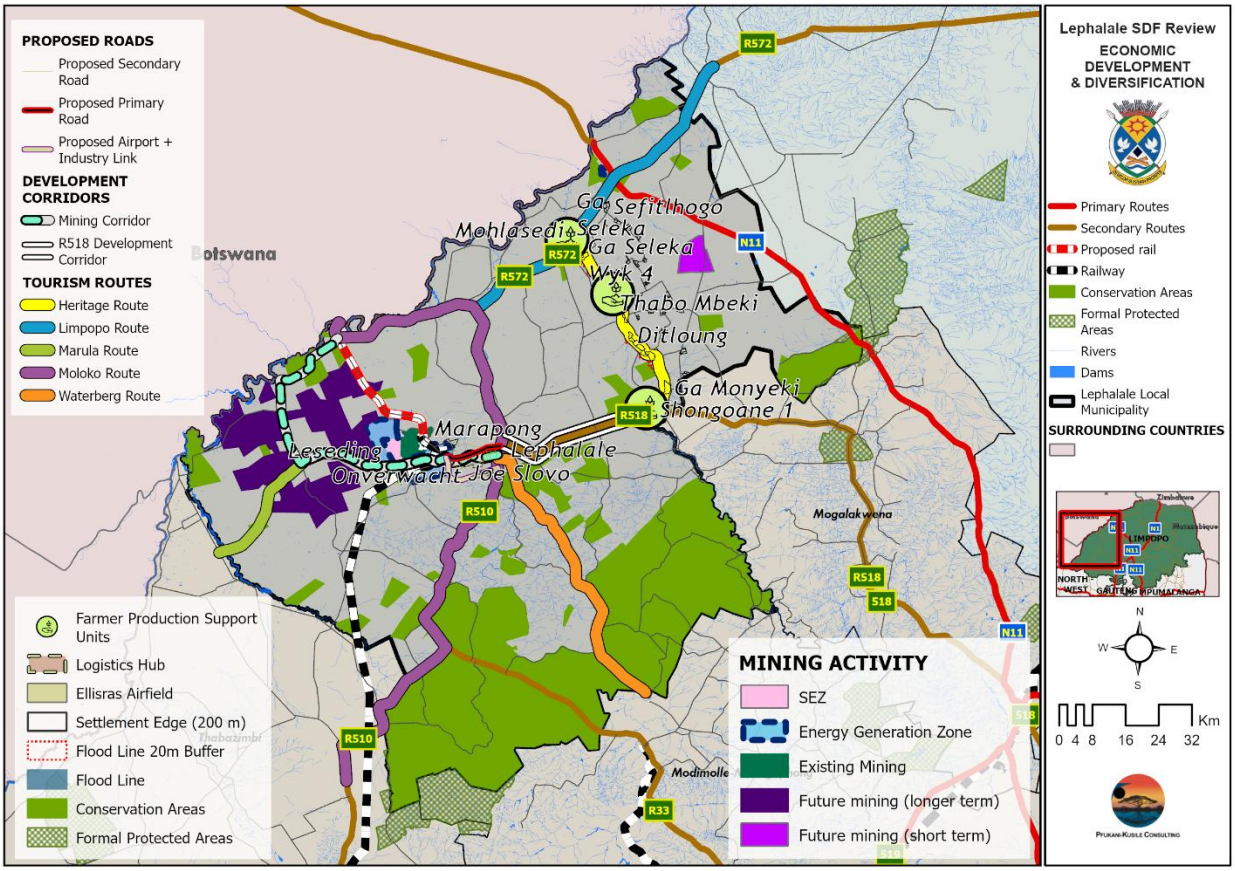
Thusong Centres are “a focal point at which a comprehensive range of essential services can be obtained by people living in its vicinity”. Establishment of these centres will ensure that all areas in Lephalale (urban and rural) are at least provided with the constitutionally mandated minimum levels of service, promoting spatial justice.

DO 5. Economic Development and Diversification

Table 38. DO 5. Economic Development and Diversification: Strategy/Development Actions.

Development Objective	Strategy/Development Action
Encourage economic diversification and expansion of the rural space economy. ❖ Encourage economic growth and development through diversification in economic activities and markets. ❖ Consolidate and optimally develop the agricultural and mining resources of the Local Municipality in a sustainable manner. ❖ Support the development of a range of local tourism nodes, assets, and activities. ❖ Objective aims to promote resilience and sustainability of the economy.	**5.1 Mining Zone (MZ):** areas earmarked for extensive mining activities. The MZ will include both existing mines and strategic areas where future mining activity can occur). • No human settlement development in this zone. • This zone should not overlap with the existing natural environment system (i.e. rivers, wetlands) and must adhere to environmental buffers where applicable.
	5.2 Energy Generation Zone (EGZ): areas where energy generation activities occur. Zone includes the Matimba power station, Medupi power station, Thabametsi Coal Mine and Independent Power Producer. • Human settlement development in this zone is not encouraged. Land earmarked for new labour force housing will be located in Marapong's SDAs (through infill development areas).
	5.3 Agriculture and Farming Zones (AFZ): areas strictly earmarked for farming-related activity (commercial and subsistence), which is not to be compromised by undesirable development (i.e. mining, residential etc.). This Zone will include proposed Farmer Production Support Units (FPSUs). • FPSUs to be established in rural nodes of Thabo Mbeki (as per Limpopo SDF), Ga-Seleka and Shongoane (new proposal). • Zone identifies areas viable for commercial farming activity, which aims to further the potential for existing small-scale farmers. • The Zone will support the growth of small-scale subsistence farming into commercial farms overtime. • Agri-processing and other manufacturing activities to be accommodated in the FPSU locations (i.e. manufacturing of goods and services required at the mine like protective clothing and signage).
	5.4 Existing Ellisras Airfield to be developed and expanded into **Lephalale Local Airport**. • This expansion of the facility will increase the services provided and passengers coming into the site. • The marketing and functioning of the Airport should be closely co-ordinated with existing and new tourism nodes, accommodation and activities (i.e. holiday packages, transport/shuttles to and from the airport).
	5.5 Logistics Hub (LH) with cargo capacity/facilities, to be established south-east of the existing Lephalale Airfield (in Onverwacht), accessible via Onverwacht Road.

	• Hub to function in enhancing the organisation, coordination and movement of goods within national and international borders.
	5.6 Expand and promote the **tourism industry** in Lephalale and encourage the participation of rural communities in the sector. Types of tourism to be supported: • Educational tourism – tours, school visits etc. to the power station (s) and/or mine. • Eco-tourism (i.e. wildlife and nature reserves, and activities such as safaris, hiking, eco-adventure tours, scenic tours, wildlife watching, sustainable hunting) • Cultural tourism: Steenbokpan (historical rural village and may have potential as a heritage site). Tourism development to be supported by the establishment of Strategic Tourism Links (STLs).



Map 43. DO5. Economic Development and Diversification.

Unpacking the Agri-Park Program

The Agri-park program is a long-term programme which supporting rural enterprises, develops rural industries and facilitates the efficient movement of rural produce to markets (DALRRD, n.d.). Agri-parks function as networked innovation systems of agro-production, processing, logistics, marketing, training and extension services, located in a District Municipality (DALRRD, n.d.).

The components of the Agri-Park Model include:

- **Farmer Production Support Unit** (FPSU): is linked to a rural small-holder farmer outreach and capacity building unit that links farmers with markets. The FPSU does primary collection, some storage, provides some processing for the local market, and extension services including mechanisation.
- **Agri-Hub** (AH): a production, equipment hire, processing, packaging, logistics, innovation, and training unit.
- **Rural Urban Marketing Centre** (RUMC): provides market intelligence assist farmers, processors in managing a nexus of contracts. With large warehousing and cold storage facilities to enable market management. The RUMC has three main purposes.
    i. Linking and contracting rural, urban, and international markets through contracts.
    ii. Acts as a holding-facility, releasing produce to urban markets based on seasonal trends.
    iii. Provides market intelligence and information feedback, to the AH and FPSU, using latest information and communication technologies.
- **Logistics Brokerage**: transport networks that operate between the FPSU's - Agri-hubs - RUMCs and various derivatives thereof.

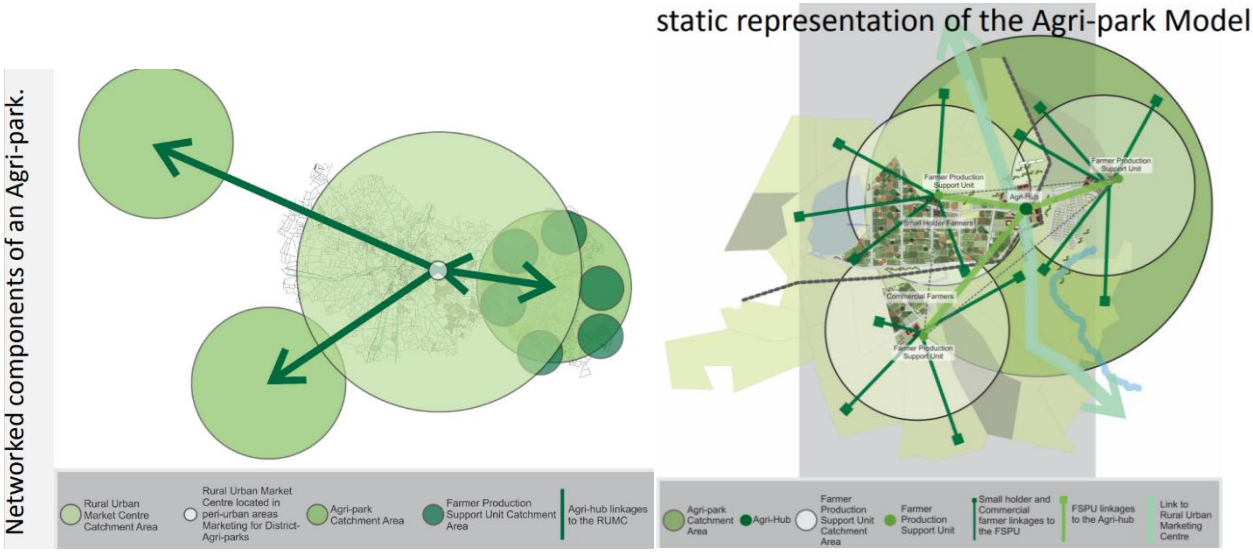


Figure 36. Static Representation of the Agri-Park Model (DRDLR, 2017).

5.7. SPLUMA Principles Alignment

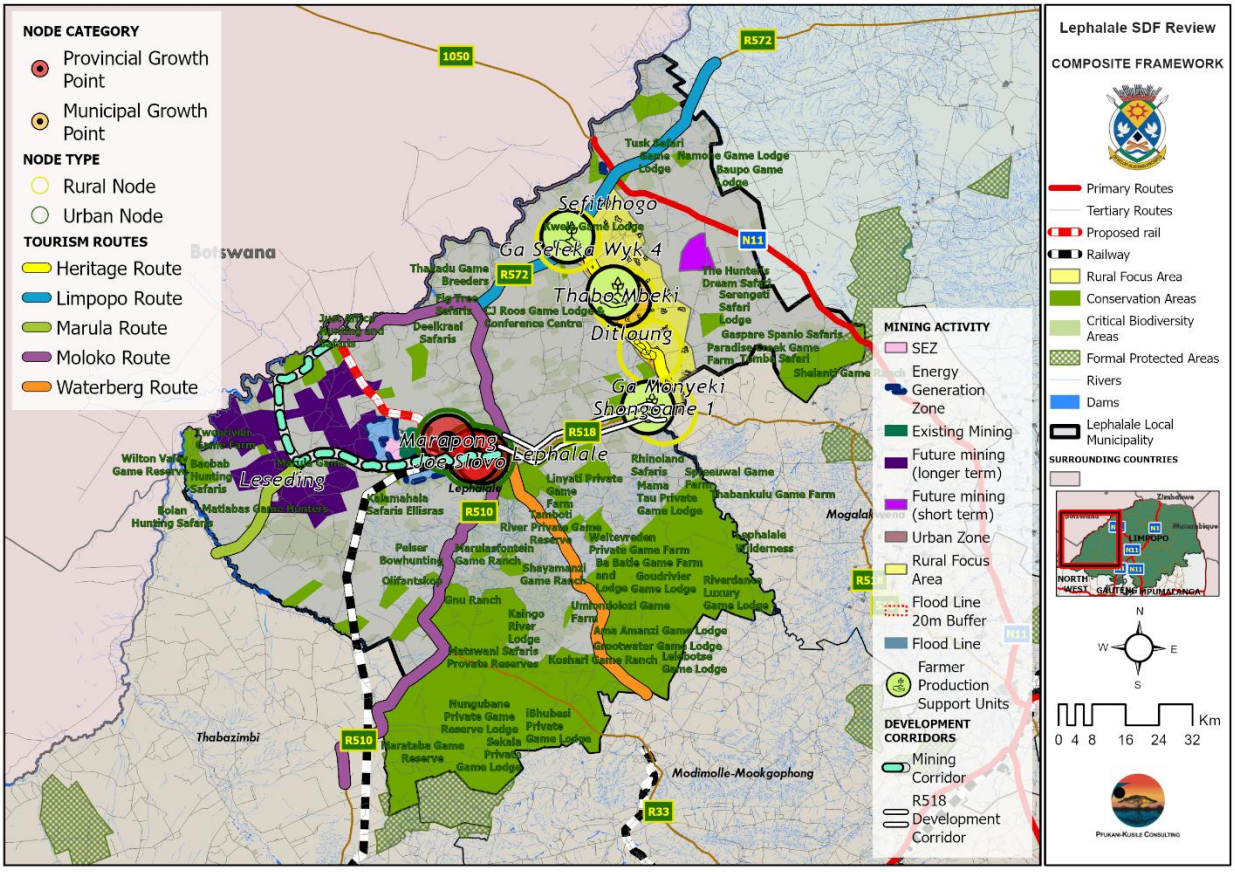
This Municipal Spatial Development Framework for Lephalale is compatible and supports the principles pertaining to Spatial Planning and Land Use Management Systems as contained in Chapter 2, Sections 7 and 8 of the Spatial Planning and Land Use Management Act (No. 16 of 2013). The Table below illustrates alignment of the Development Objectives with the five SPLUMA Principles.

Table 39. Spatial Objective Alignment with SPLUMA Principles.

Development Objective	**SPLUMA Principle**				
	Spatial Justice	Spatial Sustainability	Spatial Efficiency	Spatial Resilience	Good Administration
DO 1. Environmental Sustainability		x		x	
DO 2. Corridor Development and Connectivity	x		x		
DO 3. Functional Nodal Hierarchy		x	x	x	x
DO 4. Inclusive, Vibrant, and Sustainable Human Settlements	x	x	x		x
DO 5. Economic Development and Diversification		x	x	x	

5.8. Composite Lephalale Spatial Development Framework 2025

Map below presents the composite Spatial Development Framework for Lephalale Local Municipality, comprising of all the proposed development strategies and Development Objectives aforementioned.



Map 44. Lephalale Composite Spatial Development Framework.

Nodal Hierarchy

- Provincial Growth Point: **Lephalale, Marapong and Onverwacht**
- Municipal Growth Point: **Thabo Mbeki**
- Rural Service Delivery Points: **Ga-Seleka and Shongoane**
- Local Service Point: **Abbotspoort and Steenbokpan**

Urban Focus Area: Lephalale, Marapong and Onverwacht

Rural Focus Area: Thabo Mbeki Ga-Seleka and Shongoane

Proposed Focus Areas for Intervention: Urban and Rural Focus Areas

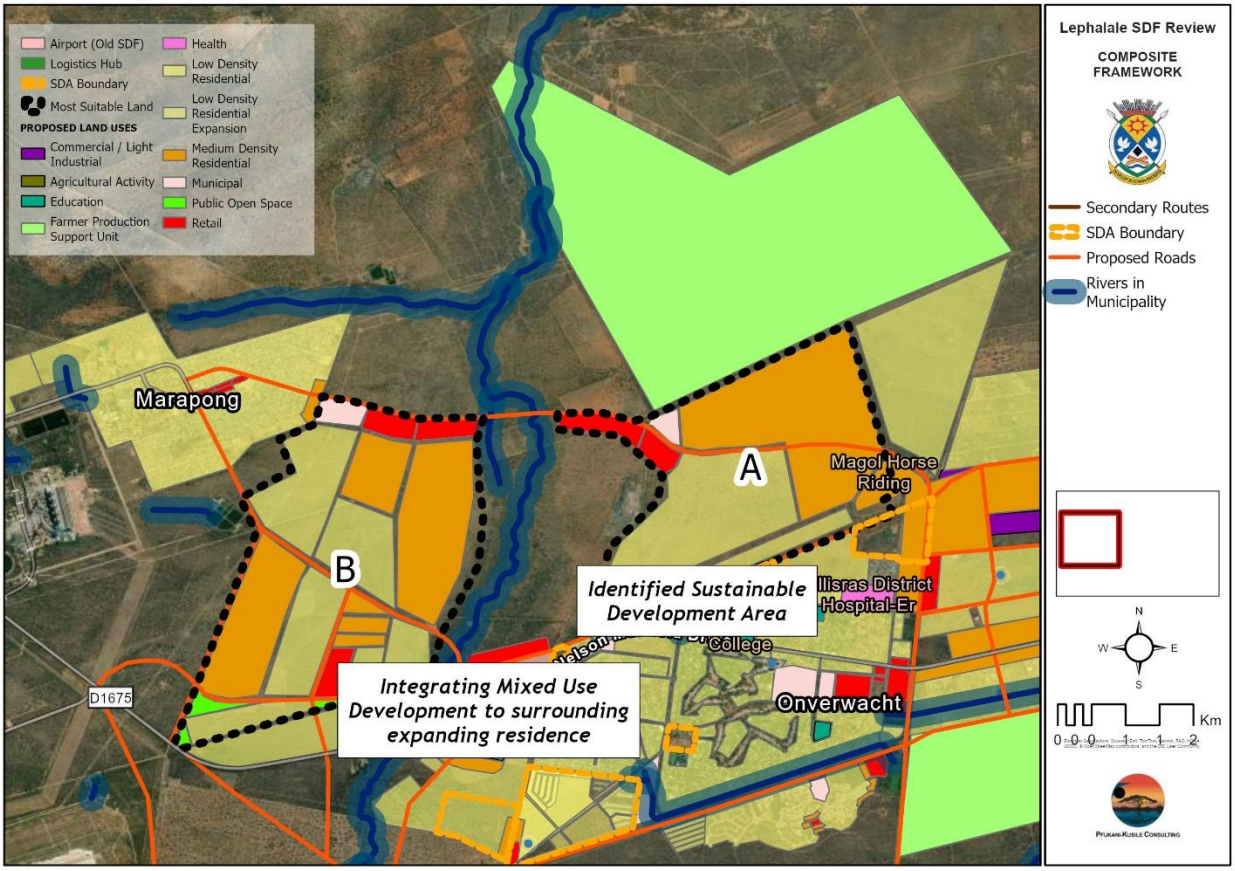
The choice of focus areas/spatial intervention areas is informed by the following:

- The node demonstrates new development (residential, commercial and other) that deviates from the land use scheme. Thus, indicating a need to ensure principles of SPLUMA and sustainable human settlement principles are adhered to and implemented on the site.

- The node has potential to diversify in economic activities due to factors such as strategic location along major arterial, surrounding land uses accommodating/encouraging land use diversification and intensification.
- The node has potential to function as a rural service center by providing new and/or consolidating existing social services and amenities (e.g. social facilities clusters). These rural nodes are located such that surrounding isolated settlements can easily access and benefit from the concentration of services. In turn allowing for more efficient urban form and better utilized facilities.

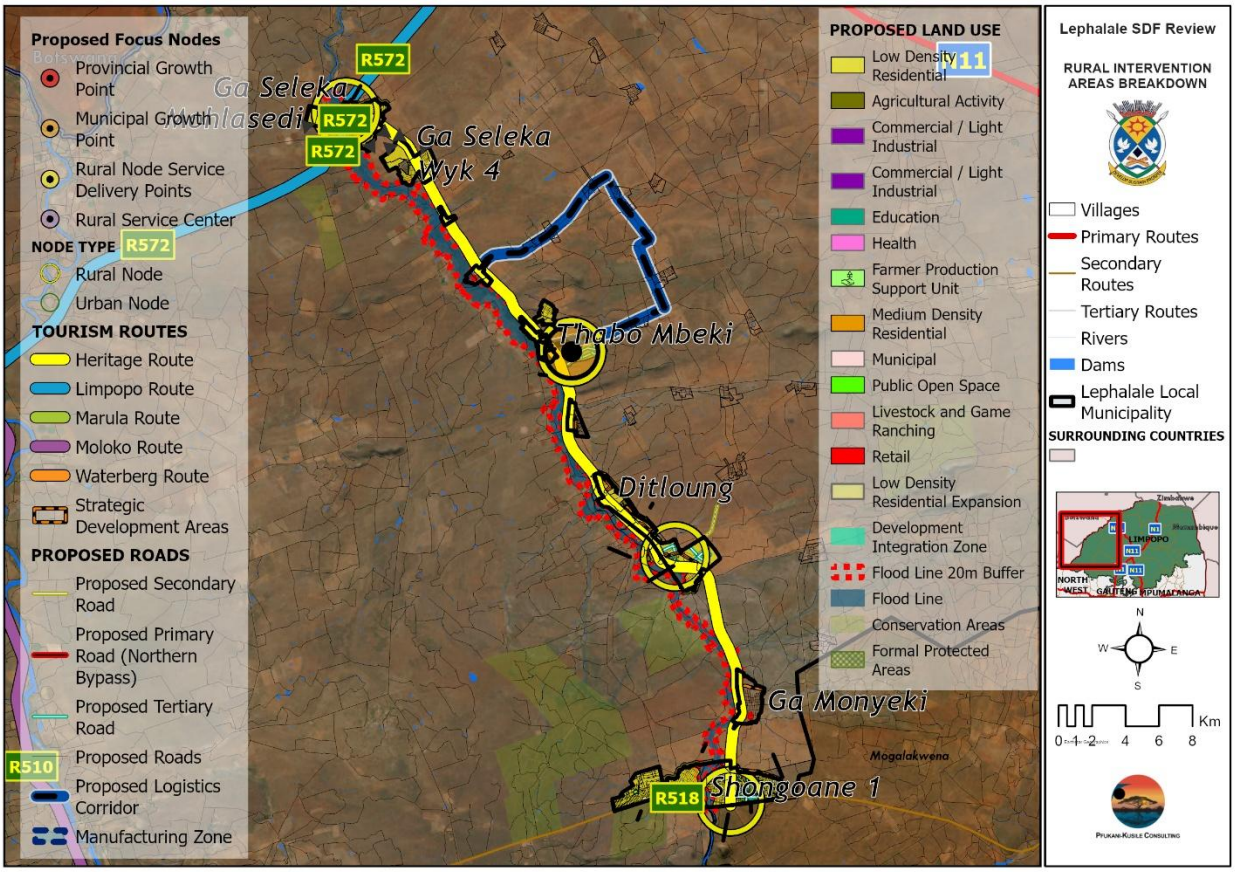
5.9. Focus Area Frameworks

5.9.1. Urban Focus Area Framework



Map 45. Urban Focus Area Framework.

5.9.2. Rural Focus Area Framework

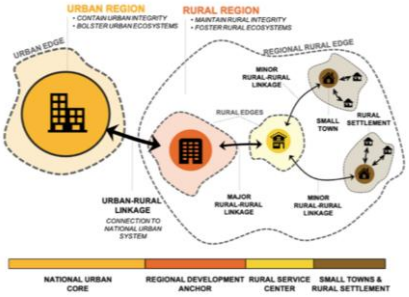


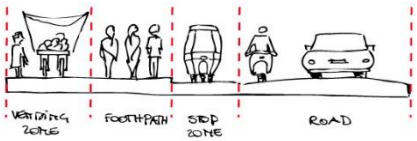
Map 46. Rural Focus Area Framework.

5.10. Urban Design Guidelines

The following urban design guidelines are used to guide and inform the development of the Local Spatial Development Frameworks (LSDFs) for the key nodal areas identified in the urban and rural area frameworks.

Table 40. Urban Design Principles.

Urban Design Principle	Visual Reference	Strategies
01. Consolidate the urban footprint. Consolidate and compress the urban footprint within the urban edge and around activity nodes.	 Urban-rural development model (NSDF, 2018).	• Ensure infill development is consolidated within the boundary of the development edge. • Ensure environmental features (rivers, wetlands etc.) and protected areas are outside of the urban edge boundary to promote conservation/protection of natural features and systems. • Ensure proposed development is environmentally sustainable (i.e. align density and land uses with CBA categories)

Urban Design Principle	Visual Reference	Strategies
02. Promote residential densification. Residential densification will increase the viability of the identified activity nodes.		• Densification to occur within the urban edge boundary in identified SDAs and in close proximity to identified nodes. • Residential development must be supported by social facilities, access to public transport and economic activity. • Accommodate a range of typologies and unit sizes.
03. Promote mixed use development. Offers users choice and convenience, strengthens, and increases the vitality of activity nodes.		• Locate mixed-use developments along major arterials, connected to the public transport network. • Ensure mixture of building uses that encourage 24/7 activation. • Provide flexibility and resilience.
04. Accommodating and well-connected movement network. Establish a movement network that accommodates diverse transport modes (including pedestrian and vehicular) and supports activities.		• Ensure public transport facilities are well-located, connected and distributed. • Prioritize and support pedestrian movement in and around main activity nodes. Public transport facilities and services. • Design sidewalks of 3-5m wide, to enhance the pedestrian experience. • Provide street furniture, human-scale street-lighting, and greening along pedestrian routes.
05. Create quality, safe and viable public open spaces. Public open space should be in well-located, safe, accessible, and multi-functional (robust)	 End Street Park, Doornfontein, Johannesburg	• Mixture of hard and soft spaces, designed according to surrounding land/building uses and connect with the streetscape. • Open spaces must be in well-located, well-used, safe, locations, accessible via walking and public transportation. • Design and infrastructure/ equipment in open spaces should encourage social activity, play, and rest. • Adhere to universal design principles to ensure equitable access. • Integrate sustainable practices, materials, and vegetation into the landscape.
06. Diversify the Economy		• Encourage mixed-use buildings typologies and spaces that accommodate various types of economic activities. • Support local economies (small businesses, entrepreneurs, informal traders): design of public spaces that provide platforms and facilities for local economic activities, such as markets, festivals, and workshops.

Urban Design Principle	Visual Reference	Strategies
		• Facilitate learning and collaboration: create environments and networks that support the exchange of knowledge, skills, and ideas. This includes educational and cultural facilities that offer diverse and flexible learning spaces, such as libraries, museums, and studios.

5.11. Local Spatial Development Frameworks

This section will provide the more detailed localised spatial plans proposed for the key nodal areas identified within the Lephalale SDF. The proposal for each nodal area will be unpacked in relation to the guiding nine urban design principles (refer to Table 38). Furthermore, it will locate the specific strategies/action areas discussed in the previous section Development Objectives and Spatial Strategies as they relate to the identified nodal areas.

5.11.1. Lephalale

UD 1. Consolidate the urban footprint: Compactness and Densification

- Encourage infill and new development within the Lephalale urban edge, in the SDAs, and along the R510 and Nelson Mandela Road. Development of vacant plots along the arterials is to be prioritized first, before development expands outwards (corridor development approach).
- Where appropriate, encourage new developments within the CBD to establish vertically in order to efficiently maximise space.

UD 2. Residential Densification

- Low-medium density residential is proposed to be located closer to the business core in order to strengthen and increase viability of the town, and promote life (active 24 hours node), safety (eyes on the street) and a sense of convenience.
- Residential developments to be supported by access to public transport, social facilities, and economic opportunity.

UD 3. Mixed Use Development

- New and infill development should accommodate a mixture of commercial, retail, and residential land uses.
- Development density must adhere to the lands CBA development guidelines and restrictions. Low-medium density can be proposed in CBA2 areas, with CBA1 areas maintaining natural and low-intensity land uses such as public open space.

UD 4. Movement network

- Enhance mobility within the village settlements by way of upgrading gravel roads, primarily mains roads within the Lephalale town and the roads leading to the nodal point.
- Support existing public transport stops (taxi rank and bus rank) with public infrastructure, and adequate public transport stops in existing and proposed residential areas.
- Priority should be given to pedestrian pathways, ensuring they are equipped with essential streetscape features of textured walkways, appropriately scaled street lighting, benches, waste bins, and trees for shade.
- Additionally, to improve pedestrian safety, crossings, speed bumps, and street bollards should be provided near key attractions and services.
    - There are six primary pedestrian links, three of which being north-south orientate and three traversing east-west. Pedestrian movement network traversing north-west is proposed along the O.R Tambo Road (R510), J Louis Botha Street and Wells Street which alternates as Jan Street in the north. In the east west direction, pedestrian movement is proposed along Nelson Mandela Dr, Hendrik Pistorius Street and along the proposed secondary road north of Marula Mall.

UD 5. Public Open Space

- Develop the regional open space around the Mokolo River (east of route R510) as Recreational Precinct. The reason for this is the environmental state of the area. It falls under CBA 1, hence it is an area that must be kept in a natural state as much as possible. In order to achieve this, the Lephalale Local Municipality could do the following:
    - Clear excess vegetation between route R510 and the Moloko River;
    - Facilitate safe pedestrian crossing of route R510 e.g., via pedestrian bridge(s) or pedestrian crossings;
    - Provide paved pedestrian walkways that link into the Recreational area from the road network of the CBD;
    - Provide park signage, 'human scale' lighting (1.37m high), shelters, benches, hard and soft spaces, together with a variety of braai/ picnic facilities, activity square/ paved areas and sport facilities within the open space system.
    - Construct a tourism information centre as part of the Recreational Precinct adjacent to the existing lodge to provide visitors with information regarding the town and surrounds.
- The public open space close to the court and police station is proposed to have its current fenced area removed and integrated together with the taxi rank facility in the north, as well as with the court and police station. Proposed public open space/activity square at intersection between J Louis Botha and proposed extension of Hendrik Pistorius Drive. To serve as a gateway into the CBD. This public area should include paved surface, street lighting, benches and art features.

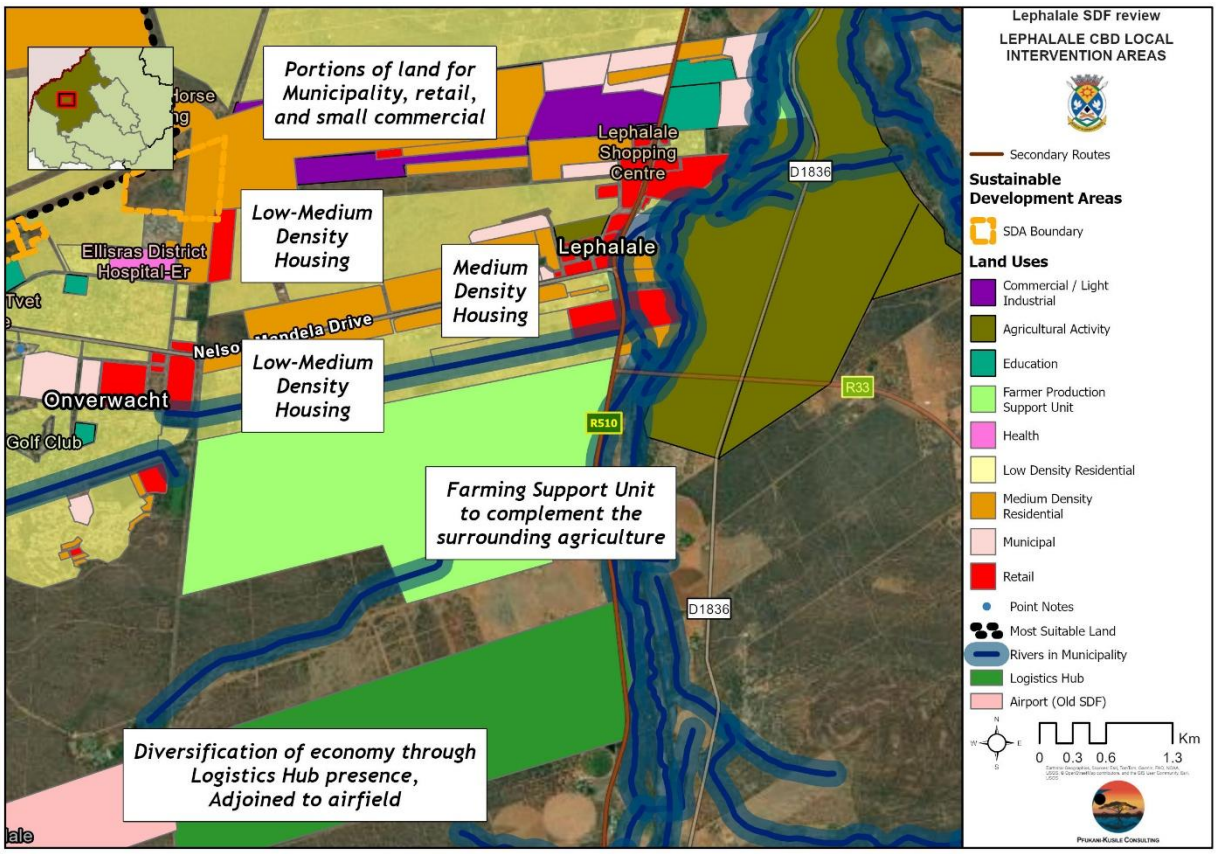
UD 6. Diversify the Economy

- Introduction of commercial (office parks and businesses), and service/retail (restaurants, accommodation, spas, hairdressers and barbers, convenience stores etc.) land uses intends to create a greater diversity in economic activities.
- Informal Trading be formalized and consolidated at the three public transport facilities, and along J Louis Botha Road which links all three public transport facilities. The "Market Stalls" concept is proposed as the main permanent structure wherein informal traders can operate from (this is successfully seen in Collins Chabane Local Municipality – see Figure below).
- Gateway: Establish the northern entrance to the CBD, at the intersection of O.R. Tambo Road and northern bypass road, as a gateway by means of a signpost, landscaping etc.

Figure 37. Collins Chabane Market Stall Concept (photo source: Pfukani Kusile Consulting, 2024).

Proposed strategies/development actions that fall within the Lephalale nodal area:

- Maintain and enhance the Lephalale/ Onverwacht/ Marapong function as a Regional Service Centre and the Primary Activity Node cluster (DO3).
- Existing Ellisras Airfield to be developed and expanded into Lephalale Local Airport (DO5).
- Logistics Hub (LH) with cargo capacity/facilities, to be established south-east of the existing Lephalale Airfield (in Onverwacht), accessible via Onverwacht Road (DO5).



Map 47. Lephalale Local Spatial Development Framework

5.11.2. Onverwacht

UD 1. Consolidate the urban footprint: Compactness and Densification

- Encourage infill development within the proposed Onverwacht urban development edge, in the identified Strategic Development Areas (SDAs), primarily located in the north of the node along Nelson Mandela Drive. There is further potential for residential expansion to the south-west of the node.

UD 2. Residential Densification

- Promote residential densification close to the proposed nodal area, within the delineated urban edge boundary, in order for services to be utilized effectively, and for communities to be at a walking distance to opportunity areas.
- Different residential building typologies, unit sizes and costing-arrangements (buying, renting, social housing, GAP housing, FLISP etc.) to be explored and built in the precinct to facilitate a range of income brackets and housing sizes (bachelors, couples, families).
- Residential developments to be supported by access to public transport, social facilities, and economic opportunity.

UD3. Mixed Use Development

- Development density must adhere to the lands CBA development guidelines and restrictions. The region contains the following categories: CBA 1, ESA 1, ESA 2, Other Natural Areas and No Natural Remaining. CBA 1 can only allow low intensity land uses. While the remaining land uses allow for other land uses to be explored.

- In areas of ONA, and NNA, new and infill development should accommodate a mixture of commercial, retail, and residential land uses.
-

UD 4. Movement network

- Enhance mobility within the village settlements by way of upgrading gravel roads, primarily mains roads within the Lephalale and the roads leading to the nodal point.
- Support existing public transport stops (taxi rank and bus rank) with public infrastructure, and adequate public transport stops in existing and proposed residential areas.
- Priority should be given to pedestrian pathways, ensuring they are equipped with essential streetscape features of textured walkways, appropriately scaled street lighting, benches, waste bins, and trees for shade.
- Additionally, to improve pedestrian safety, crossings, speed bumps, and street bollards should be provided near key attractions and services.
    - Main pedestrian routes: Nelson Mandela Drive, Chris Hani Street, Onverwacht Road, and Dagbreek Road /Joe Slovo Lane.

UD 5. Public Open Space

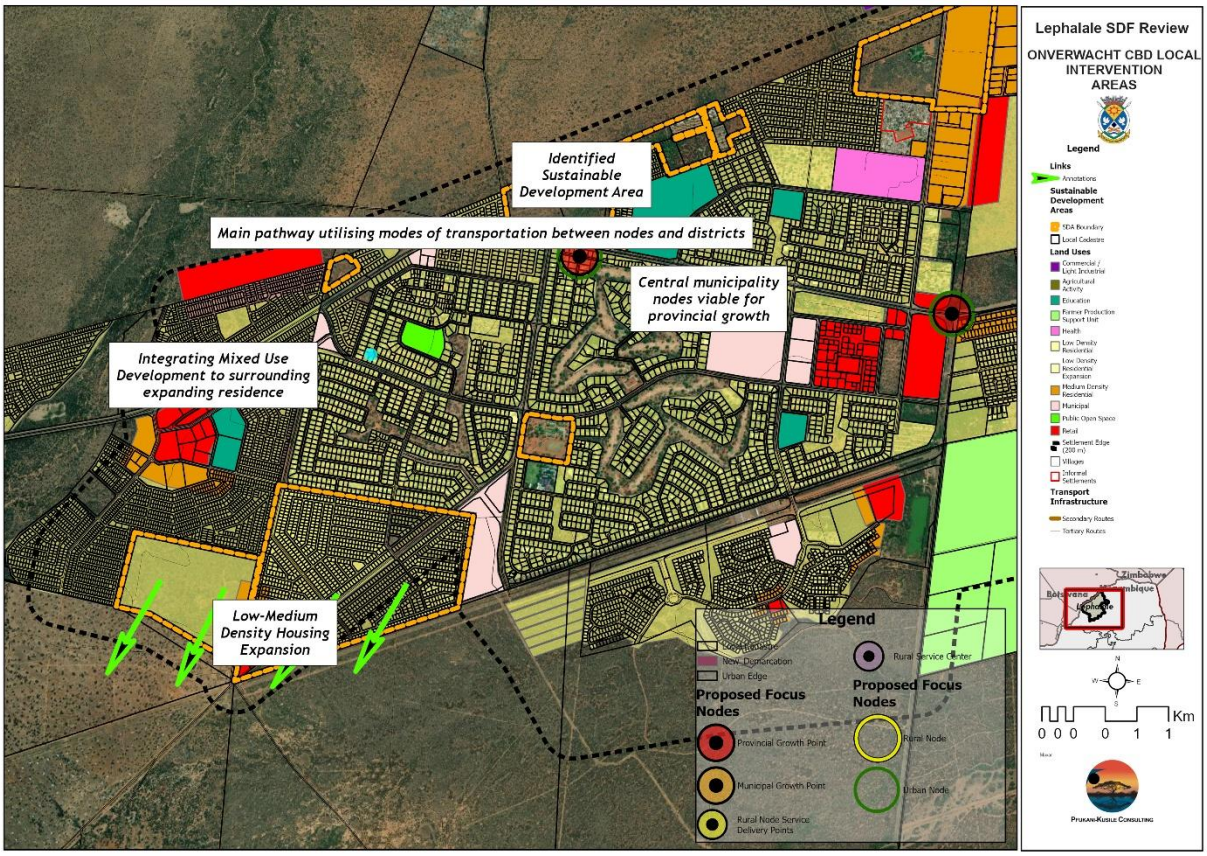
- Establish well-designed, safe, and attractive small parks and open spaces (hard and soft) in strategic locations, to ensure spaces are used for intended purpose and prevent undesirable activity (land invasions, informality, crime, illicit activities etc.). Ideally these spaces should be located in residential areas.
- Provide an additional formal lay-by facility at the intersection of Nelson Mandela Drive and Chris Hani, at the north-east quadrant. Formalise the two public open spaces within the residential fabric, in the north and the south of the node.
- An art feature will be installed at the intersection of Nelson Mandela Drive and Onverwacht Road, which acts as a gateway to the business district to the south and the light industrial/commercial area to the north. Key design elements at major intersections will include textured paving, signage, landscaping, and/or an art feature that reflects the character of the area

UD 6. Diversifying of the Economy

- Provide formalized informal trading structures using the “Market Stalls” concept (as detailed previously in Figure 37 above) along Chris Hani Street close to the Ellisras Hospital.

Proposed strategies/development actions that fall within the Onverwacht nodal area:

- Development Integration Zone (DIZ): spatial integration through development of vacant land between Marapong and Onverwacht. Land use development in this demarcated Zone should focus on a mixture of commercial, light industry, and where appropriate residential development. This zone will be located within the proposed development edge.
- Develop a Logistics Hub (LH) with cargo capacity/facilities, to be established south-east of the existing Lephalale Airfield (in Onverwacht), accessible via Onverwacht Road (D5). This will be subject to certain conditions being met to keep in line with CBA regulations.



Map 48. Onverwacht Local Spatial Development Framework

5.11.3. Marapong

Marapong is proposed for expansion with the boundary of the site extending to include the integration zone. The long-term intent is to allow for Marapong and Onverwacht to connect in their spatial foodprints, creating a more connected, accessible and mobile zone.

UD 1. Consolidate the urban footprint: Compactness and Densification

- Encourage infill development through residential densification and mixed land uses within the town
- Residential development can only take place within the urban edge and towards the north of the settlement.

UD 2. Residential Densification

- To accommodate the growing population, residential densification must be implemented in areas close to public transport, and social amenities.
- Residential expansion can only be done northward of the Marapong Settlement. To the south, the CBA 1 restriction will not allow for residential development to move in that direction.

UD 3. Mixed Use Development

- The area is vibrant with people moving through the space. Provision must be made to enhance these activities. The busy areas must be identified and have mixed use focus on these areas.
- This focus will entail a mix of retail facilities, open spaces, densified residential areas.

UD 4. Movement network

- The roads in the area must be upgraded to remove potholes and improve gravel routes in the town.
- There also needs to be provision of pedestrian pathways. There is a large population not utilising personal transport in the area. They use public transport and walking. Appropriate walkways, and taxi stops must be provisioned through the area to accommodate movement.

UD 5. Public Open Space

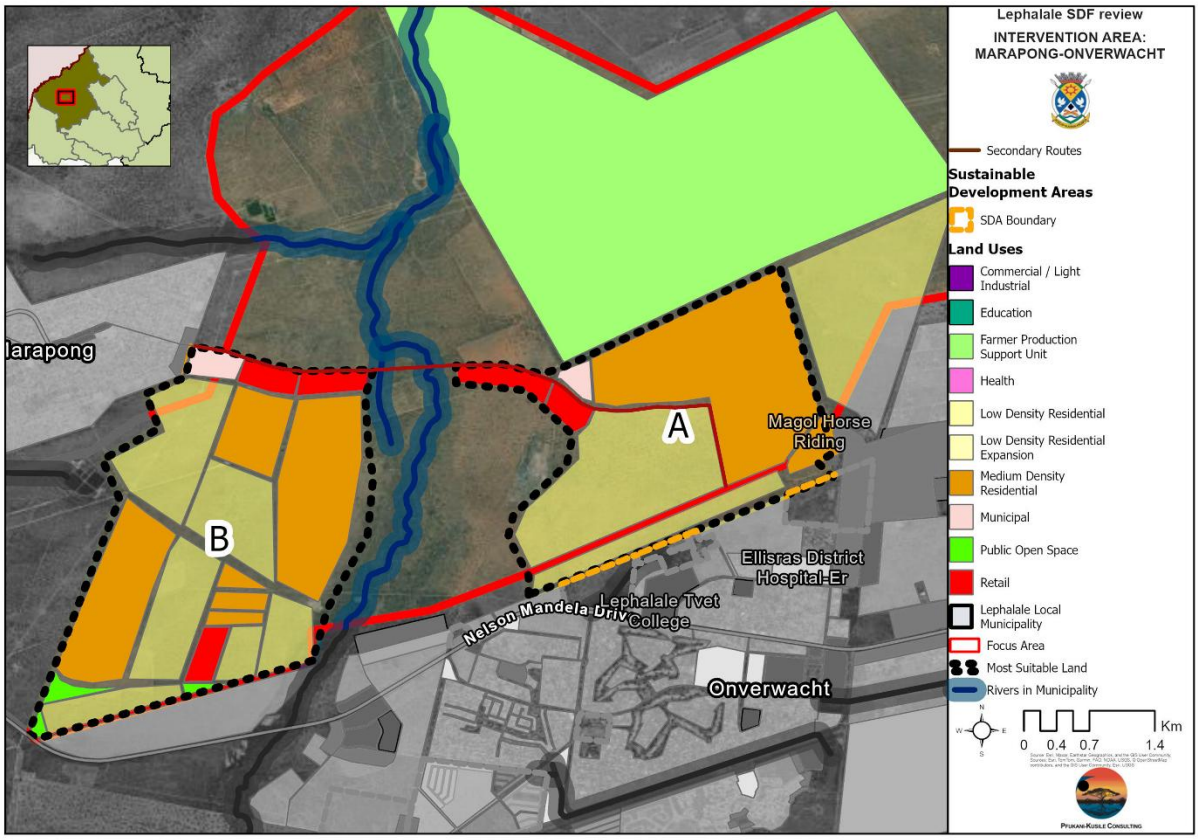
- Formalize three existing public open spaces, namely at Tlou Street and two situated along Relebogile Street. Provide a play park, paved walkways, seating, street lights, and signage e.g. the name of the park. Proposed sports field within the new activity node along Tswene Street.

UD 6. Diversifying of the Economy

- Provide formalized informal trading structures using the "Market Stalls" concept (as detailed previously in Figure 37), at spar shopping complex, at the intersection of Tlou and Relebogile Street opposite the Marapong Clinic, as well as along Chris Hani Street.

Proposed strategies/development actions that fall within the Marapong nodal area:

- The Land Uses development in this area should contain a mixture of Agriculture and Conservation zoning. This will entail consent use rights in the following specific land uses: Resort Dwellings, Livestock and Game Ranching, Place of Sport and Recreation, Tourist Facilities.



Map 49. Marapong Local Spatial Development Framework

5.11.4. Thabo Mbeki

UD 1. Consolidate the urban footprint: Compactness and Densification

- The proposal doesn't change too much from the previous SDF's proposal. The township establishment has been made for the town, however, the implementation is still pending.
- A 20-meter flood line buffer is proposed along the river that flows through the node. This measure aims to safeguard the river system's integrity and mitigate flooding risks associated with housing developments in floodplain areas. All new and infill developments must comply with the established flood line buffer surrounding the river tributary

UD 2. Residential Densification

- Residential Development must be restricted to be away from flood prone areas. No development must take place in these areas.
- An environmental buffer must be created between the flood prone areas and the residential settlements.
- Most residential development in the area will be low density, so that the CBA 2 regulations are not infringed on significantly.

UD 3. Mixed Use Development

- The Thabo Mbeki town is located in a CBA 1, CBA 2, and ESA 1 region.
- The mix of land uses in this area will not be as intense as the urban areas.
- A provision of Farmer Production and Support Units and Livestock and Game Ranching are proposed in the area to promote diversity, as well as keep in line with the CBA restrictions of the area.
- There is currently a facility to cater for Street Traders in the south of the town. However, it is isolated and away from where most people reside. With the new township pending, this facility can be shifted to the new township and away from the flood prone area.
- The proposal places it in the Business Node at the intersection of the two major roads (D3110 and D3126).

UD 4. Movement network

- Enhance mobility within the village settlement by way of upgrading gravel roads.
- Provide for pedestrian pathways within the settlement.

UD 5. Public Open Space

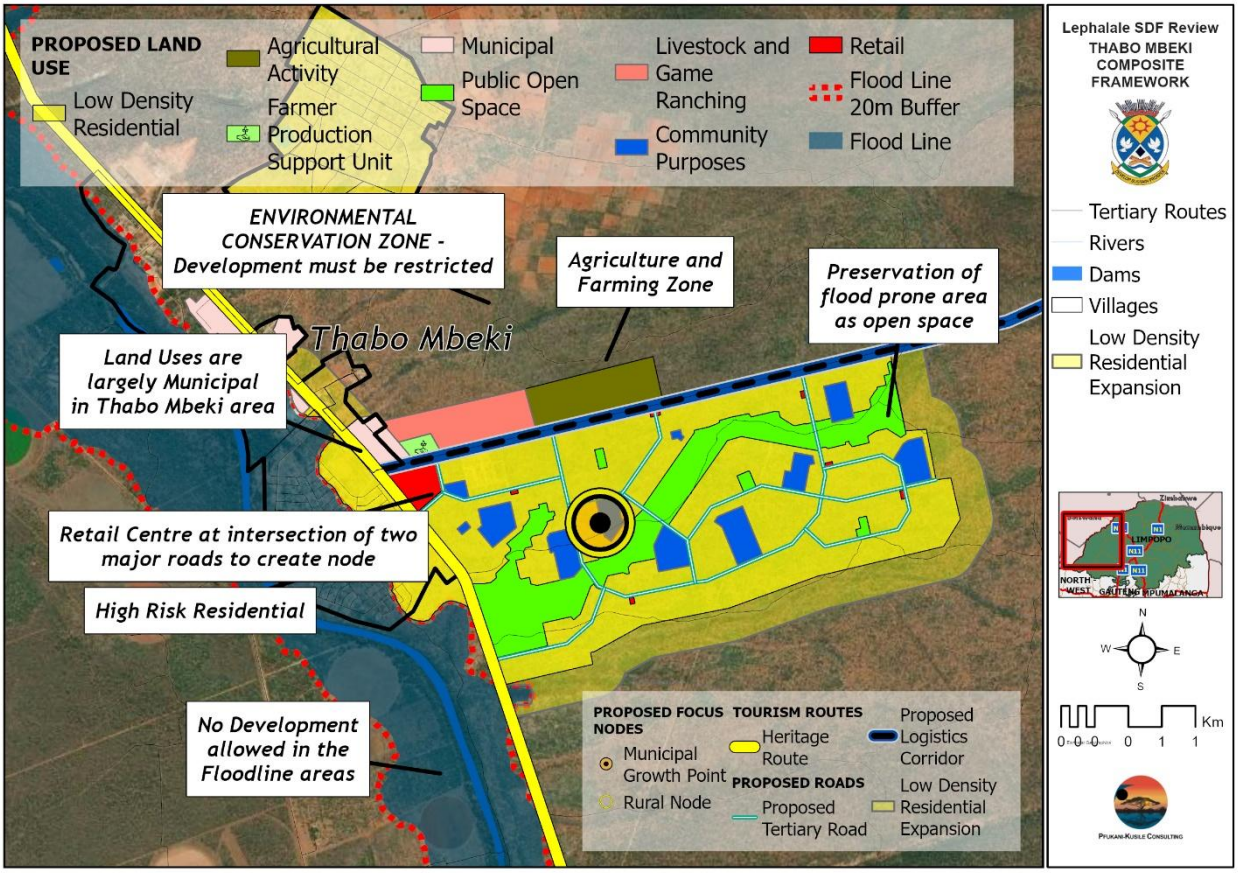
- A proposal to keep a green Public Open space through the site is maintained as was highlighted in the previous SDF.

UD 6. Diversifying of the Economy

- It is proposed that the economy of the area be diversified through Agricultural Farming Zones, Livestock and Game Farming, Farmer Production Units along with a Business centre along the intersection of D3110 and the Proposed Logistic Corridor.
- Within the settlement, pockets of retail development are proposed to cater for the local neighbourhoods in the settlement.

Proposed strategies/development actions that fall within the Thabo Mbeki nodal area:

- Development of Thusong Centres in: Thabo Mbeki, Ga-Seleka, Shongoane and Abbotspoort (DO4)
- FPSUs to be established in rural node of Thabo Mbeki (DO5).



Map 50. Thabo Mbeki Local Spatial Development Framework

5.11.5. Mohlasedi

UD 1. Consolidate the urban footprint: Compactness and Densification

- A 20-meter flood line buffer is proposed along the river that flows through the node. This measure aims to safeguard the river system's integrity and mitigate flooding risks associated with housing developments in floodplain areas. All new and infill developments must comply with the established flood line buffer surrounding the river tributary
- A Strategic Development Area was proposed in the west of Ga-Seleka in the previous SDF. This falls within an Environmental Conservation Zone. Development of households has already begun in this area. It must be limited to a low intensity due to the CBA 1 restriction on the areas with Environmental Conservation Zone. (For the sake of providing sustainable human settlements, it is advised that the Strategic Development area be shifted to the East of Ga-Seleka.)
- The shift will also ensure that the settlement is close to the major routes in and out of the area, and not isolated by the flood prone area, should floods take place in the region.

UD 2. Residential Densification

- The North Western part of the settlement, must be restricted to only develop towards the south. This so that Development does not infringe on CBA 1 regulations.
- Medium Density Residential is proposed along the D3110. This will fall within the new SDA in the East of Ga-Seleka.
- Residential Expansion is proposed towards the South West of the settlement. This will expand to the second existing settlement to the south of D3110.

UD 3. Mixed Use Development

- Within the SDA, mixed use is proposed in the area to allow for an increase of activity in the area.

UD 4. Movement network

- Enhance mobility within the village settlement by way of upgrading gravel roads.
- Provide for pedestrian pathways within the settlement, especially in the SDA.

UD 5. Public Open Space

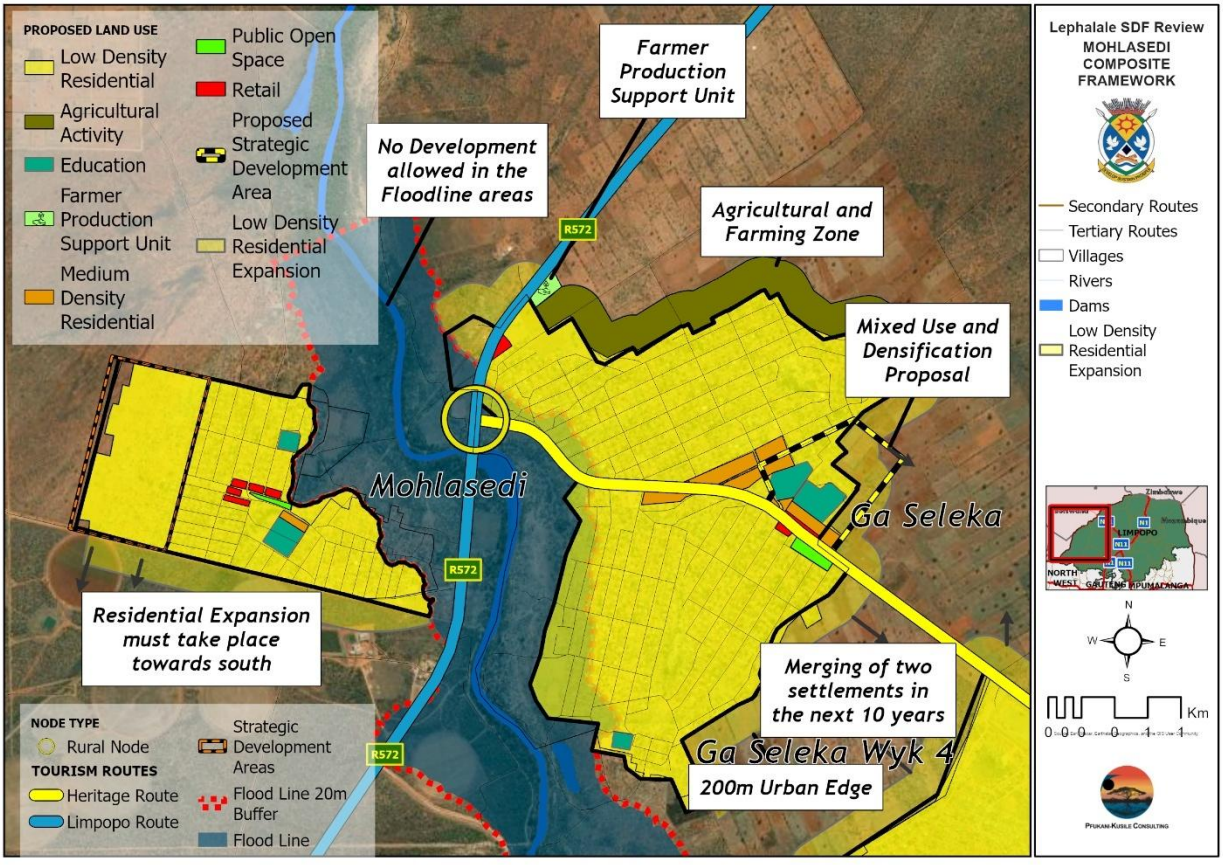
- Near the Flood Prone Areas, open spaces are encouraged to act as a buffer between the settlement.

UD 6. Diversifying of the Economy

- In the West of the settlement, a retail centre is proposed to cater for the neighbourhood on the western side of the Flood Plain.
- In the North of the settlement, a Farmer Production Support Unit is proposed along with an Agricultural Farming Zone to bring different economic activities in the area.

Proposed strategies/development actions that fall within the Ga-Seleka nodal area:

- Development of Thusong Centres in: Thabo Mbeki, Ga-Seleka, Shongoane and Abbotspoort (DO4)
- FPSUs to be established in rural node of Ga-Seleka (DO5)



Map 51. Mohlasedi Local Spatial Development Framework

5.11.6. Shongoane

Shongoane is proposed to act as a Rural Service Centre with strong residential character. The development of the node, including both infill and new projects, should be designed to complement the existing mall which is to act as the nodal anchor. The intention is to encourage densification and compaction of the node, before new development.

UD 1. Consolidate the urban footprint: Compactness and Densification

- Encourage infill development west of the site to prevent sprawl and inefficient patterns.
- A 20-meter flood line buffer is proposed along the river that flows through the node. This measure aims to safeguard the river system's integrity and mitigate flooding risks associated with housing developments in floodplain areas. All new and infill developments must comply with the established flood line buffer surrounding the river tributary.

UD 2. Residential Densification

- Low Density Residential is proposed in the regions to the east of the D3110 corridor.
- Residential Development is already taking place towards the eastern side of Shongoane. This must be formalised and concentrated in such a way that development is compact and doesn't sprawl.
- Residential Development near the Flood Prone area, must be left as is, to limit the risk of natural disasters in those areas.

UD 3. Mixed Use Development

- The intersection between R518 and D3110 is proposed as a mixed-use node.
- A combination of retail and medium density residential is proposed in the area. Along with the existing school on the western side of the D3110 road.

UD 4. Movement network

- In the eastern side of Shongoane, a new Secondary Road is proposed as an activity spine for the region. This route will be paired with portions of mixed use along the route.

UD 5. Public Open Space

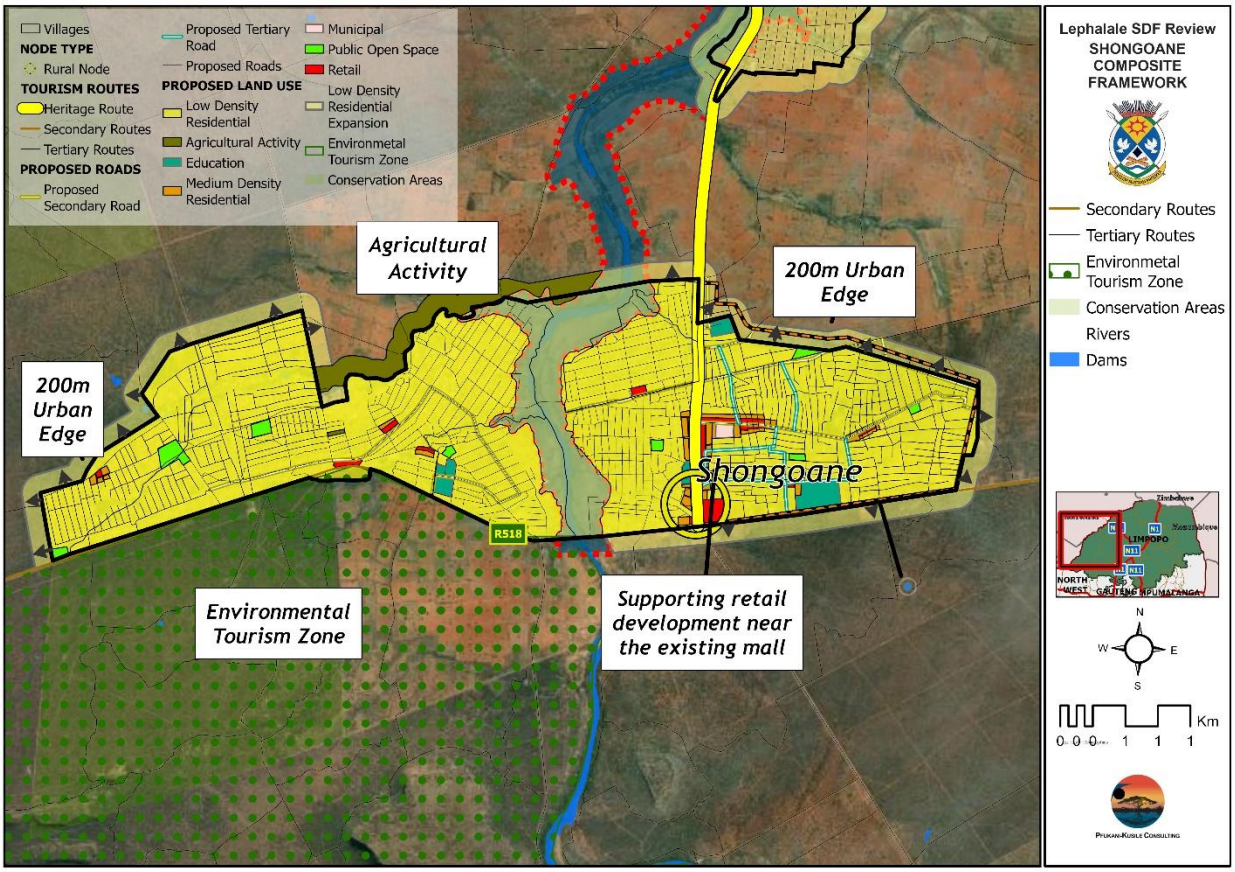
- Numerous pockets in the area are set as public open space to serve the respective neighbourhoods and schools.

UD 6. Diversifying of the Economy

- Along the D3110, further retail development is proposed as an addition to the existing mall in the area.
- In the North West of the municipality, Agricultural Activity is proposed to allow for different economic activity to take place, as well as to allow for capitalisation of the Moderate Agricultural Potential in the area.

Proposed strategies/development actions that fall within the Shongoane nodal area:

- Propose FPSUs to be established in rural node of Shongoane (DO5)
- Propose a Magistrates Court, Police Station and Eskom Offices in close proximity to the mall to develop the activity node. These will be located in the areas allocated for Municipal Offices.



Map 52. Shongoane Local Spatial Development Framework

5.11.7. Ditloung

UD 1. Consolidate the urban footprint: Compactness and Densification

- A 20-meter flood line buffer is proposed along the river that flows along the western edge of the node. This measure aims to safeguard the river system's integrity and mitigate flooding risks associated with housing developments in floodplain areas. All new and infill developments must comply with the established flood line buffer surrounding the river tributary.

UD 2. Residential Densification

- Low Density Residential Development is proposed in the area.
- Due to the risk of flood prone areas, medium density development is proposed away from the risk prone areas and positioned deeper in the settlement.

UD 3. Mixed Use Development

- Mixed Use is proposed along the D3109 route which is further in the settlement.

UD 4. Movement network

- Enhance mobility within the village settlement by way of upgrading gravel roads.
- Provide for pedestrian pathways within the settlement, especially in the SDA.

UD 5. Public Open Space

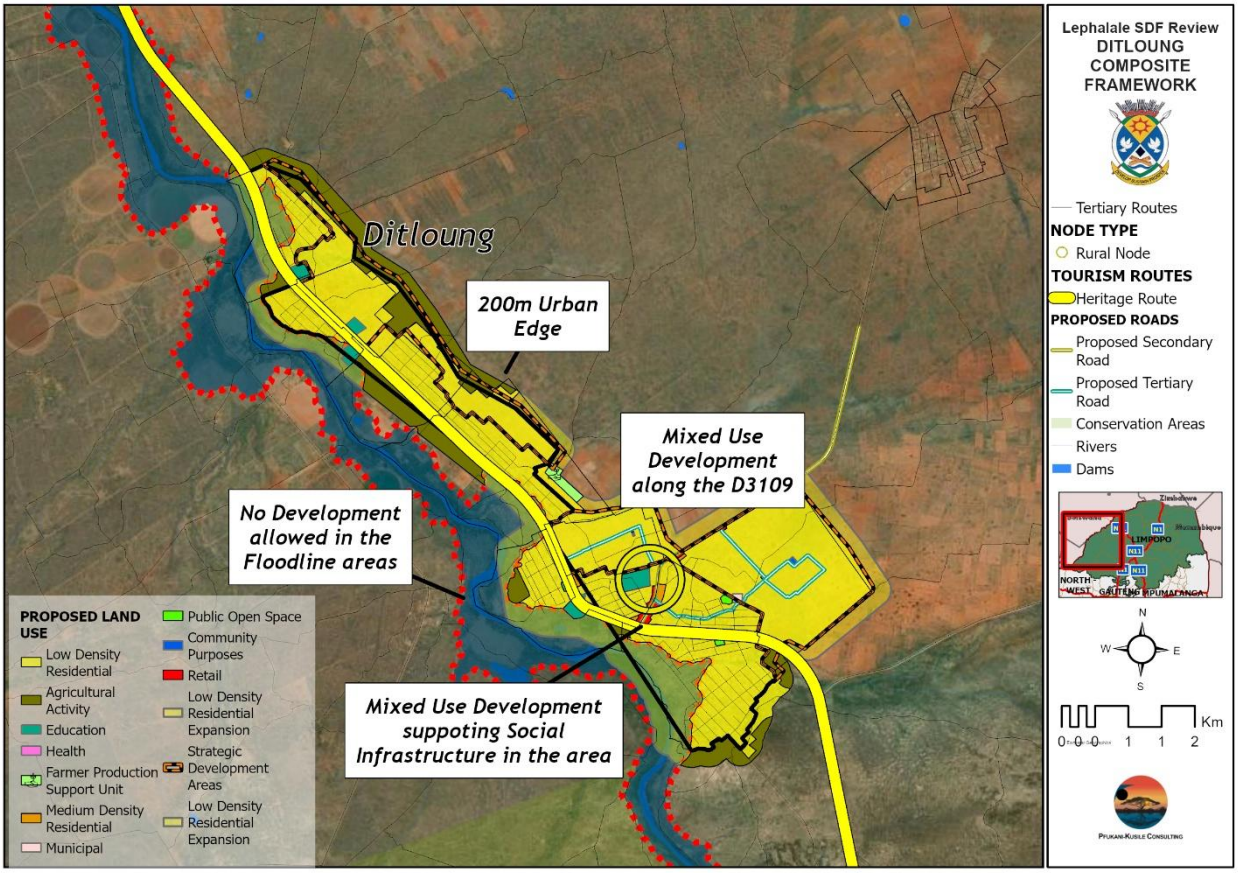
- An Agricultural Area buffer is proposed between the region with flood prone areas and the residential settlement in the North of the settlement.

UD 6. Diversifying of the Economy

- Light retail facilities are proposed near the existing social facilities in the area, due to the risk of flooding.

Proposed strategies/development actions that fall within the Abbotspoort nodal area:

- Development of Thusong Centres in: Thabo Mbeki, Ga-Seleka, Shongoane and Abbotspoort (DO4)



Map 53. Ditloung Local Spatial Development Framework

5.12. Land Use Guidelines

5.12.1. General Environmental Guidelines

The following guidelines as per the National Environmental Management Act, 1998 should be considered in any development. The purpose of the act is to provide for co-operative, environmental governance by establishing principles for decision making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environment function exercised by organs of state and to provide for matters connected therewith. The following principles should be applied to all development considerations:

a) Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.
b) Development must be socially, environmentally and economically sustainable.
c) Sustainable development requires the consideration of all relevant factors including the following:
    i. That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimized and remedied:
    ii. that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimized and remedied;
    iii. that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimized and remedied;
    iv. That waste is avoided. or where it cannot be altogether avoided, minimized and re-used or recycled where possible and otherwise disposed of in a responsible manner;
    v. that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;
    vi. That the development. use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardized; vii. that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and
    vii. That negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented are minimized and remedied.
d) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.
e) Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.
f) Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.
g) Responsibility for the environmental health and safety consequences of a policy, program, project, product, process, service or activity exists throughout its life cycle.
h) The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation and participation by vulnerable and disadvantaged persons must be ensured.
i) Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognizing all forms of knowledge, including traditional and ordinary knowledge.
j) Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate

means. The social, economic and environmental impacts of activities, including disadvantages and benefits must be considered, assessed and evaluated and decisions must be appropriate in the light of such consideration and assessment.

k) The environment is held in public trust for the people the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.

l) The costs of remedying pollution, environmental degradation consequent adverse health effects and of preventing, controlling or minimizing further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.

m) Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as estuaries, wetlands and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure. Any development must comply with the principles set out in section 2 of the National Environmental management Act as well as any national norms and standards as envisaged under section 146 (2)(b)(i) of the Constitution and set out by the Minister, or by any other Minister, which have as their objectives the achievement, promotion and protection of the environment.

5.12.1.1. Specific Land Use Guidelines Applicable to DO 1. Environmental Sustainability

The proposed Environmental Conservation Zone (ECZ) and Environmental Tourism Zone (ETZ) outlined in the table above require additional Land Use Guidelines to ensure these proposed intervention zones achieve the desired outcome and function. These Zones were proposed in the current SDF 2017, but referred to as Environmental Management Zone 1 (EMZ1) and Environmental Management Zone 2 (EMZ2) respectively. This SDF revises and expands on the previous proposals, to ensure they reflect the current status quo of Lephalale.

a) Environmental Conservation Zone (ECZ) Land Use Guidelines

This zone includes areas with a generally high natural, visual and cultural quality that provides the core natural and cultural resource base for the establishment of the Waterberg as a conservation (even wilderness) destination. It is large and unique in form and character. The protection of the area as a whole is important.

Areas that fall within the ECZ include:

- Protected Areas (PAs) important to the Waterberg Biosphere Area;
- Critical Biodiversity Areas (CBAs);
- Wetlands and river systems.

General guidelines:

- Further loss of natural habitat to be avoided in categorised CBAs
    - Degraded or disturbed land categorised as CBA1 and CBA 2 should be prioritized for rehabilitation through programmes such as Working for Water and Working for Wetlands.
    - Control illegal activities, such as hunting and dumping, which impact on biodiversity, in these areas
    - The introduction and breeding of invasive alien species should not be permitted in CBAs and ESAs.
    - Discourage the restriction of animal movement (e.g. cheetah, African wild dog) due to impenetrable fences.

- Flood line areas, river catchment areas, environmental sensitive areas, and areas with geotechnical constraints should remain undeveloped to form part of the open space system and conserve the natural integrity.
- Buffer of 100m should be established around river streams and wetlands.
- Development on wetlands, natural forests and rivers should be restricted and development affecting these areas should only be allowed after formal procedures (as specified in environmental legislation, i.e. Environmental Impact Assessment) and written consent has been received.

Preferred activities: Conservation of nature in protected areas in terms of the National Environmental Management: Protected Areas Act (No. 107 of 1998, NEMA).

Compatible activities: limited low-impact tourism facilities; existing farming and gaming activities (with no expansion); and roads both existing and upgrading:

- Limited tourism facilities that take place in a manner that:
    - Limits disturbance to natural vegetation to the minimum possible after undertaking an environmental assessment as required in terms of Government Notice No. R. 564 of 18 June 2010;
    - does not consume additional natural resources;
    - does not impact negatively on the sense of place of the area, being particularly sensitive to not breaking the skyline or impeding on views;
    - recycles its waste products; and
    - treats its sewage before release into natural streams.
- Existing game farms that are managed with conservation as the core activity;
- Existing hunting activities but within the context of conservation of nature as the main priority;
- Existing farming activities that takes place in a manner that does not consume additional, natural resources and does not impact negatively on the sense of place of the area; and
- Existing and new unpaved roads that are maintained at a basic level to provide general access to the area.

Undesirable activities: medium- to high-impact activities and land uses which strain, destroy or change the natural environment:

- Mining of any sort;
- Industries and industrial facilities of any sort;
- Energy generation plants of any sort;
- Urbanisation and residential settlement, including lifestyle estates and low-density settlements;
- Golf courses and golf estates;
- Additional surfaced roads;
- Airfields and landing strips. Only allowed if their need and desirability is such that their impact on the environment can be justified in an environmental assessment as required in terms of Government Notice No. R. 564 of 18 June 2010;
- Commercial and retail buildings for use by the public of any sort (including filling stations).

b) Environmental Tourism Zone (ETZ) Land Use Guidelines

This zone represents areas with a generally high, natural, visual and cultural quality that has significant potential for the development of nature and/or culture-based tourism. It also forms the area from which the conservation use in the ECZ can be explored.

Areas that fall within the ETZ include:

- Protected Areas (PAs) with tourism properties such as Nature Reserves and Parks;

- Ecological Support Areas (ESAs);
- areas of potential adventure tourism; and
- proposed tourism nodal areas.

General guidelines:

- Ecological support areas (ESAs) allow for loser restrictions on land use and resource use when compared to the CBAs. The following strategies should be considered fort these areas:
    - Maintain in a functional state, avoid intensification of land uses, and rehabilitate to a natural or near-natural state where possible
    - Overall maintain landscape connectivity by avoiding loss/degradation of CBAs and ESAs, especially in corridor pinch-points.
- Flood line areas, river catchment areas, environmental sensitive areas, and areas with geotechnical constraints should remain undeveloped to form part of the open space system and conserve the natural integrity.
- Buffer of 100m should be established around river streams and wetlands.
- Development on wetlands, natural forests and rivers should be restricted and development affecting these areas should only be allowed after formal procedures (as specified in environmental legislation, i.e. Environmental Impact Assessment) and written consent has been received.

Preferred activities :

- Conservation of nature in protected areas in terms of the National Environmental Management: Protected Areas Act; and
- Tourism facilities that make use of the surrounding natural and cultural environments as the main attractions place in a manner that:
    - Limits disturbance to natural vegetation to the minimum possible after undertaking an environmental assessment as required in terms of Government Notice No. R. 564 of 18 June 2010;
    - does not consume additional natural resources;
    - does not impact negatively on the sense of place of the area, being particularly sensitive to not breaking the skyline or impeding on views;
    - recycles its waste products; and o treats its sewage before release into natural streams.

Compatible activities:

- Larger game lodges, country hotels, lifestyle estates within large nature/cultural areas that take place on disturbed sites (no clearing of indigenous vegetation should be allowed) in a manner that: o Limits disturbance to natural vegetation to the minimum possible after undertaking an environmental assessment as required in terms of Government Notice No. R. 564 of 18 June 2010;
    - does not impact negatively on the sense of place of the area, being particularly sensitive to not breaking the skyline or impeding on views;
    - recycles its waste products; and
    - treats its sewage before release into natural streams.
- Existing game farms that are managed with conservation as the core activity;
- Existing hunting activities but within the context of conservation of nature as the main priority;
- Existing farming activities that takes place in a manner that does not consume additional, natural resources and does not impact negatively on the sense of place of the area; and
- Existing roads that are maintained at a level that is safe and appropriate for tourism activities.

Undesirable activities:

- Mining of any sort;
- Industries of any sort;
- Energy generation plants with the exception of those that provide carbon free energy to the local area on disturbed areas in a manner that does not have a negative impact on the sense of place of the area, being particularly sensitive to not breaking the skyline or impeding on views;
- Urbanisation and dense residential settlement; and
- Golf courses and golf estates.

5.12.2. Urban Residential Development Guidelines

In order to achieve sustainable residential development, infill development should be prioritized, particularly in the areas demarcated for urban infill and densification in the Spatial Development Framework.

5.12.2.1. General Urban Residential

Principles Residential development should be guided by the core principles of the following strategies:

a) Densification must contribute to the overall structure and functionality of the urban area and that it takes place in a balanced focussed structure and meaningful way.
b) Appropriate higher density housing opportunities at appropriate locations must be provided for all income groups to promote the aims of social integration.
c) Specific areas of opportunity or need for restructuring should be identified.
d) Areas targeted for densification should be treated as whole environments, i.e. densification should not happen in isolation but as part of a larger program aimed at creating a suitable high-density environment.
e) Areas targeted for densification should be well served by public transport, or have the potential to be well served by public transport in the future.
f) Areas targeted for densification should be well served by social facilities such as education, open space, recreation etc. or should have the potential to be well served by social facilities.
g) Preserve and enhance open space, farmland, natural beauty and critical environmental areas.
h) Encourage community and stakeholders' collaboration
i) Retain, enhance and encourage cultural assets.

5.12.2.2. Affordable Housing

The following guidelines are presented for the location of affordable housing projects

a) Availability of Bulk Services: As a rule, bulk municipal services are available in or next to existing urban areas. This favours infill development and opposes urban sprawl as a form of urban development.
b) Ownership of Land: Land already owned by the municipality avoids the tedious and expensive purchase and transfer of private owned land for affordable housing development.
c) Access to Social Amenities and Economic Opportunities: Affordable housing projects should be located close to existing social and economic nodes or close to planned socio-economic nodes.
d) Access to Public Transportation: The aim is to place higher-density land uses, such as affordable housing, in a strip abutting public transport routes and in doing so, increasing access to the public transportation systems.
e) Integration of Urban Structure: Affordable housing should contribute to the establishment of integrated, economically viable and sustainable communities.
f) Located within Urban Edge: No affordable housing projects must be developed outside the urban edge.

5.12.2.3. Upgrading of Informal Settlements

With the exception of land ownership, the same criteria for developing affordable housing projects apply to selecting informal settlement upgrading projects. If an existing informal settlement does not adhere to most of the criteria set out above, it is suggested that consideration be given to relocate such a settlement. In this regard, the urban edge is of specific importance.

5.12.2.4. Non-residential or high-density residential uses in residential areas

The following matters shall be taken into account when considering an application for a non-residential or higher-density residential land use within a residential area:

a) Residential amenity should in general be protected, specifically, but not exclusively, from:
    i. Significant changes to traffic conditions in local streets including an increase in car parking demand,
    ii. Noise, light or odours emitted from the site, and
    iii. Disturbance associated with the hours of operation.
b) Low scale, non-intrusive, non-residential uses should be permitted in residential areas, i.e. shopping facilities, home offices, home industries etc.
c) Higher residential densities along major transport routes and around major nodes and employment areas should be promoted and actively supported.
d) The density of proposed and existing built-up areas should correlate with the availability of productive open spaces and public amenities in close proximity thereto, the higher the density/intensity of residential developments, the more productive open space and public amenities are warranted.
e) Residential intensification should be discouraged in areas with already high residential densities.
f) High-density residential development, which promotes high-rise development, is preferable rather than smaller single residential stands.
g) Areas designated for public use should be incorporated within high-density developments and lager public open spaces should be provided in close vicinity of these developments.
h) Medium-density residential development should promote a mixture of cluster housing.

5.12.3. Rural/Villages Development Guidelines

5.12.3.1. Objectives of rural/village development

c) Improve food security and household income.
d) Develop rural business and community organizations.
e) Provide flexible training and education.
f) Provide cost effective infrastructure without sacrificing quality services.
g) Economic sector development to create jobs for especially youths, woman and people with disabilities.

The following considerations should be applied during the planning stage:

a) Identify and protect biodiversity, heritage and scenic resources through establishment of formally protected priority conservation areas.
b) The forestry sector should be consulted to determine potential impacts from a forestation.
c) Support tourism development that meets the guidelines of Table 38 in rural areas to strengthen the rural economy. Tourism development should be in keeping with the local character.
d) Limit the development of rural housing to existing towns and rural settlements. An exception to the rule are:
    i. On-and-off farm security of tenure for farm workers.

ii. Restricted residential rights to incentivise the consolidation of rural properties of high biodiversity value and their incorporation into the conservation estate and traditional areas.

e) To facilitate the diversification of the rural economic base into tourism and recreational sectors, appropriate investment should be supported.
f) Strengthen the rural economy through facilitating development of businesses serving the needs of rural communities and tourists, as well as agricultural production in suitable locations throughout the rural landscape.
g) Strengthen the rural economy through facilitating rural industrial development in appropriate locality and at appropriate scale.
h) Smallholdings should not be permitted where the objective of the development is the provision of extensive residential lifestyle properties outside urban edges. Small holdings could be established on suitable land inside the urban edge.
i) Support and locate rural community facilities within or adjacent to rural settlements and hamlets.
j) Direct urban development pressure, where-ever possible to nodes and rural settlements. Apply the Isidima principles for Sustainable human development settlements to manage growth. Only in essential circumstances should new settlements of appropriate scale and compatibility be supported within the rural landscape

Table 41. Tourist and Recreation Facility Location Guidelines (source: Chapter 8: Rural Development and Land Use Management.

Tourist and Recreational Facilities	
Location Guidelines (source: Rural Land Use Planning and Management Guidelines; RLPMG)	• Whilst tourist and recreational facilities should be accommodated across the rural landscape, the nature and scale of the facility provided needs to be closely aligned with the environmental characteristics of the local context. • Environmental sensitive areas should be avoided and the placement of facilities and activities should be informed by a landscape assessment. • Any facility not directly related to the rural landscape should preferably be located within or peripheral to urban centres. • The residential component of rural tourist and recreation developments should be restricted.

General Development guidelines applicable to the development and planning of a rural area/ village:

a) The expansion of existing villages should be linked with employment opportunities within the village. Residents should therefore have the opportunity to farm in close proximity of the settlement as a source of income.
b) The provision of services will be basic and must be sustainable and affordable to these settlements.
c) No informal settlement may be developed within the village and illegal occupation of land should be discouraged.
d) The management of the village by the tribal authority must be done in collaboration with the municipality and other government spheres.
e) Rural settlements need to be upgraded and make provision for land for public facilities and private enterprises.
f) The upgrade of rural settlements should achieve the following:
    i. A planned area in a central location for the establishment of businesses, community facilities and government and municipal services.
    ii. The identification of agricultural land, woodlots, areas for thatching grass and building materials which need to be protected from residential expansion.
    iii. The reservation of land for roads, servitudes, communal open spaces and public facilities.
    iv. The identification of environmental sensitive areas and measures to protect and manage these areas.

v. Appropriate land use controls to manage the use and development of land in an orderly and planned manner.
vi. Rural settlements should be managed through flexible guidelines that represent a land management agreement between the municipality, the traditional authority and the community.
vii. Land management guidelines are sufficient to manage the key land uses within rural settlements and are sufficiently flexible to respond to changing land use requirements.

5.12.3.2. Rural Residential

Rural Residential is a land for rural living and agricultural purposes on a limited basis. The objectives:

a) Areas with a predominantly rural character and generally, situated outside the Urban Edge but within the Rural Development Edge.
b) Provide for activities in keeping with the rural character of the area and distinctly different tot agricultural or commercial farming.
c) Provision for land use not regarded as Bona Fide agricultural land by the Department of Agricultural, generally agricultural smallholdings with a distinctively lower density than residential development within the Urban Edge.
d) Permitting uses in line with rural activities i.e. keeping of animals and small-scale cultivation.

The following criteria provide for the establishment of rural residential developments for principal residence where individual ownership is mostly envisaged and do not intend to regulate recreational uses such as resorts and tourist uses, or residential uses related to farm labourers.

a) Rural residential developments must be sustainable and complimentary to the current and likely future urban structure.
b) The development must not impede on the proper, long-term growth of an urban area at normal densities and municipal service provision.
c) The development must not place additional demand on a service provider with regard to the provision of or maintenance of the public roads network.
d) Rural residential developments should have easy access to a tarred road that is maintained on a regular basis.
e) The development must be provided with sufficient and sustainable engineering services to a standard acceptable to the Municipality.
f) The geo-technical and geo-hydrological conditions are such that septic tanks and French drains can be used, alternatively, other systems must be used that would remove any risks.
g) The Department of Water Affairs and Forestry has issued a license for the use of ground or surface water for household purposes.
h) The development must be compatible with the existing or likely future surrounding land uses.
i) The impact on the environment and natural resources must be minimal or must be mitigated through design or environmental management.
j) The land parcel must not be prime and unique agricultural land and the Natural Department of Agriculture must consent to the proposed development.

5.12.4. Industrial Development Guidelines

Industry means purposes normally or otherwise reasonably associated with the use of land for the manufacture, altering, repairing, assembling or processing of a product or the dismantling or breaking up of a products, or the processing of raw materials.

5.12.4.1. Objectives of Industrial Development

a) Provide land use for the purposes of low impact mix of general industrial, light industrial and manufacturing activities and services.
b) Provide also commercial activities, which include factory shop, wholesale and shops that are permitted at the discretion of the Municipality.
c) Provision in the Industrial 1 zone can be made for non-industrial activity but these should not compromise the general use of the land for industrial purpose.
d) Prohibited/Noxious uses within this land use are subject to the Council's Special Consent and all relevant legislation.
e) Industrial Development is any land development activity including but not limited to non-offensive types of industry, processing and manufacturing activities. This does not include development activity intended solely for residential, retail and or office use.

5.12.4.2. General Industrial Development Principles

a) Industrial and commercial areas should have regard for their local context in being functional, well serviced, amendable and attractive.
b) Consider existing industrial and commercial areas and addressing diverse needs of industry and associated commerce.
c) Industrial development should be designed to support future industrial and commercial market demands, facilitate business and employment opportunities and achieve State and Local planning objectives.
d) Industrial development should assist the facilitation of economic development and increase in the viability business and industrial enterprises located in the specific area.
e) The industrial development should have a positive impact on the amenity and environment.
f) The industrial development should reinforce the valued rural character.

As far as industrial development is concerned the following general guidelines should be complied with:

a) For commercial and industrial land, ideally, a slope of 1:200 or less is suitable. The alternative is an expensive cut and fills exercise for each commercial or industrial building.
b) Industrial/commercial developments generally require fairly large areas, with gentle slopes.
c) Easy access to road and/or rail transport is imperative when new areas are planned for industrial development.
d) Service industries and light industries may develop in close proximity of residential areas.
e) Existing industrial/commercial zoned land should be substantially filled up before new industrial/commercial areas are developed.
f) Noxious industries should not be developed in close proximity to residential areas. Specific areas should be delineated for this kind of land use in order to isolate the impact it might have on its surroundings with specific to the direction of prevailing winds, natural resources downstream, accessibility, infrastructure provision and handling of waste.
g) All industries must comply with environmental and health standard regulations.

5.12.4.3. Industrial and Commercial Uses

Industrial and Commercial uses may be allowed to establish outside of existing or planned commercial/ industrial areas under the following circumstances:

a) When it is necessary to establish the use in close proximity to either the source of the raw material or the market for the end product, due to prohibitively high transportation costs, or have a negative impact on the environment, transport infrastructure or other uses along the route.

b) When the use requires only a elementary level of services, including water, sewerage, electricity, road infrastructure and solid waste disposal, which can be sustainably provided by the developer and the use will not in the future place any demands for service delivery or additional maintenance on the municipality or other service provider,

c) When the user requires large areas of land that will not be intensively utilised, thereby effectively prohibiting the establishment of the use within existing or planned, fully serviced, commercial or industrial areas due to:
    i. The cost of the land, or
    ii. The unavailability of land of sufficient extent.

d) When the use is not so labour intensive so as to encourage:
    i. The commuting of labourers over any long distance,
    ii. The settlement of labourers in the locality, unless such settlements is provided for in the planning of the Municipality and can be achieved in a sustainable manner, in which case the settlement will be affected by the developer, or
    iii. The creation of any unsustainable or undesirable settlement or living conditions.

e) When the use is found to be environmentally sustainable in terms of the Environmental Conservation Act which proof must be submitted before the application can be considered.

f) When the use will not have a negative or polluting or disturbing influence on either the amenity or operation of surrounding land uses, and when the use will not, in any way, prevent the current or future use of the subject or surrounding land for the use foreseen in the applicable zone.

6. IMPLEMENTATION FRAMEWORK

This section identifies the fundamental elements that are required for the effective realisation of the SDFs spatial vision and implementation of the Development Objectives outlined in this document.

6.1. Implementation Monitoring and Evaluation Guidelines

In terms of Section 26 of the Municipal Systems Act (No. 32 of 2000), the Spatial Development Framework of a Municipality is one of nine legal components of the Integrated Development Plan (IDP) of that Municipality. As such the SDF thus becomes part of the statutory processes associated with the IDP, and which includes, amongst others, the processes related to Inter Governmental Relations (IGR), Community Consultation and Participation, and the Budgeting Process of the local municipality.

The Lephalale SDF Implementation Framework is interconnected with other spatial planning and project implementation programmes at various scales.

- The Lephalale SDF is the overarching framework communicating the longer-term spatial vision, policy objectives, and desired outcomes as informed by the IDP. The SDF proposals must inform the priorities, performance indicators and targets of the IDP.
- The strategic priorities, performance indicators and targets of the Lephalale SDF proposals must translate at the local planning scale through detailed Sector Plans, Precinct Development Plans (PDP), and Site Development Plans (SDP). After the adoption of the Lephalale LM SDF, progress with regards to the implementation of the SDF will be reported to the Municipal Management Committee. As per Section 15(5) of SPLUMA (No. 16 of 2013) and the Executive Council may amend the Municipal SDF. However, the implementation framework of the SDF must be amended annually to measure implementation.

6.2. Guidelines

6.2.1. Spatial Forward Planning and the Land Use Scheme (LUS)

SDFs are spatial forward planning and policy led. Spatial forward planning occurs at different scales and informs decision-making about development, specifically decisions of land use change in terms of the Land Use Scheme (LUS). Hence the SDF must inform decisions made regarding the LUS and in turn the LUS enforces the policies and strategies contained in spatial forward planning to realize the spatial vision and land use patterns envisaged by the SDF. However, decisions in terms of the LUS are enforced by law at an administrative execution level, as opposed to mere development guidelines (as contained in spatial forward planning documents like SDFs).

The diagram in Figure below illustrates the hierarchy of plans and different levels of detail, each with specific goals. Lower order spatial forward planning plans bridge the gap between the SDF which is a strategic document and the LUS which is the final development control. These lower order plans deal with greater detail and provide area specific guidelines and proposals. All spatial forward planning plans inform each other and there should be continuous review and progressively influence each other. The LUS must give expression to the needs and strategies proposed in spatial forward plans (and should the scheme fail to do so, it requires review). Together, all the spatial forward planning plans and the LUS function as one Land Use Management System (LUMS).

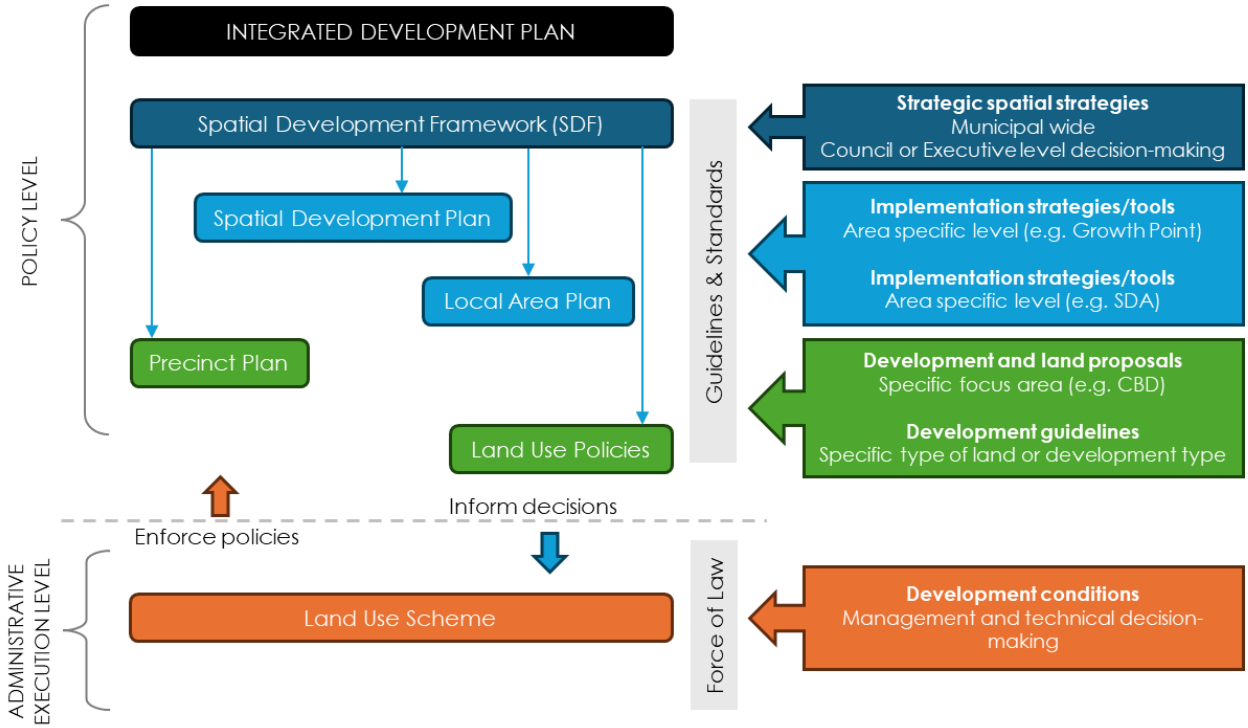


Figure 38. Spatial Planning and the Land Use Scheme.

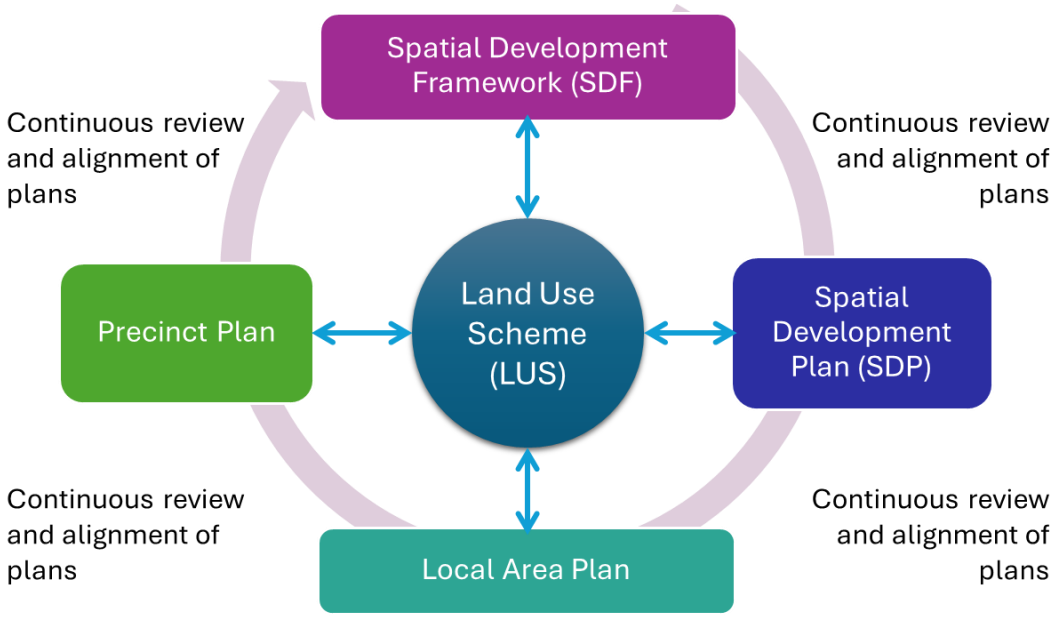


Figure 39. Land Use Management System: Alignment of Plans and the Land Use Scheme.

6.3. Supporting Policies and Program

Below is a list of policies and programmes proposed to support the implementation of the Lephalale SDF. This includes policies guiding future development and opportunities for grant funding.

- **Social Housing Programme (DHS):** grant funding programme to establish, capacitate and capitalize social housing institutions which may develop, hold and administer affordable rental units within identified restructuring zones.
  Applicability to this SDF: this programme should be implemented in the identified SDAs in Lephalale, to provide affordable housing options and support inclusive and integrated human settlements.
- **Integrated Residential Development Program (IRDP, DHS):** provides for the planning and development of integrated housing projects including the acquisition of land, servicing of stands for a variety of land uses such as commercial and recreational purposes, schools and clinics, as well as residential stands for low-, middle- and high-income groups.
  Applicability to this SDF: this programme will encourage integrated mixed-income residential areas.
- **Inclusionary Housing Policy (as seen in CoJ):** this is a policy implemented in the City of Johannesburg which requires and incentivises private developers to dedicate a certain percentage of new housing developments to lower income households at affordable housing cost.
  Applicability to this SDF: introducing this policy in Lephalale will ensure that new developments, especially in the urban core area of Lephalale, Marapong and Onverwacht, cater towards a diverse income bracket and create opportunities for affordable housing options in well-located areas (in terms of access to jobs and amenities).
- **Green Building Policy (DPW):** provides guidance in the sustainable building sector, including efficient energy, water and waste-management, and sustainable production and management.
  Applicability to this SDF: this policy will ensure that all new developments in Lephalale are in line with sustainable building practices and adhere to the overarching Waterberg Biosphere guidelines.

6.4. Proposed Priority Projects

The table below identifies a set of programmes and projects necessary for realising the stated Development Strategies/Action Plans (refer to Section 5.5). The Table identifies the parties/stakeholders responsible for implementing the projects and programmes listed, and where applicable, opportunities for private-public partnership have been indicated. The projects are further categorised into three broad timeframes to indicate their time of implementation. These timeframes are short term (next 0-5 years), medium term (next 5-10 years) and long term (next 10-15 years).

Table 42. Implementation Framework: Priority Projects.

Strategy/ Development Action	Policy Reference	Responsibility/ Partnership	Funding/ Cost	Timeframe		
				short (0-5 yrs.)	med (5-10 yrs.)	long (10-15 yrs.)
Development Objective 1. Environmental Sustainability						
Coordination/ alignment with Ehlanzeni District Bioregional Plan to ensure demarcation, protection, and proclamation of established conservancies around proposed protected areas	• Waterberg Bioregional Plan • Waterberg Biosphere Plan	• Lephalale LM • Waterberg DM • Waterberg Biosphere	Operational	x		
Develop a Municipal Disaster Management Plan, in line with the existing Waterberg Disaster Management Plan.		• Lephalale LM • Waterberg DM	Operational	x		
Development Objective 2. Corridor Development and Connectivity						
Ensure all road proposals (corridors, road upgrades, new strategic linkages etc.) of the SDF are included and reflected in the next review of the Integrated Transport Plan (ITP).	• Lephalale IDP 2023-27	• Lephalale LM • Private-public partnership		x	x	
Priority activity corridors and linkages for upgrading and rehabilitating: • R518 • R33 • R510 • N11	• Lephalale IDP 2023-27	• SANRAL • RAL		x	x	
Priority tourism routes and linkages for upgrading and rehabilitating: • The Mokolo route - R510 • Marula route - D1675 • Limpopo route - R572 • Waterberg route - R33 • Heritage route - D3110	• Lephalale IDP 2023-27	• SANRAL • RAL	Operational			
Feasibility study for the construction of the proposed northern bypass road – R510 to Marapong.	• Lephalale CBD Plan, 2013	• Lephalale LM			x	x

Strategy/ Development Action	Policy Reference	Responsibility/ Partnership	Funding/ Cost	Timeframe		
	• Lephalale SDF 2017	• Private-public partnership				
Groblersbrug Border Post short-medium term intervention: • Develop additional Truck Parks to accommodate freight trucks crossing the Border Post		• Lephalale LM • Private-public partnership		x	x	
Groblersbrug Border Post medium-long term intervention: • Exploit existing backlog and volume of trucks crossing the post by develop complimentary uses such as filling stations, retail facilities, overnight accommodation specifically catering for long-distance truck drivers. • Feasibility study for the expansion and upgrading of the Groblersbrug Border Post infrastructure (e.g. bridge expansion, moving the border post further south along the N11).		• BMA and DHA • Lephalale LM • Private-public partnership			x	x
Development Objective 3. Functional Nodal Hierarchy						
Establish nodal hierarchy concept in Lephalale by focusing infrastructure development and funding allocation within identified Focus Areas Nodes as a priority.	• Limpopo SDF • IUDF	• Lephalale LM • Limpopo		x	x	x
Develop detailed plans for identified Growth Points and Nodes: • Provincial Growth Point: Lephalale, Marapong and Onverwacht • Municipal Growth Point and PCP: Thabo Mbeki • Rural Service Delivery Points: Ga-Seleka and Shongoane • Local Service Point (LSP): Steenbokpan and Abbotspoort	• Limpopo SDF • IUDF	• Lephalale LM • Private-public partnership		x	x	x
Development Objective 4. Inclusive, Vibrant and Sustainable Human Settlements						
Indicate settlement development edges on approved Land Use Scheme Maps.	• IDP 2023-27 • Lephalale SPLUM By-Laws, 2017	• Lephalale LM	Operational	x		
Formalisation of the following informal settlements through Township establishment: • Mahlakung	• IDP 2023-27	• Lephalale LM • DALRRD • DHS		x	x	

Strategy/ Development Action	Policy Reference	Responsibility/ Partnership	Funding/ Cost	Timeframe		
• Mamojela Park • Marapong • Paprika • Thulare Park						
Detailed feasibility studies required for all SDAs to confirm their development potential – protect environmentally sensitive areas and high potential agricultural land in layout planning.		• Lephalale LM • Public-private partnership	Annual Allocations	x	x	x
Manage residential expansion in line with delineated Strategic Development Areas (SDAs), focusing on incremental expansion (no leapfrog development).		• Lephalale LM		x	x	x
Ensure SDAs are reflected as priority integrated housing intervention areas in future housing plans and policies including the Integrated Human Settlement Sector Plan and the Housing Chapter (IDP).	• IDP 2023-27	• Lephalale LM • DALRRD • Public-private partnership		x	x	x
Updated Land Audit to be conducted, followed by the development of a Municipal Land Assembly Strategy to identify key parcels of land that can give effect to this SDF, engage with landowners, identify funding sources and strategies, and establish the process of acquiring the land parcels.		• Lephalale LM • DALRRD	Operational	x	x	
Compile a Thusong Precinct Plan and Implementation Strategy for each of the identified locations.		• Lephalale LM • Public-Private Partnership		x		
Engage provincial and national service departments to align capital programmes in accordance with the Thusong Strategy.		• IDP Technical Committee and Representative Forum	Annual Allocations	x	x	x
Development Objective 5. Economic Development and Diversification						
Demarcate and reflect designated mining expansion areas (MZ), Energy Generation Zone (EGZ), and agriculture Farming Zones (AFZ)	• Lephalale SPLUM By-Law, 2017	• Lephalale LM	Operational	x		

Strategy/ Development Action	Policy Reference	Responsibility/ Partnership	Funding/ Cost	Timeframe		
in the Land Use Scheme and IDP.						
Formulate a Lephalale Tourism Development and Branding Strategy with detailed plans for the tourism activities and anchors, exploring different types of viable tourism types: • Educational tourism (looking at educational visits for school learners to the mines and generation facilities). • Eco-tourism • Adventure tourism • Cultural tourism		• Lephalale LM • Limpopo Tourism and Parks Board • Department of Education • Mining industry	Operational	x	x	
Engage with rural communities (rural focus area) to workshop strategies that integrate these communities in the eco- ,cultural and adventure tourism sector. To promote economic inclusion and local economic development	• Local Economic Development (LED)	• Lephalale LM • Limpopo Tourism and Parks Board		x	x	
Agri-parks programme: Organise and host training workshops with rural communities to introduce opportunities of new crops and new technology/ techniques.		• Lephalale LM • DALRRD		x		
Institutional/General						
Workshop SDF proposals with all sector departments and tribal authorities to assist integrated implementation from all role-players		• Lephalale LM	Operational	x		
Update the existing GIS based system (ArcMap, QGIS, etc.) to manage land use and integrate all municipal spatial data (i.e. transport, roads, housing, informal settlements etc.)		• Lephalale LM	Annual Allocations	x