DIKGATLONG
LOCAL MUNICIPALITY

REVIEW OF DIKGATLONG SPATIAL DEVELOPMENT FRAMEWORK

Final Draft Spatial Development Framework | **JUNE 2022**

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LIST OF ABBREVIATIONS

The following abbreviations are used in the text of this report:

CBA	Critical Biodiversity Area
CEA	Critical Environmental Areas
CoGTA	Cooperative Governance and Traditional Affairs
COO	Chief Operating Officer
CSIR	Council for Scientific and Industrial Research
DALRRD	Department of Agriculture, Land Reform and Rural Development
DM	District Municipality
DLM	Dikgatlong Local Municipality
Du	Dwelling Unit
e.g.	Example
EMF	Environmental Management Framework
FAR	Floor Area Ratio
FBDM	Frances Baard District Municipality
ha	Hectare
IDP	Integrated Development Framework
IGR	Inter-Government Relations
IPCC	Intergovernmental Panel on Climate Change
IWMP	Integrated Waste Management Plan
ITP	Integrated Transport Plan
km	kilometer
FPSU	Farmer production support unit
km²	square kilometers
LED	Local Economic Development
LHR	Liberation Heritage Route
LM	Local Municipality
LUMS	Land Use Management Scheme
NDP	National Development Plan 2030
NSDF	National Spatial development Framework
NEMA	National Environmental Management Act
NGO	Non-Governmental Organisation
NSDP	National Spatial Development Plan
NERSA	National Energy Regulator of South Africa
PEDS	Provincial Economic Development Strategy
PGDP	Provincial Growth and Development Plan
PSDF	Provincial Growth and Development Framework
SA	South Africa

SDF	Spatial Development Framework
SEA	Strategic Environmental Assessment
SMMEs	Small Medium and Micro Enterprises
SPLUMA	Spatial Planning and Land Use Management Act 16 of 2013
SWOT	Strengths, Weaknesses, Opportunities and Threats
WTP	Water Treatment Plant

EXECUTIVE SUMMARY

This document serves as the Review of the Dikgatlong Municipality Spatial Development Framework (SDF). The adoption of this SDF is a legal requirement, and as such fulfils the requirements as set out within the Spatial Planning and Land Use Management Act (Act No.16 of 2013). This SDF is an integral component of the Integrated Development Plan (IDP); it both informs and translates the IDP spatially and guides how the implementation of the IDP should occur in space. The SDF therefore guides the overall spatial distribution of land uses within the Municipality to give effect to the spatial vision, goals, and objectives of the district.

This SDF is also aligned with provincial and municipal sector plans and strategies as a way of ensuring that the desired spatial form and outcomes of the Municipality are achieved. The SDF is wide strategic document that goes with the IDP, it does not provide definitive statements on all aspects of spatial development in the Municipal Area as such it is advisable that this SDF be read in conjunction with other Council approved sector plans. These plans include Urban Development Frameworks (UDFs), Local Area Plans (LAPs), Precinct Plans or Special Projects, etc. as these translate the strategic and spatial intentions of the SDF into detailed and cadastral based land use and implementation plans and facilitate the translation into Schemes.

PROCESS UNDERTAKEN

This section outlines and briefly discusses the Review of the Dikgatlong SDF Development Process. The approach that has been chosen in preparing the Review of the Dikgatlong Local Municipality SDF complies with the Municipal Planning and Performance Management Regulations of 2001 and the Spatial Planning and Land Use Management Act (SPLUMA No. 16 of 2013). The drafting of this SDF adhered to the Guidelines for the Development of Spatial Development Frameworks, introduced by the Department of Rural Development and Land Reform as well as the COGTA Spatial Planning Guidelines.

SUMMARY OF THE STATUS QUO

This section includes the current status of sectors within the DLM and has been developed through alignment with the SPLUMA Pillars of Biophysical, Built Environment and Socio Economic.

The following Legislation and Plans were analysed to ensure alignment:

National Consideration

- The Constitution of South Africa Act No. 108 of 1996
- The Municipal Systems Act 32 of 2000
- Promotion of Administrative Justice Act 3 of 2000
- Traditional Leadership and Governance Framework Act 41 of 2003
- The Inter-governmental Relations Framework Act 13 of 2005
- The Environmental Conservation Act No. 73 of 1989

- The National Environmental Management Bio-Diversity Act No. 10 of 2004
- The National Heritage Resource Act No. 25 of 1999
- The National Environmental Management Act No. 107 of 1998 (NEMA)
- The National Water Act No. 36 of 1998
- National Development Plan
- National Spatial Development Framework, 2018
- The White Paper on Wise Land Use Spatial Planning and Land Use Management
- Spatial Planning and Land Use Management Act No, 16 of 2013
- Local Government – Back to Basics Strategy 2015
- Integrated Service Delivery Model 2016

Provincial Consideration

- Provincial Growth and Development Strategy
- The National Environmental Management Bio-Diversity Act No. 10 Of 2004
- Northern Cape Provincial Spatial Development Framework **Error! Bookmark not defined.**

Local Municipal Policy Alignment

- Dikgatlong Spatial Development Framework
- Environmental Management Framework (EMF)

Socio-Economic Assessment

According to Statistics South Africa census 2011, Dikgatlong Local Municipality has seen an increase in total population of 46 841 to 48473 (Community Survey 2016) with a total 3.5 increase in population over the last few years. The following population is thus projected for the year 2050, using an average growth rate of 0.7% p/a

Municipality	2011	2016	2050
Dikgatlong Local Municipality	46 840	48 463	59 756

The following are economic sectors found in DLM:

- Agriculture – 12.3%
- Mining - 30.6%
- Manufacturing- 9.5%
- Electricity & Water - 1.1%
- Construction – 3.1%
- Trade - 8.5%
- Transport - 4.7%
- Finance & Business – 8.6%
- Community Services- 21.7%

Built-Environment Assessment

The Land Use assessment for the Dikgatlong LM was conducted through wall-to-wall verification of current land uses pertaining to the following towns:

- Barkley West
- Windorston
- Delportshoop

Bio-Physical Assessment

Climate change is currently one of the biggest pressing issues on the development agenda. The need to reduce carbon emissions is great importance. Cities are said to be responsible for approximately 75% of greenhouse gases worldwide and should thus offer alternatives to change

Impacts of climate change on DLM and the world as a whole:

- Frequent and intense drought
- Storms
- Heat waves
- Weather events are becoming more frequent and severe
- Water quality decreases
- Health risks

SWOT Analysis and Key Issues

Spatial planning directives from the National and Provincial level as well as the district sector plans and local Municipal plans aims to unpack the state of the area or the sector within its location. Through a detailed analysis of these plans, we are able to create a picture of the positive and negative aspects of each sector within the areas that either fall within the district or surrounding the district which has equal impact on how the district functions.

The section highlights the SWOT Analysis and Key Issues pertaining to the Dikgatlong Local Municipality. These have been developed through a Workshopping session with the Local Municipalities and Internal and External Municipal Departments. Some of the key issues that are of key importance include but are not limited to;

- Lack of suitable incentives for energy saving.
- Old infrastructure
- Insufficient economic activities happening in the local municipality
- There is a lack of skill development centres
- Social facilities are not giving out quality services
- There is a housing backlog
- Decreasing Mining activities
- Deterioration of the tourism sector

STRATEGIC FRAMEWORK

The "Strategic Framework" in relation to a Spatial Development Framework refers to the strategic background and guidelines which will underpin the development of the Spatial proposals. It aims to identify the strategic spatial focus of and the municipality. The development strategy includes meaningful target measures and objectives that help focus on the key efforts that implement the strategy. The chapter takes the process shown in the diagram.

The Dikgatlong SDF's Vision is stated below;

"To become a financially viable municipality which plans for, implement and maintains the environment, offer affordable quality services, provide sufficient access to social facilities, making use of our natural resources and creating conditions in which there are employment and spatial land development opportunities"

The following Concept plan is the preferred scenario to achieve the vision.

For the Dikgatlong LM Spatial Development Framework there are Six (6) Spatial Structuring Elements that can guide spatial development and decision-making in the district and these elements include: -

- Nodes,
- Corridors
- Urban/ Settlement Edge
- Waterbodies
- Critical Biodiversity Areas (CBAs)
- Urban Revitalisation Areas Marginalized Townships

SPATIAL DEVELOPMENT FRAMEWORK

A Spatial Development Framework is a framework that seeks to guide overall spatial distribution of current and desirable land uses within a municipality, in order to give effect to the vision, goals and objectives of the municipal IDP

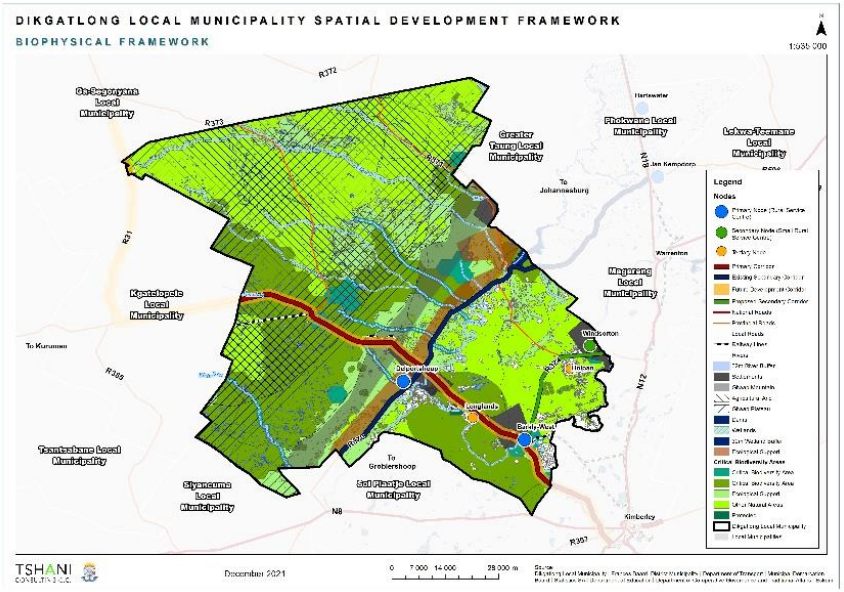
Biophysical Framework

There are four (4) different types of conservation areas that can be found within the Dikgatlong municipal area:

- River Systems
- Dams
- Critical Biodiversity Areas
- Threatened Eco-systems

It has been seen through the SDF that DLM has the opportunity to promote the advancement of the Agriculture sector and further promote jobs in this

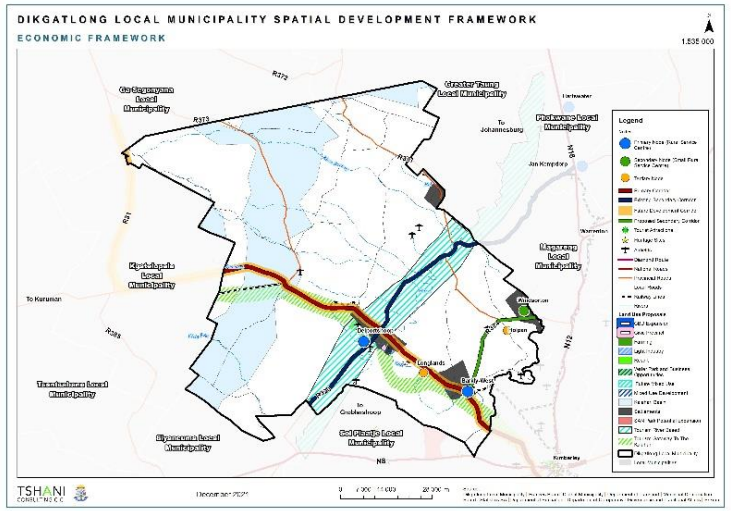
sector on order to ensure that the LM does not only play the role in supplying the agricultural demand within the district/province/country but also promoting job creation for the locals, thus ensuring that they are able to benefit by this sector and essentially become in a situation where they are less grant dependent and are able to live more sustainable lives.



Socio economic Framework

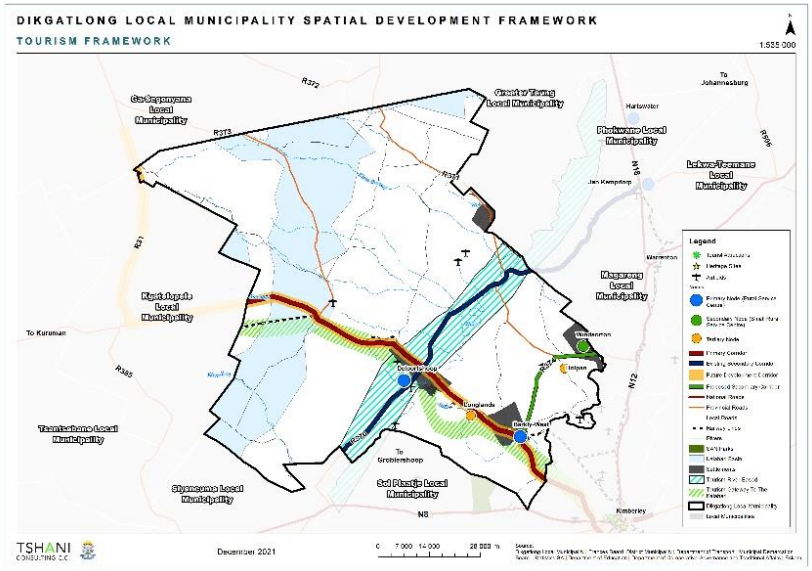
The key economic sectors within the DLM is as follows:

- Primary Sector (Agriculture and Mining)
- Secondary Sector ((Manufacturing, electricity and construction)
- Tertiary Sector (Trade, transport, financial and social services)



The Dikgatlong Local Municipality identified 5 (five) tourism areas which have the potential to be developed and marketed in order to promote economic growth. These tourist areas are:

- Game Viewing/ Trophy Hunting
- Mining Tourism;
- Expansion of the Hospitality Industry
- Adventure Tourism; and
- Eco-Tourism.

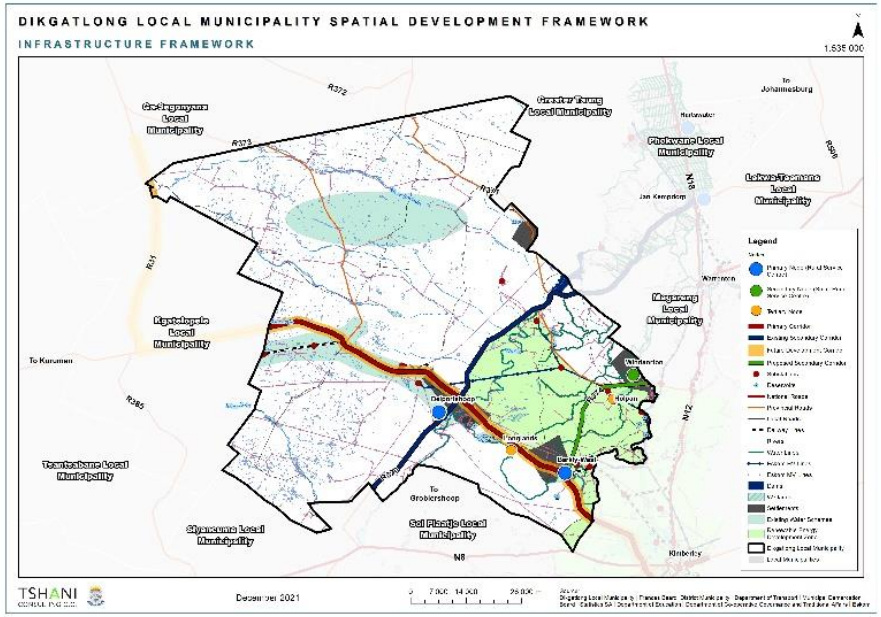


Built Environment Framework

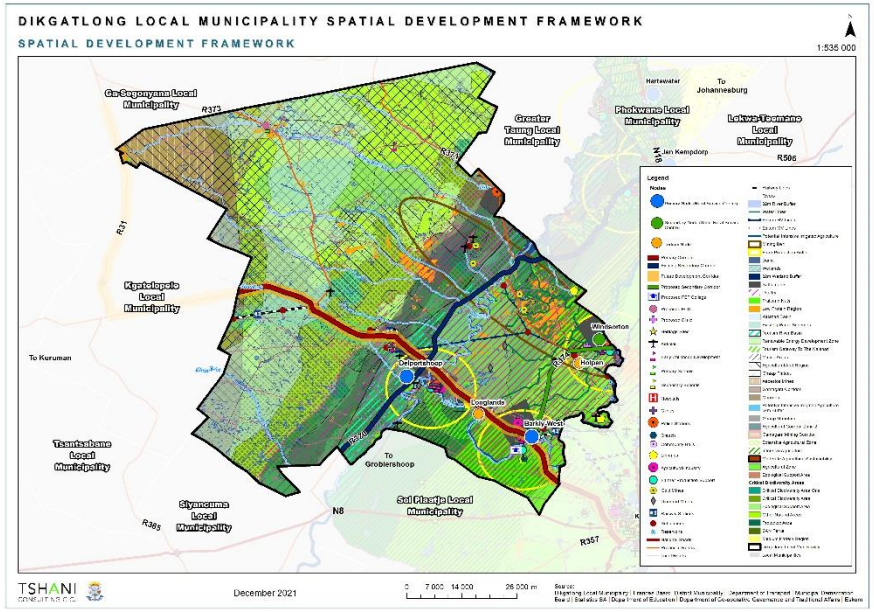
The concept for the future development of the district is to strengthen the existing residential nodes, both Urban and Rural areas and define the edges of these areas, to protect the areas of Agricultural potential as well as the areas of environmental sensitivity.

The following are some of the key spatial development drivers in the area:

- • Land reform program, particularly its impact on agricultural land and establishment of new settlements on agricultural land.
- • Low-income settlements located in isolated areas such from the major commercial nodes and employment opportunity areas.
- • Changes in the agricultural sector arising from an increasing number of farmers that are involved in game farming



Overall Spatial Development Framework



LAND USE MANAGEMENT FRAMEWORK

This section outlines the Land use Management within the district and how this should be undertaken within the district through the implementation of SPLUMA and the Spatial Planning Categories.

Spatial Planning Categories:

- Spatial Planning Category A & B: Core and Buffer Areas
- Spatial Planning Category C: Agriculture Areas
- Spatial Planning Category D: Urban and Rural Areas
- Spatial Planning Category E: Industrial Areas
- Spatial Planning Category F: Surface Infrastructure and Building

IMPLEMENTATION FRAMEWORK

The Implementation Plan depicts the projects reviewed and identified as part of this SDF development process. Each project includes the following info:

1. Description of the Project
2. Responsible Department
3. Municipality/ Region
4. Source of Funding
5. Total Project Cost
6. Phased Budget

CONCLUSION

The development of the Spatial Development Framework is derived from the outcome of the Spatial Analysis and the feedback from the workshopping sessions regarding the key issues faced by various departments who operate within the space.

SECTION A:

INTRODUCTION

The Spatial Development Framework (SDF) for Dikgatlong Municipality was reviewed and adopted by Council in 2014. It was reviewed then, in compliance with the provisions of section 26(e) of the Municipal Systems Act (MSA) 2000.

As such, this Dikgatlong Municipality SDF is developed as a product that is sustainable, legally compliant with SPLUMA and provides clear guidance for growth and development.

In addition to the requirements of legal compliance and sustainability, it is imperative that an SDF provides for the localization of national and provincial sector specific policies and guidelines. Central to the process is the drive toward redressing the imbalances of the past which resulted in the spatial segregation of people, land use, social and economic activities.

The SDF has been reviewed to comply with the provisions of the Spatial Planning and Land Use Management Act (SPLUMA) 2013, MSA and the Department of Agriculture Land Reform & Rural Development (DALRRD) SDF's Guidelines of 2017.

A.1 PROJECT PHASING

The development of the SDF followed the following phases.

PHASE 1:	Inception
PHASE 2:	Issues and Vision
PHASE 3:	Spatial Analysis and Synthesis
PHASE 4:	The Draft SDF Document
PHASE 5:	Achieving Support for the Draft SDF
PHASE 6:	Finalisation, Approval and Gazette
PHASE 7:	Publish the Notice in the Provincial Gazette
PHASE 8:	Implementation Plan

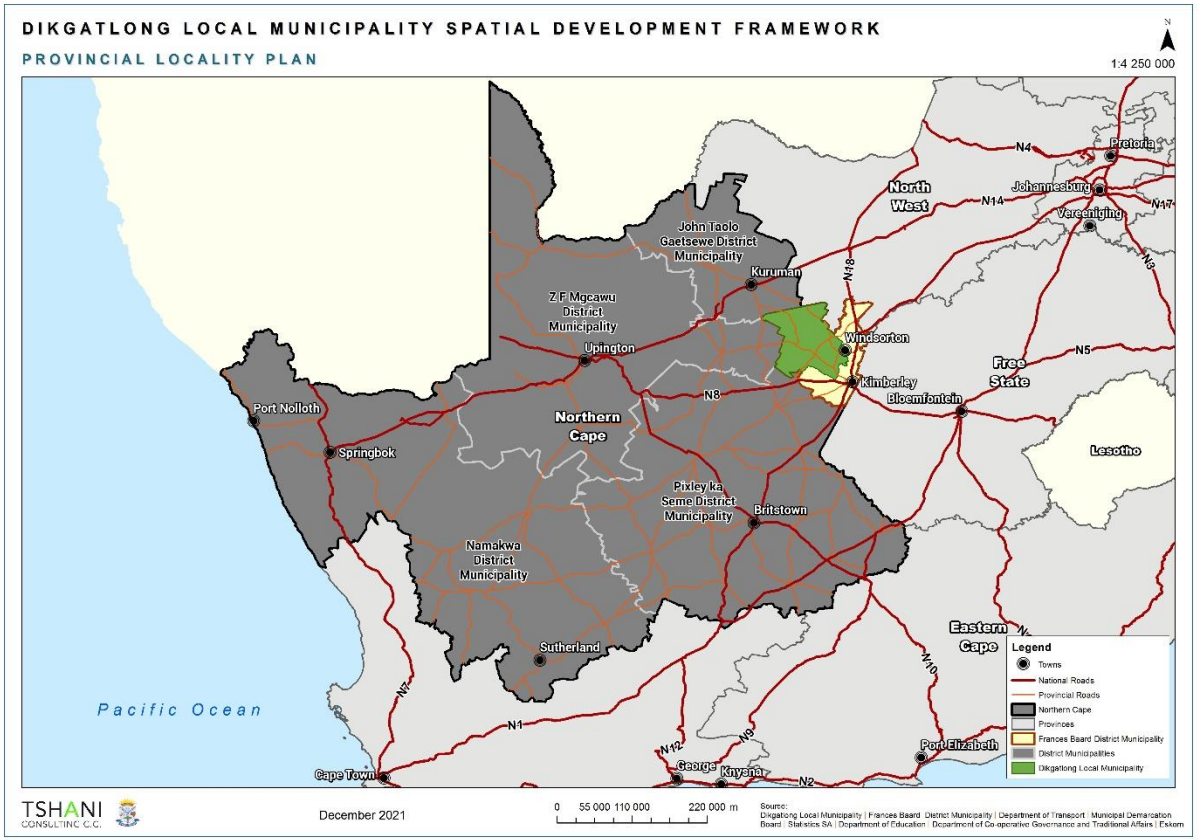
A.2 PROJECT LOCALITY

Provincial Locality

The locality of the municipality is discussed as it relates to the Northern Cape Province as well as key locational points within the municipality.

The province is bordered by the following:

- North West to the North;
- The Free State Province to the east;
- The Eastern Cape Province to the southeast;
- The Western Cape Province to the southwest.



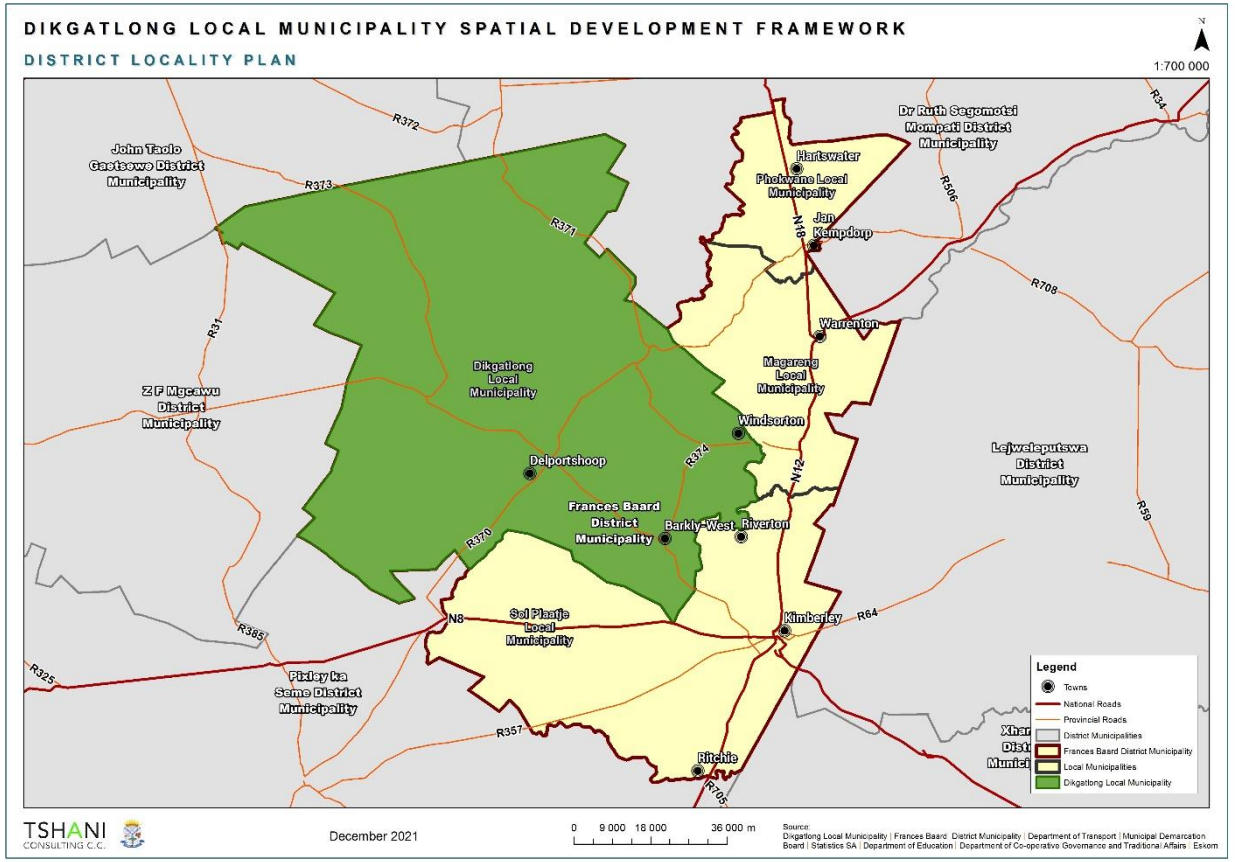
PLAN 1: Provincial Locality

District Locality

Dikgatlong LM forms part of the four (4) local municipalities within the Frances Baard District municipality.

The Frances Baard District Municipality is bordered by:

- John Taolo District Municipality
- Mgcawu District District Municipality
- Pixley Ka Seme District Municipality
- Dr Ruth Segomotsi Mompati District Municipality
- Lejweleputswa District Municipality



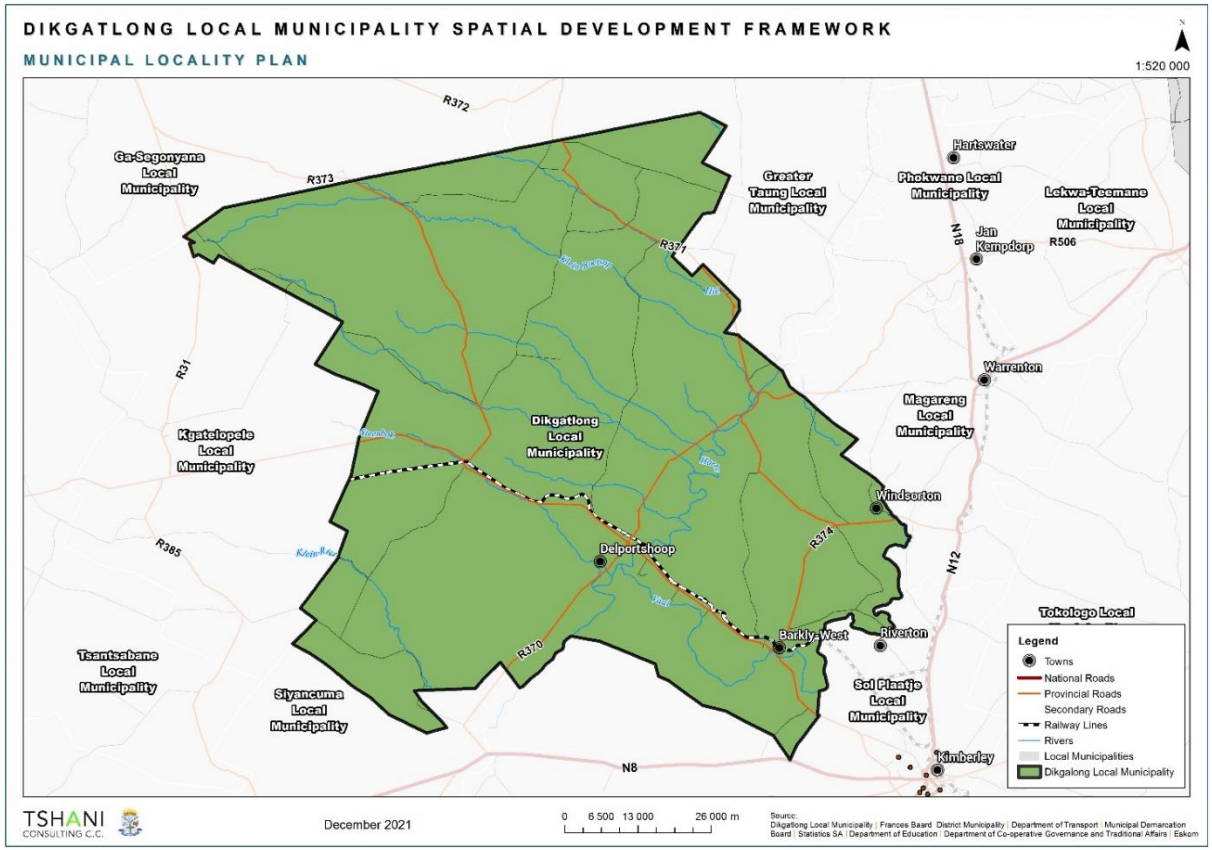
PLAN 2: District Locality

Municipal Locality

Dikgatlong LM is located within the Northern Cape Province. The Municipality is considered to be one of the biggest, in terms of area within the four (4) local municipalities within the ***Frances Baard District Municipality*** as it is 7 316 Km^2 in extent and consists of seven (7) wards

Dikgatlong Local Municipality is bordered by the following Local Municipalities:

- Greater Taung Local Municipality
- Magareng Local Municipality - FBDM
- Sol Plaatjie Local Municipality - FBDM
- Sinyancuma Local Municipality
- Kgatelopete Local Municipality
- Ga-Segonyana Local Municipality
- Siyancuma Local Municipality

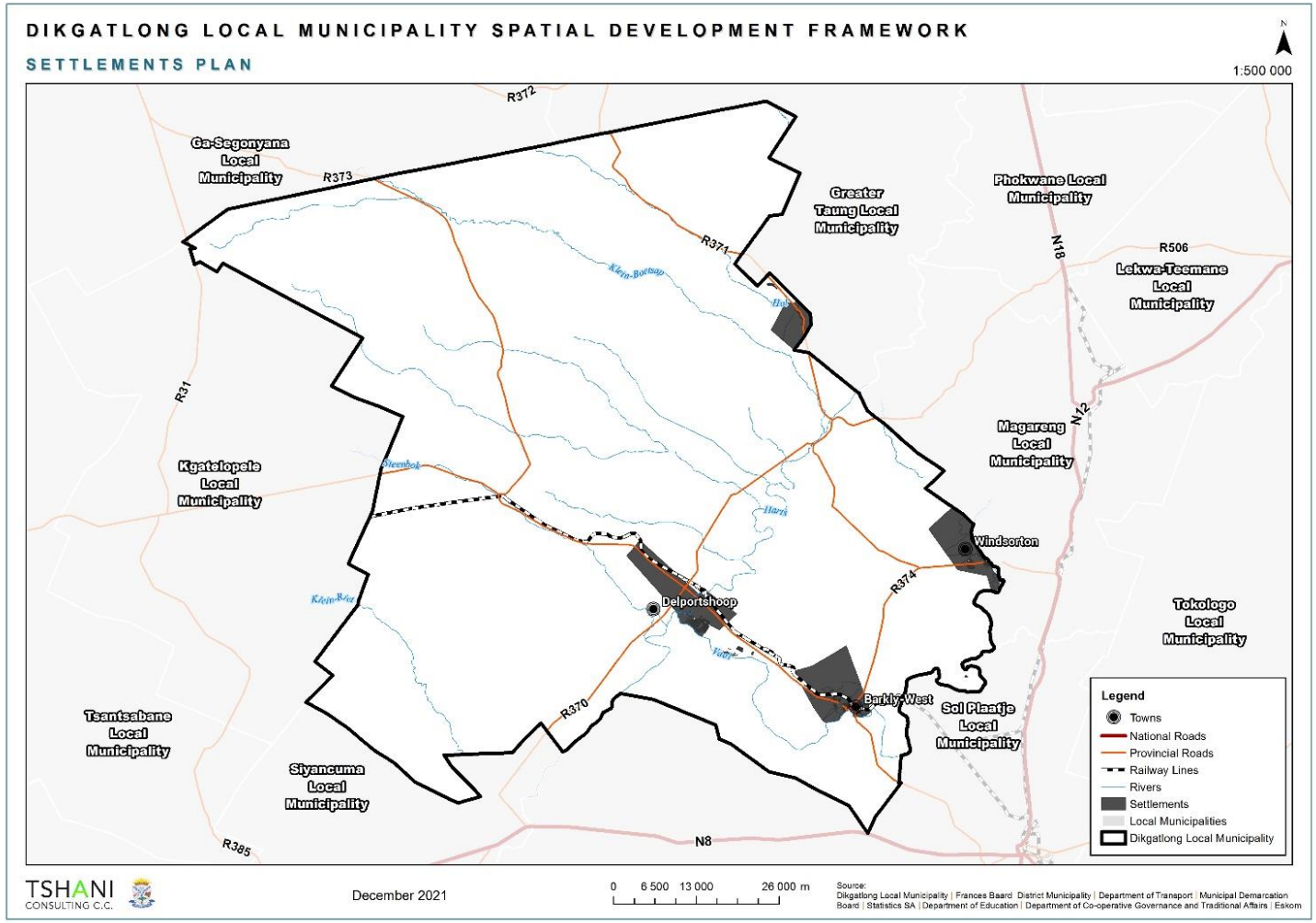


PLAN 3: Municipal Locality

Towns and Settlements

The following settlements can be found within the Dikgatlong LM:

- Barkley West
- Delportshoop
- Gong-gong
- Windsorton
- Ulco
- Longlands
- Pniel
- Koopmansfontein
- Holpan
- Stillwater
- Proteahof



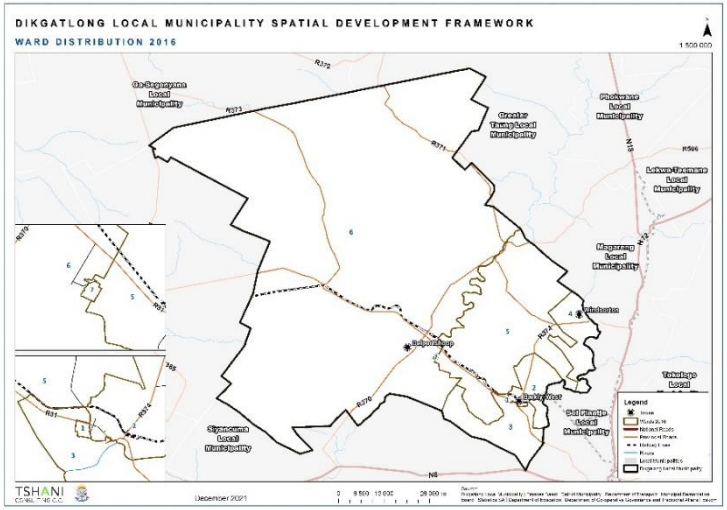
PLAN 4: Settlements

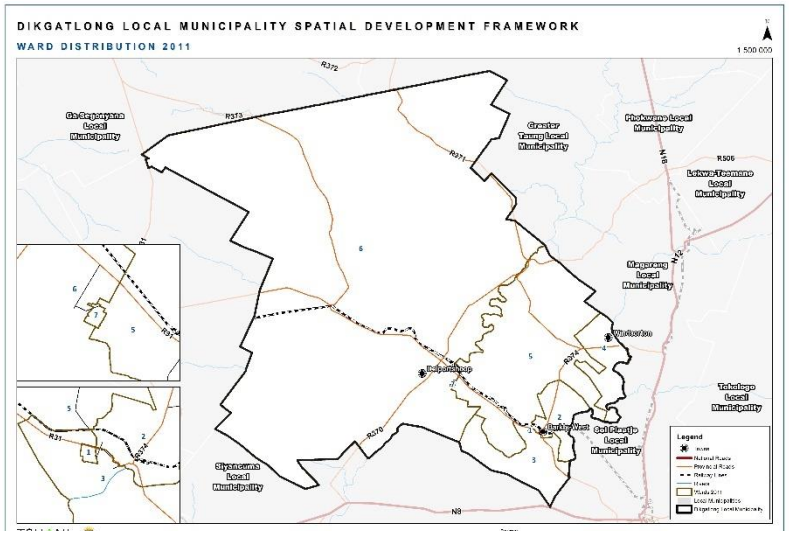
Wards

According to the FBDM SDF, Dikgatlong is demarcated into 8 wards and Council has 15 Councillors. This is to ensure proper consultation cascades even to the basic units in the different communities.

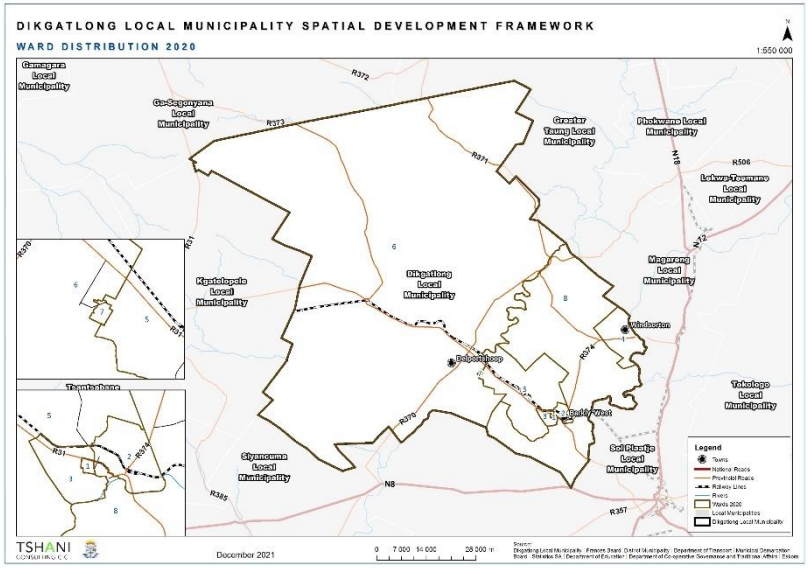
The purpose of wards is to:

- Promote democratic and accountable government for local communities
- Ensure the provision of sustainable services to communities
- Promote a safe and healthy environment; and
- Encourage community participation in local government





PLAN 5: Wards



SECTION B:

STATUS QUO

POLICY ASSESSMENT AND ALIGNMENT

The alignment with other policy documentation is of extreme importance through all the spheres of government as well as across sector departments. This is to ensure a holistic and integrative approach towards the development of spatial development frameworks.

The Department of Rural Development and Land Reform (DRDLR) has set out guidelines on the development of spatial development frameworks through all the spheres of government.

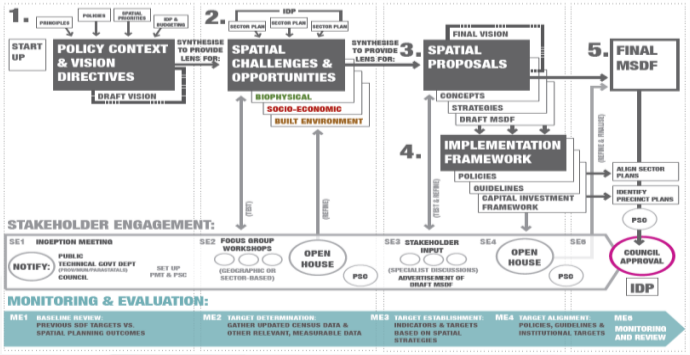


Figure 1: SDF Process- DRDLR

What is a Spatial Development Framework?

A Spatial Development Framework (SDF) is a long-term plan which aims to manage growth and changes within a municipal area in order for the municipality to become more sustainable, integrated, and equitable.

What is the link between the Integrated Development Plan (IDP) and SDF?

A Spatial Development Framework (SDF) provides a "geographical expression to the economic, social, cultural and ecological policies of society. It is at the same time, a scientific discipline, an administrative technique and a policy developed as an interdisciplinary and comprehensive approach directed towards a balanced regional development and the physical organisation of space according to an overall strategy."

The SDF will co-ordinate the spatial implications of all strategic sector plans such as engineering, housing, community services, etc.

The SDF should give physical effect to the vision, goals, and objectives of the municipal IDP. The SDF also informs the land use management of a municipality.

B.1 National Policy Alignment

This section will discuss national level developed policies with regards to their relation to the Spatial Development Framework (SDF) process.

NATIONAL DEVELOPMENT PLAN, 2013

- The National Development Plan (NDP) is a national plan towards 2030 that seeks to transform the country's spatial fragmentation, promote social and sustainable economic transformation and improvement of governance. The plan highlights six (6) priority areas towards achieving its goals:
- Uniting South Africans so as to achieve prosperity and equity
- Promoting active citizenry to strengthen accountability, democracy, and development
- Bringing about economic growth, labour absorption and attracting investment
- Building a capable and development state
- Encouraging strong leadership throughout society
- Focusing on key capabilities of people and the state

The plan highlights a number of critical issues towards the country's development but of relevance are the following chapter:

- Chapter 8 highlights the importance of **sustainable human settlements** that bridges the rural/urban divide of our country's landscape. What is stressed in this chapter is location and planning of future settlements as this relates to access to infrastructure, transportation.
- Chapter 4 highlights the need to **invest in infrastructure** so as to promote access to services such as water, electricity, transportation, ICT.
- Chapter 5 of the plan highlights the importance of environmental sustainability measures and principles. Exploration of alternative renewable energy resources such as wind and solar, reducing carbon emissions, water resource management. Attempts to address and reduce the effects of climate change that include social vulnerability.
- Chapter 6 discusses the integration of rural areas through infrastructure development, rural economies, land reform, and diversification of industry to include agriculture, tourism, and small enterprise developments industries.

SPATIAL PLANNING AND LAND USE MANAGEMENT ACT, 16 OF 2013

The Spatial Planning and Land Use Management Act No. 16 of 2013 (SPLUMA) was assented to by the President of the Republic of South Africa on 5 August 2013. SPLUMA is a framework act for all spatial planning and land use management legislation in South Africa. It seeks to promote

consistency and uniformity in procedures and decision-making. Other objectives include addressing historical spatial imbalances and the integration of the principles of sustainable development into land use and planning regulatory tools and legislative instruments.

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

SDFs are thus mandatory at all three spheres of government. Sub-section 12(2) confirms that all three spheres must participate in each other's processes of spatial planning and land use management and each sphere must be guided by its own SDF when taking decisions relating to land use and development.

Chapter 4 Part A. of SPLUMA sets out the focus and general requirements that must guide the preparation and compilation of SDF products at the various scales. Chapter 4 is divided into six parts of which, Part A provides an extensive introduction to the purpose and role of SDFs and sets out the preparation requirements and expectations of the SDF process.

The SDF will be informed by aligning the following development principles of SPLUMA:

- Spatial Justice

  Each development application must be assessed to determine whether it will contribute to a more just and equitable spatial outcome. Spatial justice incorporates important active intentions, such as:

  - Inclusivity – actively promoting the inclusion, rather than the exclusion, of disadvantaged groups and areas;
  - Redress – to make up for past imbalances and injustices;
  - Increased access – by disadvantaged groups and also spatially through well located developments;
  - Incorporation of disadvantaged areas – to create a more just spatial form, and
  - Flexible mechanisms with applicability in previously excluded areas – inclusion of incremental development procedures for upgrading informal settlements for example and developing suitable zoning and regulations for slums or informal areas or traditional areas where existing procedures made the development and use of land illegal and criminalised residents.

- Spatial Sustainability

  This principle looks at the long term view of development and embraces the concepts of environment, social and economic sustainability.

- Spatial Efficiency

This principle embodies the notion that we need to use our resources efficiently and not be wasteful of them and of our time and capacity as we have resource constraints. We must make the best and most efficient use possible with the limited resources available.

- Spatial Resilience

This principle embodies the notion that communities that live in vulnerable spatial locations have less ability to withstand economic and social shocks so spatial plans and policies need to be flexible to enable them to continue to have sustainable livelihoods.

- Good governance

This principle embodies the notion of integration in all spheres of government. This integration is through sector inputs in the preparation and amendments of spatial plans, policies and land use schemes

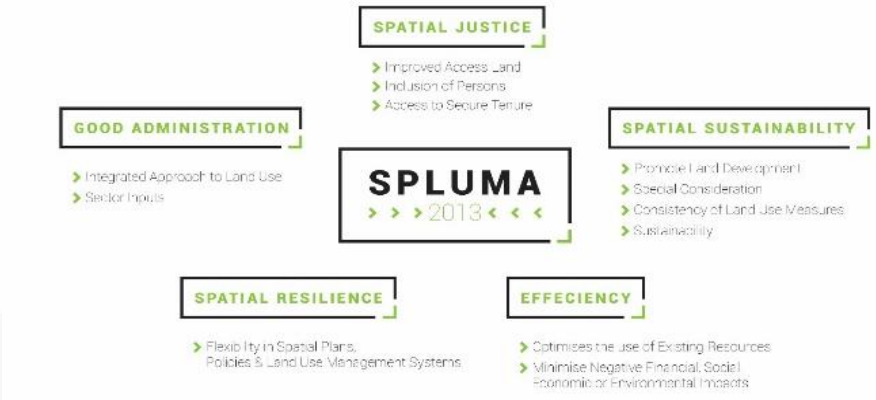


Figure 2: SPLUMA principles-SPLUMA, 2013

MUNICIPAL SYSTEMS ACT, NO. 32 OF 2000

The Municipal Systems Act (MSA) was assented on 14 November 2000. The Act is aimed at providing core principles, mechanisms and processes that are required to enable municipalities to move progressively towards the social and economic improvement of local communities and, ensure universal access to essential services that are afforded to all.

NATIONAL HERITAGE RESOURCES ACT, NO. 25 OF 1999

The Act seeks to empower communities to conserve and nurture their legacies for current and future generations as well as to promote good management of national state.

This legislation aims to promote the management of national heritage resources, to set out principles to govern heritage resource management.

NATIONAL ENVIRONMENTAL MANAGEMENT ACT, NO. 107 of 1998

The Act establishes in law certain principles that provide a framework for environmental management in South Africa. In addition, NEMA makes provision for the formulation of Environmental Implementation Plans by Provinces. These Implementation Plans are the vehicle for implementing the NEMA principles, and municipalities are required to adhere to them.

NATIONAL ENVIRONMENTAL MANAGEMENT: PROTECTED AREAS ACT 57 OF 2003

The National Environmental Management: Protected Areas Act (PAA) was enacted to provide for declaration and management of protected areas in South Africa. The Protected Areas Act (PAA) should be read in conjunction with the principles set out in National Environmental Management Act (NEMA) and Section 5 and 6 of National Environmental Management Act (NEMA). Protected Areas Act (PAA) represents a shift in the approach to conservation from the historical "protectionist" approach (i.e. exclusion of local communities) to allowing controlled access to resources and participation in the management of protected areas.

NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, NO 59 OF 2008

This Act notes the importance of waste management, set out norms and standards in relation to waste management, stipulate waste service standards at different spheres of government.

Sustainable development requires that generations of waste are avoided as the Constitution states that everyone has a right to an environment that is not harmful to his or her health, to have the environment protected for the benefit of the present and future generations through reasonable legislative and other measures that:

- Prevent pollution and ecological degradation;
- Promote conservation; and
- Secure ecologically sustainable development and use of natural resources while promoting just economic and social development.

The Act notes that waste, under certain circumstances is a resource and offers economic opportunities.

NATIONAL SPATIAL DEVELOPMENT FRAMEWORK, 2018

GUIDELINES

Consolidate and direct the rapid population growth in the eastern half of the country to national urban nodes, clusters and corridors by (1) creating quality human settlements and (2) centres of human capital excellence, innovation, trade, inclusive green economies and regional enterprises, and in the process reaping the urban dividend.

Consolidate settlement growth in (1) growth regions in emerging and fast-growing urban nodes, and (2) distressed and sparsely populated areas and areas that are becoming increasingly more arid in existing large urban nodes.

NATIONAL NETWORK OF REGIONAL DEVELOPMENT ANCHORS

Identify, support, and strengthen strategically located regional anchor towns through (1) targeted settlement planning and development, (2) higher-order social infrastructure provision, (3) focused support for small and medium-sized enterprise development, industrialisation and economic diversification.

- Use the investment and enhanced social service provision in regional 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 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 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, lively, rural settlements, and regional rural systems

Kimberley has also been defined as a National Urban Node within the NSDF where the plan has outlined Kimberley as a distressed and sparsely populated areas and areas that are becoming increasingly more arid, consolidate settlement growth in (1) existing large urban nodes, and (2) emerging and fast-growing urban nodes.

NATIONAL TRANSFORMATION CORRIDORS

Three National Transformation Corridors have been outlined in the NSDF, the North-western Corridor which traverses the FBDM is one of the 3 identified National Transformation Corridors.

The NSDF has identified these areas to be categorised to have (1) large, youthful populations, (2) shared histories of deep deprivation and neglect as former Apartheid Bantustans, (3) high levels of poverty and unemployment, and (4) dense and sprawling rural settlement forms. They are also areas of high ecological value to the country as there is known to be enormous source of groundwater, in the case of the North western Transformation Corridor. It has further been noted that the North western Transformation Corridor includes crucial cattle and irrigation farming activities.

The corridor is set to experiences very harsh climatic conditions in the not-too-distant future however, due to intensive irrigation, farming has become established as a regionally and nationally important economic activity, and mining has a become a earner of foreign exchange for the country.

The NSDF aims to ensure the following for North western Corridor:

- Extend and improve the transportation networks, ensure regular maintenance and upgrading of existing infrastructure, notably roads, increase investment in high-speed ICT infrastructure and enhance urban-rural and rural-rural connectivity;
- Develop a network of (1) strong and vibrant existing and emerging cities and large towns to fulfil the role of fully-fledged national urban nodes, (2) viable regional development anchors, and (3) well capacitated rural service centres;
- Ensure effective city and town management to prevent sprawl, ensure innovative settlement planning and urban land reform, well-managed land-use, enabling infrastructure investment.

- Provide catalytic, innovative, and contextually suitable sustainable infrastructure, social and basic services to support enterprise development, well-being, and inclusive growth with both an ecological and human-focussed approach.
- Prioritise human capital and people-centred enterprise development, e.g. arts and culture, tourism, knowledge creation, education and innovation;
- Optimise the agricultural opportunities in the region and support the establishment of small-scale farming activities, agri-enterprises and agri-led industrialisation, to foster productive rural regions, enhance national food security, and strengthen national water security;
- Develop the tourism sector and creative industries in the region, with an emphasis on small-and-medium-sized farming activities, and agri-eco production;
- Ensure the protection and management of ecological infrastructure and national resources and protected areas, including SWSAs and high-value agricultural land; and
- Establish strong regional growth and development compacts, including all role-players, i.e. the three spheres of government, traditional leaders, communities (notably youth), the private sector, CBOs, NGOs and organised labour, and ensure regional, cross provincial and cross-municipal boundary collaborative spatial development planning and governance.

The Plan below highlights the North-western Corridor as outlined in the NSDF:

Within this Corridor, Sol Plaatjes has been identified as an Urban Core and Barkley West, Hartswater, Jan Kempdorp, Pampiestad and Ritchie.

Figure 3: North-Western Transformation Corridor

NATIONAL ECOLOGICAL INFRASTRUCTURE AND NATURAL RESOURCE SYSTEM

Areas within the FBDM have been defined as National Ecological Biodiversity areas. These are Critical Biodiversity Areas (CBAs) and Strategic Water

Source Areas (SWSAs). They could also be used for the socio-economic benefit of people, cities, and economies in the regions in which they are located. The NSDF mentions that 'Developmental co-benefits' must be created through effective management and use of strategic ecological and biodiversity management areas, to support rural livelihoods, especially with regards to custodianship and tourism opportunities.

There are also various National Protected areas located within the district. These are Protect national ecological resources and national heritage areas. National spatial development is well-planned and well-managed to enable protection, as well as the effective use and beneficiation of national protected areas in accordance with the relevant regulations.

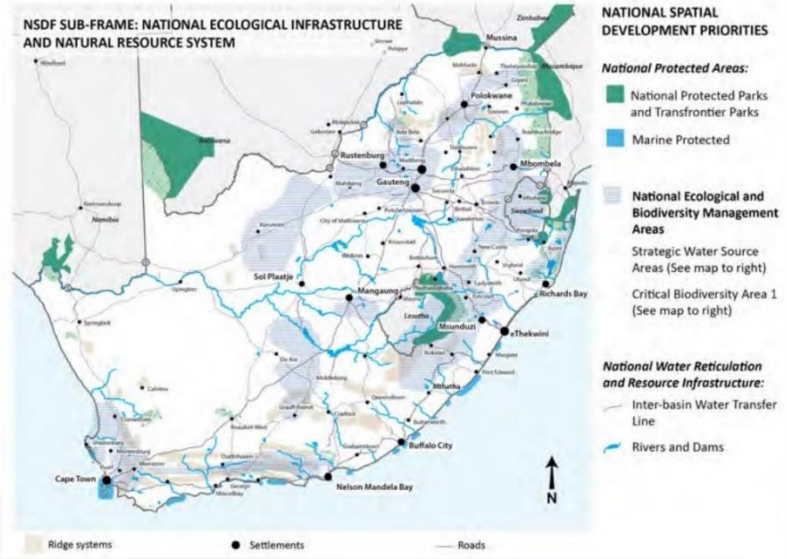


Figure 4: National Development Priorities

NATIONAL WATER ACT, NO 36 OF 1998

The Act aims to ensure the protection, use, development and conservation, management of the country's water resources

The Act states that it should be recognised that water is a scarce resource that is unevenly distributed throughout the country. Water should be protected in order to ensure sustainability of the country's water resources.

Sustainability and equity are central guiding principles in the protection, use, development, conservation, management and control of water resources.

INTEGRATED URBAN DEVELOPMENT FRAMEWORK (IUDF), 2016

The IUDF aims to guide the future growth and management of South African urban areas, including towns and cities. The IUDF is a local response to the Sustainable Development Goals, particularly "**Goal 11: Making cities and human settlements inclusive, safe, resilient and sustainable**". It also seeks to guide the development of inclusive, resilient and liveable urban settlements while addressing the unique conditions of South Africa's cities and towns. To achieve this, the following strategic goals are stipulated:

- **Spatial integration** through spatial transformation of settlement forms, transportation networks, social and economic nodes;
- **Inclusion and access** by ensuring that people have access to social and economic services and opportunities;

- **Growth** to harness urban dynamism for inclusive, sustainable economic growth and development;
- **Governance** by enhancing the capacity of the state and citizens to work together to achieve spatial and social integration.

The IUDF has an urban focus although it is essential in guiding economic development of small towns. This document emphasises the importance of stakeholder engagement and participation for the transformation of small towns. The diagram below depicts which stakeholders are of importance for the urban transformation.

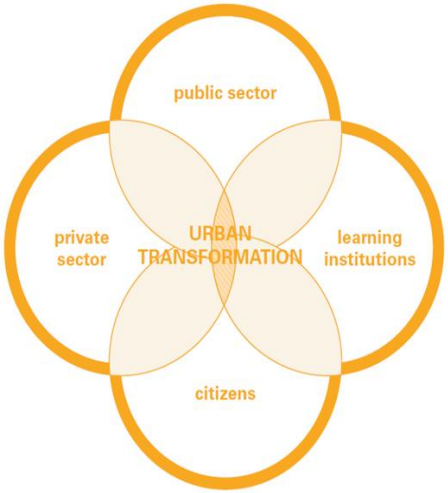


Figure 5: Critical Stakeholders for Urban Transformation Agenda, IUDF 2016

NATIONAL FOREST ACT, 84 OF 1998

The principles of the National Forest Act (Act 84 of 1998) pertain to:

- The protection of natural forests (except under exceptional circumstances where the Minister determines that the proposed new land use is preferable in terms of its economic, social or environmental benefits)
- The conservation of a minimum area of each woodland type; and
- The management of forests to ensure the sustainability of resources (wood, soil, biological diversity etc)

No person may cut, disturb, damage or destroy any indigenous living tree in, or remove or receive any such tree from a natural forest, except in terms of:

- A licence issued under subsection (1) of section 23 or
- An exemption from the provisions of this subsection published by the Minister in the Gazette on the advice of Council.

The Minister may declare to be a natural forest, a group of indigenous trees whose crowns are not largely contiguous; or where there is doubt to whether or not their crowns are largely contiguous, if he or she is of the opinion based on scientific advice, the trees that make up a forest which needs to be protected in terms of this part. The Minister declares a forest to be a natural forest by publishing a notice on the Gazette and publishing a notice in two newspapers circulating in the area and airing a notice on two radio stations broadcasting to the area. The Minister may issue a license to cut, damage or destroy any indigenous, living tree in, or remove or receive any such tree from a natural forest.

B.2 PROVINCIAL POLICY ALIGNMENT

This section discusses Northern Cape provincial policy and legislation as it relates to the development of Spatial Development Frameworks.

PROVINCIAL GROWTH AND DEVELOPMENT STRATEGY

The Provincial Growth and Development Plan (PGDP) developed by the Provincial Government of the Northern Cape, is a document aligned to the NDP and the National Spatial Development Framework. The purpose of a PGDP is to provide the strategic framework, sectoral strategies and projects that will place the province and its people on a trajectory of growth and prosperity. To achieve this, the PGDP addresses issues of economic growth, social development, environmental protection, employment creation, poverty eradication and good governance concretely with implementable projects to advance the liveability of all in the province.

The PGDP, with its long-term vision, aims to place the Northern Cape Province on a new development trajectory of sustainable development.

The PGDP outlines that the Northern Cape Province's economy is highly dependent on the primary and tertiary sectors for growth and employment. This concentration implies economic vulnerability on several fronts such as external economic fluctuations, climate change, international commodity price changes and national government policy priorities.

Spatial transformation in the Northern Cape Province implies inclusive and sustainable economic growth. Small towns and rural communities must become Economic Transformation, Growth and Development drivers through diversification, skills development, infrastructure development, optimised resource utilisation, the empowerment of vulnerable groups and investment attraction. In line with the SPLUMA Act 16 of 2013, critical factors in achieving spatial and economic transformation in the Province include:

- Equitable access to economic and employment opportunities
- Equitable access to transport, energy, water, bulk and communications infrastructure
- Equitable access to land and food security
- Equitable access to social services and public amenities
- Equitable access to a healthy natural environment
- Equitable access to housing and municipal infrastructure
- Equitable access to natural resources

The characteristics underpinning the Northern Cape Growth & Development Strategy are centered towards charting towards a new socio-economic trajectory. This trajectory is one that advocates for the social and economic emancipation of the people of the province, from the clutches of colonial repression, through land reform initiatives, through the creation of environments that have a core focus on the reduction of poverty, unemployment and inequality and through initiatives that promote environmental sustainability, good governance and livable environments. The output of the strategy is the overall attainment of social and economic transformation for the province by 2040, which is not only connected to the

principles of the Freedom Charter and the National Development Plan but acts as an important vanguard for district and local development.

THE NATIONAL ENVIRONMENTAL MANAGEMENT BIO-DIVERSITY ACT NO. 10 OF 2004

The Act makes provision for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources; the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources; and the establishment and functions of a South African National Biodiversity Institute.

The Northern Cape Agriculture sector is one of the key sectors that drive the economy of the province. Therefore, the PGDP aims for the province to have a productive, sustainable, and healthy agricultural sector it needs to contribute to job creation, social welfare, as well as ensure sustainability of natural resources.

The PGDP further outlines Frances Baard District Municipality (FBDM) as the smallest among the five District Municipalities in the Northern Cape Province. The Vaalharts Irrigation Scheme, is the largest irrigation scheme in South Africa, can be found in FBDM. This water scheme is the primary water source for the agricultural industry in this district municipality and provides water to farmers in Jan Kempdorp, Pampierstad, Warrenton as well as other settlements in the area. Most agriculture land is used for the cultivation of maize. Other crops include wheat, various fruit and vegetables, ground nuts, pecan nuts cotton, canola and Lucerne.

NORTHERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK

The metamorphosis of any area into a 'development state', be it at a national, provincial and/or local context, as enshrined by the constitution, requires a dedicated integrated planning process, which effectively incorporates innovative and best-practice strategies, pertaining to its obligation in achieving social, economic and environmental sustainability. It remains of paramount importance to remain cognizant of the fact, that the Provincial Spatial Development Framework (PSDF), remains an extension of the Provincial Growth and Development Plan, expressing the needs and aspirations of the people of the province in the spatial context, as highlighted in the development drivers of the Provincial Growth and Development Plan (PGDP).

Key Issues Facing the Province

It is cardinal to note that whilst the province is plagued with underlying key issues, many of which have been inherited from the scourge of Apartheid Planning, the effective redress of these inherent challenges, not only has the potential to change the trajectory of the province, but to birth opportunity in areas of ailments. As such the province is plagued by the following key issues;

- Human settlements characterized by high levels of poverty and limited job creation, which result in an exponential increase in urbanization and informal settlements, as well poor accessibility, thereby rendering it extremely difficult to provide crucial health and social services to isolated rural communities
- Infrastructure development- numerous areas and towns are experiencing water shortages and inadequate electricity supply, with many villages relying on contaminated groundwater, unsuitable for human consumption.
- Connectivity and mobility- the vast distances within the province lead to high transport costs, which tend to trap the previously, marginalized into poverty traps, as well as a limited number of roads are paved, thereby limiting overall connectivity and mobility,
- Provincial resources- a high level of water use, and environmental degradation is associated with mining or extractive industries, as well as continuous conflict between mining and agricultural land uses, and what is often found is that agriculture and mining activities, often take place within close proximity to environmentally sensitive areas. What is also found is vast distances and poor transit systems to and from tourist attractions within the province,

Vision

The vision of PSDF is as follows:

"Sustainable urban and rural spatial development based on a modern space economy supported by an integrated national and provincial infrastructure network and the responsible use of natural resources providing sustainable livelihoods for all"

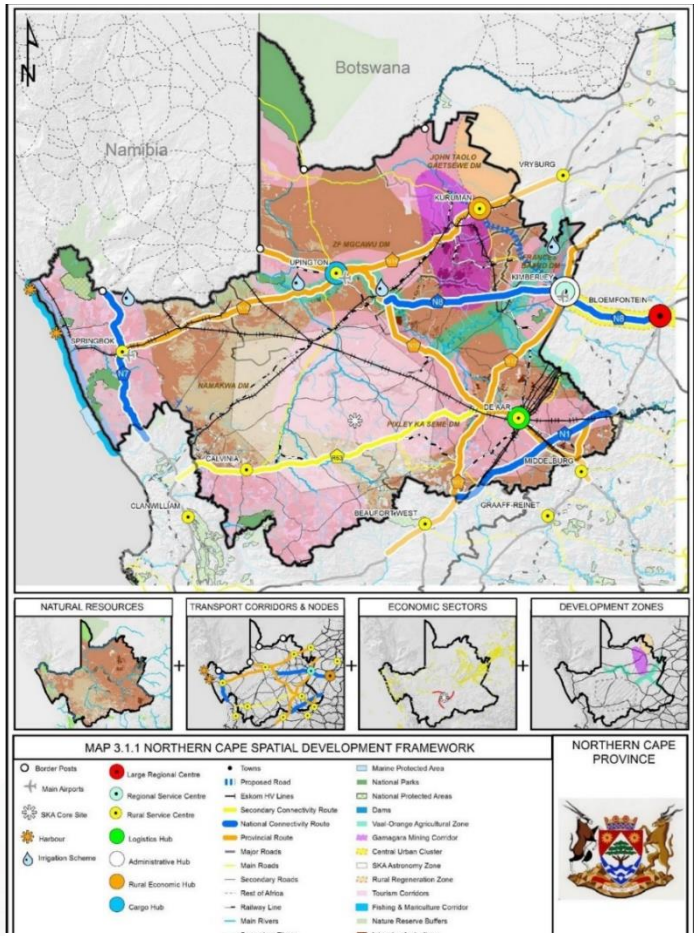
The vision is focused on forging towards a more inclusive, productive, and resilient economic trajectory. At the core of the Northern Cape Spatial vison is sustainable urban and rural development, which is connected and aligned with the national and provincial infrastructure and a move towards more responsible use, of natural resources in order to bring about more sustainable livelihoods.

Spatial Structuring Elements

At the core of spatial structuring elements is the effective movement of people, goods and services. As such the following spatial structuring elements are encompassed in PSDF;

- The development and reinforcement of varied growth centres, with increased access to public transport, economic opportunities and social amenities.
- Growth centers in the form of urban regions e.g. Kimberly and regional growth centers viz. Kuruman and Upington
- Tourism nodes which represent growth centres with potential for agri-tourism, eco-tourism, botanical tourism, marine and coastal tourism, heritage tourism and adventure areas.

- Development corridors, which increase of levels of mobility and access and reduces spatial marginalisation
- Development zones which guide where development can take place within the province



PLAN 6: Northern Cape SDF

B.3 LOCAL POLICY ASSESSMENT AND ALIGNMENT

This section of the report discusses local level policy and legislation that affects the development of a Spatial Development Framework (SDF).

DIKGATLONG SPATIAL DEVELOPMENT FRAMEWORK

The concept of democratization is one that is highly flawed in its interpretation, particularly as it is often limited to the science of politics. Democratization as a concept, however plays a fundamental role, not only as a pillar but as a guideline for the effective implementation of the Dikgatlong Spatial Development Framework, both as a forward planning tool , as well as a tool with the core objective of bringing about redress and reform. In so doing it is a framework which advocates for the redress of the socio-economic aspect through the spatial context, through the move towards inclusive, diverse spaces, that promote grass-root involvement and representation.

Key Issues Facing the Municipal Area

The following are highlighted as existing key issues facing the Dikgatlong Local Municipality:

- Old, degraded and poorly maintained infrastructure
- Rural Settlements are low-density, sparse, and inaccessible because of poor road infrastructure.

- Poor refuse removal and proper waste management system, resulting in blocked storm water and flooded streets in larger settlements
- High unemployment levels
- Lack of educational programs to teach people to work the land for food production
- Lack of sport and recreational facilities
- Land claims and former CPA are constraining planned development
- Lack of local production and SMME's trapped in low value markets

Spatial Structuring Elements

Bio regional Planning: Bio-regional planning has gained increasing importance in recent years as a methodology for simply and effectively addressing the issue of land use management in regional planning. Four main land use management zones or areas can be identified.

Nodes, Corridors and Linkages: The following areas are defined as the Nodes, Corridors and Linkages for Dikgatlong:
1. Barkly West (administrative, retail, mining agri-processing. manufacturing, storage, services and transport node);

2. Windsorton (mining and agricultural node);

3. Delpoortshoop (mining and agricultural node);

4. Longlands (mining node) and

5. ULCO (Mining and Industry)

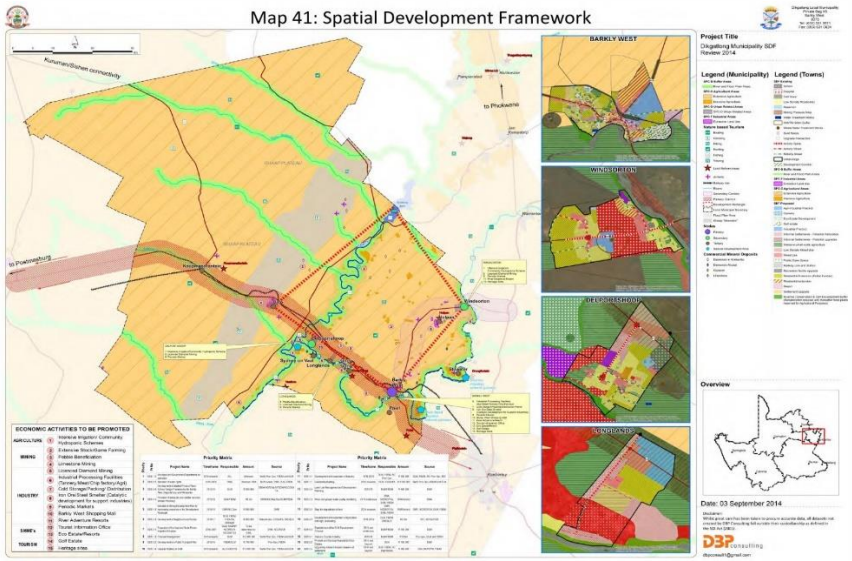
Protected and Development Restricted Areas: Dikgatlong SDF outlines the Protected areas as the MOSS areas withing the LM as well as the Tourism-related Conservation areas which includes the following areas:

- Vaal and Harts Rivers and their riverine areas/buffers;
- Ghaap "mountain" plateau;
- Gong-Gong Falls;
- The Burial Sites of historical value.
- Glacial geological features, stone age art and recovered artifacts.

Part and parcel of ensuring that Dikgatlong Local Municipality achieves its key objectives is through the identification of the following strategic focus areas:

- Restructuring of all urban settlements
- Linking R31 settlements to the main road
- Periodic Market route
- Proposed Housing Projects
- Promoting non-motorised transport
- Mixed passenger services
- Agriculture, mining and bio-diversity conservation
- Point tourism related opportunities

The previous Dikgatlong SDF plan is shown below:



PLAN 7: Dikgatlong LM SDF 2014

ENVIRONMENTAL MANAGEMENT FRAMEWORK (EMF)

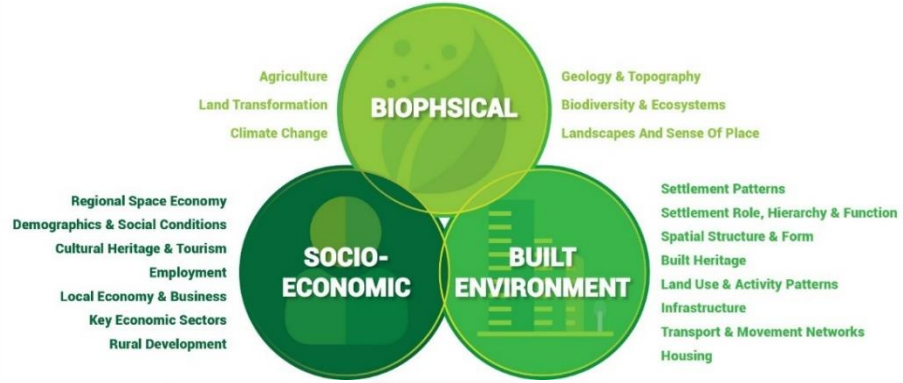
Environmental Management Frameworks (EMFs) is a regulatory instrument which can be used as a strategic planning instrument. EMFs can be used for coordinated management of information about an area and for the consideration of applications for environmental.

Development considerations in DLM need to take into account the environmental management zone into which a proposed development falls and also consider in detail the site-specific environment using the sensitivity categories and criteria where applicable. For developments to take place in each of the management zones, certain minimum requirements would have to be met. While the EMF highlights the importance of maintaining the conservation and production functions of the ecological and agricultural zones respectively, it accepts the inevitability of urban growth and provides guidelines for developments that have to take place on land with ecological and agricultural functions.

SITUATIONAL ANALYSIS

This section of the report analyses the current municipal situation and is therefore carried out in terms of the Department of Rural Development and Land Reform's Spatial Development Framework Guidelines and Evaluation Framework 2014.

These Guidelines outline 3 pillars which the SDF should be developed in line with, i.e., Biophysical, Socio – economic and Built environment. Each pillar has various subcomponents. These are outlined in the figure below.



PLAN 8: SPLUMA Pillars

B.4 SOCIO-ECONOMIC ANALYSIS

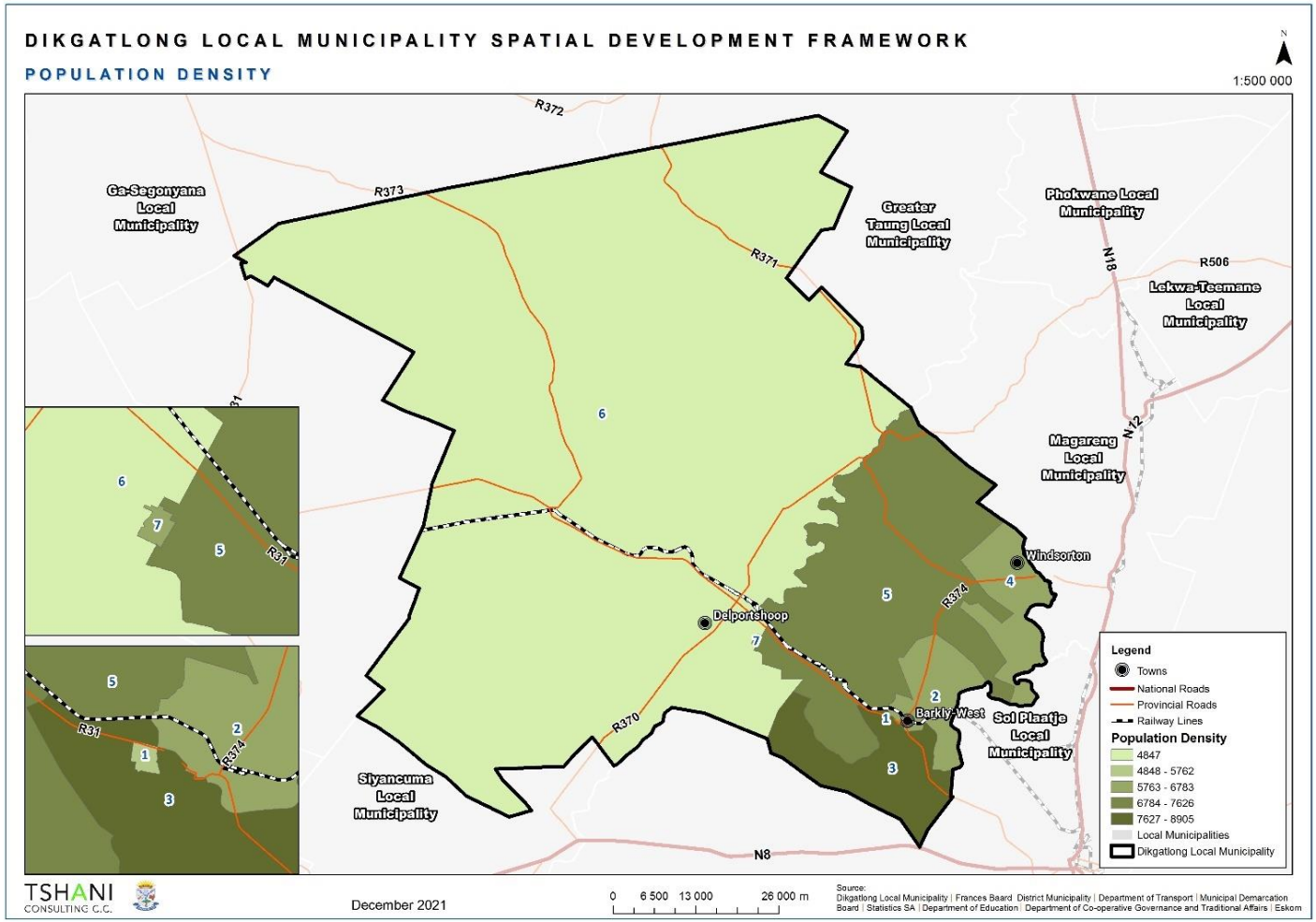
This section of the document is to reflect on the relation between population requirements and the natural resource base. The distribution and changes in population growth directly influences the number of services to be rendered.

DEMOGRAPHIC ANALYSIS

The demographic analysis sets a basis for the socio-economic analysis as it primarily deals with statistical data relating to the population and particular groups within it.

Population

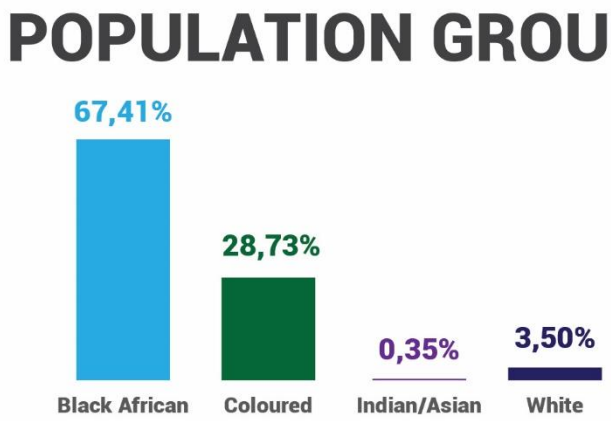
According to Statistics South Africa census 2011, Dikgatlong Local Municipality has seen an increase in total population of 46 841 to 48473 (Community Survey 2016) with a total 3.5 increase in population over the last few years. The following population is thus projected for the year 2050, using an average growth rate of 0.7% p/a



PLAN 9: Population Density

Population group

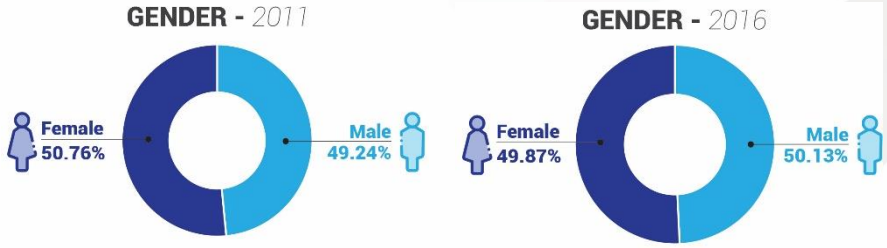
The Dikgatlong Local Municipality has a total population of 46 840, (Census 2011). This indicates that the population has increased by 2.7% per annum, as the population was 35 773 in 2001. The population is divided into various racial groups: the majority being Black African (58.47%), followed by Coloured (28.48%), other (8.88%) while Whites (3.62%) and Indians or Asian (0.28%) being the least represented. The figure below shows the population groups according to the 2016 Community Survey.



The number of households increased from 9 733 households (2001) to 11 969 households (2011) in the Dikgatlong Local Municipality. This has led to a slight increase in the household size; which has increased from 3.7 to 3.9 (2001 to 2011).

Gender

According to research on the Dikgatlong SDF, on average there are 50,76 % of females and males 49,24 % males. Basically, there are more females than males residing within DLM

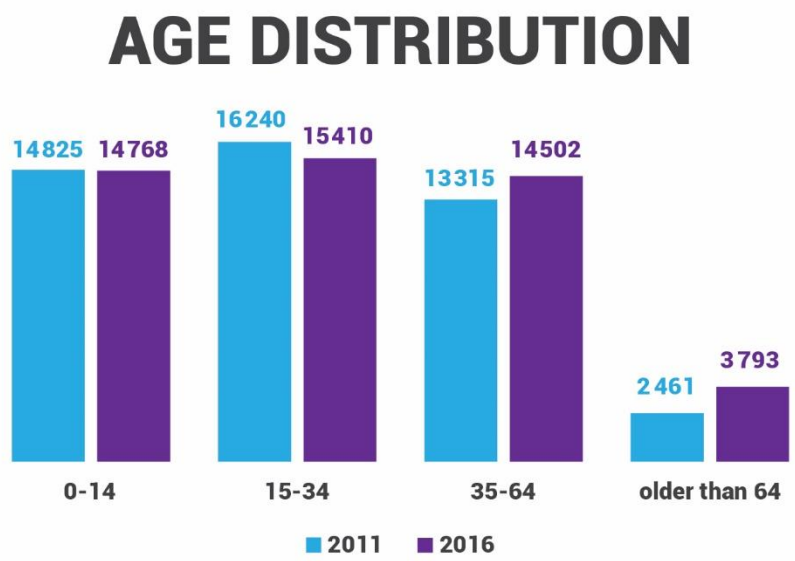


Source: Calculations based on Statssa: Census 2011 (2016 Municipal Demarcations), Community Survey 2016

Age

The population of Dikgatlong Local Municipality consist mainly of young people; the biggest age group is those between 0 - 4 years (5232), whilst more than 30% of the population is below the age of 15. The importance of access to adequate education/health/sporting/social and cultural facilities is vital for Dikgatlong's future workforce.

The aged section of the population 65 contribute only a small percentage of the total population but nevertheless requires access to medical facilities/old age homes/frail care centres etc. and social security – pensions etc.



Source: Calculations based on StatsSA: Census 2011 (2016 Municipal Demarcations), Community Survey 2016

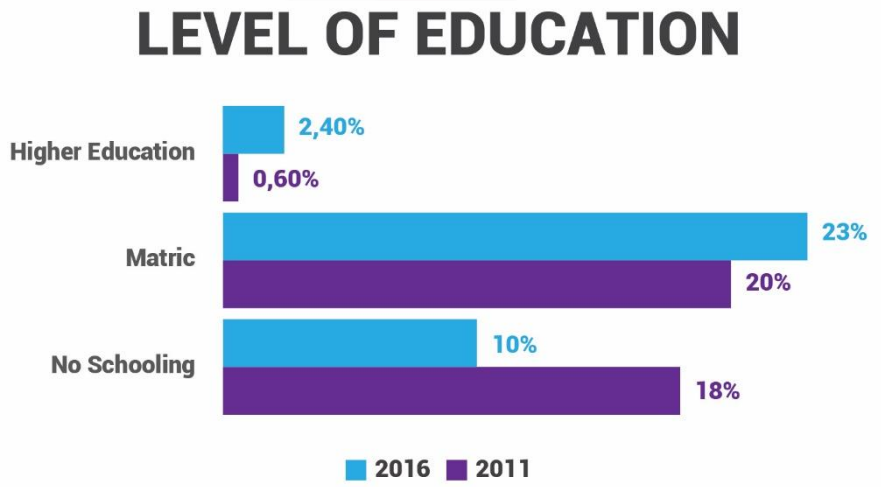
The Dikgatlong Local Municipality is seeing a slight aging in its population, with a 5,4% decline in the age category of between '15 and 34', while the '0-14' age category saw a slight decline and the '35-64' age category increased by 8,9% between 2011 and 2016. Similar to the other local municipalities, the 'older than 64' category saw a large increase of 54.1%

Levels of education

According to research by the South African Institution of Race Relations (SAIRR), people with a university degree have a 75% chance of finding a job while those chances decrease with one's level of education. People with a matric certificate have a 50 % chance of getting a job while those without a matric certificate have a 35% chance. This research shows the importance of education as it relates to employability, especially amongst the youth.

Education prepares individuals so that they are able to play an active role in the labour market, which directly affects their quality of life as well as the economy of a county and the area they live in. Through the education level, one can then understand the skills that an area has and its potential to contribute positively to the economy.

Dikgatlong Local Municipality has a large number of people with some secondary school followed by those with some primary levels. Those with Grade 12 constitute 12.83% while those higher than Grade 12 only constitute 1.64%. Thus are a limited number of skilled people available to the labour market.



Migration

The Northern Cape and the Frances Baard District, with the exception of Phokwane Municipality, are one of the provinces in South Africa that are facing net emigration from its towns as well as its rural areas. The main reason for this would seem to be the increasing inability of the land and urban settlements to sustain reasonable livelihoods. Rural-urban migration is a worldwide phenomenon and is happening in all rapidly modernizing economies, particularly in India and China. Migration theory has identified a number of push factors; declining rural resource base in the primary sectors, lack of education and health facilities, discrepancies between rural and urban incomes; and pull factors "the bright lights" (aspirations driven by consumer advertising), exposure to greater business markers and tertiary education facilities.

Todaro, the development economist, identified that it was possible to have significant urban migration in the face of high unemployment levels based on the expectations of finding an urban job rather than certainty that such a job was available. He noted that the higher the difference between rural and urban incomes the greater unemployment levels could be and people would still migrate to urban areas. This migration forces raise questions about the appropriate nature of local economic development.

In South Africa a reversal of this trend has been noted where middle class, mainly white retirees move to rural towns pushed by the crime and grime of cities and the pull of quiet rural environment, relatively cheap housing, picturesque towns, good quality internet connections and a range of sporting facilities. Three types of people who remain in rural areas can be identified:

- Survivalists who don't have skills or aspirations to move to towns;
- Those who cannot find work to fulfil globalised aspirations locally, mainly public sector but also some tourism, farmers, miners and service sector entrepreneurs; and,
- Retirees, generally living off pension or passive income transfers from elsewhere,

SOCIAL FACILITIES

Social facilities are a vital aspect of human settlements as they serve as sources for social and public services; including health, education, recreation, cultural and socializing spaces among other services.

Access to and availability of social facilities is an important factor which attracts and keeps people in an area. Therefore, the section below indicates the number of social facilities within the municipality jurisdiction.

The following strategies for social infrastructure are based on the criteria as stipulated in terms of the CSIR Human Settlement Guidelines: -

Table 1: CSIR Human Settlement Guidelines

Planning Thresholds	Walking Distance	Minimum Requirements
Crèche	2 km Radius	2 400 – 3 000 people
Primary School	5 km Radius	1 000 – 7 000 people
Secondary/ High School	5 km Radius	2 500 – 12 500 people
Library	8-10 km Radius	20 000 – 70 000 people
Clinic	5 km Radius	24 000 – 70 000 people
Hospital	30 km Radius	300 000 – 900 000 people
Police Station	8 km Radius	60 000 – 100 000 people
Post Office	5-10 km Radius	10 000 – 20 000 people
Pension Pay Points	5 km Radius	Variable
Community Halls	10 km Radius	10 000 – 60 000 people
Shops	10 km Radius	1 x 5000 people
Cemetery	15 km Radius	8.8Ha / 50 000 people

The section below aims to highlight the number of social facilities which are currently accessible to the people of the Municipality, as well as determine if these social facilities are sufficient to cater to the population as per the CSIR thresholds above.

The presence of the social facilities to the residents of Dikgatlong Local Municipality gives them a sense of place, a sense of belonging and makes life convenient for them. Some wards share facilities with those who do not have.

Below is an overview of the facilities that each ward has in the municipality:

Table 2: Summary of Social Facilities

WARD	EDUCATIONAL	LIBRARY	HEALTH SERVICES	RECREATIONAL	SAFETY	COMMUNITY FACILITIES
1	3 schools, 3 ECDs	1 (Shared)	Clinic (shared)	Sport complex (dilapidated)	Magistrate court (shared)	Community Hall (dilapidated)
2	2 schools, 3 ECDs	1	Clinic (shared)	Swimming pool (dilapidated)	Magistrate court (shared)	Community Hall
3	3 schools, 5 ECD	-	Hospital (shared) Clinic (shared)	Resort (dilapidated)	Police Station (shared)	-
4	3 schools 3 ECDs	1	Clinic, mobile clinic	Park Sport Complex (dilapidated)	Police station (shared)	2 Community Halls
5	2 schools, 2 ECDs	-	Clinic (shared)	-	-	-
6	6 schools, 7 ECDs	3	2 (shared)	4 Halls 2 stadiums 4 swimming pools	Police station (shared)	Community Hall
7	2 schools, 3 ECDs	-	Clinic (shared)	Sport complex (shared)	-	Community Hall

Health Facilities

Health facilities vary in scale, size as well as their functionality. This section discusses the various health facilities available within the municipality, including clinics, hospitals, and community health care facilities.

There are three main health issues are in the Northern Cape according to the CSIR:

- Tuberculosis,
- Asbestosis and
- HIV/AIDS are heath diseases that are affected by factors such as human settlement, occupation, and social characteristics.

The health targets of the Northern Cape PGDS is as follows:

- To reduce infant mortality
- To reduce maternal mortality
- To stabilize the prevalence of HIV/AIDS and begin its reversal by 2014

In conclusion the number of facilities appear to be fairly sufficient and fairly well spread in relation to the location of the population, only the quality of the services, i.e. size, speed of service, frequency of mobile clinic visits, routes etc. may need to be addressed.

Hospitals

Primary health care facilities such as clinics and community health care centres (CHCs) offer primary health services. Primary health care includes functions such as immunisation, family planning, treatment of non-communicable diseases and disease prevention at community level.

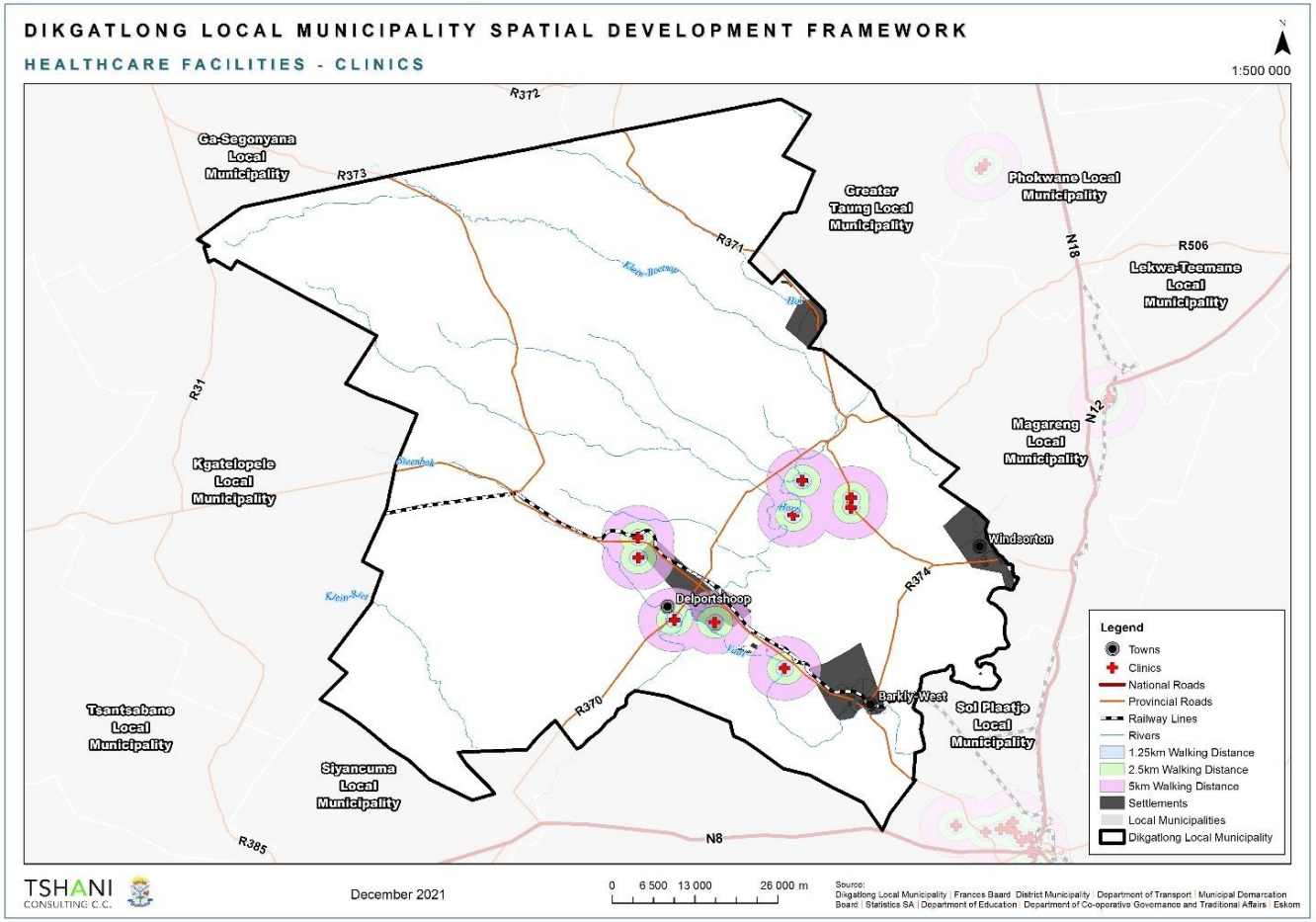
The difference between clinics and community health care centres (CHCs) is their operating times. By law, CHCs are to operate on a 24-hour basis and serve complimentary functions to clinics, however, they still serve as primary health care facilities.

There is one hospital in the municipality.

Clinics

Clinics offer more varied and specialised health care services. Clinics are thus considered as higher order health care services such as trauma, emergency services and specialised services.

According to the CSIR guidelines, clinics should be within a 1-5 Km walking distance from settlements. From the plan alongside, we can conclude that DLM has 9 Clinics.

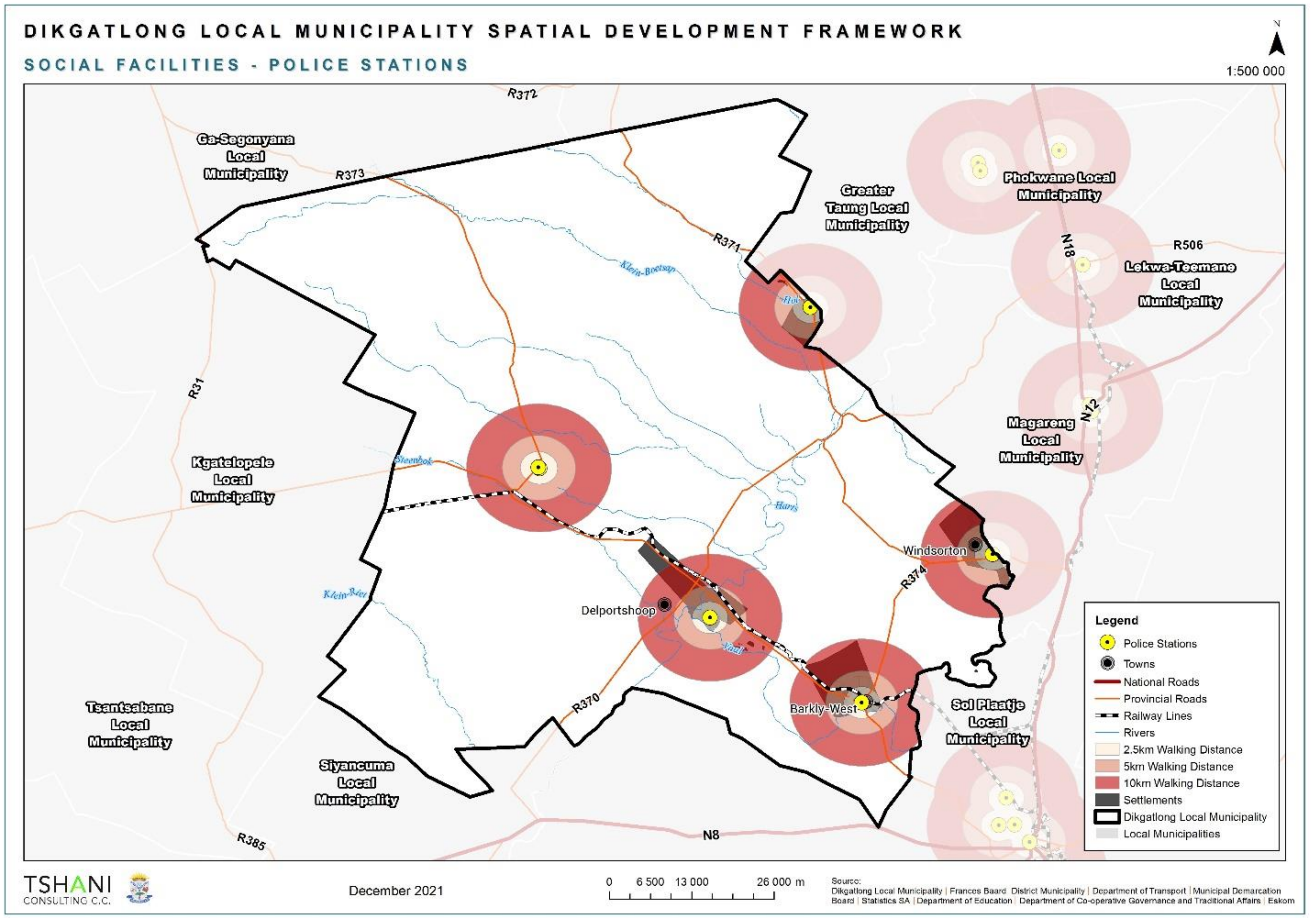


PLAN 10: Clinics

Police Stations

Police officers protect the lives and property of citizens. They maintain order, catch lawbreakers, and work to prevent crimes. Police officers may patrol the streets on foot or in squad cars, control traffic, or work as detectives investigating crimes.

According to the CSIR guidelines, police stations should be within a 5-16 Km walking distance from settlements. From the plan alongside, we can conclude that DLM has Five (5) Police Stations.



PLAN 11: Police Stations

EDUCATION FACILITIES

Educational facilities are categorised differently based on grades. For this section, education facilities will be differentiated according to grades.

Early Childhood Development

Early childhood education (ECD's), also known as nursery education, is a branch of education theory that relates to the teaching of children (formally and informally) from birth up to the age of eight. Traditionally, this is up to the equivalent of third grade. ECD is described as an important period in child development.

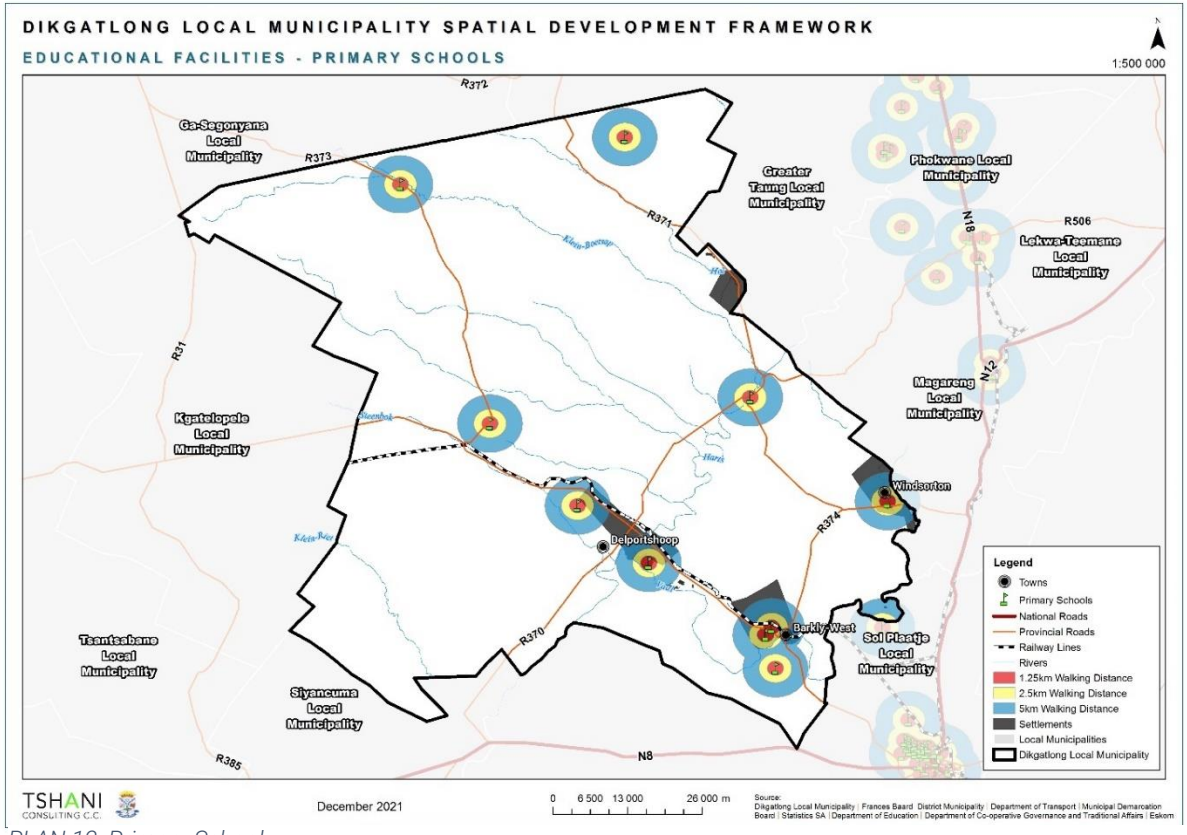
The plan alongside indicates the 24 (twenty-four) ECD's within DLM:

Primary Schools

Primary education is important to provide children with the opportunities of self-development and to become an important part of the society. Good primary education plays a vital role in creating minds that are critical thinkers, leader and innovators.

According to the CSIR Guidelines, primary schools should be within a 1 – 5 Km walking distance from settlements. From the plan alongside, we can conclude that DLM has a total of 11 (eleven) primary schools.

There is one new Primary School [Barkley Rooirand Primary School] that is currently in construction and that will officially open in January 2023

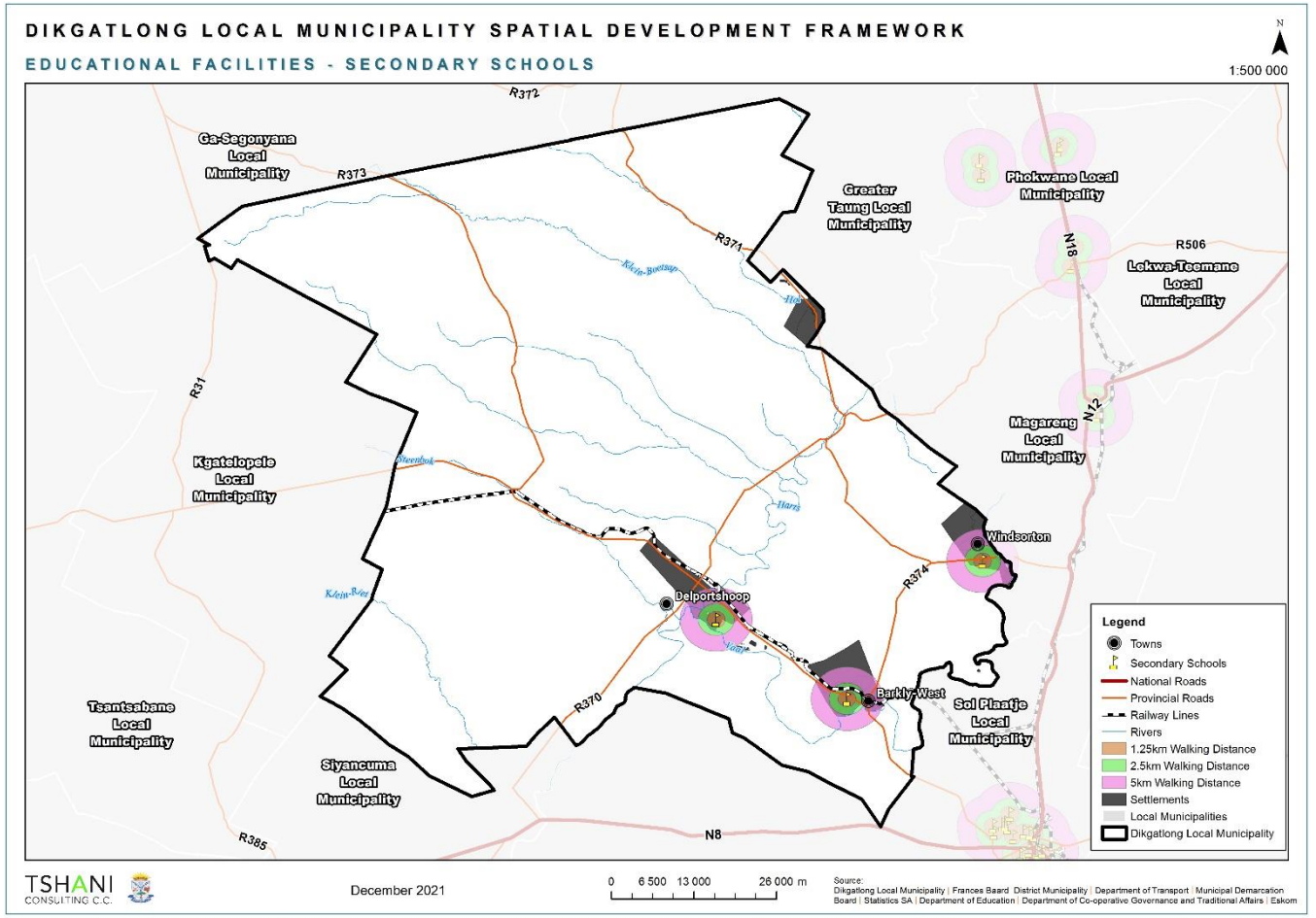


PLAN 12: Primary Schools

Secondary schools

Secondary education is an important segment in every person's life. It also serves as a means to potentially empower young girls and boys, raise a person's economic status.

According to the CSIR Guidelines, primary schools should be within a 1 – 5 Km walking distance from settlements. From the plan alongside, we can conclude that DLM has a total of 3 (three) secondary schools.

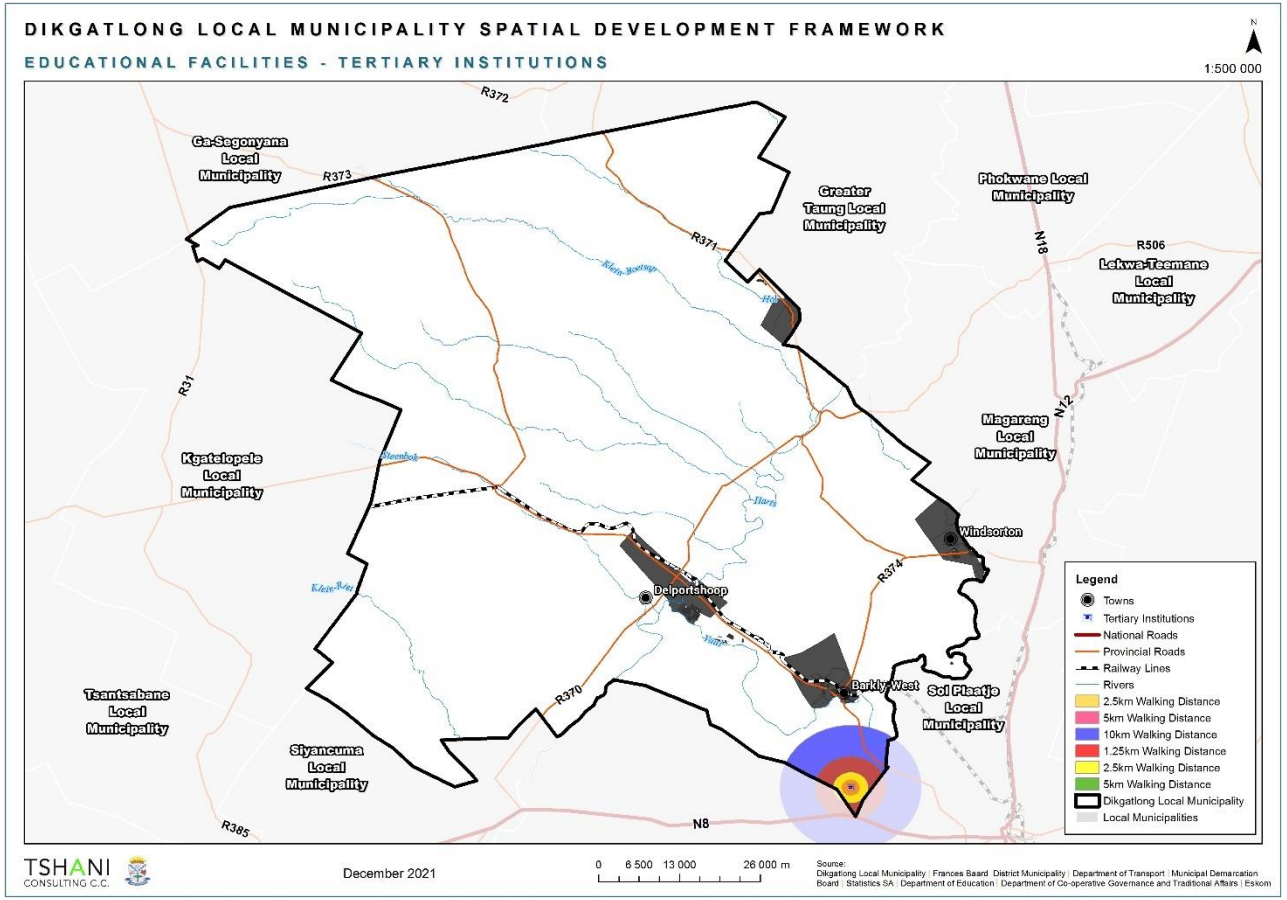


PLAN 13: Secondary Schools

Tertiary Education

Tertiary education, more commonly referred to as postsecondary education, refers to academic pursuit undertaken after high school. Undergraduate programs include any postsecondary education that takes up to four years to complete, including certificates, diplomas, and associate's and bachelor's degrees. Graduate programs typically require prior completion of an undergraduate degree and include diploma, certificate, master's and doctoral degree programs. You can find tertiary education programs at vocational schools, community colleges, technical schools, professional schools, colleges, and universities.

The plan alongside indicates the 1 (one) tertiary institution located within DLM:



PLAN 14: Tertiary Education

TOURISM

The Dikgatlong Local Municipality identified 5 (five) tourism areas which have the potential to be developed and marketed in order to promote economic growth. These tourist areas are:

- Game Viewing/ Trophy Hunting
- Mining Tourism;
- Expansion of the Hospitality Industry
- Adventure Tourism; and
- Eco-Tourism.

There is considerable unexploited potential for tourism in the Dikgatlong Municipality. Much of this potential appears to have been recognized in the tourism development plans that have been presented but an effective marketing and implementation strategy is required. Training and literacy will also be important as tourism is dependent on high levels of service. The Frances Baard District Municipality's Local Economic Development Unit has identified tourism development as one of its strategic thrusts. The Strategy also recognises the need to ensure responsible tourism practices and bring host communities into the mainstream of the tourism industry, thereby creating opportunities for job creation and the development of small and medium enterprises.

Activities and attractions in Barkley West:

Alluvial Diamond Diggings: Licensed prospectors still sift the sand and gravel of the Vaal River for ever elusive diamonds. Guided tours only.

Barkly Bridge and Barkly West Museum. The bridge, the first over the Vaal River, was transported in sections from the United Kingdom (by sea, rail and, over the last more than 100 km by ox wagon) and erected across the Vaal in 1885. A steel plate gives details of its manufacture: (Westwood, Baillie & Co, Engineers and Contractors, London 1884). Shops in Kimberley and Barkly West closed for the occasion when the bridge was opened. A new bridge was built alongside in the 1970's. The tollhouse was restored in 2000 as a museum with displays on local geology, archaeology and history.

Canteen Kopje A hill at the entrance to Barkly West. Site of first diamond diggings and contain stone tools, weapons and fossils. Alluvial diamond diggings from 1870 revealed many archaeological sites. An open-air display explains the significance of early hand-axe industries (over a million years old). The Canteen Kopje Skull was found in the vicinity in 1925 and was described in Nature by Robert Broom in 1929. It is currently subject to re-appraisal.

Course of the Vaal River. Characterised by breakwaters where diggers still labour, the river has many pools, rapids, waterfalls and features with odd names, eg Gong Gong, Beaumont's Folly and Bosman's Fortune.

Nooitgedacht Glacial Pavings. A 250-million-year-old archaeological formation

Rekaofela Resort (off R31). The resort is home to the Rekaofela Adventure Centre.

St Mary's Anglican Church. St Mary's Anglican Church. It was the first church on the diamond fields. Sir Henry Barkly laid the foundation stone in February 1871

Wildebeest Kuil Rock Art Centre. The Wildebeest Kuil Rock Art Centre is situated on a farm belonging to the Xun & Khwe, who collaborated in making this pristine Khoisan heritage site open to the public. The Centre boasts a superb visitors' centre, a movie auditorium, art & craft shop and tearoom and an audio-guided walk through the rock art site.

Barkly West Resort. It is a municipal owned resort.

Activities and attractions in Windsorton:

The Windsorton Glacial Features are a continuation of the Nooitgedacht Glacial Pavements which comprise of widespread prominent geological features found around Barkly West, and had their origin in the Palaeozoic / Dwyka, / Karoo Ice Age, (some 250 - 300 million years ago) where the glacially scoured (smoothed and striated) ancient bedrock (re-exposed by erosion) was used substantially, and more recently, during the Later Stone Age period in the late Holocene as panels for rock engravings. Many diamond diggings such as at Rietsplats 15 (Near Windsorton) have escavated the diamond bearing overlying gravels and exposed the bedrocks and numerous stone age artifacts – axeheads and cleavers have been recovered. The features need to be classified and protected as Heritage Sites

Activities and attractions in Delportshoop:

- Good fishing at confluence of the Vaal and Harts River.
- Diamond diggers houses (1924).

Activities and attractions in Gong-gong:

- Tours of old potential heritage mining houses and diggings should be established.

Other attractions:

- Fly Fishing
- River activities: Canoeing, boating, rafting, fishing, etc.
- Game viewing

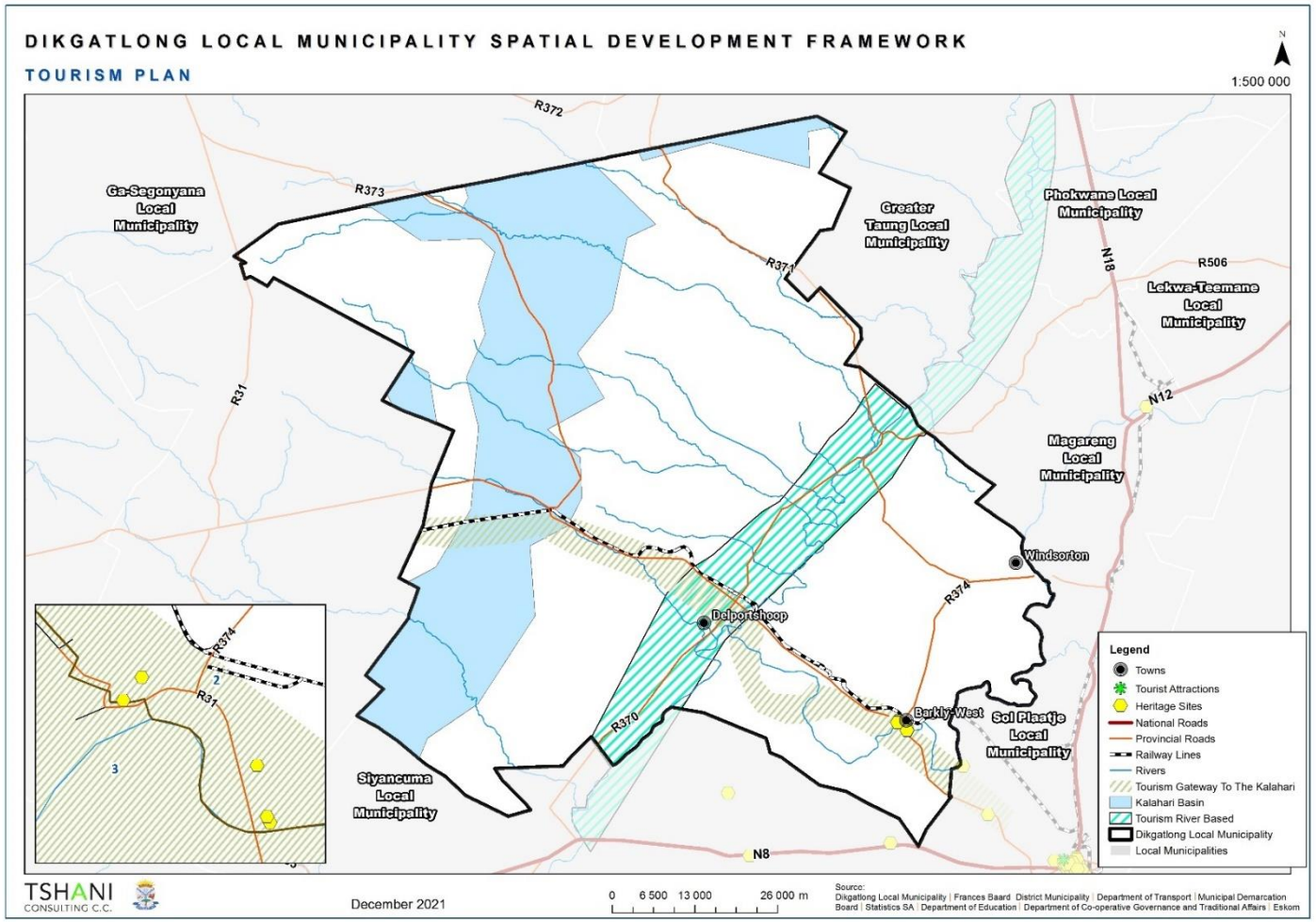
Challenges and Issues faced by the Tourism Sector in Dikgatlong:

- Inappropriate location of Tourism Information Centre
- Lack of a Tourism Association
- Lack of skilled Tourism Officials
- Lack of Community involvement
- Unemployment

Interventions

- Community awareness campaign
- YEDP programme
- SMME support

- Tourism Product Development
- Tour Guide Training
- Ablution facilities for tourists needs to be erected at attractions eg. Gong-Gong Waterfall.



PLAN 15: Tourism Plan

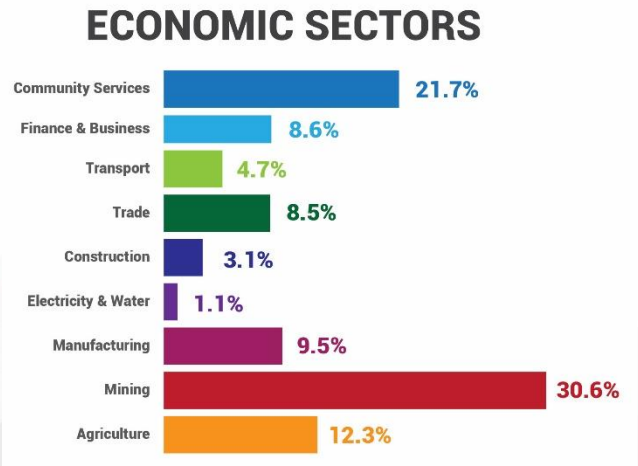
ECONOMIC PROFILE

A presentation on the composition of the economy allows for the identification of key industries and also provides directives on where economic growth and employment creation is likely to occur. This invariably impacts on the economic sector through household incomes and household formations and the spatial location of housing demand.

Economic Sectors

The composition of an economy refers to the relative level of output from each of the ten economic sectors. Understanding economic composition in a study area is important for several reasons. Firstly, it allows for the identification of key industries, where economic growth and employment creation is likely to occur. Secondly, the economic composition of a region is a clear indication of the demand for diversification into new industries.

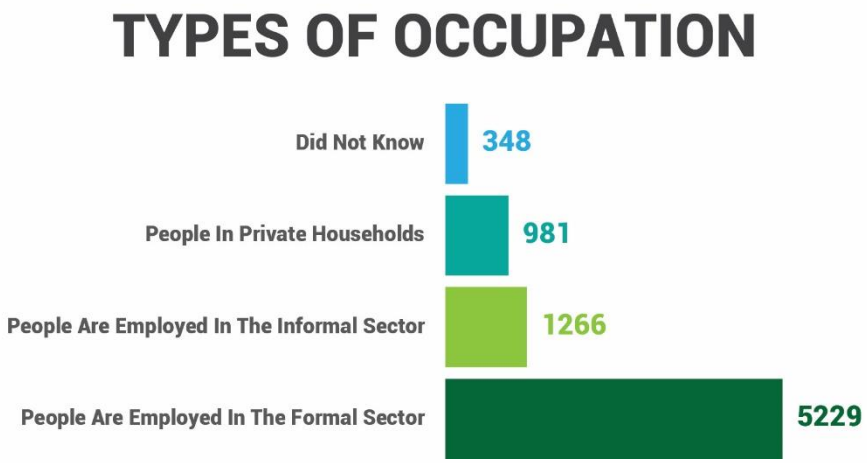
The following are economic sectors are found in the DLM:



Unemployment Status

The unemployment rate indicates the number of people who are without employment as a percentage of the total economically active population. The Frances Baard DM has an average unemployment rate of 27.9%, similar to that of the Northern Cape. However, the Dikgatlong LM has one of the highest unemployment rates 40% (5 073 people) within the Municipality in comparison to the other local municipalities. The main contributing factor to the low levels of employment in Dikgatlong LM is the high percentage (86.2%) of labour force that has not obtained a Grade 12 Senior Certificate and Higher Qualification, resulting in a primarily unskilled labour force. The high unemployment levels also point to the lack employment opportunities in the local economy. Employment Distribution

Types of Occupation



The figure above shows the type of sector in which people in the DLM are employed.

LOCAL ECONOMIC DEVELOPMENT (LED) INITIATIVES

Local Economic Development (LED) initiatives are a critical aspect on empowering people and creating employment opportunities. The Dikgatlong Local Municipality, as part of its LED department's drive, has assisted with a number of LED initiatives within the municipality. The following have been some initiatives to assist various communities.

In order to make sure that it is able to meet its vision, the LED strategy suggests projects focusing on the following areas:

1. Agricultural Sector Development Agriculture
2. Manufacturing and Industry Development
3. SMME Development
4. Tourism
5. Quality of Life Improvement
6. Institutional Capacity

Table 3: LED Initiatives

THRUST	PROJECT
THRUST 1: INSTITUTIONAL CAPACITY	Establish Learnership Programmes. Establish functional LED Forums. Implement Economic Information System. Meet backlogs in sanitation, water, energy, housing and other services. Upgrade & Management of Public transport Systems. Implement sufficient Educational programmes, skills institutes and colleges. CBD and residential area upgrades. Upgrade Roads. Set up rail infrastructure/network.
THRUST 2: MANUFACTURING	Goat Farming. Game Breeding.

AND INDUSTRY DEVELOPMENT	Vegetable & Fruit Processing. Field Crop Processing. Meat Processing. Research of new Products (water wise plants).
THRUST 3: MANUFACTURING AND INDUSTRY DEVELOPMENT	Fruit and Vegetable Processing. Field Crop Processing. Meat Processing. Tannery Plant. Chips Factory. Packaging and Distribution of Products. Expansion of the Manufacturing Sector.
THRUST 4: SMME DEVELOPMENT	Central Freezing & Cold Storage Transport. BPO&O Destination. SMME Database & Support Programme. Form Business Support Network. Skills Training Facilities. Industrial Development Strategy.

THRUST 5: TOURISM DEVELOPMENT	Mining Tourism. Eco Tourism. Game Viewing/ Trophy Hunting. Adventure Tourism. Expansion of the Hospitality Industry. Tourism Marketing Strategy.
THRUST 6: QUALITY OF LIFE IMPROVEMENT	This is seen as an all-encompassing thrust with specific programmes in the Expanded Public Works. Programmes aimed at improved infrastructure, overcoming backlogs in service delivery, providing education, health and safety services and so on. It should deal with the attractiveness of the area to investors in terms of quality of life and quality of labour and resources on the one hand, and the ability of locals to take advantage of economic opportunities on the other.

B.5 BUILT ENVIRONMENT ANALYSIS

The Built Environment assessment aims to unpack the current aspects that pertained to the Built Environment aspects including land use, built form, housing, Infrastructure, access to basic services, etc.

"Nothing in this world is more simple and cheaper than making cities that provide better for people."- Jan Gehl

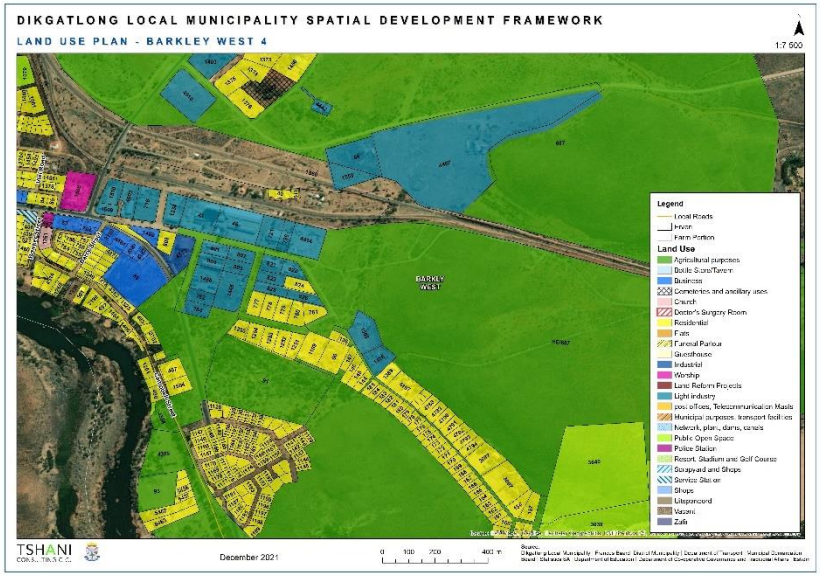
LAND USE

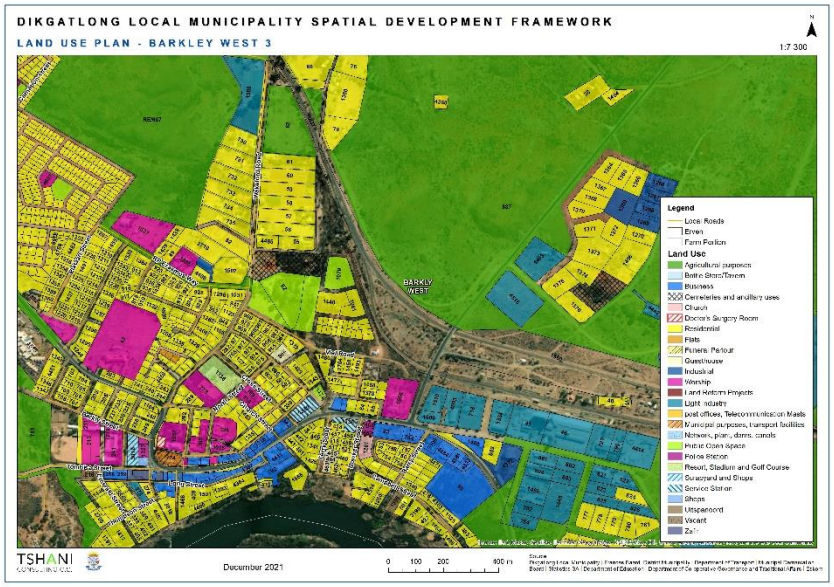
The Land Use assessment for the Dikgatlong LM was conducted through wall-to-wall verification of current land uses pertaining to the following towns:

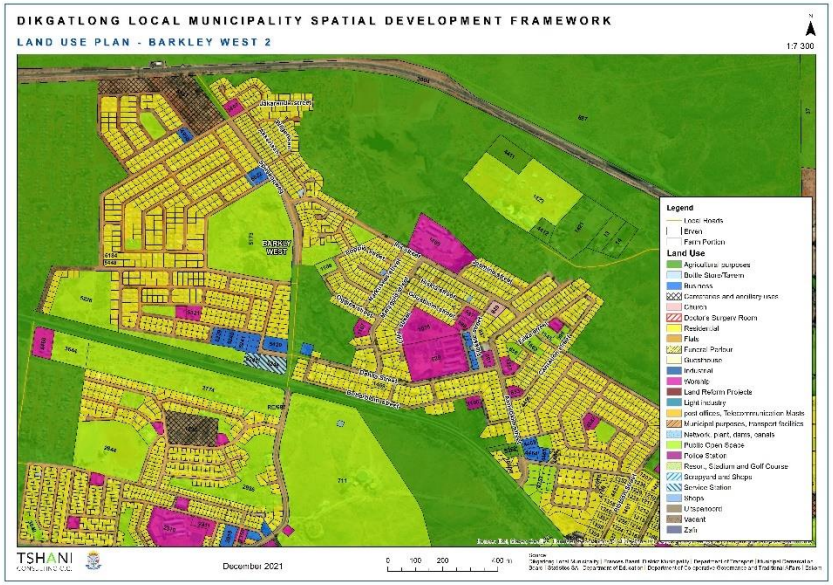
- Barkley West
- Windorston
- Delportshoop

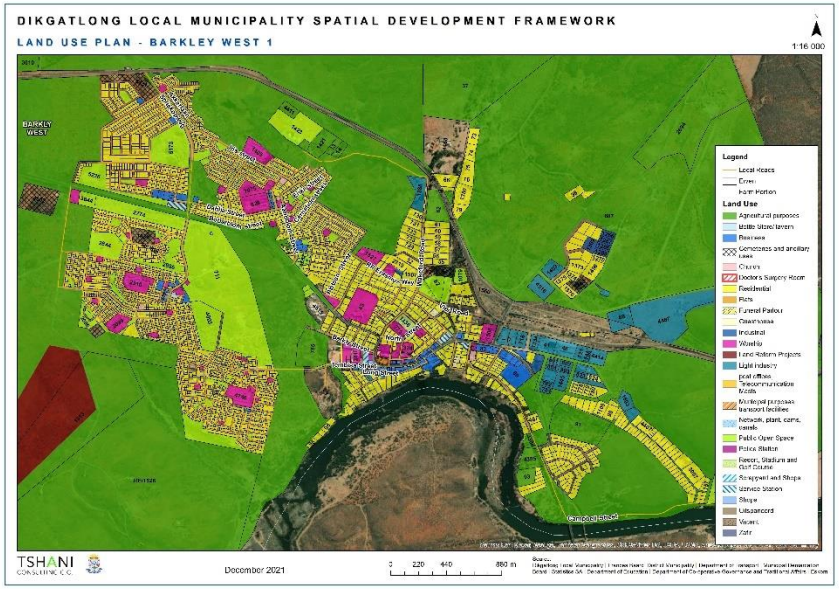
Barkley West

The general characteristic of Barkley West includes Residential, with some Business uses and Industrial. There is also significant land outside of the urban area open to agricultural activity.





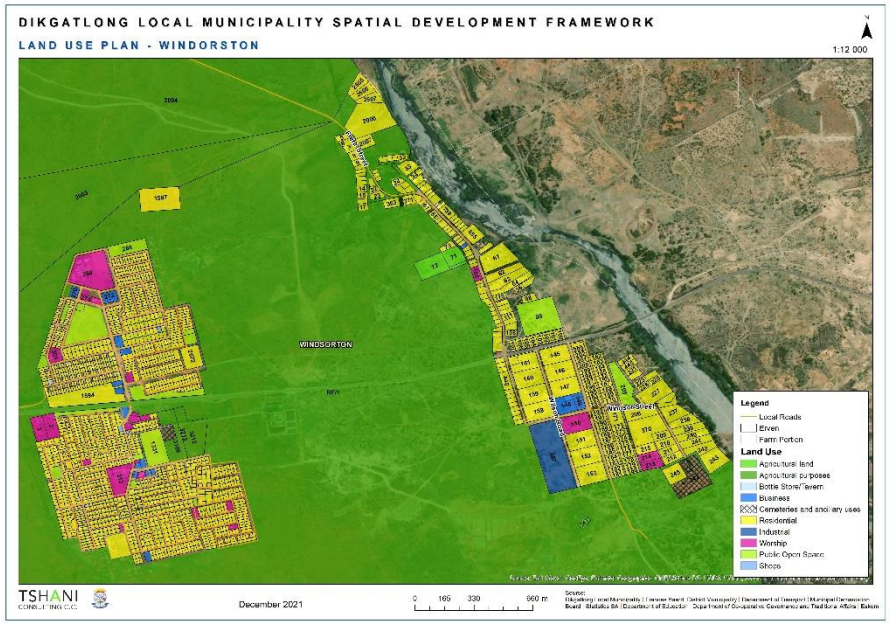


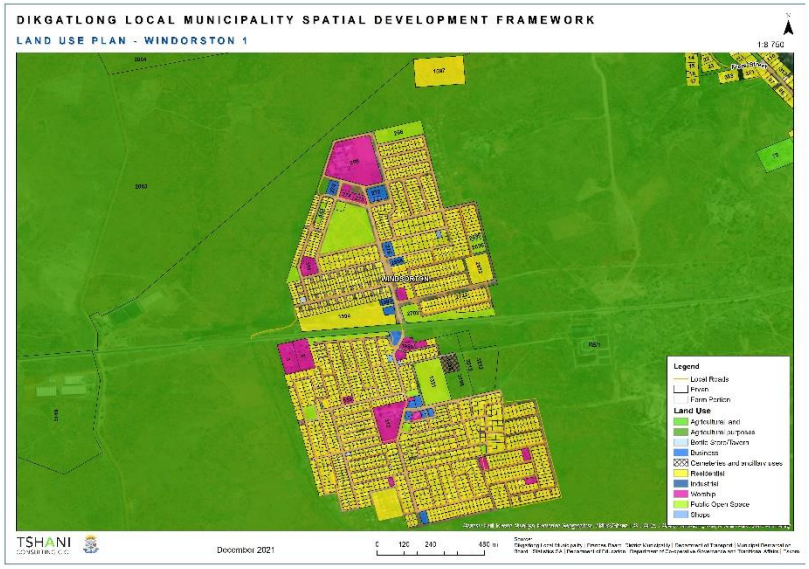


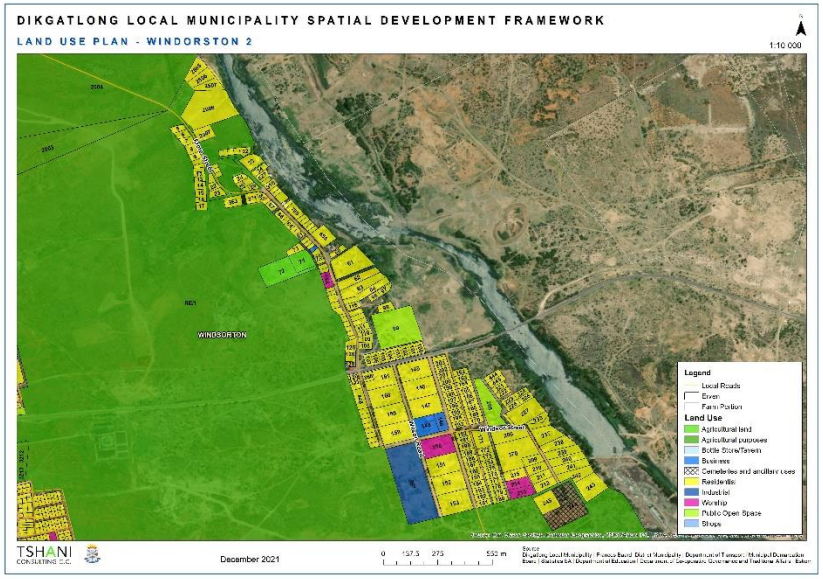
Windorston

Windorston is a small town which is predominantly residential in nature.

Other minor activities include some industrial and business sites.



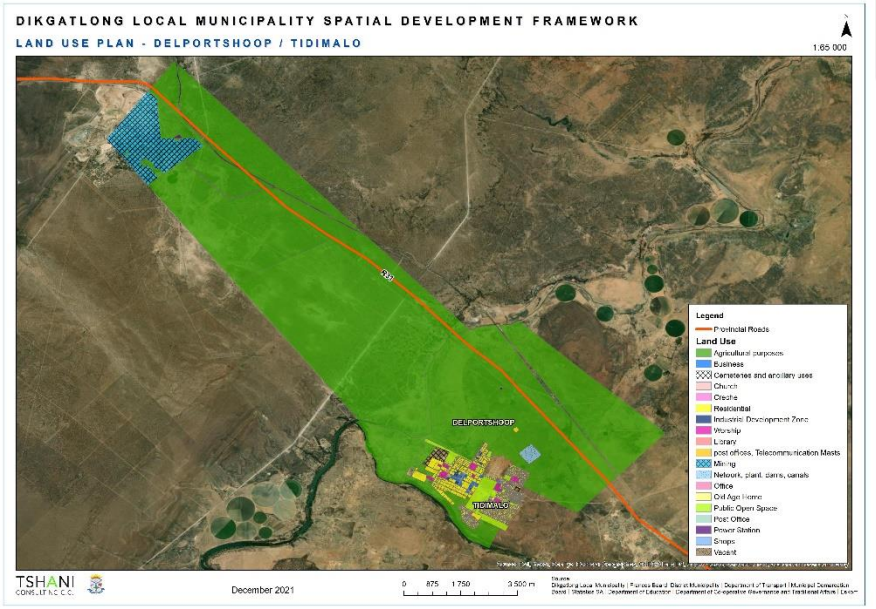


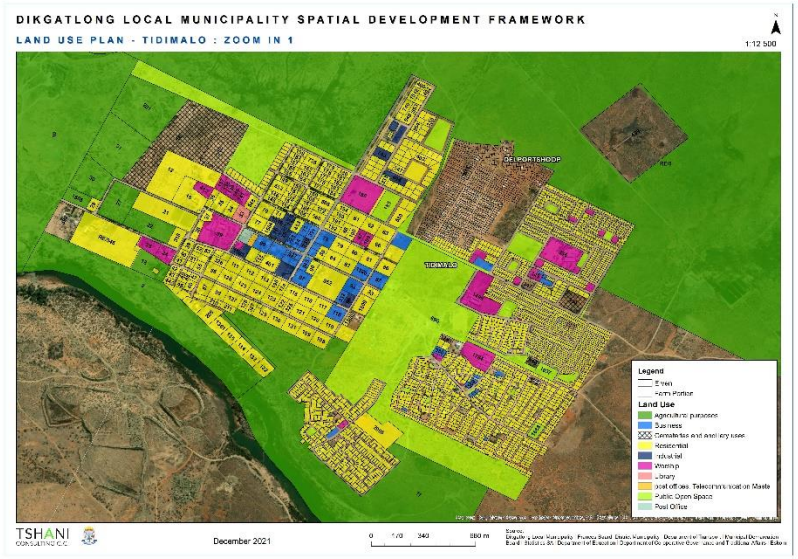


Delportshoop

The town of Delportshoop is larger than that of Windorston with more activities and uses which includes residential, business, industrial and office use including social amenities including church / worship sites.

The township of Tidimalo is located in close proximity to Delportshoop.




DIKGATLONG LOCAL MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK
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Farm Portion
Land Use
Agricultural purposes
Business
Cemeteries and ancillary uses
Residential
Industrial
Worship
Library
post offices, Telecommunication Masts
Public Open Space
Post Office
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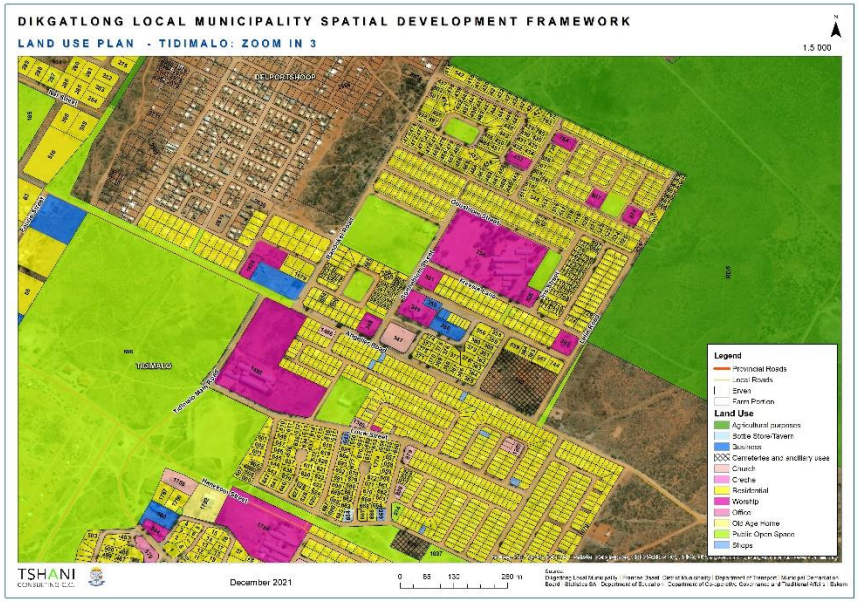
DIKGATLONG LOCAL MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK
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Provincial Roads
Local Roads
Erven
Farm Portion
Land Use
Agricultural purposes
Bottle Store/Tavern
Business
Cemeteries and ancillary uses
Church
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Residential
Worship
Office
Old Age Home
Public Open Space
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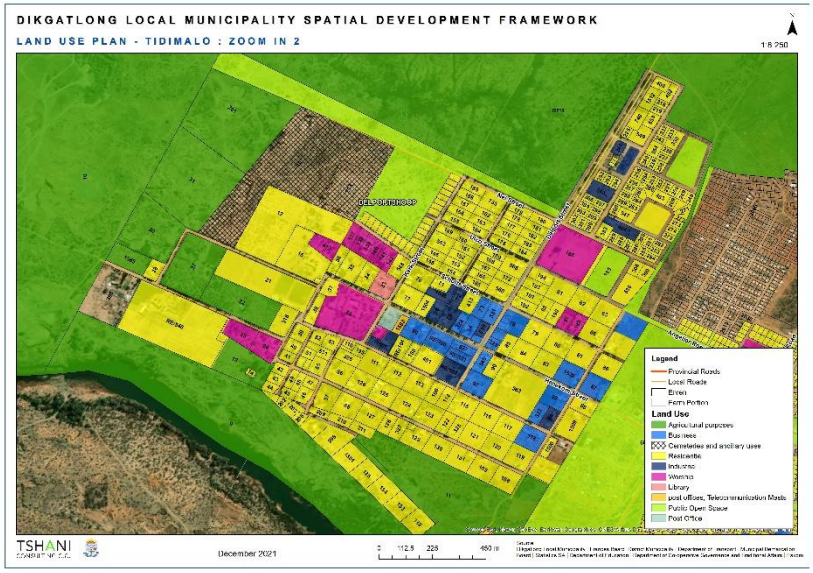
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Industrial
Worship
Library
post offices, Telecommunication Masts
Public Open Space
Post Office
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HOUSING NEED

Housing demand for various sectors, location, and proposed densities (SPLUMA 21 (f)). The preparation of this framework will be entirely based on existing housing development strategies and/or inputs from the various officials within the municipality, based on institutional knowledge of housing needs within the district. The intention is not to undertake a Housing Sector Plan study where it does not exist.

There are two main ways of determining housing demand/need within municipal areas, these are 1) using statistics from the census or other credible studies (using the data to do trend analyses and make predictions) and calculating relevant variables or 2) through the analysis of housing waiting lists or National Housing Needs Register. Both are utilised in the following section, as both have limitations, it should however be noted that the statistical predictions are based on very dated information and their accuracy are questionable and they do not take considerations that housing developments already undertaken.

An understanding of where demand originates, and by whom as well as the nature of the demand can inform planning to enable targeted decisions regarding the types, tenure and location of homes and prioritisation.

The National Housing register (2022) indicated a total 9013 applications. From the table below it is clear that the majority of the applicants fall within the low-cost housing category and would thus require an RDP house. The demand for rental housing is relatively low, with only 137 individuals indicating a need for rental housing.

The table below indicates the reviewed 2022 demand for Dikgatlong LM Human Settlements based on statistical and trend analysis calculations and the National Housing Needs Register as at 8 February 2022.

Table 4: DLM Housing Demand

Municipality	Total Housing Demand		Low Cost/Subsidised Housing		Gap Housing		Rental Housing Needs register	Unknown
	Statistical Demand	Needs Register	Statistical Demand	Needs Register	Statistical Demand	Needs Register		
Dikgatlong (HSP 2017)	13 347	9 199	9 576	8 985	3 771	NA	214	NA
Dikgatlong (HSP 2019)	11 858	10 801	9 576	9 576	2 282	NA	1 225	NA
Dikgatlong (HSP 2020)	8 561	9 030	7 442	8 894	2 229	4	132	NA
Dikgatlong HSP Revised 2022	14 519	9 013	11 792	8 216	2 757	122	137	541

Source: Human Settlements Sector Plan 2022/23

Challenges currently faced by the housing department:

Insufficient delivery to scale, unsustainable in the future: The delivery of around 3 million fully subsidised houses since 1994 is insufficient and as costs increase over time, bigger subsidies are required to deliver on promises, which make the current housing finance policy unsustainable.

Fully subsidised housing creates perverse incentives: An undesirable outcome of the housing subsidy is the continued dependency on the state and the current system creates an environment for corrupt ward councillors controlling waiting lists in their favour, poor quality workmanship and households splitting in order to increase their chance of accessing a subsidised house.

Gap market growing, largely due to affordability constraints: The current subsidy system distorts prices in the gap market, which continues to grow mainly because home ownership is unaffordable for households whose income is too high for state subsidies but too low to attract loans from commercial banks.

Poor data and understanding of housing demand: The demand for housing in South Africa is poorly understood. It was argued that the demand-for-dwellings data should indicate whether these need to be replaced entirely or could be upgraded in situ to meet the required standard.

Inner City Housing

With the rate of increasing urbanisation, living within the city centre is regarded as a norm. This is directly linked to the notion of compact development and densification. Because there is limited space for expansion in the city centre, the way to develop is upwards. This has shown to be a success in major world cities where city living is particularly popular. Cities such as Johannesburg and Tshwane have also been practising this inner-city housing strategy.

Although inner city living has been associated with uncleanliness and gangsterism, cities such as Johannesburg are slowly seeing a change on the growth of inner city living through city regeneration and urban renewal initiatives from the private and public sectors. Social housing, loft apartments and student accommodation are now located in inner city areas and developers have changed the image of the inner city in such cities.

Considering that estimates show that by 2030, 60% of the world's population will be living in urban areas, growing smaller towns should be investing towards inner city housing and compact developments. This is also **to promote the live, work, play concept** that is aimed at reducing the use of motorised transport, carbon emissions and promoting cities that remain active post working hours.

Inner City Regeneration Strategy

All towns are unique from their geographic layout to their architecture. They do however have common objectives such as the safety and security of their citizenry and the provision of services in the form of utilities and transportation networks. They also face common challenges while attempting to remain competitive in securing sufficient resources to maintain and grow the town.

For the towns within Dikgatlong, they have faced particular challenges stemming from years of hostilities and neglect of infrastructure. Rapid urban migration of the surrounding population is placing demands on existing infrastructure and transportation networks which are beyond their original design.

Arguments around the need for inner city regeneration within the DLM are as follows:

- It is a home and service centres for the rural population;
- It has a symbiotic relationship with the concentration of services;

- Existing diversity is a potential marketing tool for the region;
- It can alleviate levels of crime through creating secure precincts;
- An inner-city strategy can reduce outward migration to urban areas;

It offers an urban approach towards development that allows for a more efficient and effective ways to serve the dependent population.

LAND COVERAGE

Land is a critical issue towards the development of our urban centres as well as the promotion of sustainable livelihoods. It is on land that we reap most of our economic benefits; including farming and building infrastructure. Land coverage will be considered based on three (3) classifications; urban, traditional and farms.

LAND TENURE

Land tenure is the ownership or holding of land by title or lease, or permission to occupy, social or customary tenure.

There are two land recording systems: the formal system based on survey of farms/erven, approval of survey diagrams by the Surveyor-General and registration of title in the Deeds Registry; and transfers by conveyances of freehold titles and quitrents. In the second system, sometimes referred to as an 'off-register' system, communal land is held either by Permission to Occupy (PTO) after demarcation of allotments for residence or arable, recording in a district land register and issue of a PTO certificate; or is held by customary tenure with no formal record.

LAND TENURE CATEGORIES

Freehold Title

This applies to land formally surveyed, numbered and then registered in the deed's registry, fully owned by a juristic person, which can be transferred or leased. Most properties are 'farms' in rural areas or 'erven' in urban areas. Each may be further subdivided into smaller portions (farms in the agricultural sense often consist of a number of such cadastral units).

State Land

State Land is held by government for a range of purposes in different forms. State Land in the Municipality is legally owned or held in trust by the Minister of Rural Development and Land Reform. Some state land, especially communal land, is surveyed and registered, but has only recently been surveyed; and is still unregistered in the Deeds Registry.

State land in the former Republic of South Africa (RSA) is owned by the Minister of Public Works. The Provincial Dept of Public Works owns state land for state domestic use which falls under provincial competence constitutionally.

Before state land can be disposed of to a land reform beneficiary or a municipality, it has constitutionally to be vested in either the national or a

provincial government. Unfortunately, this is a painstaking procedure, requiring the minister's signature for each individual cadastral unit.

'State Domestic Use' is tenure for uses such as schools, police stations and hospitals, and falls under the national or Northern Cape Dept of Public Works. On communal land, state domestic use was recorded on reservation certificates. Management of such facilities usually falls to the relevant government department.

'State Forest' is state land managed by Department Agriculture, Forestry and Fisheries but requires the agreement of the Minister of Rural Development and Land Reform for any change of tenure.

'Roads' are on either state, provincial, or municipal land, but national roads are held under freehold title by SANRAL. Provincial government also owns state land such as provincial Nature Reserves, and some urban land is in the process of transfer to municipalities and/or disposal to individuals.

'Municipal Land' is registered urban land owned by a local authority. The transformed municipal boundaries incorporating rural communal areas have led to tensions and misapprehensions about land ownership and control which are unlikely to be resolved until the Communal Land Rights Act and integrated planning legislation are in place. Municipal state land may be used for services, or settlement and development.

'Municipal Commonages' around or adjacent to urban areas are owned by municipalities for the benefit of local residents. Some are surprisingly large. Others have been enlarged recently under land reform. (NB the word 'commonage' is used on occasion to refer to communal land not allocated to residential or arable. This is not the same as urban or municipal commonage)

'Parastatals' such as Transnet, Eskom, Telkom, and SANRAL own land or hold it through servitudes and way leaves.

Communal Land

'Communal' land is held in trust by the Minister of Rural Development and Land Reform, but also regarded by government as co-owned by the local community. It legally is owned by the State, but is held by individuals under PTOs, (customary tenure) (see below), by quitrent grants, or by lease. Individual's rights on it are protected by the Interim Protection of Informal Land Rights Act (IPILRA). Group ownership will be legally transferred from the state to the communities, if and when the Communal Land Rights Act is implemented.

The majority of land in communal areas is unsurveyed and unregistered. The basic spatial unit is the Administrative Area (AA) which was previously known as locations. The boundaries of villages and wards existing at the time were described and gazetted in the late 1800's or early 1900's. These boundaries fixed the social landscape with wall-to-wall boundaries where previously boundaries were more fluid and there was some common land between villages.

Approach to Housing Demand:

The human settlement development strategy for Local Municipalities is anchored on the notion of 'right adequate and affordable housing' and seeks to address the following concerns:

a) Integration: The principle of integration will ensure that the various land uses function as a single combined unit. This will require identifying areas for development, improved movement networks and improving accessibility within the town.

b) Sustainability: Sustainable development is meeting the needs of the present without compromising the ability of future generations doing so. Development should therefore be undertaken in a manner that meets the social, economic, and environmental needs in a unified way.

c) Efficiency: This requires the city to operate efficiently in terms of the movement pattern and urban development. Increased levels of efficiency will enable citizens to conduct their daily activities quickly and easily.

d) Densification: This entails a change in urban management approaches and introduction of systems and procedures that promotes an increase in densities.

e) Affordability: housing opportunities should be accessible to the broader spectrum of the population considering the socio-economic conditions and profile of the local community.

f) Connectivity: focusing mainly on defining functional and structural linkages between different elements of the municipal area.

LAND REFORM

The South African Land Reform program is driven by the Department of Rural Development and Land Reform (DRD&LR) and is composed of three distinct pillars namely, land redistribution, tenure reform and land restitution.

Land Redistribution deals with changing the ownership patterns of land in South Africa from the current predominantly white owned land in favour of black people. Government aims to redistribute approximately 30% of the agricultural land to black ownership. A Proactive Land Acquisition Strategy (PLAS) has been finalised to assist with vesting land for acquisition purposes.

Tenure Reform deals with securing rights of ownership or holding of the land. In essence tenure reform deals with establishing security of tenure. Tenure security has been the focus of the DRD&LR programs since 2005 and includes programmes such as Restitution, Land Reform and Labour Tenants. The Extension of Security of Tenure Act (ESTA) is the main legislation governing this program. It appears to have had some unintended consequences, in particular possibly creating a wave of intra-migration as farmworkers move off farms to the nearest urban settlements.

Land Restitution deals with the return of the rights of land, through land claims, to its historical owners who have been dispossessed thereof due to apartheid policies, i.e. land claims. It is estimated that 3,5million people and

descendants were dispossessed and forcibly removed during apartheid in the form of urban and rural removals. The following restitution claims are in the DLM Area.

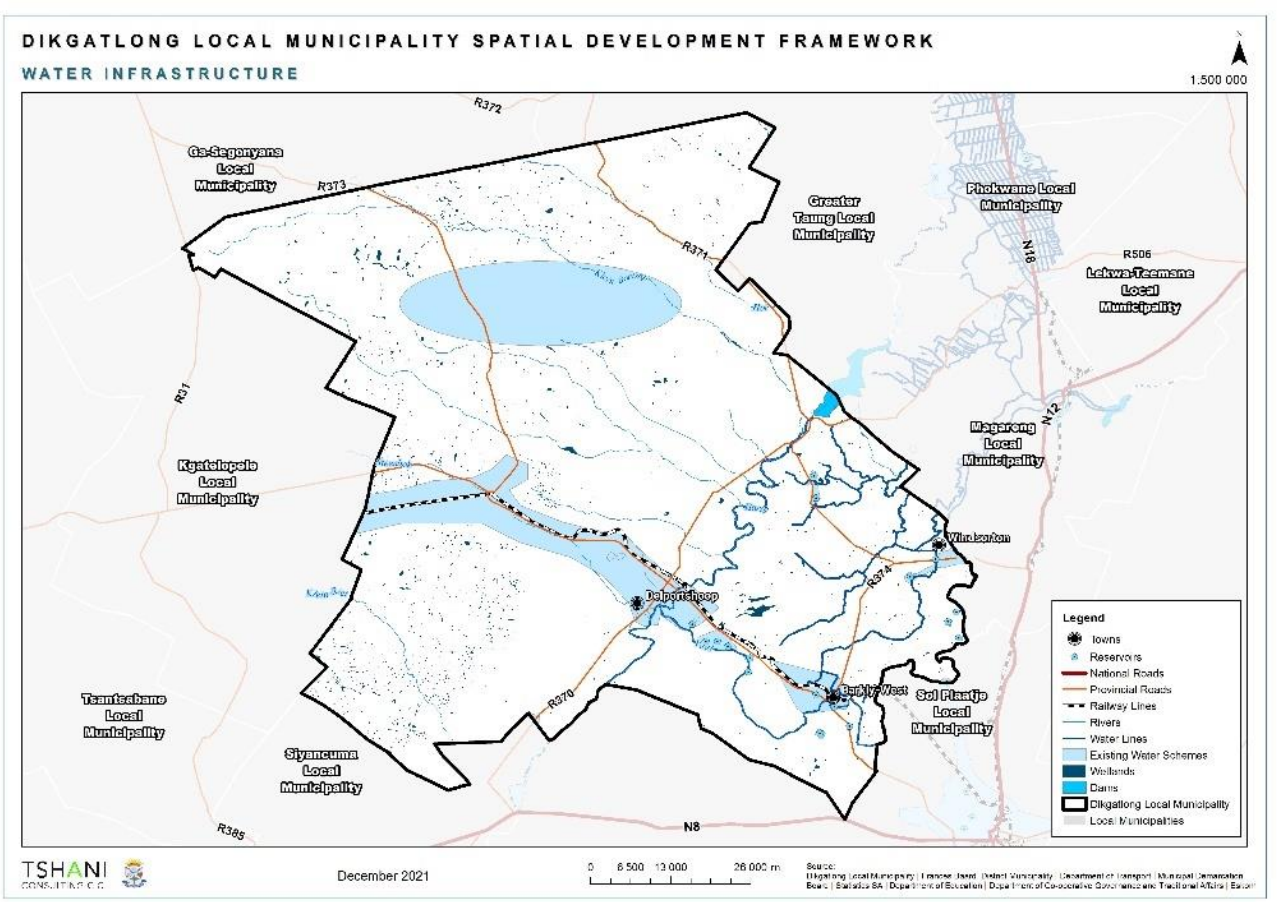
Land Reform Projects:

1. Syndney-on-Vaal Land Claim
2. Pniel Land Claim

BULK INFRASTRUCTURE

Infrastructure could be broadly defined and widely understood, this report will consider **infrastructure as facilities and structures needed for the effective operation of a business, state or economy.** Infrastructure includes roads, railways, airports, power generation and transmission, communications, water and waste and housing. Infrastructure is a basis for social and economic development; cities and towns, which invest infrastructure increase their chances of competitiveness, citizen liveability and promotes connectivity with adjacent towns and beyond.

It should be acknowledged that new technological advancements in smart urban systems, green energy, mass transit transportation and telecommunications play a role in assisting cities to become centres of innovation, culture and diversity. These are future trends of the development of cities that compete on a global scale; it is also not too late for town to follow suit as the levels of urbanisation are increasing drastically over the years.



PLAN 16: Water Infrastructure

Access to Water

Barkly West is supplied with treated potable water by a water treatment plant situated on the bank of the Vaal River, via a 250 mm trunk main which conveys the potable water to two concrete ground reservoirs of a combined

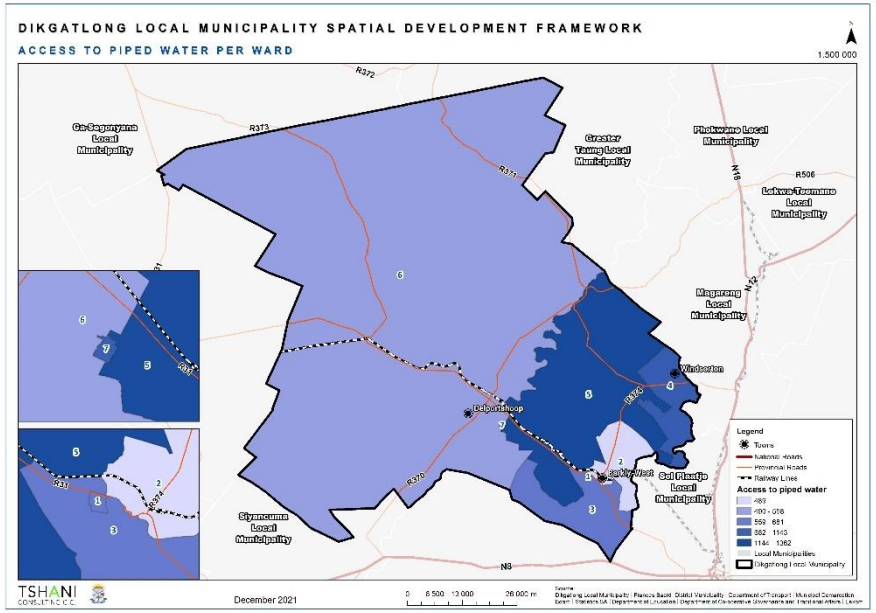
total capacity of 7.15 Mℓ, situated on a hill located between Barkly West and Mataleng, approximately 300 m south of the R31.

Raw Water is abstracted from the Vaal River by Sedibeng Water near their Vaal Gamagara Water Treatment Works (WTW). The Sedibeng Water provides bulk purified water to Delportshoop from the Vaal Gamagara WTW.

Raw Water is abstracted from the Vaalharts Irrigation Scheme Canal. Therefore, Windsorton is supplied with treated potable water by a water treatment plant which is situated west of Hebron Park, alongside the R374 road. The WTW has a design capacity of 1Mℓ/day.

Important points to note regarding water:

- The Vaal River is the main source of water supply.
- Water is purified from the Vaal River for Barkly West and smaller settlements along the Vaal River.
- Delportshoop is supplied with purified water via Vaal-Gamagara pipeline scheme purchased from Sedibeng Water, which is purified at their Vaal Gamagara water treatment works.
- The Vaal Dam regulates the flow in the Vaal River and therefore the Vaal River can be classified as a reliable source although water pollution is allegedly occurring from mining and irrigation practises.
- There are purification plants using water extracted from the Vaal River at Windsorton, Barkly West and Delportshoop.



PLAN 17: Access to piped water

Access to Sanitation

The majority (70%) of households in the DLM have access to a flush toilet. It is clear that there are major shortcomings in terms of sanitation in ward three and five with 23% and 22% of the population respectively, not having access to any form of sanitation.

Important points to note regarding sanitation:

- Effluent from towns is mainly treated in oxidation ponds, although Ulco has a mechanical process

- Barkly West an activated sludge plant, and Vaal Gamagara a bio-filter
- The CPA's commonly have dry sanitation
- Barkly West has a small sized wastewater treatment plant, whilst Delportshoop and Windsorton have micro-sized plants and in Windsorton capacity of the oxidation ponds is overstretched.

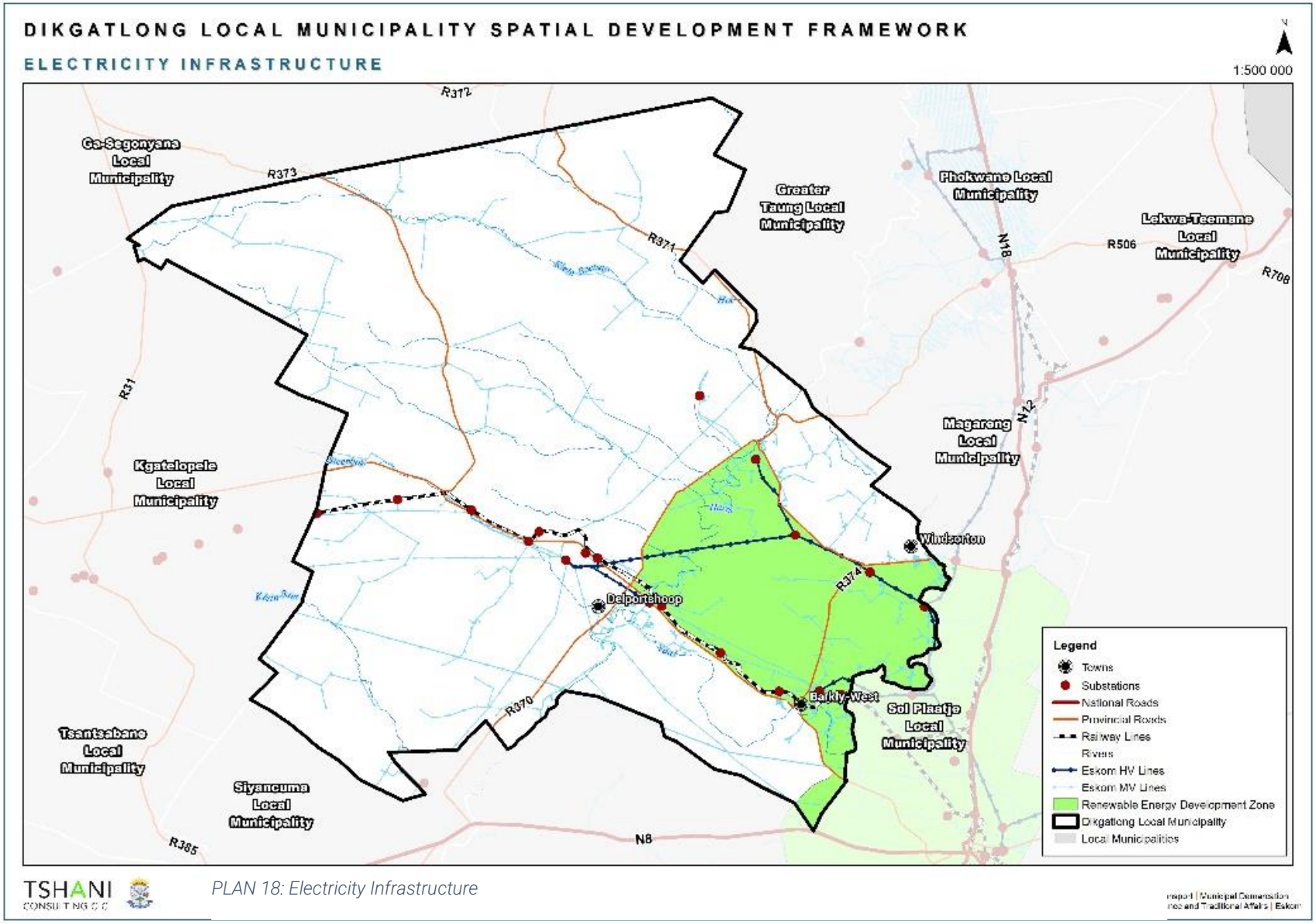
Access to Electricity and Energy Source

Provision of energy is vital in a modern society. The availability of energy remains a serious resource challenge. ESKOM does not have the generation capacity to meet the rising energy demand resulting from the rapid economic growth in South Africa (DME-2008). In the last ten years community's access to electricity has significantly improved (FBDM IDP 2012). Electricity fuels industry. Electrical railway transportation, telecommunications and determines among other aspects what cooking methods a household uses, how households warm themselves and what methods they use for lighting.

It is clear that the majority (70%) of the population make use of electricity for heating, lightning and cooking. The second most used source other than electricity is paraffin. Ward three has the smallest percentage of households that have access to electricity with only 39%. 'Other' refers to forms of electricity not included in the main categories and can for example includes wind electricity or the burning of other flammable substances (animal manure). There is likely to still be considerable use of firewood.

Key Issues:

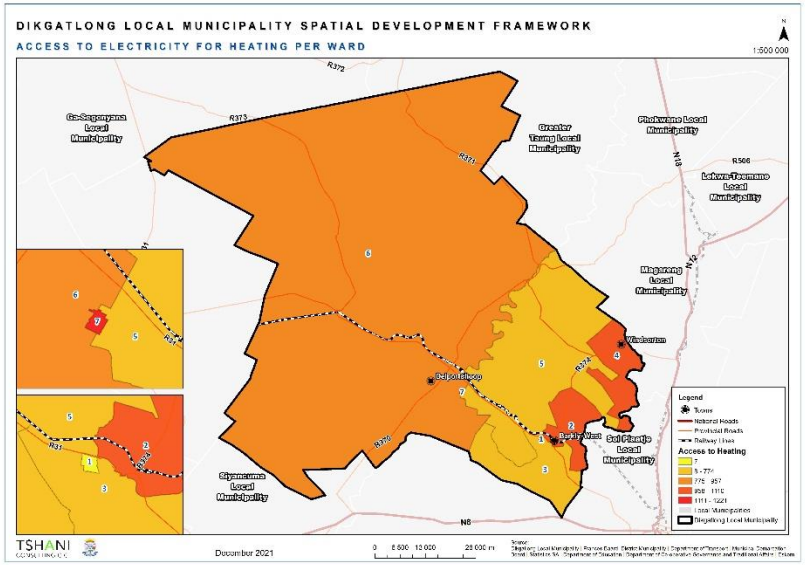
- Although a large percentage of residents have access to electricity, this represents a considerable financial burden on both consumers as well as the Municipality as non-repayment on this service also contributes to the arrears problem.
- In conjunction with Eskom an updated Electricity Master Plan is required to cater for new developments. (due in 2015).

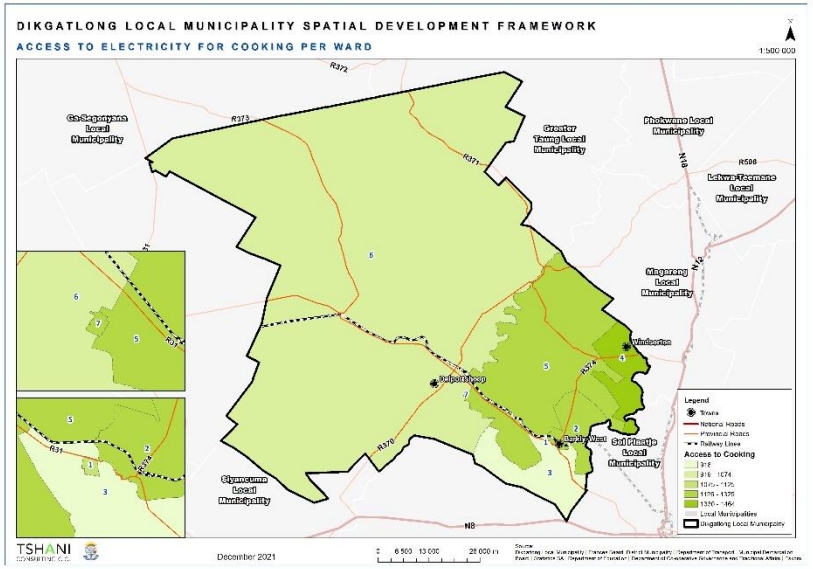


PLAN 18: Electricity Infrastructure

Energy (DME).

- Inability of ESKOM to generate enough power to meet national demand. Lack of initiatives in renewable energy sources (wind power, solar energy, etc) nationally or locally.
- Lack of suitable incentives for energy saving.
- Aging Infrastructure





Access to Refuse Removal

Barkly West landfill has an estimated size of approximately 3 hectares. This site is fenced but access to the site is not controlled. The site is not well managed and although a municipal representative is on site, controlled dumping is not enforced. Waste is not covered and burning of waste is common.

The primary landfill site for Barkly West is in the process of being registered. Secondary small facilities also serve the Windsorton and Delportshoop residential areas.

Delporthoop landfill site is approximately 3 hectares in extent. There is currently no fencing since this has been stolen. Dumping is conducted in an uncontrolled manner.

Windsorton Landfill is approximately 2 hectares in extent and although the site is currently partially fenced, clear signs of removal of fencing are visible. Access to the site is not controlled. A waste sorting structure has been erected by FBDM.

Roads and Stormwater

A transport system serves to bind the urban and rural fabric together. Any distance beyond a reasonable walking distance would make the consumer dependant on other forms of transport such as road or railway (A main freight line runs from Bloemfontein in the east via Kimberley through Barkly West to Postmasburg to the west).

Issues faced by the roads in DLM:

- Significant traffic volumes on the R31, the main artery of the Municipality, bypass most of the settlements except Barkly West, thereby diminishing potential economic benefits
- The southern section of the R374, an important rural arterial road linking Barkly West to the N12 via Windsorton
- The apartheid layout of the urban settlements whereby most low-income townships are more than 2 km's from the town centres creates an excessive demand for travel and a need for public transport.
- The communities along the R31 lack an appropriate public transport system resulting in their requesting the return of mixed passenger services along the rail line.

B.6 BIO-PHYSICAL ANALYSIS

The Biophysical Assessment aims to unpack the natural and environmental aspects pertaining to the DLM including highlighting where the water systems are such as rivers, wetlands and dams; as well as identifying the Critical Biodiversity areas, etc.

Another critical component of the Biophysical assessment is the Agricultural Assessment.

"Saving our planet, lifting people out of poverty, advancing economic growth… these are one and the same fight. We must connect the dots between climate change, water scarcity, energy shortages, global health, food security and women's empowerment." Ban Ki-moon, UN Secretary General

The Bio-physical refers to the biotic and abiotic surroundings. The shape, environmental character, and configuration of the municipality have a pivotal role in influencing the way people have chosen to reside within the area.

This section of the report will thus discuss the state of the physical environment within the municipal jurisdiction. The bio-physical analy

AGRICULTURE

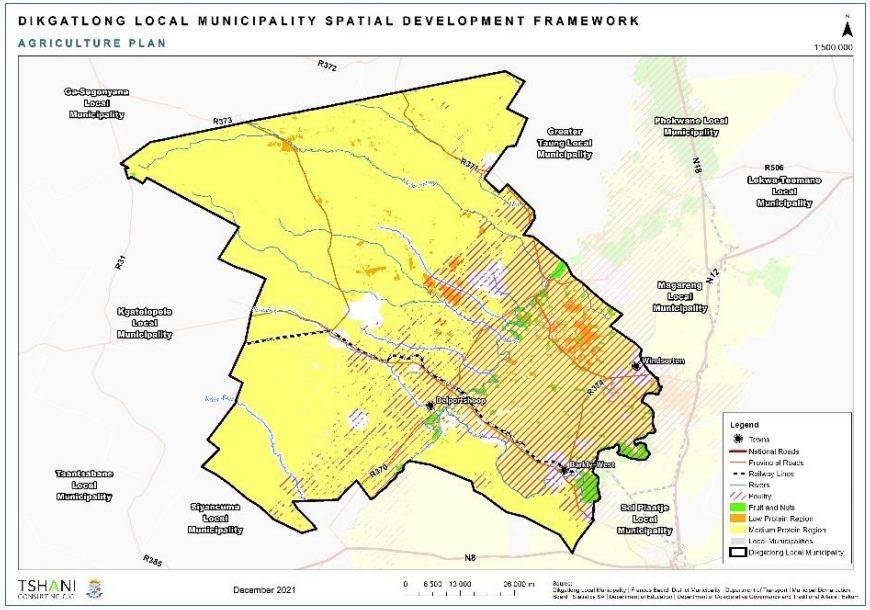
Despite the largely semi-arid and arid environment in the province, the fertile land that lies alongside the Vaal river supports the production of some of the country's finest quality agricultural products. The province is world renown for the quality of meat – Karoo lamb, ostrich, beef and venison – produced in the province. The Northern Cape is also well known for the production of wool, mohair and karakul pelts as well as dates, citrus products, wine and raisins. Source: Provincial Growth and Development Strategy.

The agricultural sector is one of the major employment sectors within the FBDM, requiring strategic planning, stringent management and continuous monitoring and improvement to ensure for the sustainable future of the sector. Crop and livestock farming is mostly practiced in this DM, with irrigation farming most prominent along river banks. Livestock farming in the DM mostly consist out of cattle, sheep, goat and game farming.

Table 5: Agricultural Opportunities

ENVIRONMENTAL FEATURE	OPPORTUNITIES
Agricultural potential	Agro processing Optimising agricultural use of high potential agricultural land
Irrigation Potential	Potential to develop intensive crop production along river frontages • Agro processing Use of groundwater for irrigation in the south of DM Growing more expensive crops Expanding into the wine industry (grapes and wine) Improved farming techniques
Game farm potential	High potential for area

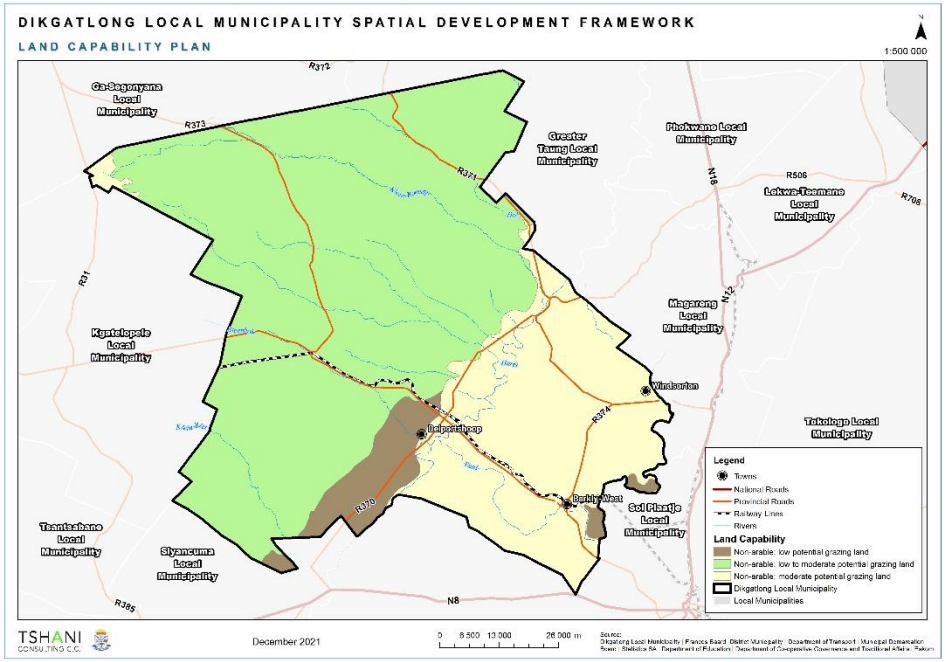
	Eco-tourism development



PLAN 19: Agricultural Plan

LAND CAPABILITY

Land Capability identifies where the arable and non-arable land is located within the Dikgatlong Local Municipality as well as identifying the land suitable for grazing and crop growth.



PLAN 20: Land Capability Plan

BIODIVERSITY

Critical Biodiversity Areas (CBA) are terrestrial (land) and aquatic (water) areas which must be safeguarded in their natural or near-natural state because they are critical for conserving biodiversity and maintaining ecosystem functioning. There are a number of CBAs located within the Dikgatlong municipal area, namely they are:

- Wetlands - a distinct ecosystem that is flooded by water, either permanently or seasonally.

- Threatened Ecosystems – is basically an ecosystem that is in danger and can be extinct if not protected.

The absence of formally protected areas (under NEMPAA) requires that appropriate sensitive areas be identified and protected to contribute to national conservation targets. Protection of sensitive environmental areas (e.g. Ganspan, and Ghaap Plateau), features (e.g. heritage and cultural resources, protected flora and fauna species, watercourses) and attributes (e.g. riparian zone, sensitive habitat) is required.

ENVIRONMENTAL DEGRADATION

Land degradation is a hazard in areas where communities are dependent on their natural environment for a living, especially in densely populated areas, such as the former Homelands.

An area with a high population density, where the main land use is classified as subsistence farming, is at risk of environmental degradation.

Activities causing degradation is the greatest threat to grasslands. Degradation is most likely due to overgrazing and inappropriate burning regimes. Land degradation leads to soil erosion and loss in plant cover. Overgrazing results in depletion of species diversity, which in turn reduces the number of suitable habitats to maintain fauna diversity. Unsuitable agricultural practices, such as increasing irrigation in areas of poor soils and cash crop cultivation in marginal areas is another threat to biodiversity in the district.

The greatest threat to wetlands is grazing, trampling and inappropriate fire regimes. In rivers, poor water catchment area management practices are also significant threats. Water from wetlands is relied upon in areas where no additional irrigation is supplied for cultivation.

WATER BODIES AND WETLANDS

Rivers, catchments, and wetlands are important in the functioning of our ecosystem as they provide water sources and cleanse the natural environment. This section further highlights the importance of these systems and their functioning within the municipality.

Wetlands offer a multitude of advantages to the environment, these include:

- Plant cover allows for filtering thus reducing the flow velocities and most importantly, allowing for infiltration into the soil and thereby replenishing ground water levels
- Controlling stream flow velocities, flood control and volumes
- Reduces soil erosion
- Provision of stock grazing lands
- Provision of wildlife habitat, including aquatic nurseries (fishing, hunting, material harvesting, education and game viewing)

Bodies of permanent water are very important habitats for vertebrates and invertebrates. They are especially important to birds, many with Red Data status. They need to be kept undeveloped with adequate buffer zones around them. Pollution should be monitored on an ongoing basis and polluted water bodies will be rehabilitated and/or remediate.

No development should occur within the 1:100-year flood line area.

GEOLOGY, TOPOGRAPHY AND SURFACE HYDROLOGY

As far as surface hydrology is concerned, a number of important perennial rivers run through the area. These rivers need be protected, and management plans should be implemented and monitored by a qualified environmental control officer.

Large-scale developments which could possibly have negative impacts on the natural land form need to be avoided. All natural tributaries and floodplains as well as the natural open spaces created by these, need to be maintained as natural as possible.

Natural floodplains and water courses should be protected and not be altered by means of unauthorized excavations and vehicle movement. Natural vegetation along these water courses needs to be protected and the removal of any to be restricted. Invasive, exotic vegetation in these areas need to be removed responsibly, especially along drainage systems.

Erosion control measures need to be implemented, especially where areas have been altered and affected through agricultural activities. Geo-technical studies will assess soil suitability for any future developments and relevant mitigation and control measures shall be adhered to according to the findings of these studies.

MINING

In order to obtain a clearer picture of the economic geology of the region furthermore detailed investigation is required. This must be coupled to an understanding of global and local demand for minerals and building materials. An effort should also be made to couple these demand requirements to the longevity of the various resources.

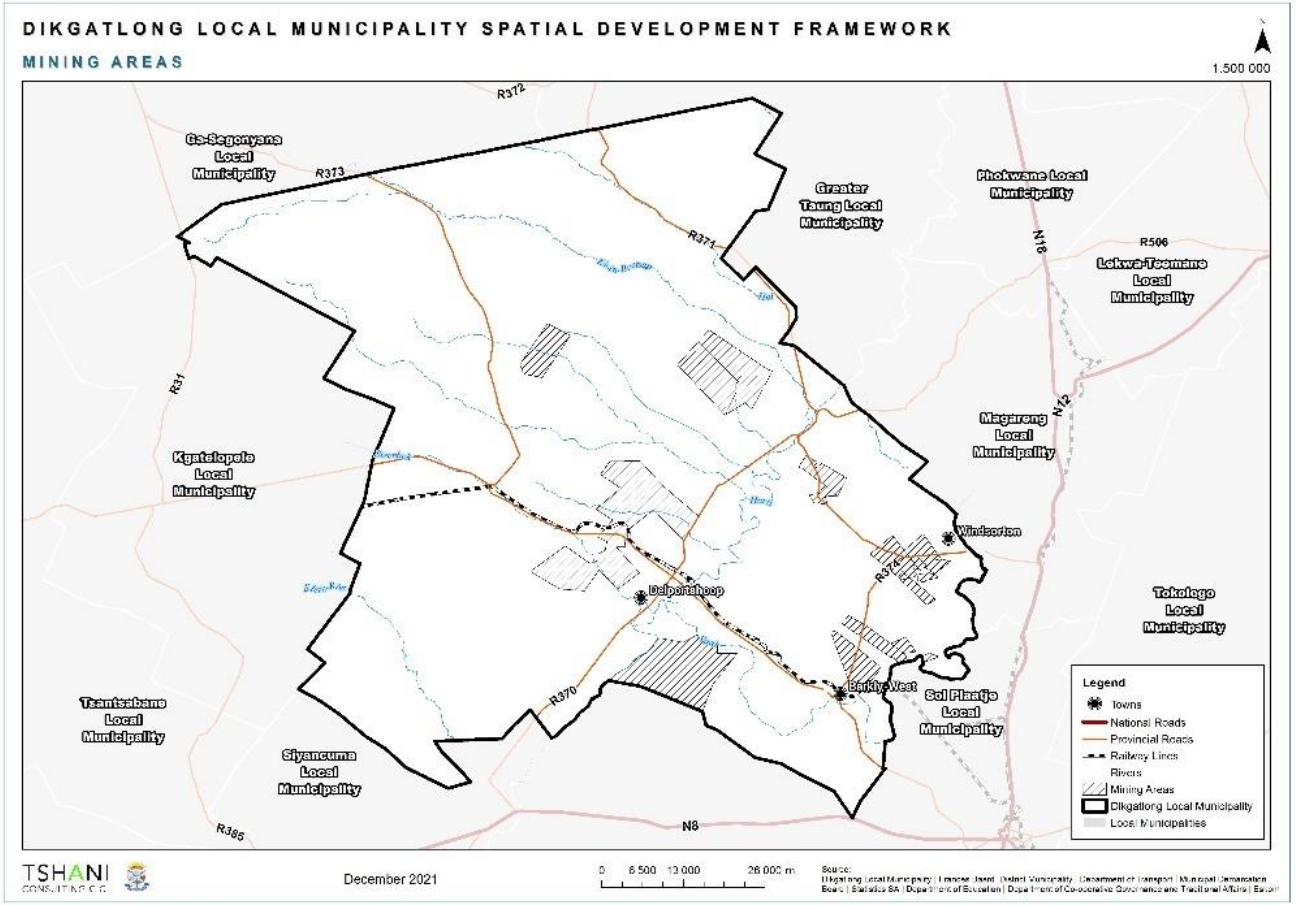
The main mining activity in the region is diamonds. Diamond mining has been a corner stone of the DLM and the District Municipality's economy for the past century.

It has essentially been the main economic driving factor for the location of many DLM settlements which owe their location not to factors such as proximity to arable land or a strategic location on a river crossing but to the presence of Kimberlite pipes or alluvial deposits in the area which have yielded large quantities of diamonds over the past 140 years.

Mines based on Kimberlite pipes tend to be footloose in their location in relation to river crossings, proximity to agricultural land and other inherent locational factors as they mine directly into the resource. There are also a number of alluvial deposits on the major rivers where surface material from the Kimberlite pipes has washed down the rivers over geological time.

There are also other mineral resources in the DLM, in particular the large deposits of limestone and cement in the Ulco area located around the gap in the Ghaap escarpment. This mine is reputed to still have a 150 years life and is one of South Africa 's major suppliers of the material. Its production is expected to double in the next four years.

What is important for settlement growth is the need for building materials, particularly cement, brick clays, sand and gravel for aggregate purposes. Gypsum and lime are used in the brickmaking process and as such the establishment of a brick making plant in the DLM (Barkly West) must be encouraged. The distribution and life span of these resources require further research.



PLAN 21: Mining Areas

CLIMATE CHANGE

Climate change is currently one of the biggest pressing issues on the development agenda. The need to reduce carbon emissions is great importance. Cities are said to be responsible for approximately 75% of greenhouse gases worldwide and should thus offer alternatives to change

Impacts of climate change on DLM and the world as a whole:

- Frequent and intense drought
- Storms
- Heat waves
- Weather events are becoming more frequent and severe
- Water quality decreases
- Health risks

Ways DLM can mitigate the effects of climate change:

- Put a price on carbon
- End fossil fuel subsidies
- Build low carbo, resilient cities
- Increase energy efficiency and use of renewable energy
- Implement climate-smart agriculture and nurture forest landscapes

SWOT ANALYSIS AND KEY ISSUES

The main purpose of the workshop was to capture the SWOT Analysis and Key Issues pertaining to the Dikgatlong local municipality as well as to complete a Visioning exercise.

The Issues & Visioning Workshop was held on the 27th of January 2022 at the Barkly West Library, Akasia St with the internal and external stakeholders of Dikgatlong Local Municipality.

Attendees then engaged with the presentation by giving their input and queries on the Draft Status Quo. These points were noted for further amendments and additions.

Thereafter, the workshopping exercise was facilitated by Ms Darshika Makan and structured around attendees assessing a SWOT Analysis for the LM which is basically an analysis in which we discuss strengths, weaknesses, opportunities, and threats of the municipality and how we can further improve on the weaknesses and threats and how we can develop on the Strengths and Opportunities.

The SWOT analysis is used in decision-making situations when a desired objective is defined.

- A strength is the ability to consistently provide near perfect performance in a specific activity, while a weakness characterizes areas, which are a disadvantage.
- An opportunity is classified as elements that can be exploited to a full advantage, while a threat are those elements that cause distress to an area or industry.
- Adequately addressing threats and weaknesses are essential to positive growth;
- All aspects of the SWOT analysis can be addressed together as each impact on the other and each have the ability to strengthen another or potentially hinder when not appropriately addressed or managed.

Each component of the SWOT analysis was done separately where attendees were asked to write down what they interpret as Strengths, Weaknesses, Opportunities, and Threats pertaining to the municipality and the area within which it operates. they were asked to do this anonymously and were told that they will not be discriminated against, by their feedback.

After the SWOT Analysis was conducted, the workshop facilitator, Ms Makan, read out the inputs from the attendees for each component of the SWOT and asked the attendees if this is a true reflection of what is experienced in the municipality. Upon confirmation by the attendees, the facilitator moved to the next element of the SWOT.

This further lead to the Vision exercise where attendees were asked to imagine a functioning Local Municipality and how this would look like.

Strengths

The following STRENGTHS were identified: -

Weaknesses

The following WEAKNESSES were identified: -

Opportunities

The following OPPORTUNITIES were identified: -

Threats

The following THREATS were identified: -

Key Issues


KEY ISSUES
Lack of suitable incentives for energy saving.
Old infrastructure
There is less access to the Vaal River
Insufficient economic activities happening in the local municipality
There is a lack of skill development centres
Social facilities are not giving out quality services
There is a housing backlog
Decreasing Mining activities
Deterioration of the tourism sector

SECTION C:

STRATEGIC FRAMEWORK

A "Strategic Framework" refers to the spatial strategy for wall-to-wall development within the municipal space. It takes inception out of the outcomes of the SWOT Analysis and Key Issues highlighting the areas of concern and the positive areas for further growth and development. It further, clarifies how individual efforts and municipal projects can be connected to achieve the best outcome and direct the projects into the IDP for the Municipality. The Strategic Framework includes meaningful target measures and objectives that help focus on the key efforts that implement the strategy.

C.1 SUMMARY OF KEY ISSUES

Below are some of the Key Issues that were identified in the Workshop Session held on the 27th of January 2022 in Barkly West.

- Lack of suitable incentives for energy saving.
- Old infrastructure
- Insufficient economic activities happening in the local municipality
- There is a lack of skill development centres
- Social facilities are not giving out quality services
- There is a housing backlog
- Decreasing Mining activities
- Deterioration of the tourism sector

C.2 NEEDS AND OPPORTUNITIES

The needs and opportunities analysis are used in decision-making situations when a desired objective is defined. This enables better decision making and prioritised development to ensure that the needs of the community is catered for.

Table 6: Needs and Opportunities

DIKGATLONG LOCAL MUNICIPALITY	
Needs	Opportunities
The overall improvement of the transport infrastructure to service the internal and external linkages (i.e., between Settlements / towns / nodal areas and within towns)	Due to the central location of Dikgatlong, opportunities exist to promote logistics and movement of goods.
There is a need to enhance the agriculture sector and expand opportunities in the agri-processing sector	This will allow for a further promotion in the skills development sector, will boost job opportunities and would facilitate the need to improve the linkages of movement within the LM
Enhancing Tourism potentials to promote economic growth in the sector	Many tourism opportunities exist within Dikgatlong LM including (but not limited to), crafts, game reserves, River activities: Canoeing, boating, rafting, fishing, etc and nature reserves and agri-tourism
Addressing the housing backlog	Land is available
Bulk infrastructure is needed to allow for development of housing to provide for the demand	The provision of Bulk Infrastructure will allow for further integration and growth and possible growth in the economic sector and businesses need access to bulk infrastructure

Spatial Restructuring needed to prioritise certain economic sectors which have potential to thrive such as agriculture, manufacturing, tourism, and mining,	Arable land exists within Dikgatlong LM, so these sectors have the potential to thrive.
Need to enhance public spaces to promote pedestrian movement within towns and to bring about vibrancy of public spaces and social interaction	The LM has provision for open spaces for development
Creation of youth employment initiatives by facilitating an environment where priorities are placed on the youth to provide them with the opportunities so that there are alternatives rather than seeking employment in other bigger towns.	More youth attraction facilities and entertainment options such as skills development and Sol Plaatje University Satellite/ FET college in Barkley West
Rectification of inherent and deeply entrenched income and wealth disparities and inequities, through government intervention.	The opportunity to ensure that money circulation occurs within the LM, ensuring that the money made there is spent there. This facilitates the demand and development of retail facilities.
Need to resuscitate the township economy / informal economy, to facilitate this sector and to provide provisions for spaces where informal trade can occur.	The towns are characterised with opportunities for the informal sector to occur within town centres

C.3 SPATIAL DEVELOPMENT VISION

Developing a vision for a Local Municipality needs to be based on or ensured alignment to the visions from the various tiers above. The vision should take cognisance of the tiers of spatial representation where the vision of the minor context should be taken direction from the vision of the larger context. The vision would aim to direct growth of its spatial area based on the strengths of the area as well as aspiring to positively impact on the issues pertaining to the area.

National Spatial Development Framework Vision

"All Our People Living in Shared and Transformed Places in an Integrated, Inclusive, Sustainable and Competitive National Space Economy".

Provincial Spatial Development Framework Vision (Towards 2040)

"Sustainable urban and rural spatial development based on a modern space economy supported by an integrated national and provincial infrastructure network and the responsible use of natural resources providing sustainable livelihoods for all "

Integrated Development Plan Vision 2022/23

"A Developmental Municipality, with a clear Sustainable Environment and Economic Opportunity for all"

District Spatial Development Framework Vision

"To be a municipality that strives for socio-economic freedom through holistic spatial redress, sustainable development and environmental consideration for all communities in the district"

The following vision statement is generated out of the vision elements mentioned above and through the Workshop exercise:

Dikgatlong Spatial Development Framework Vision

"To become a financially viable municipality which plans for, implement and maintains the environment, offer affordable quality services, provide sufficient access to social facilities, making use of our natural resources and creating conditions in which there are employment and spatial land development opportunities"

C.4 OBJECTIVES AND STRATEGIES

Strategic objectives define what the municipality wants to achieve in terms of its developmental agenda, and in line with achieving the spatial vision for the LM. Below is an overview of what the DLM wants to achieve

Table 7: Objectives and Strategies

OBJECTIVES	STRATEGIES
BASIC NEEDS: Ensuring availability-acceptable level of infrastructure and service delivery	• Aiming to provide the necessary social amenities to serve the needs of locals; • The development of Integrated Sustainable Human Settlements; • Communication and connectivity - technological • Develop smart strategies for the basic service delivery • Prioritize areas of greatest need; • Link services and service supply networks to optimize efficiency; • Facilitation of integrated and inclusive planning.
SPATIAL TRANSFORMATION: Creating an efficient and integrated Human Settlement patterns in the Dikgatlong Local Municipality	• Consolidate and densify settlements where appropriate; • Promote the integration of sprawling settlements; • Prioritize, maintain and upgrade strategic link routes • Prioritize access to Social Amenities to support community livelihoods.
LINKAGES AND ACCESS:	• Identify nodes and products that require linkages; • Identify and prioritize where the need is the greatest; • Maintenance and upgrading of the road network to allow for smart growth • Provide access to tourist routes;

Well-structured road and rail network system to ease movement; to create efficient and effective links between nodes, relevant products and services	
LAND USE MANAGEMENT: An appropriate Land Use Management Systems in operation across the local Municipality; and security of access to land for development	• Support and implement a programme to develop appropriate new Zoning Scheme for urban and rural areas in line with the direction of new legislation; • Promote integrated ward-based plans. Support Land Reform and Settlement upgrade initiatives by identifying areas of opportunities.
ENVIRONMENT: Adhering to sound environmental practices in line with legislation; and protecting environmentally sensitive areas while climate change forms part of all the planning processes	• Support and implement a programme to develop appropriate new Zoning Scheme for urban and rural areas in line with the direction of new legislation; • Support land reform and settlement upgrade initiatives by identifying zones of opportunities according to land needs
ECONOMIC GROWTH Ensuring Economic sustainability for the citizens of the DLM	• Creating an enabling environment that caters for Investment and income generation for the district; • Uplift the skills base of communities to allow them to be able to earn a living • Investigate potential or enhance existing tourism opportunities

C.5 SPATIAL PLANNING PRINCIPLES

While strategic planning at national level is well established, the Dikgatlong Local Municipality is well in process of full compliance and alignment with the national spatial planning directives such as the National Development Plan 2030, National Spatial Development Perspective and Spatial Planning and Land Use Act (No.16 of 2013). Equally essential, the Municipality draws its strategic planning disciplines from SPLUMA, and these principles include the redress of spatial injustice and the integration of socioeconomic and environmental considerations in land use management to balance current development needs with those of the future generations in a transformative manner. Therefore, SPLUMA reinforces and unifies the NDP's vision and policies in respect of spatial planning mechanisms to eliminate poverty and inequality while creating high-employment economy that delivers on social and spatial cohesion.

The five (5) founding principles as set out in Section 7 (a) to (e) of SPLUMA that applies throughout the country are:

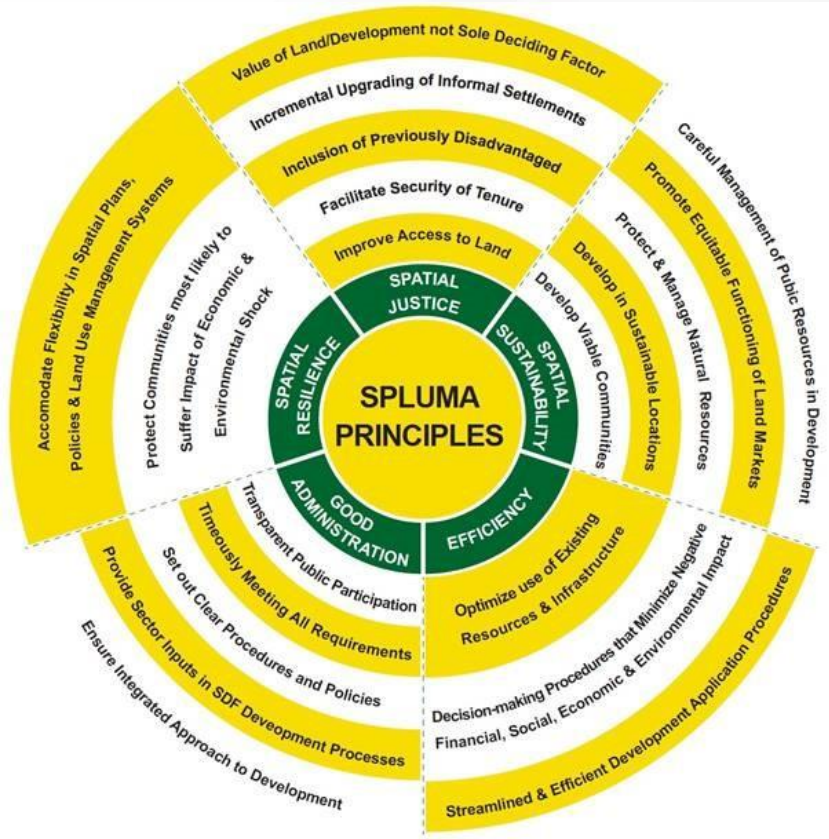


Figure 6: SPLUMA Principles

1. Spatial Justice

Past spatial and other development imbalance must be redressed through improved access to and use of land by disadvantaged communities and persons.

2. Spatial Sustainability

Spatial planning and land use management systems must promote the principles of socio-economic and environmental sustainability through encouraging the protection of prime and unique agricultural land; promoting land development in locations that are sustainable and limit urban sprawl: consider all current and future costs to all parties involved in the provision of infrastructure and social services to ensure for the creation of viable communities.

3. Efficiency

Land development must optimise the use of existing resources and the accompanying infrastructure, while development application procedure and timeframes must be efficient and streamlined to promote growth and employment.

4. Spatial Resilience

Securing communities and livelihoods from spatial dimensions of socioeconomic and environmental shocks through mitigation and adaptability that is accommodated by flexibility in spatial plans, policies, and land use management systems.

5. Good Administration

All spheres of government must ensure an integrated approach to land use and land development and all departments must provide their sector inputs and comply with prescribed requirements during the preparation and or amendment of the SDFs. The principle is the function of this framework largely because implementation of the spatial planning vision and objectives is not only highly dependent upon a strong coordinating role of central government, but it's also predicated upon good governance mechanisms, incorporating meaningful consultations and coordination with a view to achieving the desired outcomes across the various planning spheres and domains.

Other principles which are also applicable to the Dikgatlong LM include:

6. Smart Growth

The urban edge is not an isolated management tool, but rather part of a package of urban growth management tools that all need to be employed equally vigorously by the local authority to achieve desired, sustainable, and efficient urban growth management.

Internationally, a sustainable approach to growth management aptly called "smart growth" is seen as the most efficient way of developing urban areas. Smart Growth is a collection of urban development strategies aimed at reducing sprawl and promoting growth that is balanced and fiscally, environmentally, and socially responsible. Smart Growth tries to promote growth and development in areas with optimal opportunity and offers an antidote to the sprawl that has resulted from unlimited low-density development further and further away from the urban centres. Rather than simply restricting development, smart growth is focused on how and where new development should be accommodated.

Smart growth is an approach to development that encourages a mix of building types and uses, diverse housing and transportation options, development within existing neighbourhoods, and community engagement.

The principles of smart growth are:

- New growth and development must be leveraged to improve existing areas of opportunity.
- Redevelopment of existing areas must be promoted rather than abandoning existing infrastructure and facilities only to rebuild it farther out.
- Development must be "town-centre", transit and pedestrian oriented.
- Integrated, mixed-land uses must be promoted in strategic locations.

It is proposed that, to support the successful implementation of the urban edge, the municipality must focus on employing the following strategies:

- Management Zones along the urban edge.

Well-functioning urban environments are structured around zones of diminishing intensity as it moves away from areas of highest opportunity. Typically, the fringe of urban areas is characterised by what is termed the urban-rural transition zone, comprising low density urban development, low intensity, extensive land uses and semi-rural activities such as nurseries. The urban edge should therefore not denote a clear divide between urban and rural, but rather include management zones along the edge that makes provision for a gradual transition from an urban to a rural environment. The area directly inside the urban edge should look at lower urban intensities, while the areas directly outside the urban edge should make provision for semi-rural and rural residential activities.

- Promoting Infill development refers to the identification of vacant land parcels within the demarcated urban areas, amongst existing developments, and developing these parcels of land according to their optimal development potential levels.
- Promoting Densification in and around strategic locations is an important antidote to urban sprawl as it looks at providing high numbers of housing units in strategic, highly accessible locations with high levels of access to economic and social opportunities. If the housing demand, or part thereof, can be satisfied through centrally located high quality higher density residential development then there will be less demand for low density residential developments on the periphery. The secret to success for stimulating the demand for higher density residential living is the quality of the urban environment in which these developments are located. These areas should therefore be focus areas for public investment in infrastructure, social services, streetscape and urban design, open spaces and general high quality, positive performing urban environments.
- Managed expansion refers to the gradual and incremental outward growth of a settlement (i.e., the so-called ripple effect), but within demarcated urban development boundaries (or urban edge), as opposed to leapfrog developments that are not physically and functionally integrated with the main urban area.

7. Infill and Densification

Densification is not an end, but a means to achieve more efficient utilisation of transport, the creation of the necessary population thresholds to support community and business facilities and to prevent low density outward expansion and development on land, which is valuable from an ecological or agricultural perspective. In the case of pedestrian-orientated communities like those in the Dikgatlong municipality, densification helps with improving access to key facilities and amenities in the town.

It is proposed that:

- Higher density development should be focused around and within walking distance from major activity areas and transport services.
- Densities should decrease as the distance away from major activity areas increases. Higher densities in the wrong locations or which are removed from major activity areas and transport routes can be harmful to urban efficiency and sustainability.
- Densification should capitalise on existing available infrastructure.

Aspects that may influence the level of densification in a particular local context include:

- Availability of infrastructure and services which can support higher density residential development.
- Heritage aspects.
- Socio-economic characteristics.
- Topography.

General guidelines for densification can be summarised as follows:

- Promote average gross residential density of 30du/ha in urban settlements dependent on public transport.
- Promote average gross residential density of 15du/ha in small rural villages not dependent on public transport.
- Densities should increase toward major access routes and strategic centres, or crossroads as follows:
  - Medium residential densities >15du/ha - 60du/ha within 1km of major transport route.
  - High densities - will only be restricted by FAR, coverage and height: In the urban core and CBD 's
- Mixed uses should be considered at higher densities
- Activity / development spines/streets can be promoted along mobility routes if offset and parallel to (service roads) or, perpendicular and linking to activity streets (access routes) are provided.

8. Accessibility

The proper walking distance must always be used as the measure for accessibility. According to the Guidelines for Human Settlement, Planning and Design, a convenient walking distance to public transport is often interpreted as maximum walking time of 5-10 minutes, and a maximum walking distance of 400-500 metres. There will be exceptions to these principles, particularly in deep rural areas, but these principles become

applicable as soon as densities increase and where there is a need for efficient urban settlements and services.

A comprehensive neighbourhood, in which the actions of daily living, including transportation access, are within walking distance of a person's home, decreases the number of vehicle kilometres travelled by its citizens. Were the same population to live in a conventional suburban development pattern, where daily activities are separated beyond a comfortable walking distance, increased kilometres would be travelled and therefore more roads and parking spaces would be needed. Traditional urban patterns integrate human activities through a mixture of landscapes and buildings, allowing the walk from one destination to another to be a pleasant alternative to driving.

9. Integration

The implementation of the walking distance principle to promote greater access to opportunities for all people will require functional integration. In conventional suburban development, land and buildings are designated for singular use or activity. In contrast, neighbourhood development should integrate a range of activities and therefore may be better described by its building and design typology. Fundamentally, integration must intend to maximize continuity and beauty within the public realm and minimize influence on individual building use or design. These issues are also resembled where settlements are characterized by segregation of land uses and low-density development that cannot support public transport, or small businesses. To address these issues and achieve better access and integration, appropriate densification will have to be promoted in settlements.

10. Urban Design Guidelines

1. Create open space systems that integrate the elements of a settlement to contribute to a meaningful urban structure. This can be done by:

- Providing connectivity between open spaces;
- Establishing linkages between open spaces;
- Aligning the open space system with public buildings; and
- Ensuring an improved quality of linkages through the continuation of special activities or functions along major routes.

2. Link symbolic elements (statues) or public facilities (library, clinic, etc.) to open spaces in relation to their importance and character.

3. Ensure the definition of the public spaces through the effective design of an interface between public and private domains.

4. Create visual recognition and surveillance along open spaces and public routes. This can be achieved through:

- Locating buildings around open spaces and streets so that sufficient enclosure is created;
- The appropriate height of buildings;
- Locating the highest buildings to the southern side of the open space, with lower buildings or trees on the northern side.

5. Markets should be permitted at highly accessible locations in terms of the movement network and urban structure to ensure the greatest viability possible. These locations could be modal interchanges and intersections.

6. As a rule the erection of shopping centres on the periphery of settlements should be discouraged so as to strengthen local businesses within the settlement. This should only be permitted if the intention is to initiate a new urban node at the specific location and the proposed shopping centre development is in line with the growth direction of the settlement.

7. Accommodate a variety of users in and uses along the streets by doing the following:

- Concentrate intensive activities along major vehicular and public transport routes;
- Locate majority of public buildings and increase densities along these routes; and
- Locate buildings closer rather than further from the streets to increase pedestrian activity, a sense of enclosure and surveillance.

8. Create appropriate road cross-section widths that can provide for vehicle traffic, parking, pedestrian movement, cycling and landscaping.

9. Urban block length should promote access (penetration) and encourage economic activity by orientating the short side of blocks to major streets wherever possible.

10. Space buildings from each other to provide adequate solar access to buildings. In this regard the roof pitch of buildings should be orientated so that roof solar panels have a maximum continuous direct access to the sun.

11. Any proposals for the redevelopment of existing buildings should consider their heritage value, elements of the vernacular architecture and, where possible, retain these important elements. Similarly, the historical characteristics of existing buildings should be considered to draw from their elements that could be integrated into the design and construction of new buildings close by.

12. The use of local materials should be encouraged in the construction of new buildings.

13. Encourage appropriate water-wise landscaping.

14. Ensure that the main streets of the urban areas are appropriately landscaped to encourage a pleasant gateway treatment into the settlements.

C.6 DEVELOPMENT SCENARIOS

"The metropolitan region is now the functional unit of our environment, and it is desirable that this functional unit should be identified and structured by its inhabitants. The new means of communication which allow us to live and work in such a large interdependent region, could also allow us to make our images commensurate with our experiences."- Kevin Lynch

Development scenarios are an important phase of the SDF formulation process. Development scenarios are not predictions or roadmaps, they are constructed to give a particular point of view in the future as well as some informed speculation about the crosscutting paths that might get us to that point. The power of scenarios lies in provoking a sense of **"what might be a possibility as well as in combining probabilities"** in ways that might not have previously thought of.

The following scenarios have been developed for the Dikgatlong Local municipality:

SCENARIO 1

Maintaining the Status Quo: The population grows exponentially, with many residents residing in the limited urban areas and growing the number of existing informal settlements as land grabs are components of this Scenario. It further enforces the concept of Spatial Injustice. . The economy is heavily dependent on social grants and remittances and thus does not promote spatial sustainability as it does not allow for the creation of livelihoods. There is extensive incapacity within the local government structures and deep political instability which does not express good administration.

The scenario Provides a more in depth look at no new development occurring, with the municipality retaining its current state.

The resultant of retaining the current state is as follows:

- Uncontrolled settlements and expansion thus promoting urban sprawl as opposed to densified mixed-use developments;
- Invasion of vacant land;
- Declining economic development;
- Development within environmentally sensitive areas;
- Lagging development in rural areas;
- Limited revenue streams;
- Poor administrative functions;
- Infrastructural decay;
- Housing provision that is not linked to economic opportunities and social amenities;
- Institutional incapacity.

The above scenario is *unacceptable*, as it will result in economic decline and further entrench poverty within the municipality. The scenario will lead to poor service delivery and underdevelopment of rural areas.

SCENARIO 2

Futuristic Approach: A vibrant municipality which rates among South Africa's best regions with world class infrastructure and integrated public transportation systems. The municipality has large shopping centres, supported by national retailers. An economy that is supported by its residents and prosperous tertiary universities that are globally competitive in research and academia.

The Municipality is characterised by the following:

- Integrated urban and rural economies;
- Intricate highways and road infrastructure;
- High speed rail;
- Efficient public administrative functions;
- Smart and digital networks;
- High speed Wi-Fi in all urban areas.

While this is an ideal, the concept does not fit in with the experiences and need of the Dikgatlong Local Municipality and the future spatial direction. The scenario is *unrealistic* and depicts a future utopia which will not be achieved within the timeframe of this development policy. It does not prioritise the needs of the locals and relation the spatial principles. Key factors to note within the context of Dikgatlong LM is the alignment to spatial resilience, to be able to plan against the changing times and in to ensure reliance.

SCENARIO 3

Realistic Approach/ Managed growth and development: A transformed municipality which is people-centred ensuring spatial justice and accessibility. It aims to provide infrastructural services so as to improve investor confidence and socio-economic development thus promoting the sustainable growth of the LM. The local government has filled the vacant posts within their institutions, political stability has been strengthened and institutions are equipped with experienced personnel, thus promoting the concept of Good Administration. There is an extensive breed of local entrepreneurs who are prosperous in both, urban and rural areas, further enforcing spatial resilience. There is enforcement of land use and development policies and better planning in urban and rural areas. This aims to adequately plan for and accommodate all residents and the areas where they live within.

Public transportation systems are better managed and offer various options that extend being the urban centres. Life in the city is improved through infrastructural upgrades and inner-city housing developments. The local tertiary institutions are incorporated into the functioning of municipal key industries. Environmentally sensitive areas are well kept and serve as critical assets for education and tourism.

The following scenario presents a positive outlook for the development of the municipality in the following ways:

- Growth of rural enterprises;
- Boost in investor confidence;
- Efficient municipal functions;
- Well managed land uses;
- Growth of alternative economic sectors;
- Improvement of infrastructure in urban areas;
- Rural development;
- Supports local economies
- Conservation of protected and sensitive areas.

Scenario 3 is considered as the *preferred* scenario as it seeks to promote development within reasonable time frames.

C.7 GROWTH PROJECTIONS

Population forecasting was a key factor in our determining our regions for intervention and investment. It has been found that information regarding population growth and demands are compiled regularly within local municipalities

Projected population and need of sustainable human settlements within the Dikgatlong LM is based on the projection for Northern Cape are based on *an average growth scenario (1.47 % growth rate per annum, measured between 1996 - 2016),* a high growth scenario (3.93 % p.a., measured between 2001 and 2011) a medium growth scenario (0.84 % p.a., measured between 2011 and 2016) and low growth scenario (-0.42% p.a., measured between 1996 - 2001), NC PSDF, 2019.

For the projected analysis an average growth scenario will be adopted. In addition, population projections by the CSIR (as stated in the NSDF) has been used to reaffirm the projections calculated using the above projection rates. The NSDF envisage a development shift from the west towards the east of South Africa and this could prevail growth projects experienced between 1996 and 2001. Urbanisation would also have certain growth implications in the province (especially towards the central and eastern regions such as Upington, Kuruman and Kimberley).

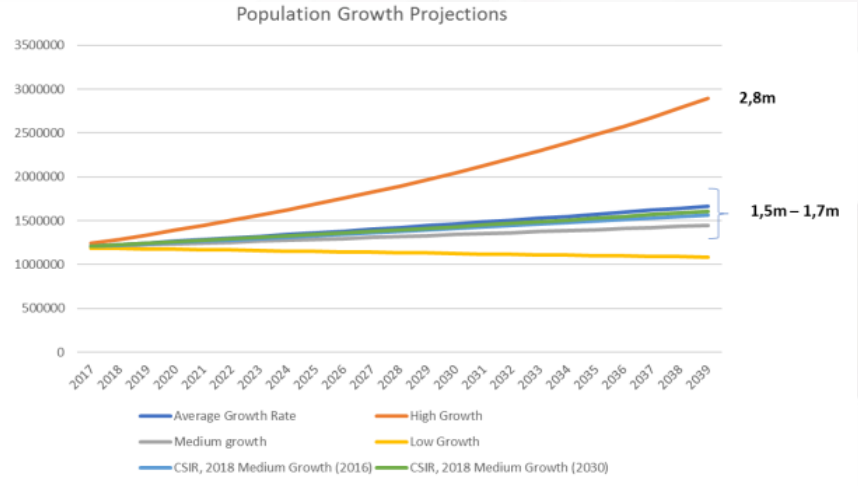


Figure 7: Population Growth Projections

According to Statistics South Africa census 2011, Dikgatlong Local Municipality has seen an increase in total population of 46 841 to 48473 (Community Survey 2016) with a total 3.5 increase in population over the last few years. The following population is thus projected for the year 2050, using an average growth rate of 0.7% p/a

Table 8: Population Growth Projections

Municipality	2011	2016	2050
Dikgatlong Local Municipality	46 840	48 463	*59 756*

Source: Calculations based on StatsSA: Census 2011 (2016 Municipal Demarcations), Community Survey 2016

C.8 SPATIAL DEVELOPMENT CONCEPT

The conceptual development framework recognises the planned focal point of the proposed interventions and takes forward the development perspective by way of proposed physical actions/ projects that will have the desired impact on the overall performance of the municipality. At a conceptual level, scattered settlements, undeveloped rural villages, and abundant agricultural land frame the Dikgatlong Municipal Area.

The concept for the future development of the municipality is to strengthen the existing residential nodes, both Urban and Rural areas and define the edges of these areas, to protect the areas of Agricultural potential as well as the areas of environmental sensitivity. Agriculture is one of the main economic drivers and areas have been identified for Intensive Agriculture to support the Agricultural Economic Industrial Hub and Agri-Park and Farmers Production Support Units concept

The concept looks at the nodes being developed to accommodate residential and alternative economic opportunities to create employment. Mining activities have deteriorated and enhancing alternative economic sectors like agro –processing and tourism can be possible sectors, which can support and ensure the sustainability of these nodes.

The municipality is surrounded by some national attractions like the Barkly Bridge and Barkly West Museum, Course of the Vaal River, Nooitgedacht Glacial Pavings, Rekaofela Resort, Barkly West Resort, Gong-Gong Waterfall etc., which attract many tourists, which traverse the municipality to get to these destinations.

From an environmental perspective, the natural environmental needs to be protected especially areas around Dikgatlong. We need to protect these areas by monitoring land uses near these areas. The environment is an asset which also needs to be marketed and promoted.

The following components are applicable to the Conceptual Spatial Plan for the Dikgatlong SDF:

1. Movement

- The R31 is the main movement route in the municipality
- The R374 is regarded as a corridor to Windsorton
- The enhancing the agricultural sector would further require prioritisation to be placed on the movement routes between towns in Dikgatlong as well as outside of the LM – linkage to Kuruman, Kimberley etc.

2. Infrastructure

- Infrastructure upgrades are required for towns to expand and to accommodate for the housing need in Dikgatlong LM.
- Upgrades of Roads to allow for the ease of movement of people, goods and services
- Social Facilities to cater for the growing need

3. Towns

- Towns have the potential to expand, specifically Barkly West and Delportshoop. The proposal for this is to also aim to impact the provision of Sustainable Human Settlements and transportation movement, as well as the retail and trade sectors.
- Alignment and support to neighbouring towns. Assess their needs and consider the impact it would have on Dikgatlong LM

4. Economic Growth

- The key economic sectors which the concept plan covers are as follows:
  - Manufacturing
  - Tourism
  - Agriculture
  - Retail
  - Transportation
- The concept plan aims to facilitate economic growth in the economic sectors of Dikgatlong LM. This is aimed to be achieved through the prioritisation of the Agricultural and Agro processing sectors, the opening of industrial sites, the promotion of logistics and transportation movement, as well as the retail and trade sectors.

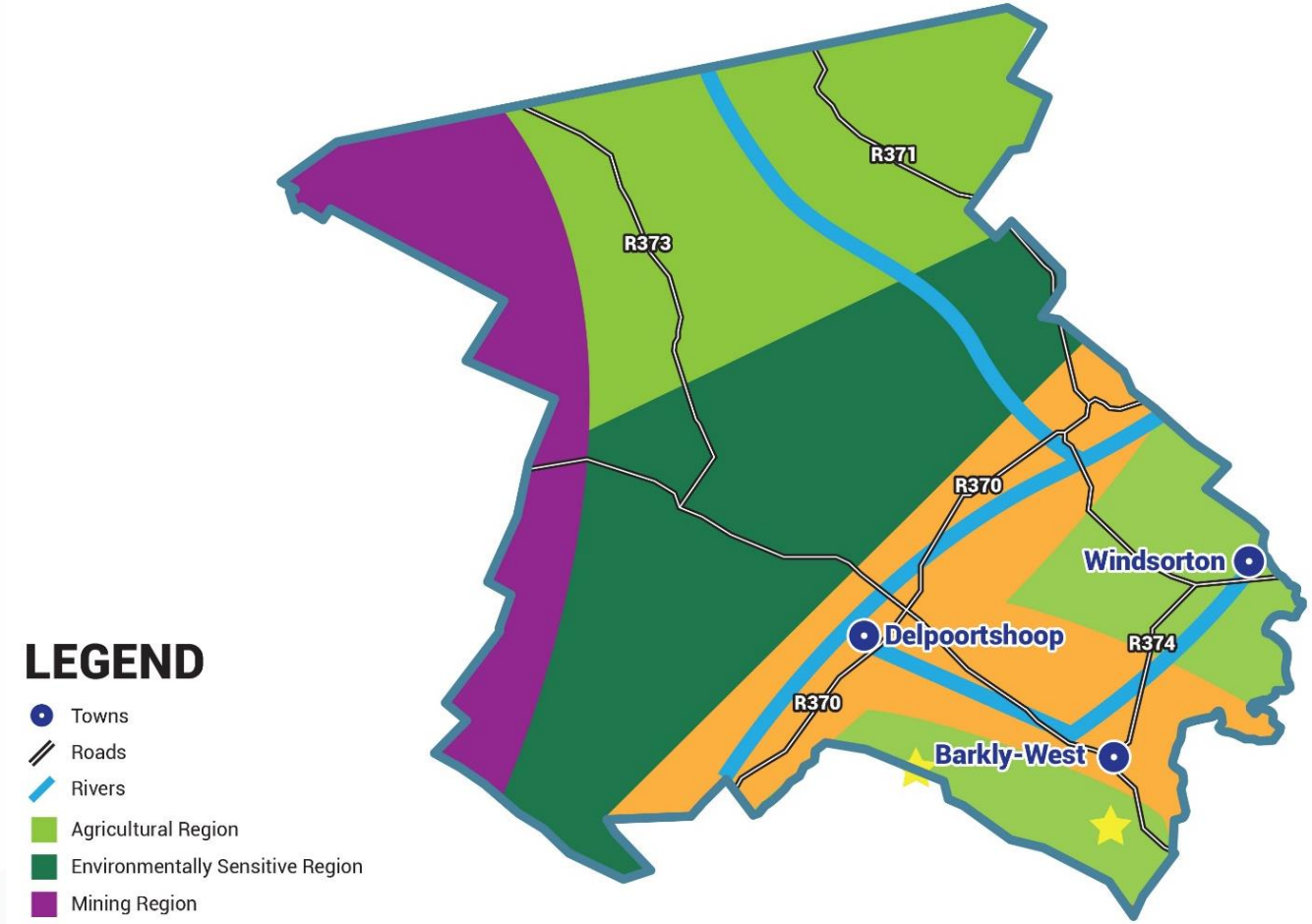
5. Agriculture

- The agricultural sector is proposed to be promoted within Dikgatlong LM
- Agro process is a spin off sector which has the potential to thrive should focus be placed on the agricultural sector
- Training / skills development centres are required to allow for the growth of the sector and to provide job opportunities for residents. This can be through the Agri-hubs and FPSU initiatives

6. Tourism

- Tourism opportunities exists within the Dikgatlong Local Municipality which need further promotion and enhancement. The tourism opportunities include but not limited to the following:
  - Old mining sites
  - The Vaal River
- Heritage Sites includes but not limited to the following:
  - Canteen Kopjie
  - Tollgate (Museum)
  - St Mary's Church (One of the oldest church buildings)

CONCEPT PLAN



LEGEND

- Towns
- Roads
- Rivers
- Agricultural Region
- Environmentally Sensitive Region
- Mining Region
- Tourism Route
- Tourist Attractions

PLAN 22: Concept Plan

The conceptual Framework is a "blob diagram" framework plan for the study area which is based on the spatial vision and spatial objectives as indicated in the previous sections of this SDF. It indicates how the issues identified will be addressed spatially, based on potential objectives.

The conceptual framework is a single drawing to allow for diagrammatic illustrations of "ideas/guidelines: to inform the SDF according to the guidelines unique opportunities should be indicated such as:

- General land use patterns;
- Key nodes and links;
- No-go areas for urban development;
- Agricultural and environmental protection; and
- Key areas for development.

A framework indicates basic planning principles to apply to achieve an ecological balance and to create a more rational cost effective and manageable spatial structure.

The concept illustrates the following:

- Towns, which are key areas to which urban development should be directed and where a higher intensity of land uses and activities are supported.
- Agriculture and environmental sensitive areas, which are typical "no go" areas for urban development.
- Mobility routes – mobility should be improved between urban and rural areas.
- Potential key economic sectors such as tourism, mining or agriculture

It is crucial that this urban-rural relationship be reinforced by strengthening existing urban centres on the one hand, and to diversify and protect agriculture and environmental resources on the other. A good road network is the essential link between urban and rural areas.

SECTION D:

SPATIAL DEVELOPMENT FRAMEWORKS

The Spatial Development Framework of a town/city should direct and arrange the development activities and the built form in such a way that it can accommodate ideas and desires of people without compromising the natural environment and the way services are rendered. Therefore, the Spatial Development Framework should provide general direction to guide decision-making and action over a multi-year period aiming at the creation of integrated and habitable cities, towns, and rural areas.

To enhance the objectives of efficiency, sustainability, accessibility, integration, equality and good governance, the following strategies must be used in developing policies and processes:

- Adopting a growth management approach
- Understanding the city's development context
- Utilising a city-wide approach to development
- Implement area-based development initiatives and interventions
- Identify marketable opportunities
- Providing development guidelines

The structure of the Spatial Development Framework will be aligned to the 3 SPLUMA Pillars of Biophysical, Socio Economic and built Environment

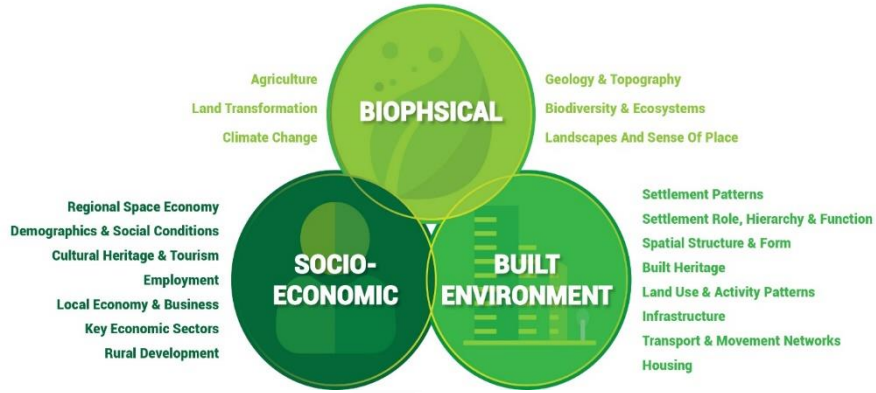


Figure 8: SPLUMA Pillars

D.1 BUILT ENVIRONMENT FRAMEWORK

"The man-made surroundings that provide the setting for human activity, ranging in scale from buildings and parks or green space to neighbourhoods and cities that can often include their supporting infrastructure such as water supply or energy networks."

SPATIAL STRUCTURING ELEMENTS

To plan efficiently, there needs to be a focus on investing resources in areas of opportunity to create maximum impact. There needs to be certain structuring elements to give guidance to develop and spatial planning. For the Dikgatlong Local Municipal Spatial Development Framework, there are Spatial Structuring Elements that can guide spatial development and decision-making in the municipality. These are broken down in the section below.

The spatial framework is developed though an interconnected set of nodes, networks, and surfaces. The crux of development in this system is the movement of people, goods and services that produces the basic impetus for developing functional relationships between otherwise independent and unrelated elements. The movement of people, goods, and services are channelled along specific routes that describe a network of interaction. Where networks intersect the opportunity for people, goods and services develop to interact and this gives rise to activity nodes. The intensity of interaction gives rise to the development of a hierarchy of nodes of different sizes depending on the level of interaction taking place in a node. This one-dimensional system of networks and nodes are tied together through surfaces that fill the areas between the nodes and networks.

Nodes

Nodes' is term usually ascribed to cities, towns, and villages. This tends to work against the need to achieve rural development through integration of urban and rural areas. It is accordingly proposed the term node is to be less prominent and less significant in future SDFs with the emphasis rather being placed on identifying "human settlement" where integrated programmes can be shared. Such settlement/s can be both rural and urban in nature and could serve to bridge diversity between these communities.

Nodes are generally described as areas of mixed-use development, usually having a higher intensity of activities involving retail, transportation, office, industry, and residential land uses. These are the places where most interaction takes place between people and organisations, enabling most efficient transactions and exchange of goods and services. Nodes are

usually located at interchanges to provide maximum access and usually act as catalysts for new growth and development.

From an efficiency and functionality perspective, the clustering of community, social and business facilities in nodes around points of highest accessibility is of vital importance, i.e. -

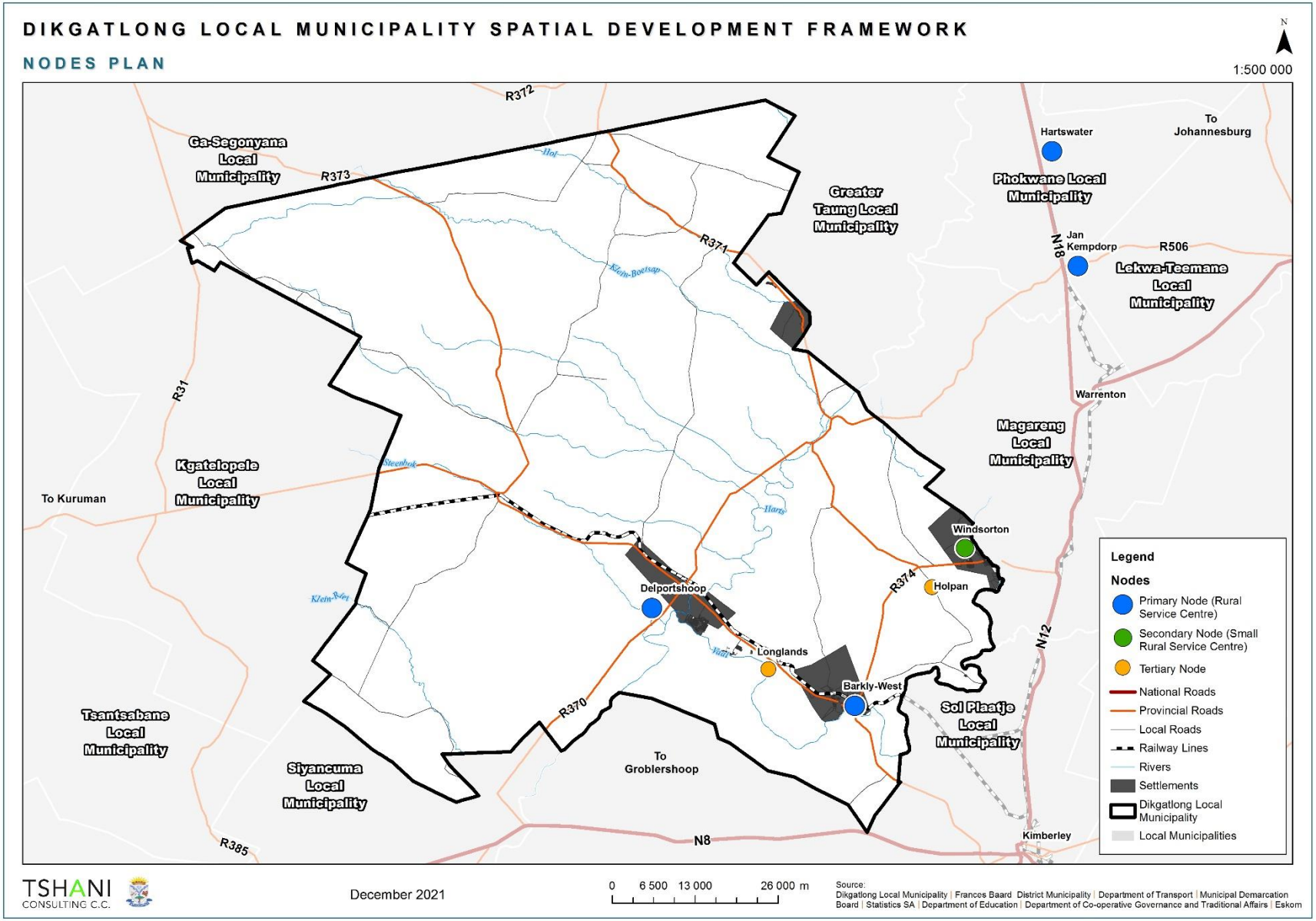
By clustering facilities, a high-quality node can be created that can serve as the heart of communities and promote social interaction.

- Multiple neighbourhoods can be served by social services in central points.
- The sharing of facilities between various services (e.g., buildings, logistics, parking etc.) can take place.
- Central clusters ensure enhanced accessibility and convenience for residents.
- It is proposed that the following general principles apply to the development and management of nodes:
- To support the effective development of the node in the municipality, the development of urban non-residential land uses, such as business, retail, community facilities, and social services should be restricted to nodal areas.
    - Nodes should typically be located at the main access points in urban areas, typically at the intersection of a major mobility route and the major collector route.
    - These nodes should show a large degree of public investment in infrastructure, public domain, and social services.
    - Nodes must be characterised by mixed-use, high intensity activity and higher density residential development (maximum FAR's, coverage and height should not be restricted).
    - The way parking in the nodal areas is treated is of importance. Large parking lots adjacent to streets should not be promoted. Buildings should be placed as close to street boundaries as possible to facilitate pedestrian movement and to define and shape the public space.
    - Extroverted as opposed to introverted development patterns and typologies must be promoted.
    - Site layouts and building designs of individual developments must take cognisance of and support public transport and pedestrian movement.

The Northern Cape Spatial Development Framework outlines the following Settlement Classification to nodes within the province. The same distinction has been used for the Dikgatlong SDF to ensure alignment from the National, Provincial plan, District plan through to the Local municipality.

Table 9: Typology of Settlement

SETTLEMENT CLASSIFICATION AND FUNCTION		
Settlement	Primary Function	Economic Base
Barkley-West	Rural Service Centre	Mining
Delportshoop	Rural Service Centre	Mining
Windsorton	Small Rural Service Centre	Agriculture
Ulco	Rural Settlement	Mining
Longlands	Rural Settlement	Agriculture



PLAN 23: Nodes

Corridors

A "Development Corridor" is normally used to symbolise the area where important economic activities are to be encouraged along a particular route. There is often difficulty in stakeholder perceptions regarding the term 'corridor' and the purpose of such planning tool. It is proposed that the use of the term 'transport route' be adopted in future because it places emphasis on the transportation activity, which is critical for economic clusters to grow in both urban and rural environments;

Development Corridors are identified for spatial and economic planning purposes, as roads and/or railway routes associated with the movement of goods and people. The high transportation function creates the opportunity for economic activity to take place along these movement corridors, particularly at junctions. These occur at various levels, from local development corridors along the main streets of the towns or even along rivers, to Regional and Provincial Corridors. Different types of corridors can be distinguished, such as development corridors, movement corridors and cavity corridors.

What is important to understand, is that the corridor may not take the form of a continuous integrated band of activity. At points of highest access along the central spine, development will be more intense and of a higher order while at locations of lower access, lower intensity development or even part of a natural open space network may be found.

Corridors are aimed at improving:

- Efficiency in terms of mobility;
- Spatial transformation through connectivity;
- Economic, social, and environmental sustainability.

Corridors differ in their functions based on activity, traffic, and adjacent land uses. The following section highlights different types of corridors identified within the various government spheres.

Development corridors are described in planning terms as roads or railway routes that are usually associated with the movement of people between places. This function of facilitating movement of people along a route also means that these "movement corridors" have the potential to accommodate development of different levels of intensity and a mix of land uses at certain points along the route.

The Northern Cape PSDF will be used as a base for the identification of corridors within the province, as well as their functions within the province.

According to the NC PSDF, a Future Development Corridor (R31) is proposed to facilitate the expansion of Kuruman, Hotazel and Kathu towards the Sol Plaatje Local Municipality passing through Dikgatlong Local Municipality. The Corridor is proposed to unlock the Rural Economic Development Zone, the corridor further links towards the Central Urban Cluster as proposed in the National Spatial Development Framework. The expansion is meant to improve the economic diversity of the Central Urban Cluster as the

Gamagara Corridor would be included in the last-mentioned cluster. The proposal would further encourage mixed land use activities, improved access and mobility, improve road safety and increased development potential in the central region of South Africa. Key to the success of the proposed development corridor is to promote freight to rail, thus releasing the pressure experienced on the existing road networks.

Local Corridors:

The Dikgatlong Municipality has several important corridors traversing the municipal area. The following have been identified as corridors within the municipality:

The types of corridors identified within the municipal area are the following:

- Primary Corridor(s);
- Secondary Corridor(s);
- Tourism Corridor(s).

Primary Corridors

Primary corridors are aimed at functioning as key mobility routes that promote trade, commerce, and key linkages between other municipalities. The municipality has the following primary corridors R31 (Kimberley to Kuruman) whilst the N8 and N12 do not pass through Dikgatlong it does provide access to the R31 for access to the local municipality

This SDF proposes a tourism corridor along the R31.

Secondary Corridors

Secondary corridors support the functions of the primary corridors while extending connectivity to local areas. The secondary corridor identified within the municipality is the R374 from Barkly West to Windsorton:

Tourism Corridors

The tourism sector within the municipality contributes significantly to the local economy This SDF proposes a tourism corridor along the R31 going to Kuruman.

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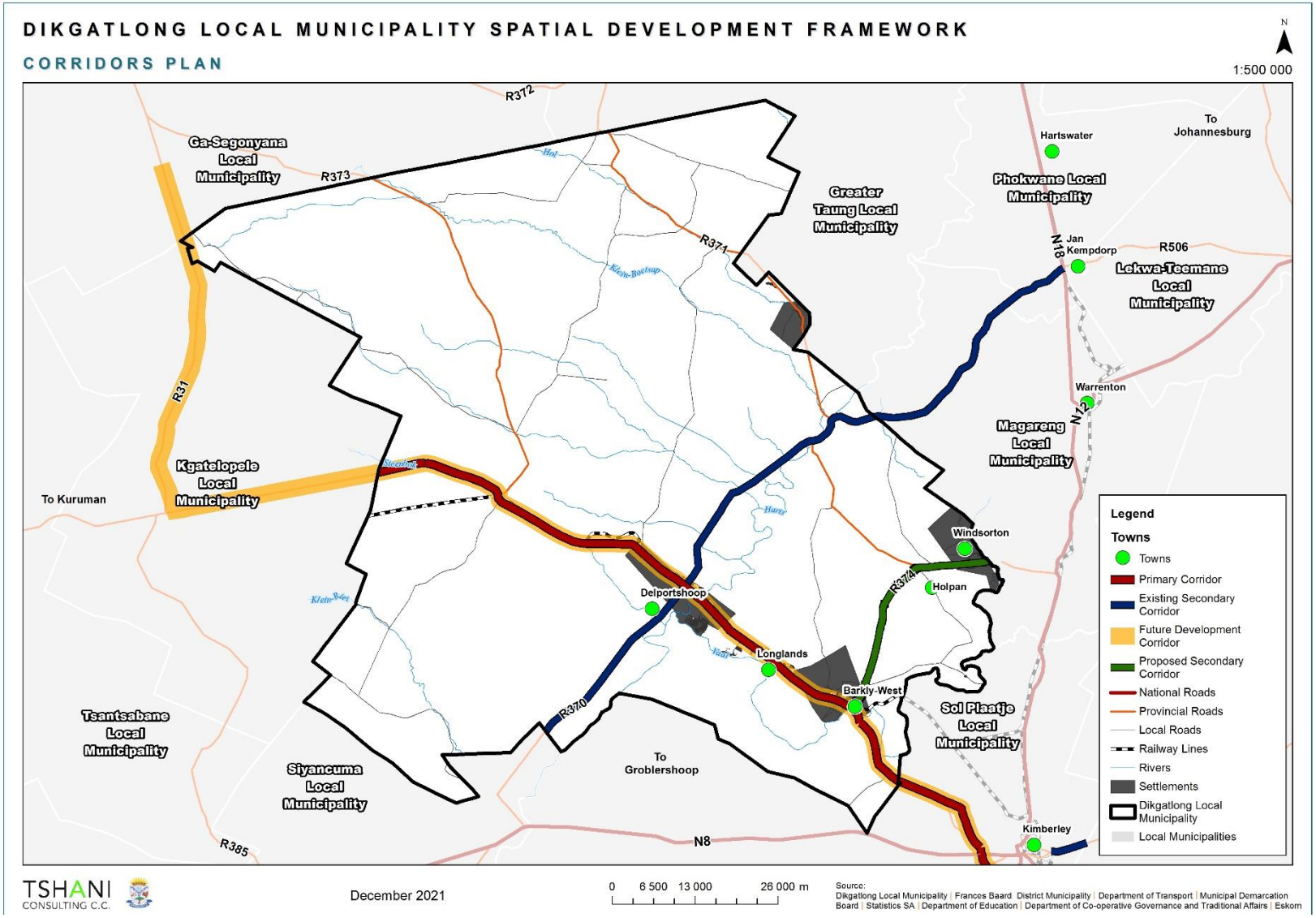


PLAN 24: Corridors

Settlement Edges

A *'settlement edge'* is the dividing line or boundary between areas of urban development (a settlement) and non-urban or rural development. It also defines the logical boundary between areas with different features and purposes, such as the boundary between areas considered environmentally sensitive and those suitable for development.

Settlement edges are used to *manage investment* and *characteristics of infrastructure levels* according to the needs of communities and economic activities located within settlement edges or outside settlement edges; and are used to encourage more efficient use of underutilized land existing in a settlement or town, through development of vacant land or the re-use of "brownfield" degraded land areas.

According to the Development Edges: A Settlement Typology Updated Approach and Data Report, 2015, prepared by the Department of Rural Development and Land Reform, over the last decade, throughout the world, and in South Africa, there has been a new focus on approaches to managing urban growth. The acceptance and use of several planning concepts has received widespread support. Many of these concepts and practices are not necessarily new, but they have become part of an integrated toolbox of concepts addressing common approaches.

These approaches are responses to several concerns and the need to address a growing awareness of the interrelatedness of issues. The undesirable features that were identified were:

- Urban sprawl, which has several dimensions, unlimited outward and "leapfrog" expansion, as well as being extremely low density.
- Large scale conversion of open space and environmentally sensitive land to urban uses
- Worsening traffic congestion
- Costly requirements to expand roads and other infrastructure
- Conversion of valuable agricultural land to urban uses.
- The following goals will be achieved through the identification of development/ settlement edges: -
- Achieving Balance (There are two dimensions to this concept of balance.)
- Achieving a Dynamic Balance between the Landscapes of Society
- Achieving Greater Urban Efficiencies
- Protecting Important Elements within Urban Settlements
- Promoting Small-Scale Agriculture
- Managing Urban Wastes
- Issues of Sustainability and Recycling
- Co-ordination of Line and Point Bulk Services to Achieve Efficiencies
- Avoiding Hazards
- Limiting the outward extension of new developments
- Raising densities in both new and existing areas

- Emphasizing public transport
- Creating what is called "sustainable" development (development that limits consumption of resources and is maintainable into the future)

The approaches to achieve these directives included concepts such as: -

- The need to create compact cities that facilitate the provision of efficient infrastructure and transportation;
- The need to be ecologically sensitive;
- The need to manage, direct, or limit urban growth, and the tool used to do this is to create an "Urban Edge", which is also called an Urban Growth Boundary.

Factors in Sizing Growth Boundaries: - Growth Pressures: -

- This is the most important factor in sizing the Urban Growth Boundary.
- Anticipated growth must have sufficient capacity within an urban growth boundary – if growth is high, then the urban growth boundary must be "roomy"; otherwise, there is a need to change it quite soon. If growth is low, then urban growth boundary can be tight.
- The Urban Growth Boundary must be related to anticipate growth pressures in terms of both amount and direction.

Potential for Growth Deflection: -

- Constrained Urban Edges will tend to push growth elsewhere.
- This could be planned to direct growth towards a particular area, and if it is possible to where an adjacent authority will respond to the opportunities, otherwise development could be scattered and /or leapfrogged.
- If an adjacent area is planned then this will not occur, but this depends on the potential for "deflection". Densification: -
- A planning decision to densify existing residential development, usually to achieve thresholds for public transportation, will require constraints on the direction for growth and on limiting the aerial extent of the built-up area and will be matched with changes of zoning within a fixed area.

Protection of Agricultural Land: -

- High quality agricultural land will determine a tight and firm edge
- Low quality agricultural land will permit inclusion within urban growth boundary

Infrastructure Capacity: -

- Limits to the provision of infrastructure will constrain an urban edge and is often a key factor,
- Infrastructure provision is large scale and done over a long period and urban edges need a long-term horizon.
- An urban edge will remain in place for lengthy periods and then large areas are included as capacity is extended or alternatives are available.
- Urban Growth Boundaries can be flexible or be adjusted at regular periods.

Fiscal Capacities and Fiscal Strength: -

- Strong income base will support expansion

In terms of the transformation of human settlements, key objectives are to ensure that people live closer to their places of work and have access to better quality transport. Proposed actions in this regard include:

- Develop a strategy for densification of cities and resource allocation to promote better-located housing and settlements.
- Substantial investment to ensure safe, reliable, and affordable public transport.
- Introduce spatial development framework and norms, including improving the balance between location of jobs and people.

Urban Edges

An urban edge is a demarcated edge line defining the outer limits of urban development. This refers to areas where full municipal services are provided to land uses other agriculture and the rural, predominantly agricultural, conservation and nature areas. Urban edges are intended to include an adequate supply of land can be efficiently provided with urban services (roads, sewers, water and storm water systems and streetlight) to accommodate the expected growth of the urban areas for a defined period. By providing land for urban uses within the urban edge the rural landscape can be protected from urban sprawl.

One of the major issues that affects the future development and spatial structure of the municipality is urban growth management. It is not possible to achieve the objectives of sustainable access to opportunities and resources if growth implies settling people further from the core area in the urban nodes. Urban growth management is recognised as the domain of the local municipalities, but it is appropriate for the District Municipality to highlight a strategy and approach that will ensure a consistency in approach between the local municipalities. Utilizing the concept of an urban edge is a tool for managing urban growth.

An urban edge can be defined as a planned boundary within the municipality with the sole purpose of containing physical development and sprawl and re-directing growth towards a more integrated, compact, and efficient urban form. Peripheral locations are faced with continuous outward development pressures and are typically seen as the perpetrators of sprawl. The delineation of urban edges for the identified nodes by the local municipalities is vital for achieving an efficient and sustainable municipality.

Urban edges are primarily set to:

- Manage urban sprawl;
- Encourage balanced growth;
- Identify areas of land intensification and densification;
- Rationalise areas of investment;
- Protect significant environments and resources;
- Promote efficient land use management systems.

The delineation of the urban edge for the purpose of the SDF takes a long term, strategic approach, looking at potential future pressure areas, municipal growth directions, population projections and strategic value of

certain locations. The value of having a long-term urban development boundary for the municipality is that –

- It enables long term, focused planning for infrastructure and services delivery;
- It provides certainty in the market, and
- It enables integrated, pro-active long-term spatial planning which can direct and manage growth and development.
- protects and conserves natural, agricultural, and historical resources, while managing these resources in a sustainable manner. These ecosystems provide a vital service to human settlements and their sustainability must therefore be protected;
- prevents urban sprawl, and curtails the pattern of low-density, haphazard, and discontinuous development; promotes a more efficient, safe, equitable and accessible urban structure through containing and intensifying urban development
- provides landowners and property investors with certainty regarding where urban development is envisaged in the short term, and where it is not envisaged.

An urban edge, by virtue of its purpose should include only enough land to accommodate realistic growth expectations for the short term. An urban edge can always be expanded but once set and development is taking place, it is practically impossible to shrink the boundaries thereof.

In dealing with growth and urbanization in the urban areas the following will apply:

- The urban edges should be clearly demarcated in local SDFs based on realistic short term growth expectations
- The local municipalities should not entertain ad hoc, short-term proposals for the amendment of the urban edge, unless a strategic change has taken place in the municipal and provincial context that warrant such changes.

It is important to articulate the fact that urban edges if are not appropriately implemented can contribute to spatial disintegration and regional inequality. An urban edge does not mean that development cannot occur outside of the urban edge, but it does guide the level and intensity of development that should occur.

The towns of Barkly West, Delportshoop, Windsorton and Longlands have been identified as the key areas within the municipality. The plans below depict the existing and proposed urban edges within the four key areas as well as other important nodes that show development potential within the municipality.

Services Edge

The Services Edge is described as the area within which the Dikgatlong local municipality is able to provide services within.

This is the space that is promoted for densification. Development within this zone serves to manage, direct, and limit urban expansion.

Transition Zone

The Transition Zone is described as the area between the Urban Services Edge and the Urban Edge. The area within the Transition Zone is where future expansion can occur in the coming years. This is envisaged within the areas of Industrial activity, Agro processing, and at sometimes Residential and Commercial.

These land uses can be allowed for development provided that the land uses are in line with the spatial pattern and desired spatial form of the area.

Due to the spatial goal of increased densification within the Urban services edge, Infrastructure provision within the Transition Zone is to the responsibility of the developer.

Barkly West Urban Edge:

To ensure alignment to the future development of the Barkly West node, a proposal for the expansion of the existing urban edge is accommodated here. This expansion of the urban edge is to allow for the growth of the towns in alignment to the current trends in development at the periphery of these towns. The urban edge has a blob that includes the Pniel area.

The area along the R374 has been termed the "Transition Zone", this is to allow for the change is land use to occur gradually and sequentially over time. This is proposed to ensure that developments occur in a sustainable manner where service provision can also occur sequentially and to not put added strain on the service provision for the municipality through leap frogging developments.

Delportshoop Urban Edge:

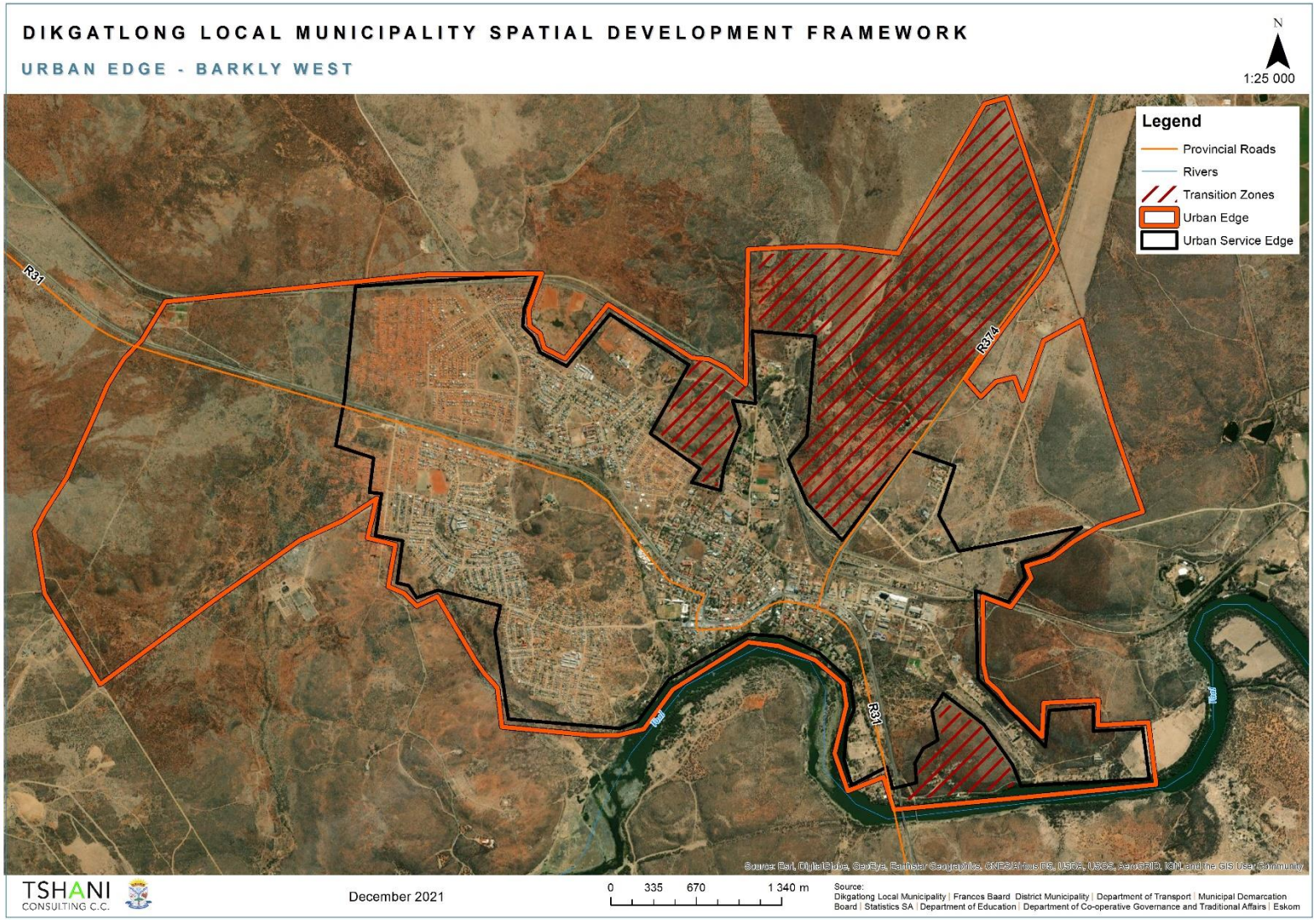
The Urban Edge for Delportshoop has an expansion proposal to cater for the growth and land use proposals taking place. The node also makes provision for a transition zone.

Windsorton Urban Edge:

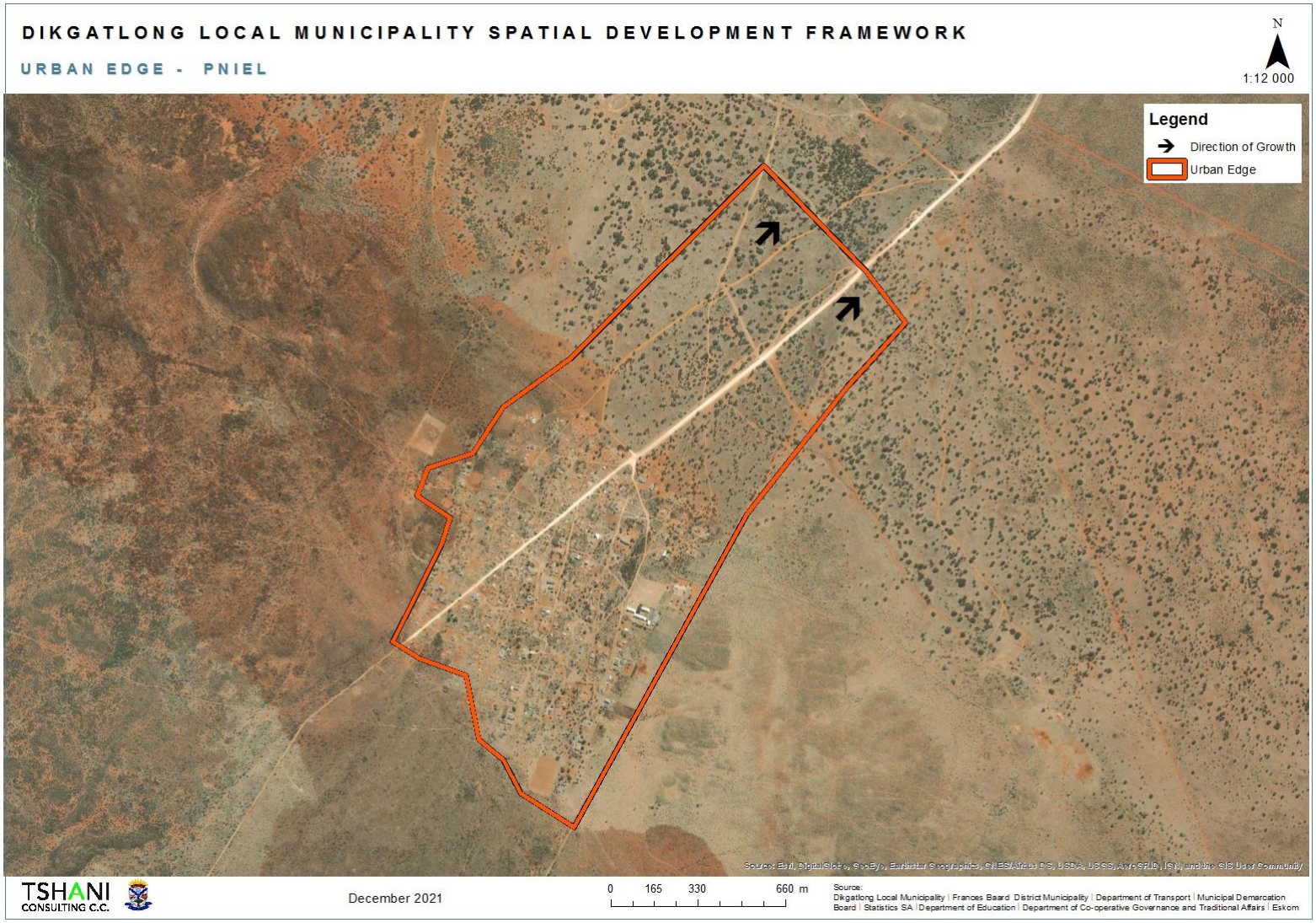
To ensure alignment, the urban edge is slightly expanded to accommodate the few residential areas that fall outside the existing urban edge.

Longlands Urban Edge:

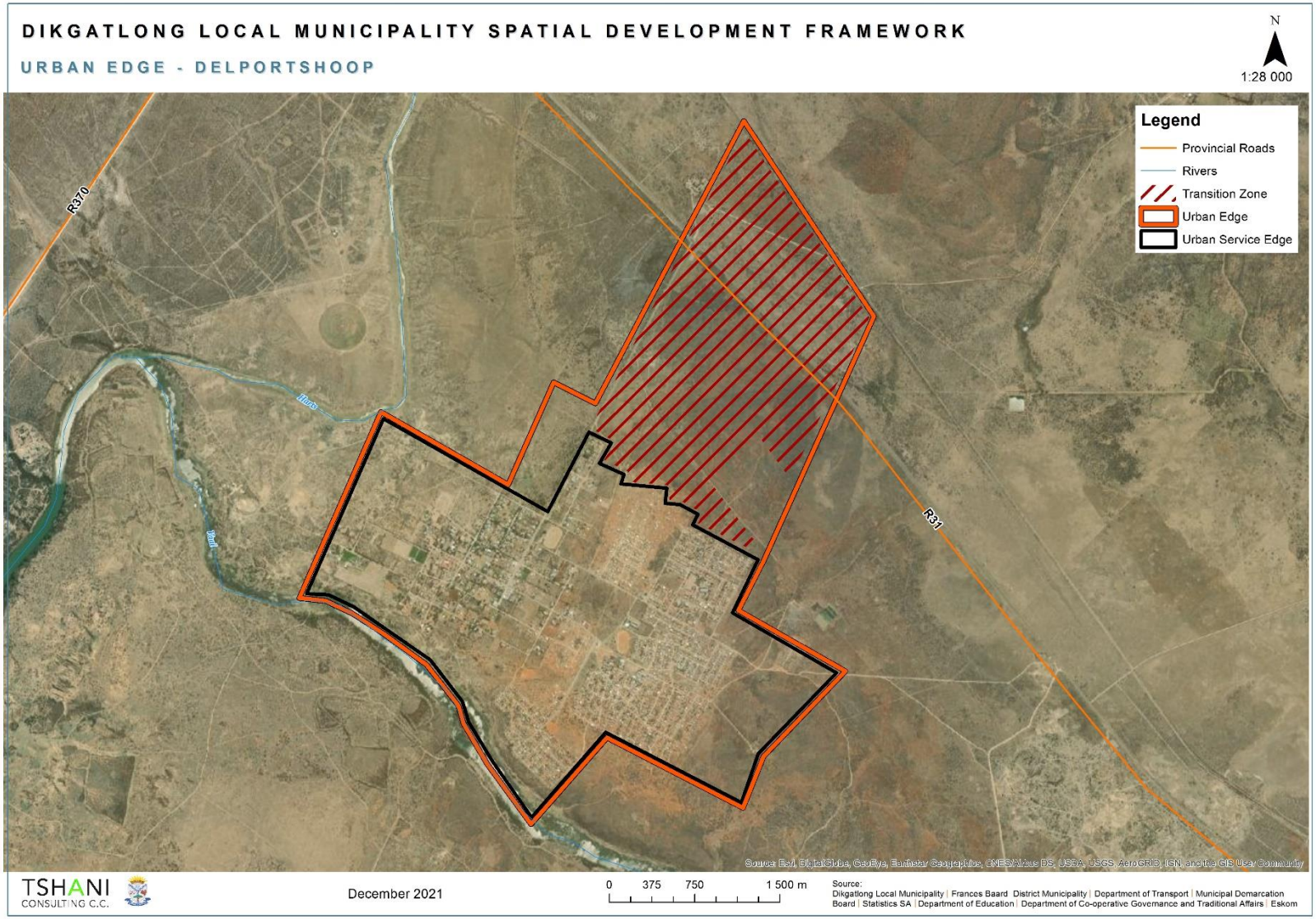
Expansion of the Longlands urban edge is encouraged. The isolated location and single use nature of the township, residential only with community facilities that could serve as magnets for economic activity, but they are situated at the "rear" (east) rather than at the "front" (west) on the link access road means that there are limited economic benefits that could have flowed from this infrastructural and housing investment are considerably diminished. There is a provision for a transition zone between the residential area and the community facilities on the east.



PLAN 25: Barkly West Urban Edge

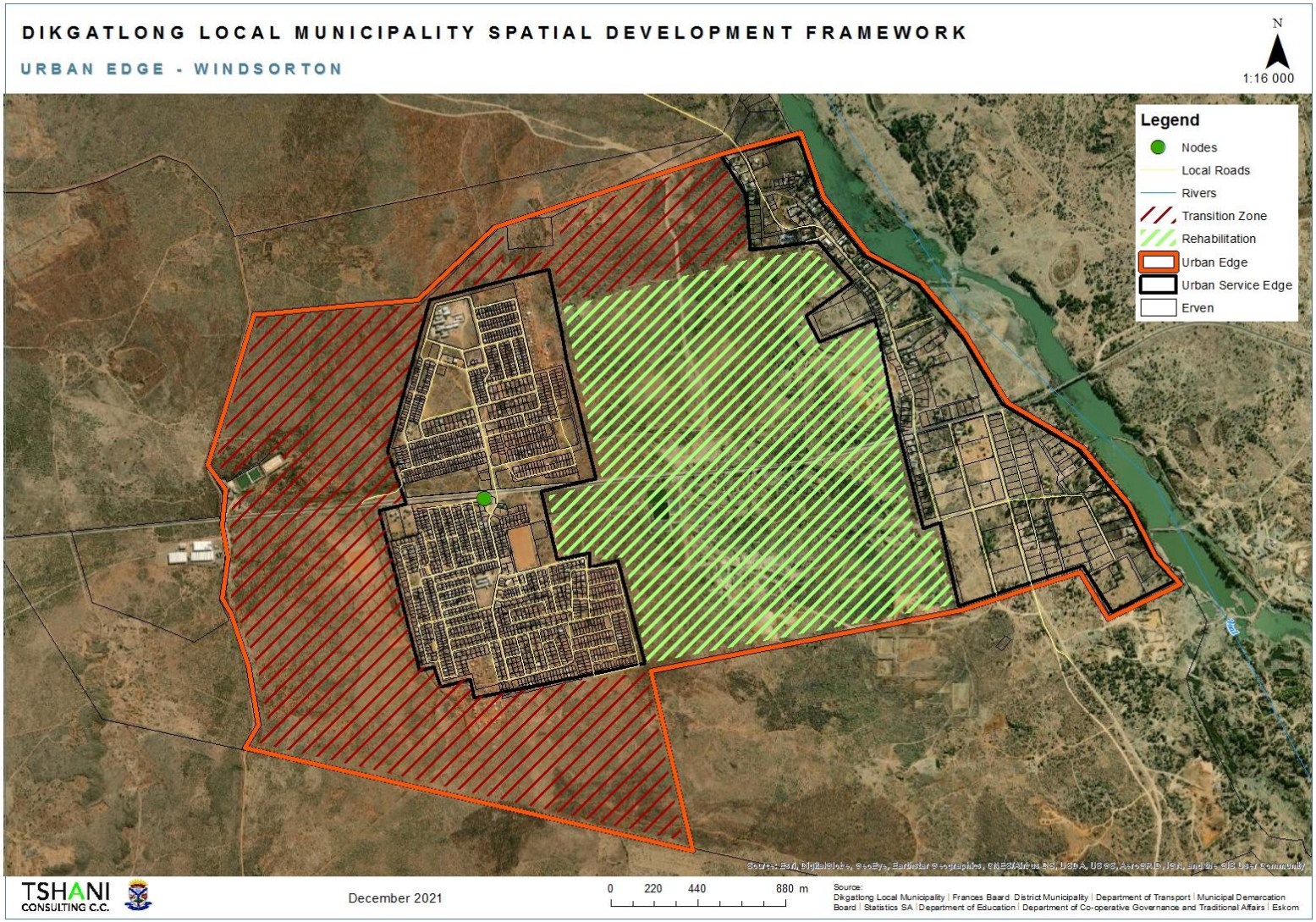


PLAN 26: Pniel Urban Edge



PLAN 27: Delportshoop Urban Edge

PLAN 28: Longlands Urban Edge



PLAN 29: Windsorton Urban Edge

LAND USE PROPOSALS

Barkly West Node

Barkly West is the administrative centre for Dikgatlong and is situated within 35km from Kimberley. In the SDF the following attributes of the town are acknowledged:

- Dormitory function to Kimberley and close proximity thereto;
- Availability of industrial land;
- Development potential of the river frontage;
- Dramatic gateway into town from Kimberley;
- Places of historical interest exist. (Heritage sites)
- Rich mining and digging activities in the surrounding area (Tourism Potential).

Residential

- There is a great opportunity for residential expansion along the R374 going to Windsorton.
- There is an opportunity for high-income residential development close to the Resort.
- Infill housing development on the vacant land.

Business

- There is an opportunity for CBD expansion
- Tembisa street can be utilised for alternative student residences (flats).
- The street can also be used as an activity spine with mixed uses.
- Proposed Mixed uses on the vacant land along the R374
- There is an opportunity for an agro-processing hub.

Industrial

- Industrial Expansion is proposed within this region at various strategic land parcels. This is proposed to support the industrial expansion through the manufacturing sector and the agri-processing sectors.
- The expansion falls close to the railway line

Tourism

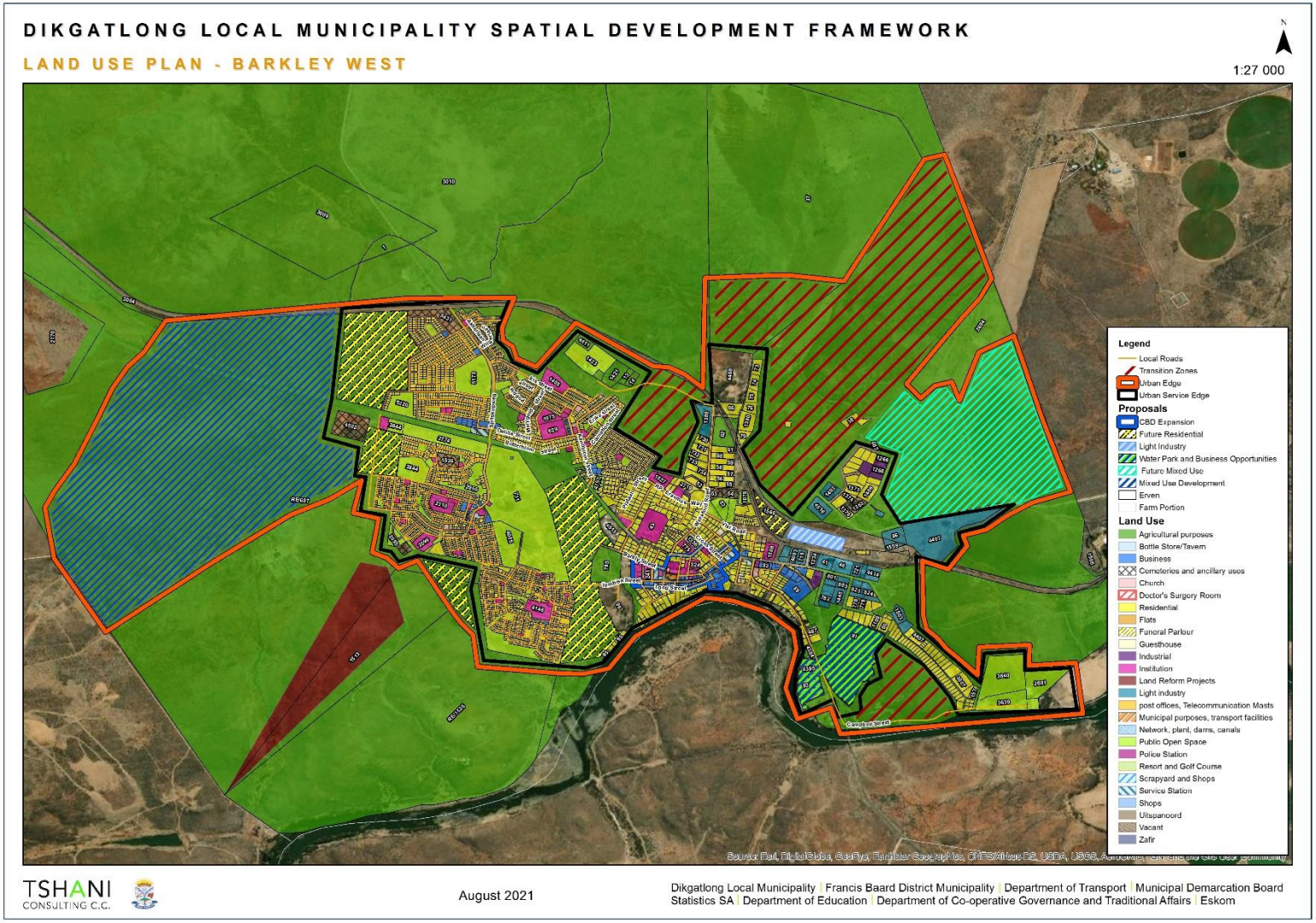
- Tourism within the Barkly West is proposed through the upliftment of the Vaal River. This river has potential to accommodate active and passive recreation through picnics and braais through passive recreation activities and active recreation of canoeing and other water sport activities.
- Rehabilitation of the mines for tourism purposes.

Education Facility

- There is an opportunity for a Sol Plaatje University Satellite Campus or and FET College for the influx of people into the city.

Mixed-use Development

- The urban edge has been changed to offer space for new mixed-use development along the R31 going to Delportshoop.



PLAN 30: Barkley West Land Use proposals

Delportshoop Node

Delportshoop is situated ± 35km to the west of Barkly West and also enjoys the advantages of location on the Vaal River for potential tourist developments (apart from diamond mining). This node is also a Rural Service Centre that has a lot of Mining happening. Some of its important attributes include

- Intensive and extensive agriculture (to be developed and expanded)
- - Mining (continued diamond mining with better controls)
- - Residential Function (Proteahof, Tidimalo, Rooikoppies, Extension 7 and Lusaka)
- - Tourism (Potential Eco – Resort and mining tours)
- - Community services.

Residential

- Residential extension and mixed land uses in the infill area between Delportshoop and Proteahof / Tidimalo / Lusaka and Extension 7.
- Residential Expansion going to the R31 for connectivity. This will also be called the transition zone.

Business

- CBD Expansion between Scholts and Pretorius Streets
- Civic Precinct in close proximity to the CBD
- Create an activity spine from the CBD to the R31 to create economic activities.
- The business potential of being in close proximity to the R31 to the north of the existing settlements has also been accommodated in the land use proposals.

Industrial

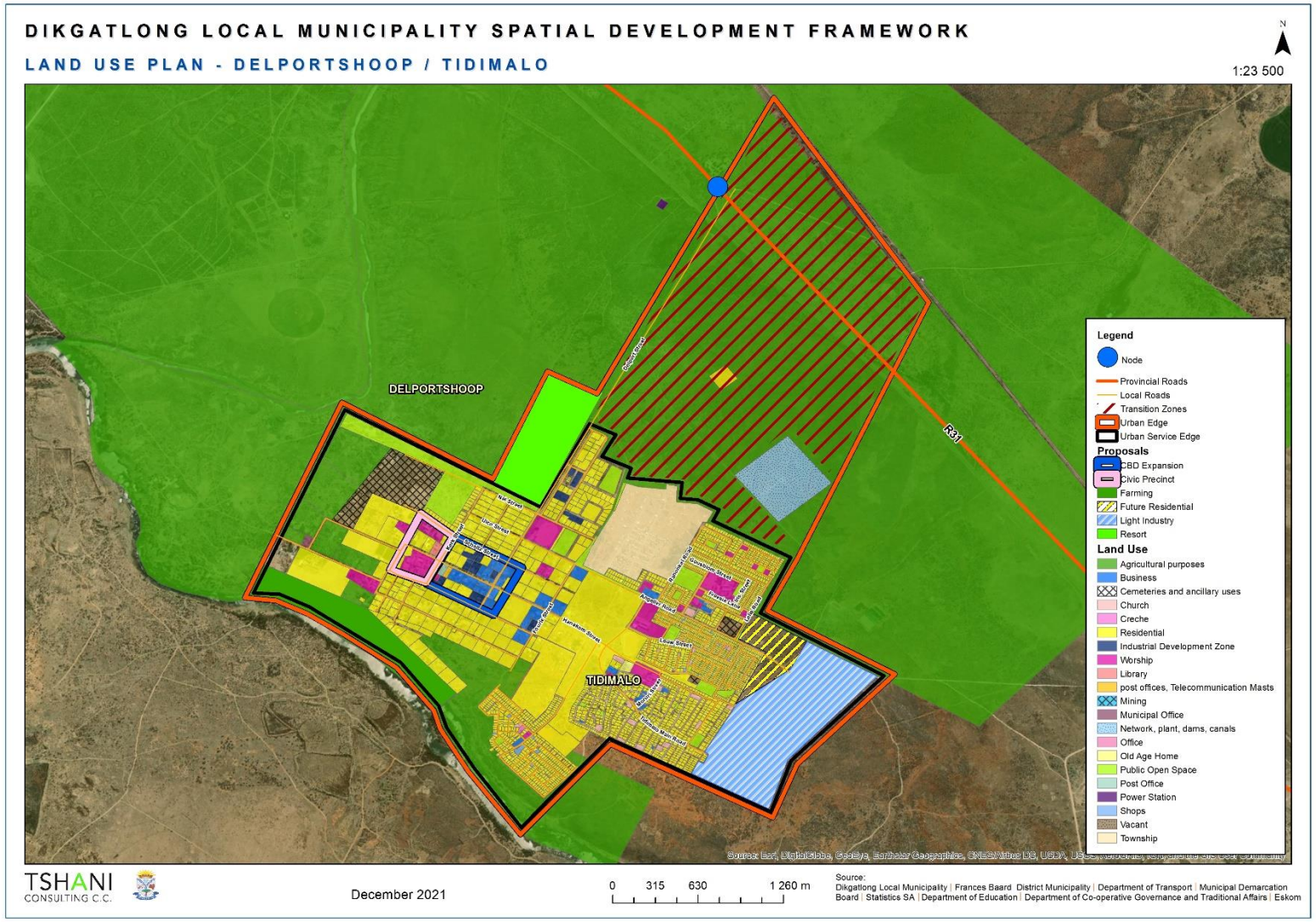
- Proposed light industry to cater for the locals and the proposed new residential.

Tourism

- Revitalisation of old mines for mining tourism

Agriculture

- Proposed commercial farming along the Vaal River.



PLAN 31: Delportshoop Land Use Proposals

Windsorton Node

Windsorton is a residential area situated alongside the Vaal River. The two sections of this settlement area are separated by disturbed land created by past mining activities. This disturbed mining property makes future growth and integration of Windsorton difficult unless extensive rehabilitation occurs.

Residential

Approximately 147 ha vacant land is available to the west of the Hebron Park and Kutlwano residential areas for residential expansion. The existing waterworks is also situated in this direction and would be in close proximity of the proposed development.

Business

- Mining Revitalisation in between the two fragmented developments
- Maintain linkages with Barkly West through residential expansion along the R374
- The R374 is also earmarked as a development corridor.
- Proposal for another CBD outside of town to accommodate the expansion towards Barkly West. The CBD should be along the R374.

Industrial

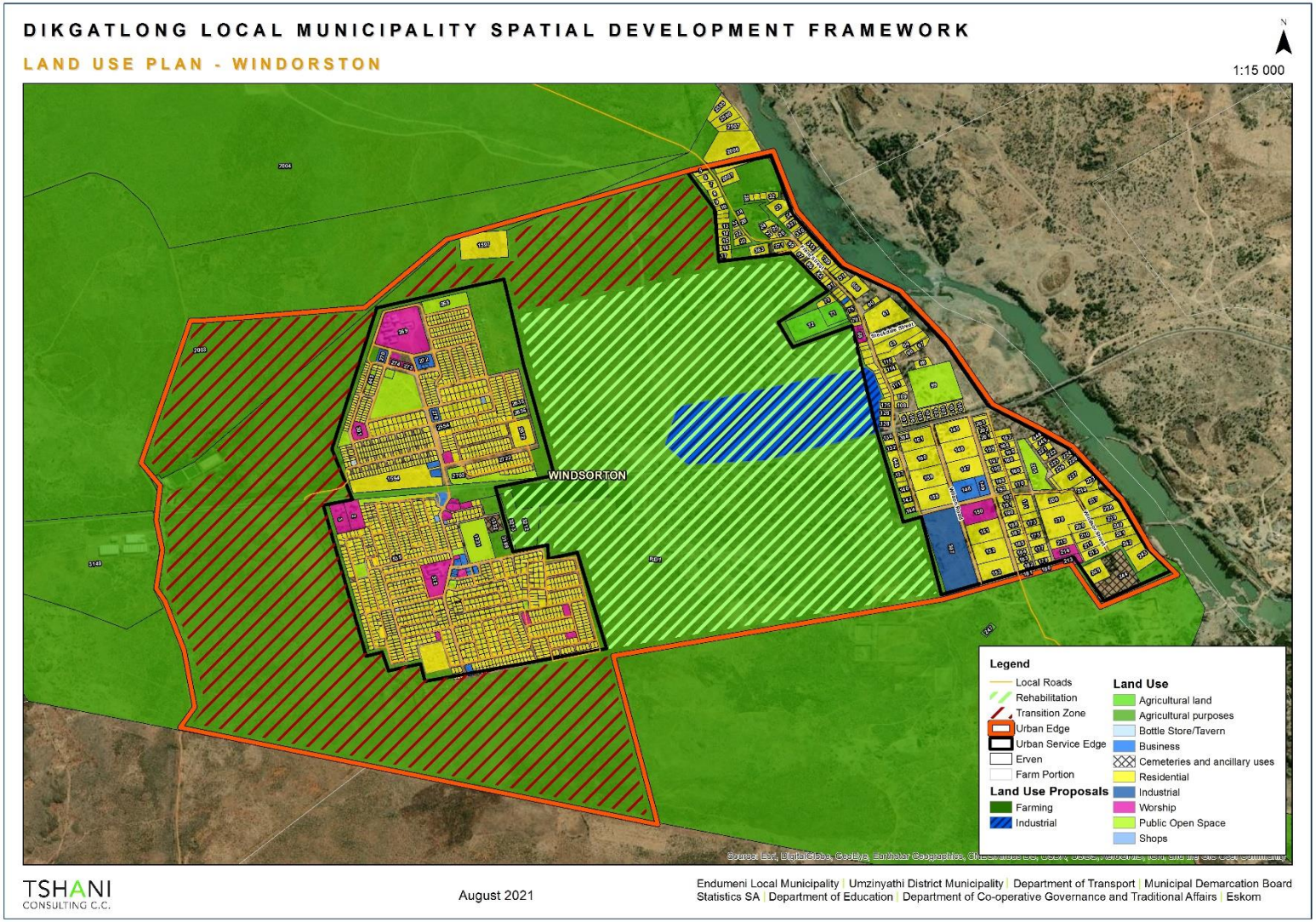
- infill light industrial development and residential expansion promoted out of the 500m WWTW buffer zone.

Tourism

- A river adventure resort is proposed on the northern outskirts of Windsorton. The possible impact of flooding should be assessed.

Agriculture

- A potential Agri-Industrial Zone is proposed on either side of the R374 within the WWTW buffer zone to promote integration between the two divided settlements of Windsorton and Kutlwano/Hebron Park.



PLAN 32: Windsorton Land Use Proposals

Longlands Node

- Longlands consists of a formal housing component of ± 500 erven plus some informal rural settlement structures. The existence of this settlement is mainly supported by the surrounding mining activities.
- Large areas of land are scarred by present and past mining activities and have not been rehabilitated. Rehabilitation measures are strongly recommended.
- Development alternative: ± 83ha of vacant land is available for development between the existing settlement area and the main road. Detailed geotechnical tests should however be conducted in order to determine stability and avoid past mining activities influencing any proposed development.
- A main Activity Spine is proposed from Longlands to the R31 Intersection.
- Mobility/Activity streets are also proposed within the settlements to promote movement/trade and improve linkages.
- Upgrading of the railway siding is recommended if a passenger service and agri -processing facilities are established
- It is proposed that the residents of the informal settlement to the SE of Longlands be relocated to the proposed residential expansion zone north of the existing settlement.
- A new CBD and Service Node is proposed next to the NW section of the established settlement in order to promote development closer to the R31
- A second Retail Services Investment Node is proposed at the R31 intersection in order to benefit from passing trade

PLAN 33: Longlands Land Use Proposals

SUSTAINABLE HUMAN SETTLEMENTS

Housing demand for various sectors, location, and proposed densities (SPLUMA 21 (f)). The preparation of this framework will be entirely based on existing housing development strategies and/or inputs from the various officials within the municipality, based on institutional knowledge of housing needs within the district. The intention is not to undertake a Housing Sector Plan study where it does not exist.

There are two main ways of determining housing demand/need within municipal areas, these are 1) using statistics from the census or other credible studies (using the data to do trend analyses and make predictions) and calculating relevant variables or 2) through the analysis of housing waiting lists or National Housing Needs Register. Both are utilised in the following section, as both have limitations, it should however be noted that the statistical predictions are based on very dated information and their accuracy are questionable and they do not take considerations that housing developments already undertaken.

An understanding of where demand originates, and by whom as well as the nature of the demand can inform planning to enable targeted decisions regarding the types, tenure and location of homes and prioritisation.

The National Housing register (2022) indicated a total 9013 applications. From the table below it is clear that the majority of the applicants fall within the low cost housing category and would thus require an RDP house. The demand for rental housing is relatively low, with only 137 individuals indicating a need for rental housing.

The table below indicates the reviewed 2022 demand for Dikgatlong LM Human Settlements based on statistical and trend analysis calculations and the National Housing Needs Register as at 8 February 2022.

Table 10: 2022 Reviewed DLM Housing Demand

Municipality	Total Housing Demand		Low Cost/Subsidised Housing		Gap Housing		Rental	Unknown
	Statistical Demand	Needs Register	Statistical Demand	Needs Register	Statistical Demand	Needs Register	Housing Needs register	
Dikgatlong (HSP 2017)	13 347	9 199	9 576	8 985	3 771	NA	214	NA
Dikgatlong (HSP 2019)	11 858	10 801	9 576	9 576	2 282	NA	1 225	NA
Dikgatlong (HSP 2020)	8 561	9 030	7 442	8 894	2 229	4	132	NA
Dikgatlong HSP Revised 2022	14 519	9 013	11 792	8 216	2 757	122	137	541

Source: Human Settlements Sector Plan 2022/23

Proposed Housing Projects:

According to the Human Settlements Sector Plan, there are proposed human settlement development projects on specific pockets of land. These pockets have been identified due to their strategic location, being near the Central Business District, being near public facilities, being areas, which have the most need of housing and human settlement development, etc.

These housing / human settlement projects are categorized into rural housing projects, middle income housing projects, etc. and therefore cater for various income groups which were identified during the situational

analysis. The proposed Human Settlements Plan, therefore, is envisaged to facilitate the development of these projects and ensure that they meet the desired income group within the envisaged timeframes. The following form part of the housing development projects:

Table 11: Gikgatlong LM COGHSTA Housing Pipeline 2022/23

Project	Project Type & Funding Sources	No. Units	Location	COGHSTA 2022 PIPELINE STATUS	Planned 2022/23 Key Performance Indicator Output
Barkley West, 1200	IRDP Town Est. FBDM Funded.	1200 Erven 1045 Units	Barkly West	No Business Plan No Bulk Services No Planning (township establishment, environment and geo-tech) No Internal Services No beneficiary List	Submit Business Plan Finalised Bulk Services Finalised Town Planning
Barkley West, Sonderwater, 3500	IRDP	3500	Barkley West	Not aligned with SDF & IDP No Business Plan No Bulk Services No Planning (township establishment, environment and geo-tech) No Internal Services No beneficiary List	Submit Business Plan Finalised Bulk Services Finalised Town Planning
Barkley West, Mataleng , 70	IRDP	70	Barkly West	No Business Plan No Bulk Services No Planning (township establishment, environment and geo-tech)	Submit Business Plan Finalised Bulk Services Finalised Town Planning

				No Internal Services No beneficiary List	
Proteahof, Delportshoop, 217	IRDP	217	Delportshoop	Complete except for Beneficiary list	Project Finalisation
Rooikoppies, Delportshoop, 200	Housing Project	200	Delportshoop	No Business Plan Bulk Services Complete Planning Complete except for Environmental Study and Geo-tech Internal Services Complete No Beneficiary List	Submit Business Plan Completed Environmental and Geo-tech studies
Proteahof, Delportshoop, 365	IRDP	365	Delportshoop	No Business Plan Bulk Services Complete Planning Complete except for Environmental Study and Geo-tech Internal Services Complete No Beneficiary List	Submit Business Plan Completed Environmental and Geo-tech studies
Delportshoop, 125	Infills	125	Delportshoop	No Business Plan Bulk Services Complete Planning Complete Internal Services Complete No Beneficiary List	Submit Business Plan Project Finalisation
Windsorton, Kutlwano/Hebron, 550	IRDP	550	Windsorton	No Business Plan Bulk Services Complete Planning Complete except for Environmental	Submit Business Plan Complete Environmental Study and Geo-tech

				Internal Services Complete No Beneficiary List	

Source: Housing Sector Plan 2022/23

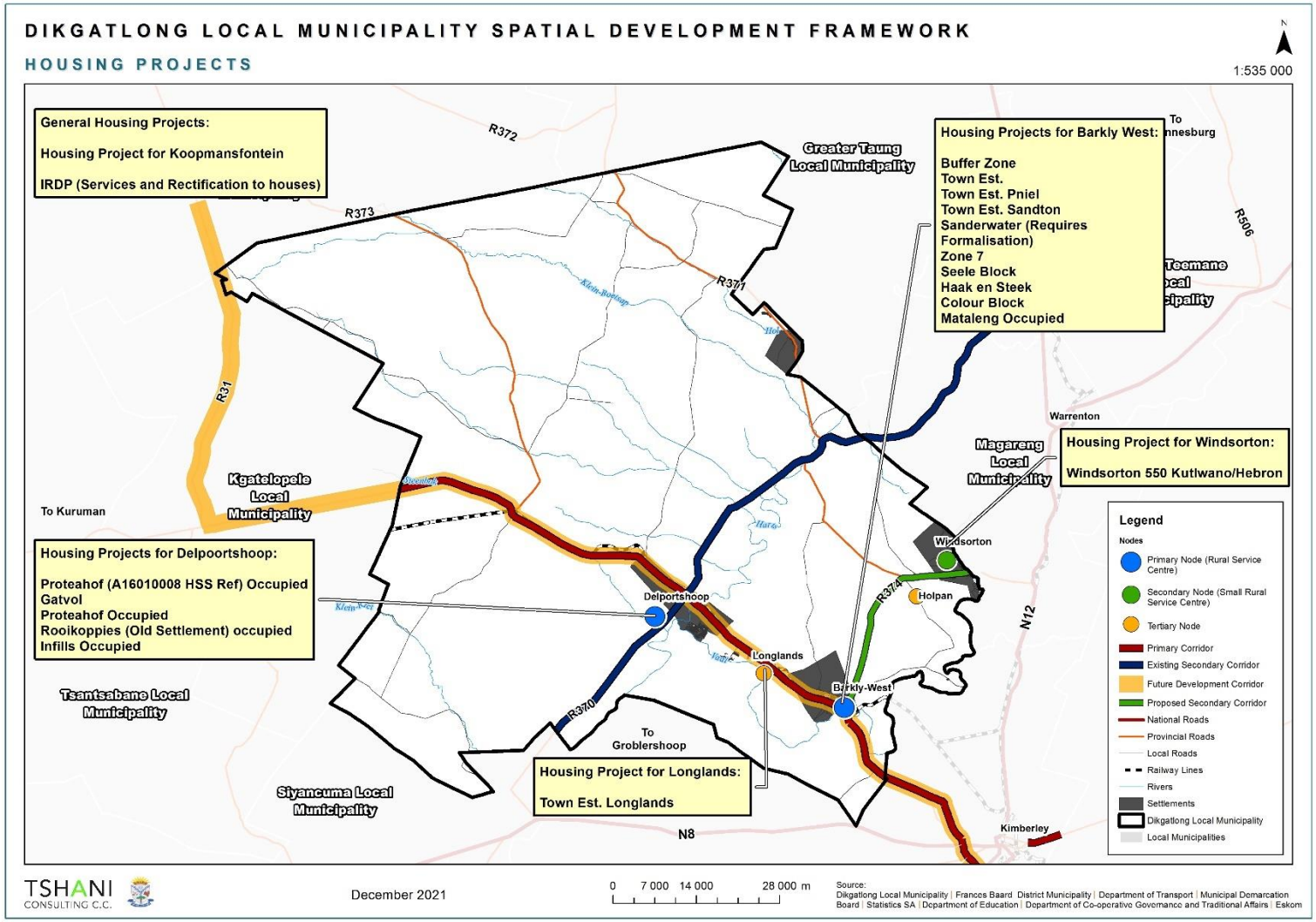
(Dikgatlong LM Housing Projects not on the COGHSTA Housing Pipeline 2022)

Table 12: Dikgatlong LM Housing Projects Pipeline 2022/23

Project	Project Type & Funding Sources	No. Units	Location	Status 2021/22 (according to DLM)	Planned 2022/23 Key Performance Indicator Output
Barkley West, 160 (Buffer zone)	IRDP	160	Barkley West	No updated information provided	Require clarity on status of project
Barkley West, Pniel, 500 (Inclusive of Pniel and Pniel Estate)	Town Est. COGHSTA	500 Erven	Barkly West	Bulk Services Required Internal Services Required	Completed Bulk and Internal Services
Barkley West, Sandton, 140	Town Est. COGHSTA	140	Barkly West	Bulk Services Required Internal Services Required	Completed Bulk and Internal Services
Barkley West, Zone 7, 140	Housing Project: Formalise Area	130	Barkley West	Geotech Accepted	

Barkley, Haaken Steek Settlement, 350	Informal Settling	350	Barkley West	Feasibility study and assessment (if possible) is required for the potential township establishment. The area is very rocky and is danger of flooding.	Completes Feasibility Study
Barkley West, Colour Block, 60	Informal Settling	60	Barkley West	Feasibility Study Required (Rocky Terrain)	Completed Feasibility Study
Longlands, 600	Town Est. COGHSTA	600	Longlands	Business Plan submitted to COGHSTA in 2020 Bulk Services Required Internal Services after TE	Completed Bulk and Internal Services
Barkley West, Seele Block, 70	Informal Settling	70	Barkly West	Business Plan Feasibility Study Required (Rocky terrain)	Completed Feasibility Study
Stillwater, 145	Information not available	NA	NA	Not included in the housing pipeline projects. Two GEOTECH reports prepared by the NHBRC and cracks in the soil during construction. This project is under investigation. COGHSTA commissioned their investigation team to furnish the municipality with a report. The municipality has not received the report yet.	NA

Source: Housing Sector Plan 2022/23



PLAN 34: Housing Projects

CEMETERIES

There are numerous cemeteries, and graveyards in the municipal area. These are associated with townscapes, rural landscapes, farmsteads, church land, and battlefields. Although formal cemeteries are reflected in existing data bases there are no accurate records of informal cemeteries and graves.

Key Interventions:

- Municipalities to review their SDFs and IDPs to map and discuss existing and proposed cemeteries and Crematoria, identify the available land, as well as include future budgeting requirements in relation to acquisition and establishment
- Ensure that Municipal Schemes have appropriate zones to support such development of such facilities including appropriate additional controls
- Municipal planning staff engage with relevant business units regarding public focused developments to ensure that the location is optimal and sustainable
- Alternative methods for disposal of human remains need to be explored including impact on the natural environment and opportunities to develop innovative open spaces. The SDF proposes a crematorium in Barkly West.
- Communal cemeteries within farmsteads and Traditional Authority areas need to be mapped as part of the development of Traditional Settlement Master Plans and/or as part of the development of a Scheme.

TRANSPORT AND INFRASTRUCTURE

The focus of movement and Transportation in the DLM is on the interplay of viable public transportation with the appropriate pattern of land use and settlement development. It is clearly recognised that public transport functions best and most sustainably when it services a user population that resides at sufficient density within the catchments of the transport services offered. Thus, it is emphasised that the theme encompasses the need to plan for public transportation services in tandem with planning for the transformation of inefficient spatial patterns of development over time.

Green Building Design

Green building is the practise of creating structures and using processes that are environmentally responsible and resource efficient throughout the building's life cycle. The Green buildings design may include:

- Safeguarding water resources: These may include rain water harvesting for indoor use, minimising water use in buildings
- Minimising waste and maximising re-use: usage of durable materials and generating less waste, demolition waste re-use
- Promoting health and well-being: Incorporating natural light and views to ensure users comfort and enjoyment. Creating indoor temperatures through building design or management of systems
- Energy saving: Integrating renewable energy usage and low carbon technologies for building's supply energy needs.
- Creating resilience and flexibility in structures: Adapting to climate change and resilience against natural disasters such as floods and hurricanes. Designing spaces that are flexible and dynamic, anticipating their changes in use over time so as to avoid demolition and rebuilding.
- Integration with surrounding environments: Ensuring transport and distance to amenities are considered on design, encouraging non-motorised transportation (NMT). Exploring information communication technologies to improve communication with the world around us.

Green Infrastructure Technology

Rainwater harvesting – Rainwater harvesting involves collecting, storing, and using rainwater for other uses. These uses can include household uses

(drinking water, sanitation etc) and agricultural uses (irrigation). Rainwater harvesting can be used by those wishing to reduce their carbon footprint, those wishing to reduce their municipal utility bill or those who have no access to formal water supply.

Stormwater harvesting – Stormwater harvesting involves the collection, accumulation, treatment and storage of stormwater runoff for reuse. It differs from rainwater harvesting in that the runoff is collected from roadside drains instead of roofs. Stormwater could be diverted to a collection point which could be used to water gardens and farmlands. In addition, planting trees in the steep areas would intercept rainfall and thus reduce soil erosion

Solid waste recycling – reduces the amount of waste that ends up in landfill sites. Solid wastes are any discarded or abandoned materials. Solid wastes can be solid, liquid, semi-solid or containerized gaseous material

Greywater reuse - Greywater is gently used water from bathroom sinks, showers, tubs, and washing machines. It is not water that has come into contact with faeces. Greywater could be collected to water gardens and farms. Greywater can be collected and reused for certain applications. The most common is watering gardens

Wind harvesting is not considered feasible in the area due to the terrain. Wind power is extracted from wind turbines which are rotated. This rotation causes kinetic energy which is then converted into electrical power.

Solar panels could be used for electricity as they are less intrusive on the residents & can be locally installed at each house where the resident can take ownership.

A solar panel is a photovoltaic cell which is mounted onto either a roof or support post. The cells generate solar electricity and are generally used in rural areas where there is no formal electricity supply or by people who want to decrease their dependence on fossil fuels or reduce their electricity bill.

Bulk Infrastructure:

Engineering services within the municipal area should be of an adequate standard before any new developments or densification may be permitted. Services such as water reticulation and waste management (sewage disposal, solid waste) are particularly important since portions within the municipal area have not been serviced. The lack of waterborne sewage systems in certain areas is worrying as this could have major negative environmental impacts. A backlog exists in the Municipality in the provision of water and sanitation and is mainly situated in the informal areas.

The desired environment will be one where all urban areas are serviced sufficiently with water, sanitation, electricity, waste, and stormwater management. Impacts of new service infrastructure on the environment need to be investigated before such infrastructure is installed. It will need to ensure that Sewerage Treatment Works (Water Care Works) and landfills have sufficient capacity to accommodate new developments to avoid pollution in all forms.

Roads

Key Informants and Policy for Transportation in the DLM

The National and Provincial Road movement network has been highlighted in the Spatial Structuring Elements.

There is a linkage from Barkly West to Kuruman using the R31. This would be a key linkage which would have the potential to unlock many economic and tourism opportunities.

Other key movement linkages which would require further upgrades include the N8 and N12 linkages which would ensure safe interprovincial movement and further links to the R31 which is the primary road in the LM.

The R374 serves as a secondary corridor within the LM and there are local roads like the R371 and the R370

Rail

The railway lines which traverse the LM through Barkly West. The railway freight has declined over the past number of years and the condition of the facility deteriorated. It has been noted through the Spatial Analysis that there is not much demand in the LM for movement of people by rail. Should rail be upgraded, it should be in line with that of logistics movement, to ensure safe and speedy movement of produce farmed within the LM.

Air

The DLM is in close proximity to the Sol Plaatje LM which is home to the Kimberly Airport, and it carries a national status and is owned and managed by the Airports Company of South Africa. The airport accommodates daily scheduled flights from the City to Johannesburg and Cape Town. It is considered to have an important role in the regional economy. The main purpose of the airport is to transport businesspeople and tourists to the FBDM which is inclusive of the DLM.

Electricity

The provision of energy is vital in a modern society. The availability of energy remains a serious resource challenge. ESKOM does not have the generation capacity to meet the rising energy demand resulting from the rapid economic growth in South Africa (DME-2008). In the last ten years community's access to electricity has significantly improved (FBDM IDP 2012). Electricity fuels industry. Electrical railway transportation, telecommunications and determines among other aspects what cooking methods a household uses, how households warm themselves and what methods they use for lighting.

It is clear that the majority (70%) of the population make use of electricity for heating, lightning and cooking. The second most used source other than electricity is paraffin. Ward three has the smallest percentage of households that have access to electricity with only 39%. 'Other' refers to forms of electricity not included in the main categories and can for example includes wind electricity or the burning of other flammable substances (animal manure). There is likely to still be considerable use of firewood.

Renewable Energy Prospects:

With the price of electricity increasing over the past few years and negative impacts of load shedding, studies need to be undertaken to determine the prospects of Renewable energy to supplement the current supply of electricity. The report assesses the potential solar and hydro energy resource in the district as well as identifies potential areas for establishment.

The Vaal River can be used for the generation of renewable energy.

The provision of alternative sources of energy has major financial implications which are connected to providing the required infrastructure and increasing accessibility. It also has environmental impacts that need to be taken into consideration, according to the following categories:

- Highly sensitive areas which may have potential for hydro and solar energy but have been classified as no go areas.
- Moderately sensitive areas that can be used for generating hydro and solar energy but will require environmental authorisation and may require certain establishing certain conditions to protect the natural environment.
- Locations that are already transformed and do not have major environmental implications that cannot be mitigated against.

Solar Energy:

Solar energy is an important source of renewable energy and includes techniques such as photovoltaic systems (PV), concentrated solar power and solar water heating. PV systems range from small, roof-top mounted or building-integrated systems with capacities from a few to several tens of kilowatts, to large utility-scale power stations of hundreds of megawatts. The technology can be easily installed on both rooftops (residential, commercial, and industrial) as well as on ground installations. The core criterion for viable PV systems is finding land that is available, meets the environmental impact assessment criteria and has a sufficiently high level of solar irradiation.

According to the electricity masterplan, this technology is now making significant strides into South African communities, it is still unaffordable for the ordinary South African because of its initial capital cost, especially regarding its energy storage

The forecasts assume that no major government driven incentive programs are implemented during the forecast period, there are minimal ongoing cost reductions for PV systems, and the residential PV market remains impenetrable due to prohibitive PV technology costs.

Water

Barkly West is supplied with treated potable water by a water treatment plant situated on the bank of the Vaal River, via a 250 mm trunk main which conveys the potable water to two concrete ground reservoirs of a combined total capacity of 7.15 Mℓ, situated on a hill located between Barkly West and Mataleng, approximately 300 m south of the R31.

Raw Water is abstracted from the Vaal River by Sedibeng Water near their Vaal Gamagara Water Treatment Works (WTW). The Sedibeng Water provides bulk purified water to Delportshoop from the Vaal Gamagara WTW.

Raw Water is abstracted from the Vaalharts Irrigation Scheme Canal. Therefore, Windsorton is supplied with treated potable water by a water treatment plant which is situated west of Hebron Park, alongside the R374 road. The WTW has a design capacity of 1Mℓ/day.

Important points to note regarding water:

- The Vaal River is the main source of water supply.
- Water is purified from the Vaal River for Barkly West and smaller settlements along the Vaal River.
- Delportshoop is supplied with purified water via Vaal-Gamagara pipeline scheme purchased from Sedibeng Water, which is purified at their Vaal Gamagara water treatment works.
- The Vaal Dam regulates the flow in the Vaal River and therefore the Vaal River can be classified as a reliable source although water pollution is allegedly occurring from mining and irrigation practises.

There are purification plants using water extracted from the Vaal River at Windsorton, Barkly West and Delportshoop

Sanitation

The majority (70%) of households in the DLM have access to a flush toilet. It is clear that there are major shortcomings in terms of sanitation in ward three and five with 23% and 22% of the population respectively, not having access to any form of sanitation.

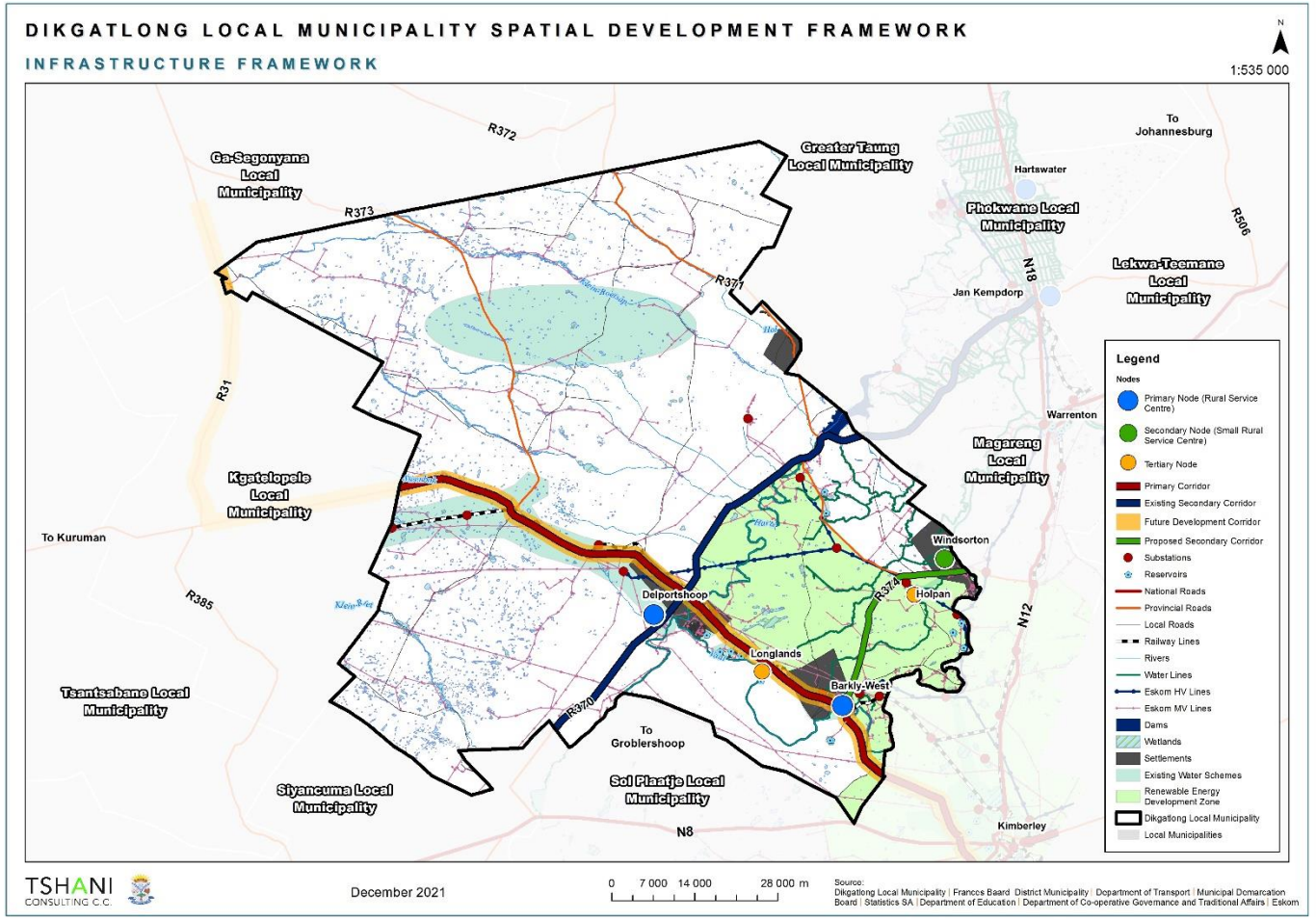
Important points to note regarding sanitation:

- Effluent from towns is mainly treated in oxidation ponds, although Ulco has a mechanical process
- Barkly West an activated sludge plant, and Vaal Gamagara a bio-filter
- The CPA's commonly have dry sanitation
- Barkly West has a small sized wastewater treatment plant, whilst Delportshoop and Windsorton have micro-sized plants and in Windsorton capacity of the oxidation ponds is overstretched.

These are some of the remedial interventions that can be employed;

- Implementation of a litter control programme for the Dikgatlong Local municipality
- Possible Recycle strategies to be implemented
- Development of partnerships with community-based Organisations & Non-Government

- Identify additional, suitable waste sites for all the local municipality



PLAN 35: Infrastructure Framework

D.2 BIOPHYSICAL FRAMEWORK

There are four (4) different types of conservation areas that can be found within the Dikgatlong municipal area:

- River Systems
- Dams
- Critical Biodiversity Areas
- Threatened Eco-systems

River systems can be defined as the whole natural water system in a drainage basin. Rivers are an important feature of most landscapes, acting as the principal mechanism for the transport of weathered debris away from upland areas and carrying it to lakes and seas, where much of the classic sediment is deposited. River systems can also be deposition, accumulating sediment within channels and on floodplains.

A dam is a barrier that stops or restricts the flow of water or underground streams. Reservoirs created by dams not only suppress floods but also provide water for activities such as irrigation, human consumption, industrial use, aquaculture, and navigability.

Critical Biodiversity Areas are areas required to meet biodiversity targets for ecosystems, species, and ecological processes, as identified in a systematic biodiversity plan. Ecological Support Areas are not essential for meeting biodiversity targets but play an important role in supporting the ecological functioning of Critical Biodiversity Areas and/or in delivering ecosystem services. Critical Biodiversity Areas and Ecological Support Areas may be terrestrial or aquatic.

Threatened Eco-systems are considered threatened if they are small or shrinking, if life-support systems like soil are being lost, or if crucial processes such as predator-prey relationships are being disrupted. Combining these measures gives an estimate of how likely the ecosystem is to collapse within the next 50 years.

Dikgatlong Local Municipality has several environmental sensitive areas, some of which are not protected. The Municipality does not have any proclaimed protected areas within its jurisdiction, however, there are few areas that are worth conservation which includes Ganspan, and Ghaap Plateau, features (e.g. heritage and cultural resources, protected flora and fauna species, watercourses)

ENVIRONMENTAL GUIDELINES

Owing to the increasing population, urban expansion and development is inevitable. However, urban expansion encroaches upon habitants with

PLAN 36: Infrastructure Framework

potentially high diversity as well as on land with high agricultural potential. Strategic land use planning in Dikgatlong Local Municipality need to be based on information as contained in the Environmental Studies, discouraging development in environmentally sensitive areas while earmarking other, more suitable areas for development.

The urban concentrations of Dikgatlong Local Municipality are characterized by several river systems near the respective towns. These systems need to be protected from pollution and encroachment by formal developments.

Formal Residential:

Homeowners will be encouraged to create indigenous gardens within existing residential areas.

Proposed new residential areas will be evaluated, based on their potential impact, whether positive or negative, on the environment. "Environment" in this sense of the word includes the natural, economic, and social environment as well as the general sense of place. Residential development in environmentally sensitive areas with high agricultural potential will be discouraged.

Areas not suitable for residential development due to geological, hydrological, and other constraints such as a lack of infrastructure need to be identified. "No-Go" areas will be "red flagged" and development role players will be made aware of this upfront

Sufficient open space areas need to be retained within new residential developments and where possible kept natural. Landowners should be encouraged to maintain their properties and keep them as natural and indigenous as possible, creating linkages with neighbouring properties and therefore establishing a natural habitat potential in the area. Where possible, natural habitats should not be disturbed.

Informal Residential:

The growth of existing informal settlements and the establishment of new settlements need to be avoided at all costs. These settlements have a negative impact due to the lack of infrastructure and basic services. Pollution in these areas is generally high. It is therefore important that these areas be formalized and that, where possible, basic services be provided.

Education, especially about the impact of pollution on the natural and social environment, should be encouraged and facilitated, informing these communities of the possible impacts and how to address these in a responsible manner. Education will contribute to the general upliftment of these communities.

Industrial / Commercial:

A desired environment should include an area free of or within minimum pollution (air, water, noise, ground). Industries need to be restricted to these areas earmarked for such purposes. Non-agricultural related industrial activities on farms and agricultural holdings should be discouraged.

Strict pollution mechanisms should be implemented and adhered to, especially in sensitive areas such as along water courses. Environmental Management Plans need to be formulated for all industries and will be monitored on a regular basis by an appointed and dedicated environmental management officer (EMO).

Air Quality Management

Air Quality Management is of utmost importance and should be considered for all development that will take place in the municipality. One facility is a Section 21 listed activity in terms of National Environmental Management Air Quality Act, 39 of 2004.

Environmental Management Zones

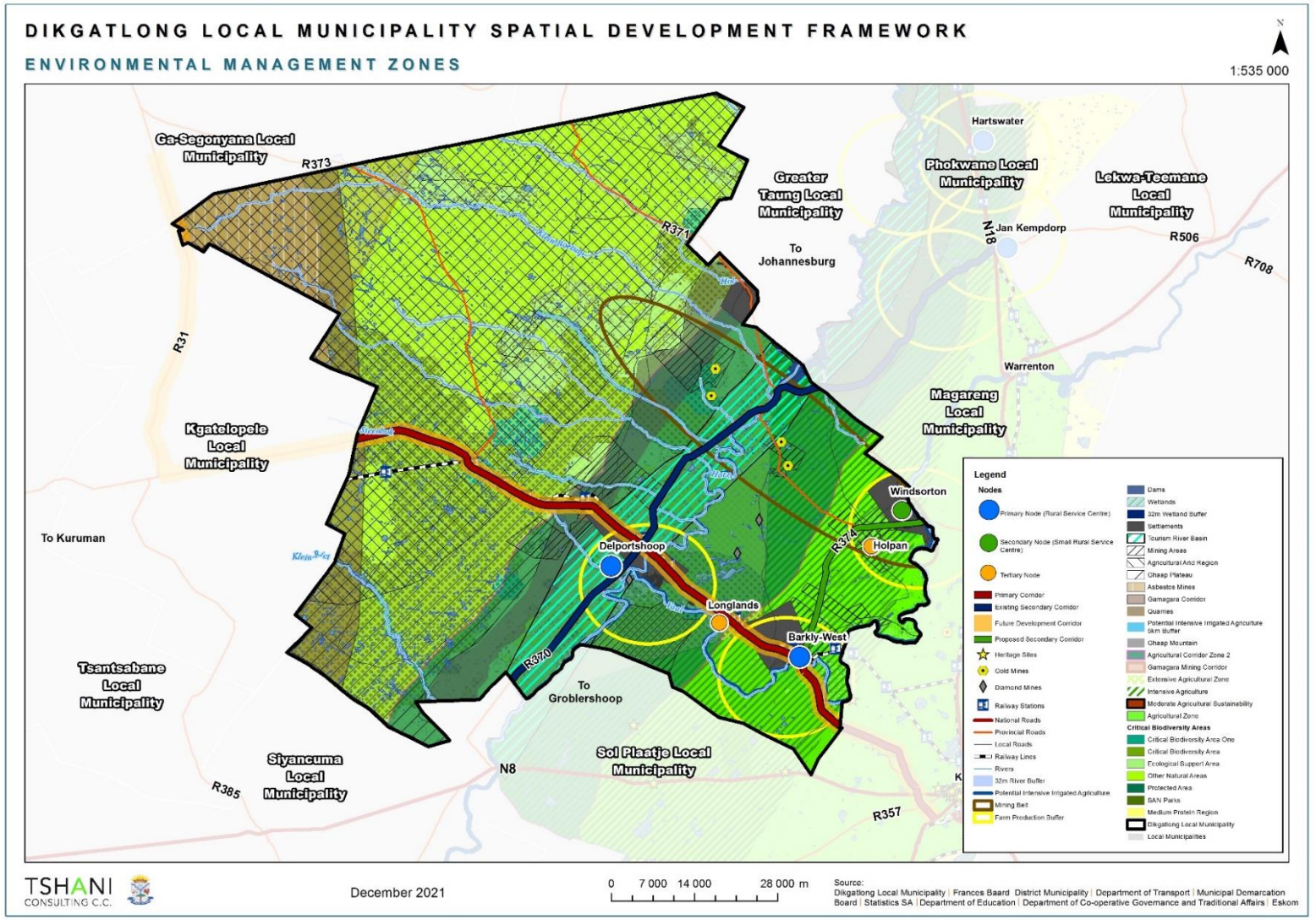
An EMZ, which is also regarded as a 'geographical area' in terms of section 24 of NEMA, represents a specific demarcated area that requires active control to ensure that its potential is realised, sensitive features are safeguarded, and potential impacting activities are controlled. The management zones focus the attention of the relevant authority on critical environmental areas in FBDM and thus ultimately guide and inform decision-making within the environmental planning realm.

The picture below gives a description of the Environmental Management Zones applicable in the FBDM. The Same EMZs are also applicable in the Dikgatlong Local Municipality.

Source: (FBDM EMF, 2019)

EMZ	Overview
Formally Protected Areas	Areas are declared as protected in terms of NEM:PAA for various reasons, such as for the preservation of the ecological integrity of those areas, to protect threatened or rare species, to protect an area which is vulnerable or ecologically sensitive, to create or augment destinations for nature-based tourism, or to manage the interrelationship between natural environmental biodiversity, human settlement and economic development (*note, not all reasons mentioned)*. Protected areas are uniquely regulated and managed to safeguard their natural assets, and it is thus deemed necessary to have a dedicated zone for these areas.
Biodiversity	This zone includes terrestrial and aquatic biodiversity features outside of protected areas that provide valuable ecosystem goods and services or are areas that are deemed to be sensitive and are associated with specific management requirements.
Agriculture	Agriculture is one of the primary economic sectors in the district. Agricultural land needs to be sustainably utilised without compromising the resource base.
Heritage	Heritage assets in the district are included in a dedicated zone to contribute towards the protection and appreciation of these features.
Urban Areas	A dedicated zone was created for urban areas in recognition of the development priorities often associated with built-up areas, such as focus areas for providing services, densification, tourism facilities, etc.
Mining Areas	A dedicated zone was created for mining and industry due to the potential significant impacts that can be caused by these sectors.

Figure 9: Environmental Management Zones:



PLAN 37: Environmental Management Zones

Disaster Management

Disaster management is the process of focusing on reducing and/or avoiding the potential or expected losses from any hazard (e.g. loss of life or livelihoods, economic loss.) There are four important phases of Disaster Management according to the CSIR, 2020; namely:

- **Mitigation/prevention:** Minimising the devastating impacts of the disaster. The focus here is on preventing or reducing the exposure to the disaster and mitigating vulnerability
- **Preparedness:** Planning the response strategy and capacitating emergency managers to provide the best response possible. The focus here is on strengthening various coping capacities
- **Response:** Implementing efforts to minimise the consequences of the disaster and reduce associated mortality and morbidity. In this phase, humanitarian action and aid are often applicable. The focus here is on coordinating of various efforts to preserve life and livelihoods, and to provide essential services and/or subsistence to those affected by the disaster
- **Recovery:** Returning the community and affected groups to a new state of normal. The focus here is on striving to 'building-back' better

These are applicable in any disaster management cycle. Ensuring that timely assistance is provided to affected, or potentially affected, communities; and facilitating the rapid and effective recovery from a disaster event through 'building-back' better. When a disaster strike (e.g. the spread of an infectious disease such as the COVID-19 outbreak), government departments and sectors, businesses, NGOs, industries and civil society will engage and respond differently with the disaster management cycle according to their mandates, responsibilities and contingency plans.

In the early phase of the disaster management cycle (mitigation/prevention and preparedness), data and information are vital to the success of the subsequent phases (response and recovery). In the case of the COVID-19 pandemic in South Africa, many sector departments faced similar questions at the start of the outbreak.

The development of a Disaster Management Strategy is of Key Importance to ensure that communities are able to sustain through a disaster, whether natural or through a pandemic.

As part of the FBDM Disaster Management Plan (2006), all potential hazards were identified at LM level, using indigenous knowledge. This included vulnerability and risk assessment for FBDM. Using GIS-techniques, it was possible to identify communities and infrastructure at risk in the FBDM.

The DLM is prone to the following disasters as set out in the FBDM EMF;

1. Drought
2. Floods
3. Veld Fire
4. Dam Failure
5. Weather Related
6. Accidents on the R31

Indigenous Vegetation

Harvesting of indigenous vegetation such as medicinal plants and firewood for domestic purposes is permissible in all ecological systems. The harvesting of medicinal plants should be restricted to removal of parts of a given plant only such as back, leaves, or roots.

Removal of whole plants is not recommended in protected areas. Harvesting of firewood may occur in all ecological systems. However, firewood harvesting should be restricted to dry, dead, and fallen branches or trees only. There should be no removal of living branches or trees in protected areas. Areas Identified as Limited Development Areas.

In addition to the above-mentioned, Act, 09 of 2009 of the NC Nature Conservation provides for the sustainable utilisation of wild animals, aquatic biota and plants; to provide for the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora; to provide for offences and penalties for contravention of the Act; to provide for the appointment of nature conservators to implement the provisions of the Act; to provide for the issuing of permits and other authorisations; and to provide for matters connected therewith.

Limited development areas are those areas which (although are sensitive) may be open to specific types of developments which would not jeopardize the ecological or conservation integrity of no-go areas. In other words, environmental impacts resulting from the development of such areas, if any, should be limited and readily manageable. Thus, any development in such areas must be subjected to rigorous environmental impact study.

Managing and Conserving Biodiversity (FBDM Environmental Management Framework, 2019)

- Conserve long-term viable and representatives of habitats of critically endangered species or any species of conservation importance (red data, specially protected species), as well as sensitive and threatened vegetation types.
- Promote formal protection (under NEM:PAA) of areas that need to be managed for the purpose of biodiversity conservation.
- Protection of Nature Reserve. Register nature reserves as statutory reserves under NEM:PAA
- Conservation of the Important Bird Areas such as Kamfers Dam.
- Implementation of biodiversity stewardship initiatives in priority areas under private or communal ownership.
- Protect environmental corridors and promotes connectivity. Ecological linkages (including the Ghaap Plateau and rivers) identified on the interface between the local municipality and the bordering municipalities must be taken into account in conservation planning.
- Restore and conserve biodiversity and ecosystem patterns and processes.
- Support species-led programmes to protect threatened species (e.g. Black-Footed Cat and Lesser Flamingos).

- Game farming to remain within the carrying capacity of existing veld resources
- Monitoring programmes for rare and endangered species (GPS) (especially vegetation) and follow up its existence in following years.
- Where land uses conflict with areas earmarked for development, ensure adequate habitat and faunal impact assessments as well as overall feasibility assessments are done and identify appropriate mitigation measures before any activities are approved or supported.
- Any irreconcilable activities in close proximity to ecologically sensitive species' habitats or initiatives / wildlife industries compatible with regions overall biodiversity objectives (e.g. conservation areas) should be discouraged or strictly controlled.
- Control and prevent the illegal removal of terrestrial faunal and floral species.
- An inventory of popular medicinal plants must be drawn up and efforts to commercially produce these species must be encouraged.

Key conservation strategies to adopt and accommodate within the conservation corridors are:

- Promoting the conservation linkages between existing natural protected areas, thereby reinforcing the natural resource foundation towards mitigating climate change. The linkages can be strengthened by the extension of buffer/transition zones to embrace large areas suitable for appropriate ecosystem management. The approach explores and demonstrate techniques to sustainable development at the regional scale. Appropriate attention should, therefore, be given to the transitional and/or buffer areas.
- Maintaining landscape connectivity is a major action that municipalities can implement through land use planning to mitigate climate change impacts within the province and South Africa as a whole.
- Mountains, ridges and rivers, including wetland systems, represent important natural corridors in the Northern Cape Province.
- Protection of intact natural habitat, especially wetlands, floodplains and intact riparian habitat is extremely important for reducing the magnitude of flood events as these areas play an important role in regulating hydrological processes, such as storm water run-off. In addition, these areas (especially floodplains) are extremely high risk for communities living in these areas.
- Ensuring that infrastructure and agricultural development is avoided, where possible, in high-risk areas to reduce the long-term impact of climate change, particularly on poor communities.
- For biodiversity conservation to succeed, the maintenance of environmental integrity (as defined by ecological, economic and social criteria) must be one of the primary determinants of land-use planning and development.

Mitigation Measures, (FBDM Environmental Management Framework, 2019)

Measures to safeguard protected fauna and flora species.

- Remove and control terrestrial alien and invasive species.
- The use of residual biocides and insecticides to control nuisance animals must be reduced through education and extension.
- Implement effective veld fire management strategies.
- Where development proposals will result in irreversible biodiversity loss even after mitigation, biodiversity offsets should be considered to offset for the residual impacts of development.
- Manage collision of birds with overhead power lines.
- Maintenance of open space systems in settlements.
- Linear-type development (e.g. pipelines, transmission lines, roads, railway lines) should be aligned along existing and proposed transport corridors rather than along point to point cross-country routes.
- Rehabilitation plans to be developed for natural areas, where disturbance occurs outside development footprint.
- Development footprint should be restricted to already disturbed areas, as far as possible.

Environmental

Climate change is a significant global concern. Traditional livestock farming e.g., goat farming has a major impact on climate change. The practice of goat farming is also vulnerable during drought events. Game such as buck are more resilient to drought. The municipal area is currently facing major water shortages due to drought.

Environmental Impact Assessments/ Authorisation:

NEMA requires that certain activities need an application for environmental authorisation before commencing such activities. Some of the activities which could trigger the need for environmental authorisations include:

- Most development activities within protected areas as well as within a 5-10km radius of protected areas.
- Development within a watercourse or within 32 metres from the watercourse
- Removal of natural vegetation
- The construction of bulk service pipelines
- Constructing within areas zoned for open space
- The construction or planning of roads
- Railway lines
- Facilities for agri-industrial purposes outside of appropriately zoned areas
- Mining
- Facilities for the concentration of animals and livestock that exceed certain thresholds
- Aquaculture
- The transformation of undeveloped, vacant, or derelict land if the development exceeds certain thresholds

Wetlands:

It is recommended that a 100m ecological buffer zone (no development) around wetlands be used as a guide when informing developments located within the study area. This buffer zone will assist in the continuation of the wetland's ecological functioning and protection of natural resources. The width of the buffer zone will depend on the nature and scale of the development.

Developments within 500m of wetlands will be required to apply for a Water Use License under the National Water Act. It is also recommended that no development be allowed within the 1:100-year flood line of rivers and streams or at least 100m where no flood line exists. The National Water Act also requires an application for a water use license to be submitted to the Department of Water and Sanitation for the following activities:

- Road Crossings over a river
- Sewer Crossings over a river
- Potable water pipe crossings over a river
- Attenuation in a river channel
- Attenuation in a wetland
- Housing within a 500m radius of a wetland
- Sewers within a 500m radius of a wetland
- Potable water pipes within a 500m radius of a wetland
- Roads within a 500m radius of a wetland
- Sewage pump station

Open Space:

Natural open spaces protect and maintain the ecological integrity of natural ecosystems. Open spaces play an important role in the social, mental, and physical wellbeing of residents and wildlife. Open spaces also protect the natural visual quality of the area and maximizes the area's attractiveness, liveability, investment, and tourism potential of the area. It is recommended that valuable environmental components and their buffers be zoned as open space. These areas include:

- Wetlands, dams, rivers, streams, watercourses (and their buffers)
- Endangered ecosystems
- Forests (minimum 50m buffer)
- Mountains and ridges
- Heritage and cultural areas

Water Courses

Water bodies refer to dams, rivers, wetlands and pans. These structuring elements refer to the following:

Table 13: Water Courses

River Type	Location
Perennial Rivers:	The Vaal River Harts River

Non – perennial rivers	Some of the drainage structures to the west of the Ghaap Mountain.
Surface water	This structure is created by local smaller drainage areas and blind smaller rivers
Ground water	Widely spread boreholes

This resource is important to the tourism industry, mining, irrigation and settlement areas. Water resources need to be carefully managed. The Frances Baard District Municipality has no control over the management upstream and therefore the quality of water is under suspicion.

Dams

The following dams are located within the District and provide drinking water to rural towns and communities as well as water for irrigation from the Vaalharts Dam.

Interventions, (FBDM Environmental Management Framework, 2019)

- Promote water conservation and demand management through regulation where appropriate. Rainwater harvesting, grey water recycling, re-use of treated effluent from WWTW and similar technical enhancements should be encouraged.
- Dedicated catchment management for important water yield areas (notably the NFEPA and priority sub-catchments).
- Promote the restoration of the NFEPA to deliver basic ecosystem functions to surrounding environments.
- Support of the implementation of the Working for Water and National River Health Programmes as well as other local and provincial conservation authority programmes related to water protection, conservation and sustainable use.
- Ensure that water is fit for use as imposed by the water quality standards.
- Provision of adequate sanitation, storm water and waste management services.
- Provision of basic services to informal settlements.
- Rehabilitation of riparian areas affected by anthropogenic activities.
- Develop drought management plan.
- Consider the potential impacts of Climate Change on long term spatial structure.

Climate Change

The growing awareness of climate change and the crucial role played by the natural environment in providing the essential ecosystem goods and services upon which all life on earth depends is the context for this theme. Climate Breakdown as it has come to be termed – is regarded as the most

significant challenge to human development and, indeed, human survival as a viable species on earth in our era. It is already having – and will continue to have – far reaching impacts on human livelihoods.

According to the Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), the following measures are recommended to adaption against climate change on the African continent:

Table 14: Key Climate Change Risks

Key Risk	Adaption measures
Compounded stress on water resources facing significant strain from overexploitation and degradation at present and increased demand in the future, with drought stress exacerbated in drought-prone regions of Africa	• Reducing non-climate stressors on water resources • Strengthening institutional capacities for demand management, groundwater assessment, integrated water-wastewater planning, ▪ Sustainable urban development
Reduced crop productivity associated with heat and drought stress, with strong adverse effects on regional, national, and household livelihood and food security, also given increased pest and disease damage and flood impacts on food system infrastructure.	• Technological adaptation responses (e.g., stress-tolerant crop varieties, irrigation, enhanced observation systems) • Enhancing smallholder access to credit and other critical production resources; Diversifying livelihoods • Strengthening institutions at local, national, and regional levels to support agriculture (including early warning systems) and gender-oriented policy • Agronomic adaptation responses (e.g., agroforestry, conservation agriculture)
Changes in the incidence and geographic range of vector- and water-borne diseases due to changes in the mean and variability of temperature and precipitation, particularly along the edges of their distribution	• Achieving development goals, particularly improved access to safe water and improved sanitation, and enhancement of public health functions such as surveillance • Vulnerability mapping and early warning systems

	• Coordination across sectors • Sustainable urban development

According to the FBDM District Development Model, 2020; Climate change will have an impact on water, agriculture and many other human activities. Some 39 key impacts have been identified. The next table provides a summary of the key issues noted by municipalities in the district when analysing the impacts of climate change. These potential impacts and the degree to which they could affect specific districts is recorded. The first column of the table below shows how many of the 44 districts indicated whether the impact needs to be planned for, with the second column showing the percentage of districts so affected. The third column indicates for this district whether or not it rated it as a critical issue for consideration:

Table 15: Impacts of Climate Change

Climate Change Impact	# Districts	%Districts	DC09
Increased risks to livestock	28	63,6	Yes
Loss of High Priority Biomes	26	59,1	Yes
Decreased water quality in ecosystem due to floods and droughts	27	61,4	Yes
Less water available for irrigation and drinking	28	63,6	Yes
Decreased quality of drinking water	14	31,8	Yes
Change in other crop production areas (e.g. vegetables, nuts, etc.)	13	29.5	Yes
Increased Occupational health problems	19	43,2	Yes
Increased impacts On strategic infrastructure	17	38,6	Yes

Increased impacts on environment due to land-use change	17	38,6	Yes
Increased heat stress	15	34,1	Yes
Increased air pollution	8	18,2	Yes

Composite Risk Profile

This part of the report details out the risk profile for DLM and its settlements, detailing the climatic impacts pertaining to fire, drought, flooding and heat. This is also shown by the use of a risk area map. This will help in the direction of development in the municipality.

Fire

The risk area map on depicts the settlements that are at risk of increases in wildfires by the year 2050. Barkly West and part of Windsorton show that there is a higher risk of extreme wildfires while Delportshoop and Longlands show a high risk of fires.

Drought

The areas in the municipality has very low chances of experiencing a flood until the year 2050.

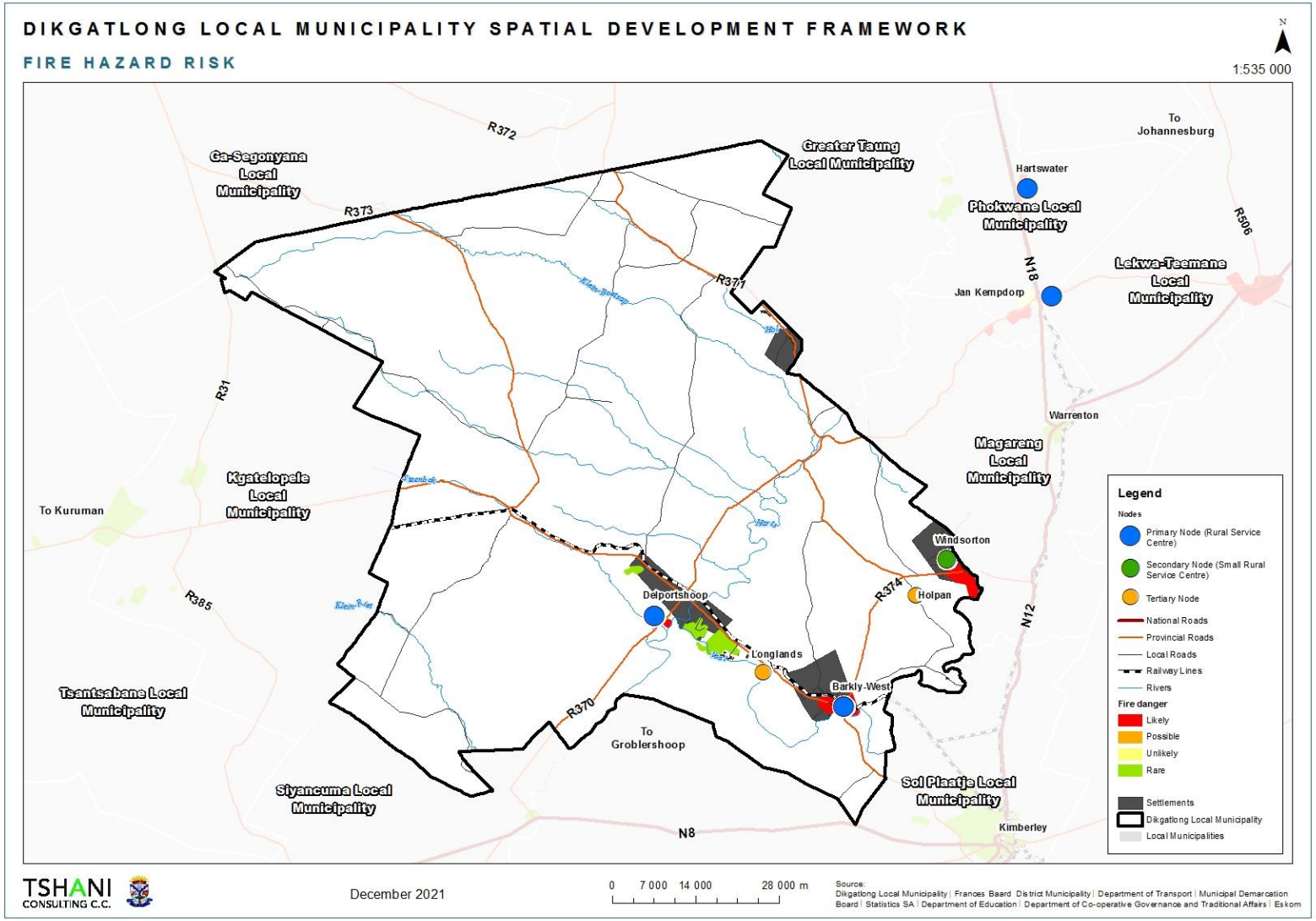
Flooding

The municipality has very low chance of experiencing floods.

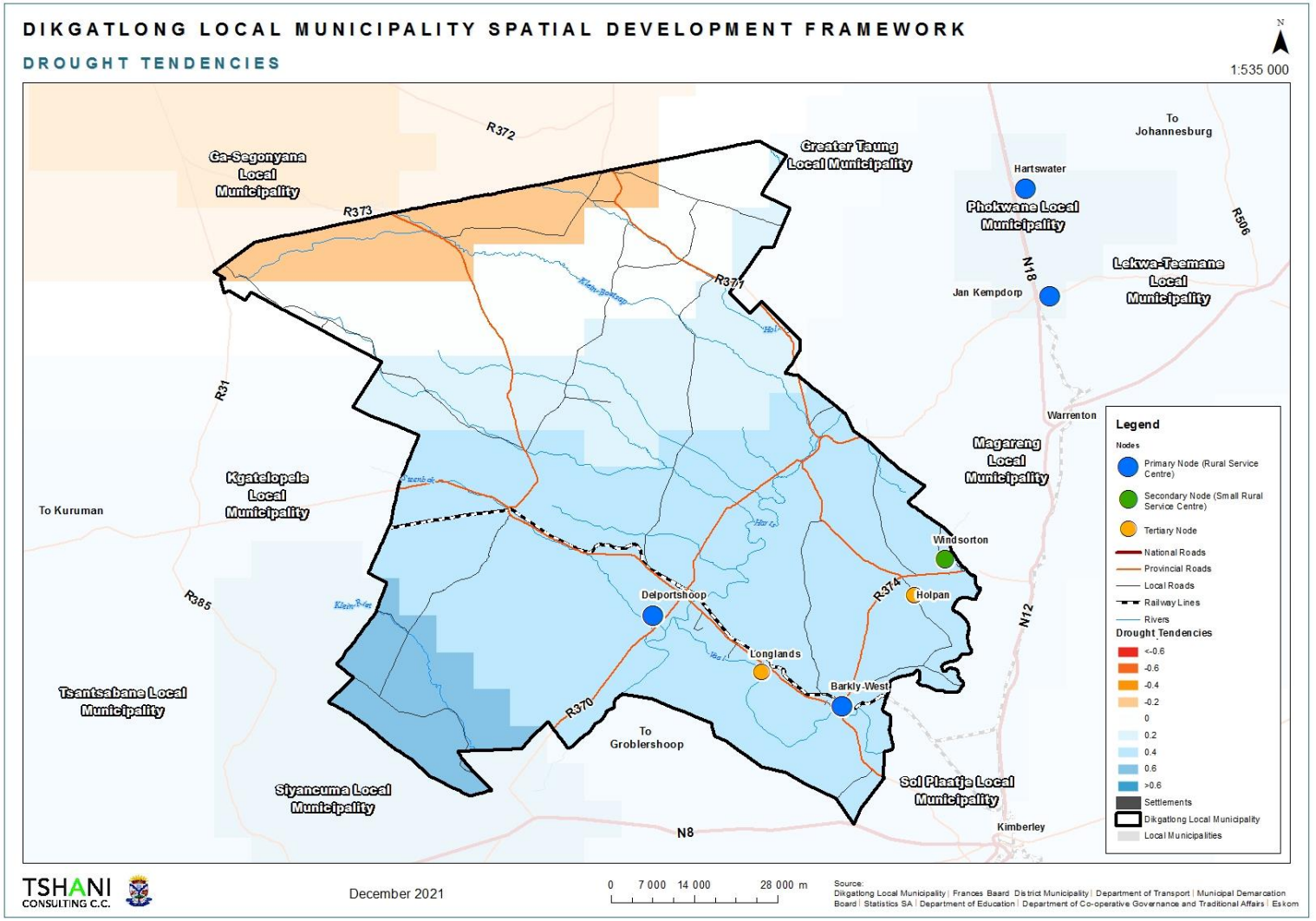
Heat

With the changing climate, it is expected that the impacts of heat will only increase in the future. The heat-absorbing qualities of built-up urban areas make them, and the people living inside them, especially vulnerable to increasingly high temperatures. The combination of the increasing number of very hot days and heatwave days over certain parts of South Africa is likely to significantly increase the risk of heat stress in a number of settlements. The heat stress map indicates settlements at risk of encountering increasing heat stresses under an RCP 8.5 low mitigation scenario (classified as either low, medium, high, or extreme risk).

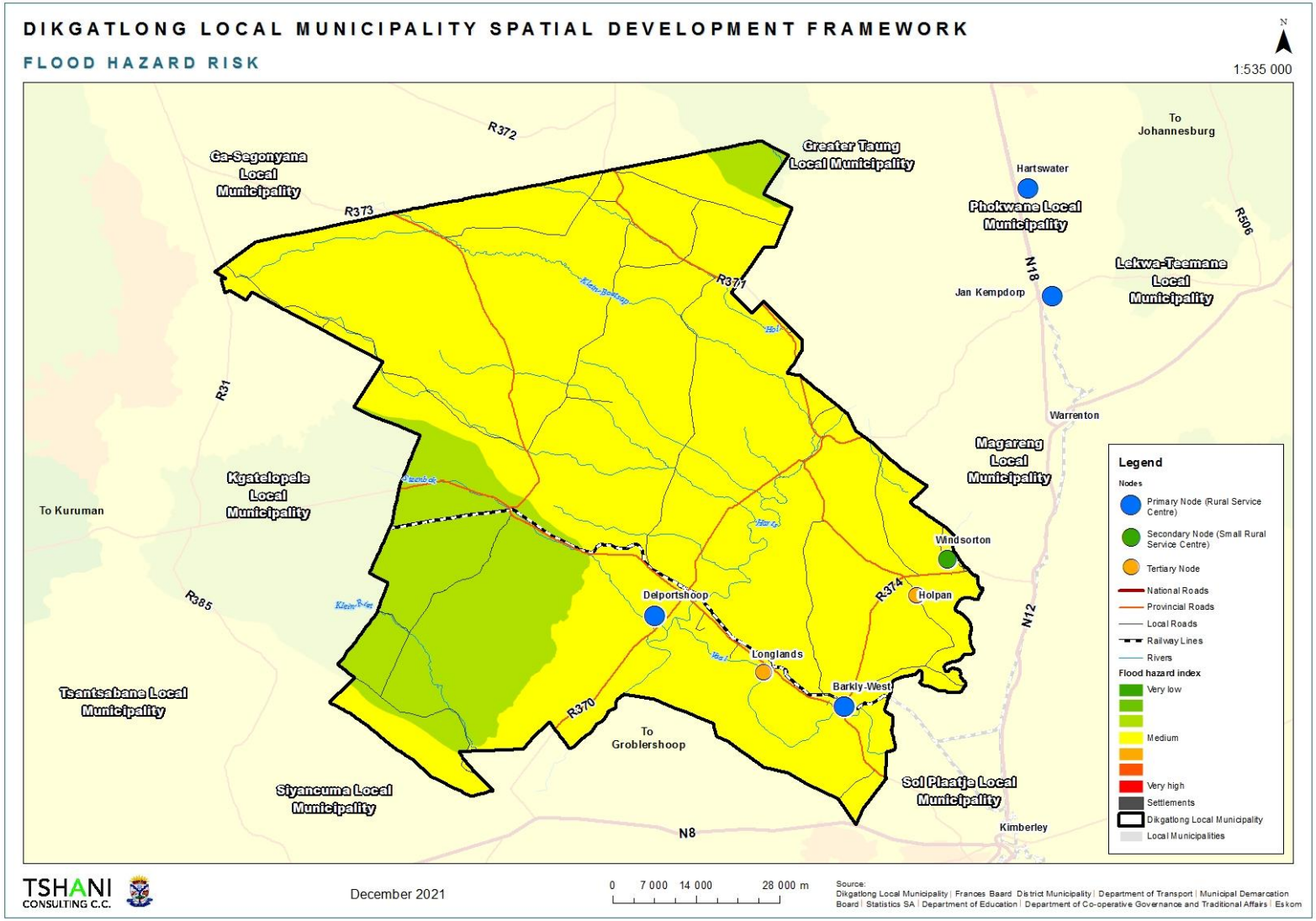
Areas around Barkly West, Windsorton and Ulco will experience a high heat stress while areas around Delportshoop will experience extreme heat stress'



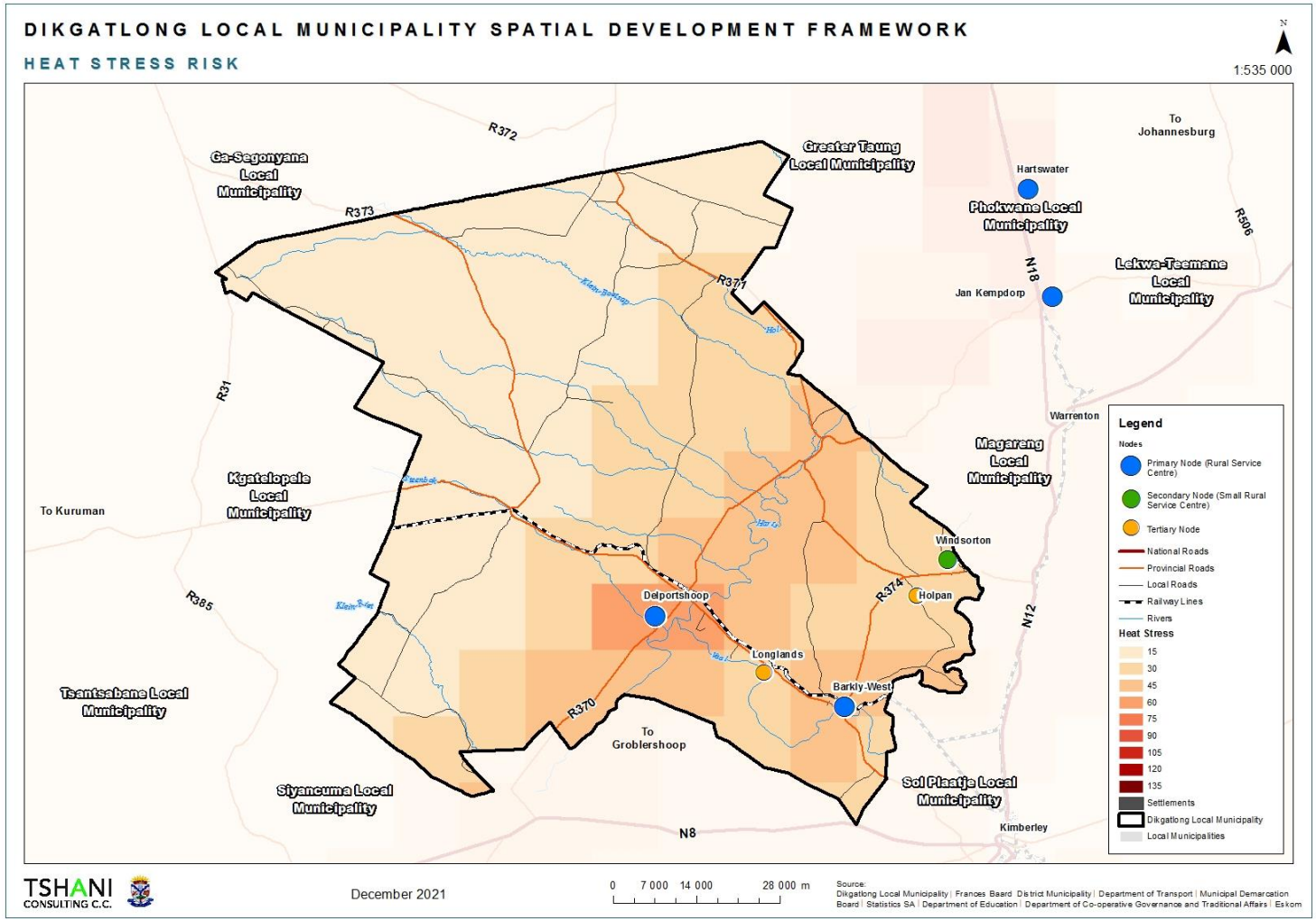
PLAN 38: Fire Risk Area



PLAN 39: Drought Tendencies Plan



PLAN 40: Flood Hazard Risk



PLAN 41: Heat Stress Risk

CRITICAL BIODIVERSITY AREAS

The National SDF and the Northern Cape PSDF identifies a framework for Linking the Spatial Planning Categories (CBA Map Categories) to Land Use Planning and Decision-Making Guidelines. The table is outlined below

Table 16: CBA Map Categories

CBA MAP CATEGORY	ADAPTION MEASURES
Protected Areas & Critical Biodiversity Area 1 (CBA1)	Maintain as natural conservation or production landscapes that maximize the retention of biodiversity pattern and ecological process: • Ecosystems and species fully intact and undisturbed • These are areas with high irreplaceability or low flexibility in terms of meeting biodiversity pattern targets. If the biodiversity features targeted in these areas are lost, then targets will not be obtained.
Critical Biodiversity Area 2 (CBA2)	Maintain as near-natural production landscapes that maximize the retention of biodiversity pattern and ecological process: • Ecosystems and species largely intact and undisturbed. • Areas with intermediate irreplaceability or some flexibility in terms of area required to meet biodiversity targets. There are options for loss of some components of biodiversity in these landscapes without compromising our ability to achieve targets. • These are landscapes that are approaching but have not passed their limits of acceptable change.
Ecological Support Area 1 (ESA1)	Maintain as ecologically functional landscapes that retain basic natural attributes (generally natural or near-natural areas): • Ecosystem still in a natural or near-natural state and has not been previously developed. • Ecosystems moderately to significantly disturb but still able to maintain basic functionality. • Individual species or other biodiversity indicators may be severely disturbed or reduced. • These are areas with low irreplaceability with respect to biodiversity pattern targets only.

Ecological Support Area 2 (ESA2)	Maintain partly functional ecologically landscapes that retain some natural attributes (generally cultivated areas): • Maintain current land use or restore area to a natural state • Ecosystem NOT in a natural or near-natural state and has been previously developed (e.g. ploughed). • Ecosystems significantly disturbed but still able to maintain some ecological functionality. • Individual species or other biodiversity indicators are severely disturbed or reduced and these are areas with low irreplaceability with respect to biodiversity pattern targets.
Other Natural Areas and No Natural Habitat Remaining	Production landscapes: manage land to optimise sustainable utilization of natural areas.

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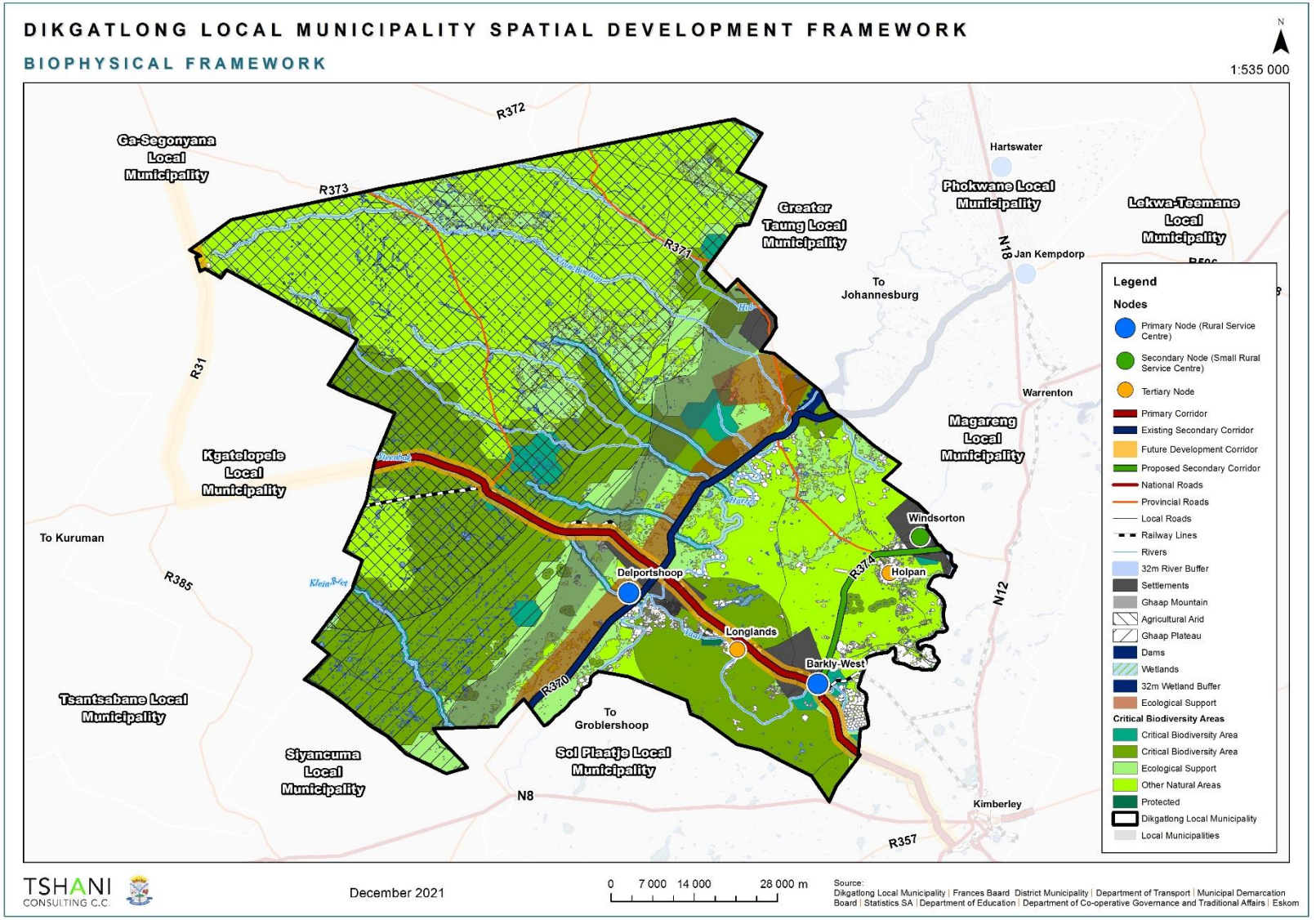
Critical Biodiversity Areas are located along the perennial rivers and Dams running though the Dikgatlong LM. There are also large parcels of CBA1's that needs to be excluded from agricultural potential land due to the conservancy of critical endangered species and grassland in the LM..

There is a lot of intensive farming and pivots located within the LM especially in the Barkley West that needs to be protected for food security.

Biodiversity score is derived from the Northern Cape biodiversity plan which classifies the Northern Cape according to biodiversity importance. Protected areas are giving a 0 score as it has no potential for development. CBA1 is also given a 0 since it's seen as critical. Ecological support areas are given a 50% score and already cultivated and used areas are 100 available for development.



PLAN 42 Bio Physical Framework

AGRICULTURE

Commercial agriculture can be defined as the opposite of subsistence agriculture. Commercial agriculture is basically growing crops intended to sell the produce for profit in the local or export market. With reference to Dikgatlong, most of the land in the municipality is utilised for commercial agriculture, and a significant proportion of the land has a very high production potential. Those areas identified through the agricultural assessment as having the highest agricultural potential have been reflected on the Spatial Framework Map as areas of agricultural development only. In general, the subdivision of prime agricultural land is discouraged and the development of this land for non-agricultural purposes should only be allowed if:

- The land has already been subdivided to such an extent that it is no longer agriculturally viable;
- The land has already been developed for non-agricultural purposes;
- The proposed development does not compromise the primary agricultural activity of the property;
- The proposed development comprises a secondary activity to supplement a landowner's income;
- It will facilitate the implementation of the Land Reform Programme and Labour Tenant Projects.

Climate Change - Climate Breakdown as it has come to be termed – is regarded as the most significant challenge to human development and, indeed, human survival as a viable species on earth in our era. It is already having – and will continue to have – far reaching impacts on human livelihoods.

The CSIR Green Book is an online planning support tool that provides quantitative scientific evidence on the likely impacts that climate change and urbanisation will have on South Africa's cities and towns.

The Green book presents several adaptation actions that can be implemented by local government to support climate resilient development.

These adaptations include:

- Determining urban edge
- Identify all open spaces
- Identify all key ecosystems and protected areas
- Connect open spaces
- Connect key transit nodes
- Determining coastal management lines
- Identifying existing vulnerable infrastructure.

The land reform process is very dependent on agriculture to succeed, but in return also provides the opportunity for growth in the agricultural sector. However, the agricultural sector serves as the main food supply source in the Municipality.

Whereas many people are already dependent on the agricultural sector, it is now feared that the sector has reached optimal production levels, whilst the

demand is increasing continuously. Furthermore, the declining food supply is also threatened by a need to produce additional forms of products such as Biofuels.

Other economic factors (i.e., rising food and fuel prices) also place continuous pressure on the agricultural sector and innovative solutions need to be found to address the long-term sustainability thereof. Production in the agricultural sector should be increased through research and development of new and better products and production methods, as well as renewed investment in infrastructure and value-adding opportunities.

Agriculture related investment should focus on supporting and maintaining existing commercial farming activities in the district in the areas where extensive commercial farming and large-scale food production currently occurs; as well as enhancing agrarian transformation in the deep rural areas of Northern Cape Province in line with the objectives of the Comprehensive Rural Development Programme (CRDP) Typical investment in these areas should include:

- Agri-parks (Including Agri-hubs and respective FPSU's, implemented according to the District Rural Development Plans);
- Support Land Reform Programme with emerging farmers;
- Farming equipment, irrigation systems, agricultural training facilities (colleges) and the establishment of small local fresh produce markets which could lead to the establishment of small-scale agro industries focusing on processing and/or packaging of local products before exporting it to larger centres; and
- Artisan and other skills training initiatives and facilities.

Promoting Agriculture as An Economic Sector In The DLM

It has been seen through the SDF that DLM has the opportunity to promote the advancement of the Agriculture sector and further promote jobs in this sector on order to ensure that the LM does not only play the role in supplying the agricultural demand within the district/province/country but also promoting job creation for the locals, thus ensuring that they are able to benefit by this sector and essentially become in a situation where they are less grant dependent and are able to live more sustainable lives.

In order to achieve this, emphasis needs to be placed on skills training and skills development in agriculture to equip the locals to be able to gain jobs in this sector and for the district to essentially thrive through this sector.

Other sectors which would thrive through this would be the industrial / agro-processing sector as well as the logistics sector to allow for the movement of the produce.

Game farming industry is expanding at a rapid pace within the DLM. A number of farms in the commercial farming sector have been game fenced and game species introduced. This is an attractive industry, as income is not only derived from trophy and meat hunting, but also through the provision of accommodation to overseas visitors.

The potential for game farming is to be facilitated.

Rural Development Focus Regions

The DLM through coordinated support can however attempt to address rural development needs through the identification of critical focus areas. These Focus areas have been identified on the basis of existing funding and institutional support initiatives available from the National Departments such as the Department of rural Development and Land Reform as well as the Department of Agriculture, both two leading role players within the rural context.

Focus Area 1: Food Security

The first focus area is targeted towards food security in surrounding communities/countries. Food security is arguably the most important rural challenge that could cause social instability in South Africa. Food security could stabilise the current economic tension especially for the rural poor while creating job opportunities. The intention of this focus area is to determine the basic rural food basket requirements. The highest cost items in a typical food basket are to be identified, where these items (where possible) would require improved value chains to decrease item values. This would indirectly provide cost saving measures for the poorest of the poor.

The food basket approach follows a bottom –up model where we seek to understand the needs of the poor, from here we can start to understand the actual demands and needs. Taking the limited economic climate into consideration the approach should be to target towards the poorest of the poor. The identification of tangible and realistic targets to change the rural climate would be critical in addressing sustainable livelihoods. Targeting the food basket could improve the lives of the poor as well as stimulate economic growth while creating employment opportunities. The food basket approach is striving towards delivering the basic foods to the poorest through existing structures and projects facilitated by government.

Focus Area 2: Agriculture Development

Enhancing equity in agriculture development through farming production support units supporting specialised commodities at Agri hubs with the required Agri processing value chain needs. It is important to understand the agglomeration advantages of the farming production supporting units as well as the Agri-Hubs. The inter relationship needs to be clarified and rolled out to lay the rural development path ahead.

Focus Area 3: Agricultural Value Chains

A value chain is a set of linked activities that add value to a product; it consists of actors and actions that improve a product while linking commodity producers to processors and markets.

Value chains may include a wide range of activities, and an agricultural value chain might include development and dissemination of plant and animal genetic material, input supply, farmer organization, farm production, post-harvest handling, processing, provision of technologies of production and handling, grading criteria and facilities, cooling and packing technologies, post-harvest local processing, industrial processing, storage, transport,

finance, and feedback from markets. A value chain approach in agricultural development helps identify weak points in the chain and actions to add more value.

Commodities targeted and the respective value chains and opportunities within value chains are to be identified. Processing opportunities are to be identified for further economic potential. Agri-processing is key to the creation of job opportunities.

Focus Area 4: Sustainable livelihoods

Subsistence farming is an initiative for the identification of economic potential areas that could accommodate sustainable livelihoods. An attempt is made to seek opportunities that could improve sustainable livelihoods through the creation of jobs and sustainable commonage management, especially through the Agricultural Sector. Other potential economic sectors are considered as well, with recommendations made towards unlocking rural development.

Focus Area 5: Urban-Rural linkages

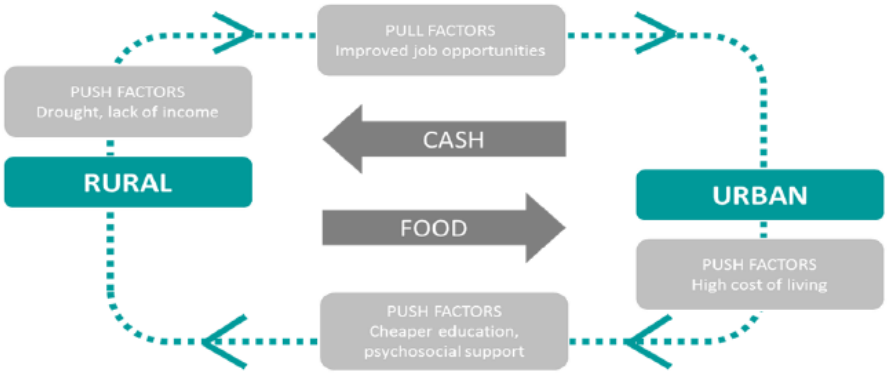
Rural-urban linkages can be defined as the structural social, economic, cultural, and political relationships maintained between individuals and groups in the urban environment and those in rural areas. Rural-urban linkages can also refer to spatial and sectoral flows that occur between rural and urban areas. Spatial flows include flows of people, goods, money, technology, knowledge, information, and waste. By contrast, sectoral flows include flows of agricultural products going to urban areas, and goods from urban manufacturing areas going to more rural areas. Typically, rural-urban linkages are often articulated in the nature and forms of migration, production, consumption, financial and some investment linkages that occur within the rural-urban symbiosis. The exchange of money, goods, visits including social activities, and communication with relatives and friends can all be used as indicators of rural-urban linkages.

Farming areas and cities coexist along a continuum with multiple types of flows and interactions occurring between the two spaces. Typically, it is now widely recognised that there exist economic, social and environmental interdependences between urban and rural areas.

Rural communities are responsible for the stewardship of ecosystem services that are essential for human survival and well-being such as clean air and water, flood and drought mitigation, pollution mitigation, biodiversity, and climate stabilization.

Urban and Rural linkages are critical towards the success of both the rural and urban built up areas, this section deals with push and pull factors that are required to ensure a sustainable balance between both urban and rural divide.

The nature and form of these linkages are not homogenous as they are determined by both push and pull factors as highlighted in Figure below.



Focus Area 6: Disaster Management

Disaster management is vital in terms of agricultural management, a brief look at potential risk areas is done to inform policy and decision makers.

Temperature dictates crop production, with optimum growth rates under different upper and lower temperature limits in different seasons. The heat unit and chill unit concept depicts this dependence and refers to the period of accumulated maximum/ minimum temperatures above/ below a threshold. Increased minimum and maximum temperatures imply an increase in potential evaporation, which is likely to have profound effects on dryland and irrigated crop production. Rainfall is critical to agriculture, especially the timing, intensity and distribution of rainfall throughout the growing season. Increased intensity of rainfall will affect both ground and surface water resources. In South Africa, a semi-arid country where the average evaporation rate exceeds its precipitation, water is a critical limiting factor for agricultural production.

Functional Regions

The following key functional regions specifically looks at the different agricultural food groups that forms the basis of the rural development strategy in the Dikgatlong LM. The food groups identified are discussed in more detail in the Food security focus area. The areas identified varies in terms of agricultural commodities that are suitable in the different regions. These regions do not exclude the diversification of agricultural practises but merely identifies areas more suitable than others when looking at the different food groups. The DLM has identified two suitable functional regions.

Functional Region 1: (High Potential Fruit, Nuts & Vegetable region)

Fruits, Nuts & Vegetables are focussed on perennial rivers (Orange and Vaal Rivers) within the LM. Commodities such as Table Grapes, Citrus, Olives, Onions, Potatoes, Pecan Nuts and other specialised commodities are highly suitable for the region and province due to its arid and dry climate with other climatic conditions.

Most of the commodities can be produced and exported to international markets as well as being distributed to local markets throughout South Africa where the need arises.

Functional Region 2: (High Potential Poultry region)

Poultry are restricted to specific regions and corridors in the region. The region is mainly focussed along accessible routes and high-density towns and nodes within the municipality.

Northern Cape Produces 0,1 % of the country's poultry production. The functional region will focus on the local markets to provide local and rural communities with poultry and eggs within the LM, rather than exporting to other regions or provinces.

Functional Region 3: (Medium Potential Protein sheep & game)

The Protein region mainly focuses on small livestock and game farming especially with high suitability towards sheep within the Northern Cape Provinces and arid conditions.

The Protein region required large areas of land to farm successfully due to the low grazing capacity of the region. Game main form of food intake is a mixture of bush, trees and grass thus having a smaller effect of the vegetation of the municipality.

Key Action Areas

Investments and Re-invest in primary Agric supports

LED will conduct in a municipal farming land availability audit; this will assist the municipality in view of reviving economic activity but also understand the quantity of readily agricultural primary inputs and investment needs to optimise audited farm utilization. The exercise will result in reviving and supporting current storage (Silos) and production structures such as Abattoirs and it will also trigger investment need for a feed mill to support the feedlots in the area and surrounding areas. Adopt Value Chain

Understanding the importance of creating sustainable agricultural economy, it is then vital to adopt value chain as the model from Input to supply and marketing, so we experience growth and sustainability in the local produce.

- Inputs
- Production
- Processing
- Supply Chain (Logistics, Packing, Distribution & Exports)
- Marketing

Focusing on the leading produced commodity we need to support production to optimise growth, and such model will be implemented.

- Stud breeding
- Feed production
- Feed formulation
- Sheep Production
- Milk production
- Value adding
- Sheep abattoirs
- Sheep distribution
- Sheep processing

Agri-Park

According to the Department of Rural Development and Land Reform which are working together with the Department of Agriculture, Forestry and Fisheries; the Economic Development Department; the Department of Science and Technology; Department of Trade and Industry, the Department of Cooperative Governance, the Department of Small Business Development, the Department of Water Affairs and Sanitation, the Department of Environmental Affairs, their respective agencies and the private sector have embarked on rolling-out Agri-parks to all 44 Districts in South Africa.

The projects will kick-start the Rural Economic Transformation for identified rural regions creating jobs in production, farmer support, and processing.

The Agri-Parks would be farmer-controlled. The model will have a strong social mobilisation component so that black farmers and agri-business entrepreneurs were mobilised and organised to support this particular initiative. The Agri-Hub will have various activities around processing by adding other services like social services, retail services and so forth. There would be linkages with surrounding municipalities and villages to ensure that production elements and other activities were localised.

The Agri-park comprises three distinct but interrelated basic components (as illustrate below):

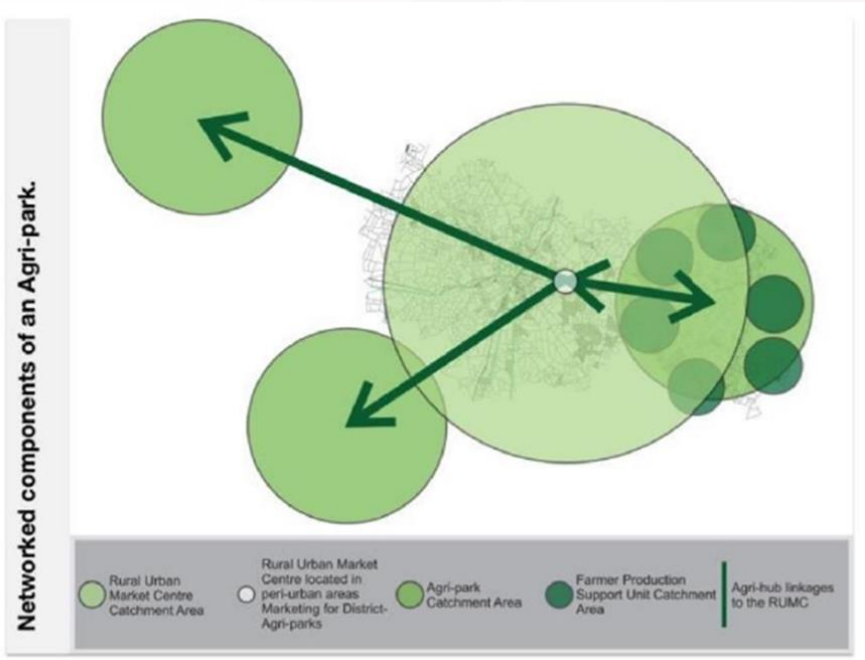


Figure 10: Agri-park Component

Agri-Hub

The farmers produce (input) is processed on a large scale at the Agri-Hub. The Agri-Hub provides quality production support services to the farmers including product development and improvement (i.e. Innovation, Research and Development) and links the farmers to the targeted commodity value chain. (Market: The Agri-Hub mainly supplies agro-processed product through the RUMC and local Market).

Warrenton has been identified as being part of the Agri hub project and covers Windsorton in the 60 km buffer.

Farmer Production Support Unit

The FPSU supplies primary and/or processed farmers produce to the local community market, Agro-processors (at the Agri-Hub) and RUMC).Farmer Production Support Units have been identified and are in the process to be developed in strategic located areas conforming to the type of agricultural produce. The FPSU's are located within Barkley West, and Delportshoop are creating centralised gathering points which will ultimately transport agricultural produce to the Agri Park for Processing.

Rural Urban Market Centre (RUMC)

The RUMC function as a marketing and distributional channel for primary products from FPSU and processed products from the Agri-Hub. The RUMC also serves as an information nerve centre for the Agri-Park and facilitates for information flow between the market and producers. (Market: The RUMC is a market access facilitator for both domestic and export markets).

- The Farmer Production Support Unit (FPSU) - a rural small-holder farmer outreach and capacity building unit that links farmers with markets. The FPSU does primary collection; provides some storage, some processing for the local market, and extension services including mechanization.
- The Agri-hub (AH) - a production, equipment hires, processing, packaging, logistics, innovation, and training unit.
- The Rural Urban Market Centre (RUMC). The RUMC has three main purposes;
  - Linking and contracting rural, urban, and international markets through contracts.
  - Acting as a holding-facility; releasing produce to urban markets, based on seasonal trends.
  - Providing market intelligence and information feedback, to the AH and FPSU, using the latest Information and communication technologies.

Agriculture potential:

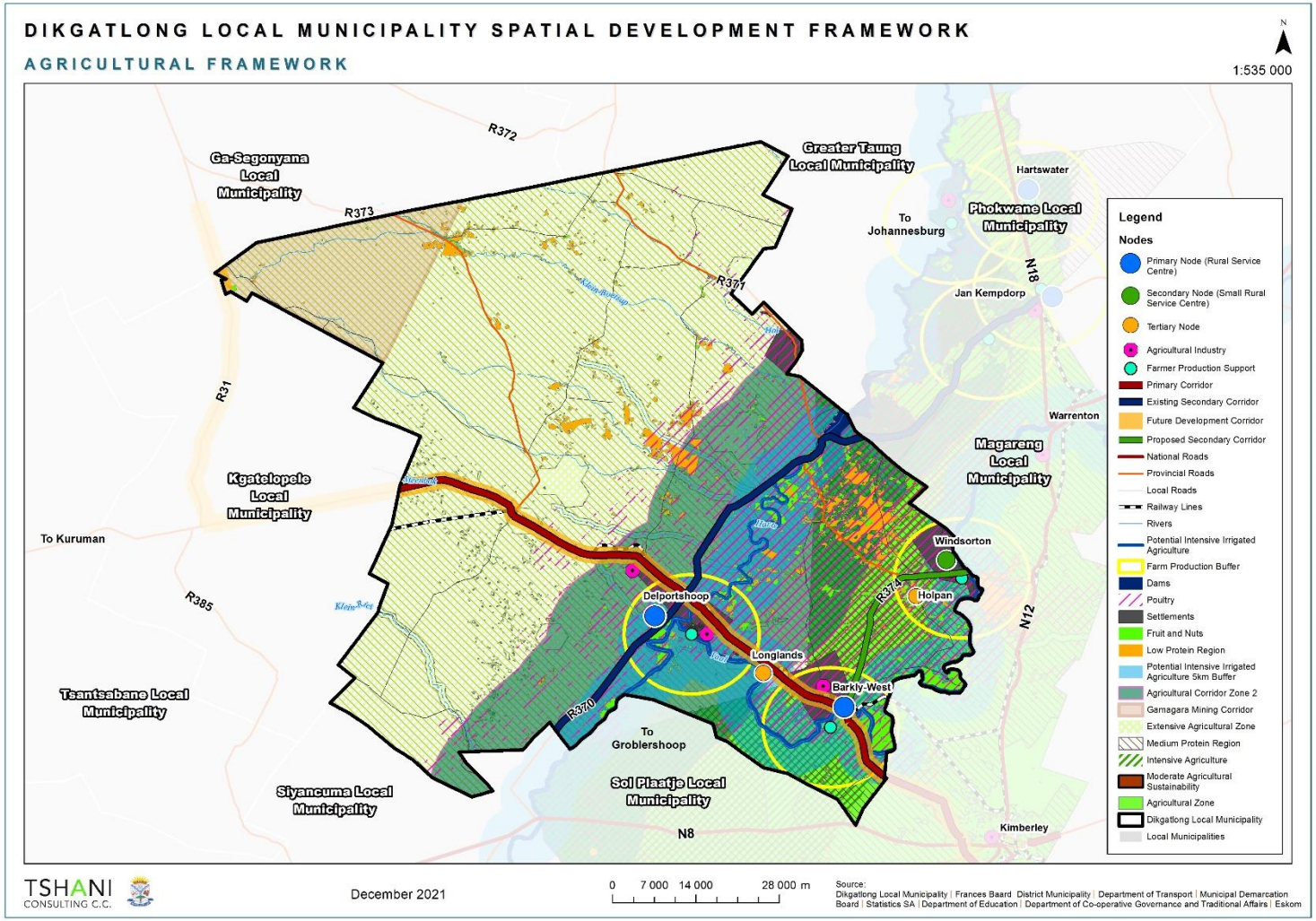
The different agricultural opportunities have been identified in Dikgatlong Local Municipality

Dry bean: The dry bean is an annual crop which thrives in a warm climate. It grows optimally at temperatures of 18 to 24 °C. The maximum temperature during flowering should not exceed 30 °C for P. vulgaris and 26 °C for P. coccineus. High temperatures during the flowering stage lead to abscission of flowers and a low pod set, resulting in yield loss. Day temperatures below 20 °C will delay maturity and cause empty mature pods to develop. Cultivated under rainfed conditions the crop requires a minimum of 400 to 500 mm of rain during the growing season, but an annual total of 600 to 650 mm is considered ideal.

Maize is a warm-weather crop; it is unsuitable for areas with a mean daily temperature of below 19°C, or where the mean summer temperature falls below 23 °C.

Goat/sheep farming: Goat Farming in South Africa is an important economic and social livelihood. They produce milk, meat, skins, cashmere, mohair and play an integral part in religious and cultural ceremonies. They are mankind's first domesticated animal and have been farmed in conditions ranging from the harshest climates to the most modern intensive dairy farms in the world.

Goat/sheep Farming in South Africa is aimed at subsistence farmers in rural areas, stud breeders, mohair producers, dairy farms, and commercial meat farmers.



PLAN 43: Agricultural Framework

LAND REFORM IMPLEMENTATION

The role of local government in supporting the land reform program remains one of the poorly defined and uncoordinated activities in the integrated development planning process. The land reform affects the local communities, yet it is implemented by a national government department with limited consideration of the IDPs.

The primary aim of the Land Reform Program is to broaden access to land and address the historical imbalances in the land ownership pattern in South Africa. It is a complex program and affects several development sectors including agriculture, housing, conservation, commerce, and industry. As such, it is imperative for the program to be implemented in a cooperative manner with all the spheres of government making firm commitments to support and integrate the program into their planning and service delivery initiatives.

Similarly, these documents do not provide an adequate strategic framework for dealing with the land question. Land issues are complex and intricate with some of them (labour tenants and land restitution) being rights driven. Therefore, land reform is considered as one of the most significant programs that promise to make a major contribution to economic growth, poverty alleviation, and nation building. As such, its implementation should be embedded in the notion of sustainable and integrated development.

Dikgatlong Local Municipality recognizes the importance of the land reform, particularly the role it can play in addressing historical land related conflicts, overcrowding and congestion, as well as promoting agricultural development. As such, the following should guide future implementation of the land reform program within Dikgatlong Local Municipality:

- Clustering of projects in a geographic area in terms of location, products and commodities, and social identity of the beneficiaries. Clustering will optimise development potential, rationalise support services and promote efficient use of scarce resources. Identification of clusters should be based on access, social identity, development opportunities, land use pattern, and social relationships. This will provide a framework for a comprehensive approach to the resolution of labour tenant and land restitution claims.
- Settlement of the emerging farmers in terms of the Land Redistribution for Agricultural Development (LRAD) or Pro-active land Acquisition Strategy should be located close to transport axes on good agricultural land in situations where they have access to ongoing support and mentorship.
- There is a need to promote off-farm settlement as a land delivery approach where the main need for land is settlement. Such land should be in accessible areas, which can be provided with social facilities and basic services in an efficient and effective manner. It may also form part of a cluster of projects. This will also facilitate housing delivery and development of such settlements as sustainable human settlements.

- Identification of high impact projects and integration into the local value chain or development proposals. These projects should also be integrated into the LED program of the Municipality. Opportunities in Dikgatlong LM include game farming, forestry, livestock farming, irrigated pastures, and dryland and irrigated crop production.

It must, however, be noted that the land reform is a need and a rights-based program. Its primary focus is to transform the land ownership pattern in line with the national government targets.

Land Restitution deals with the return of the rights of land, through land claims, to its historical owners who have been dispossessed thereof due to apartheid policies, i.e. land claims. It is estimated that 3,5million people and descendants were dispossessed and forcibly removed during apartheid in the form of urban and rural removals. The following restitution claims are in the DLM Area.

Land Reform Projects:

1. Syndney-on-Vaal Land Claim
2. Pniel Land Claim

LIMITED DEVELOPMENT ZONES

For future demands and the need for an assurance of a balanced ecological environment, some areas within the Dikgatlong Municipality must be according to minimum development status or where development has to be undertaken with considerable care for the existing environmental resources. For the purposes of this land use management system, limited development areas include:

- Riparian ecosystems (all rivers in the primary catchments need to be investigated and 1:100 years flood line should be determined and accorded development exclusion zone;
- Protected areas by legislative declaration: (this includes vegetation areas and wetlands);
- Sites of ecological irreparability values 0.6 and higher (include all areas designated as negotiated and mandatory reserves);
- Steep slopes greater than 1:3.
- Areas with which mitigation measures need to implement.
- Areas with aesthetic controls.
- Environmentally Sensitive Areas, with respect to the SDF, the following general environmental guidelines for spatial planning are proposed:

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Table 17: No Go Areas VS Go But Areas

No-Go Areas	Go-But Areas	
No Development Areas	**Inside Urban Edges**	**Limited Development Areas**
		Outside Urban Edge (rural context)
• Areas of high environmental • Sensitivity and conservation value • Critically Biodiversity Areas • Preferably within 100 metres (but at least 50 metres) of a water course (rivers, stream or wetland) and any undisturbed riparian zones • Diverse grasslands and thicket vegetation types • Within 500 metres of a sewage treatment facility	• Urban Settlement • Residential • Public-Funded Housing • Resort Development • Business and Trade • Other • Develop from Inside – Outward (Phasing) BUT, not for • Environmentally sensitive areas within the urban edge • Lack of services	• Limited by • EIA process • Low density • Density/footprint/impact restrictions • Not in areas of environmental sensitivity • Unique & Sustainable Developments • Must show tangible economic benefits to broader community • Clustering of built form • Aesthetic controls • Mitigate impacts • Show net gains for the environment

D.3 SOCIO ECONOMIC FRAMEWORK

The socio-economic framework seeks to highlight various socio-economic opportunities as well as places of socio-economic development within the municipality

ECONOMIC FRAMEWORK

The following section aims to unpack the Economic Framework underpinning DLM and aims to highlight the areas of focus to lead to economic growth for DLM.

The key economic sectors within the DLM is as follows:

- Primary Sector (Agriculture and Mining)
- Secondary Sector ((Manufacturing, electricity and construction)
- Tertiary Sector (Trade, transport, financial and social services)

The Provincial Spatial Economic Development Strategy (PSEDS) recognises that: social and economic development is never uniformly distributed; apartheid created an unnatural distortion of development, and; this distortion must be addressed through an interventionist approach. PSEDS is part of broader economic developmental policy within the province, hence it should not be implemented in isolation.

In doing this, DLM can invest in opportunities to accelerate economic growth, job creation and transform the Local Municipal area. Spatial strategies and plans as well as the land use management regime administered by the DLM must be designed so as to facilitate and enhance the opportunities for sustainable economic development in the area.

INFORMAL TRADING

Informal trading is as much a part of the past, present and future of the Dikgatlong Local Municipality as are other forms of economic activity. It contributes towards job creation and thereby helps in the absorption of many who would otherwise be economically idle. As with the formal economy, it helps in the alleviation of poverty, the indirect medium to long-term outcome of which includes reduced levels of petty crime and criminality.

Spatial development will focus on the gradual development of aesthetically inferior and poorly serviced demarcated informal trading spaces. Spatial planning requirements for the accommodation of informal trading shall apply to private property developers as well, especially if the new development displaces a present market, or has potential to attract the interest of informal traders in the long run.

The process of registering informal traders should become transparent, simple, and user-friendly. LED will coordinate an inter-departmental standing committee meeting which intended to sit on weekly basis an approval of

trading process to compile a single, comprehensive form with sections that address all the requirements necessary to ensure that any informal trading licenses, certificates or permits that are issued are registered.

A basic site rental should be set by DLM, then differentiate rentals for other levels should be determined accordingly. The methodology used to determine an amount of rental payable should consider, inter alia, the services and infrastructure available at the trading space allocated.

Informal trading is proposed within the CBD of Barkly West and Delportshoop CBD to promote LED and address poverty and generate rates for the municipality.

Some examples of formalising Informal trader stalls are shown below.

SMALL, MEDIUM AND MICRO ENTERPRISES (SMME) DEVELOPMENTS

SMME developments are aimed at supporting the growth of small and medium enterprises through business management and financial skills development.

SMME developments present a wide spectrum of opportunities for developing entrepreneurs through the growth of innovative industries. SMME developments can be regarded as a critical developmental strategy to boost economic growth and development. The success of SMME developments, however, is heavily reliant on enabling policies, financial support and enabling environments from local spheres of government.

SMME developments drive economic growth and development in the following ways:

- Job creation;
- Exploration of innovative industries;
- Curb Unemployment;
- Address Inequality
- Some industries require low skill levels;
- Harness entrepreneurial skills.

Due to the predominant rural nature of the municipality, various enabling approaches are needed in order to expand SMME developments to areas outside of the urban areas. Various enabling approaches are needed for the expansion of this sector to various areas of the municipality, these include:

- Awareness;
- Financial support;
- Knowledge empowerment;
- Skills development

SMMEs are also critical tools to promote empowerment, especially empowering previously disadvantaged groups such as women and rural residents. The promotion of SMME developments within the municipality will not only promote employment opportunities but will also promote entrepreneurs and the empowerment of individuals or groups.

Table 18: SMME and Informal Trading

Programme	Specific Intervention	Responsibility
SMME relief programme	Assist local SMME's to access national support programs	FBDM and LM
	Provide a rates reduction intervention to businesses operating in the municipal facilities	LM
	Provide municipal financial support for stock acquisition for SMME's	FBDM, and LM
Informal traders relief programme	Develop the informal traders database	FBDM, and LM
	Assisting informal traders to access national support through formalisation	FBDM, and LM
	Waiver permit and licence charges for a prescribed period	LM's
	Offer stock stipends to the informal traders	FBDM, and LM's
	Promote and facilitate bulk buying for informal traders to cut on stock costs	FBDM, and LM's
	Promote product diversity amongst informal traders	FBDM, and LM's
Buy local campaign programme	Conducting campaigns for the local people to buy from the local informal traders	FBDM, and LM's
	Conducting campaigns for the local people to buy their goods and services from the local SMME's.	FBDM, and LM's
	Facilitate government buying from local SMME's	FBDM, and LM's

	Promote business to business buying activities	FBDM, and LM's
Capability programme	Preparing the informal trading infrastructure to be COVID 19 ready and compliant.	LM's
	Educate local communities about the importance of buying local and from informal traders	FBDM, and LM's
	Advocate for municipal policy reviews that promotes re-entry into the informal trading sector	FBDM, and LM's

MINING

The location of mining activities in the Dikgatlong Area is also dictated by the position thereof in the natural environment. Therefore, mining is exploited in the following manners.

- Alluvial diamond exploration is taking place alongside and in close proximity to the Vaal River beds.
- Diamond digging is also taking place in Kimberlite pipes spread in the central and eastern section of the service area.
- Lime is produced on a commercial scale at Ulco situated in the Ghaap Plateau.

The mining industry contributes to the economic base of the DLM and Frances Baard Area, but it should also be noted that:

- This activity should be professionally managed because it comes into conflict with tourism and agricultural activities and causes environmental decay;
- Applications for exploration permits and the rehabilitation of diamond digging activity should be better controlled.

Mining Spatial Challenges

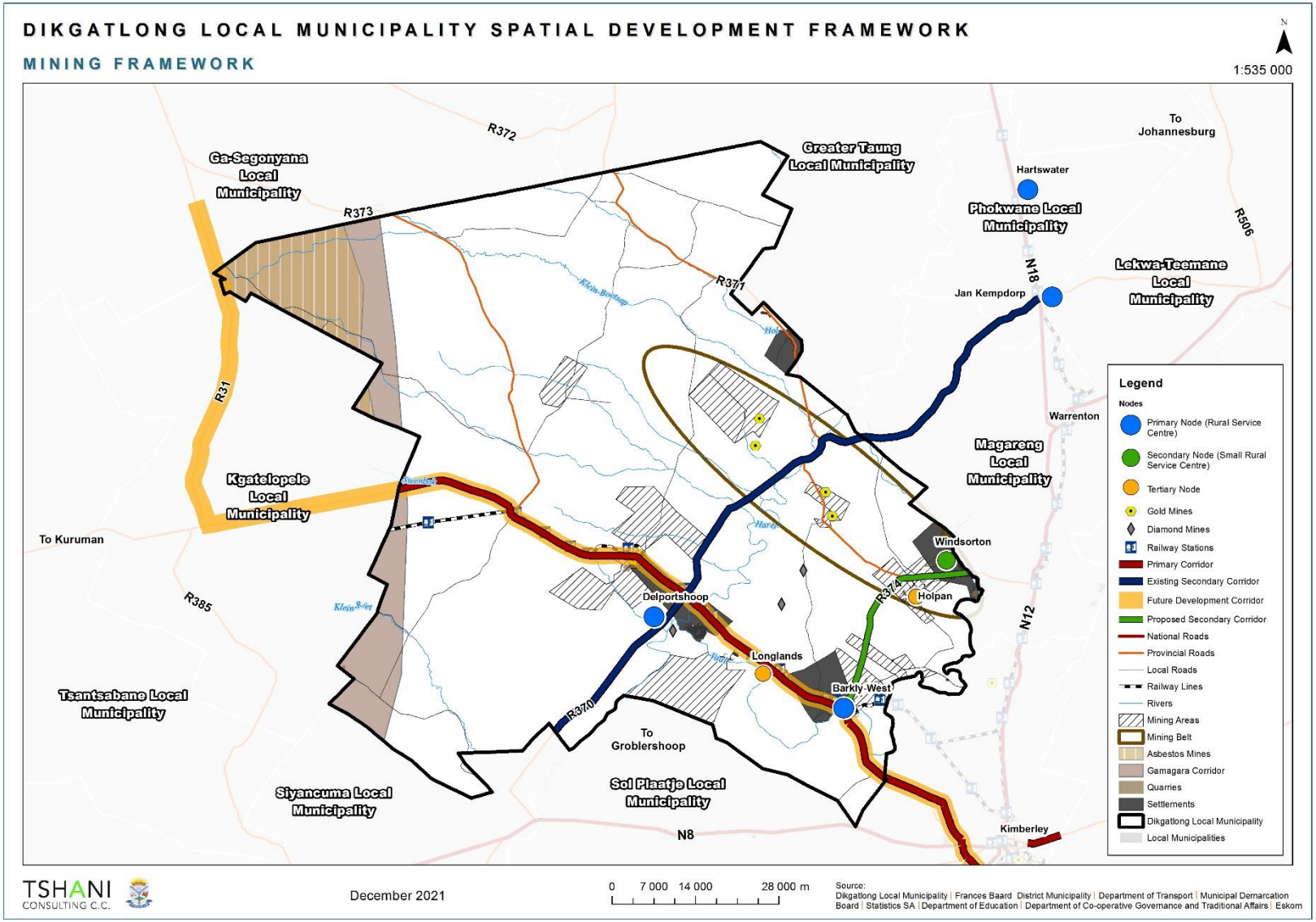
The following has been identified as Mining Spatial Challenges:

- Difficulty is faced with sustaining mining towns or settlements, after mineral deposits are depleted, or become financially unviable. (Longlands is a good example)
- Financial cost of expanding basic infrastructure to areas in close proximity to mining activities.
- High level of water use, and environmental degradation is associated with mining or extractive industries.
- As the main headquarters of mining houses are situated within the Gauteng Province, the income and profit are registered and allocated to the Gauteng Province.
- Continuous conflict between mining and agricultural land uses

Mining Opportunities

The following has been identified as Opportunities relating to the Mining Sector:

- Mining is a major economic driver, providing numerous job opportunities and economic development.
- Promotion of manufacturing activities that support the mining industry.
- Development of a strategy to address the establishment and inevitable decline of mining towns (no mine towns to be established or extended) and guidelines for the provision of mining housing.
- Development of clear regulations for extractive industries located in high potential agricultural land, and in close proximity to crucial water resources



PLAN 44: Mining Framework

REDUCTION OF REDTAPE

The creation and promotion of an enabling environment for business is fundamental to a competitive and vibrant economy. The amount of red tape and bureaucracy faced by business when dealing with government is considered a key constraint to economic development and growth.

Directly linked to an enabling environment is the concept of "ease of doing business" (EDB). The World Bank Group defines EDB as the extent to which the regulatory environment is conducive to the starting and operation of a local firm.

Red tape is defined as:

- Non-essential procedures, forms, licenses, and regulations that add to the cost of dealing with government, or
- Anything obsolete, redundant, wasteful, or confusing that diminishes the competitiveness of the province, which stands in the way of economic growth and job creation or wastes taxpayers' time and money.

Red tape interferes with:

- The ability of business to compete in a global marketplace because of unnecessary costs and or delays;
- The rate of establishment of new businesses; and the sustainability and/or growth of existing enterprises.

Reducing Red Tape is all about using a wide range of specific tools that promote service delivery excellence. There are three main determinants of customer service excellence - people, processes, and technology. They should be viewed as overlapping circles with the so-called 'sweet spot of service quality' being achieved when the three operate in harmony with the customer's preferred method of doing business. Source: Guidelines for reducing municipal red tape, 2013

To effectively reduce Red Tape, it is important to follow a well-organised and managed process, which involves the following stages:

1. Identify what the critical Red Tape problems are facing businesses in the area, and which fall within the control of the municipality, by either conducting a survey or holding a workshop.
2. Design a participative and consultative process that involves both businesses and municipal officials involved in, knowledgeable about and affected by the Red Tape issue.
3. Begin by identifying the various causes of the Red Tape problem (using the Fish Bone diagram).

Develop a Red Tape Action Plan, which includes identifying practical ideas and solutions to address each of the causes and identifying a Red Tape Champion to take responsibility for taking forward and ensuring the Action Plan is implemented.

LOCAL ECONOMIC DEVELOPMENT

Local Economic Development (LED) is an approach towards economic development that encourages local people to work together to achieve sustainable economic growth and development. It is aimed at bringing economic benefit and improved quality of life for all residents within the municipal area. Among other factors, LED seeks to achieve the following:

- Poverty alleviation;
- Improving rural livelihoods;
- Broadening the rural economic base;
- Encouraging the growth of entrepreneurship;
- Encouraging sustainable economic development initiatives;
- Creating employment;
- Promoting innovation and skills development.

Within the municipality, various LED key focus areas are proposed, as part of this SDF. This is aimed at promoting economic opportunities in the predominantly rural areas of the municipality, address the high dependency on social grants and promote a varied economic base among other factors. The following are key industries for exploration within the municipality to promote LED:

Agriculture

Agriculture is defined as the cultivation of land and breeding of animals and plants for food and medicinal purposes.

Agriculture is one of the key industries contributing towards the country's economic development through export earnings as well as food security.

The Dikgatlong Local municipality is one of the fortunate areas to be home to one of the biggest water sources in the in the province, the Vaal River. This has been a consistent water source within the municipality and serves as a great opportunity for irrigation schemes and supporting agricultural activities such as livestock farming, crop production, grazing and agri-parks among other activities.

Township/Rural Economies

'Township economy' refers to enterprises and markets based in the townships. These are enterprises operated by township entrepreneurs to meet primarily the needs of township communities and therefore can be understood a 'township enterprises' as distinguished from those operated by entrepreneurs outside the townships. The term "township" refers to old, new, formal and informal human settlements that are pre-dominantly African, Coloured and Indian characterised by high levels of poverty, unemployment and low incomes as well as distance from the main centres of economic activities.

Township enterprises have different legal forms - for-profit and not-for profit enterprises registered under the Companies Act and for cooperative enterprises registered under the Cooperatives Act. However, majority of township enterprises have high rates of informality.

The following has been identified in the township economy:

Table 19: Township Economy

SECTORS	CLUSTERS
Retail	• Butcheries • Spaza Shops • Fish and Chips • Fruit & Vegetables
Service Industry	• Hair Salons • Shebeens • Shisanyama • Car wash • Burial society
Construction and real estate	• Brick laying • Renting • Construction business
Transport	• Taxis
Agriculture	• Vegetable production
Finance	• Stokvel • Mashonisa/ lending schemes
Government and Community Services	• Feeding Schemes
ICTS	• Internet solutions in townships • Electronic repairs
Green Economy	• Recycling • Coal and wood making

The Department of Small Business Development has developed a programme to support the township economy. This programme is called the **"Township and Rural Entrepreneurship Programme (TREP)".**

The **Township and Rural Entrepreneurship programme (TREP)** is a dedicated programme to transform and integrate opportunities in townships and rural areas into productive business ventures. The focus is to create platforms which provide the business support infrastructure and regulatory environment that enables entrepreneurs to thrive.

The goal of this programme is to overcome the legacy of economic exclusion by creating a conducive environment for entrepreneurial activity and provide dedicated business support to enterprises in rural and township areas including access to funding.

The following schemes are available for qualifying entrepreneurs:

- Small-scale bakeries and confectioneries support programme
- Autobody repairers and mechanics support programme
- Butcheries support programme
- Clothing, leather and textile support programme
- Personal care support programme
- Spaza-shop support programme
- Shisanyama and cooked food support programme

RENEWABLE ENERGY INDUSTRY

Rationale for Intervention

South Africa has committed itself in reducing its emissions below a baseline of 34% by 2020 and 42 percent by 2025. "The approach to mapping out the transition to a low-carbon economy is informed by the need to reach broad consensus on the challenges and trade-offs involved in implementing South Africa's climate policy" (NDP, Ch5).

The transition to a low-carbon and resilient economy requires a capable state to lead, enforce the regulation of GHG emissions, and respond to the impacts of climate change. The transition to a low-carbon economy depends on the country's ability to improve skills in the workforce, at least in the early phases of the transition.

The New Growth Path

"The New Growth Path is our vision to place jobs and decent work at the centre of economic policy. It sets a target of five million new jobs to be created by 2020. It sets out the key jobs drivers and the priority sectors that we will focus on over the next few years. It is based on strong and sustained, inclusive economic growth and the rebuilding of the productive sectors of the economy. "(President J Zuma)

"Technological innovation opens the opportunity for substantial employment creation. The New Growth Path targets 300 000 additional direct jobs by 2020 to green the economy, with 80 000 in manufacturing and the rest in construction, operations, and maintenance of new environmentally friendly

infrastructure. The potential for job creation rises to well over 400 000 by 2030." (NGP). There is no doubt that government views the green industry as the potential sector for job creation.

Industrial Policy Action Plan 2 and Renewable Policy instruments

The IPAP2 notes establishment of energy-efficient and green industries as critical in the development of the sustainable economy. It further acknowledges the high solar intensity and the potential of solar power generation in Southern Africa.

"A co-ordinated effort is required to scale up the manufacturing and installation of solar water heaters.

An important contribution to establishing this market in South Africa will be the phasing in of mandatory requirements relating to the installation of solar water heaters."(IPAP2). Undoubtedly the IPAP2 sets the clear framework and guidelines towards industrialisation of green economy and attainment of IRP 2 targets.

Developing the Green Industries

The policy framework indicates high level of willingness from South African government to transform the economy and cease the opportunity while the window is still open. Interestingly the proposals on localisation of solar geysers and panel manufacturing and improvement of investment climate within the industrial set-up of the green sector are surely gaining the momentum.

Objective

- To develop DLM as a leading centre for Renewable Energy and introduce green opportunities for local companies and green jobs for local people.

Key Action Areas

1. To develop DLM as a centre for Renewable Energy and maximise opportunities for local companies and local people

a) Promote DLM through the activities of the DLM Renewable Energy partnership

b) Work in partnership other local authorities within the district to promote the Frances Baard District Municipality as a viable location

c) Encourage companies and the municipality to develop a Directory of Green Products that can be produced locally and mobilise necessary investment for implementation purposes.

d) Partner with Industrial Development Corporation Green Fund to implement strategic green projects.

e) Prioritise local manufacturing of Solar Geysers and Solar panels to support government initiative of installing more solar geyser to low-cost housing

f) Develop a comprehensive range of training and support opportunities through Sol Plaatje University that will bring home better understanding of Green Economy and related products.

SKILLS DEVELOPMENT AND TRAINING

Rationale for intervention

Training Institutions in DLM to serve as a focal point to equip DLM labour force and thereby drive economic growth

Objectives

- To support economic growth through learning, teaching, research, and commercialisation activities.

Key Action Areas

To support economic growth through learning, teaching, research, and commercialisation activities

a) Develop new markets and work with representatives of key sectors to develop training and educational content which meets future skill requirements at home

b) Build upon existing university research expertise and exploit spin-out and commercialisation opportunities

c) Provide gateways for local and other businesses to access expert staff and skills through a variety of channels, knowledge transfer partnership, sectoral groups, etc

d) Ensure DLM's key sector expertise including new product and transnational project developments actively shape the key sectors within the area.

INFRASTRUCTURE FOR ECONOMIC GROWTH

Rationale for intervention

The economy requires reasonably developed infrastructure for it to grow and develop. Again, the attraction of inward investment is mainly dependent on conducive environment. Hence, the prioritisation of infrastructure improvement remains central to the economic regeneration programme of DLM.

Key Action Areas

Improved physical infrastructure investment and enhanced business development in Barkly West as a primary node. The availability of suitable infrastructure is just one of the key factors in investment attraction and business retention programme. Hence, local authorities need to be a step ahead in terms of achieving broad based infrastructure satisfaction of the business fraternity.

(a) CBD road improvement programme will be implemented to allow a smooth flow of traffic and delivery trucks especially on the R31

(b) Support expansion of the trading centre

(c) Provide services to Industrial sites

STRENGTHENING OF INSTITUTIONAL ARRANGEMENTS

Rationale

The economic function in DLM has been constrained and extremely over undermined over a period of time. Hence, the organisation of relevant bodies to participate in LED was not prioritised.

The level of willingness and enthusiasm from the local partners necessitate the formalisation of the relevant forum and execution of the programme as per conditions of the Partnership Agreement.

Objectives

- To formalise stakeholder engagements thereby allow them to find common economic ground for DLM
- To extend the area of responsibility to all people with vested interest of growing DLM to be a home for all races and address collaboratively all existing social ills.
- To understand the scope of planned economic initiates beyond the public sector or government driven initiatives

Key Actions

1. Dikgatlong Economic Partnership Agreement

The DLM economic forum is proposed as a new body of stakeholders that will come together to plan, support and monitor the implementation of economic strategy in the municipality. In the main, the Partnership forum will sign a memorandum of Understanding with the Council on how the partnership should function. On the other hand, the municipality will commit to provide secretariat and capable incumbents to drive strategy implementation.

2. Establish Business Chamber for Businesses

In general, the Business Chambers have a strong co-ordinating role to play in any economy and they further represent a united front of businesses that operate in the area. It is always easy to understand the planned business growth in the area through consultation and liaison with the Chamber.

So, the strategy encourages local businesspeople to drive the establishment of their chamber and the council will co-ordinate initial meetings and provide support where necessary.

TOURISM

Tourism is often used as an economic development tool to address issues such as unemployment, expanding the skills base as well as reducing poverty. Coastal areas are often seen as areas showing great potential for the development of tourism activities and growing the tourism sector.

The Dikgatlong Local Municipality identified 5 (five) tourism areas which have the potential to be developed and marketed in order to promote economic growth. These tourist areas are:

- Game Viewing/ Trophy Hunting

- Mining Tourism;
- Expansion of the Hospitality Industry
- Adventure Tourism; and
- Eco-Tourism.

There is considerable unexploited potential for tourism in the Dikgatlong Municipality. Much of this potential appears to have been recognized in the tourism development plans that have been presented but an effective marketing and implementation strategy is required. Training and literacy will also be important as tourism is dependent on high levels of service. The Frances Baard District Municipality's Local Economic Development Unit has identified tourism development as one of its strategic thrusts. The Strategy also recognises the need to ensure responsible tourism practices and bring host communities into the mainstream of the tourism industry, thereby creating opportunities for job creation and the development of small and medium enterprises.

Activities and attractions in Barkley West:

Alluvial Diamond Diggings: Licensed prospectors still sift the sand and gravel of the Vaal River for ever elusive diamonds. Guided tours only.

Barkly Bridge and Barkly West Museum. The bridge, the first over the Vaal River, was transported in sections from the United Kingdom (by sea, rail and, over the last more than 100 km by ox wagon) and erected across the Vaal in 1885. A steel plate gives details of its manufacture: (Westwood, Baillie & Co, Engineers and Contractors, London 1884). Shops in Kimberley and Barkly West closed for the occasion when the bridge was opened. A new bridge was built alongside in the 1970's. The tollhouse was restored in 2000 as a museum with displays on local geology, archaeology and history.

Canteen Kopje A hill at the entrance to Barkly West. Site of first diamond diggings and contain stone tools, weapons and fossils. Alluvial diamond diggings from 1870 revealed many archaeological sites. An open-air display explains the significance of early hand-axe industries (over a million years old). The Canteen Kopje Skull was found in the vicinity in 1925 and was described in Nature by Robert Broom in 1929. It is currently subject to re-appraisal.

Course of the Vaal River. Characterised by breakwaters where diggers still labour, the river has many pools, rapids, waterfalls and features with odd names, eg Gong Gong, Beaumont's Folly and Bosman's Fortune.

Nooitgedacht Glacial Pavings. A 250-million-year-old archaeological formation

Rekaofela Resort (off R31). The resort is home to the Rekaofela Adventure Centre.

St Mary's Anglican Church. St Mary's Anglican Church. It was the first church on the diamond fields. Sir Henry Barkly laid the foundation stone in February 1871

Wildebeest Kuil Rock Art Centre. The Wildebeest Kuil Rock Art Centre is situated on a farm belonging to the Xun & Khwe, who collaborated in making this pristine Khoisan heritage site open to the public. The Centre boasts a superb visitors' centre, a movie auditorium, art & craft shop and tearoom and an audio-guided walk through the rock art site.

Barkly West Resort. It is a municipal owned resort.

Activities and attractions in Windsorton:

The Windsorton Glacial Features are a continuation of the Nooitgedacht Glacial Pavements which comprise of widespread prominent geological features found around Barkly West, and had their origin in the Palaeozoic / Dwyka, / Karoo Ice Age, (some 250 - 300 million years ago) where the glacially scoured (smoothed and striated) ancient bedrock (re-exposed by erosion) was used substantially, and more recently, during the Later Stone Age period in the late Holocene as panels for rock engravings. Many diamond diggings such as at Rietsplats 15 (Near Windsorton) have escavated the diamond bearing overlying gravels and exposed the bedrocks and numerous stone age artifacts – axeheads and cleavers have been recovered. The features need to be classified and protected as Heritage Sites

Activities and attractions in Delportshoop:

- Good fishing at confluence of the Vaal and Harts River.
- Diamond diggers houses (1924).

Activities and attractions in Gong-gong:

- Tours of old potential heritage mining houses and diggings should be established.

Other attractions:

- Fly Fishing
- River activities: Canoeing, boating, rafting, fishing, etc.
- Game viewing
- The Ghaap Plateau/ Ridge as well as the Vaal Rivier provides a visual amenity to the DLM. The Ghaap Plateau creates passes with major roads (N8 and R31) and also some minor roads. These elements provide for scenic drives and extensive views.
- To the east the Vaal- and other Rivers cuts through the landscape which forms dramatic gorges and water elements. These cliffs and water features provide for tourism potential still to be fully developed. In conclusion it could be mentioned that the LM consists of distinct morphological regions that provides their own individual tourism and agricultural potential.

Challenges and Issues faced by the Tourism Sector in Dikgatlong:

- Inappropriate location of Tourism Information Centre
- Lack of a Tourism Association
- Lack of skilled Tourism Officials
- Lack of Community involvement
- Unemployment

Promoting the tourism sector

1 Partnerships with other stakeholders

The municipality could facilitate partnerships between investors and stakeholders.

Partnerships between municipalities and businesses or community organisations can also provide useful institutional vehicles for LED. Different types of partnerships work well at the programme level and at the project level. The detailed conditions and requirements of the Municipal Finance Management Act need careful investigation in this regard.

2. Partnerships at a programme level

Local government will often form partnerships with other stakeholders to assist in the co-ordination of programme-level LED initiatives, and to help secure a shared community vision as a basis for LED. These have the status of a legal person. This means that the company may contract with other organisations and individuals. It may also hold assets and liabilities in its own name. Expensive and time consuming to establish. The Registrar of Companies has to establish that the company is being formed for the purpose of its stated objective, rather than as a profit-making venture. This makes the process of legal establishment lengthier. Limited liability in the case of bankruptcy, members of Section 21 companies are protected from being held personally liable for the debts of the company. In this respect Section 21 companies are similar to ordinary companies.

Complex structure. Ownership of Section 21 companies is usually separated from management.

For example, in the case of an LED institution, the owners of the Section 21 company will be community stakeholders, excluding the municipality. However, the company will be run by a Board of Directors. This may make decision making more complex and time-consuming.

Independence allows flexibility and effectiveness. The independence of Section 21 companies allows them to operate with maximum flexibility and effectiveness. Structure and management style of commercial enterprises. Section 21 companies are equipped to undertake a wide range of LED activities, secure funding from a range of sources, and interact with a variety of stakeholders. The accountability framework of a Section 21 company provides safeguards when spending public funds. Further, the company structure helps bind a partnership of stakeholders into the LED initiative through the Board of Directors. The directors are legally obliged to prioritise the interests of companies.

Founders may lose control of the company. The same independence that is mentioned as an advantage has an important negative aspect. Unless community groups are able to retain close control over the Section 21 company through ownership or funding, there is a danger that the institution may become increasingly distant, and even eventually break away from the founders. Communities should be aware of this danger and be alert to the need to retain effective control over the management of Section 21 companies set up for the purpose of promoting LED Transparency and tight

legal framework. The tight legal framework under which Section 21 companies operate tends to enhance transparency and minimise the scope for individuals or interest groups to manipulate or misuse the company.

Partnerships may range from unstructured or informal partnerships to formal and tightly structured arrangements. Some possible types of Programme-Level Partnerships are Informal networks: These are loose networks, which often develop through personal relationships or social ties.

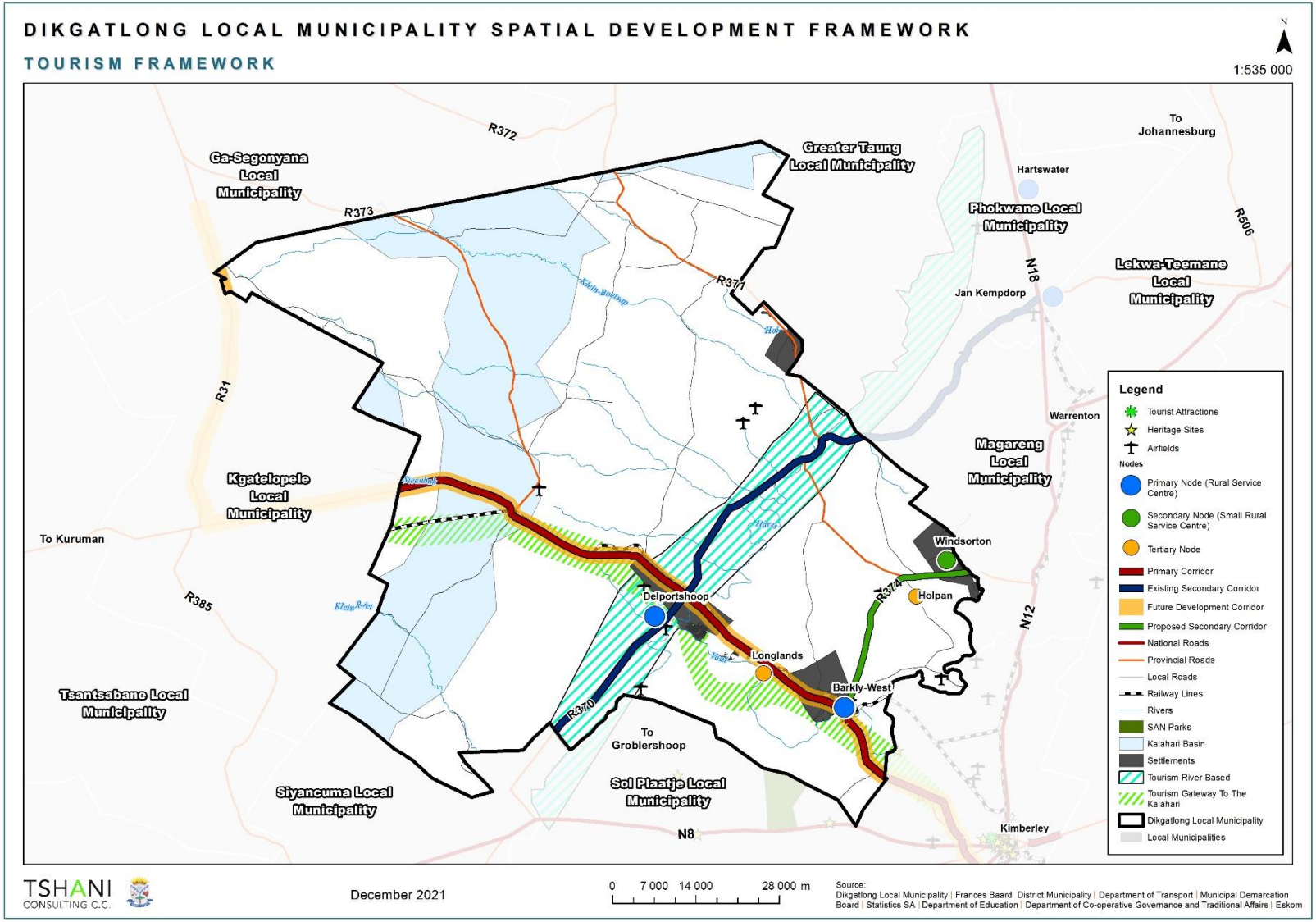
Co-ordinating structures: These structures which do not necessarily have a legal status. A common type of co-ordinating structure is a Local Economic Development Forum Independent implementation organisation: Examples include Section 21 companies and community development trusts.

3. Private company or close corporation

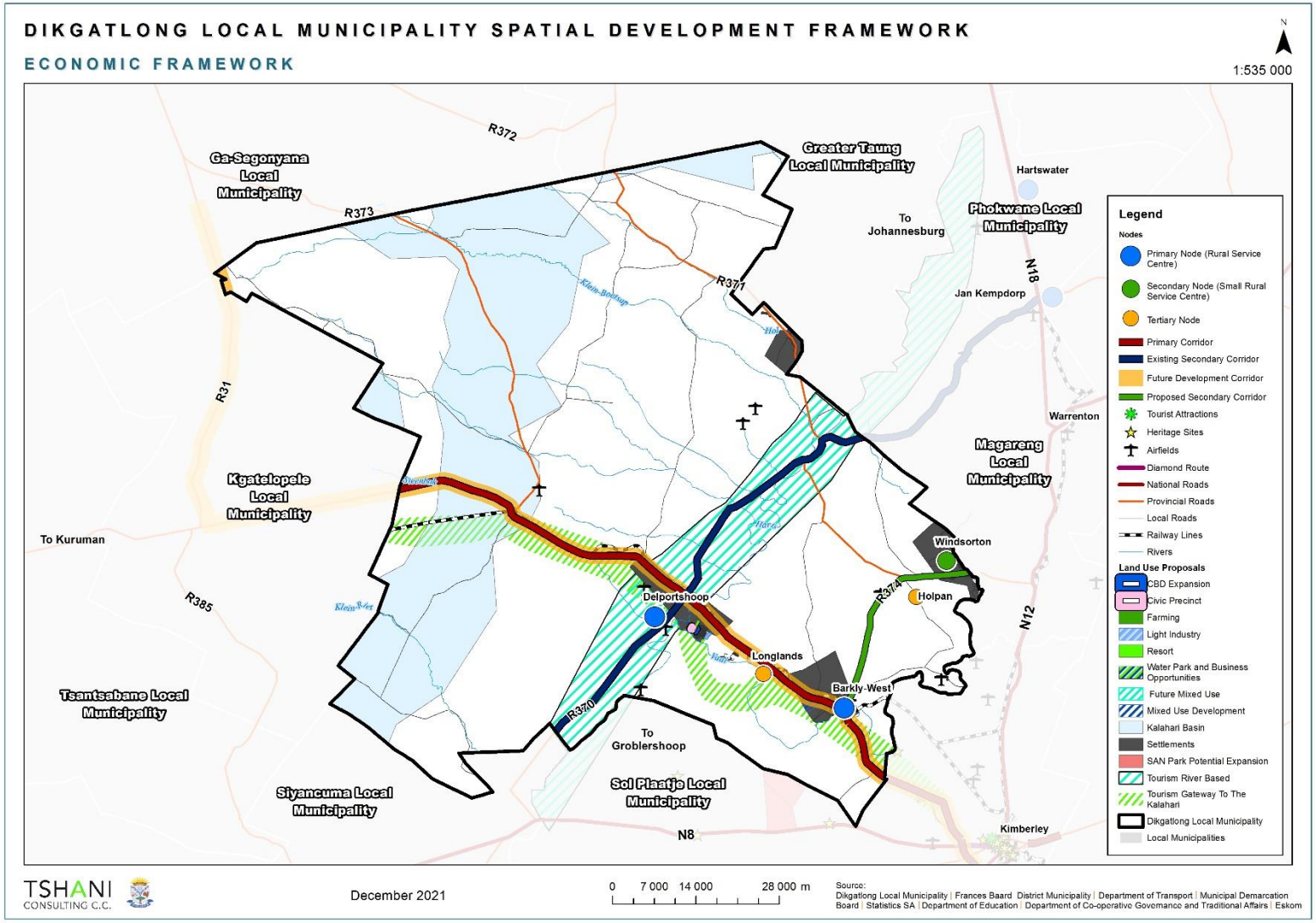
Most businesses register with the Registrar of Companies in Pretoria as either a Private Company (Pty) Ltd or a Close Corporation (cc). Application forms are obtainable from a business consultant or chartered attorney.

Key Interventions

- Community awareness campaign
- YEDP programme
- SMME support
- Tourism Product Development
- Tour Guide Training
- Ablution facilities for tourists needs to be erected at attractions eg. Gong-Gong Waterfall.
- Constant maintenance and upkeep of these natural assets
- Promote Township Tourism
- Develop a "Key Places" Cleansing and Maintenance Programme aimed at ensuring that major gateways, routes and destinations in the DLM are beautified and maintained
- Enhance existing tourist attractions, thus encouraging revisits
- Promote Heritage Tourism - Utilize and promote all of DLM's heritage resources to attract Tourists



PLAN 45:Tourism Framework



PLAN 46: Economic Framework

SOCIAL FACILITIES

Social facilities are a vital aspect of human settlements as they serve as sources for social and public services; including health, education, recreation, cultural and socializing spaces among other services.

Access to and availability of social facilities is an important factor which attracts and keeps people in an area. Therefore, the section below indicates the number of social facilities within the municipality jurisdiction.

The following strategy for social infrastructure is based on the criteria as stipulated in terms of the CSIR Human Settlement Guideline:

Table 20:CSIR Human Settlement Guideline

Planning Thresholds	Walking Distance	Minimum Requirements
Crèche	2 km Radius	2 400 – 3 000 people
Primary School	5 km Radius	1 000 – 7 000 people
Secondary/ High School	5 km Radius	2 500 – 12 500 people
Library	8-10 km Radius	20 000 – 70 000 people
Clinic	5 km Radius	24 000 – 70 000 people
Hospital	30 km Radius	300 000 – 900 000 people
Police Station	8 km Radius	60 000 – 100 000 people
Post Office	5-10 km Radius	10 000 – 20 000 people
Pension Pay Points	5 km Radius	Variable
Community Halls	10 km Radius	10 000 – 60 000 people
Shops	10 km Radius	1 x 5000 people
Cemetery	15 km Radius	8.8Ha / 50 000 people

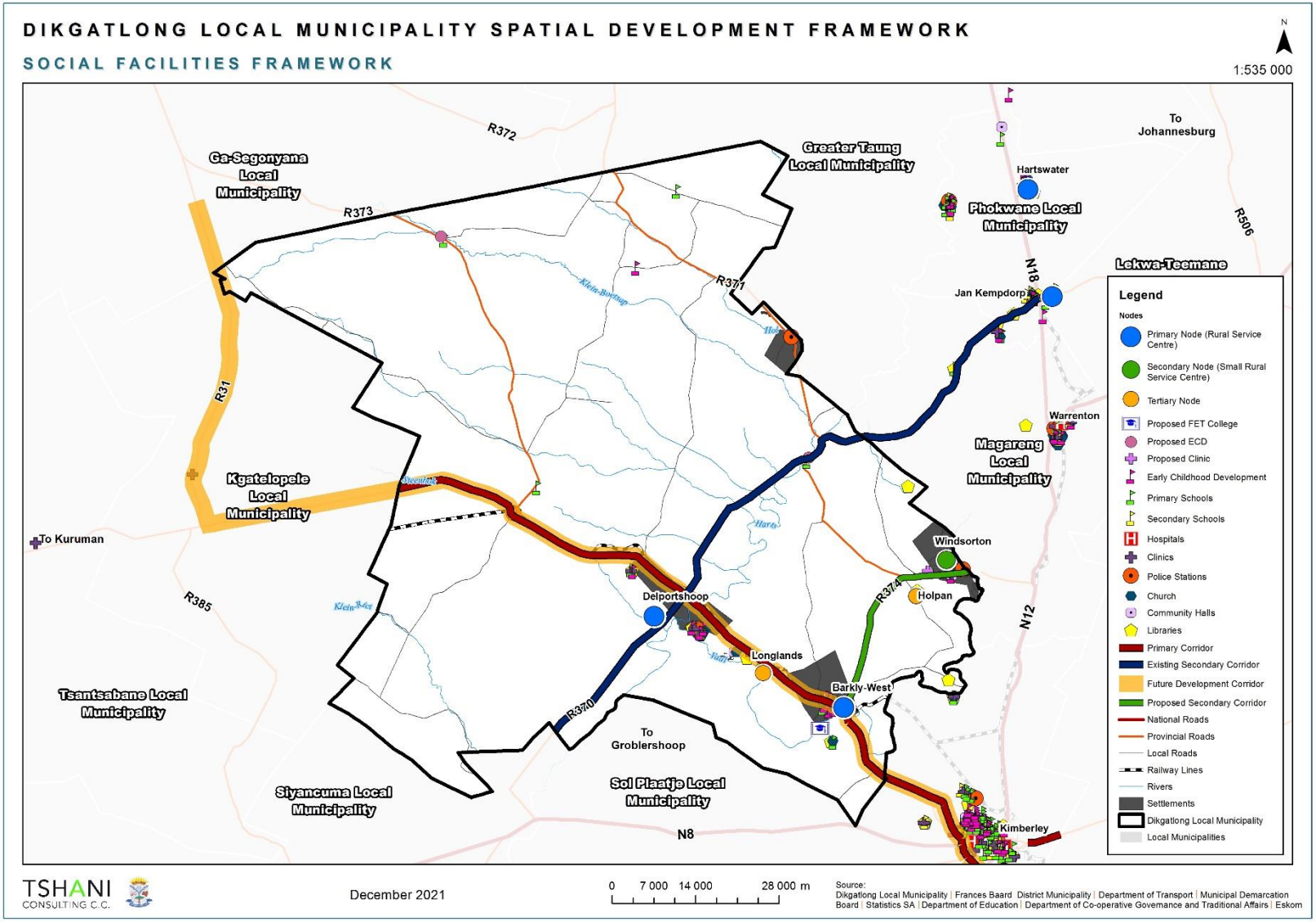
It is important to note the importance of an integrated planning approach towards service delivery to make sure that services are provided along with adequate supporting infrastructure. Based on the existing facilities with the Municipality, the following is a depiction of the number of facilities that are required to meet the population needs of the Municipality. Based on the

growth projection of the Dikgatlong Local municipality to the year 2050, a drastic increase in the number of Social Facilities will be required.

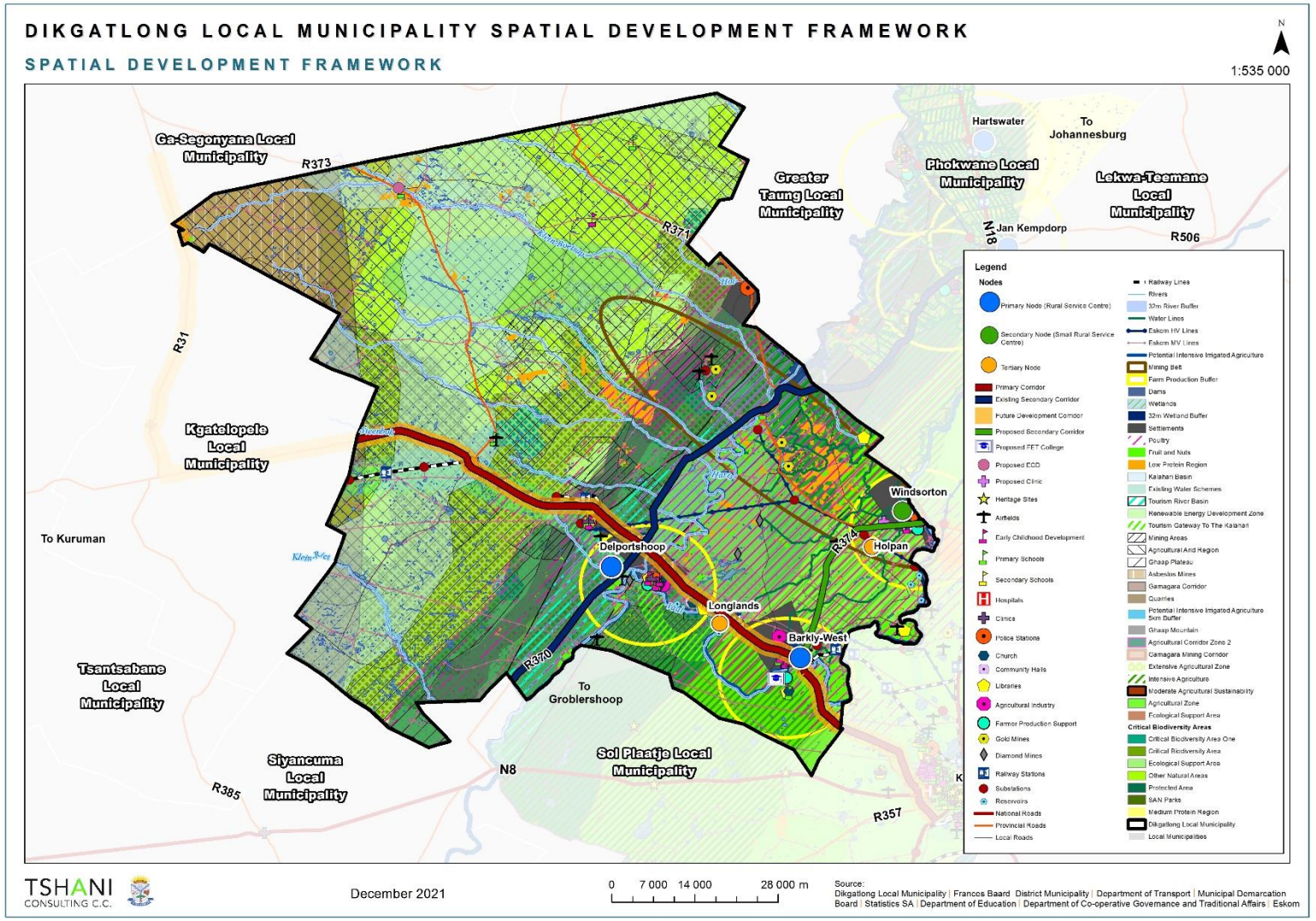
Table 21: Social Facility Intervention

SOCIAL FACILITY INTERVENTIONS	
TYPE	EXISTING
EDUCATION	
Creche	24
Secondary School	3
Primary School	11
Combined School	3
HEALTH AND EMERGENCY	
Primary Health Clinic	9
Hospital	1
CIVIL FACILITIES	
Police Station	5
SOCIAL SERVICES	
Community Halls	7

Currently, the municipality has some social facilities that are inadequate in number, however, there should be a consideration of increasing the number of social facilities to respond population increases.



PLAN 47: Social Facilities



PLAN 48: Dikgatlong LM Spatial Development Framework

SECTION E:

LAND USE MANAGEMENT FRAMEWORK

"To implement a [Spatial Development Framework] it is clearly necessary… to have mechanisms in place to encourage the desired types of land development. This makes the Municipal Systems Act terminology, land use management, that much more appropriate, as it suggests a function that is broader than merely controlling development" - White Paper on Spatial Planning and Land Use Management (Dept Land Affairs, 2001)

Land Use Management is the system of legal requirements and regulations that apply to land, to achieve desirable and harmonious development of the built environment. Land Use Guidelines and regulation of land includes Zoning Schemes and building Regulations.

PURPOSES OF A LAND USE MANAGEMENT SYSTEM:

The purpose of a Land Use Management System is to promote coordinated and environmentally sustainable development. The following are of importance for LUMS:

- Address spatial inequality;
- Promote efficient land systems;
- To promote wall-to-wall planning;
- Promote development in previously disadvantaged areas;
- Preserve environmentally sensitive areas;
- Balance opportunity for human and economic development with requirements for biodiversity persistence
- Maintaining landscape connections (ecological corridors) that connect CBAs;
- Promote infrastructural improvement and efficient public transport systems'
- To preserve archaeological and historic heritage

Guidelines For Preparation of Municipal Land Use Management Scheme (LUMS):

In the preparation of Municipal LUMS, the following processes or phases adopted from Chapter 4 of Department of Rural Development and Land Reform Guidelines for the development of LUMS (2015) must be followed by local municipalities.

- Phase 1: Inception – compilation of work plan and obtaining council resolution

- Phase 2: Research Analysis and Recommendation – data collection and analysis, land audit, translating SDF into more detailed broad land use areas and status quo report
- Phase 3: Draft Report and Supporting Documents – select zones and prepare the scheme map, land uses and development parameters, draft general and land use definitions, develop policies and additional controls as well as procedures to be included in scheme
- Phase 4: Consultation and Amendments – public participation, circulation to relevant authorities, submission to council for support of the scheme in principle, obtain public comments and revision based on public comments.
- Phase 5: Final Report and supporting material – preparation of final scheme clauses and scheme maps and submission to council for adoption / approval.
- Phase 6: Implementation – promulgation of scheme and training of officials

CONTENTS OF LAND USE SCHEMES:

A Land Use Scheme is a legislative plan and should consist of a written document and maps. The plan should have the following contents:

- Introduction
- Vision and Statements of Intent
- The Zones, Management Areas and Management Plans required for the area of applicability
- Land Use Matrices and Development Control Templates showing permitted and prohibited land use
- Definition of terminology
- Policies and Guidelines
- Procedures regarding application, consent, appeal etc
- Land Use Scheme Maps, Maps

Spatial Planning Categories

SPCs are generally consistent with UNESCO's MAB Programme and include all land zonings that are provided for under the existing Zoning Scheme Regulations. The designation of SPCs does not change existing zoning or land-use regulations or legislation. SPCs merely help to clarify and facilitate coherent decision-making that can lead to better zoning, laws and regulations. The SPCs, furthermore, provide a framework in terms of which land-use decisions can be standardised throughout the province. It is advisable that all zoning scheme regulations be aligned with the SPCs. The SPCs are to be applied in land-use classification at all levels of planning in the Northern Cape (refer specifically to the preparation of IDPs and SDFs).
A comprehensive set of SPCs and Sub-Categories have been created to serve as a guide for more detailed land-use planning at the district and local municipal sphere. The sub-categories may be refined as required to address site-specific needs at the district and local municipal sphere.

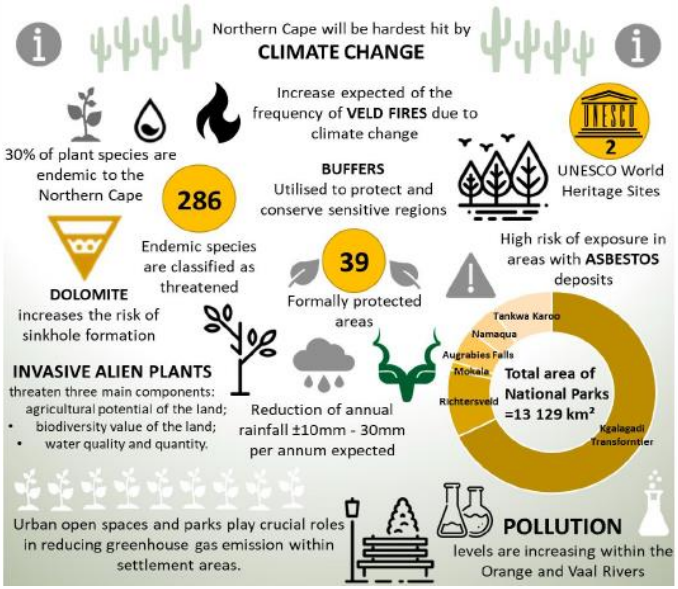
Some of the key applications of SPCs in decision-making and planning include the following:

1. The SPCs provide a system in terms of which all land units or entities within the district will eventually be recorded in the Spatial Planning Information system (SPIsys), facilitating effective administration of land-use issues.
2. The SPCs can be used to indicate both the status quo of official land-use and the desired land-use of all land within a planning area. In addition, they identify specific types of land-uses that are not included in the existing Zoning Scheme Regulations, providing for a non-statutory and more detailed land-use classification.
3. The SPCs indicate desired land usage which might in certain instances be aligned with the current zoning of properties and in other instances differ from that.
4. Existing Zoning Scheme Regulations are to be amended/upgraded in order to include these new concepts. It is envisaged that the Provincial Model Scheme Regulations will contain certain new overlay zonings in this regard.
5. The SPCs facilitate decision-making regarding applications for a change in land-use. In this regard, it is important to note that an SPC designation which differs from the current zoning, implies that any new development will be considered a diversion from the status quo, requiring that applications will have to be considered by the relevant authorities in accordance with specific guidelines.
6. Application of SPCs in natural landscapes – SPC A and SPC B and, to an extent, SPC C areas primarily relate to the natural landscape, which contain the inhabited (human-made) landscape (SPC C.b, D, E, and F).

Spatial Planning Category A & B: Core and Buffer Areas

SPC A areas constitute sites of high conservation importance including terrestrial land, aquatic systems (rivers, wetlands and estuaries) and marine areas (beach or rocky headlands). Due to their highly irreplaceable status, such areas should be protected from change or restored to their former level of ecological functioning.

Below is an excerpt from the NC PSDF with relation to the Spatial Planning Categories



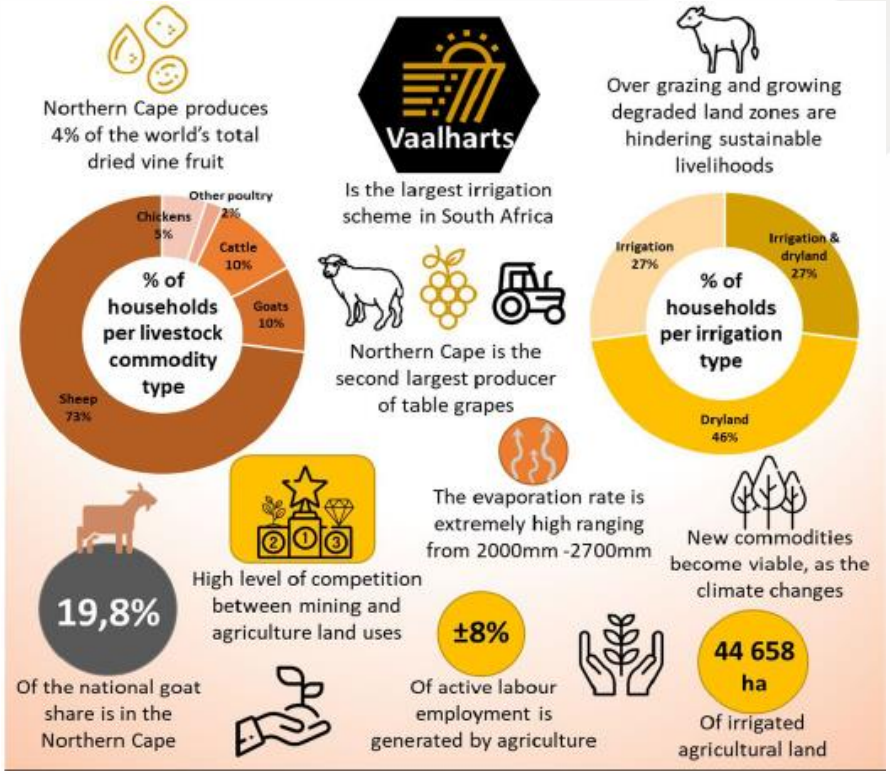
The Key Strategies and Interventions related to A & B is as follows:

- Implementation of the provincial and a local municipal air quality and waste management plan.
- Conserve existing ecological corridors and consolidate and rehabilitate any remnants of corridors that link coastal ecosystems with one another and with terrestrial ecosystems.
- Secure additional potential SPC A areas with the aid of institutions such as the WWF, IUCN, SKEP, SANParks Private Sector and GEF.
- Establish a system of protected areas incorporating the diverse coastal landscapes, ecosystems, habitats, communities, species, and culturally significant sites. The Special Management Area concept in combination with an efficient Stewardship agreement is to be implemented.

Spatial Planning Category C: Agriculture Areas

The protection and appropriate use of high potential agricultural land (in particular the areas along the Orange River, Vaal River and Harts River and those falling within the existing irrigation scheme areas) is of critical importance for sustainable economic growth and food security. High potential agricultural land in close proximity to settlements are often subjected to non-agricultural development pressure, while negative social impacts associated with such settlements often have a significant detrimental impact on the production potential of such land. It is therefore imperative that the highest priority be given to the protection of high potential agricultural land and that measures be instituted to create and maintain circumstances conducive to sustainable agriculture (PSDF, 2018)

Below is an excerpt from the NC PSDF with relation to the Spatial Planning Categories



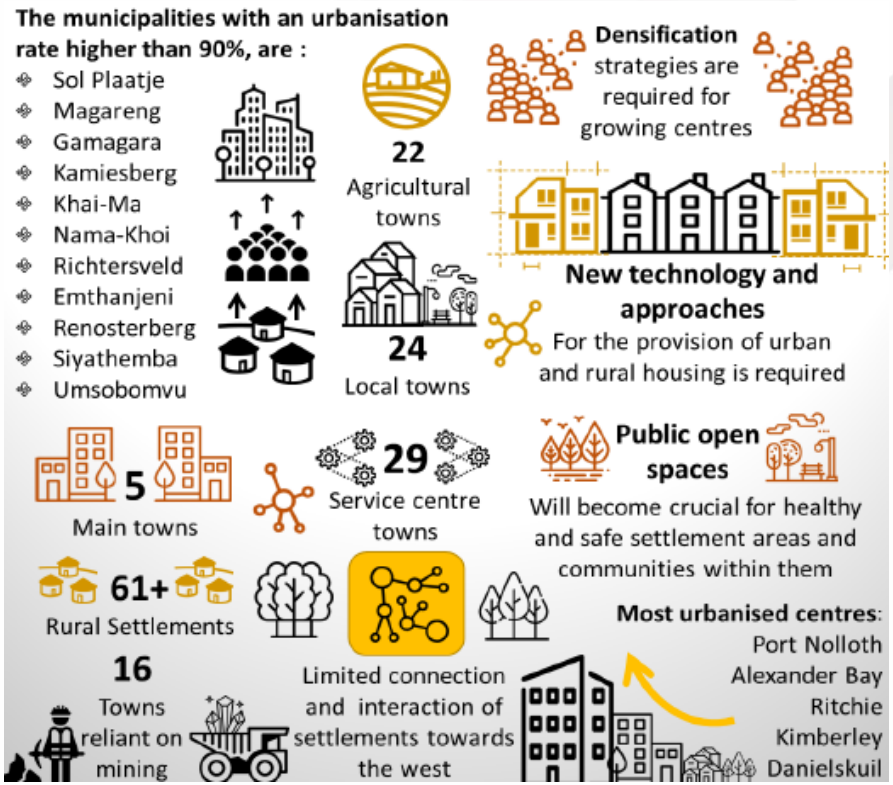
The Key Strategies and Interventions related to C is as follows:

- Give effect to the ideals of the sustainable Development Goals (SDG 2 and 12) pertaining to the promotion of sustainable agriculture and rural development
- Development of an Agricultural Master Plan for the Province to identify and protect the most fertile land for cultivation and food security purpose.
- Consider the rezoning of low-potential agricultural land as a mechanism to promote sustainable economic development by unlocking the latent capital vested in non-agricultural uses through the Sustainable Development Initiative (SDI) approach.
- Encourage bona fide game farms to combine their landholdings to create extensive SPC B areas that would support biodiversity conservation in a meaningful manner. Such areas should be managed as Special Management Areas.
- Encourage local processing of farm products and the provision of local farm services to enhance the rural economy, increase the viability of agricultural production and reduce rural poverty.

Spatial Planning Category D: Urban and Rural Areas

The relationship between rural and urban areas is increasingly changing throughout the world. Rural and urban areas are no longer mutually exclusive. Farming areas and cities coexist along a continuum with multiple types of flows and interactions occurring between the two spaces. Typically, it is now widely recognised that there exist economic, social and environmental interdependences between urban and rural areas.

Below is an excerpt from the NC PSDF with relation to the Spatial Planning Categories



The Key Strategies and Interventions related to D is as follows:

- All spheres of government, especially municipalities, must provide quality spatial data and interpretation to land managers to assist decision-making and adaptive management, and make regional

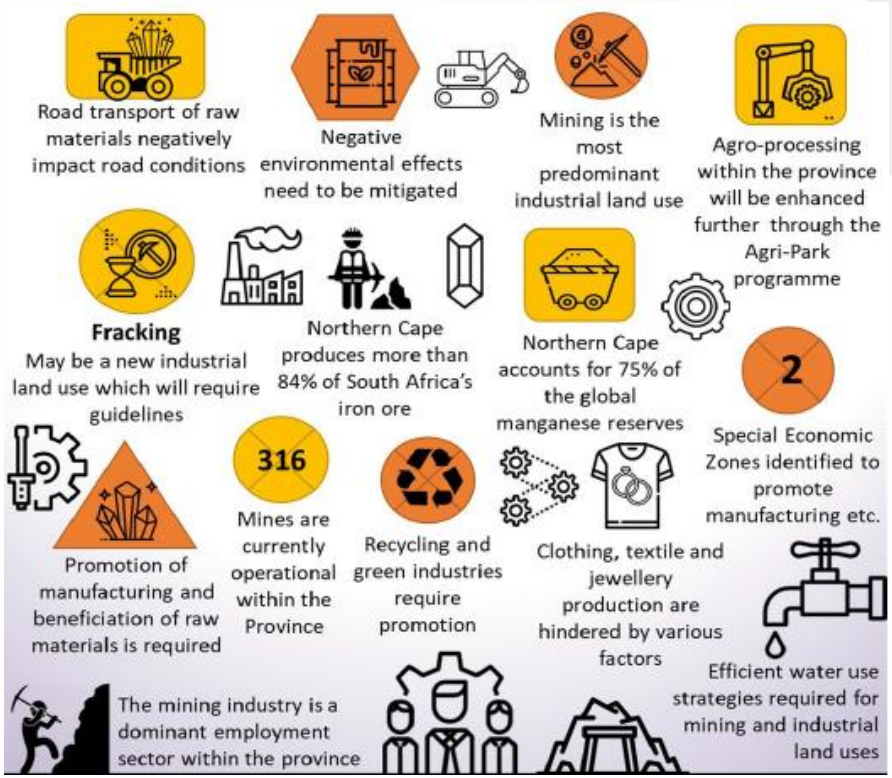
natural resource information and knowledge widely available or accessible (i.e. the SPISYS).

- Accelerate and streamline township establishment processes and procedures to ensure sustainable development.
- Prioritise government spending and private sector investment in urban and rural development in accordance with a settlement category determined by the socio-economic potential of towns and the needs of their inhabitants.
- Improve the quality of subsidised housing settlements through innovative urban planning and design and cross-subsidising.
- Ensure that development scale and design are determined by the carrying capacity of the environment.

Spatial Planning Category E: Industrial Areas

A key challenge is to broaden and unlock the opportunities presented by the availability of natural resources. Industrial activities, whether large- or small-scale, have the potential to stimulate economic diversification and development in the province.

While immediate industrial development opportunities related to mining in the Northern Cape, Frances Baard, and Dikgatlong local Municipality lie in brown-fields expansions and various types of downstream value-added activities (art, jewellery, souvenirs etc.) there are a number of other possibilities in side-stream and indirect activities. 'Side-stream' activities refer to the service network, vendors and key contracting firms directly affiliated with a particular mineral project's operations. Not only is this sector significant in terms of contributing to broadening the local and provincial employment base and enhancing the potential for further employment spin-offs, but it is of critical importance to the functioning of all departments within a particular mineral-based operation.



The Key Strategies and Interventions related to E is as follows:

- Develop the required industrial amenities and infrastructure in the defined development corridors which respond to the availability of

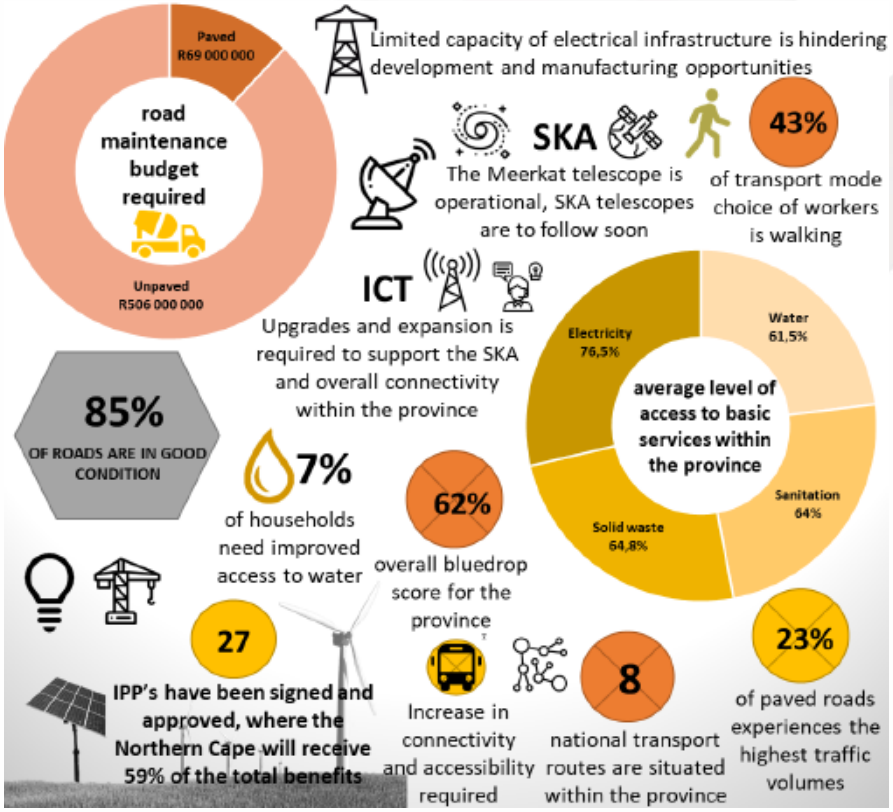
Environmental Capital (e.g. water, suitable agricultural soil, mining resources, etc.) and Infrastructural Capital (e.g. roads, electricity, bulk engineering services, etc.).

- Develop and adopt strategies for efficient water use and increase water conservation at mine sites.
- Continuous rehabilitation of mined land for agricultural and other rural development projects.
- Adjusting existing risk-identification processes to incorporate additional heat related health risks for industrial activities, such as underground mining.
- Prepare a provincial industrial development strategy.
- Prepare a Provincial Disaster Risk Reduction and Adaptation Plan.

Spatial Planning Category F: Surface Infrastructure and Buildings

An effective, competitive and responsive infrastructure network is imperative for ongoing economic development of the province, the FBDM, and DLM.

The DLM's ability to convey goods effectively and efficiently though the R31 is a key aspect to be addressed. The relevant sectoral departments therefore have a vitally important task in providing the infrastructure and bulk services required by the various economic sectors, the human settlements of the province, and the rural hinterland. Key challenges are a lack of basic infrastructure in rural areas and the proliferation of informal settlements in urban areas. Both these challenges are beyond the sole institutional and fiscal capabilities of the relevant municipalities. It is therefore important that the relevant funding mechanisms and institutions function efficiently and equitably.



The Key Strategies and Interventions related to F is as follows:

- Development of a Master Infrastructure Plan to align and coordinate infrastructure investment Improve the levels of mobility,

infrastructure development, and synergies in the transport planning activities.

- Maintain road, built and bulk infrastructure development and integrate into the infrastructure planning activities throughout the province.
- Conduct Strategic Environmental Assessments in areas suited for renewable energy generation, to incentivise and streamline the administrative and development processes.
- Consider a carbon tax with tariffs that effectively penalise producers and emitters of high levels of carbon dioxide either in the manufacturing or vehicle industry.
- Investigate how affordable and sustainable mobility in rural areas can be enhanced through the roll-out of non-motorised transport initiatives, including the provision of safer pedestrian pathways and facilities and the expansion of the Shova Kalula bicycle programme.

General Guidelines for Development:

The Spatial Planning and Land Use Management Act, Act No 16 of 2013 (SPLUMA), requires all municipalities in the province to develop and introduce wall-to-wall Land Use Schemes throughout their area of jurisdiction. This has to take place within 5 years from the promulgation of SPLUMA which implies that the target is now 2018. According to the Municipal Systems Act, a Land Use Scheme is a key component of the Integrated Development Plan (IDP).

Table 22: Land Use Categories

LAND USE CATEGORY	DEVELOPMENT OBJECTIVE	LAND USE TYPE	COMMON TERMS	LUMS GUIDELINES PREFERRED OUTCOMES
Environmental Areas	To protect main biodiversity areas, natural resources, and the ecological systems through the integration of SDFs, environmental policy and other spatial frameworks	Conservation	Nature Reserves, heritage sites, cultural tourism	*Typical Land Uses:* Conference facilities; tourism, leisure, and adventure activities, limited residential accommodation *Level of infrastructure and services*: limited infrastructure, management should include maintenance of existing trails and limited facilities, access
		Core	Wetlands, Protects areas	
Human Settlements	To manage and facilitate the development of integrated sustainable human settlements, with appropriate infrastructure, socioeconomic opportunities, and social amenities	Towns and Settlement Regions	Small Towns/ Local service centres	*Typical Land Uses:* Residential, business and offices, industrial parks, government and administration, transportation, leisure, and recreation *Level of infrastructure and services*: Basic to Full municipal services
		Major Settlements	Cities/ Large Towns/Large urban built up areas with CBDs, industrial complexes etc	*Typical Land Uses:* Residential, large business and offices, industrial parks, government and administration, transportation, leisure and recreation, busy CBD *Level of infrastructure and services:* Full municipal services

		Dispersed Settlements	Villages/homesteads/Resorts	*Typical Land Uses:* Residential, agriculture and farming, shops, sporting facilities, resorts, nature, taverns, access roads *Level of infrastructure and services:* Basic services
		Informal Settlements	Informal settlements	*Typical Land Uses:* Residential, social facilities, shops, access roads, *Level of infrastructure and services:* Basic services
Resource Areas		Agriculture, forestry, oceans	Commercial and subsistence farming, commercial plantations,	Tourism attraction, agricultural activity, rural development, youth empowerment, infrastructure development
Infrastructure	To promote efficient and integrated infrastructure and transportation systems	Strategic transport routes, telecommunications, sustainable energy	Higher order infrastructure (rail, roads, sea, air), radio telecommunications, green buildings, solar panels, cellular masts, water services	-Requirements of NEMA are applicable; -Certain applications will require EIA and Special Consent Applications (e.g., cellular masts, radio telecommunications)

All applications are required to comply with the requirements of the applicable legislation such as the Spatial Planning and Land Use Management Act, Municipal Town Planning By-Laws. The following general guidelines are applicable to applications:

- A Site Development Plan for all developments must contain details of the proposed development, density, coverage, layout, landscaping, position of all structures, property building lines, proposed parking, internal roads and the 100-year flood line above any water course;
- Any developments occurring in properties with a water body, a Water Use License Application (WULA) should be submitted to the DWAF;
- 100-meter buffers (preferably 50 meters) are applicable to rivers;
- The abstraction of water for any use, from any river, must have prior approval from DWAF and should require a full EIA to ensure that environmental impacts are negligible;
- All developments on heritage structures should comply with processes of the National Heritage Act;
- All applications pertaining to Communal Land are to be read in conjunction with and applied with respect to the Communal Land Tenure Bill;
- No application pertaining to land development on or change the land use purpose of communal land may be submitted unless accompanied by Power of attorney signed by the applicable traditional council;
- All applications pertaining to land development on or change the land use which has a high impact on the community must be applied for at the Municipality, in a manner provided for in the municipal planning by-law;
- Newly developed buildings should comply with Green Building Standards and Norms.

Defined Nodes Outside of the Urban Edge:

These encompass the proposed rural service centres. Shops; service industries, offices and limited size tourist related businesses could be allowed at such nodes. In addition, social, health, education and safety and security facilities are to be encouraged to locate in these nodes. Standard provisions of approved policies, Town Planning controls, building by-laws, aesthetic and signage controls are in place for these areas as defined in municipal policy documents and this SDF.

Natural Tourism Areas

These are areas where limited development may occur subject to an environmental assessment and management plan, the STEP guidelines, and associated protocols.

- Limited and regulated tourism facilities; Small accommodation facilities that are low-key, low-impact and in harmony with the natural environment;
- Agricultural activities;
- Existing rural settlement.

Any development contemplated in the Nature Tourism Areas would need to adhere to the following guidelines:

- The development of a site must not be dependent on the creation of a new road. Existing roads may be upgraded to improve access but where there is no existing road, this should inform the type of tourism facility that is developed.
- The maximum carrying capacity for all development sites, until an SEA or EIA has taken place, is 36 beds or 20 small units. All development sites should be well located in the Nature Tourism buffer area to safeguard the sense of place and eco-tourism opportunities available to that site.
- Development of these sites requires a full EIA and a live Environmental Management Plan that addresses, inter alia, the disposal of solid waste.
- Full IEM procedures are to precede any development whereby the precautionary principle shall apply with approval conditions requiring rehabilitation of the environment and specifications regarding the use of the remainder (for example; conservation, private nature reserve etc);

No Development Areas

There are areas that have experienced land loss and have been exposed to various ecological threats within the province, hence, they should be preserved. Areas that are highlighted as "no development areas" include, but not limited to the following:

- Areas of high environmental sensitivity;
- Within 500 meters of a sewage treatment facility;
- 50 meters within a wetland area;
- Below 5-meter contour around an estuary;
- In areas with slopes of 1:3;
- Along ecological corridors

Limited Development Areas

There are areas that indicate limited impacts on the environment and offer reasonable economic benefits. These are also areas that can be regarded as safe for development although they have certain levels of limitation and should thus follow applications of certain legislation and authorisation. These areas are:

- Areas outside of the urban edge; although authorisation is required;
- Urban Settlements;
- Resort Developments;
- Areas of heritage value and importance.

The guidelines noted in this section should be effectively implemented and enforced to ensure that the municipality achieves the goals of a Land Use Management System. Various policies and legislation should serve as a base to enforcing the requirements of the Land Use Management Systems.

Subdivision of Agricultural Land

The subdivision of farms into multiple individual farms to avoid the rezoning process and/or to achieve de facto residential development is not considered desirable, as it negates the intention and spirit of the zoning categories provided in the Subdivision of Agricultural Land Act 70 of 1970.

The Subdivision of Agricultural Land Act 70 of 1970 (SALA), Scheme 8 Regulations, indicate that the minimum subdivision of agricultural land is 0.8 Hectares. Where no subdivision is involved, a density of 1 dwelling unit for every 10 Hectares, up to a maximum of 5 dwelling units, is permitted, subject to consent and proof that the farming programme is sustainable and economically viable.

Accordingly, and with due cognisance of the trends and pressures for land development on land currently zoned for agricultural purposes, it is proposed that the guidelines of Subdivision of Agriculture Land Act 70 of 1970 be applied within the OR Tambo District Municipality, but with a recommended minimum subdivision size of 10 Hectares for agricultural land.

Should an applicant want to pursue intensive farming activities on land holdings smaller than 10 Hectares, the application for Subdivision of Agricultural Land must be accompanied by a full motivation, including an Agricultural Feasibility Report indicating sustainability of the proposed enterprise

The development of this land for non- agricultural purposes should only be allowed if:

- The land has already been subdivided to such an extent that it is no longer agriculturally viable;
- The land has already been developed for non-agricultural purposes;
- The proposed development does not compromise the primary agricultural activity of the property;
- The proposed development comprises a secondary activity to supplement a landowner's income;
- It will facilitate the implementation of the Land Reform Programme and Labour Tennant Projects.

The Department of Agriculture does not consider anything less than 20 Ha as a viable unit; therefore, it is proposed that subdivisions of less than 20 Ha should not be allowed. This information is also recommended for inclusion into the draft Land Use Management Guidelines.

Cooperative Governance Approach to Spatial Planning

The Constitution makes it clear that all the three spheres of governments are interdependent and interrelated. The Constitution therefore assigns planning responsibilities to the provinces to undertake the following:

- Implementation of provincial and regional planning policies and regulations as enshrined in Schedules 4 and 5 of the Constitution;
- Implementation and regulations to monitor and support municipalities in exercising their municipal functions.

The Spatial Planning and Land Use Management Act, 2013 (SPLUMA) is a framework act for all spatial planning and land use management in South Africa, which seeks to promote consistency and uniformity in procedures and decision-making as well as addressing historical spatial imbalances and the integration of the principles of sustainable development into land use and planning regulatory tools and legislative instruments. SPLUMA, mandates the Northern Cape province to be s responsible for the co-ordination, integration, and alignment of the following:

- Provincial plans and development strategies with policies of National Government;
- The plans, policies, and development strategies of Provincial Departments; and
- The plans, policies and development strategies of district and local municipalities.

There should be inter-governmental relation (IGR) structures that should be used to facilitate implementation of the SDF, that is, there should be co-operative approach to spatial planning and land use management to achieve sustainable governance system in the SDF.

In the Frances Baard District Municipality, proposals for SDF governance, amongst others, should include the following:

- A need to establish interdepartmental spatial coordination committee in the Office of the Premier with the necessary oversight to formulate the SDF, resolve the responsibilities for spatial planning within the provincial government level, remove duplications and recommend that COGTA be responsible for overseeing spatial planning in the province.
- Ensure limiting peri-urban sprawl through strong local land use controls.
- Establish an integrated LUMS in the province involving all stakeholders
- Preparation of credible "wall-to wall" SDFs by LMs with both technical and tradition leaders / indigenous approach to land use management.
- Regular capacitating of municipal planners with guidelines from SACPLAN
- There should be CoGTA's capacity assistance to LMs in terms of co-operative governance

Contents of Land Use Schemes

A Land Use Scheme is a legislative plan and should consist of a written document and maps. The plan should have the following contents:

- Introduction
- Vision and Statements of Intent
- The Zones, Management Areas and Management Plans required for the area of applicability
- Land Use Matrices and Development Control Templates showing permitted and prohibited land use
- Definition of terminology
- Policies and Guidelines
- Procedures regarding application, consent, appeal etc

- Land Use Scheme Maps, Maps

Communal Land

- An applicant who wishes to develop on or change the land use purpose of communal land located in the area of a traditional council where such development will have a high impact on the community or such change requires approval in terms of a land use scheme applicable to such area, must apply to the Municipality in the manner provided for in relevant chapter of the municipal planning by-law;
- No application pertaining to land development on or change the land use purpose of communal land may be submitted unless accompanied by power of attorney signed by the applicable traditional council;
- All application pertaining to Communal Land are to be read in conjunction with and applied with respect to the Communal Land Tenure Bill.

SECTION F:

IMPLEMENTATION FRAMEWORK

This section serves as the Project Identification and Implementation Plan section of the report. Based on the key development proposals identified in Spatial Proposals and the overall Spatial direction of all sectors of the district municipality. This section also includes an Implementation Plan of the identified projects completed with a list of likely funders of the projects, as well as budget estimates and the period of Implementation over a three (3) year period linked to the Medium-Term Expenditure Framework (MTEF).

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PART 1: IMPLEMENTATION PLAN

This section serves to conclude the Dikgatlong LM Spatial Development Framework by reinforcing the link between the SDF and the IDP. In this regard, the Plans overleaf illustrate the spatial pattern of investment currently being implemented through the IDP and, as such, provide a "picture" of the IDP's planned pattern of expenditure.

Understanding the Implementation Plan Table

The Implementation Plan table includes the following components:

Project Name: This is the title of the project. It also includes a brief description of the project

Responsible Department: The Responsible department outlines the department which will lead the proposed project. The role of this identified department is responsible for ensuring the Implementation of the project, including presenting the proposal of the project at various tiers to acquire buy-in to the project.

The role of the responsible department further includes the sourcing of Funding for the respective project, preparing the Tender document (should the project be tendered out), ensuring the smooth and timeous implementation of the project. This department may also request to seek assistance from another department should assistance be needed. Their responsibility further includes any applications which need to be made or studies that need to be conducted to acquire funding.

Municipality / Region: The location in which the project will be implemented within.

Source of funding: Identifies suggestions of where the funding can be sourced from for the implementation of the project.

Total Project Cost: This is the total cost of project

Budget 2022/23: The amount of the Total project cost that is expected to be spent on the project during the 2022/2023 financial year.

Budget 2023/24: The amount of the Total project cost that is expected to be spent on the project during the 2022/2024 financial year.

Budget 2024/25: The amount of the Total project cost that is expected to be spent on the project during the 2024/2025 financial year.

Budget 2025/26: The amount of the Total project cost that is expected to be spent on the project during the 2025/2026 financial year.

Budget 2026/27: The amount of the Total project cost that is expected to be spent on the project during the 2026/2027 financial year.

Proposed Catalytic Projects, (FBDM District Development Model, 2020)

Catalytic projects can be defined as those projects that when pursued, would have a significant positive impact on more than one area, community, sector and directly or indirectly improve the lives of the people within the district.

The identified catalytic projects are linked to specific drivers of change to illustrate how this plan could potentially support the provincial strategic and spatial vision.

The NC Provincial Growth and development Plan outlines the following Catalytic Programmes:

- Driver 1: Economic Transformation, Growth and Development
- Driver 2: Social Equity and Human Welfare
- Driver 3: Environmental Sustainability and Resilience
- Driver 4: Accountable and effective Governance

The following table includes the top 25% of high impact/catalytic projects as identified in the Northern Cape Provincial Growth Development Plan 2018 applicable to the Dikgatlong Local Municipality:

PGDP Driver of Change	Project	Sector
Driver 4: Accountable & Effective Governance	Provincial mining strategy (Mining and mineral beneficiation)	Mining
Driver 2: Social Equity & Human Welfare	Agri-Park Programme	Agriculture and agro-processing
Driver 1: Economic Growth, Development And Prosperity	New Industries in the manufacturing revolution	Innovation and the knowledge economy
Driver 3: Environmental Sustainability And Resilience	Supply chain centres in each REDZ – Springbok, Kimberley and Upington	Energy
Driver 2: Social Equity & Human Welfare	One Hectare One Household	Agriculture and agro-processing
Driver 3: Environmental Sustainability And Resilience	Promote small-scale and subsistence farming	Rural development, land reform and food security
Driver 2: Social Equity & Human Welfare	Logistics Hub / storage facilities for locally produced crops	Rural development, land reform and food security
Driver 1: Economic Growth, Development And Prosperity	SIP 16 SKA	Innovation and the knowledge economy
Driver 3: Environmental Sustainability And Resilience	Vaalharts Revitalisation Scheme	Agriculture and agro-processing
Driver 1: Economic Growth, Development And Prosperity	Relocation of the state diamond trader to the Northern Cape	Mining and mineral beneficiation
Driver 2: Social Equity & Human Welfare	SIP 15 Broadband Roll-out	Innovation and the knowledge economy
Driver 2: Social Equity & Human Welfare	Northern Cape Electricity Supply Company	Energy
Driver 1: Economic Growth, Development And Prosperity	Big Hole Tourism Precinct	Tourism
Driver 2: Social Equity & Human Welfare	Mega Housing Developments	Sustainable human settlements
Driver 2: Social Equity & Human Welfare	Traffic college development	Social Protection and Welfare
Driver 3: Environmental Sustainability And Resilience	A centralised SED and ED project implementation office, knowledge sharing, and databank	Energy
Driver 2: Social Equity & Human Welfare	Smart School and Distance Learning Initiative	Quality basic education

The Implementation Plan identifies likely funders for the different projects, budget estimates and the period of Implementation over a three to five (3-5) year period, linked to the Medium-Term Expenditure Framework (MTEF).

Project	Location	Total Budget	Budget 2021/22	Budget 2022/23	Source of funding	Priority
Provision of adequate and reliable infrastructure/services.	Dikgatlong Local Municipality	R 1 500 000.00	-	-	• DBSA • IDC • National Treasury • DLM • DMR	Medium
Development of Public Transport Plan	Dikgatlong Local Municipality	R 700 000.00	-	-	• NCP Department of Police, Roads and Transport • NCP Department of Public Works	High
Development of Neighbourhood Nodes	Dikgatlong Local Municipality	R 800 000.00	-	-	• DLM • FBDM • DRDLR (NC)	Medium
Development of detailed Precinct Plans for Barkly West, Delportshoop and Windsorton	Dikgatlong Local Municipality	R 900 000.00	-	-	• DLM • FBDM • DRDLR (NC)	High
Upgrading of local transport routes in all settlements	Dikgatlong Local Municipality	R 900 000.00	-	-	• NCP Department of Police, Roads and Transport • NCP Department of Public Works	High

Provision of Social Services	Dikgatlong Local Municipality	Unknown	-	-	• DLM • FBDM • DEPT. OF EDUCATION • DEPT. OF HEALTH • DEPT. OF SOCIAL SERVICES AND POPULATION DEVELOPMENT	High
Development and expansion of Industry	Dikgatlong Local Municipality	R 500 000.00	-	-	• NCP DEPT. OF ECONOMIC DEVELOPMENT, TOURISM AND ENVIRONMENTAL AFFAIRS • IDC	Medium
Development and expansion of Agri- processing	Dikgatlong Local Municipality	R 2 300 000.00	-	-	• NCP DPT. OF ECONOMIC DEVELOPMENT, TOURISM AND ENVIRONMENTAL AFFAIRD • IDC	Medium

Industrial & Mining Development Plan for harnessing resources in the Development Rectangle	Dikgatlong Local Municipality	R 900 000.00	-	-	• DLM • FBDM • NORTHERN CAPE PROVINCE • DMR • DE & NC	Medium
Improve Tourism Industry	Dikgatlong Local Municipality	R 600 000.00	-	-	• FBDM • NCP DEPT. OF ECONOMIC DEVELOPMENT, TOURISM AND ENVIRONMENTAL AFFAIRS	High
Expansion of Tourism and Resorts/Eco Estates	Dikgatlong Local Municipality	R 700 000.00	-	-	• DLM • PRIVATE SECTOR • PROPERTY DEVELOPERS	High
Feasibility Study on the future of Longlands, Morrisdraai and Gong Gong	Dikgatlong Local Municipality	R 200 000.00	-	-	• DLM • FBDM • DoHS	High
Feasibility and Land Availability Study for a Shopping Centre for each node	Dikgatlong Local Municipality	R 450 000.00	-	-	• FBDM • DLM • PRIVATE INVESTORS • DEVELOPERS	Medium

Promoting the Tourism Potential in Riverton	Dikgatlong Local Municipality	-	-	-	• NCP DEPT. OF ECONOMIC DEVELOPMENT, TOURISM AND ENVIRONMENTAL AFFAIRS	High

Function	Project Description	Source of Funding	Region/ Ward	2021/2022 Target	Budget Estimates			
					2021/2022	2022/2023	2023/2024	2024/2025
Water Management	Proteahof 365 Water & Sewer reticulation	COGHSTA	6	2024	-	-	-	-
Water Management	Gatvol 265 Water & Sewer reticulation	COGHSTA	6	2022	-	-	-	-
Water Management	Sonderwater 3500 Water & Sewer reticulation	COGHSTA	3	2023	-	-	36 000 000	-
Water Management	Longlands 600 Water & Sewer reticulation	COGHSTA	5	2024	-	-	18 000 000	-
Water Management	Delportshoop Water Purification Plant	DWS	5, 6 & 7	2024	-	-	-	35 000 000
Wastewater Management	Windsorton Oxidation Pond	MIG	4	2022	R332 000.00	-	-	42 000 000

Water Management	Replacement of Asbestos pipe (Barkly west)	FBDM	2	2022	Retention	-	-	-
Water Management	Windsorton-Holpan Bulk Scheme	DWS	4 & 5	2022	R9 945 000	-	-	-
Water Management	Barkly West Upgrade of Bulk Water supply	MIG	1,2 & 3		R14 725 000			
Environmental Management	Parks & Recreation of community parks	DENC	All	2022	R108 000.00			
Environmental Management	Green initiative	DEA	All	2022	-	-	-	-
Environmental Management	Thumamina Good Green Deeds	DEA	All	2022	-	-	-	-
Environmental Management	Youth Environmental Services	DEA	All	2022	-	-	-	-

Function	Project Description	Source of Funding	Region/ Ward	2021/2022 target	Budget Estimates			
					2021/2022	2022/2023	2023/2024	2024/2025
Roads	De Beershoogte roads & Stormwater (Iris Street)	MIG	2	2022	3 446 739.94	15 000 000	-	-
Roads	Longlands Road & Storm water	MIG	5	2022	-	-	-	15 000 000.00-
Roads	Windsorton Roads & Storm water	MIG	4	2023	-		18 000 000.00	-

Roads	Tidimalo Roads & Stormwater	MIG	7	2022	-	-	-	-
Roads	Maintenance	FBDM	All	2022	R300 000	-	R10 500 0000-	-
Parks	Maintenance	MIG	1	2022		R8 000000.00		
Waste water	Windsorton oxidation ponds	MIG	4	2022	R332 000.00	-	-	-
Waste water	Pniel Dry Sanitation	WSIG	3 & 6	2022	R10 0000000.00	-	-	-
Fleet management	Purchasing of Yellow fleet	MIG	ALL	2022	R1 000 000.00	-	-	-
DWS	Waste Water Treatment Works Master Plan	COGHSTA PMU	ALL	2022		R1 000 000.00		
DWS	Water Services Development Master Plan	COGHSTA PMU	ALL	2022		R1 000 000.00		
DWS	Water and Sanitation Master Plan	COGHSTA PMU	ALL	2022		R1 000 000.00		

Function	Project Description	Source of Funding	Region/ Ward	2021/2022 Target	Budget Estimates			
					2021/20222	2022/2023	2023/2024	2024/2025
Electricity	±200 connection to Gatvol area	INEP	6	2022	-	R1 500 000	R1 920 000	R2 026 000
Electricity	Maintenance of meters	FBDM	All	2022	R250 000.000	-	-	-
Electricity	Connection of High mast lights	MIG	All	2022	R8 550 000.00	R950 000	-	-

Electricity	Electrical connections to Delportshoop	MIG	All	2022	R1 000 000.00	-	-	-

Function	Project Description	Source of funding	Region/ward	Budget Estimates			
				2021/2022	2022/2023	2023/2024	2020/2021
Planning and Development	Land Restitution Programme Support	Own funding & Rural Development	All wards	-	-	-	-
Planning and Development	Support LED Projects	Own funding & SLP, FBDM	All wards	-	-	-	-
Planning and Development	Heritage & Exhibitions	Own funding & SLP	All wards	R 60 000	R 62 000	R 65 000	R 70 000
Planning and Development	EPWP (Stipends)	Public Works	All wards	R 950 000	R 1.200 000	R 1.300 000	R 1.400 000
Planning and Development	Community Works Programme	COGSTA	All wards	R 12.100 000	R 12.200 000	R 12.300 000	R 13 000 000
Planning and Development	Monitoring of Social & Labour Plan	Own funding	All wards	R 15 500	R 17 000	R 17 200	R 18 000
Planning and Development	LED Forum	Own funding	All Wards	R 12 000	R 12 300	R 12 500	R 13 200
Planning and Development	Public works grant	Public works dept	All wards	R 2 000 000	-	-	-
Planning and Development	Road Traffic management system (weighbridge)	Own Funding/Investor	All wards	R 2 000 000	-	-	-

Function	Project Description	Source of funding	Region/ward	2021/2022 Target	Budget Estimates 2021/2022	2022/2023	2023/2024	2024/2025
Technical services	Rezoning & Subdivision of 3500 Erven	COGHSTA	3	2022	R 18 000 000	-	-	-
Technical services	Rezoning & Subdivision of 600 Erven Longlands	COGHSTA	5	2023	-	R 200 000	-	
Technical services	Spatial Development Framework	FBDM	All	2022	R 800 000	-	-	-
Technical services	Land Audit	FBDM	All	2023	-	R 600 000	-	-
Technical Services	Tuckshop & Tavern By-laws	FBDM	All	2022	R 300 000			
Technical services	Municipal Planning Tribunal Sitting	FBDM	All	On-going	-	-	-	-
Technical Services	Rooirand Primary School	Dept of Public works	3	2022	R 72 653 836	-	-	
Technical services	Boresetse Secondary School	Dept of public works	1 & 3	2022	R 2 539 051.00	-	-	-
Technical services	Sandton: Geotechnical & Contour Surveyor	Own Funding	1	2022	R 400 000	-	-	-

Technical services	Zone 7 & Colour block: Geotechnical & Contour Surveyor	Own Funding	3	2022	R 615 000	-	-	-
Technical services	Subdivision & Rezoning of Erf 711 (Mobiseng tyres)	Own Funding	3	2022	R 60 000	-	-	-

Projects from the Department of Education.

PROJECT NAME	PROJECT NO.	IA	NATURE OF INVESTMENT	PROGRAMME	TOTAL PROJECT COST	TOTAL EXPENDITURE UP TO DATE - MARCH 2022	PROJECT BALANCE AS AT MARCH 2022	MTEF 2022/23	MTEF 2023/24	MTEF 2024/25	TOTAL 2022/23 MTEF ALLOCATION [3years]
Boresetse Secondary School	Doe03ncar037	Ncdoe	Upgrading And Additions	Classroom Block	R 35 213 335	R 32 444 102	R 223 654	R 223 654			R 223 654
Dl Jansen Primêre Skool	Bbb2208-2020	Ncdoe	Upgrading And Additions	Classroom Block	R 20 720 984	R 8 604 562	R 1 021 383	R 1 021 383			R 1 021 383

Stillwater Intermediate School	TBD	TBD	Upgrading And Additions	Classroom Block	R 2 970 243	-	R 2 970 243		R 246 970	R 2 723 273	R 2 970 243
Gn Pressly Intermediêre Skool	Drpw 002/2020	Drpw	Upgrading And Additions	Ecd Classroom	R 3 479 149	R 1 420 000	R 2 059 149	R 2 059 149			R 2 059 149
Reakantswe Secondary School	TBD	NCDOE	Upgrading And Additions	Fencing	R 700 000	R -	R 700 000	R 700 000			R 700 000
Delportshoop Gekombineerde Skool	TBD	NCDOE	Maintenance And Repairs	Maintenance - Corrective	R 1 000 000	R -	R 1 000 000	R 1 000 000			R 1 000 000
Kgotatsano Primary School	TBD	NCDOE	Rehabilitation, Renovations & Refurbishment	Maintenance - Corrective	R 2 161 387	R -	R 2 161 387	R 2 161 387			R 2 161 387
Pniel-Landgoed Primêre Skool	Tbd	Ncdoe	Maintenance And Repairs	Maintenance - Corrective	R 500 000	R -	R 500 000	R 500 000			R 500 000

Reakantswe Secondary School	Tbd	Ncdoe	Maintenance And Repairs	Maintenance - Corrective	R 350 000	R -	R 350 000	R 350 000			R 350 000
Barkley Rooirand Off-Shoot Primary School	Doe03ncar002	Ncdoe	New Or Replaced Infrastructure	New School	R 120 399 082	R 73 871 248	R 10 782 889	R 7 548 022	R 3 234 867		R 10 782 889

PART 2: CAPITAL INVESTMENT FRAMEWORK

A Capital Investment Framework (CIF) is a very important component of the Spatial Development Framework (SDF). CIF is a sound step towards a more systematic approach to infrastructure planning and coordination.

Legislative Requirements

The Spatial Planning and Land Use Management Act 16 of 2013 requires that municipal spatial development frameworks determine a Capital Expenditure Framework (CEF) for the municipality's development programmes, depicted spatially. SPLUMA does not elaborate on the content or purpose of a Capital Expenditure Framework or distinguish between the focus of such a CEF in district versus local municipal SDFs. In line with current thinking within National Treasury, this SDF contains a "Capital Investment Framework" (CIF), which is the foundation for more effective integration of the municipality's spatial development strategies with the IDP and budget. These instruments are central to implementation and unless the implementation framework of an SDF connects explicitly with these, there is little chance of the proposals being realised. By providing more specific guidance on what investments should be made where and in what order of priority, will ensure alignment between the municipality's strategies, plans and policies. In addition, the risk that budget allocations undermine or contradict the SDF are mitigated.

The Dikgatlong Local Municipality SDF's key spatial strategies are central to financial sustainability and should inform the district's approach to its Capital Expenditure Framework. Among these strategies, regional accessibility is key to inclusive and equitable growth and co-ordinated growth management is of particular importance. The District's Capital Expenditure Framework is also an essential tool for realising the SDF's fourth, foundation strategy - the need to plan, budget and manage as one government. Developing the CEF into an effective tool for co-ordinated development based on a shared set of development strategies and speaks directly to the municipalities mandate to co-ordinate infrastructure planning.

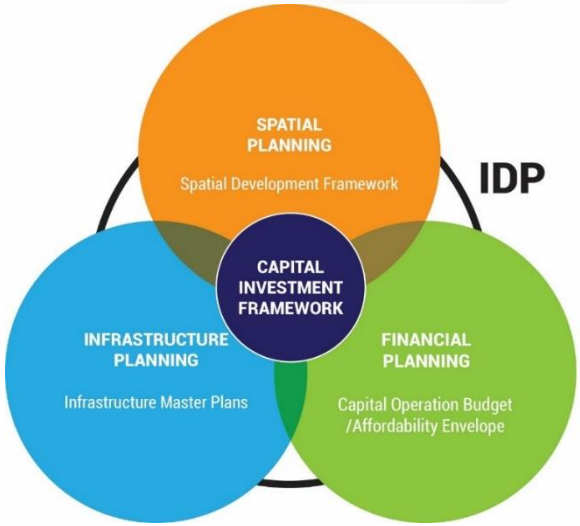


Figure 11: Capital Investment Framework

Preparing a Capital Expenditure Framework

This section refers to the preparation of a Capital Expenditure Framework supported by a Medium-Term Integrated Infrastructure Investment Framework (MTIIF).

Several tools exist to project the capital investment needs in space, against which the available resources can be matched, sequenced, and prioritised. This is informed by the leadership priorities of the respective councils.

Why Undertake Spatial Integrated Infrastructure Investment Planning

- Resources are limited.
- Municipalities in the district need to understand the drivers of growth and respond with infrastructure to support growth and development – no more, no less.
- Planning is fragmented and regional scale issues are missed in local scale planning.
- The most appropriate funding mechanisms need to be selected to match the source of the demand, i.e. balance grant funding, municipal own sources (including borrowing), development charges and Public-Private Partnerships (PPPs).
- Costs vary in space and spatial planning decisions may have long-term consequences.
- There is a need to balance investment in what you have (asset renewal) versus creating new infrastructure to address backlogs

  This can be described as catering for growth and the ability to operate and maintain infrastructure in the long-term.

What Should a Capital Expenditure Framework Look Like?

The underlying questions that the CEF needs to provide guidance on is:

- How much do we need to spend where and on what?
- Is the spatial growth trajectory affordable now and sustainable on an ongoing basis?
- How do we ensure that investment planning is supporting the local and district municipalities' SDF Vision Directives? Does it enable the implementation of the SDF's spatial proposals?

To answer these questions, the ideal function of a Medium-Term Integrated Infrastructure Investment Framework (MTIIIF) is to:

- Project the impact that the anticipated population and future economic growth and service delivery targets (to address backlogs), is likely to have on the demand for infrastructure services, and identify where this demand will occur in space;
- Estimate the cost of the infrastructure required to service this demand, given its location;
- Project the timing of investment required to "unlock" developable land;
- Account for the capital that is required to renew existing assets;

- Identify the most appropriate funding mechanisms for the overall capital investment requirements, as well as any potential funding gaps; and
- Identify the trade-offs that need to be made if there is a funding shortfall. This may include adjusting growth forecasts; revising the levels of service or technical solution to the service demand; adjusting the location of development; or increasing the available funding to match the investment need (e.g., increased borrowing or increased rates and tariffs).

The above scope has clear overlaps with engineering master planning and the capital budgeting processes. Rather than seeing this as an over-ambitious task, the idea is that these three planning processes (spatial, technical, and financial) should be undertaken simultaneously and iteratively. A MTIIIF, as described above, can only be done if some level of engineering master planning has been undertaken. Likewise, a capital budget can only be concluded once the competing needs have been addressed in a balanced and fair manner. Importantly, the Capital Expenditure Framework, based on the findings of the MTIIIF, should recommend investment priorities within the context of the Council's leadership's priorities within a longer-term view than the capital budget and should consider the investment pipeline related to the phasing of growth and development.

How Would One Do This

The conceptual methodology that has been used to undertake this type of long-term infrastructure investment planning is as follows:

- Have a common set of growth assumptions. These may need to be varied or adjusted over time, which implies a flexible model that can vary assumptions and produce future implications. Growth assumptions should have a solid evidence base;
- Project forward over a sufficient time frame to allow for proper infrastructure planning and for life cycle costing of decisions. Between 20-30 years is an appropriate time frame;
- Use the growth projections, backlogs, levels of service, and evidence-based unit demands to project the service demands in a spatially disaggregated way as possible. Differentiate users with distinct consumption patterns, or with clear revenue or funding characteristics;
- Once the future service demands are understood, these can be costed by either identifying projects to address the demands (where master planning has been undertaken), or by applying high level unit costs to the future demands. Unit costs should be spatially differentiated if possible. A project-level assessment allows for more spatial differentiation of the costs;
- Use technical asset registers to calculate the cost of asset renewal based on prevailing costs and asset condition;

- Match the funding stream to the type of infrastructure required, i.e., conditional grants should be allocated to their intended beneficiaries or service, and development charges should be allocated to nonindigent residential development and non-residential development based on the municipal development charges policy. The balance of the funding will need to come from municipal resources (reserves and borrowing); and
- Once a capital programme has been determined and aligned to spatial planning objectives, the operating account implications can be calculated to assess the on-going affordability of the growth plan. This will also inform assessments of borrowing capacity. In sophisticated analyses, these operating costs can be varied in space according to the authority providing the service and their underlying cost drivers.

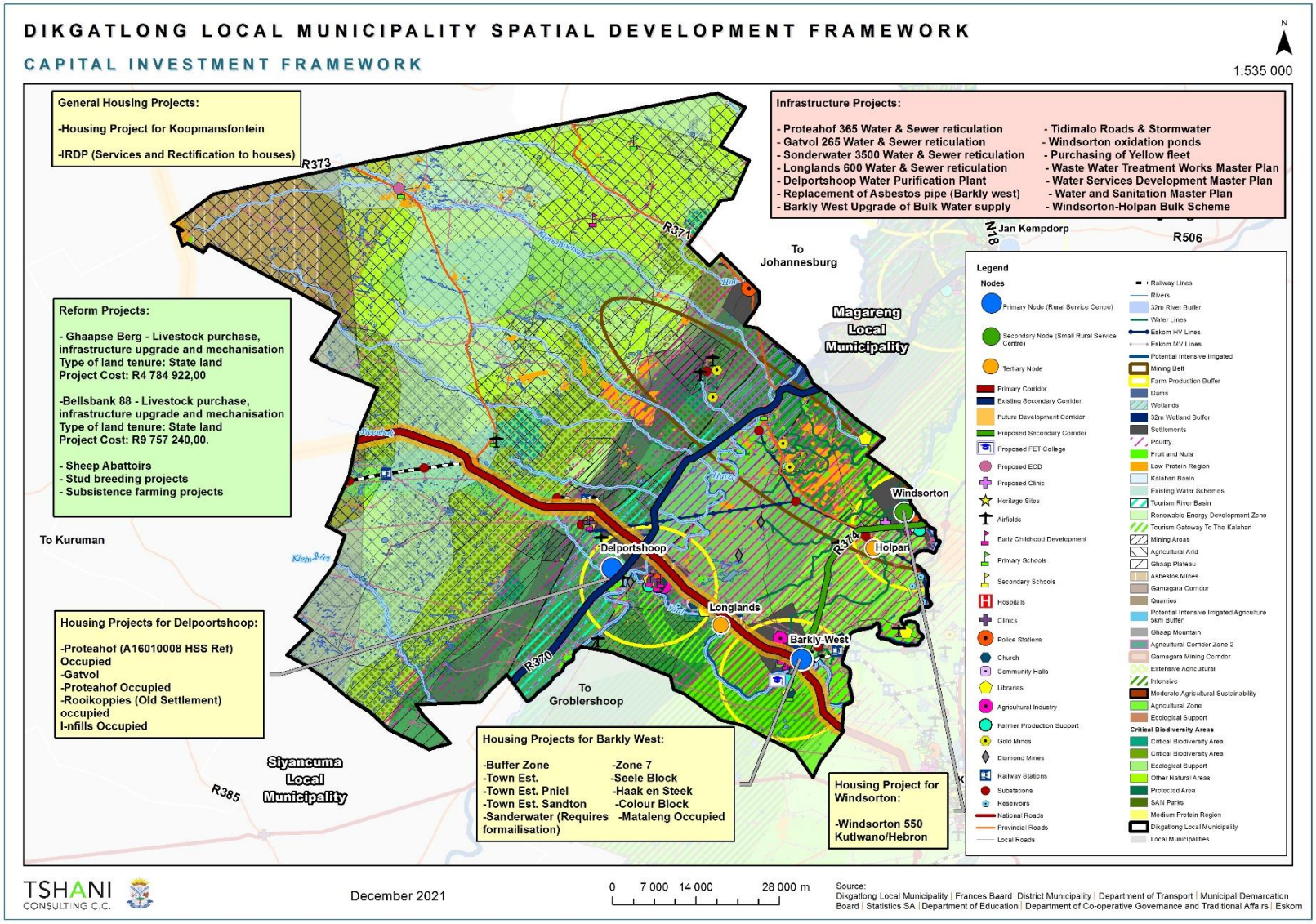
What Would this Exercise Produce

The potential outputs of a long-term infrastructure planning process are multiple and varied and depend on the level of effort and funding that is allocated to the exercise. The following potential outputs, projected over a period of 20-30 years, are listed in order of level of effort, from lowest to highest, together with the benefits that such a consolidated set of planning instruments would produce.

Preparing a Pipeline of Projects

A Capital Expenditure Framework should endeavour to articulate a portfolio of investment priorities aligned to strategic development and spatial planning objectives in the municipalities' IDP and SDFs. The CEF should be informed by the above-mentioned MTIIIF, and position these within a pipeline based on a robust project preparation methodology. This will allow for the progressive realisation of development projects and avoid wasteful expenditure based on poor project planning. In addition, this will empower the LM to ensure that major investment projects are adequately prepared and prioritised in a manner that they do not compete with one another for the same investment resources, and the most critical investment projects are prioritised based on an understanding of the LM's long-term sustainability. This is critical in the context of substantial fiscal constraints. There are three important questions to consider when presenting this pipeline:

- Are the proposed projects supporting or detracting from the IDP Priorities and SDF Strategies?
- Is there a line of sight from the LM's holistic understanding of its growth projections (demand), backlogs (capital and operating), network functionality, affordability envelope and financial sustainability;
- Are the resources (people and funding) present and available to run the project through a rigorous project preparation?



PLAN 49: CIF Plan

SECTION G:

CONCLUSION

"We are realising that if you have people walk and bicycle more, you have a more lively, more liveable, more attractive, more safe, more sustainable and healthier city. And what are you waiting for?"- Jan Gehl

In concluding the Review of the Dikgatlong Spatial Development Framework, this report serves as the final draft report which outlines the Spatial Development Framework for the Dikgatlong Local Municipality.

It is envisaged that over the next 20 – 30-years, DLM will be a prominent LM that is built upon the vision set forth in this SDF, supported by the IDP and Vision 2030 as well as the NC PSDF. The proposals will be realised through key rural development interventions, by developing strong infrastructure linkages with the neighbouring municipalities within and around LM.