



agriculture, land reform
& rural development

Department:
Agriculture, Land Reform and Rural Development
REPUBLIC OF SOUTH AFRICA



Review and Development of the **Municipal** **Spatial Development Framework** for

JOHN TAOLO GAETSEWE DISTRICT MUNICIPALITY

November 2022

Phase 1: Project Inception

Phase 2: Status Quo Analysis, Policy Context and Spatial Vision

Phase 3: Spatial & Sectoral Analysis and Stakeholder Consultation

Phase 4: Spatial Proposals

Phase 5: Implementation Framework and CEF

Phase 6: Final Comprehensive SDF, Close-Out Report & Retention

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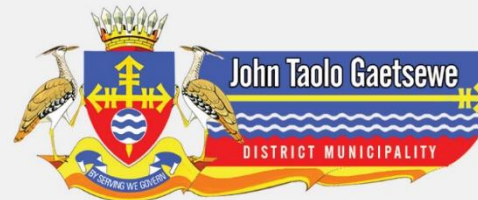


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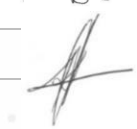
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LIST OF ABBREVIATIONS

SPLUMA	Spatial Planning and Land Use Management Act 16 of 2013
LM	Local Municipality
DM	District Municipality
SDF	Spatial Development Framework
JTGDM	John Taolo Gaetsewe District Municipality
IDP	Integrated Development Plan
PSDF	Provincial Spatial Development Framework
DKM	Dawid Kruiper Local Municipality
DRRSM	Dr Ruth Segomotsi Mompati District Municipality
GDP	Gross domestic product
SWOT	Strengths, Weaknesses, Opportunities, and Threats
FPSUs	Farmer Production Support Unit
AH	An Agri-Hub
RUMC	A Rural-urban Market Centre
SMME	Small Business Economic Development
FET	Further Education and Training
SPC	spatial planning categories

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SECTION A: INTRODUCTION

A 1. INTRODUCTION

The Department of Agriculture, Land Reform and Rural Development (DALRRD) has appointed Tshani Consulting CC to review the District Spatial Development Framework for the John Taolo Gaetsewe District Municipality

This document serves as **Phase 3: Spatial & Sectoral Analysis and Stakeholder Consultation**; Report prepared by TSHANI CONSULTING CC.

A 2. BACKGROUND AND OBJECTIVES

The specific intention is to review and prepare a Spatial Development Framework for the John Taolo Gaetsewe District Municipality, in terms of Section 12 (1) of the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) (SPLUMA).

The SDF is intended to guide the orderly and desirable spatial development of the district municipality by inter alia developing development strategies/guidelines. The SDF should provide direction to guide decision-making on an ongoing basis, aiming at the creation of integrated, sustainable, and habitable regions, cities, and towns.

A 3. PROJECT PHASING

The following table highlights the project phases.

Table 1 Project Phasing

PHASE 1:	Project Inception
PHASE 2:	Status Quo Analysis, Policy Context, and Spatial Vision
PHASE 3:	Spatial and Sectoral Analysis and Stakeholder Consultation
PHASE 4:	Spatial Proposals
PHASE 5:	Implementation Framework and CEF
PHASE 6:	Final Comprehensive Draft SDF, Close-Out and Retention

SECTION B: **SPATIAL AND SECTORAL ANALYSIS**

This section aims to build the thread on the step after the Spatial Analysis and Synthesis phase. The section will begin by providing a detailed Cross Boundary Assessment of the District and Local Municipalities that bound the **John Taolo Gaetsewe District Municipality**. This will aim to identify the relationship between the LMs and DMs neighbouring area to determine the synergies and contradictions that may be apparent as well as what we would need to take note of when developing the proposals for John Taolo Gaetsewe District Municipality in the next phase.

The sectoral analysis will address the major sectors within the municipal area and will discuss the role that they play within a regional context.

B 1. SECTORAL ANALYSIS

The following Sectoral Analysis discusses the major economic sectors prevalent in the JTG district. The importance of each sector will be discussed next in terms of the sector's contribution to the GDP as well as its current function and intensity.

The section will also discuss the strategic direction of each sector in terms of its longevity and opportunities for growth.

The key economic sectors in the district are mining, agriculture, tourism, manufacturing, and construction. Mining is the largest employer followed by the agricultural sector (StatsSA 2011).

Mining

With the great mining expansions in the John Taolo Gaetsewe District, it is expected that mining will continue to be the biggest economic sector in the province ([District Growth Development Strategy, 2017](#)).

The majority of JTGDM's mines are concentrated within and around the local municipalities of Joe Morolong and Gamagara Local Municipality.

Several opportunities in the mining and associated beneficiation sectors exist in the area, notably the following:

- Vast, extensive manganese deposits, which can be exploited both by large companies and small-scale operators where deposits are not suitable for large-scale operations;
- Iron smelter and Sinter plants

- Semi-precious stones (e.g. granite, Tiger's Eye); and
- Industrial minerals, such as clay, sand, and salt.

List of existing Mines	
HOTAZEL MANGANESE MINES (PTY) LTD (SOUTH 32 (PTY) LTD	EMANG MMOGO MINING RESOURCES (PTY) LTD
TAWANA HOTAZEL MINING (PTY) LTD	WIDE INTESTMENTS 100 (PTY) LTD
ASSMANG LIMITED	DVD QUALITY ENGINEERING (PTY) LTD
PMG MINING PTY LTD	LEHATING MINING (PTY) LTD
UNITED MANGANESE OF KALAHARI PTY LTD	BOLD MOVES 1715 (PTY) LTD
KALAGADI RESOURCES PTY LTD	KUDUMANE MANGANESE RESOURCES (PTY) LTD
AFRIMAT DEMANENG MINE (PTY) LTD	MOKALA MANGANESE (PTY) LTD
BAGA PHADIMA TRUST (PREVIOUSLY VECTO TRADE 27 PTY LTD) ISSUED TO LAXEY SAND MINING PRIMARY COOPERATIVE LIMITED	THARI RESOURCES (PTY) LTD
MOROKWA MANGANESE (PTY) LTD	JAPIES RUS MINERALE (PTY) LTD
NTSIMBINTLE MINING PTY LTD	KADGAME MINING (PTY) LTD
AFRIMAT DEMANENG MINE (PTY) LTD	AFRIMAT MANGANESE (PTY) LTD
SOLITER MYN ONDERNEMINGS CC	TOEKOMSTE SKYN (PTY) LTD
ASSMANG LIMITED	SITATUNGA MANGANESE (PTY) LTD
Amari Manganese (Pty) Ltd	MAMATWAN MANGANESE (PTY) LTD
Sebilo Resources (Pty) Ltd	COZA MINING (PTY) LTD
MAIN STREET 778 (PTY) LTD	HOTAZEL MANGANESE MINES (PTY) LTD (SOUTH 32 (PTY) LTD
KUDUMANE MANGANESE RESOURCES (PTY) LTD	NEALA MINING (PTY) LTD

Tourism

The JTGDMD has a unique array of tourism and heritage resources that not only have to be protected but can also, if managed wisely, serve as a strong attraction for tourists to the area: The following are the existing tourism within the district:

Eco-Tourism

The activities listed as eco-tourism in JTGDMD can be listed as camping, game drives, hunting, indigenous wildlife, natural springs, and caves, etc. Most of these activities are situated in the east and northeast of JTGDMD. Some of the main eco-tourism attractions include the following (RDP, 2019):

- **The Eye:** This is a geological feature bringing water from deep underground to the surface in the Kalahari Desert. The Eye is the biggest natural fountain in the southern hemisphere, proclaimed a national monument in 1992.
- **Khai Apple Recreation Resort:** situated in the Gamagara Municipality, the resort offers outstanding accommodation, camping, and caravanning facilities, fishing and horse riding
- **The Kalahari Raptor Trail:** Kuruman, Kathu, Olifantshoek, Upington, Keimoes, Kakamas, and the Augrabies Falls National Park falls within the Kalahari Raptor Trail.



Cultural Tourism

The cultural tourism attractions within the area are:

- **Wonderwerk Cave (National Heritage Site):** one of the longest-inhabited caves in the world, with San rock paintings in areas near its mouth.
- **Moffat Mission:** established in 1820 by a Scottish missionary, Robert Moffat, in Kuruman, the mission church was declared a national monument in 1993.
- **Truce Tree:** a treaty was signed under this tree by General JC Kemp surrendered to Capt. JP Frylinck on 8 November 1914.

- Dithakong is a well-known significant historical site, as two recognised battles took place in the area. In 1823, the Tswana mission settlement was saved from raiding Mantatee refugees by missionaries and Griquas that came to their aid.
- Griqualand West Rebellion, the BaTlhaping were shelled in their defensive positions amongst the ancient stone walls. During the Langeberg Rebellion of 1896-7, a major siege was enforced by British forces at Luka/Gamasep, located north of Olifantshoek in the eastern Langeberg, during which Kgosi Luka Jantjie was killed. There is a strong possibility that the site will be declared a Provincial Heritage Site.

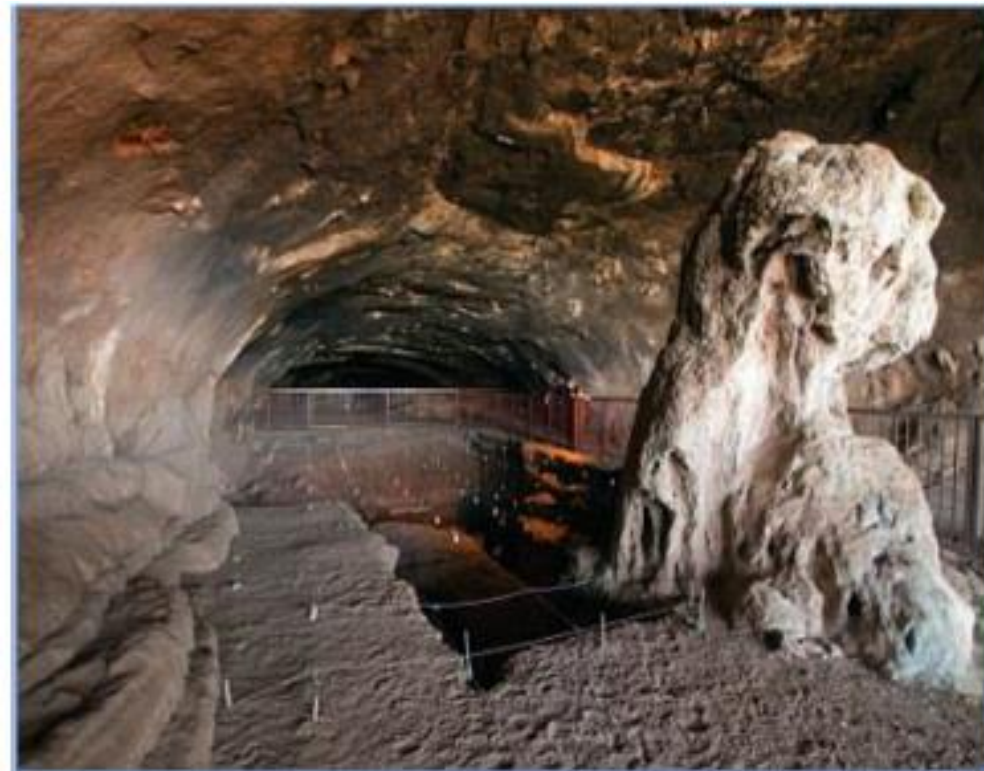
Educational Tourism

Educational Tourism is comprised of several sub-types including eco-tourism, heritage tourism, rural/farm tourism, and student exchanges between educational institutions (Smith, 2013: 2).

The educational tourism attractions within the area are:

- Archaeological and Paleontological Resources: Over and above the proposed National Heritage Site at the Wonderwerk Caves in Kuruman, the Kathu area is of considerable interest to the Archaeological and Paleontological communities.

- Mining activities as tourism opportunities: The mining companies in the area can, in collaboration with the District and Local Municipalities, set up and offer mining tours.



The Forgotten Highway

The Forgotten Highway- a unique road trip.

Build the route

This 1 000 km Route stretches from Tulbagh and Ceres in the south to Kuruman in the north.

The Forgotten Highway Route links Tulbagh in the south with Kuruman in the north, traversing several Karoo regions –Ceres Karoo, Roggeveld, Nuweveld, BoKaroo, Griqualand West, onto the Ghaap, and into the Kalahari.

The purpose of the Route is to awaken the historical awareness of local people along the Route so that they realise how special their environment is. Also, other South Africans will explore where their ancestors travelled, and foreign visitors will help us celebrate the historical significance of these remarkable events.

The focus of the Route is to add attractions, activities, and experiences

JTG SDF should consider the identified route for any possible spatial development in order to enhance the tourism within the district.



Agriculture

Natural and agricultural resources both play a crucial role within the province. Both intensive and extensive agricultural activities take place within the Northern Cape, but intensive agriculture tends to be concentrated along the river systems ([NC PSDF, 2018](#))

From a land-cover perspective, agriculture is the second most significant economic activity in the JTGD, comprising of large commercial livestock farms and subsistence grazing activities ([JTG SDF Review, 2017](#)).

In order to boost rural economies, government has initiated the establishment of Mega Agri-Parks throughout the country ([IDP, 2022-23](#)).

Subsistence and survivalist farming predominate in the eastern half of the Joe Morolong LM. These activities consist mainly of livestock-keeping, poultry-rearing and planting of vegetables. Inefficient and inappropriate farming techniques and lack of exposure to skills-training, have, however, in many cases resulted in low yields. They have also been hugely detrimental to soils quality, land capability and grazing capacity and impacted in a very negative way on the environment.

The district is mostly not suitable for arable land use. It is only a small portion of the district that is suitable for arable land use, on the eastern side of the Joe Morolong LM.

Industry

Industry for the purposes of this document will be classified as all the economic activities that is within the secondary economic sector, these are:

- Manufacturing;
- Electricity, gas and water; and
- Construction.

SA has about 80% of the world's manganese resources. Manganese is an industrial metal which is used to strengthen to steel.

Most of the heavy industrial activities (RTC Mining Supplies, Workshop Warehouse Kathu, ITR Kathu, etc.) are found near the mining towns of Kathu and Hotazel with smaller industrial and related activities in Kuruman and also Kathu. Agri-processing activities are found within the towns of Kuruman and Kathu, although there are only a few industries in this market segment (JTG RDP 2016).

Ga-Segonyana LM in terms of the local GVA per sector, has the biggest industrial area contributing most to the manufacturing GVA of JTGD. Joe Morolong LM contributes most to the electricity, gas and water sector, while Ga-Segonyana LM contributes most towards construction, with Gamagara LM a closely in second as outlined in the graph below ([JTG SDF Review, 2017](#))

B 1.1 STATUS OF SECTOR PLANS

John Taolo Gaetsewe District Municipality			
Sector Department Policy	Date of Publication	Adequate	Requires a Review
John Taolo Gaetsewe District Growth and Development Strategy	2017	✓	<input type="checkbox"/>
John Taolo Gaetsewe District Municipality Spatial Development Framework	2017	✓	<input type="checkbox"/>
John Taolo Gaetsewe District Municipality Integrated Development Plan	2022/23	✓	<input type="checkbox"/>
John Taolo Gaetsewe District Municipality Environmental Management Framework	2020	✓	<input type="checkbox"/>
John Taolo Gaetsewe District Municipality Integrated Infrastructure Plan	2022/23	✓	<input type="checkbox"/>
John Taolo Gaetsewe District Development Model	2022	✓	<input type="checkbox"/>
John Taolo Gaetsewe Rural Development Sector Plan	2022	✓	<input type="checkbox"/>
Integrated Waste Management Plan	2014-2019		✓
District Integrated Transport Plan	2022/23	✓	<input type="checkbox"/>
JTG Agri-Hub Precinct Plan	2022	✓	<input type="checkbox"/>

B 2. SPATIAL ANALYSIS

This section will unpack the detailed Cross Boundary Assessment by looking at the Spatial Development Frameworks for the Local Municipalities neighbouring the John Taolo Gaetsewe District Municipality and cross-border with Botswana and Namibia.

The assessment will be unpacked in line with the plan below. Each summary will address the background of the municipal area, as well as a table that summarises the relationship of the municipal area to the **John Taolo Gaetsewe District Municipality** in terms of the Development Corridors, Cross Boundary Influences, Cross Boundary cooperation, and Potential Conflicting Issues. Further, the SDF plan is also shown in each assessment.

After all municipal assessments, an overall conceptual spatial plan is provided highlighting the major cross-boundary opportunities and challenges.

B 2.1 LYNCH ANALYSIS

The Lynch Analysis was conducted on a broader scale.

One of the major linkages is the N14 which runs through Kathu and Kuruman to Pretoria, and the R31 which runs through Daniëlskuil to Kimberley

The red line shows the National border between JTGDM and Botswana. This is aimed at showing that a simple border does not prevent people from moving between the two Provinces. And the Orange lines show the Provincial

barrier between JTGDM and North West Province, as it prevent migration from one province to the other, but it is cross-border.

The Lynch Analysis encompasses the following four (4) **STRUCTURING ELEMENTS**:

- Paths - the streets, main roads, and other channels in which people travel.
- Edges - the physical land features that define and contain the main roads, nodes, and all other public space.
- Districts - deal with the region's size and character.
- Landmarks - physical markers that mark position in the environment.

The following was noted when developing the lynch analysis for our study area:

Five (5) Areas were identified:

- Settlements Areas
- Agriculture Areas
- Tourism Areas
- Industrial Areas
- Mining Areas

Some of the notable unique features of the district municipality are described below;

- Strong mining industry, Gamagara Corridor
- Renewable energy
- High development potential (Rural regeneration Zone)
- Agri-processing: Livestock & Game farming (Poultry and livestock) in Kuruman
- The route from Kathu, Kuruman to Johannesburg
- Tourism industry (Eco-Tourism, Cultural Tourism, Tourism route, etc.)
- Border Post
- Farmer Production Supporting Units
- Kuruman as Regional Airport
- National Spatial
- Transformation and Economic Transition Regions
- R31 transport corridor

Spatial Structuring Element: Functional Economic Regions

Four functional economic regions have been identified in the Rural Development Plan (2015) for the JTG District Municipality:

Functional Economic Region 1 covers a scarcely populated and minimal economically active area due to the distance from economic nodes, marginalised agricultural land, and a lack of any other sustainable resources.

Functional Economic Region 2 is the smallest of the functional regions and covers a remote that, has environmental concerns around previously mined asbestos areas and has high impoverished rural settlements.

Functional Economic Region 3 is the largest of the functional regions in terms of area covered, activities, and rural settlements incorporated within its boundaries and has a large area covered by tribal land. It has the highest population living within rural settlements as well as the highest number of impoverished rural settlements.

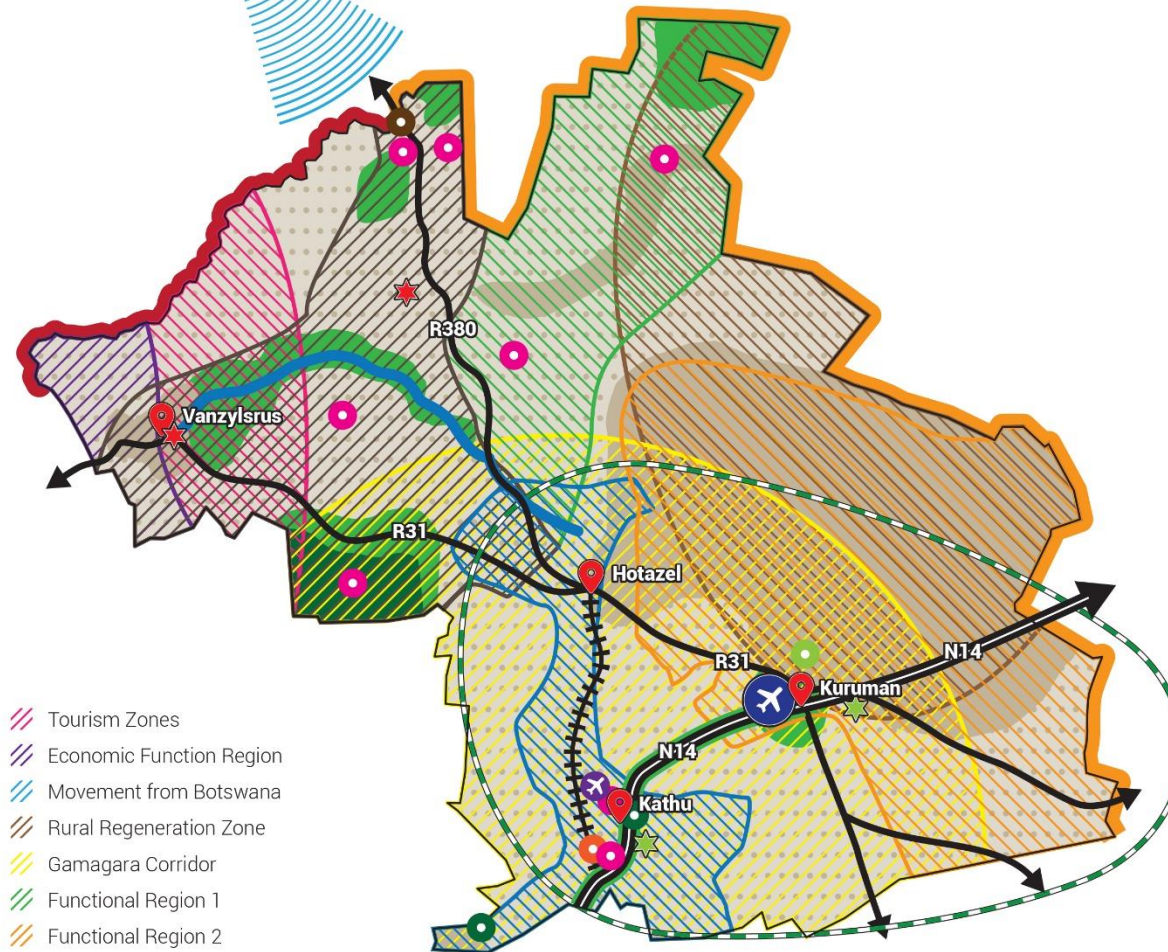
Functional Economic Region 4 is the composition of the larger Gamagara Mining Corridor, within the JTGDM.

SPATIAL SUMMARY OF THE STATUS QUO

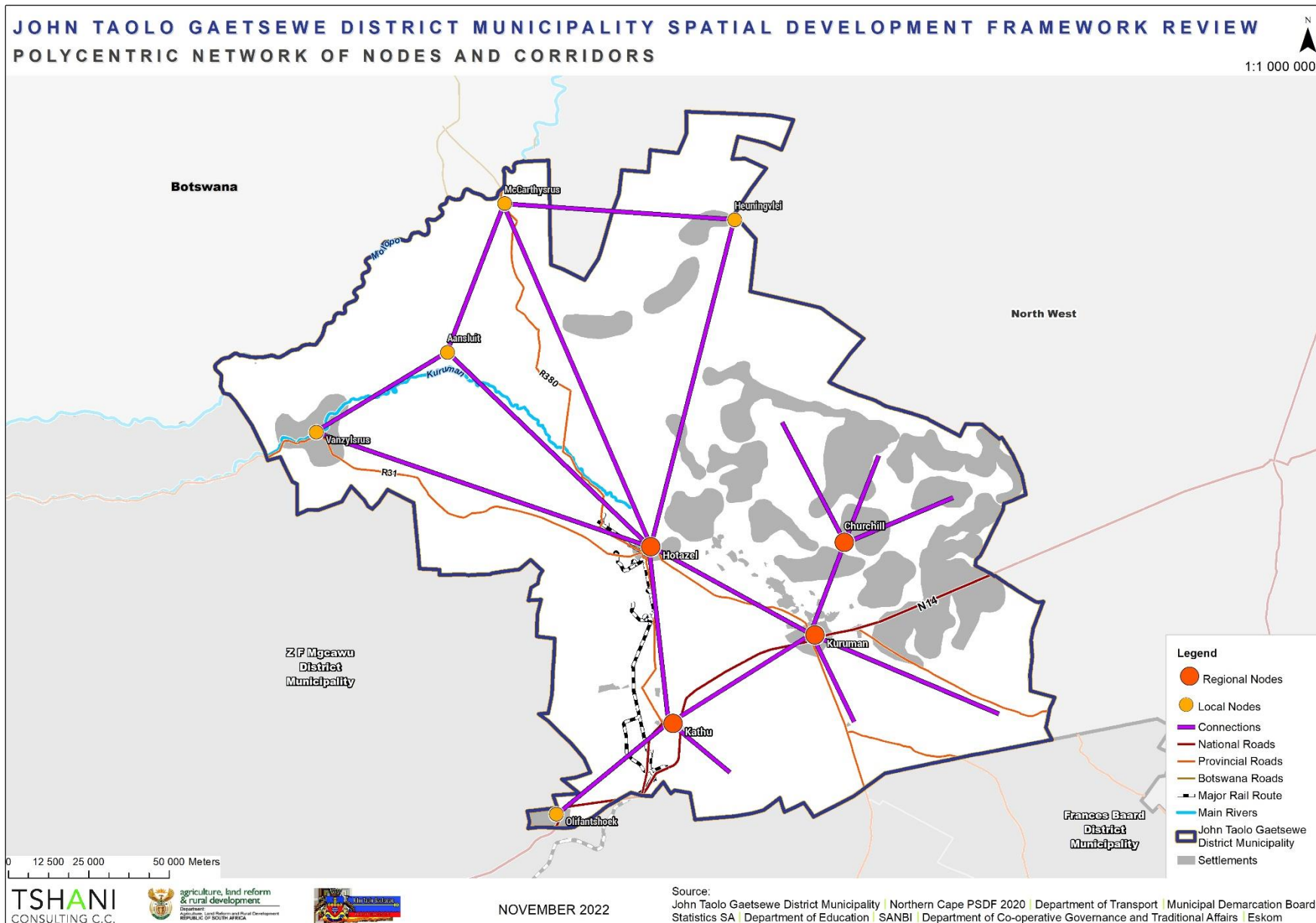
LEGENDS

- National Border
- Provincial Boundary
- National Roads
- Provincial Roads
- Railway
- River
- Mining Corridor
- Towns
- Border Post
- Tourism Attraction
- Agri-Hub
- Agri-Industry
- Sishen Mine - Iron Ore
- FPSU
- FPSU - Priority
- Airport
- CBA
- Protected Area
- Wetlands
- Settlements

- Tourism Zones
- Economic Function Region
- Movement from Botswana
- Rural Regeneration Zone
- Gamagara Corridor
- Functional Region 1
- Functional Region 2
- Functional Region 3
- Functional Region 4



PLAN 1: Spatial summary of the status quo



The hierarchy of nodes as proposed in the [JTG SDF2017](#), as well as in the Gamagara Corridor Framework is used as a basis. In accordance with the concept of the “polycentric regional network,” a series of nodes on various scales in terms of linkages and impacts in the region.

The following regional nodes in the JTG District Municipality are proposed:

- Kuruman in the Ga-Segonyana LM;
- Kathu/Sishen in the Gamagara LM, which should be managed to grow towards an amalgamated single node; and
- Hotazel in the Joe Morolong LM.
- Churchill is also proposed as a regional node in the Joe Morolong Local Municipality SDF. This node is considered to play a local role for the large tribal community in that vicinity. It is, however, not foreseen that the Churchill node will be able to replace, or even duplicate the services provided in Kuruman in the short to medium term. The regional status of Churchill is thus not indicated in this SDF.

The following local nodes in the JTG District Municipality are proposed:

- Batlharos and Mothibistat in Ga-Segonyana LM;
- Olifantshoek and Mamathwane in Gamagara LM; and
- Blackrock, Bothithong, Churchill, Vanzylsrus and Heuningvlei in Joe Morolong LM..

B 1.2 CROSS BOUNDARY ASSESSMENT

Cadastral boundaries do not always correspond to land characteristics, the natural environment, residential activities, economic activities, and natural occurrences that cross municipal, provincial, and international boundaries. All municipalities do not possess the required resources to provide services to communities e.g. water. Hence this objective aims to ensure that spatial planning is aligned to allow government organisations to take advantage of comparative advantages offered within an area. This also refers to cross-boundary services such as education facilities, which can be utilised by communities residing in two municipalities. This allows for cost effective of services and is applicable to the provision of civil services, social services, and economic opportunities. Alignment of initiatives will also prevent conflicting initiatives and land uses to be implemented on opposite sides of a boundary i.e. mining activities versus tourism due to the pristine natural environment.

As per the National and Provincial policies and legislation (MSA-S26 (d), MSA Regulation Section 2 of (4) (h), municipalities are required to provide a clear indication of how the SDF is aligned with the planning of neighbouring municipalities. The John Taolo Gaetsewe District Municipality has the mandate to ensure that its IDP complies with the planning legislation and

policies to give effect to the development of an SDF as a spatial representation of the IDP. The District SDF, in turn, directs and guides strategic investments that are developmental and beneficial within the district and across neighbouring districts municipalities as well as local municipalities.

It is further reiterated that the John Taolo Gaetsewe District Municipality forms an integral part of a larger system of local governance and regional economy. It also influences development in the adjoining regions. [Cross-boundary planning issues have become more prevalent and significant](#). The focus is on strategic or shared development issues that would benefit from a joint approach and engaging with the relevant neighbouring authorities to explore the joint operational potential. This section is thus intended to ensure that there is no disharmony between proposals that are suggested by John Taolo Gaetsewe District Municipality's Spatial Development Framework and its neighbouring municipalities.

IMPLICATIONS OF THE JOHN TAOLO GAETSEWE DISTRICT MUNICIPALITY TO THE NEIGHBOURING LOCAL AND DISTRICT MUNICIPALITIES.

ZF Mgcawu District Municipality

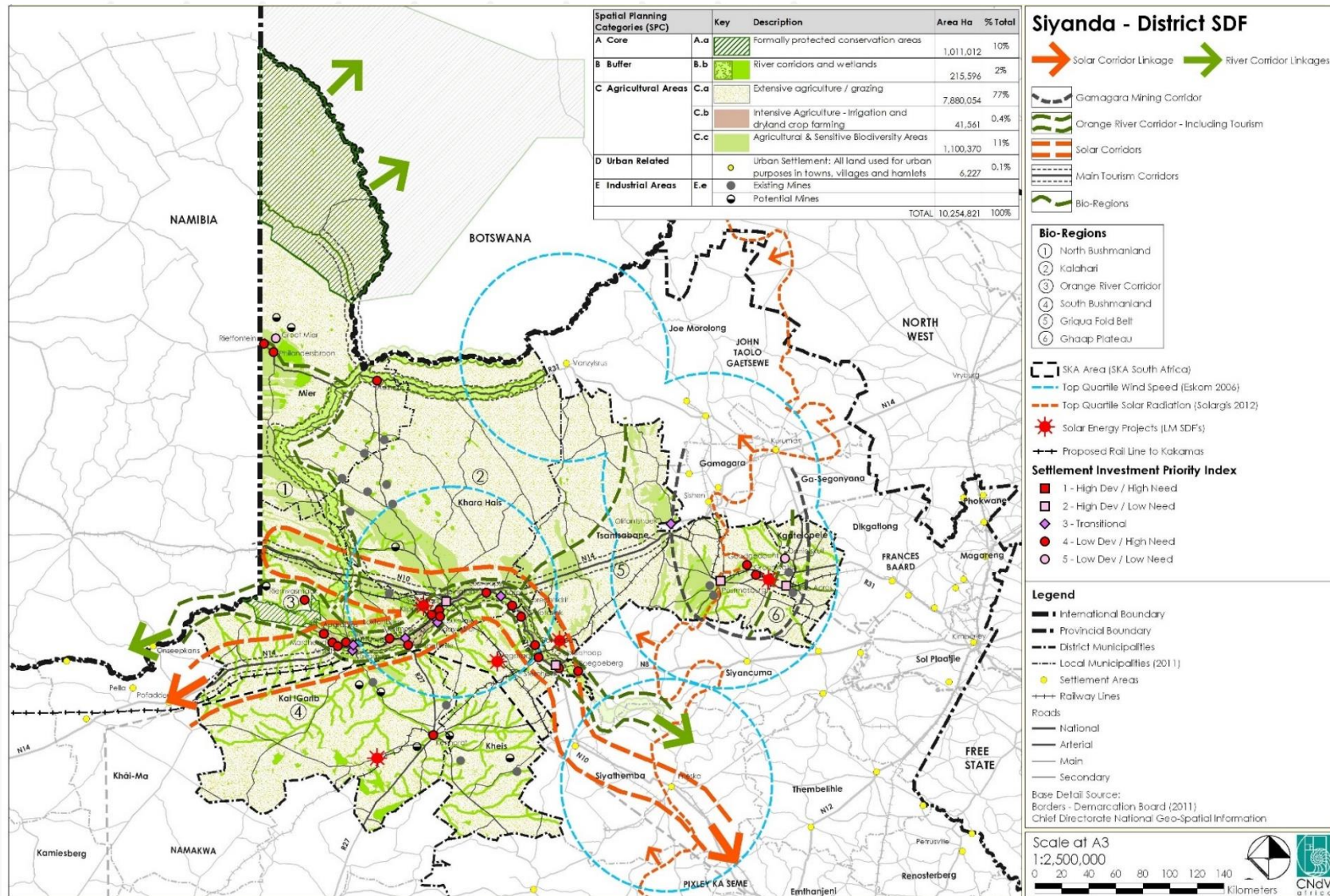
The district municipality has a good primary tarred road network that links the major towns as well as regions outside the district. The district road link is the N14 highway, which connects Upington to the east with Kuruman. The N14 between Kathu and Kuruman has been identified as a tourism route, however, it has a potential for socio-economic development.

Also, there is the Gamagara mining corridor located in Kathu kilometers away from Upington serves as the development zone between the two municipalities

The secondary road R31 that links Vanzylsrus (Joe Morolong Local Municipality) with Reitfontein has been identified as an eco-tourism corridor. Most of the eco-tourism activities are situated in the east and northeast of JTGD

Table 2 ZF Mgcawu SDF, alignment

Alignment Indicator	Alignment Status
Development Corridors	The N14 and R31 transverses through the district and join it to the John Taolo Gaetsewe District.
Cross-Boundary Influences	Mining activity occurs in the local municipalities of Tsantsabane (Postmasburg) and Kgatelopele (Danielskuil) – manganese, diamonds, Iron Ore, and raw materials (ash) for producing cement are found. (Gamagara mining corridor).
Cross-Boundary Cooperation	It is recommended that the municipalities cooperate on the protection of the landscape corridor and the future development of the N14 and R31 since they have the potential for socio-economic development.
Potential Conflicting Issues	There is a high intermigration from the neighbouring municipalities into the district in search of job opportunities from the mines.



Plan 2: ZF Mgcawu District Municipality SDF, 2012

1. Dawid Kruiper Local Municipality

The Dawid Kruiper Local Municipality is a Category B municipality that forms part of the ZF Mgcawu District in the Northern Cape. It borders the Kgalagadi Transfrontier Park in the north, Botswana in the north-northeast Namibia in the west. It is the largest of five municipalities in terms of land mass in the district, making up almost half its geographical area.

Alignment Indicator	Alignment Status
Development Corridors	The municipalities share the R31 as the main connecting road, and the growth direction is along the road. There is potential for socioeconomic development
Cross-Boundary Influences	The R31 is used as the main corridor that links the towns of Kimberley, and Kuruman and goes to the country of Botswana.
Cross-Boundary Cooperation	It is recommended that the municipalities cooperate on the mining (value chain). Diamond mining in the Rietfontein area seems to be a viable option for future development. Subsequent mine development holds major economic potential for the area with a lifespan of more than 20 years.
Potential Conflicting Issues	Cross-boundary migration: The table grapes, dates, citrus fruit, and raisins farms in the Dawid

	Kruiper Local Municipality (Upington) also attract seasonal farm workers from JTGDM. No existing overall Dawid Kruiper SDF Plan
--	--



Figure 1: Dawid Kruiper LM: Rietfontein

2. Tsantsabane Spatial Development Framework, 2014

Tsantsabane LM is located on the Northern side of JTGDM. The two municipalities are linked to the N14 highway that links Upington to the east with Kuruman serve as the district road linkage.

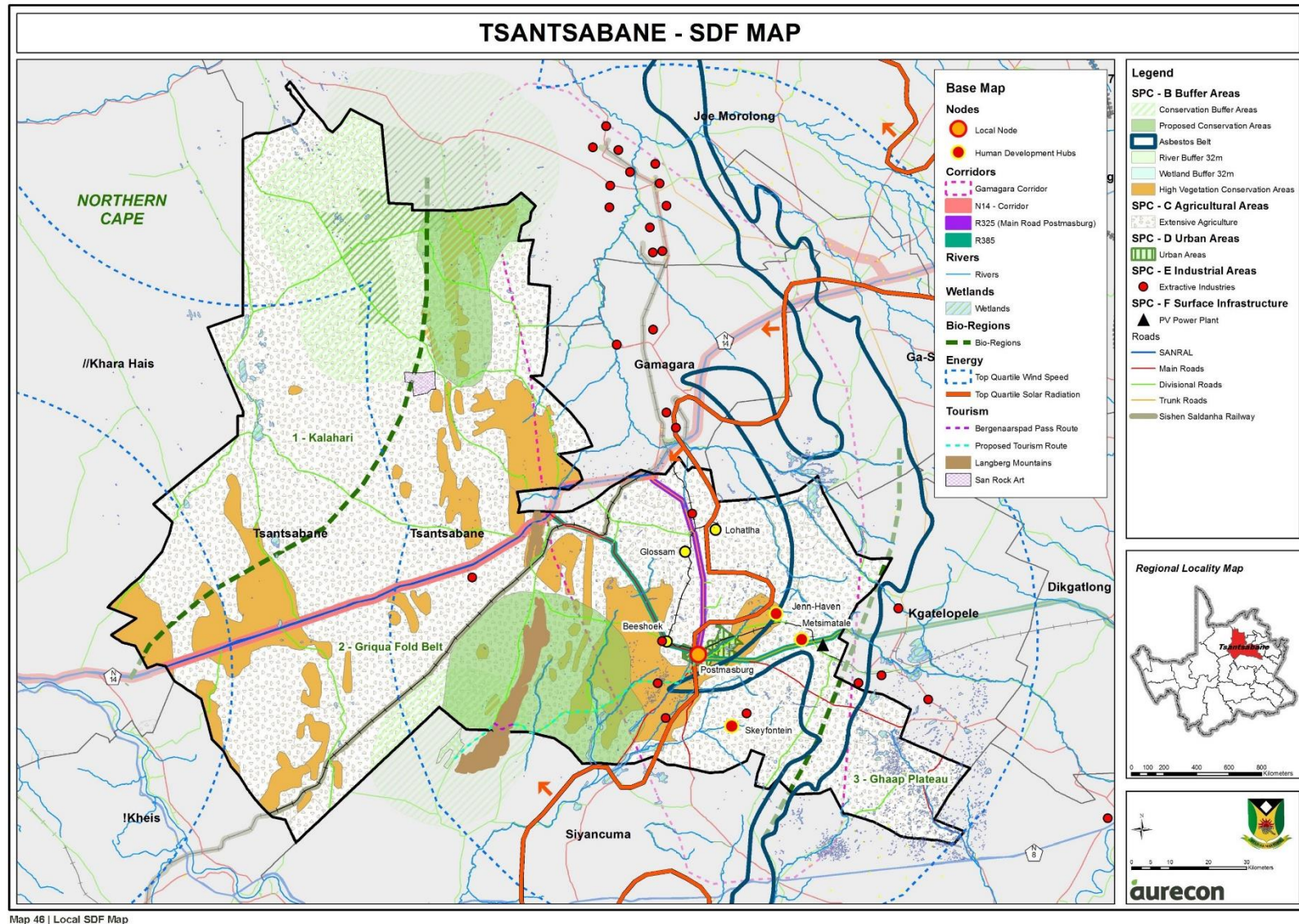
The N14, R385, and R325 are characterised by a high to extremely high level of movement, which opens economic opportunities for the municipal area.

R325 from Postmasburg is earmarked as a development corridor.

Table 3 Tsantsabane SDF alignment

Alignment Indicator	Alignment Status
Development Corridors	Extractive industries are located along N14 and R31, which links with Gamagara development corridors and has potential economic development
Cross-Boundary Influences	There is Top Quartile Solar Radiation in Postmasburg, passing through Gamagara, Ga-Segonyana to Joe Morolong. Renewable energy promotes economic development.
Cross-Boundary Cooperation	The areas within JTGDM and Tsantsabane LM are characterised with CBA, Protected areas and wetland areas. The Gamagara development corridors should be monitored to avoid possible negative impact

Potential Conflicting Issues	Tsantsabane LM is characterised with high vegetation conservation areas, cutting through Gamagara mining corridor. The proposed development might have negative impact on conservation areas.
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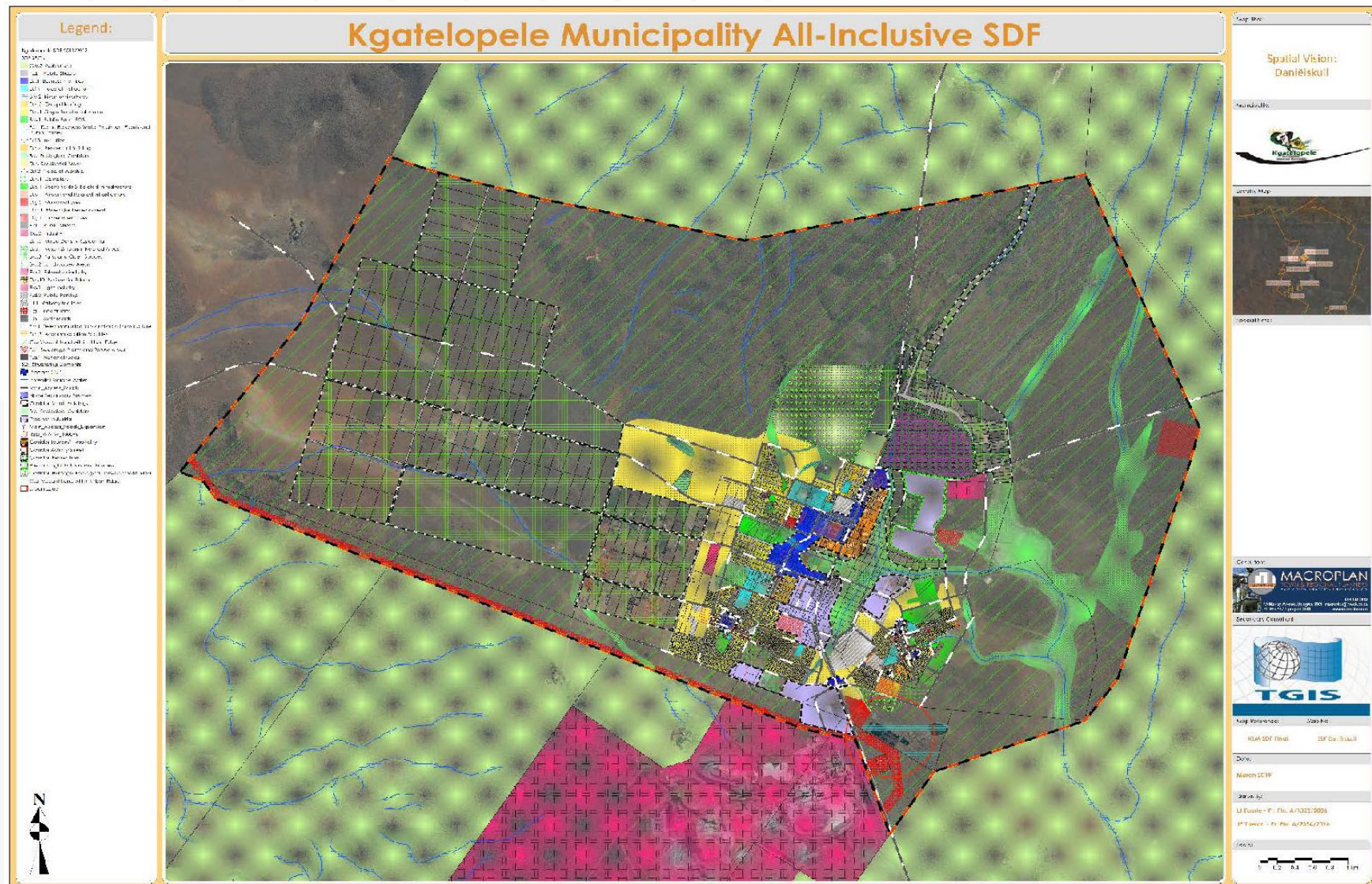


Plan 3: Tsantsabane SDF, 2014

3. Kgatelopele Local Municipality

Kgatelopele is a Local Municipality in the ZF Mgcawu District Municipality of the Northern Cape in South Africa.

Alignment Indicator	Alignment Status
Development Corridors	There is an important transport Link between the N14 and the R31 which serve as a major linkage for economic development within the two municipalities.
Cross-Boundary Influences	The JTGD and the municipality share the Gamagara mining corridor.
Cross-Boundary Cooperation	It is recommended that the municipalities should be in alignment through the energy sector, referring to wind and solar.
Potential Conflicting Issues	The municipalities are currently competing with the existing infrastructure resources (the number of trucks).



Frances Baard District Municipality

The boundary between an area abutting the John Taolo Gaetsewe District Municipality be designated as a Buffer Area: Grazing / Stewardship / Conservation /Grassland Biome.

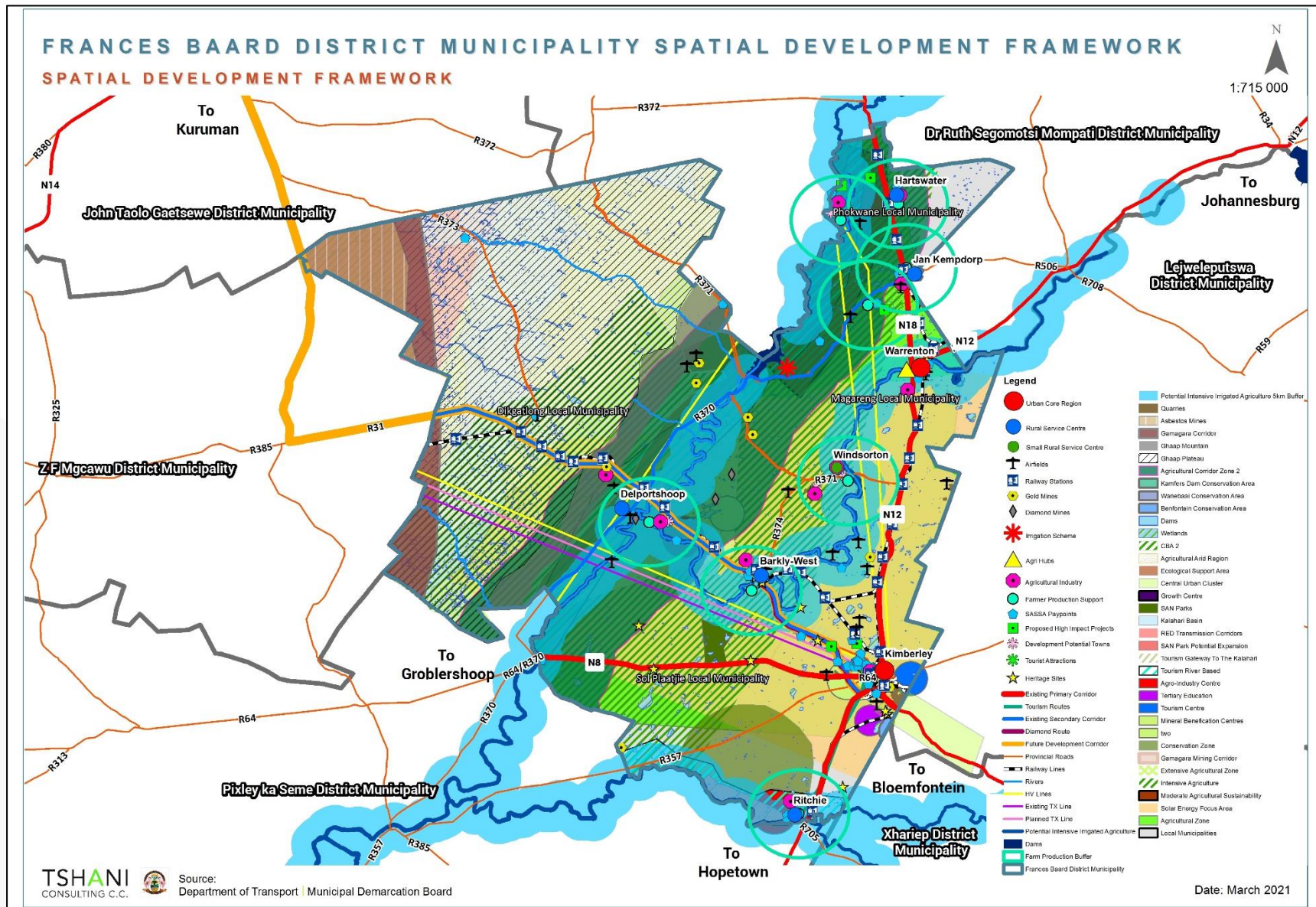
There is a potential in converting this land too, Intensive Agriculture or urban development if included within the urban edge of urban settlements, with offset conditions if Vulnerable Areas of Biodiversity are involved.

R31 link Kuruman with Danielskuil in Frances Baard District.

	<p>environmentally sensitive areas</p> <p>The landscape should be monitored through EMF to ensure sustainable spatial planning, e.g. mining development, especially along the river corridors</p>
Potential Conflicting Issues	The municipalities are currently competing with the existing infrastructure resources.

Table 4 Frances Baard, SDF, Alignment

Alignment Indicator	Alignment Status
Development Corridors	Kuruman and Danielskuil link to Kimberley via the Dikgatlong Minor Development Corridor.
Cross-Boundary Influences	Agricultural opportunities at a large scale or small scale to support communities. The existing Agri industrial centre, has potential of strengthening the agriculture and promote skills transfer between the municipalities
Cross-Boundary Cooperation	The character of the terrain on the northern side of the JTG and Frances Baard boundary is classified as



4. Dikgatlong Local Municipality

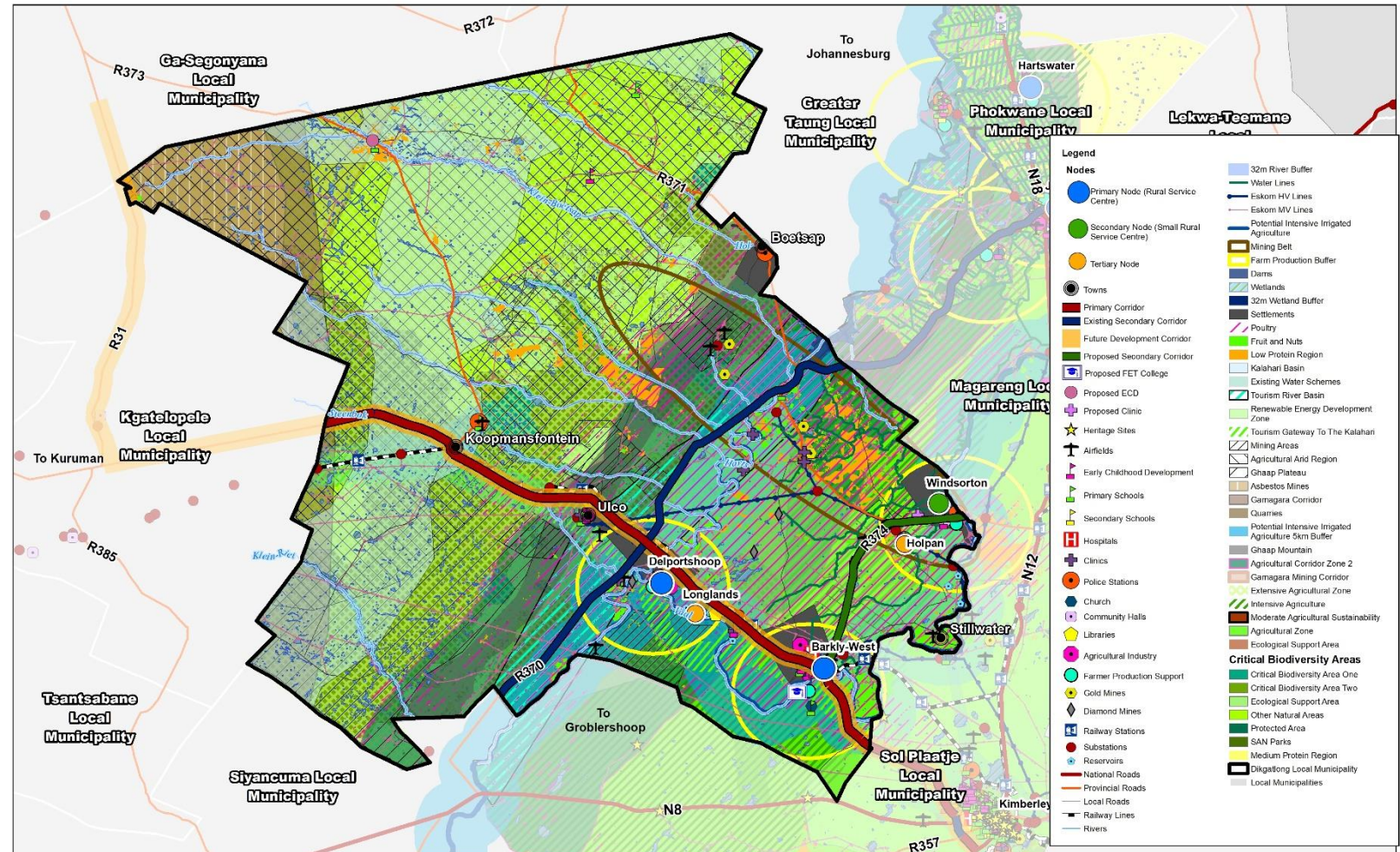
Dikgatlong is considered to be one of the biggest, in terms of area within the four (4) local municipalities within the Frances Baard District Municipality as it is 7 316 km² in extent.

Table 5 Dikgatlong SDF, Alignment

Alignment Indicator	Alignment Status
Development Corridors	The R31 linkage between DKLM and JTGDM has the potential for the future development of settlements (on the main road)
Cross-Boundary Influences	Agri-processing Optimising agricultural use of high-potential agricultural land
Cross-Boundary Cooperation	It is recommended that the municipalities cooperate on the protection of the landscape corridor and the future development of the R31 since it has the potential for economic development
Potential Conflicting Issues	The municipalities are currently competing with the existing infrastructure resources DKLM falls within the Lower Orange Water Management Area (LOWMA). The LOWMA's natural environment is characterised by an arid climate with minimal rainfall and drought conditions, with occasional severe flooding

DIKGATLONG LOCAL MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK SPATIAL DEVELOPMENT FRAMEWORK PLAN

1:520 000



TSHANI
CONSULTING C.C.

December 2021

0 6 500 13 000 26 000 m

Source: Dikgatlong Local Municipality | Frances Baard District Municipality | Department of Transport | Municipal Demarcation Board | Statistics SA | Department of Education | Department of Co-operative Governance and Traditional Affairs | Eskom

Plan 6: Dikgatlong SDF, 2022

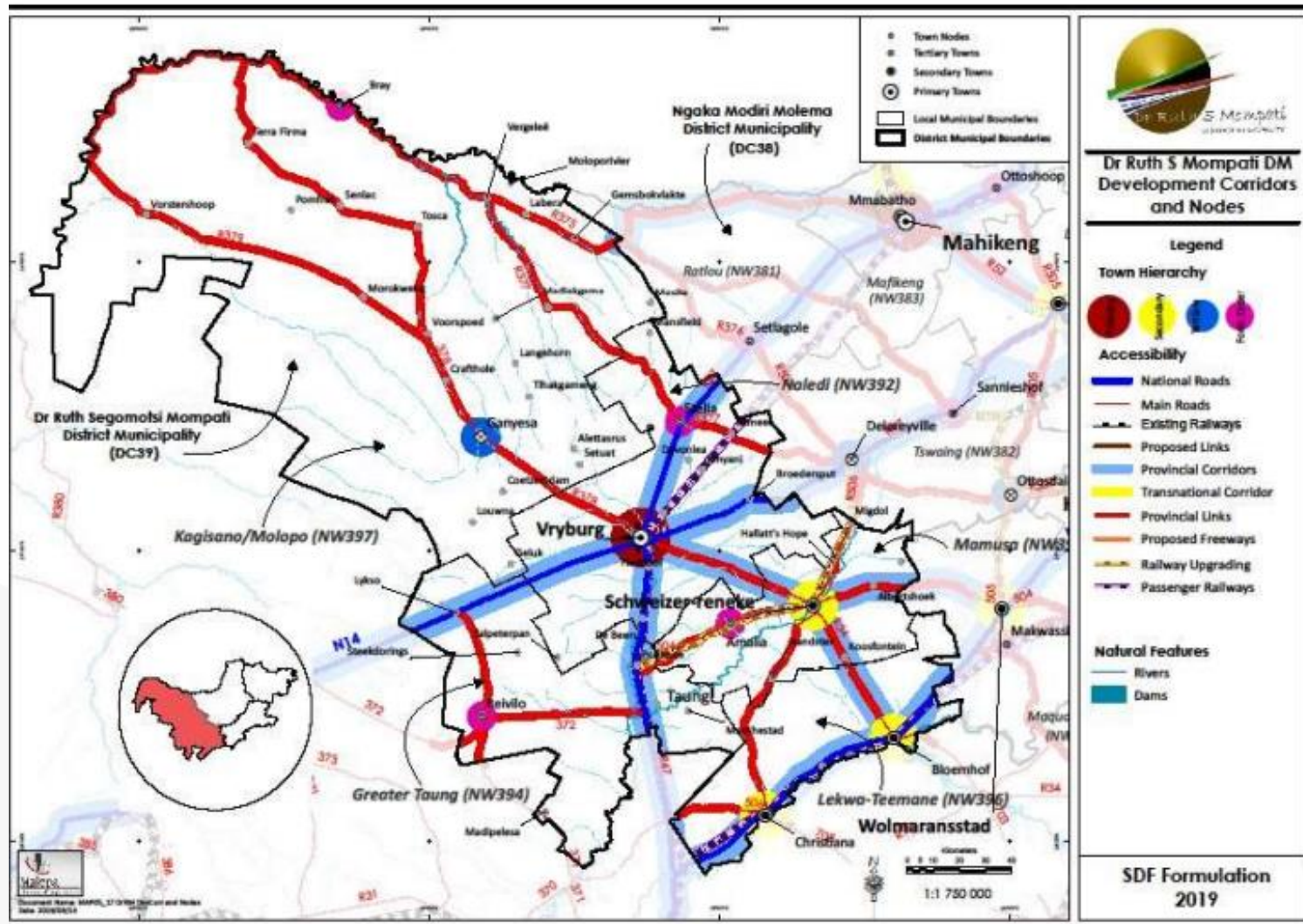
5. Dr Ruth Segomotsi Mompoti District Municipality

The Dr Ruth Segomotsi Mompoti District Municipality (previously Bophirima District Municipality) is a Category C municipality located in the North West Province. DRRSM is endowed with minerals.

Table 6 Dr Ruth Segomotsi Mompoti Alignment

Alignment Indicator	Alignment Status
Development Corridors	The main road N14 links the main town (Vryburg) of Dr Ruth Segomotsi Mompoti District with Kuruman's main town of JTG district. These two municipalities are located with the in National Resources Production heartland (NSDF) which can serve as a huge economic transformation if it is linked up to serve as value chain.
Cross-Boundary Influences	Dr. Ruth S Mompoti DM, Vryburg has been identified as a site for Agri-Park, however, this can be linked up with Agri-Hub located in Kuruman, promoting the skills transfer and agricultural value-chain. This route will also have the potential for tourism attraction.
Cross-Boundary Cooperation	It is recommended that the municipalities cooperate on the protection of the landscape corridor and the future development of the N14 since it has the potential for economic development

Potential Conflicting Issues	DRRSM has the challenge of contaminated underground water sources, however, Joe Morolong identified areas close to the border as the rural regeneration zone. There will be an urgent need for water infrastructure to support any development in this area.
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Plan 7: Dr Ruth Segomotsi Mompoti District Municipality SDF, 2019

B 2.3 CROSS Border ASSESSMENT

Namibia cross border assessment

Kharas Region Growth and Development Strategy

Strategic Planning is an organisational management activity that is used to set priorities, focus energy and resources, strengthen operations, ensure that employees and other stakeholders are working towards common goals, agree on intended outcomes/results, and assess and adjust the organisation's direction in response to a changing environment.

.VISION

To be the preferred region for investors and citizens to live and work in

STRATEGIC PILLARS

From the environmental scanning process, the following strategic pillars were identified

- Socio-Economic Development
- Stakeholder Management
- Operational Excellence:

PESTLE Analysis Matrix

Political Factors	Implications
Political Stability	Positive
Political Leadership Conflict	Negative
Economical Factors	Implications
Currency Fluctuations	Negative/Positive
Commodity Price Fluctuations	Negative/Positive
Sociological Factors	Implications
Youth Unemployment	Negative
Skills Shortages	Negative
Substance Abuse	Negative
Crime	Negative
Technological Factors	Implications
Social Media	Negative/Positive
Internet	Negative/Positive
Environmental Factors	Implications
Climate Change	Negative
Legal Factors	Implications
Diamond Act	Negative
Land Tenure Act	Negative
Liquor Act	Negative

Botswana cross border assessment

Botswana government has formulated a long-term strategy to ignite economic development and alleviate poverty called Vision 2016. In realising Vision 2016, the government formulated National Development Plan 10 (NDP 10) with the vision: "Accelerating Achievement of Vision 2016 Through NDP".

One of the development strategies of NDP 10 is to reduce the disadvantages of Botswana as a land locked country but to take advantage of export to neighbouring markets, and to export services with negligible transport costs.

The R380 is a Regional Route that connects Kathu with the Republic of Botswana. The road will be very instrumental to ensure trade between South Africa and Botswana (Review JTG SDF, 2017).

B 3. SUMMARY OF THE CROSS BOUNDARY AND CROSS BORDER ASSESSMENT

This section shows the dependency of the LMs ,DMs and neighbouring countries have on each other.

JTG is a region in the Northern Cape Province's north that borders Botswana to the west and includes three district municipalities and six local municipalities. High migration from neighbouring municipalities into the

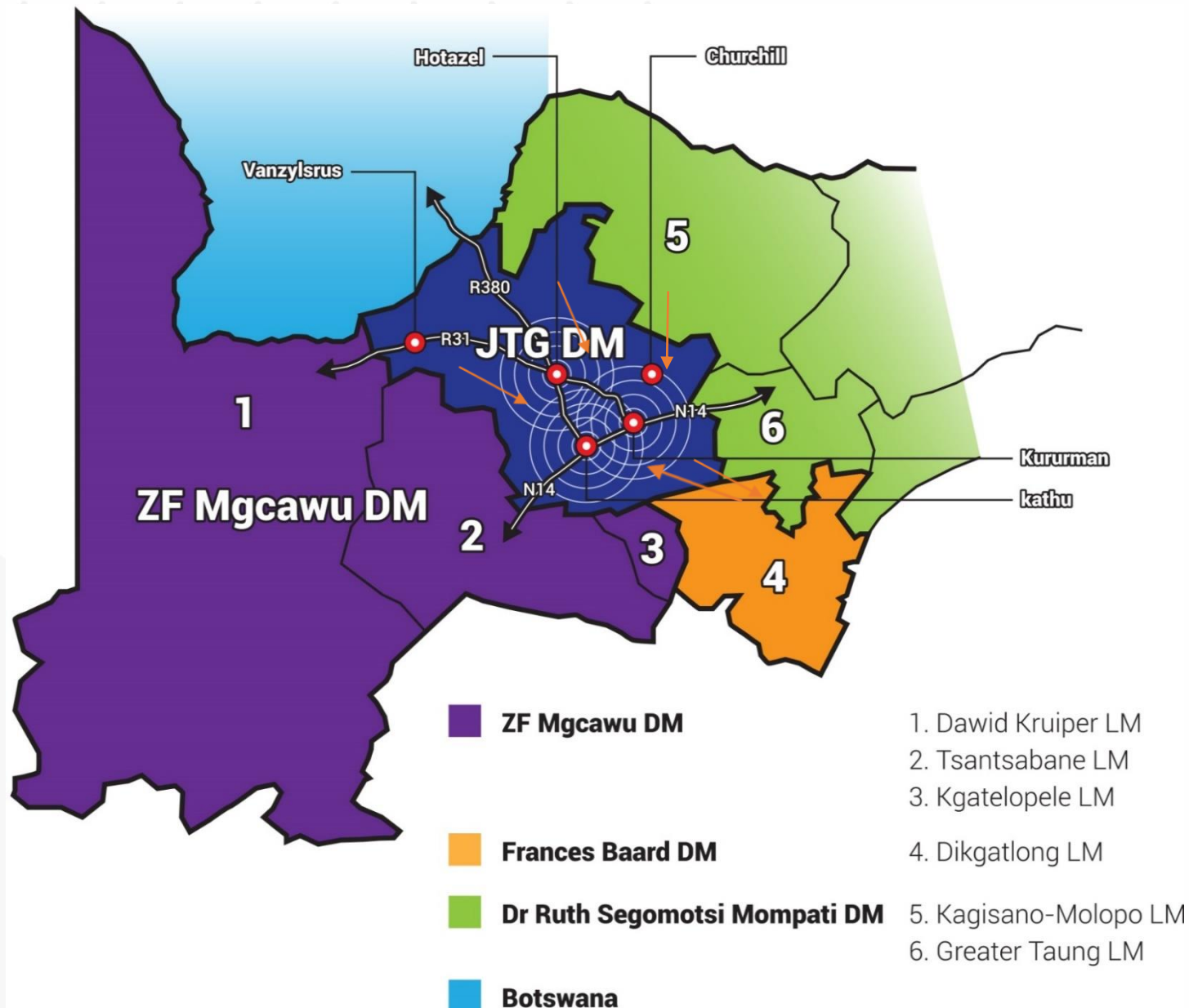
district in quest of mine work prospects, as well as intermigration, were noted as potential clashing issues.

Kuruman and Kathu plays a prominent role in the distribution of good and services.

The arrows show the dependency of the other town in relation to the regional towns. The mining area around the Kuruman, Postmansburg, Danielskuil and Kathu have a mining integration.

Lastly, DRRSM has the challenge of contaminated underground water sources, however, Joe Morolong Local Municipality identified areas close to the border as the rural regeneration zone. There will be an urgent need for water infrastructure to support any development in this area. The other cross-boundary assessment does not have a conflicting issue to JTGD spatial planning but need strengthen the alignment that boost the economy growth and ensure sustainable development.

To ensure sustainable planning, cross-boundary assessment play a significant role, and gives a direction on how to strategically plan without causing any conflict between the neighbouring municipality



PLAN 8: Cross Boundary Assessment

B 1.4 SWOT

SWOT Analysis is an assessment in which the strengths, weaknesses, opportunities, and threats are unpacked for the municipality.

The major goal of the workshop was to capture the JTG District Municipality's SWOT Analysis and Key Issues, as well as to conduct a Visioning exercise.

The JTG District Municipality's internal and external stakeholders attended the Issues & Visioning Workshop on October 27, 2022, in Kuruman.

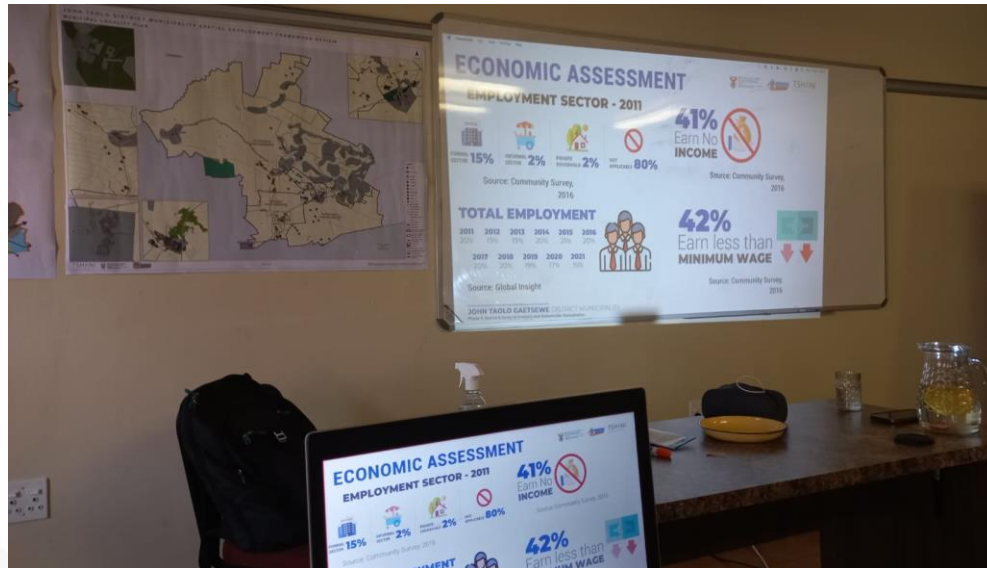
Attendees then engaged with the presentation by giving their input. These points were noted for further amendments and additions.

Thereafter, the workshopping exercise was facilitated by Kreason Naidoo and structured around attendees assessing a SWOT Analysis for the district

which is 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.

Each component of the SWOT analysis was done separately where attendees were asked what they interpret as Strengths, Weaknesses, Opportunities, and Threats pertaining to the district municipality and the area within which it operates.

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





STRENGTHS

- Airport in Kathu.
- Renewable energy.
- High development potential.
- Kuruman regional airport.
- Strong mining industry.
- Kuruman has been identified as a regional growth centre (NSDF).
- Agri-processing: Livestock & Game farming (Poultry livestock).
- The availability of land reform projects./farms.
- There is a lot of restitution land that can be used for the development.
- The route from Kathu, Kuruman to Johannesburg.
- Industrial park approved for Kathu.
- Agri park approved for Ga-Segonyana.

S



WEAKNESSES

- Lack of affordable rental units (Illegal second dwellings on stands as well as informal settlement).
- Inadequate infrastructure to cater for the rapid development in the municipality.
- Traffic congestion.
- Inadequate public transportation service network.
- Lack of relevant skills available to service local skills needs.
- Unemployment .
- Underground water.
- Unexploited mines.
- Lack of value chain.
- No recycling taking place.
- Lack of disaster risk management- Drought, veld fires.
- Governance.
- Non-export of minerals.
- Unplanned settlements expansion.
- Lack of traffic management.
- Lack of health care.
- Lack of social cohesion.
- Lack of implementation of SPLUMA on traditional owned land
- Asbestos. a. It is estimated to rate 100 years.
- Land degradation & Over grazing.
- Underutilised land.
- No public transportation.
- Congestion in town.
- Mining trucks within residential areas.
- Lack of skills.
- Crime.
- Bush encroachment/alien invasions.

W



OPPORTUNITIES

- International Tourism.
- Human Capital and Service Sector.
- Higher Education, Innovation and Research.
- Irrigation, Agro-Processing and Beneficiation.
- Large-Scale Agriculture.
- Ocean-Related Fishing and Related Enterprises.
- Well position as gateway towards Namibia, Northern. Cape and Namibia as the N14 is seen is a trans
- Renewable Energy Generation.
- Mining.
- Conservation of archaeological and other heritage sites and features.
- Promotion of cultural festivals.
- Existing communal land under traditional authority.
- Potential for Smelter development.
- Eco-tourism.
- Mining -tourism.
- Wild silk harvesting.
- Invasive plant species- for wood productivity.
- Urban vs Rural linkages- integration of settlements.
- ICT- 4th and 5th Industrial Revolution.
- Education training.
- Water bottling.
- SMME.
- Truck stop.
- Mining training, nursing college.
- Air quality management- Carbon footprint reduction.
- Alternative energy.
- Manufacturing.
- Mixed development in towns.
- R31 Transportation Corridor
- N14 Tourism Route



THREATS

- Scattered Dense Rural Settlement and Service Sustainability
- Rural-to-Rural Transport, Market & Infrastructure Gaps
- Limited Economic Diversification and Declining Town Economies;
- Agriculture Dependent Local Economies and Employment;
- Sparsely Populated Area and vulnerable Settlements;
- Climate Change Leads to Increased Arid Conditions and Temperatures;
- Dependence on Groundwater, Water Transfers and Management;
- Strategic Groundwater Production Areas and Catchment Pressure;
- Ecosystem over-use and Destruction;
- Municipal Service Infrastructure Backlogs;
- Declining or Dying Mining Activities; and
- Heritage sites are lost on a daily basis through developments in the District.
- The condition of transportation infrastructure and networks
- Health and education infrastructure
- Agricultural land fire
- Farming invasion
- Privately owned land
- Crime & Crime hotspot
- Climate change
- Lifespan of mines
- Unemployment
- Dolomite
- Food security
- Grant dependency
- Human traffic
- Unsustainable development initiatives
- Poverty
- Influx of undocumented foreign
- Lack of infrastructure
- Lack of infrastructure maintenance
- Drugs abuse
- Mental health issues
- Governance- Conflict between traditional authority & governance
- Lack of affordable housing

B 1.5 KEY ISSUES

The identification of key issues is part of a problem-solving technique that leads to informed solutions to various problems. In order to make developmental proposals for the Spatial Development Framework, this identification of key issues was key. The following were identified as key issues within the municipality.

- An economy, which has a strong mining sector, but is otherwise undiversified and vulnerable;
- A persisting and deepening prevalence of poverty, a lack of economic development and unregulated settlement expansion in the Joe Morolong and Ga-Segonyana Local Municipalities;
- An already harsh climate, which is set to get worse, due to global warming;
- A growing threat of unplanned and unmanaged settlement expansion and an absence of traffic management in the core towns in the district;
- Decline on number of households involved in agricultural activities;
- Lack of regulatory framework for land use management in traditional areas;
- Vulnerability of the water service authorities within the district
- Dolomite



Figure 2 Mining, Kathu



Figure 3 Road Infrastructure in Kathu



Figure 5 Road Infrastructure in Mamoratwe



Figure 4 Settlements in Bothitong



Figure 6: R31 Sinkhole between Danielskuil and Kuruman, 2017. Source: Council for Geo for Science



Figure 7 Public Transport in Ga-Lotlhare



Figure 8 Settlements in Ga-Lotlhare

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PROJECTS OF THE JOHN TAOLO GAETSEWE DISTRICT

A number of key catalytic projects/initiatives were identified, which are aimed at (1) stimulating economic growth; (2) generating wealth; (3) diversifying the district economy; and (4) contributing to the recovery of the district economy in the wake of the COVID-19 pandemic (DDM, 2022)

B1.6. KEY CATALYTIC PROJECT

- Regional Hospital (Level 4)
- Iron Smelter and Sinter Plants
- Regional Airport
- Special Economic Zones
- Higher education facilities, i.e., University, University of Technology, FET College and Artisan training facilities
- Basic Education
- Agri-Hub and Park which will comprise of three basic units:
 - Farmer production support units (FPSUs),
 - An Agri-Hub (AH)
 - A Rural-urban Market Centre (RUMC)
- Bulk Infrastructure and distribution networks
- Telecommunication and information infrastructure
- Tourism promotion and development

- Transport corridor and gateway, with related infrastructure and networks
- Disaster management centre
- Integrated Human Settlement Development
- Kuruman Regional airport

Growth Projections

The below table outlines the growth projection with the use of Annual growth rate. JTGDMD population will increase from 268 in 2023 to 282 in 2025. The JTGDMD SDF should ensure that the future expansion is considered and addressed.

Municipality	2023	2024	2025	Average Annual growth
Joe Morolong	97	98	98	0.55%
Ga-Segonyana	119	123	127	3.44%
Gamagara	56	58	61	4.26%
John Taolo Gaetsewe	268	275	282	2.55%

B 1.7. NEEDS AND OPPORTUNITIES

The needs and opportunities analysis is 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.

JOHN TAOLO GAETSEWE DISTRICT MUNICIPALITY	
Needs	Opportunities
There is a need to promote the diversified economic sector and ensuring the balanced use/protecting of natural resources	<p>Diversifying the economic sectors will encourage the skills development and create more job opportunities in the district.</p> <p>Storage facilities</p> <p>There is opportunity of smelting development, wild silk harvesting, alternative energy, manufacturing, value chain projects etc. within the district</p>
<p>Bulk infrastructure and distribution network:</p> <p>The overall improvement of the transport infrastructure to service the internal and external linkages (i.e., between Settlements / towns / nodal areas and within towns)</p>	<p>The district has a large iron mine known as Kumba Iron Ore in Kathu, as well as other existing mines and four towns where opportunities for logistics and products transit exist.</p> <p>There is also an opportunity to promote an integrated settlements by to linking the urban and rural settlements.</p>
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 district
Enhancing Tourism potentials to promote economic growth in the sector	Many tourism opportunities exist within the district including (but not limited to), game drives, hunting, indigenous wildlife, natural springs and caves.

	There is an opportunity for economic growth along the tourism route between Kuruman to Kathu (N14)
There is a need to manage the expansion of the settlements in the Joe Morolong and Ga-Segonyana Local Municipalities	<p>There is an opportunity for integrated Human Settlements development within the district and for encouraging social facilities, such as artisan training facilities</p> <p>There is also an opportunity for disaster management centre within the Local Municipalities</p>
Spatial Restructuring needed to prioritise certain economic sectors which have potential to thrive such as agriculture, tourism, and mining,	<p>Arable land exists within the district, so these sectors have the potential to thrive.</p> <p>There is a lot of restitution land that can be used for the development.</p>
There is a need to manage the use/protecting of natural resources because of the harsh climate change within the district.	There is an opportunity of promoting the renewal energy system, save water scarcity in order to promote the sustainable use of natural resources within the district
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
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 DM such as value chain projects, ensuring that the money made there is spent there. This facilitates the demand and development of retail facilities.

B 1.8. SPATIAL DEVELOPMENT VISION

Developing a vision for a District 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 taking 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.

The vision for the John Taolo Gaetsewe District SDF has been developed in line with the National Spatial Development Framework (NSDF), the Northern Cape Provincial Spatial Development Framework and well as the John Taolo Gaetsewe Integrated Development Plan (IDP). The vision statements for these above-mentioned plans as well as the vision for the SDF are highlighted below.

National Spatial Development Framework Vision, 2022

"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"

John Taolo Gaetsewe District Municipality Integrated Development Plan Vision (2022-23)

"A global centre of excellence for environmentally sustainable, innovative and competitive iron ore and manganese mining and steel beneficiation that anchors a diversified and inclusive economy with an empowered and prosperous local community"

John Taolo Gaetsewe District Development Plan

The vision of the JTG One Plan is "A global centre of excellence for environmentally sustainable, innovative, and competitive iron ore and manganese mining and steel beneficiation that anchors a diversified and inclusive economy with an empowered and prosperous local community."

Vision element 1: People development

People's development means improved skills, employment opportunities, access to services and improved quality of life.

Desired future elements: Improved quality of living (Provision of basic services, improved levels of education and sustainable job opportunities, Lower unemployed and poverty levels, Skills development programmes, access to facilities and utilities and community participation.

Vision element 2: Economic positioning

Economic growth and developments drive all other focus areas and is the key to creating employment opportunities, eradicating poverty, infrastructure developments as well as improving livelihoods. Achieving economic

development means that people can be able to afford the services sustainably, service delivery and infrastructure developments as they address economic challenges. It also attracts developments as well as immigration which in turn has impact on the spatial structure of the area in terms of density.

Desired future elements: • Beneficiation of the natural resources, Advancement of the local economy to diversity from the high concentration on the primary sector to secondary and tertiary sectors, Advanced industrialisation, established investments opportunities, skilled work force, firm management of economic drivers and finances, Township economy, Knowledge economy.

Vision element 3: Spatial Restructuring and Environmental

Well planned spatial structure as well as the availability of spatial tools result in the sustainable land use and management which preserves the environment. It also allows for serviceable linkages which are safe for transportation of both people, goods and services.

Desired future elements: Proper implementation of planning tools, functional linkages, environmental protection, Spatial integration of existing settlements, Inclusive and equitable development, Climate change adaptation strategy, Protection of the Critical Biodiversity Areas (CBA), Balance between developments and the environment, Remote spatial and land use management

Vision element 4: infrastructure engineering and Service provision

Infrastructure development allows for the provision of services such as water, electricity, sewer, roads and storm water which in turn contribute to integrated human settlements.

Desired future elements: Improved Road network access and the maintenance thereof, improved bulk infrastructure and maintenance, migrate mining freight from road to rail transport

Vision element 5: Institution and governance

Well managed institutions have best performances and has potential to secure investments.

Desired future elements: Improve the IGR structures, frequent communication to communities on institutional and financial issues, Proper implementation of policies

John Taolo Gaetsewe District Spatial Development Framework Vision

The vision of the Revised JTGDM SDF is proposed unchanged ((the Revised JTG SDF 2017) as follows:

The John Taolo Gaetsewe District Municipality will become a district in which all its residents

- engage in viable and sustainable wealth-generating economic activities.
- live in sustainable human settlements that are safe, vibrant, and in balance with the environment. Participate in the governance of the district, including settlement formation and expansion, economic development, education, and the provision of basic services.

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 DM. Below is an overview of the Objectives and Strategies developed for the JTGDM in line with its spatial vision.

OBJECTIVES	STRATEGIES
Attract new business (especially manufacturing linked to other sectors e.g. mining, agriculture) to the district in a focused/core area.	<ul style="list-style-type: none"> • Creating an enabling environment that caters to Investment and income generation for the district; include the projects such as Iron Smelter and Sinter Plans and Agri-Park, which will comprise of the Farmer production support units (FPSUs), Agri-Hub (AH) and Rural-urban Market Centre (RUMC) • Uplift the skills base of communities to allow them to be able to earn a living • Investigate potential or enhance existing tourism opportunities
Create a spatial structure that would maximise accessibility of the dispersed population to a range of services and facilities.	<p>Spatial accessibility will be planned in phases whereby the following will be taken into consideration</p> <ul style="list-style-type: none"> • 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.
Encourage economic diversification while enhancing the already-existing economic activities within the region.	<p>Diversifying the economic sectors within the district will be addressed by promoting the following:</p> <ul style="list-style-type: none"> • Special Economic Zone • Agri-Park, which will comprise of the Farmer production support units (FPSUs), Agri-Hub (AH) • Smelter development • The development of Integrated Sustainable Human Settlements; • Telecommunication and information infrastructure

	<ul style="list-style-type: none"> • Develop smart strategies for the basic service delivery • Prioritize areas of greatest need; • Facilitation of integrated and inclusive planning
Promote expansion of the mining industry in such a way that its negative impacts are minimised, and distressed mining communities are supported.	<ul style="list-style-type: none"> • Support and implement a programme to develop appropriate new Zoning Scheme for urban and rural areas in line with the direction of new legislation;
Stimulate the agricultural sector and prioritisation of FPSUs, especially : <ul style="list-style-type: none"> • Kathu (due to mining opportunities - diversification); and • Yale Farm (due to close proximity of the Kuruman Agri-Hub). 	<ul style="list-style-type: none"> • Strengthening of commercial farming and the creation of a new intensive agriculture and agri-processing SMME economy in densely populated rural areas with subsistence farming.
Enhance tourism as a more important component integrated in the economy of the district.	<p>Many tourism opportunities exist within the district including (but not limited to), game drives, hunting, indigenous wildlife, natural springs, and caves.</p> <ul style="list-style-type: none"> • Identify tourism routes and products that require linkages; • Maintenance and upgrading of the road network to allow for smart growth
More youth attraction facilities and entertainment	Promotes skills development, higher education facilities i.e, University, University of Technology, FET College and Artisan training facilities.
Encourage the 4 th and 5 th Industrial Revolution	Encourage telecommunication and Information infrastructure

The above spatial objectives remain unchanged, and two more objectives were added due to the need of addressing 4th and 5th Industrial Revolution, together with the ways of promoting skills development.

B 1.9 SPATIAL PLANNING CATEGORIES

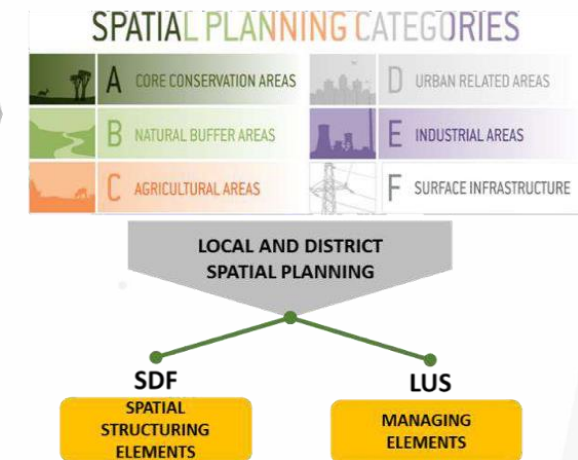
Municipalities should use the Spatial Planning Categories as the foundation of spatial planning, the following considerations needs to be adhered to when developing or reviewing local plans:

- Alignment of provincial spatial structuring elements (e.g., nodes, zones, corridors);
- Hierarchy of towns and settlements as well as considering the recommendations and strategies proposed by the Socio-Economic Potential of Towns Study;
- Strengthening of alignment between neighbouring local plans as proposed and represented in the PSDF; and







To utilise SPC's as basis of future land use development proposals



BIO-REGIONAL PLANNING



The Spatial Planning Categories provide the basis for managing rural land uses. The general conditions guiding what activities may occur within each category are generally in accordance with those set out below:

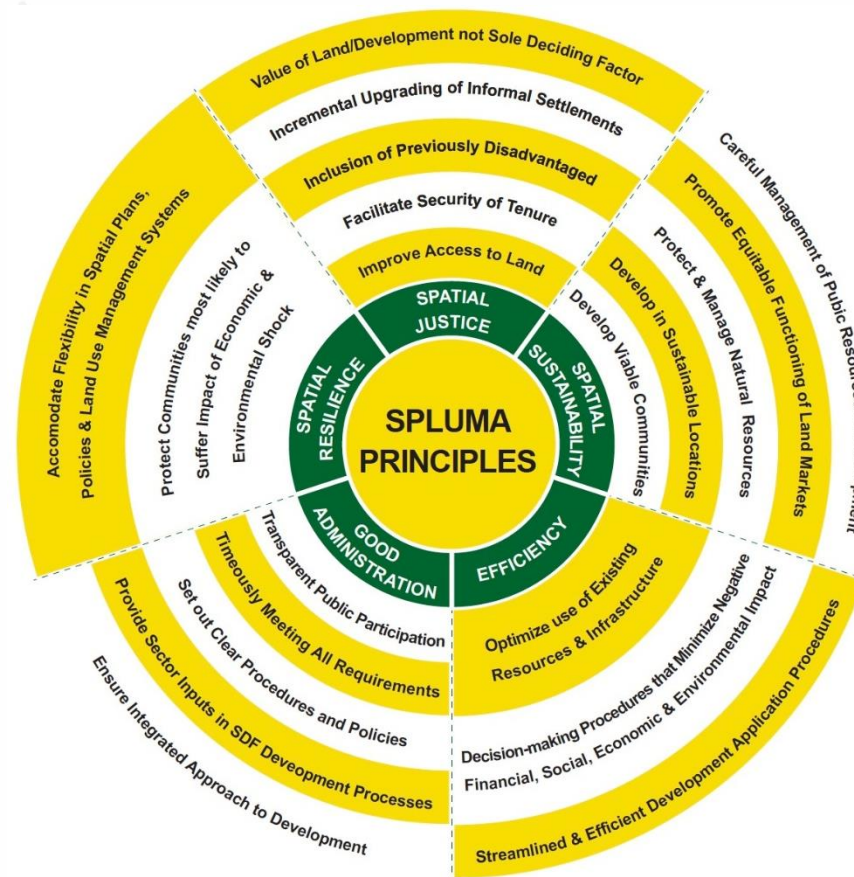
SPC	Type of Development
 A CORE	<ul style="list-style-type: none"> Core SPC Kathu Forest and Tswalu Private Nature Reserve
 B BUFFER	<ul style="list-style-type: none"> These are areas commonly called Sensitive Biodiversity Areas. Landowners should be encouraged to give their land in this category conservation status which may include tourism activities to provide income to manage the land.
 C AGRICULTURAL AREAS	<ul style="list-style-type: none"> Extensive Agriculture Intensive Agriculture Areas (Irrigation farming)
 D URBAN RELATED	<ul style="list-style-type: none"> Areas that will be used for urban-related activities Settlements such as: Kuruman and Olifantshoek
 E INDUSTRIAL AREAS	<ul style="list-style-type: none"> These include mining activities and quarrying Settlements at mines should be encouraged Labour force should be accommodated in the existing urban areas.
 F SURFACE INFRASTRUCTURE & BUILDINGS	<ul style="list-style-type: none"> These include all wind and solar energy generation facilities These projects should be sensitively placed to not negatively impact on the surrounding urban, agriculture, and natural environment

B 1.10 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

Spatial Planning and Land Use Management Act 2013 Principles

Legally, the development principles of SPLUMA must guide a strategic response to spatial development challenges and opportunities in JTGDM. Accordingly, the table below sets out the proposed strategic application of the SPLUMA Development Principles in the Development of the JTGDM SDF:



SPLUMA Development Principle	Elements of the SPLUMA Principle	Strategic Application in the JTGDM SDF
Spatial Justice	<ul style="list-style-type: none"> • past spatial and other development imbalances should be redressed through improved access to, and utilisation of, land. • spatial development frameworks and policy at all spheres of government should address the inclusion of persons and areas that were previously excluded, with an emphasis on informal settlements and areas characterised by widespread poverty and deprivation; • spatial planning mechanisms, including zoning schemes, should incorporate provisions that enable redress in access to land by disadvantaged communities and persons; • land use management systems should include all areas of a municipality and specifically include provisions that are flexible and appropriate for the management of disadvantaged areas and informal settlements; • land development procedures must include provisions that accommodate access to, and facilitation of, security of tenure and the incremental upgrading of informal areas; • a competent authority contemplated in this Act or other relevant authority considering an application before it, may not be impeded or restricted in the 	<ul style="list-style-type: none"> • Directs the DM SDF process to seek spatial planning and land use management solutions that effectively promote redress of circumstances that were caused by past politically based policies, which resulted in inequitable and fragmented spatial arrangements in urban and rural settlement layout designs as well as unequal levels of access to land and associated resources. • Highlights the need to identify opportunities where the spatial configuration of settlements and/or land holdings may be transformed by the development of strategically located land to promote the integration of settlements and better located opportunities for the socio-economic upliftment of disadvantaged communities.

	<p>exercise of its discretion solely on the ground that the value of land or property will be affected by the outcome of the application; and</p> <ul style="list-style-type: none"> the right of owners to develop land in accordance with current use rights should be recognised. 	<p>Strategic Imperative:</p> <ul style="list-style-type: none"> Identify spatial integration opportunities and implement sustained programmatic interventions to achieve spatial transformation and the development of key, centrally located sites within the district
Spatial Sustainability	<ul style="list-style-type: none"> promote land development that is spatially compact, resource-frugal and within the fiscal, institutional and administrative means of the relevant competent authority in terms of this Act or other relevant authority; ensure that special consideration is given to the protection of prime, unique, and high-potential agricultural land; uphold consistency of land use measures by environmental management instruments; promote and stimulate the effective and equitable functioning of land markets; consider all current and future costs to all parties for the provision of infrastructure and social services in land developments; promote land development in locations that are sustainable and limit urban sprawl; 	<ul style="list-style-type: none"> Places emphasise balancing land development and market-driven initiatives against the imperative to conserve the natural resource base (ecological infrastructure) and to manage resource usage sustainably; Highlights the need to ensure that the provision of infrastructure and social facilities – including the post-development maintenance thereof – is adequately planned for; Again, emphasises the importance of consolidating settlement footprints and promoting spatial integration; Directs that spatial planning strategies should prioritise long-term sustainable solutions rather than short-term political and/or market-driven

	<ul style="list-style-type: none"> • result in viable communities; and • strive to ensure that the basic needs of all citizens are met affordably; • the sustained protection of the environment should be ensured by having regard to the following: <ul style="list-style-type: none"> ◦ natural habitat, ecological corridors, and areas with high biodiversity importance; • the provincial heritage and tourism resources; • the economic potential of the relevant area or region; • the provision and conservation of, and the management of the demand for, energy should be considered in land use planning; • the safe utilisation of land should be ensured by taking into consideration factors such as sea-level rise, storm surges, flooding, fire hazards, and geological formations; • development should be principle-driven and should prioritise long-term social, economic, and environmental benefits over short-term benefits. 	<p>initiatives;</p> <p>Strategic Imperative:</p> <ul style="list-style-type: none"> • Embed Evidence-Based Wise Land Use Management and ensure that all land development decisions lead to sustainable outcomes where residents are well-connected to social and economic opportunities and have access to adequate infrastructure and social services that are within the financial means of JTGDMD to develop and maintain over time.
Efficiency	<ul style="list-style-type: none"> • land development should optimise the use of existing resources, infrastructure, agriculture, land, minerals, and facilities; 	<ul style="list-style-type: none"> • Promotes compaction of settlements and the avoidance wherever possible of extending settlement footprints or the development of so-

	<ul style="list-style-type: none"> integrated cities and towns should be developed, whereby— the social, economic, institutional, and physical aspects of land development are integrated; land development in rural and urban areas in support of each other is promoted; the availability of residential and employment opportunities in close proximity to, or integrated with, each other is promoted; a diverse combination of land uses is promoted; the phenomenon of urban sprawl in urban areas is discouraged and the development of more compact towns and cities with denser habitation is promoted; historically distorted spatial patterns of the settlement are corrected; and the quality and functionality of the public spatial environment are promoted; and policy, administrative practice, and legislation should promote speedy land development. 	<p>called satellite townships that was a feature of Apartheid settlement strategies, which require the extension or development of new associated services infrastructure networks</p> <ul style="list-style-type: none"> Also addresses the need to strengthen the positive and reciprocal relationships between urban settlements and rural hinterland areas by identifying what urban settlements do for the rural areas and how the assets and livelihoods offered in the rural areas hold benefits for the urban parts of JTGD. Places focus on urban design interventions to promote mixed land uses in appropriate localities as well as improve the quality of public spaces <p>Strategic Imperative:</p> <ul style="list-style-type: none"> Promote and implement more compact spatial development in both urban and rural settlements, with a wider mix of land uses to promote the efficient use of scarce resources and build on existing infrastructure networks
Spatial	<ul style="list-style-type: none"> whereby flexibility in spatial plans, policy, and land use management 	<ul style="list-style-type: none"> Emphasizes the need to be more aware of the

Resilience	<p>systems is accommodated to ensure sustainable livelihoods in communities most likely to suffer the impact of economic and environmental shocks.</p>	<p>challenges of climate breakdown as well as unforeseen and potentially extreme events, and to plan accordingly</p> <ul style="list-style-type: none"> Highlights the need to allow for flexibility in urban design and urban management <p>Strategic Imperative:</p> <ul style="list-style-type: none"> Ensure adaptability in JTGD's planning and development programmes to accommodate spatial planning and land use management changes necessitated by Climate Breakdown and socio-economic trends Resilience against the effects of a pandemic
Good Administration	<ul style="list-style-type: none"> all spheres of government should ensure an integrated approach to land use planning; all government departments must provide their sector inputs and comply with any other statutory requirements during the preparation or amendment of spatial development frameworks; the requirements of any law relating to land development and land use must be met timeously; 	<ul style="list-style-type: none"> Directs that spatial planning and land use management are core municipal planning activities to be underpinned by cooperative governance arrangements; Again, emphasises the importance of speedy administrative processes in dealing with land development; Places strong emphasis on the need for an

	<ul style="list-style-type: none"> the preparation and amendment of spatial plans, policy, zoning schemes, and procedures for land development and land use applications, should include transparent processes of public participation that afford all parties the opportunity to provide inputs on matters affecting them; legislation, procedures, and administrative practice relating to land development should be clear, and promote predictability, trust, and acceptance in order to inform and empower members of the public; a spatial development framework, zoning scheme or policy should be developed in phases and each phase in the development thereof should include consultation with the public and relevant organs of state and should be endorsed by the relevant competent authority; decision-making in all spheres of government should be guided by and give effect to statutory land use planning systems. 	<p>effective administration to engage in meaningful partnerships with key public and private sector stakeholders</p> <p>Strategic Imperative:</p> <ul style="list-style-type: none"> Integration of effort in ensuring a multi-lateral (multi-stakeholder) governance approach to spatial planning and land use management
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Other principles which are also applicable to the John Taolo Gaetsewe District include:

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 them 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 the 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 the 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.

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, however this will depend on the availability of infrastructure and distribution 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.

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.

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 the influence on individual building use or design. These issues also resemble 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.

Urban design guidelines

Management of open spaces:

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 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 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 maximum continuous direct access to the sun.
11. Any proposals for the redevelopment of existing buildings should consider their heritage value, and elements of the vernacular architecture and, where possible, retain these essential 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.

B 1.11 SPATIAL SCENARIOS

Development scenarios are an important phase of the SDF formulation process. Development scenarios are not predictions or roadmaps, they are constructed in order 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 particular 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 spatial scenarios are in line with the NC SDF, 2020.

The following are the four (4) possible growth scenarios

- Business as usual
- Tempered growth
- Optimistic outlook
- Accelerated/High growth

Business as usual	Accelerated/High growth
<ul style="list-style-type: none"> • Land degradation • Infrastructure development • High unemployment • Lack of skills • Climate change risk • High grant dependency • Limited growth development • Limited social cohesion 	<ul style="list-style-type: none"> • Renewable energy • High development potential. • Strong mining industry • The availability of land reform projects./farms • There is a lot of restitution land that can be used for the development • Climate reduction • Diverse economy • Sustainable Infrastructure development • Lower employment • Private Sector investment • Improved and relative skills development • Smart and rapid growth • Tourism development
Tempered growth	Optimistic outlook
<ul style="list-style-type: none"> • Slight increase of skills • Limited economic diversification • Limited social cohesion • Urban sprawl • Land degradation • Infrastructure development • High grant dependency • Limited climate change adaptation • Limited food security 	<ul style="list-style-type: none"> • Sustainable infrastructure development • Relatively high unemployment • Improvement of the skills base • Low grant dependency • Climate change adaptation strategies are placed and implemented • Denser settlements • Increase economic diversity • Improvement of social cohesion

Scenario 1: Business as usual

The main urban centres, adjacent rural areas and the main transport corridors linking them are the areas where urban and peripheral urban growth can be expected over the next 15 to 20 years.

The main features of the scenario therefore are expected to be as follows:

- Strong private sector investment in high growth areas with a large onus for infrastructure upgrade;
- Broad based government expenditure aimed at addressing social need in poverty-stricken areas;
- There will be large scale demand for urban and peripheral urban sites with a consequent demand for urban level services;
- Continued and extensive peripheral urban settlement development in the relatively high population regions – John Taolo Gaetsewe District;
- Continued moderate levels of population growth are anticipated within the rural communities of the province.
- Existing infrastructure will be overstretched in some of the towns with numerous negative implications as result;
- Infrastructure as well as some key roads have already outgrown their planned capacities.
- The imbalance between population, jobs, and economic opportunities within the province will be sustained; and
- Economic and employment growth will continue along its current trajectory, maintaining the joblessness cycle within the province.

Scenario 2: Tempered growth

The main urban centres, adjacent rural areas and the main transport corridors linking them are the areas where urban and peripheral urban growth can be expected over the next 15 to 20 years.

The main features of the scenario, therefore, are expected to be as follows:

- Strong private sector investment in high growth areas with a large onus for infrastructure upgrade;
- Continued and extensive peripheral urban settlement development in the relatively high population regions – John Taolo Gaetsewe District;
- Relative population stagnation is anticipated in the freehold land areas to the western side of the province; and
- Continued moderate levels of population growth are anticipated within the rural communities of the province.
- It will result in increased challenges affecting areas that are supposed to be conserved for future generations – biodiversity hot spots could be destroyed;
- In about 15 to 20 years valuable resources such as the Karoo Flora and other precious resources will shrink and eventually vanish. Agricultural soils will be washed away, there will be no grazing land for rural households, poverty levels will increase, and rural land will continue to lose its value;

- Rural areas will experience an increased level of migration to larger urban centres, increasing the pressure to provide services in urban regions;
- Vacant and local commonage land resources will become fully developed with time. As the land release process is complex, it will be difficult for the urban areas to expand resulting in a lack of development. Property values will increase with resultant increased in rents. The costs of living will be pushed to extremely high levels;

Scenario 3: Optimistic outlook

The high-growth scenario will require exceptional growth rates of approximately 2.1%. It will require decisive and well thought through and accurately aimed public sector interventions. Future development should be bound by economic rationale – meaning that money should be invested in locations where it will have maximum impact. This will result in an improved spatial development pattern, with:

- Strong private sector investment in high growth areas, supported by focused government infrastructure investment to optimise the growth effect and subsequent income-generating, revenue side of the tax equation (i.e. accelerate taxable / productive investment);
- Private sector responds, establishing higher confidence levels, which lead to greater investment propensity;
- Government investment in low growth / marginal markets should be highly focused and strategically aimed at high potential nodes and corridors – enhancing attractiveness for (income generating) private

sector investment (multibillion Rand private sector investments have a much greater and more sensible job creation impact – and success rate – compared with relatively small scale, government-funded entrepreneurial projects);

- Focused economic development in the high population concentrations within the John Taolo Gaetsewe District (Rural areas) activity nodes as Economic Focus Zones to be developed in tandem with the provincial growth centres; and

Scenario 4: Accelerated/High growth

The high road/ high growth scenario reflects a much more optimistic scenario. However, this scenario will require direct decisive interventions. The high-growth scenario will require exceptional growth rates of above 3%¹¹ (which is deemed a healthy growth rate). It will require decisive and well-thought-through, accurately aimed public sector interventions. Future development should be bound by economic rationale – meaning that money should be invested in locations where it will have maximum impact. This will result in an improved spatial development pattern, with:

- Strong private sector investment in high growth areas, supported by focused government infrastructure investment to optimise the growth effect and subsequent income-generating, revenue side of the tax equation (i.e. accelerate taxable/productive investment);
- Onus for infrastructure upgrade vests the government and is not shifted to the private sector.

- Private sector responds, establishing higher confidence levels, which lead to greater investment propensity;
- More tax revenue is generated – creating more scope for social investment in low-growth areas;
- Government investment in low growth / marginal markets should be highly focused and strategically aimed at high potential nodes and corridors – enhancing attractiveness for (income generating) private sector investment (multibillion Rand private sector investments have a much greater and more sensible job creation impact – and success rate – compared with relatively small scale, government-fund.
- Focused economic development in the high population concentrations within the John Taolo Gaetsewe District (Rural areas) activity nodes as Economic Focus Zones to be developed in tandem with the provincial growth centres;

B 1.12 REGIONAL CONCEPT PLAN

Spatial Planning within the Northern Cape is unique as each of the district's municipalities operates to serve its own community needs and also, they are all fighting for the same resources.

However, all District Municipalities can achieve much more economic growth if they can collaborate to ensure that the cross cutting catalytic projects are implemented

National Spatial Action Areas

The NSDF identifies areas of significant national risk and opportunity/potential. In sharp contrast to the centrifugal forces. The NSAA represent the;

- The most critical sub-national regions/areas for bringing about and/or catalysing national spatial transformation and economic transition at scale; and/or
- The most stressed sub-national regions/areas in terms of current, rising and anticipated national risks.

The areas are informed by the challenges and trends, the underutilised opportunities/potential in different parts of the country, the stated development objectives, and the gap between the ideal national spatial development pattern and the status quo.

The five NSAAs are:

1. National Spatial Transformation and Economic Transition Regions;

2. The Central Innovation Belt;
3. National Resource Risk Areas;
4. National Urban Spatial Transformation and Economic Transition Regions; and
5. The Arid-Innovation Region

The three districts and two local municipalities are situated in the Arid innovation Region and the National Spatial Transformation and Economic Transition Regions.

These regions each have their own unique contexts and challenges, they share many similarities: They all 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) large tracts of dense and sprawling rural settlement forms. They are also areas of high ecological value for the country, as (1) surface water producers. [The Regional concept places its focus on the Northwestern Spatial Transformation and Economic Transition Region \(Northwestern NSTETR\)](#) as it covers the study areas.

The Arid Innovation Region comprises the arid and sparsely populated western and southwestern central parts of the country. It has already and is set to be significantly affected by future climate change trends, notably (1) higher temperatures, (2) more extremely hot days, and (3) more erratic and less rainfall in large parts of the region.

The limited availability of water is a key determinant in the region and everything that happens in it (and not), affecting the lives of the inhabitants of the region on a daily basis, and limiting and shaping their livelihoods and life chances. In addition to this, and in large measure shaped by the lack of water and the harsh climate, most of the towns in the region are heavily reliant on a single economic sector, typically agriculture, mining or government services, which makes them highly vulnerable to (1) external factors, such as currency fluctuations, trade disputes and changes in the demand for commodities, as well as (2) more local factors, notably climate change, veld fires and road and railway conditions.

The region also offers substantial, nationally significant opportunities that require careful and considered utilisation, including (1) unique and niche agricultural activities and fisheries (Mostly prevalent in the Namakwa and ZF Mgcawu districts), (2) internationally recognised and sought-after tourist attractions (the Kgalagadi Transfrontier Park and the Augrabies Falls National Park hold an international tourism area status), (3) large and varied mineral deposits (The John Taolo Gaetsewe district has vast mining activities taking place) and vast shale gas reservoirs, (4) enormous potential for alternative energy generation, and (5) the Square Kilometre Array (SKA)(the ZF Mgcawu and the Namakwa District houses much of the solar plants in the Northern Cape and there are areas identified as renewable energy zones), which is already making a significant contribution to the work of the local and the international scientific community, and offers many more opportunities.

Agri Hubs:

The Northern Cape followed an approach of nodes, agricultural zones and linkages (e.g. agricultural routes and buffers areas around Agri Hubs / Parks) Nationally, the Agri Park Programme creates a system of linked nodes supported by surrounding production areas. Import and export node KRSDF considerations are:

- Framing a more compatible approach to planning for agriculture across the national and provincial spheres, in the form of key structuring elements such as agricultural nodes (Agri Parks could be a key component) and specific typologies for agricultural production areas linked to nodes.
- Adding more detail to the overall frame in terms of specific product focus areas (including input from District Rural Development Plans and other agricultural studies).
- Considering the value chain and linkages to markets in the surrounding influence area.

Industrial development:

Upington:

Role - Economic Focus and Opportunity: Agriculture (high intensity along Orange River), tourism (regional gateway), mining, industrial development, services sector; diversification opportunities in mineral products, vegetables, fruit and grains; national development focus: part of the Northwestern National Spatial Transformation and Transition Region in the Draft NSDF.

Economic Infrastructure and Expansion in Functional Region: REDZ, power corridors, on the national road network, on the national rail network, Agri-Hub and FPSUs., Airport (future International Airport)

Require supportive action –

- Improve ICT connectivity.
- Potential tourism gateway – future international airport; link to Transfrontier Park.
- Industrial development focus area.
- New economic infrastructure: proposed link between Upington and Boegoebaai Harbour (see infrastructure proposal – realign to include Springbok)
- Support services for sustainable energy generation.
- Risk management:
 - Declining population projected in the functional region for 2030/2050;
 - Climate change impact: decreased rainfall and increase in the number of extremely hot days; and
 - SKA Advantage Area.

Priority farmer production support unit:

In agricultural production areas, these towns may feature Agri-Hubs or Farmer Production Support Units which should also focus on providing support to the beneficiaries of the land reform process. It is noted in the draft NSDF that land reform should be undertaken within the framework of the

Regional-Rural Development Model to ensure that suitable and well-located (1) agricultural land and (2) stands in towns are identified through a multi-criteria assessment process and released for productive, commercially viable agricultural purposes. Ensuring that land reform takes places in locations linked to the settlement network or as part of the settlement network will go a long way towards addressing this requirement.

National parks and world heritage sites:

The conservation, use and management of the natural environment in the form of resources for the primary economic sector and ecosystem services in support of human activity are well entrenched in national and provincial planning. A strong legislative framework exists, and both national and provincial spatial plans include detailed spatial references to (1) different classes of protected and sensitive areas and (2) strategic natural resources, e.g. strategic water sources, agricultural land and mineral resources. Key aspects include:

- The protection of the natural environment: This is supported by various pieces of legislation and related resource planning and management tools, including the National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEMA), provincial scale conservations plans identifying Critical Biodiversity Areas and Environmental Support Areas, the work and tools of the South African Biodiversity Institute (SABI), including the national list of threatened ecosystems, national vegetation map, etc.

- Natural resources for human development: The Draft NSDF recognised the National Ecological Infrastructure System as one of the National Spatial Development Levers. Similarly, the National Water Resource Strategy 2024 focuses on equitable and sustainable access and use of water by all South Africans while sustaining the national water resource.
- Climate change threats and considerations: The Karoo Region is being, and will be, heavily affected by climate change. It is an area that will experience and is already experiencing (1) an increase in temperature, (2) a decrease in rainfall in some parts, mostly in the periphery of the region, and (3) an increase in extreme rainfall events in central parts of the region, which has severe implications for infrastructure planning, water availability and flooding.
- Cultural and historical heritage: This is an important consideration in the Karoo Region, ranging from archaeological assets to more recent human history and unique cultural identity. The provisions of the National Heritage Resources Act (Act 25 of 1999) should be considered in the region.

Transformation and economic transition region

Springbok - Economic Focus and Opportunity: Transport and logistics (harbour, border posts, mining and mineral products, agriculture, tourism link to Namibia and Transfrontier Park, national development focus: part of the Northwestern National Spatial Transformation and Transition Region in the Draft NSDF.

Upington - Economic Focus and Opportunity: Agriculture (high intensity along Orange River), tourism (regional gateway), mining, industrial development, services sector; diversification opportunities in mineral products, vegetables, fruit, and grains; national development focus: part of the Northwestern National Spatial Transformation and Transition Region in the Draft NSDF.

Arid innovation region:

'Arid-Innovation Region,' could be interpreted as not only referring to the nature/kind of regional spatial development proposals that would need to be made, i.e. 'innovative,' but also the kind of regional spatial governance models that would need to be created in and for the region. It is from this perspective that an innovative model for collaborative 'regional spatial governance' was prepared to enable the 'joint pursuit of regional spatial development objectives within the broader ambit of the national spatial, social, and economic development objectives.

The Region is characterised by its arid nature and low to very low rainfall patterns. This has resulted in the development of many stressed water catchment areas, particularly in the southern parts of the Region. These factors create a set of unique challenges and dependencies which will significantly affect the functionality of the region. The arid nature of the Karoo Region has resulted in serious challenges for the local food security, specifically in the central part of the region, due to independent factors such as drought, fire and biome changes due to climate change. While areas along the coast and towards the east have higher levels of food security, overall –

the region is dependent on food imports, and the situation is likely to worsen in future.

Infrastructure: Communication and technology planning

Information and focus on planning documents regarding ICT vary greatly. This is an area that required further exploration and more coordinated planning across the region, with a focus on the role of ICT connectivity in supporting economic development as part of the programmatic approaches alluded to above. The sparsely of, for example, cell towers as compared to the area surrounding the Region is an example of how communication technology is not well established in the Region and could be a 'quick win' in terms of economic infrastructure interventions.

The SKA site stands out in this theme as an example of a nationally and internationally significant project with little benefit and high impact on local communities and regional economic development.

Regional scale land use and land development

The South African Radio Astronomy Observatories' Square Kilometre Array telescope (SKA) is a ground-breaking project which is in the most arid part of the region. The introduction of this development into the Karoo landscape and the promulgation of the Astronomy Geographic Advantage (AGA) Act of 2007, which restricts the use of radiofrequency spectrum and radio transmission within a certain range of the SKA. This has had a significant impact on the development proposals of towns such as Carnarvon, Calvinia, Kenhardt and Williston, which has hindered their economic development and

growth. The SKA has also limited the future of space and technology tourism as there are concerns around the possible impact on eco and other recreational tourism forms. The proposed Boegoebaai harbor, coupled with the Upington Industrial Park and airport, may further open the latent economic potential of distressed mining towns and areas with lower agricultural potential.

Economic Functional Regions

The National Development Plan calls for spatial targeting and highlights certain key space economy interventions that need further planning. Taking their cue from this plan, a process to delineate and analyse functional economic regions was done to determine the interrelationships of economic development trends between different towns and bigger growth centres. The approach will consider the functional economic relationships occurring across a contiguous space by analysing regional value chains, market trends, sector territories, economic clusters and transportation flows amongst other aspects of the space economy.

The intention in defining functional regions is to "improve cross-boundary infrastructure planning, ensure better integration of a wider network of human settlements and support the sharing of economic assets to secure economies of scale." Key objectives for the determination of the functional regions included the following:

- The process needed to be evidence based, thus providing an opportunity for more effective planning across sectors as opposed to the more linear silo approach;

- Development of spatial economic perspective that will essentially support both the NSDF's Spatial structuring elements (Growth zones, Urban core Areas, Rural service Centres) as well as Government's new Infrastructure build programme and SIPs;
- To cost the strengths of the different economic functional regions and to give perspective on the future development opportunities these regions do pose;
- To create space for cross boundary planning. Allowing municipalities that configure into functional economic regions to collective plan catalytic interventions;
- To be provide a basis for the prioritisation of high-impact infrastructure investment across the Province;
- To enable the potential basis for Provincial Economic Development Departments to support economic planning on a regional basis with Districts strengthening the economic component of the PGDP;
- To allow for planning that is based on an understanding the potential of economic value chains over space;
- To provide a spatial platform for scaling up jobs by maximizing opportunities resulting from high impact initiatives; and
- To ensure greater leverage off major structuring elements such as transport and development corridors

To provide an economic context/ platform for key spatial initiatives of government, such as the SIP, IDZ and new SEZ programmes. The proposed economic development approach is to create an integrated cross provincial

system of growth nodes with "well-articulated strategic functional economic linkages to less-developed areas (rural areas)" to help unlock latent economic potential and create more inclusive and wide-spread regional development. The functional regions would require formalised linkages through the proposed development corridors where secondary cities and regional service centres will get to anchor their key value chains in a broader economic region.

Corridors Development

Corridor development as a spatial structuring element, and a tool for economic growth, seeks to create functional linkages between areas of higher thresholds (levels of support) and economic potential, with those that have insufficient thresholds. This will enable areas that are poorly serviced to be linked to areas of opportunity and benefit with higher thresholds. As a result, the system of development corridors in the province are developed on the following fundamental aspects:

- Levels of Mobility;
- Levels of Access;
- Land use intensity and role in the spatial economy; and
- Functionality of the corridor.

Upgrade and road maintenance projects on corridors that leads to development opportunity areas such as rural service centres, high potential agricultural land and tourism nodes should be prioritized as this will encourage investment, improve accessibility and enhance mobility. This principle supports the phased approach to development, targeting areas of

greatest potential first. Development corridors are effective in linking infrastructure and economic development as towns and structures connect to each other in a functionally effective manner.

The spatial development concept starts by understanding the mobility networks of people, goods, and services which are channelled along specific routes that describes a network of interaction. The level of activity that these networks provides results in "Development Corridors" which are broad areas of high-intensity urban development centred along activity and development routes. They are characterised by a dynamic, mutually supporting relationship between land use and the supporting movement system.

Development corridors are generally supported by a hierarchy of transport services that function as an integrated system to facilitate ease of movement for private and public transport users. Corridor development is focused predominantly on activity/ development routes serviced by mass rapid public transport services (i.e. rail or bus); however, the system of routes may serve distinct functions, with some routes combining route functionality in terms of accessibility and mobility.

The draft National Spatial Development Framework further presents priority inter-regional development corridors of national importance. The national corridors strive towards consolidating growth and to prioritise economic development through trade infrastructure and activities within a well-connected inter-regional corridor network. Based on the above, the Northern Cape conceptual spatial framework reflects:

- Inter-Regional and National Development Corridors; and
- Provincial Development Corridors to strengthen inter-regional development within the Province.

Fishing & Mariculture Corridor

The Namaqualand coast is the centre of the fishing and Mariculture sector. This corridor has its primary node at Port Nolloth and secondary nodes at Hondeklip Bay and Alexander Bay.

The Oceans Economy concept is driven by the Operation Phakisa initiative of the South African government which aims to implement priority economic and social programmes better, faster and more effectively. The Operation Phakisa: Oceans Economy was launched by President J.G. Zuma, in October 2014. Initially four growth areas were prioritised to contribute to unlocking the economic potential of South Africa's oceans. This was based on their potential contribution to economic growth and job-creation. The following growth areas and corresponding departments were prioritised:

- Marine Transport and Manufacturing led by the Department of Transport;
- Offshore Oil and Gas Exploration led by the Department of Mineral Resources;
- Aquaculture led by the Department of Agriculture, Forestry and Fisheries; and
- Marine Protection Services and Ocean Governance led by the Department of Environmental Affairs.

Tourism & Conservation corridor

This corridor centres around Lake Gariep has significant tourism potential. It is a potential interprovincial hub for tourism which affects the Northern Cape, the Free State and the Eastern Cape.

Since the Province is known for its mining assets and not really for its tourism potential, there is scope for better utilisation of opportunities. This will have to take place bearing in mind that such development is not detrimental to the natural environment. Tourism activities should be in accordance with the image of the tourism features of the Province, and various initiatives are to be coordinated.

Agricultural Corridor

This corridor constitutes the food producing area from Hartswater and Jan Kempdorp through to Prieska, Hopetown and Douglas. Agricultural zones have been proposed to protect and guide agricultural development along the Orange and Vaal river systems. Key objectives of this zone include:

- To maintain the productive capacity of agricultural activities by frugally managing water resources, protected against contamination, and prevented from becoming conduits for pollution.
- Sustainable water management strategies.
- Sustainable and Environmental sound fertilisation strategy.
- Integrated agricultural value chains
- Integrated transport management system to commute workers, produce in and out of the Province.

To development a detailed Agricultural Master Plan for the proposed development zones which needs to improve the effectiveness and management of the region (e.g. irrigation quotas, fertilisers, crop genetics, agro-processing, value chains, transportation of goods and services, SMME development). Functions include:

- Agro-processing
- Agri-tourism
- Agricultural value chains
- Protection of Agricultural Land
- Public Transportation network
- Special Economic Development Zone
- Cargo hub

Inter-Regional Corridor (N7)

This corridor stretches from Cape Town through Namaqualand up to Namibia. It is renowned for its unique aesthetic appeal and seasonal flower displays. The distance between Cape Town and Springbok makes it difficult to develop rendering the corridor as mainly a transportation corridor between Cape Town and Namibia. The key functions include:

- Export and Import gateway
- Weigh Bridge
- Tourism Development
- Botanical Tourism
- Tourism Node
- Link towards Metropolitan areas

N8

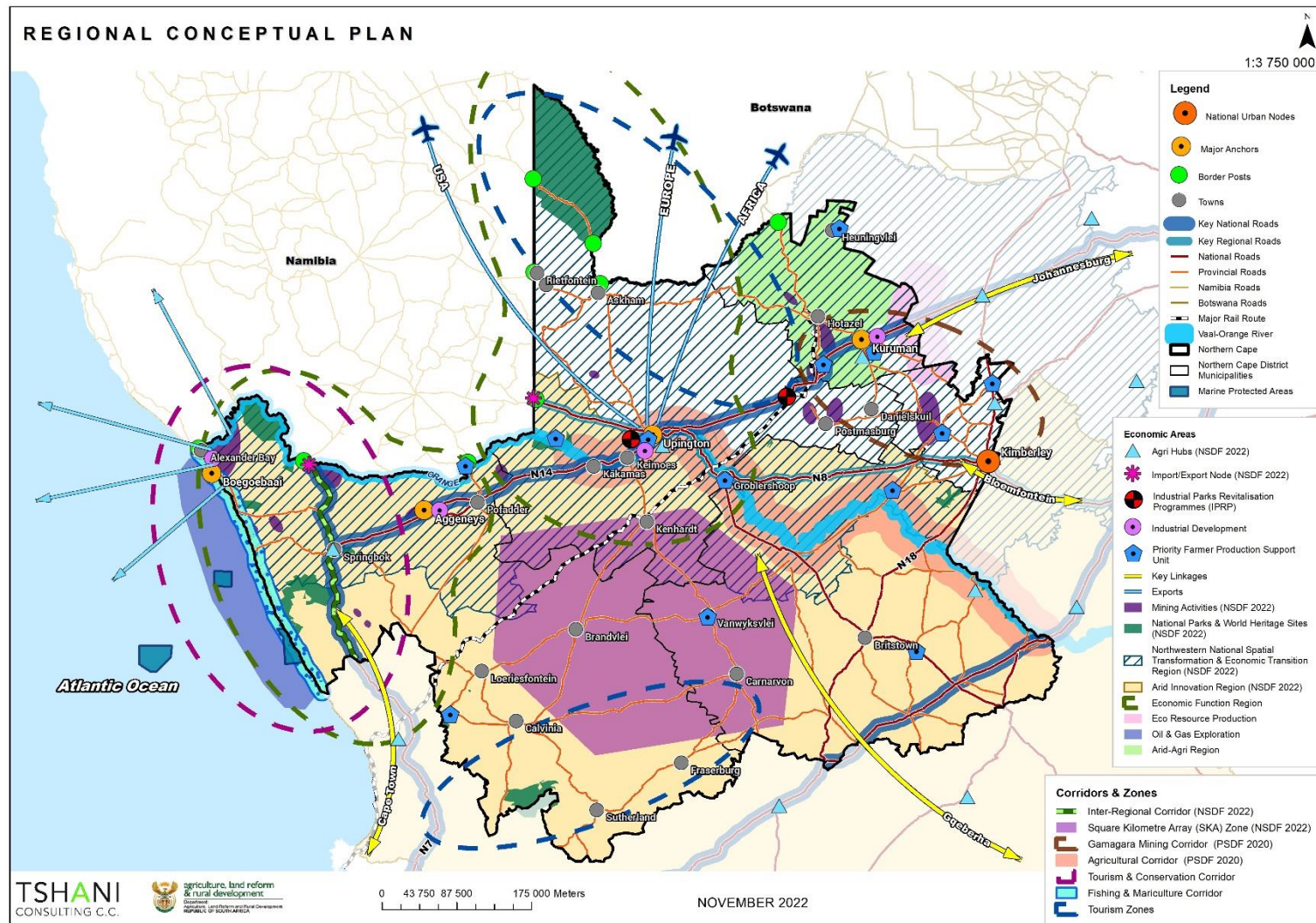
A strong economic and administrative link existing between Kimberley and Bloemfontein. Further studies are required to investigate potential. Corridor development efforts are evident in Bloemfontein whereas Kimberley has still to improve and access future corridor development potential between the cities.

N14

High corridor potential is evident between Vryburg, Kuruman and Kathu. Further studies are required to determine the economic potential. Corridor development potential along the Upington, Kakamas area is also evident and needs to be consolidated through a corridor development strategy to strengthen the Agriculture potential by enhancing the Agri-Parks.

N10

Medium corridor development potential is available between the Namibian border and Groblershoop, along the agricultural development zone. Further potential lies between De Aar and Middelburg towards Cradock.



Plan 9: Regional Concept Plan

B 1.13 CONCEPTUAL DEVELOPMENT FRAMEWORK

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 are shown in the John Taolo Gaetsewe municipality district 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. Mining is one of the main economic drivers and areas have been identified for Intensive mining.

The concept looks at the nodes being developed to accommodate residential and alternative economic opportunities to create employment. Mining activities have strengthened the economic sector and other sectors such as agriculture (Agri-hub and agricultural industry) and tourism support and ensure the sustainability of these nodes.

The municipality is surrounded by some national attractions like the Green Kalahari Canoe Marathon, etc. which attract many tourists, which traverse the municipality to get to these destinations.

National Spatial Action Areas

The NSDF identifies areas of significant national risk and opportunity/potential. In sharp contrast to the centrifugal forces.

JTGDM falls under NSAA ONE.

NSAA One: National Spatial Transformation and Economic Transition

- Northwestern Spatial Transformation and Economic Transition Region (Northwestern NSTETR).

National Nodal System Elements:

- Regional Development Anchors: Kuruman,
- Rural Service Centers: Kakamas, Kathu

These five Sub- Frames are::

1. NSDF Sub-Frame One: Inter-Regional Connectivity;
2. NSDF Sub-Frame Two: The National System of Nodes and Corridors;
3. NSDF Sub-Frame Three: The National Resource Economy Regions;
4. NSDF Sub-Frame Four: The National Movement and Connectivity Infrastructure System; and
5. NSDF Sub-Frame Five: The National Ecological Network.

Agri hubs:

The Northern Cape followed an approach of nodes, agricultural zones and linkages (e.g. agricultural routes and buffers areas around Agri Hubs / Parks). Nationally, the Agri Park Programme creates a system of linked nodes supported by surrounding production areas. Import and export node.

Agri-Hub within the District is situated in [Kuruman](#).

- Agri-Hub including Agriculture and Agro-processing.

Priority farmer production support unit:

NSDF that land reform promotes that land reform takes place in locations linked to the settlement network or as part of the settlement network will go a long way towards addressing this requirement.

The Farmer Production Support Unit (FPSU) is designed in a way which will have a rural outreach unit connected with the Agri-Hub itself.

Six (6) Farmer Production Support Unit (FPSU) in JTGD:

1. Tom Brown (FPSU)
2. Pender Farms (FPSU)
3. Heunigvlei (FPSU)
4. VanZylsrus (FPSU)
5. Yale Farm (FPSU)
6. Kathu (FPSU)

Two (2) priority Farming Production Supporting Units were earmarked, namely:

- Kathu (due to mining opportunities - diversification); and
- Yale Farm (due to close proximity of the Kuruman Agri-Hub).

Agricultural Corridor

This corridor constitutes the food producing area from Hartswater and Jan Kempdorp through to Prieska, Hopetown and Douglas. Agricultural zones have been proposed to protect and guide agricultural development along the Orange and Vaal river systems.

To develop a detailed Agricultural Master Plan for the proposed development zones which needs to improve the effectiveness and management of the region (e.g. irrigation quotas, fertilisers, crop genetics, agro-processing, value chains, transportation of goods and services, SMME development). Functions include:

- Agro-processing
- Agri-tourism
- Agricultural value chains
- Protection of Agricultural Land
- Public Transportation network
- Special Economic Development Zone
- Cargo hub

Productive Mining And Infrastructure Network

Several opportunities in the mining and associated beneficiation sectors exist in the area, notably the following:

- Vast, extensive manganese deposits, which can be exploited both by large companies and small-scale operators where deposits are not suitable for large-scale operations;
- Iron smelter and Sinter plants
- Semi-precious stones (e.g. granite, Tiger's Eye);
- Industrial minerals, such as clay, sand, and salt

Rail transport is mainly utilised in the agricultural and mining sectors. Ores are transported in this manner. A rail line extends from Black Rock southwards past Sishen to Kimberley where it connects with the main Cape Town – Johannesburg line. A second line, used to transport iron ore, extends from Sishen southwards to Saldanna Bay where it supplies the Saldanna steel plant.

Gamagara corridor

This corridor comprises the mining belt of the John Taolo Gaetsewe, and ZF Mgcawu districts and runs from Lime Acres and Danielskuil to Hotazel in the north. The corridor focuses on the mining of iron and manganese. The primary functions of the Gamagara corridor are:

- Mining

- Manufacturing
- Industrialisation
- Mining Value Chains
- Terminal development
- Heavy Industries

The main rail lines in the district include:

- The Black rock – Sishen – Kimberley
- Kathu – Sishen – Saldanna

Note: “*TRANSNET National Ports Authority (TNPA) : Upcoming port at Boegoebaai in the Northern Cape province of South Africa, and a new 550km railway to connect it to mining and industrial centres.*”

Three mining groups are active in the JTGDM, these being the Sishen Iron Ore Mine; Samancor Ltd, with mines in Hotazel, Mamatwan and Wessels; and Assmang Ltd with mines in Blackrock and Gloria.

The freight transport from these mines includes the following:

- Sishen Iron Ore Mine with approximately thirty (30) trucks (34 -35 ton) per week carrying fuel and four (4) trucks (34 -35 ton) and two (2) 6-ton trucks per month carrying oil
- Samancor with one (1) 8-ton truck per day carrying materials and one (1) petrol tanker (9 000 litre) every three (3) months
- Assmang with one (1) 8-ton truck every fortnight carrying explosives.

N14

N14 linking Gauteng Mega City Region with the Springbok, Upington, Kuruman and Vryburg Regional Growth Centres;

High corridor potential is evident between Vryburg, Kuruman and Kathu. Further studies are required to determine the economic potential. Corridor development potential along the Upington, Kakamas area is also evident and needs to be consolidated through a corridor development strategy to strengthen the Agriculture potential by enhancing the Agri-Parks.

R31 & R380

The R31 (Kimberley-Kuruman-Hotazel) is the other important surfaced road linking Kuruman to Hotazel and the Mining activities at Blackrock as well as Kimberley. This route is also a tourist route - the Wonderwerk Caves and Eye of Kuruman are located along this route.

The R325 (Sishen to Postmasburg) and R385 (Olifantshoek to Postmasburg) are the only other surfaced roads providing access for local farming and mining communities in the Sishen and southern areas of the district.

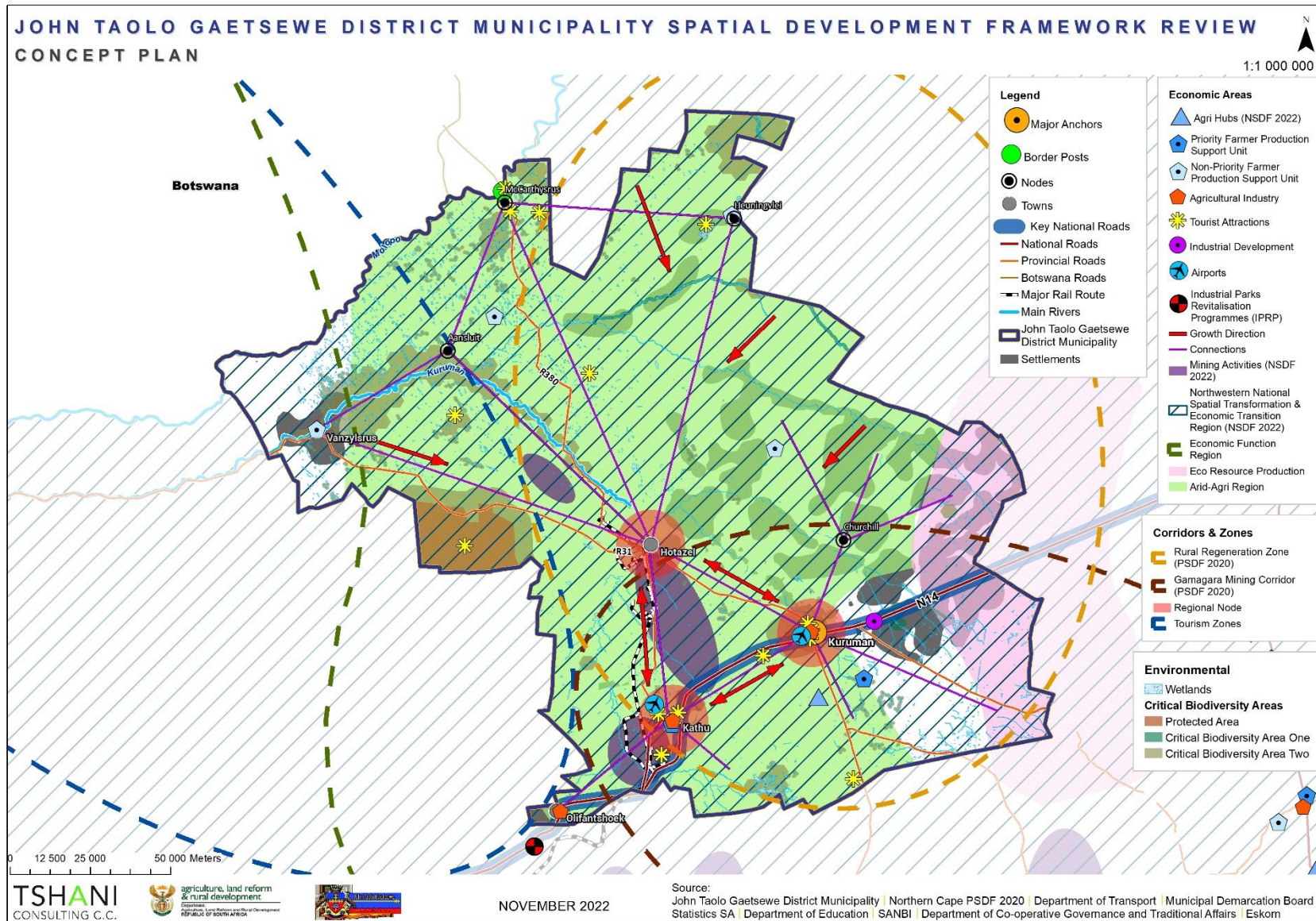
Industrial development:

SA has about 80% of the world's manganese resources. Manganese is an industrial metal which is used to strengthen to steel.

Most of the heavy industrial activities (RTC Mining Supplies, Workshop Warehouse Kathu, ITR Kathu, etc.) are found near the mining towns of Kathu

and Hotazel with smaller industrial and related activities in Kuruman and also Kathu. Agri-processing activities are found within the towns of Kuruman and Kathu, although there are only a few industries in this market segment (JTG RDP 2016).

Economic Infrastructure and Expansion in Functional Region: REDZ, power corridors, on the national road network, on the national rail network, Agri-Hub and FPSUs., Airport (future International Airport).



PLAN 10: Concept Plan

B 1.13. STAKEHOLDER PARTICIPATION

This *Stakeholder Participation* section includes a summary of all avenues of engagement of the SDF throughout its development from Inception. It includes an outline of all Meetings held, as well as the advertisements and Gazette notices which have been placed to seek public comment and engagements with different sector departments.

The success of a project of this nature and magnitude relies heavily on a well-balanced process involving technical analysis and evaluation, supported, and informed by a *focused participation* and *consultative process*. These two processes need to constantly inform each other, thereby ensuring that the final product is technically feasible, financially sustainable and that it has the buy-in of all relevant role players/ stakeholders.

Tshani Consulting CC has had the following engagements;

1. Meeting held with District Mayors, MM's, ward councillors, etc. 18 October 2022 @ Thabo Moorosi Multi-purpose centre
2. One on One with Eskom on the 20th of October 2022
3. Workshop with internal and external stakeholders on the 27th of October 2022.
4. One on One with the Agriculture, Environmental Affairs & Rural Development & Land Reform on the 7th of November 2022.

5. One on One Meeting with the National African Farmers Union (NAFU) on the 14th of November 2022.
6. Held the virtual meeting with DM's and LMs on the 15th of November 2022.
7. Held the virtual meeting with Department of Mineral Resources and Energy on the 21st of November 2022
8. Held the virtual meeting with Department of Public Works on the 28th of November 2022.

SECTION C: **CONCLUSION**

The John Taolo Gaetsewe municipality has plenty of development potential although factors such as political will, institutional capacity and acquisition of land are the biggest challenges. Based on the analysis above, the majority of the population are of working age and opportunities for development exist within the municipal space in terms of land and Local Economic Development (LED) initiatives. The growing opportunities that exist within the mining economy need to be explored fully so as to boost economic viability within the region.

The Situational Analysis report did an assessment of three pillars of biophysical, built environment and socio-economic. These have been used to get an overall idea of the municipality in terms of services, economic development, and social development other factors.

The report also highlights key municipal challenges as well as available strengths, threats opportunities and weaknesses. This analysis has thus been used as a foundation towards the development of a municipal vision and development objectives of the overall spatial development framework



Figure 9: Hotazel_Stream