agriculture, land reform & rural development

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

John Taolo Gaetsewe DISTRICT MUNICIPALITY

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

JOHN TAOLO GAETSEWE DISTRICT MUNICIPALITY

February 2023

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

TSHANI CONSULTING C.C.

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Document Control Sheet

Project	John Taolo Gaetsewe District Municipal Spatial Development Framework	**Rf.**	EL 839

Report Status	Spatial Proposals		
Submission Date	February 2023		
Client	**Department of Agriculture, Land Reform and Rural Development** Cnr Knight and Stead Street, Court Building Kimberley 8301	**Municipality**	**John Taolo Gaetsewe District Municipality** 4 Federale Mynbou Street P.O. Box 1480 8460
Consultant / Applicant	**Tshani Consulting CC** 9 Princes Road Vincent East London 5217		

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Record of Revision

Version No.	Status	Description	Date
1	Draft	Spatial Proposals	27 January 2023
2	Final	Spatial Proposals	09 February 2023

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SECTION A: INTRODUCTION

A1. 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 the **Phase 4: Spatial Proposals;** Report prepared by **TSHANI CONSULTING CC**.

A2. 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.

A3. 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 DEVELOPMENT FRAMEWORK

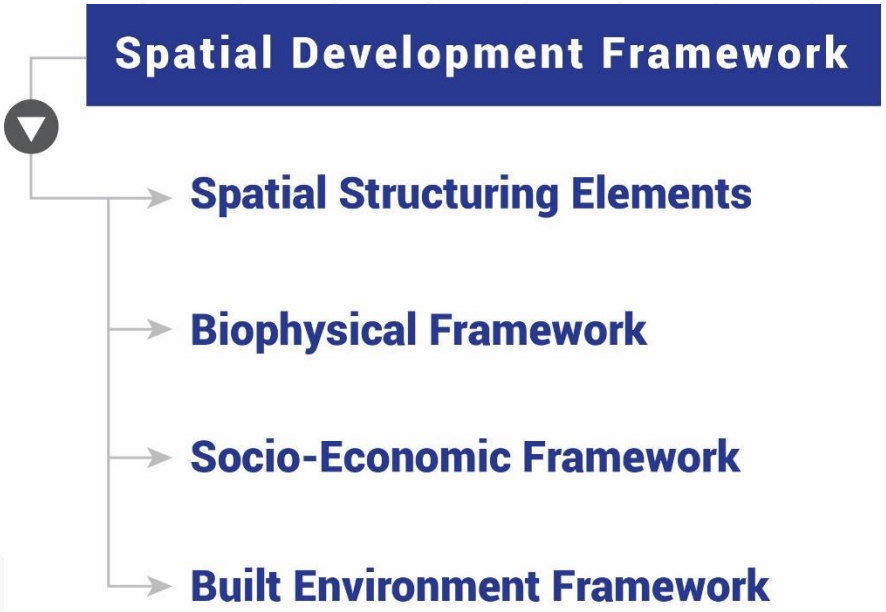
The Spatial Development Framework of a District Municipality should direct and arrange the development activities and the built form in such a way that it can accommodate ideas and desires of people without compromising the natural environment and the way services are rendered. Therefore, the Spatial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

This phase stems from the concept plan and it aims to build on the concept plan and to identify Spatial proposals to facilitate growth. The proposals align to NSDF, PSDF, KRSDF, RDSP etc.

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

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

The structure of the Spatial Development Framework will include the Spatial Structuring Elements and they will be aligned to the 3 SPLUMA Pillars and the Spatial Planning Categories.



The NCPSDF, 2020 recognises that the SPCs are not a blueprint for land-use classification, or a zoning scheme. The SPCs provide a framework to guide decision-making regarding land-use at all levels of planning, and they have been articulated in a spirit of creating and fostering an organised process that enables people to work together to achieve sustainable development in a coherent manner. The designation of SPCs does not change existing zoning or land-use regulations or legislation. SPCs merely help to clarify and facilitate coherent decision-making that can lead to better zoning, laws, and regulations. The SPCs, furthermore, provide a framework in terms of which land-use decisions can be standardised throughout the province. It is advisable that all zoning scheme regulations be aligned with the SPCs.

The model below provides for three broad land-use categories, i.e., a core conservation area (SPC A), a conservation-focussed buffer area (SPC B) and a transition area (SPC C-F).

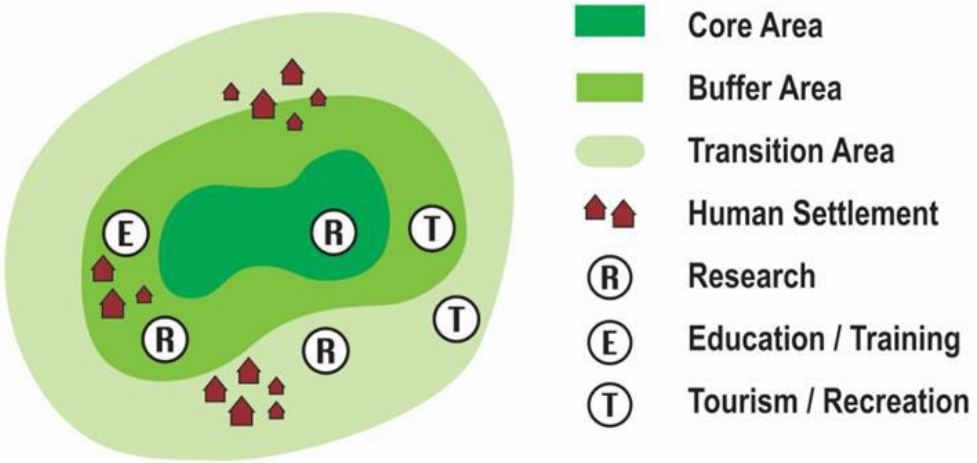


FIGURE 1 LAND-USE CLASSIFICATION MODEL ADOPTED FOR THE NORTHERN CAPE

The diagram below depicts the alignment of the SPLUMA Pillars to the Spatial Planning Categories.

	BIOPHSICAL	SOCIO ECONOMIC	BUILT ENVIRONMENT
SPLUMA Pillars	Agriculture Land Transformation Climate Change Geology & Topography Biodiversity & Ecosystems Landscapes And Sense Of Place	Regional Space Economy Demographics & Social Conditions Cultural Heritage & Tourism EmploymentLocal Economy & Business Key Economic Sectors Rural Development	Settlement Patterns Settlement Role, Hierarchy & Function Spatial Structure & Form Built Heritage Land Use & Activity Patterns Infrastructure Transport & Movement Networks Housing
Spatial Planning Categories	**A** Core: A.a Statuory Protected Areas **B** Buffer: B.a Non-Statutory Conservation Areas; B.b Ecological Corridors; B.c Urban Green Areas **C** Agricultural Areas: C.a Extensive Agricultural Areas; C.b Intensive Agricultural Areas	**D** Urban Related: D.f Institutional Areas; D.g Authority Areas; D.i Business Areas; D.j Service Related Business; D.k Special Business; D.l SMME Incubation; D.m Mixed Use Development Areas; D.q Resorts & Tourism Related Areas	**D** Urban Related: D.a Main Towns; D.b Local Towns; D.c Rural Settlements; D.d Tribal Authority Settlements; D.e Communal Settlements; D.h Residential Areas; D.n Cemeteries; D.o Sports Fields & Infrastructure; D.p Airport & Infrastructure; D.r Farmsteads & Outbuildings **E** INDUSTRIAL AREAS: E.a Agricultural Industry; E.b Industrial Development Zone; E.c Light Industry; E.d Heavy Industry; E.e Extractive Industry **F** SURFACE INDUSTRIAL BUILDINGS: F.a National Roads; F.b Main Roads; F.c Minor Roads; F.d Public Streets; F.e Heavy Vehicle Overnight Facilities; F.f Railway Lines; F.g Power Lines; F.h Telecommunication Infrastructure; F.i Renewable Energy Structures; F.j Dams & Resevoirs; F.k Canals; F.l Sewerage Plants & Refuse Areas; F.m Mixed Use Development Areas

FIGURE 2: SPLUMA SPCs

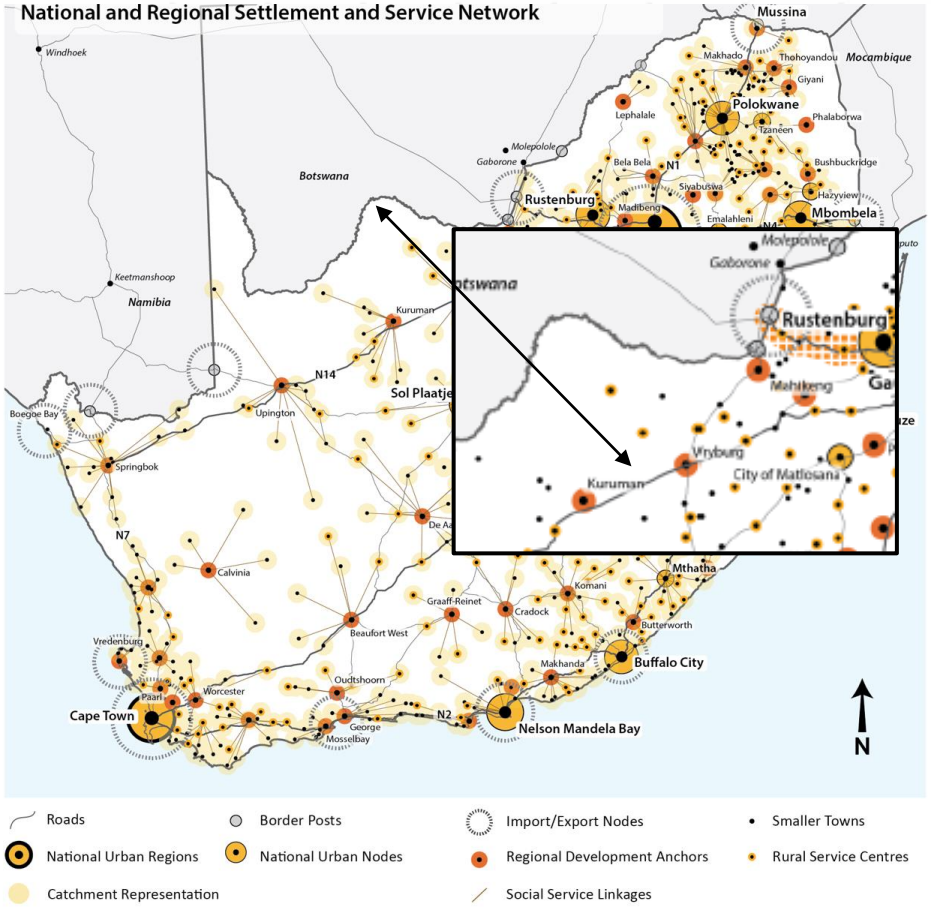
B.1 SPATIAL STRUCTURING ELEMENTS

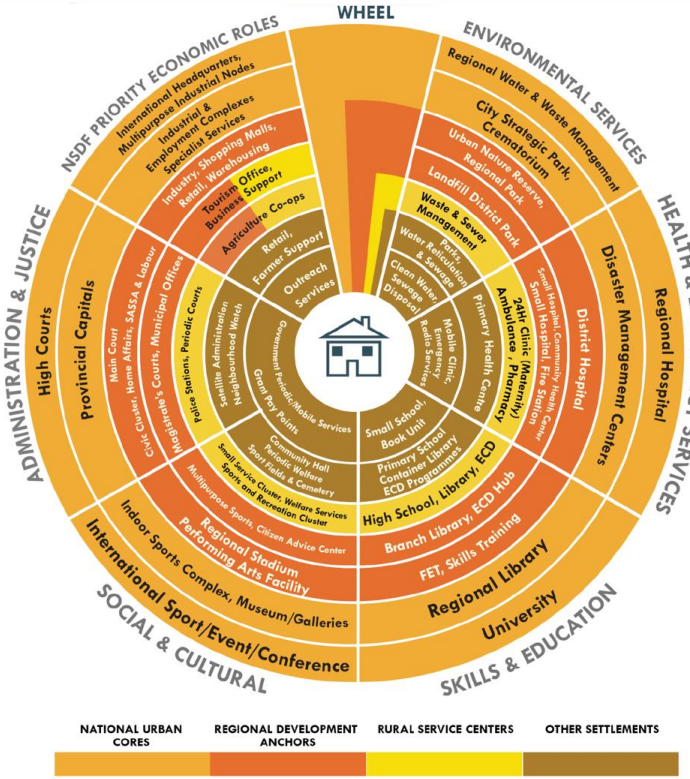
Spatial Structuring Elements are defined key prominent features of the study area which the development of spatial proposals will be based on. They are embedded by the opportunities of study area and help structure the focus of the spatial proposals.

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

The spatial framework is developed though an interconnected set of nodes, networks, and surfaces. The crux of development in this system is the movement of people, goods and services that produces the basic impetus for developing functional relationships between otherwise independent and unrelated elements.

The movement of people, goods, and services are channelled along specific routes that describe a network of interaction. Where networks intersect the opportunity for people, goods and services develop to interact and this gives rise to activity nodes. The intensity of interaction gives rise to the development of a hierarchy of nodes of different sizes depending on the level of interaction taking place in a node. This one-dimensional system of networks and nodes are tied together through surfaces that fill the areas between the nodes and networks.





** Please note: The image on the left is a conceptual depiction of the Service Network Linkages and not an accurate representation of such linkages.*

FIGURE 3: NATIONAL SYSTEMS OF NODES AND CORRIDORS: NATIONAL AND REGIONAL SETTLEMENT AND SERVICE NETWORK

B1.1 Nodes

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

Nodes are described as areas of mixed-use development, usually having a higher intensity of activities involving retail, transportation, office, industry, and residential land uses. These are the places where most interaction takes place between people and organisations, enabling most efficient transactions and exchange of goods and services. Nodes are usually located at interchanges to provide maximum access and usually function as catalysts for new growth and development.

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

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

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

- Site layouts and building designs of individual developments must take cognisance of and support public transport and pedestrian movement.

The National Spatial Development Framework, 2022 outlines the following Settlement Classification to nodes in the country. The same distinction has been used for the John Taolo Gaetsewe District SDF to ensure alignment from the National, and Provincial plan through to the district plan.

National Network of Regional Development Anchors

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

National Network of Rural Service Centres

- Rural development must be supported through a network of prioritised service centres where people in rural areas and settlements can be optimally provided with municipal and social services, and where rural logistics and support can be provided to support rural development.
- Specific support must be provided to (1) towns that function as border towns and trade posts, and (2) growing towns in border regions.
- In arid areas and areas experiencing a decline in population, settlements must be consolidated, and maintenance prioritised in such core towns.
- In dense rural settlement regions, consolidation within nodal centres and rural design is required.

Other Smaller Towns and Settlements in South Africa

- Consolidate and provide basic services to the local population in a network of small towns and settlements.
- Urban consolidation and basic service delivery in growing regions must keep pace with population growth and economic development.
- In densely populated and growing rural regions, (1) settlement must be consolidated in nodes, and (2) spatial planning and rural design done to ensure managed and quality future settlement development.
- In areas that are ecologically sensitive and that experience harsh climatic conditions, and are set to experience even harsher such conditions, existing settlement expansion and new settlement formation/ development must be discouraged.
- In arid areas and areas experiencing a decline in population, settlements must be consolidated, and maintenance prioritised in core towns.
- Mining development must be decoupled from settlement development, and existing settlement expansion or formation/development of new settlements in the case of new mining developments be carefully considered and decisions based on a full life-cycle analysis of the mining activities and the life of the settlement/s after mine-closure.

TABLE 2: NODAL CLASSIFICATION

Nodal Classification							
Local Municipality	Towns Name	Estimated Population	NSDF (2022)	PSDF (2020)	DSDF (2017)	SPC Category	Recommended Term
Ga-Segonyana LM	Kuruman	13057	Regional development anchor	Regional Growth Centre	Regional node	Main Town	Regional development anchor
Gamagara LM	Kathu	11510	Rural service Centre	Rural service Centre	Regional node	Local Town	Rural service centre
	Olifantshoek	10234	Rural service Centre	Rural service Centre	Local node	Local Town	Rural service centre
Joe Morolong LM	Churchill	-			Regional node	Local Town	Small Rural service centre
	Vanzylsrus	438	Rural settlement	Rural settlement	Local node	Rural settlement	Small Rural service centre
	Black Rock	210			Local Node	Rural settlement	Settlement
	Hotazel	1756	Rural settlement	Rural settlement	Regional node	Rural settlement	Rural service centre
	McCarthysrus				Local node	Rural settlement	Settlement
	Heuningvlei	2656			Local node	Rural settlement	Small Rural service centre
	Aansluit				Local node	Rural settlement	Settlement

TABLE 3: LIST OF VILLAGES IN THE LOCAL MUNICIPALITIES

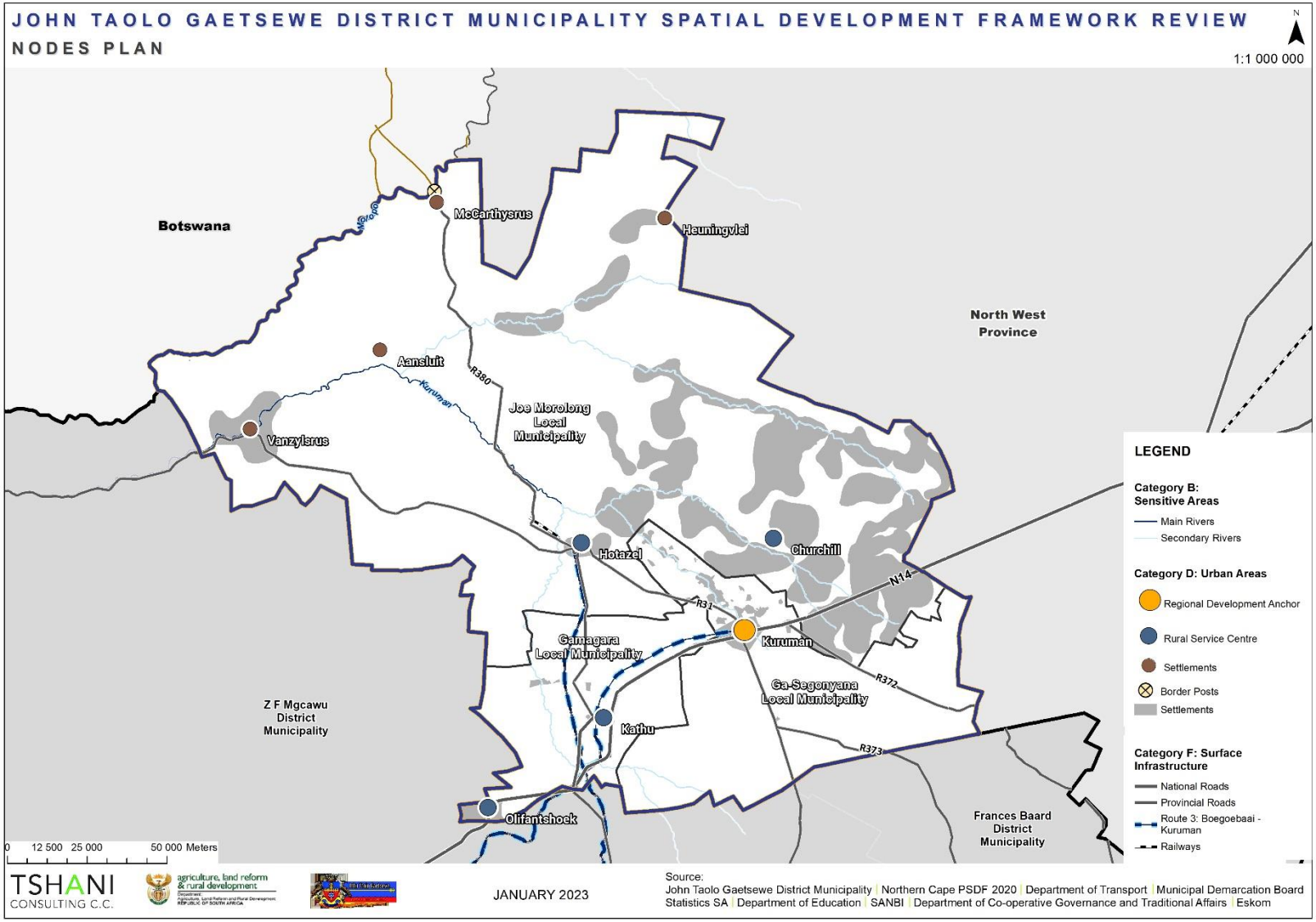
Gamagara Local Municipality		
Settlement Name	Settlement Main Type	Settlement Type
Dingleton	Urban	Urban - Formal Town
Kathu Informal A	Urban	Urban - Informal Settlements (Squatter Camp)
Olifantshoek Informal A	Urban	Urban - Informal Settlements (Squatter Camp)
Olifantshoek Informal D	Urban	Urban - Informal Settlements (Squatter Camp)
Ga-Segonyana Local Municipality		
Settlement Name	Settlement Main Type	Settlement Type
Bankhara-Bodulong Informal B	Urban	Urban - Informal Settlements (Squatter Camp)
Bankhara-Bodulong Informal C	Urban	Urban - Informal Settlements (Squatter Camp)
Batlharos Informal A	Rural	Rural - Dense Village > 5000
Ditshoswaneng	Rural	Rural - Small Village <= 5000
Galotolo	Rural	Rural - Small Village <= 5000
Gamopedi	Rural	Rural - Small Village <= 5000
Gamotsamai	Rural	Urban - Formal Town
Gantatelang/Dikgweng	Rural	Rural - Small Village <= 5000
Gantatelang/Dikgweng Informal A	Rural	Urban - Informal Settlements (Squatter Camp)
Ga-Ruele	Rural	Rural - Small Village <= 5000
Gasebolao	Rural	Rural - Small Village <= 5000
Gasehubane	Rural	Rural - Small Village <= 5000
Geelboom	Rural	Rural - Small Village <= 5000
Kagung	Rural	Rural - Dense Village > 5000
Kanana	Rural	Rural Scattered
Kono	Rural	Rural - Small Village <= 5000
Magojaneng	Rural	Rural - Dense Village > 5000
Magojaneng Informal A	Rural	Rural - Dense Village > 5000
Mapoteng	Rural	Rural - Small Village <= 5000
Mokalamosesane	Rural	Rural - Small Village <= 5000
Mothibistad/ Harvard	Rural	Rural - Small Village <= 5000
Ncweng	Rural	Rural - Small Village <= 5000
Piet Se Bos	Rural	Rural - Small Village <= 5000
Piet Se Bos Informal A	Rural	Urban - Informal Settlements (Squatter Camp)
Sedibeng	Rural	Rural - Small Village <= 5000
Sedibeng Informal A	Rural	Rural - Small Village <= 5000
Seoding	Rural	Rural - Dense Village > 5000
Seoding Informal A	Rural	Urban - Informal Settlements (Squatter Camp)
Sevenmiles	Rural	Rural - Small Village <= 5000
Sloja	Rural	Rural Scattered Very Low Density
Thamoyanche	Rural	Rural - Small Village <= 5000
Vergenoeg/ Maheane	Rural	Rural - Small Village <= 5000
Joe Morolong Local Municipality		
Settlement Name	Settlement Main Type	Settlement Type
Adderley/Gamasilabe	Rural	Rural Scattered
Baily Birth	Rural	Rural Scattered
Battlemount	Rural	Rural Scattered
Bendel	Rural	Rural - Dense Village > 5000
Bojelapotsane	Rural	Rural Scattered Dense

Bosra	Rural	Rural - Small Village <= 5000
Bothetheletsa	Rural	Rural - Dense Village > 5000
Bothithong	Rural	Rural - Dense Village > 5000
Bush Buck	Rural	Rural - Dense Village > 5000
Cahar	Rural	Rural Scattered
Camden	Rural	Rural - Dense Village > 5000
Cardington	Rural	Rural - Dense Village > 5000
Cassel	Rural	Urban - Formal Town
Churchill	Rural	Rural - Dense Village > 5000
Colston	Rural	Rural - Dense Village > 5000
Damros 1	Rural	Rural - Small Village <= 5000
Damros 2	Rural	Rural - Small Village <= 5000
Damros 3	Rural	Rural - Small Village <= 5000
Danoon	Rural	Rural - Dense Village > 5000
Deurham	Rural	Rural - Dense Village > 5000
Deurward	Rural	Rural - Dense Village > 5000
Dikhing	Rural	Rural - Small Village <= 5000
Dinyaneng	Rural	Rural Scattered
Dithakong	Rural	Rural - Dense Village > 5000
Dithakong 1	Rural	Rural Scattered
Ditlharapeng	Rural	Rural Scattered
Ditsipeng	Rural	Rural - Small Village <= 5000
Diwatshane	Rural	Urban - Formal Town
Dockson	Rural	Urban - Formal Town
Dockson1	Rural	Rural Scattered
Dohuduwatshuse	Rural	Rural Scattered
Drieloop	Rural	Rural - Small Village <= 5000
Eiffel	Rural	Rural Scattered
Ellendale	Rural	Urban - Formal Town
Esperanza	Rural	Rural - Small Village <= 5000
Ga - Sehunelo Wyk 1	Rural	Rural - Small Village <= 5000

Ga - Sehunelo Wyk 10	Rural	Rural - Small Village <= 5000
Ga - Sehunelo Wyk 2	Rural	Rural - Small Village <= 5000
Ga - Sehunelo Wyk 3	Rural	Rural - Small Village <= 5000
Ga - Sehunelo Wyk 4	Rural	Rural - Small Village <= 5000
Ga - Sehunelo Wyk 5	Rural	Rural - Small Village <= 5000
Ga - Sehunelo Wyk 6	Rural	Rural - Small Village <= 5000
Ga - Sehunelo Wyk 7	Rural	Rural - Small Village <= 5000
Ga - Sehunelo Wyk 8	Rural	Rural - Small Village <= 5000
Ga - Sehunelo Wyk 9	Rural	Rural - Small Village <= 5000
Ga Moheete	Rural	Rural Scattered
Gadiboe	Rural	Rural Scattered
Gahue	Rural	Rural - Small Village <= 5000
Gakhoe	Rural	Rural - Small Village <= 5000
Gakhoe Informal A	Rural	Rural - Small Village <= 5000
Galotlhare	Rural	Rural - Small Village <= 5000
Gamadubu	Rural	Rural Scattered
Gamakgatlhe	Rural	Rural Scattered
Ga-Masepa	Rural	Rural Scattered
Gamokotedi	Rural	Rural Scattered
Gamorona	Rural	Rural - Small Village <= 5000
Gamosidi	Rural	Rural Scattered
Gamothibi	Rural	Rural Scattered
Ganap	Rural	Rural - Small Village <= 5000
Gang-Hai	Rural	Rural - Small Village <= 5000
Gapitia	Rural	Rural - Small Village <= 5000
Garapoana	Rural	Rural Scattered
Gasekao	Rural	Rural - Small Village <= 5000
Gasese	Rural	Rural - Small Village <= 5000
Gatalakgomo	Rural	Rural Scattered
Ga-Tipe	Rural	Rural Scattered
Gatshekedi	Rural	Rural - Small Village <= 5000

Gatshwinyane	Rural	Rural Scattered
Glenred	Rural	Rural - Small Village <= 5000
Goodhope	Rural	Rural Scattered
Heiso	Rural	Rural - Small Village <= 5000
Hertzog	Rural	Rural - Small Village <= 5000
Hotazel	Urban	Urban - Formal Town
Itereleng	Rural	Rural - Small Village <= 5000
Kampaneng	Rural	Rural - Small Village <= 5000
Keang/ Dihotsane	Rural	Rural - Small Village <= 5000
Kgabetlwane	Rural	Rural Scattered
Kganung	Rural	Rural Scattered
Kganwane	Rural	Rural - Dense Village > 5000
Khankhudung	Rural	Rural - Small Village <= 5000
Kiangkop	Rural	Rural Scattered
Kikahela	Rural	Rural Scattered
Kilo-Kilo/Sekokwana	Rural	Rural - Small Village <= 5000
Klein Eiffel	Rural	Rural Scattered
Kleineira	Rural	Rural - Small Village <= 5000
Klipham	Rural	Rural Scattered
Kokfontein	Rural	Rural Scattered
Kokonye	Rural	Rural Scattered
Kome	Rural	Rural Scattered
Kortnight/ Cottenend	Rural	Rural Scattered
Kruisaar	Rural	Rural - Small Village <= 5000
Laxey	Rural	Rural - Dense Village > 5000
Laxey Informal A	Rural	Rural - Dense Village > 5000
Laxey Informal B	Rural	Rural - Dense Village > 5000
Laxey Informal C	Rural	Rural - Dense Village > 5000
Laxey Informal D	Rural	Rural - Dense Village > 5000
Lebonkeng	Rural	Rural Scattered
Logaganeng	Rural	Rural - Small Village <= 5000
Logaganeng 2	Rural	Rural - Small Village <= 5000
Logobate	Rural	Rural Scattered
Loopeng	Rural	Rural - Dense Village > 5000
Loswanthane	Rural	Rural Scattered
Lothlakajaneng	Rural	Rural - Small Village <= 5000
Lotlhakane	Rural	Rural Scattered
Lubung	Rural	Rural - Small Village <= 5000
Madibeng	Rural	Rural - Small Village <= 5000
Magobing	Rural	Rural - Small Village <= 5000
Magobing East	Rural	Rural - Small Village <= 5000
Magojaneng	Rural	Rural Scattered
Magwagwe	Rural	Rural - Small Village <= 5000
Mahukubung	Rural	Rural Scattered
Maipeing	Rural	Rural - Small Village <= 5000
Majanking	Rural	Rural - Small Village <= 5000
Majemantsho	Rural	Rural Scattered
Maketlele	Rural	Rural - Small Village <= 5000
Makgaladi	Rural	Rural - Small Village <= 5000
Makhubung	Rural	Rural Scattered
Mamebe	Rural	Rural Scattered
Manaring	Rural	Rural Scattered
Manyeding	Rural	Rural - Small Village <= 5000
Manyeding Informal A	Rural	Rural - Small Village <= 5000
Manyeding Informal B	Rural	Rural - Small Village <= 5000
Maologane	Rural	Rural - Small Village <= 5000
Maphiniki	Rural	Rural - Small Village <= 5000
March	Rural	Rural - Small Village <= 5000
Masankong	Rural	Rural - Small Village <= 5000
Masilabetsane	Rural	Rural Scattered
Mathanthanyaneng North	Rural	Rural - Small Village <= 5000

Mathanthanyaneng South	Rural	Rural - Small Village <= 5000
Matlhabanelong	Rural	Rural - Small Village <= 5000
Matolwaneng	Rural	Rural Scattered
Mentu	Rural	Rural - Small Village <= 5000
Metsimantsi Wyk 1	Rural	Rural - Small Village <= 5000
Metsimantsi Wyk 2	Rural	Rural - Small Village <= 5000
Metsimantsi Wyk 3	Rural	Rural Scattered
Metsimantsi Wyk 4	Rural	Rural Scattered
Metsimantsi Wyk 5	Rural	Rural Scattered
Metsimantsi Wyk 6	Rural	Rural Scattered
Metsimantsi Wyk 7	Rural	Rural Scattered
Metswetsaneng	Rural	Rural - Small Village <= 5000
Mmatoro	Rural	Rural - Small Village <= 5000
Molapotlase	Rural	Rural - Small Village <= 5000
Montshebeng	Rural	Rural - Small Village <= 5000
Moseohatshe	Rural	Rural - Small Village <= 5000
Motlhoeng	Rural	Rural - Small Village <= 5000
Niks	Rural	Rural - Small Village <= 5000
Ntswaneng	Rural	Rural - Small Village <= 5000
Ntswelengwe	Rural	Rural - Dense Village > 5000
Padstow	Rural	Rural - Dense Village > 5000
Penryn	Rural	Rural - Small Village <= 5000
Permonkie	Rural	Rural - Small Village <= 5000
Perth	Rural	Rural - Small Village <= 5000
Pietersham	Rural	Rural - Dense Village > 5000
Radiatsongwa	Rural	Rural Scattered
Rowell	Rural	Rural Scattered
Rusfontein Wyk 10	Rural	Rural - Small Village <= 5000
Rusfontein Wyk 11	Rural	Rural Scattered
Rusfontein Wyk 12/Saamsukkel	Rural	Rural Scattered
Rusfontein Wyk 8	Rural	Urban - Formal Town
Rusfontein Wyk 9	Rural	Rural Scattered
Segwaneng	Rural	Rural Scattered
Sesipi	Rural	Rural - Small Village <= 5000
Setshwatshwaneng	Rural	Rural Scattered
Shalaneng	Rural	Rural Scattered
Skema	Rural	Rural - Small Village <= 5000
Sloujah	Rural	Rural - Dense Village > 5000
Stillerus	Rural	Rural Scattered
Suurdig	Rural	Rural Scattered
Tlapeng	Rural	Rural Scattered
Tlhokomelang/ Ditsipeng	Rural	Rural Scattered
Tsaelengwe	Rural	Rural - Small Village <= 5000
Tsiloane	Rural	Rural Scattered
Tsineng	Rural	Rural - Small Village <= 5000
Tsineng Kop	Rural	Rural Scattered
Tzaneen	Rural	Rural - Small Village <= 5000
Washington/ Antenome	Rural	Rural - Small Village <= 5000
Wateraar	Rural	Rural Scattered
Wesselsvlei	Rural	Rural Scattered
Wilstead	Rural	Rural Scattered
Wingate 1	Rural	Rural - Small Village <= 5000
Zero	Rural	Rural - Small Village <= 5000


JOHN TAOLO GAETSEWE DISTRICT MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK REVIEW
NODES PLAN
1:1 000 000
N
Botswana
McCarthysrus
Heuningvlei
North West Province
Aansluit
R380
Kuruman
Joe Morolong Local Municipality
Vanzylsrus
Hotazel
Churchill
N14
R31
Gamagara Local Municipality
Kuruman
R372
Ga-Segonyana Local Municipality
Z F Mgcawu District Municipality
Kathu
R373
Olifantshoek
Frances Baard District Municipality
0 12 500 25 000 50 000 Meters
LEGEND
Category B: Sensitive Areas
Main Rivers
Secondary Rivers
Category D: Urban Areas
Regional Development Anchor
Rural Service Centre
Settlements
Border Posts
Settlements
Category F: Surface Infrastructure
National Roads
Provincial Roads
Route 3: Boegoebaai - Kuruman
Railways
TSHANI CONSULTING C.C.
JANUARY 2023
Source:
John Taolo Gaetsewe District Municipality | Northern Cape PSDF 2020 | Department of Transport | Municipal Demarcation Board
Statistics SA | Department of Education | SANBI | Department of Co-operative Governance and Traditional Affairs | Eskom

PLAN 1: NODES

B1.2 Corridors

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

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

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

Corridors are aimed at improving:

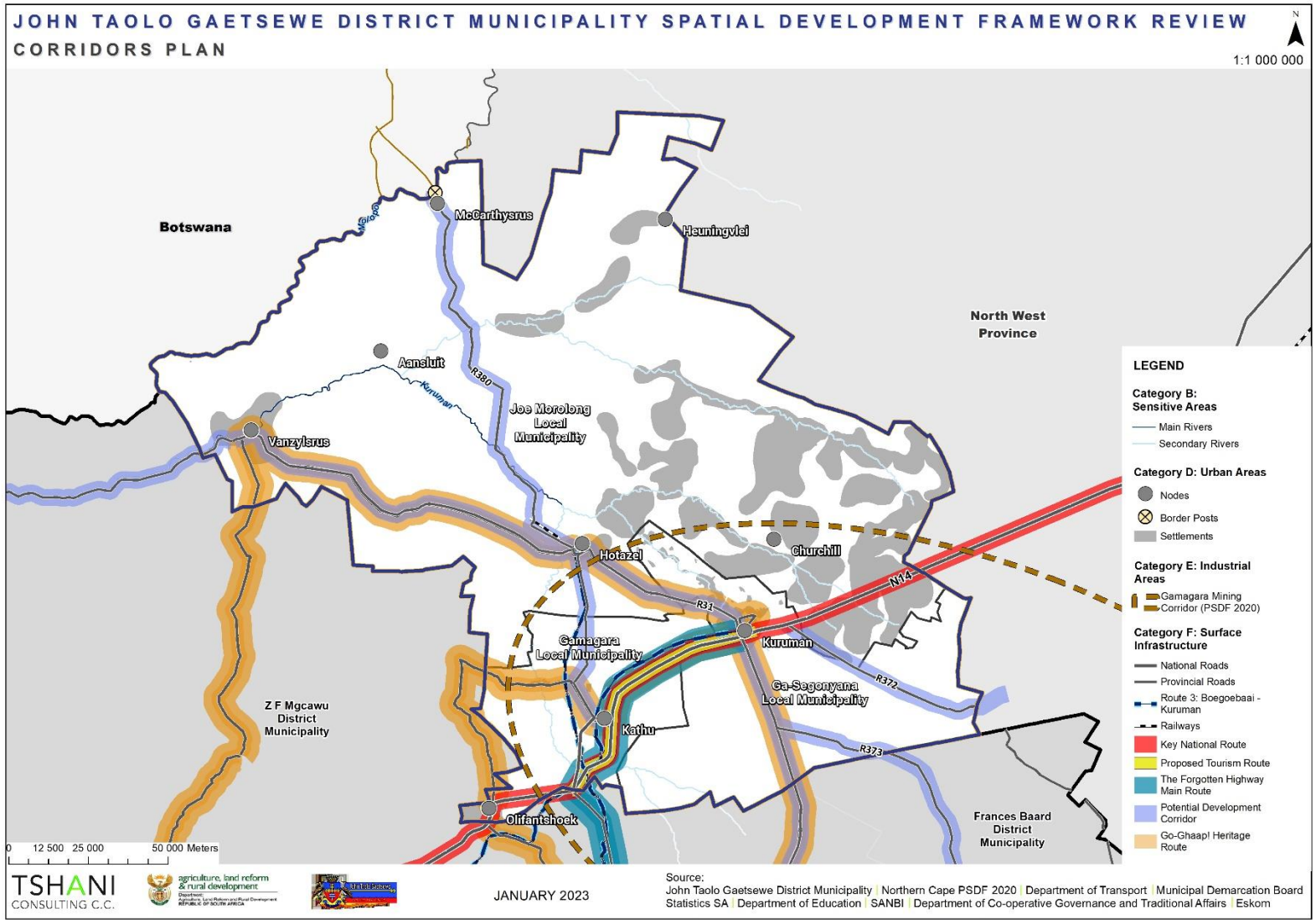
- Efficiency in terms of mobility;
- Spatial transformation through connectivity;
- Economic, social, and environmental sustainability.

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

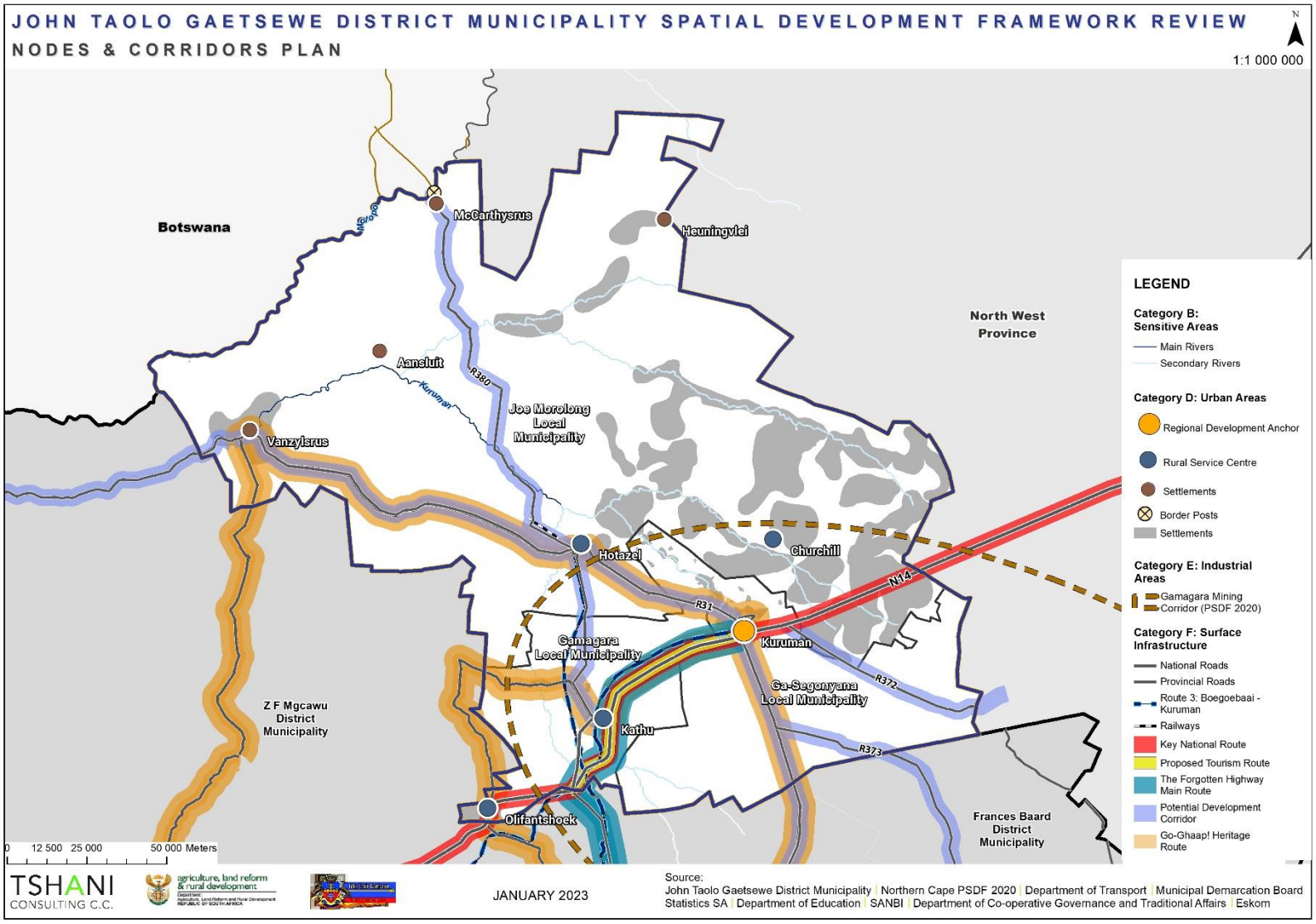
Development corridors are described in planning terms as **roads or railway routes that are usually associated with the movement of people between places.** This function of facilitating movement of people along a route also means that these “movement corridors” have the potential to accommodate development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

TABLE 4:CORRIDOR CLASSIFICATION

Corridor Classification				
Corridor	**NSDF**	**PSDF**	**DSDF**	**Recommended Term**
N14	Key National Roads	Provincial routes	National Road	**Key National Roads**
R31		Main Road	Arterial Road	**Potential Development Corridor**
R380		Main Road	Main Road	**Potential Development Corridor**
R372		Main Road	Main Road	**Potential Development Corridor**
R373		Main Road	Main Road	**Potential Development Corridor**



PLAN 2: CORRIDORS



PLAN 3: NODES AND CORRIDORS

B1.3 Urban/ Settlement Edges

The following section will provide a high-level strategic guideline for developing Urban Edges. This will be a basis for Local Municipalities when reviewing urban edges for town areas, these aspects can be considered and taken note of.

The District SDF will not be defining urban edges for towns as this will be done at a Local Municipal level, however at a district level, will provide a theoretical background and guide for municipalities when reviewing their SDFs.

A 'settlement edge' is the dividing line or boundary between areas of urban development (a settlement) and non-urban or rural development.

The Guideline set by Department of Agriculture, Land Reform and Rural Development for the development of Municipal Spatial Development Frameworks specifies that an SDF should define urban edges around settlements. The delineation of an Urban Edge is vital for the achievement of Spatial Transformation, that is, the containment of urban sprawl, the intensification of development at designated localities, and the improved integration of urban areas. Beyond the Urban Services Edge, rural land uses and densities are intended to be less intense. As a result, the Urban Edge focusses more on managing densities.

The DALRRD Guidelines for the development of Municipal Spatial Development Frameworks notes that peri-urban sprawl is a challenge because the increasing housing densities, often on communally owned land, are creating conditions which are too dense for successful rural livelihoods but not dense enough to sustain efficient convenient urban settlements. Peri-urban sprawl is thus considered unsustainable for both residents of peri-urban settlements and for the city. This also highlights the need for sufficient serviced land within urban areas.

Urban / settlement edge defines the logical boundary between areas with different features and purposes, such as the boundary between areas considered environmentally sensitive and those suitable for development.

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

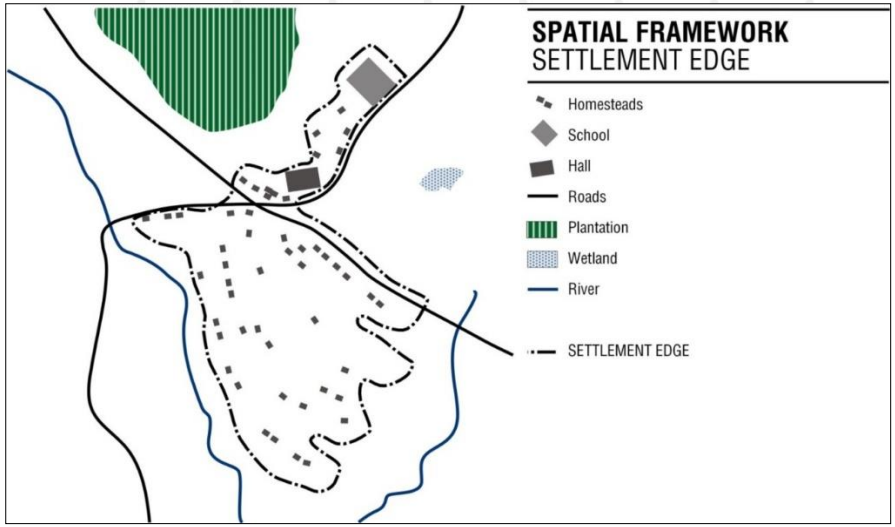


FIGURE 4: SETTLEMENT EDGE

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

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

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

- Urban sprawl, which has several dimensions, unlimited outward and "leapfrog" expansion, as well as being extremely low density.
- Large scale conversion of open space and environmentally sensitive land to urban uses
- Promote Spatial Transformation and restructure growth patterns.
- Densify built environments;
- Lead and guide growth expectations;
- Worsening traffic congestion
- Costly requirements to expand roads and other infrastructure.
- Conversion of valuable agricultural land to urban uses.
- Protect the finances of the city as required in terms of SPLUMA Principle 7(b)(i) by rationalising service delivery areas to ensure a sustainable level of service provision.

The following goals will be achieved through the identification of development/ settlement edges:-

- Achieving Balance (There are two dimensions to this concept of balance.)
- Achieving a Dynamic Balance between the Landscapes of Society
- Achieving Greater Urban Efficiencies
- Protecting Important Elements within Urban Settlements
- Promoting Small-Scale Agriculture

- Managing Urban Wastes
- Issues of Sustainability and Recycling
- Co-ordination of Line and Point Bulk Services to Achieve Efficiencies
- Avoiding Hazards
- Limiting the outward extension of new developments
- Raising densities in both new and existing areas
- Emphasizing public transport
- Creating what is called “sustainable” development (development that limits consumption of resources and is maintainable into the future)

The JTG District SDF aims to strategically outline the background to urban edges though highlighting its importance at a local scale and further outlining the benefits of an urban edge.

The District SDF also aims to provide guidelines to local municipalities when developing their urban edges and outlines the aspects to consider when developing / reviewing their SDF.

Urban edges allow for the inclusion of concepts such as:-

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

Growth Pressures:-

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

Potential for Growth Deflection:-

- Constrained Urban Edges will tend to push growth elsewhere.
- This could be planned to direct growth towards a particular area, and if it is possible to where an adjacent authority will respond to the opportunities, otherwise development could be scattered and /or leapfrogged.
- If an adjacent area is planned then this will not occur, but this depends on the potential for “deflection.”

Protection of Agricultural Land:-

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

Infrastructure Capacity: -

- Limits to the provision of infrastructure will constrain an urban edge and is often a key factor,
- Infrastructure provision is large scale and done over a long period and urban edges need a long-term horizon.

- An urban edge will remain in place for lengthy periods and then large areas are included as capacity is extended or alternatives are available.
- Urban Growth Boundaries can be flexible or be adjusted at regular periods.

Fiscal Capacities and Fiscal Strength:-

- Strong income base will support expansion.

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

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

Conduct a comprehensive review of the grant and subsidy regime for housing with a view to ensure diversity in product and finance options that would allow for more household choice and greater spatial mix and flexibility.

B1.4 Urban Services Edge

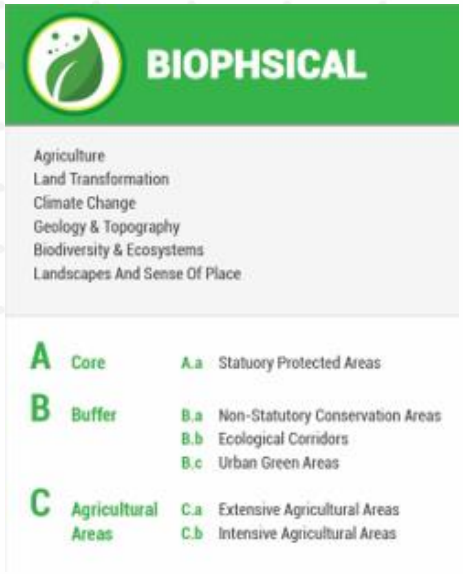
The Urban Services Edge is described as a defined area, designated for towns for which the municipality is able to provide services within. The area is usually within the urban edge and outlines the majority of development. The aim of a Services Edge is to concentrate and promote development to areas where infrastructural services exit, thus promoting sequential development This is the space that is promoted for densification. Development within this zone serves to manage, direct, and limit urban expansion.

This concept can be used for areas where the municipality wants to promote concentrated development and wants to facilitate gradual development. The urban services edge can be reviewed on a regular basis should development be taking place in a rapid rate.

B2. BIOPHYSICAL FRAMEWORK

The Biophysical Framework is broken down into 3 spheres as follows:

1. Environmental Framework
2. Climate Change
3. Agricultural Framework



B2.1. SPC A Core Conservation Areas

SPC A areas constitute sites of high conservation importance including terrestrial land, aqua□systems (rivers, wetlands, and estuaries) and marine areas (beach or rocky headlands). Due to their highly irreplaceable status such areas should be protected from change or restored to their former level of ecological functioning. Such SPC A areas are **natural resources (capital) of international, national, and provincial significance**.

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

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

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

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

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

Strategic Water Source Areas (SWSAs) have been identified as Priority National Ecological Infrastructure Regions that are of national importance and development Management., productive use and restoration of these areas (1) is a joint responsibility, and (2) could also be used for the socio-economic benefit of people, cities, and economies in the regions in which they are located.

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

Protection of Sensitive Areas

Environmentally sensitive areas (ESAs) are landscape elements or places which are vital to the long-term maintenance of biological diversity, soil, water, or other natural resources both on the site and in a regional context. They include wildlife habitat areas, steep slopes, wetlands, and prime agricultural lands. (Ndubisi et al, 1995). Environmentally sensitive areas are protected under the National Environmental Management: Protected Areas Act 57 of 2003.

When ESAs are interconnected, they could form greenway corridors consisting of networks of linked landscape elements that provide ecological, recreational, and cultural benefits to a community. The protection of environmentally sensitive areas is a high priority for our municipality as these areas offer a variety of benefits including beautiful scenery, opportunities for outdoor recreation, and plant and animal habitat, to name a few. Preserving sensitive areas often provides an additional benefit of protecting citizens and property against natural hazards. For example, protection of floodplains and the wildland urban interface not only safeguard natural resources; they also help reduce vulnerability to flood and wildfire hazards. Additionally, protecting natural areas helps meet other community goals such as providing for open space, parks and recreation, and habitat conservation.

There are no protected areas apart from the Kathu Forest (2,245 ha) and Tswalu Private Nature Reserve (100,000 ha). However, game farms are also argued to be private conservation efforts.

The Kathu Forest protected woodland and buffer is indicated on following Figure compiled by the Department of Agriculture, Forestry and Fisheries with the following land use proposals for the different zones:

- Zone 1 - No-go area
- Zone 2 - Low impact eco-tourism
- Zone 3 - Low density residential provided that permission must first
- be provided by DAFF.

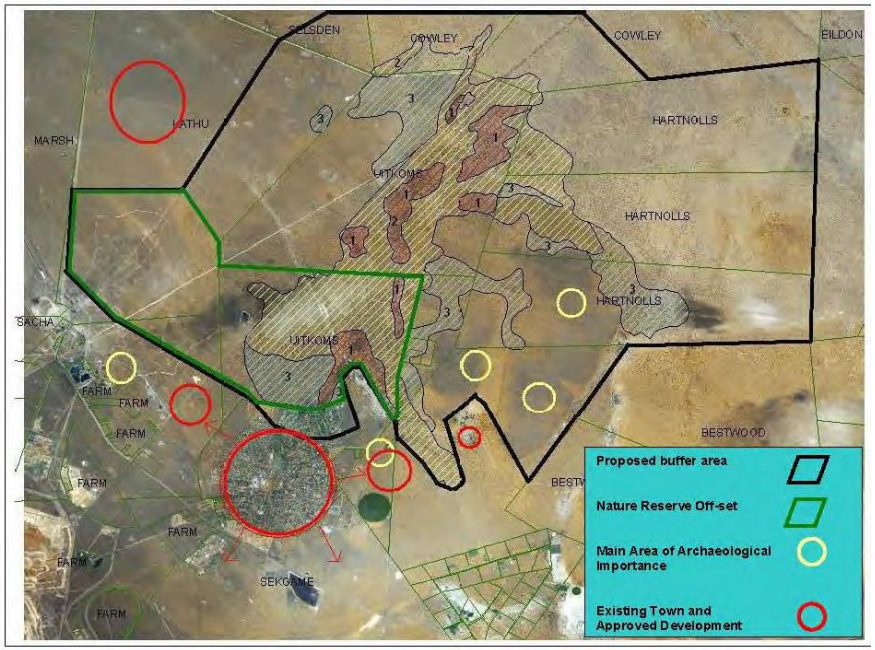


FIGURE 5 : KATHU FOREST : DECLARED PROTECTED WOODLAND AND PROPOSED

John Taolo Gaetsewe District municipality should ensure that balancing economic development with environmental protection is prioritized in order to manage uncontrolled development which may lead to an irreversible loss of ESAs. Without an SEA, the municipality will use this exercise to identify these areas.

TABLE 5:CBA MAP CATEGORY

CBA MAP CATEGORY	ADAPTION MEASURES
Protected Areas & Critical Biodiversity Area 1 (CBA1)	Maintain as natural conservation or production landscapes that maximize the retention of biodiversity pattern and ecological process: • Ecosystems and species fully intact and undisturbed • These are areas with high irreplaceability or low flexibility in terms of meeting biodiversity pattern targets. If the biodiversity features targeted in these areas are lost, then targets will not be obtained.

Critical Biodiversity Area 2 (CBA2)	Maintain as near-natural production landscapes that maximize the retention of biodiversity pattern and ecological process: • Ecosystems and species intact and undisturbed. • Areas with intermediate irreplaceability or some flexibility in terms of area required to meet biodiversity targets. There are options for loss of some components of biodiversity in these landscapes without compromising our ability to achieve targets. • These are landscapes that are approaching but have not passed their limits of acceptable change.
Ecological Support Area 1 (ESA1)	Maintain as ecologically functional landscapes that retain basic natural attributes (natural or near-natural areas): • Ecosystem still in a natural or near-natural state and has not been previously developed. • Ecosystems moderately to significantly disturb but still able to maintain basic functionality. • Individual species or other biodiversity indicators may be severely disturbed or reduced. • These are areas with low irreplaceability with respect to biodiversity pattern targets only.
Ecological Support Area 2 (ESA2)	Maintain partly functional ecologically landscapes that retain some natural attributes (cultivated areas): • Maintain current land use or restore area to a natural state. • Ecosystem NOT in a natural or near-natural state and has been previously developed (e.g., ploughed). • Ecosystems significantly disturbed but still able to maintain some ecological functionality. • Individual species or other biodiversity indicators are severely disturbed or reduced and these are areas with low irreplaceability with respect to biodiversity pattern targets.
Other Natural Areas and No Natural Habitat Remaining	Production landscapes: manage land to optimise sustainable utilization of natural areas.

B2.2. SPC B. Natural Buffer Ares

The SPC B areas serve to create appropriate buffer areas around or adjacent to SPC A areas that protect the later against consumptive or habitat-fragmenting land-use impacts. This will allow for the creation of a continuous network of natural resources areas throughout the province that maintain ecological processes and provide ecosystem services (e.g., benefits that people derive from ecosystems. In the Northern Cape, these include the provision of water, arable soil, disaster amelioration, recreational opportunities, etc.).

The Environmental Framework plan below reflects buffer areas applicable to the conservation areas.

The following buffers have been provided as follows:

- Rivers – 32m normally and 50m for larger wide rivers
- Wetlands – 32m

The following general guidelines are applicable to the environmental areas / SPCs.

Environmental Guidelines

Owing to the increasing population, urban expansion and development is inevitable. However, urban expansion encroaches upon habitants with potentially high diversity as well as on land with high agricultural potential. Strategic land use planning in John Taolo Gaetsewe District Municipality needs to be based on information as contained in the Environmental Studies, discouraging development in environmentally sensitive areas while earmarking other, more suitable areas for development.

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

Formal Residential:

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

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

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

Sufficient open space areas need to be retained within new residential developments and where possible kept natural. Landowners should be encouraged to maintain their properties and keep them as natural and

Indigenous as possible, creating linkages with neighbouring properties and therefore establishing a natural habitat potential in the area. Where possible, natural habitats should not be disturbed.

Informal Residential:

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

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

Industrial / Commercial:

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

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

Indigenous Vegetation

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

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

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

Environment

Land degradation, water scarcity, and climate change are the most significant environmental issues facing rural areas. The degradation of natural resources through overgrazing, poor fire regimes, wood harvesting,

misuse of wetlands and encroachment by invasive plants and weeds is of particular concern.

A critical aspect of ensuring sustainable management and the effective use of natural resources is to optimize productivity and sustainability of those resources so as to result in the greater production of food security, job creation and a better quality of life. It is important to ensure the sustainable and conflict-sensitive management of these resources so that they remain available to the people in the long term (RDSP, 2022/23).

Urban development and the corresponding land transformation, habitat destruction, and fragmentation of ecological corridors occurs mostly in the northern and eastern parts of the District Municipal Area.

JTGDM falls within the Vaal Water Management Area, one of nine water management areas in the country. The most important water catchment area in the JTGDM is the Korannaberg Mountains. This is where the majority of the streams in the district originate from and where they drain into the Kuruman River system.

Environmental Impact Assessments/ Authorisation:

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

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

Wetlands:

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

Developments within 500m of wetlands will be required to apply for a Water Use License under the National Water Act. It is also recommended that no development be allowed within the 1:100-year flood line of rivers and

streams or at least 100m where no flood line exists. The National Water Act also requires an application for a water use license to be submitted to the Department of Water and Sanitation for the following activities:

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

The adaptation response plans that will have to be adopted include:

- Develop a district level wetland management plan, based on the provincial management plan, which considers the effective management of the Kuruman Eye and other polluted wetlands;
- Establish nurseries for indigenous plant species and build associated specialist capacity in the district; and
- Training for project managers on climate-smart agriculture to minimise impacts on wetlands and other ecosystems.

Open Space:

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

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

B2.3. Climate Change

The JTGDM Area has a semi-arid climate characterised by low levels of rainfall, high levels of evaporation and poor soil conditions. Due to these characteristics the potential for agricultural development in the District Municipal Area is limited. The District Municipal Area is made up entirely of the savanna biome, which is made up of Kalahari Thornveld, Kalahari Plains Bushveld and Eastern Kalahari Bushveld. Overall, overgrazing is the biggest threat to vegetation in the District Municipal Area

One of the main issues faced by the sector is water scarcity and climate change is likely to exacerbate impacts.

The adaptation response plans that will have to be adopted include:

- Adopting water management regimes,
- The cultivation of crops better suited to a hot and dry climate;
- Land management techniques,

- Grazing management regimes; and
- Application of innovative, smart agriculture.

The JTGDM Climate Change Risk and Vulnerability Assessment demonstrates that projected Climate Change has implications for water, ecosystems, human settlement and infrastructure, agriculture and food security, human, and animal welfare as well as income for the majority of households in the District.

Human Health

The projected increase in temperatures due to climate change will affect the productivity and health of the population, especially the young and elderly. People working outdoors, such as construction and farm workers, will be particularly vulnerable to increases in temperature. Changes in rainfall patterns may also impact on the crops that can be grown, especially at a subsistence level, which may lead to increased malnutrition and hunger.

JTGDM already experiences significant levels of air pollution from mines and other industrial sources, as well as significant indoor air pollution, which is expected to exacerbate with the change in climate.

The adaptation response plans that will have to be adopted include:

- Conduct innovative awareness campaigns on the impacts of heat stress, especially in schools;
- Conduct research on indoor air pollution reduction techniques; and
- Register beneficiaries of projects, like the Expanded Public Works Programme (EPWP) and Environmental Protection & Infrastructure Programmes (EPIP), as cooperatives for waste materials recycling to minimise domestic burning of waste resulting in air pollution.

The nature of disaster management will likely change as a result of the increasing transportation of hazardous materials through the district and have a potential impact on human health.

- As the transportation of hazardous materials increases, it is important to assess the risks posed to communities and the environment. This will help to identify potential disaster scenarios and inform the development of appropriate response plans.
- Disaster management plans should be updated to address the potential impact of hazardous materials on human health and the environment. This may involve developing evacuation plans and procedures for responding to spills and leaks.
- Response teams and local communities should be trained to respond to disasters involving hazardous materials. This may require the provision of specialized equipment and protective gear to ensure their safety.
- It is important to engage with the industries transporting hazardous materials through the district to ensure that they are taking appropriate measures to minimize the risk of spills and leaks. This may involve working with industry to develop and implement best practices for the transportation of hazardous materials.

- The government and relevant agencies should increase their monitoring and surveillance of hazardous materials transportation to ensure compliance with regulations and to identify potential risks.

Human Settlements

With regards to basic household services available, 83.88% of the district municipal Area's population has access to water from a service provider, higher than the national average of 78.18%. This means that 16.12% of the population do not have access to piped water with 3.84% sourcing their water from water tanks and 1.20% from boreholes.

Increases in the severity of storm events and increase in flooding will damage infrastructure which may result in a loss of industrial productivity and service delivery disruptions.

The increase in the occurrence of extreme weather events will also impact on labour productivity. The impacts of storm events will particularly affect communities located in informal settlements, on flood plains and where there is poor drainage infrastructure. In addition, communities in rural areas that depend on subsistence farming may be unable to grow crops that they have grown in the past due to the changing climate. It is predicted that there will therefore be an increase in rates of rural-urban migration. Rural communities may also become more physically isolated due to extreme events impacting on key infrastructure.

The proposed priority responses in the Human Settlements Sector are:

- Implement innovative early warning systems and guidelines to inform industry on the impacts of extreme events on infrastructure and on staff productivity;
- Improve existing road infrastructure to enable better access to rural communities; and
- Rehabilitation of mine dumps and landfill sites to enable better service provision to isolated rural communities.

Water

JTGDM falls within the Vaal Water Management Area, one of nine water management areas in the country. The most important water catchment area in the JTGDM is the Korannaberg Mountains. This is where the majority of the streams in the district originate from and where they drain into the Kuruman River system.

However, groundwater is the main supply of potable water and water used for irrigation in the district because surface water is affected by the region's low rainfall, flat topography, and sandy soils. Drinking water quality and wastewater treatment provision in the JTGDM is a challenge. The district is currently experiencing issues of water scarcity and quality. Climate change is expected to exacerbate this problem. Drought, reduced runoff, increased evaporation, and an increase in flood events will impact on both water quality and quantity.

The proposed priority responses in the Water Sector are:

- Ensure skilled staff are trained in the water quality sector;
- Upgrade water infrastructure using grants such as the Municipal Infrastructure Grant (MIG).
  This includes the construction of new dams to capture rainwater; and
- Implement a system to effectively treat sewage for reuse.

Environmental Recommendations

- The LMs needs to ensure that all required environmental studies and reports are done prior to the construction phase of all municipal projects and that they are zoned correctly.
- Ensure the effective management of water resources and pastureland.
- Promote the development, utilisation, and long-term conservation of the natural resource.
- Support integrated natural resource management at farm, community, and watershed level.
- Strengthen natural resource management capacity in rural areas.
- Effective veld management plans and practices, in particular around catchment areas located in the high-lying regions are critical if sustainability of land use is to be achieved.
- The continuous degradation of agricultural land needs to be mitigated through community awareness programmes.

SPC A: Core Conservation Areas

SPC A areas constitute sites of high conservation importance including terrestrial land, aquatic systems (rivers, wetlands, and estuaries) and marine areas (beach or rocky headlands). Due to their highly irreplaceable status such areas should be protected from change or restored to their former level of ecological functioning. Such SPC A areas are a natural resource (capital) of international, national, and provincial significance.

SPC B: Natural Buffer Areas

The SPC B areas serve to create appropriate buffer areas around or adjacent to SPC A areas that protect the later against consumptive or habitat-fragmenting land-use impacts. This will allow for the creation of a continuous network of natural resources areas throughout the province that maintain ecological processes and provide ecosystem services (e.g., benefits that people derive from ecosystems. In the Northern Cape, these include the provision of water, arable soil, disaster amelioration, recreational opportunities, etc.).

B2.3. Agricultural Framework

The importance of agriculture cannot be underestimated as both a formal and informal rural based activity. When consideration is taken of rural based agriculture, the sector becomes an integral component of the Local Economic Development (LED) landscape, through its ability to provide for community livelihoods, generating employment and fighting endemic poverty in the area.

The District Municipality Area has a semi-arid (east) to arid (west) climate with potential evaporation exceeding mean annual precipitation. Crop cultivation is therefore limited to areas near water resources such as the stretch from Hotazel to Avontuur, Aansluit and along the Molopo River, as well as most of the ephemeral streams and wetlands.

The natural environment in JTDM is described as being in fair condition, yet inadequate land management has resulted in resource depletion. The degradation of natural vegetation caused by overgrazing, improper fire

regimes, wood harvesting, wetlands abuse, and encroachment by alien species and weeds is of special concern. There is a need for environmental management techniques due to the rapid change in the environment and climate change.

Climate change is predicted to negatively impact on the agricultural sector in JTGDM. Increased temperatures, drought, and the increase in frequency and severity of storm events will impact on the crops that can be grown and potentially result in a loss of livestock and increasing food insecurity.

One of the main issues faced by the sector is water scarcity and climate change is likely to exacerbate its impacts.

The adaptation response plans that will have to be adopted include:

- Adopting water management regimes,
- The cultivation of crops better suited to a hot and dry climate;
- Land management techniques,
- Grazing management regimes; and
- Application of innovative, smart agriculture.

- Establish a donkey commercialisation project that will include the development of a business plan for donkey products, this should include the creation of a tourism market for donkey related activities (Like the ostrich tourism in Oudtshoorn).

  To address the limitations on exports that there might be, the SDF could consider engaging with relevant government agencies and industry stakeholders. JTG should review trade agreements and regulations, negotiating with trading partners, and working to develop a supportive infrastructure for the export of donkeys.

  Additionally, the it is proposed that JTG provide support for the development of new markets for donkey products, such as meat, hide, and gelatine, which could offset the limitations on exports and provide alternative revenue streams for the industry.
- Provide support to the Veterinary Services project on educating and empowering emerging farmers.

(Source: https://static.pmg.org.za/200120Draft_NSDF.pdf)

Agri hubs and Park

The establishment of an Agri-Hub and Park is a National initiative and also planned for in the District Rural Development Plan.

Kuruman, as both a regional anchor and gateway was identified for the location of the Agri-Hub and to this end a Kuruman Agri-Hub Precinct Plan was adopted in conjunction with and aligned to the Ga-Segonyana Spatial Development Framework.

The focus of the agri-park is primarily the processing of 'agricultural products' (and the mix of 'non-agricultural' industries may be low or non-existent). Of prime importance will be linkages between the proposed FPSU's and surrounding agricultural land (PLAS and CPA farms) for production.

The Agri-park approach should include the selection and training of smallholder farmers, as well as selecting farms per province for the placement, incubation, and training of unemployed agricultural graduates and other agro-entrepreneurs. The Agri-parks are to be farmer-controlled.

The Agri-Hub provides opportunities for both economic diversification and SMME development, but also provide an ideal opportunity to promote emerging and small-scale farmer development by assisting them to enter opportunities in the main stream economy;

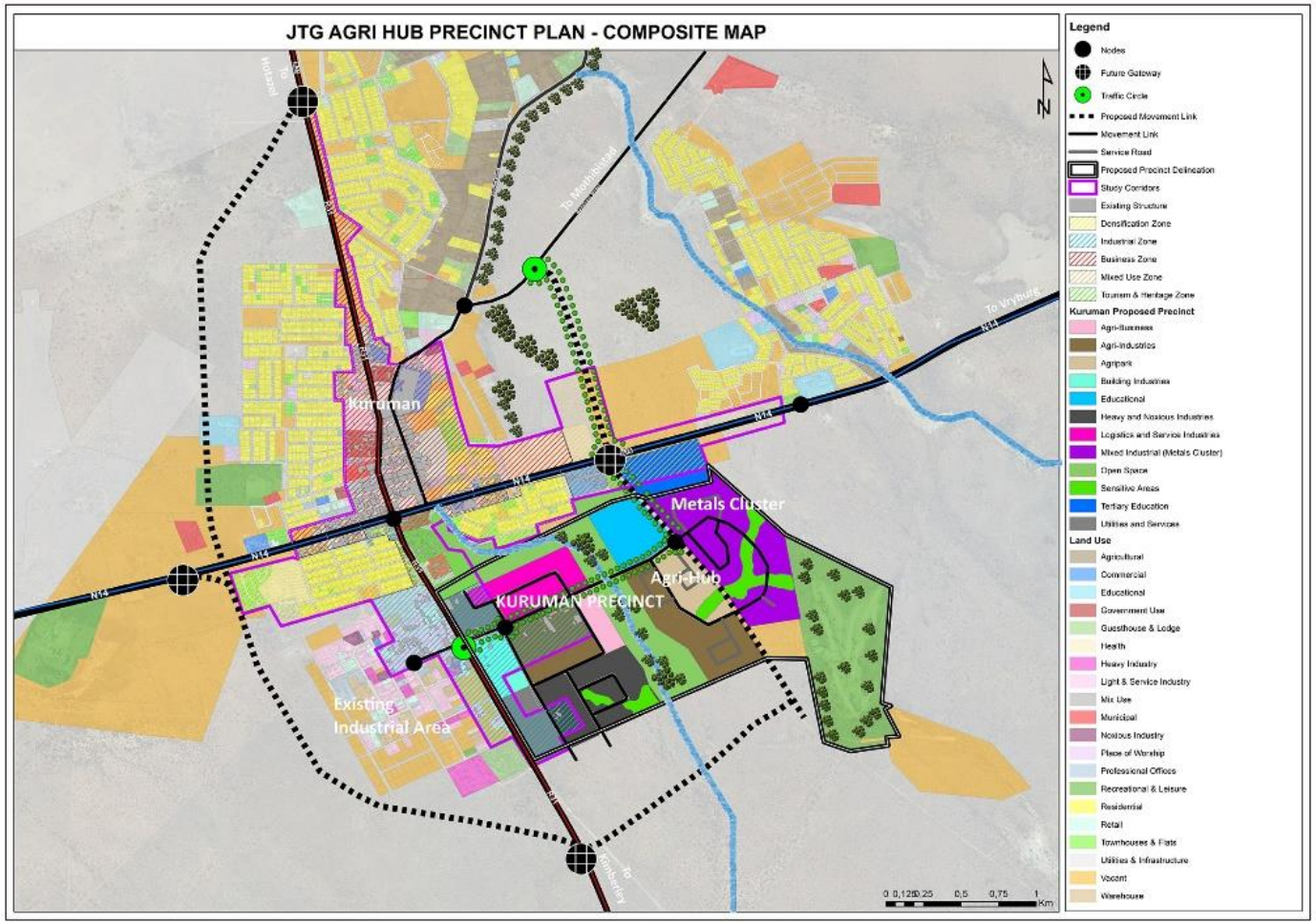
Linkages and trade-offs to other Agri-hubs and initiatives outside the district and even across provincial boundaries should be explored to reinforce an expand the value chain for all concerned;

Development Interventions

Conduct the necessary feasibility studies and research to implement the proposed Agri-Park: To successfully establish and operate the proposed Agri-Park will necessitate certain feasibility studies and further research to further investigate the Agri-Park and its potential opportunities.

This must be done in consultation with local stakeholders and include the identification of possible implementation partners that can assist in the successful implementation of the project.

Value Proposition: All the Agro-Processing firms in the Northern Cape need to be contacted with a Value Proposition to relocate to the Agri-Park. This process will include identifying the firms in accordance with the Industrial mix identified in the Agri-Park Business Plan.



PLAN 4: JTG AGRI HUB PRECINCT PLAN

The Agri-Park Management Company will assist in marketing the Park concept to the potential tenants which should be informed of the benefits by presenting an all-encompassing proposition that includes detailed information on how profits will increase, and the cost of business will decrease.

Priority farmer production support unit:

NSDF that land reform promotes 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.

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

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).

TABLE 6: FPSUS (JTG DM RDSP)

Agrihub	FPSU's	Priority	Livestock Activities	Value Chains
Kuruman		1	Meat production	Meat processing and other beef production Equipment hiring service.
	Pender Farms		Meat production	
	Yale		Meat production	
	Heuningvlei	1	Meat production	
	Tom Brown		Meat production	
	Vanzylsrus		Meat production	

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 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

Value Chains

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

An agricultural value chain includes development and dissemination of plant and animal genetic material, input supply, farmer organization, farm production, post-harvest handling, processing, provision of technologies of production and handling, grading criteria and facilities, cooling, and packing technologies, post-harvest local processing, industrial processing, storage, transport, finance, and feedback from markets.

A value chain approach in agricultural development helps identify weak points in the chain and actions to add more value.

The following should be taken into consideration pertaining to the Value Chain Development and Agricultural Sector;

- Using technology (such as drones), market assessments and understanding price fluctuations and indexes
- Mechanisation of agricultural value chains where skills and resources cannot meet in the demands;
- Government should create programmes or platforms that would improve trust within the land reform sector, especially providing produce to commercial and local markets (e.g... quality management)
- Providing supporting infrastructure such as proposed and recommended through the Agri park Programme (e.g., FPSU development that provides equipment, quality controllers, agricultural support services and storage facilities)

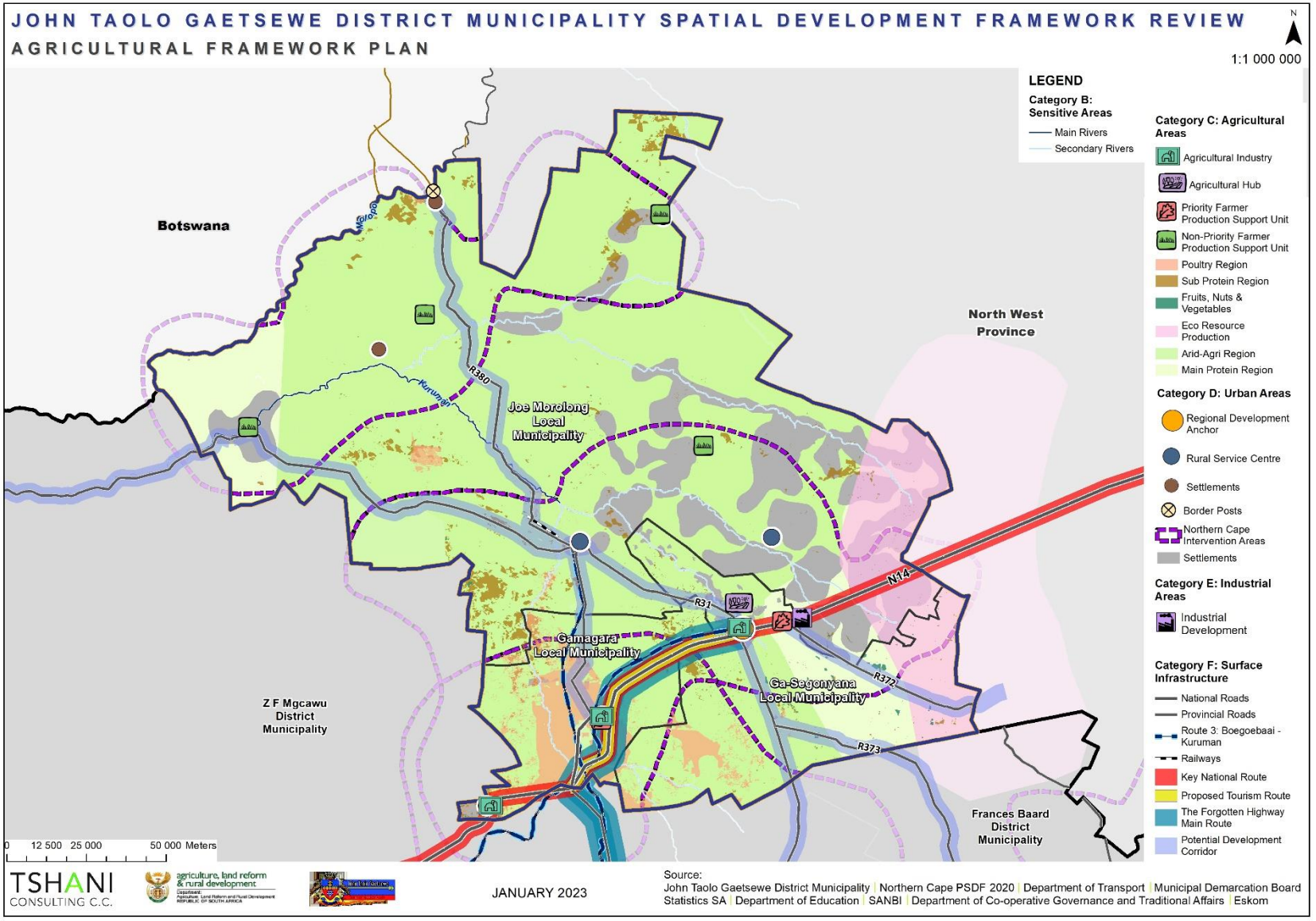
- Investigating the suitable crop and yield potential for each farm or rural cluster that would present the greatest economic potential for each area. Higher-yielding varieties require more technology and inputs, particularly fertilizers. While fertilizers may boost yields, economics may not favour their adoption;
- Advocating improved government regulatory capacity and support within the agricultural sector;
- Lowering the cost of inputs for subsistence farmers should be a priority. Successful models focus more on providing services rather than just providing inputs; and
- Developing a more cooperative farming ecosystem.

Key Value Chains proposed for the John Taolo Gaetsewe District:

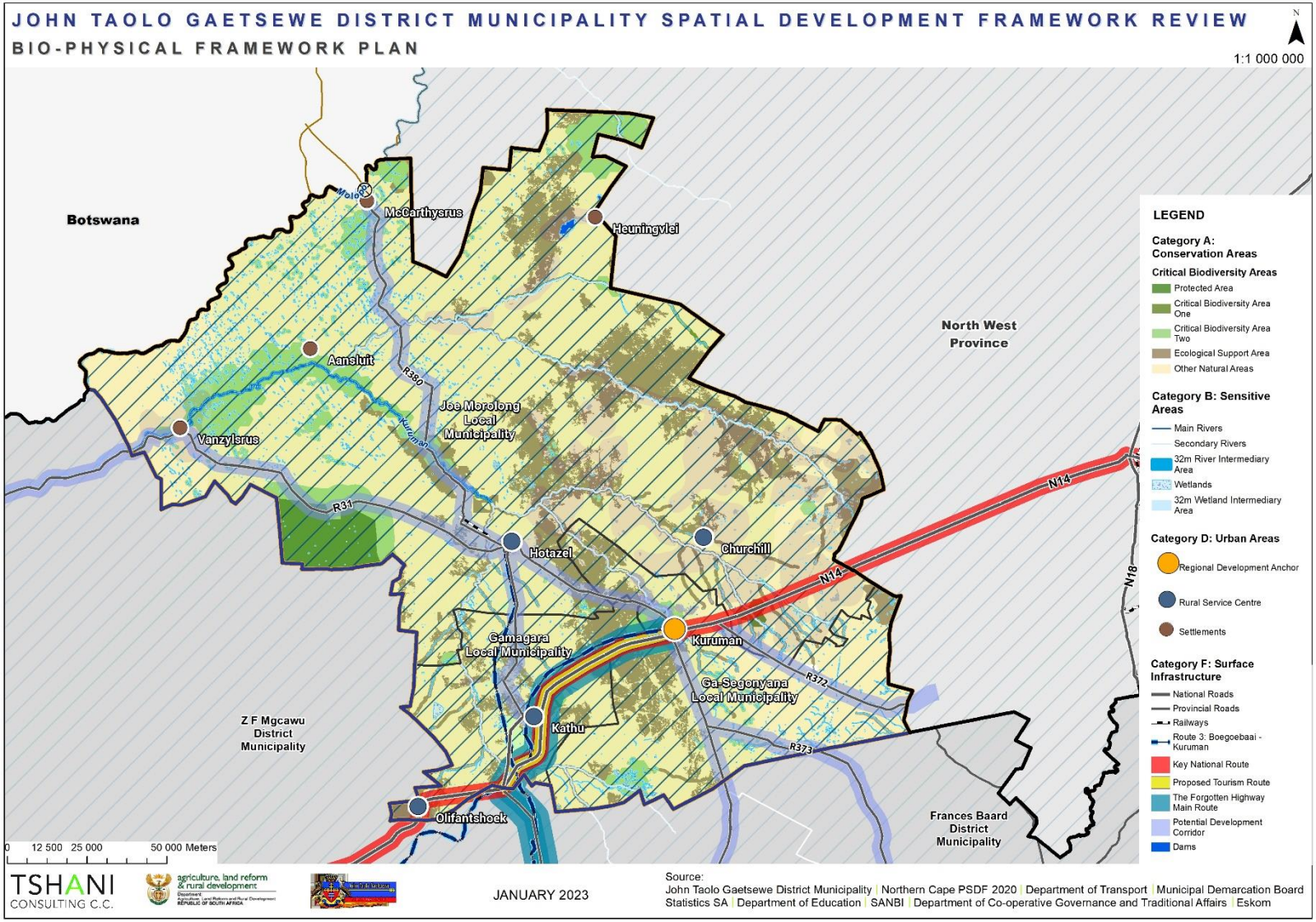
- Goats and Sheep
- Vegetables

SPC C: Agricultural Areas

The protection and appropriate use of high potential agricultural land is of critical importance for sustainable economic growth and food security. High potential agricultural land in close proximity to settlements are often subjected to non-agricultural development pressure, while negative social impacts associated with such settlements often have a significant detrimental impact on the production potential of such land. It is therefore imperative that the highest priority be given to the protection of high potential agricultural land and that measures be instituted to create and maintain circumstances conducive to sustainable agriculture.



PLAN 5: AGRICULTURAL FRAMEWORK



PLAN 6: BIO-PHYSICAL FRAMEWORK

B3. SOCIO-ECONOMIC FRAMEWORK

The Socio-Economic Framework aims to address the social and economic issues pertaining to the JTG DM. This includes skills development in the municipality as well as social amenities that may be required. This framework also addresses the tourism aspects as it has been noted in the SWOT Analysis that the district municipality has huge potential for tourism.

The Socio-Economic Framework refers to the social and economic aspects that underpin the proposals for the JTG District. The following components form part of the Socio-Economic Framework:

The Socio-Economic Framework is broken down into 3 spheres as follows:

1. Economic Framework
2. Tourism Framework
3. Social Facilities Framework

B3.1. Economic Framework

The following section aims to unpack the Economic Framework underpinning JTG DM and highlight the areas of focus to lead to economic growth for JTG DM as per the SONA (2022), President Ramaphosa stated that prioritisation needs to me made to revitalise our economy and end the inequality and injustice that impedes our progress. There is agreement among a broad and diverse range of South Africans that fundamental reforms are needed to revive economic growth, there is a need both to address the immediate crisis and to create conditions for long-lasting stability and development. To achieve this, South Africa needs a new consensus. A consensus that is born out of a common understanding of our current challenging situation and a recognition of the need to address the challenges of unemployment, poverty, and inequality this section thus places this focus through finding the key opportunities for private and government investment that will boost the economy.

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.

B3.1.1 Major Economic Sectors.

This section focuses on how the district can grow the following proposed economic sectors.

Mining

The results of the 2016 Community Survey suggest that the number of people living in the district area is increasing, whilst the population of Joe

Morolong is reducing. Both Gamagara and Ga-Segonyana showed population gains. This is directly related to mining related activities. However, there is a significant room for growth and expansion of the sector. Mineral beneficiation of the local natural resources that are found within the John Taolo Gaetsewe District is an important initiative to spur value addition to local raw materials, skill development and increase product prices A big concern is the large number of raw materials that are exported. The beneficiation of minerals is, however, a costly affair and entails the heavy use of electricity for the smelting and re-smelting of minerals as well as high capital costs (RDSP, 2022/23).

The following should be taken into consideration pertaining the growth of mining sector:

- Iron smelter and sinter plant. The location of the iron smelter and sinter plants/s should be such that it is strategically sensible, best placed in terms of externalities and especially in terms of linkage to the Kathu Industrial Park. It is from this perspective and the perspective of governance that location of the iron smelter within Gamagara Municipality is proposed. Gamagara Municipality is better positioned to provide services and infrastructure in support of the envisaged plants. However, it should be placed so that it can maximise the economic benefit for both Gamagara and Joe Morolong. Placement closer to the boundary with Joe Morolong is therefore recommended, especially if the placement of a sinter plant/s is considered for Joe Morolong. Improving capacity to provide bulk and distribution infrastructure is critically important, especially in the case of Joe Morolong that, compared to Gamagara, has a much shorter history and perhaps lessor capacity to provide such services; (JTG Draft One Plan DDM 2022) (http://www.coghsta.ncpg.gov.za/index.php/resource/more-info/ddm-one-plan/category/67-john-taolo-gaetsewe)
- Clean energy provision for heavy industrial development, especially the envisaged plants is non-negotiable, for various reasons. Energy for these plants must not be generated through the burning of fossil fuels and for inter alia.
- Water for the operations of the smelter and sinter plant/s must not be sourced from District groundwater sources,
- Neither the iron smelter, nor the sinter plant/s should be established on non-disturbed land.
- There must be strict compliance with spatial planning requirements and guidelines and specifically also SPLUMA, Provincial SPLUMA (when it comes into play) and the SPLUMA By-law, as well as the Spatial Development Framework and Land Use System of the local municipality concerned;
- Geo-technical conditions and requirements are of particular importance and where there is dolomite prevalence, the requisite care should be taken to address it;
- There must be strict adherence to environmental legislation.
- Roadworks on the N14 next to Kathu must be completed as a matter of urgency. Not only are the road conditions next to Kathu extremely dangerous but is also counterproductive to economic growth.
- Transportation of mining related freight by road to and from the district, must be eradicated, in favour of fast, rapid, and reliable rail

transport. This will not only contribute to the development of infrastructure and transport connectivity, but will also contribute to environmental-, transport- and economic sustainability, as well as wealth creation and sustainable longer-term employment opportunities.

- The development of a knowledge-based economy related to all components of the mining industry and related service provision, should be rolled out. This will not only contribute to diversifying the district economy but will also contribute to improving the skills and education levels of District residents and creating much needed employment opportunities.
- Mining infrastructure, solar infrastructure (and alternative energy in general), government infrastructure and agriculture there is a unique and niche opportunity for higher education development, as well as artisan training. Mining- and civil engineering in general, will be particularly relevant here, especially if it could be linked to upgrading of road and rail infrastructure.
- Telecommunication infrastructure, especially high-speed internet connectivity is of paramount importance for the provision of mining industry related services and particularly for the development of a knowledge-based economy.
- Linked to the Kathu Industrial Park, Kuruman Light Industry Area (metals cluster) and light industrial areas elsewhere in the district, the iron smelter and sinter plant/s, mining industry and infrastructure services in general provides unique opportunities for SMME Development and capacity building, especially if it is linked to the three pillars for a knowledge- based economy, i.e., mining, and related services, mineral beneficiation, health and the Agri-park;
- Linkage to the transport corridor from Tshabong in the adjacent Botswana, through the District to Kimberley on the R31 or R380 and on the N14 via Vryburg to Gauteng and via Upington to Cape Town provides a unique opportunity to strengthen all the key catalytic initiatives, but especially also the mining industry and proposed knowledge-based economies.
- Opportunities for vulnerable groups, i.e., women, youth and disabled should be prioritised and maximized in both the public and private sector, as it relates to industry development in general.
- Infrastructure development in order to support trucks operating in the mines.
- Increase need for housing.
- Increase need for bulk infrastructure.
- Mine rehabilitation should be considered and be in line with the Chamber of Mines of South Africa (2007) in order to ensure sustainable usable condition.

Kathu Industrial Park

Kathu Industrial Park is known for being one of the South Africa's largest industrial parks, with a focus on iron ore mining and related activities. The park houses various facilities and infrastructure, including ports, roads, water and power supplies, and other infrastructure to support the mining and industrial activities in the area.

Kathu is an important economic hub and the industrial park is a significant contributor to the region's economy, providing jobs and business opportunities for local communities. The park has attracted a number of international companies to invest in the area, further boosting economic development and growth.

Northern Cape Industrial Development Corridor

The N14 Industrial Development Corridor is a significant initiative aimed at boosting economic growth and development in the Northern Cape Province of South Africa. The master plan focuses on localizing and diversifying the economy of the region by utilizing its resources effectively. The plan consists of several nodes that serve as clusters for services and diversification. The nodes include the Kathu Industrial Park, the Upington Industrial Park, the Namakwa Special Economic Zone (SEZ), and the Boegoebaai deep port harbour for imports and exports.

Boegoebaai in particular has attracted global attention for its potential in green hydrogen production and supply. This is due to the growing demand for clean energy sources and the Northern Cape's abundant supply of renewable energy resources. The interest from global and domestic investors highlights the potential for economic growth and job creation in the region through the development of the N14 Corridor.

Overall, the N14 Industrial Development Corridor is a strategic plan for the future of the Northern Cape Province, aimed at fostering sustainable economic development and reducing dependency on the life of mines.

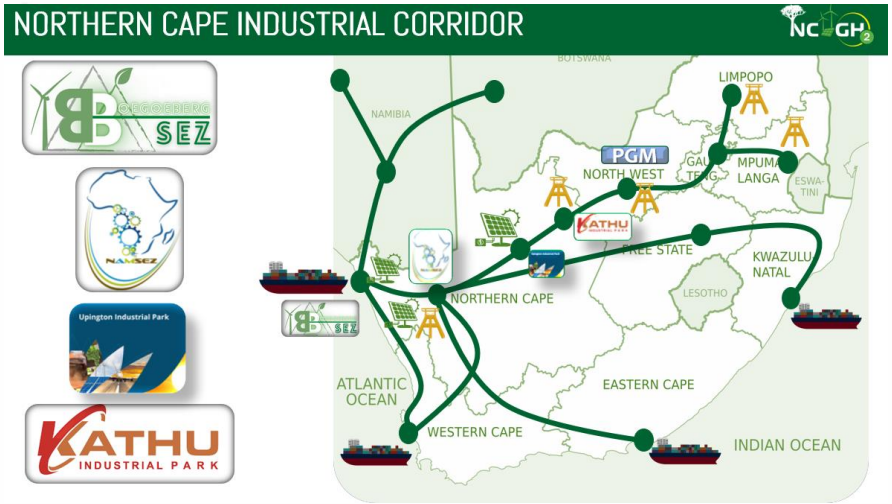


FIGURE 7: NORTHERN CAPE INDUSTRIAL CORRIDOR

B3.2 Special Economic zones

Special Economic Zones (SEZs) are envisaged for each of the three local municipal areas, which should contribute to the diversification of the district economy.

The following should be taken into consideration pertaining the growth of Special Economic Zone:

- The envisaged SEZs should be considered in relation to and also adding to the other, especially key catalytic projects and the knowledge-based economies that are proposed with it.
- Linkage to existing planned initiatives, such as human settlement expansions in both Gamagara and Ga-Segonyana, as well as the Agri-park and light industry areas in Kuruman and the Kathu Industrial/Supplier Park will play a contributing role in establishment

and maintaining the envisaged SEZs. SMME development should be further explored and enhanced from this perspective.

- Geo-technical conditions and requirements are of particular importance and where there is dolomite prevalence, the requisite care should be taken to address it;
- There must be strict adherence to environmental legislation such as The National Environmental Management Act; Biodiversity Management Act,
- Compliance with the SEZ Act and guidelines, as well as lessons drawn from SEZ initiatives elsewhere are particularly relevant.
- SEZs should not be approached as “greenfield” developments but should once again be done on already disturbed land. The approach should be to maximise economic benefit and access, whilst also creating room for upward mobility in terms of economic development;
- Linkage to the transport corridor from Tshabong in adjacent Botswana, through the District to Kimberley on the R31 and on the N14 via Vryburg to Gauteng and via Upington to Cape Town provides a unique opportunity to strengthen all the key catalytic initiatives, but especially also the SEZs; and
- Opportunities for vulnerable groups, i.e., women, youth, and disabled should be prioritised and maximized in both the public and private sector, as it relates to industry development in general. Again, SMME development may play a crucial role in this regard.

B3.3 Regional Airport

The location of the regional airport seems to be a cause of disagreement between the three local municipalities and specifically between Ga-Segonyana and Gamagara. This must be resolved at the political level, as a priority

The following should be taken into consideration pertaining the growth of Regional Airport:

- Keeping both Kuruman as planned regional anchor and the knowledge-based economy linked to health, mining, and the Agri-park, as well as the higher education facilities in mind, Kuruman should perhaps be the better choice for the regional airport.
- Close proximity to both the N14 as national and provincial corridor, with linkage to the R31 transport corridor
- The establishment and development of a regional airport is of decisive importance for (1) diversifying the district economy, (2) expanding the existing and potential value chain, (3) establishing and maintaining a knowledge-based economy/economies, (4) and reducing the reliance on mining going forward;
- The requirements set out in the planning frameworks of all three spheres of government must be strictly adhered to. SPLUMA and the requirements contained in the Spatial Development Frameworks of all three spheres of government, especially the SPLUMA By-law and Land Use Scheme of the concerned local municipality are highlighted here.

- Geo-technical conditions and requirements are of particular importance and where there is dolomite prevalence, the requisite care should be taken to address it.
- It is preferable that existing infrastructure be expanded upon and maximised, but if this is not possible, already disturbed land must be considered first.
- There must be strict adherence to environmental legislation such as The National Environmental Management Act; Biodiversity Management Act, etc.
- Telecommunication infrastructure, especially high-speed internet connectivity is of paramount importance for the provision of services related to the regional airport and particularly for the development of a knowledge-based economy.
- Linkage to the transport corridor from Tshabong in adjacent Botswana, through the District to Kimberley on the R31 and on the N14 via Vryburg to Gauteng and via Upington to Cape Town provides a unique opportunity to strengthen all the key catalytic initiatives, but especially also the regional airport and proposed knowledge-based economies.
- Opportunities for vulnerable groups, i.e., women, youth, and disabled should be prioritised and maximized in both the public and private sector, as it relates to industry development in general. Again, SMME development may play a crucial role in this regard.

B1.4 Regional Hospital (Level4)

The envisaged hospital poses a unique opportunity for not only innovation but also to turn health as a district challenge into an opportunity. It is especially important to create a new model wherein there is a combination of public and private facilities of a very high standard, available to all citizens. Public Private Partnerships will play a crucial role to ensure a high standard of services.

B3.5 Higher education facilities, i.e., University, University of Technology, FET College, and Artisan training facilities

- • It should be emphasised that the district's low education and skill levels make this catalytic endeavour an essential part of the growth of its residents, and this is especially true when poverty and youth unemployment are taken into account.
- Emphasis is again placed on the consideration of externalities, such as linkage to the envisaged transport corridor and regional airport;
- The strategic requirements identified in relation to all the catalytic projects, but particularly the regional hospital, are all relevant and applicable here and are therefore not repeated; and
- Although higher education facilities are highlighted specifically, it should also be seen in conjunction with basic education and training as point of departure. In addition, the approach should be multi-pronged and should focus on higher learning facilities (university, university of technology and FET), as well as artisan training. Adding on to existing facilities such as the SIVOS and Joe Morolong training centres, as well as the Kuruman FET campus will be a

bonus. All these facilities should specifically focus on the proposed knowledge-based economies related to:

  - The health industry;
  - Mining,
  - Infrastructure,
  - Alternative energy construction and related industry;
  - Agri-Park and related industry; and
  - Tourism and related industries as a possible fourth pillar.

- Linkage to the transport corridor (as discussed as part of the SIPs) from Tshabong in adjacent Botswana, through the District to Kimberley on the R31 and on the N14 via Vryburg to Gauteng and via Upington to Cape Town provides a unique opportunity to strengthen this catalytic initiative in particular.
- The development of higher learning facilities, with the proposed knowledge-based economy, will reinforce economic diversification (well beyond the lifespan of mining extraction activities) and poses unique opportunities for SMME development. In the latter instance focusing on opportunities for vulnerable community groupings will promote equality and equity in general
- Telecommunication infrastructure, especially high-speed internet connectivity is of decisive importance for the provision of higher and basic education services related, especially considering the potential for a knowledge-based economy. It will also promote the positioning of the district as a global player in terms of the fourth and fifth industrial revolution and its possible relevance for a knowledge-based economy.

B3.1.3 Basic Education

- The basic education levels, of mainly the historically disadvantaged people in the district, are still inadequate. Improving basic education levels and literacy rates are of paramount importance to (1) promote the continuous development of all district citizens, (2) promote economic development, (3) promote the knowledge-based economies that are envisaged in this plan, (4) enable citizens to access tertiary education and training opportunities and by doing so to be able to enter the mainstream economy, and (5) taking charge of their rights and responsibilities as citizens and in doing so contributing to governance in the District and thereby to promote the continued growth of our democracy
- Upgrading and maintenance of all levels of basic education facilities and infrastructure is of paramount importance to ensure that learners participate in their own education in environments that are conducive to learning. The Department of Education has already included numerous projects to reach this objective;
- Where new facilities are considered, there must be strict adherence to planning and environmental related legislation.
- Beefing up roads and transportation networks and particularly connector roads should receive priority attention to make basic education facilities more accessible to learners, as well as to ensure that learner transport is as safe and secure as possible;
- Both telecommunication infrastructure and adequate access to information technology equipment will be a critical requirement for improving basic education levels and promoting knowledge-based

economies in the age of the fourth industrial revolution. Beefing up access to telecommunication infrastructure and equipment is a catalytic requirement.

B3.6 Reduction Of Red tape

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

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

Red tape is defined as:

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

Red tape interferes with:

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

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

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

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

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

B3.7 Local Economic Development

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

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

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

Township/Rural Economies

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

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

The following has been identified in the township/rural economy:

TABLE 7: TOWNSHIP ENTERPRISE CLUSTERS

SECTORS	CLUSTERS
Retail	• Butcheries • Spaza Shops • Fish and Chips • Fruit & Vegetables
Service Industry	• Hair Salons • Shebeens • Shisanyama • Sewing and tailoring, including shoemakers • Car wash • Burial society
Construction and real estate	• Brick laying • Renting • Construction business

Transport	• Taxis
Agriculture	• Vegetable production
Finance	• Stokvel • Mashonisa/ lending schemes • Burial societies
Government and Community Services	• Feeding Schemes
ICTS	• Internet solutions in townships • Electronic repairs
Green Economy	• Recycling • Coal and wood making

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

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

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

The following schemes are available for qualifying entrepreneurs:

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

B3.8 Skills Development And Training

Rationale for intervention

Training Institutions in the district to serve as a focal point to equip the local municipalities labour force and thereby drive economic growth.

Objectives

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

Key Action Areas

- To support economic growth through learning, teaching, research, and commercialisation activities
- Develop new markets and work with representatives of key sectors to develop training and educational content which meets future skill requirements at home.
- Build upon existing university research expertise and exploit spin-out and commercialisation opportunities.

- Provide gateways for local and other businesses to access expert staff and skills through a variety of channels, knowledge transfer partnership, sectoral groups, etc.
- Ensure JTGDM's key sector expertise including new product and transnational project developments actively shape the key sectors within the area.

B3.9 Infrastructure For Economic Growth

Rationale for intervention

The economy requires reasonably developed infrastructure for it to grow and develop. Again, the attraction of inward investment is mainly dependent on conducive environment. Hence, the prioritisation of infrastructure improvement remains central to the economic regeneration programme.

There are various interpretations of what exactly constitutes Sustainable Infrastructure Development, but all definitions consist of the following elements (Asian Development Bank, 2017):

Key Action Areas

Improved physical infrastructure investment and enhanced business development in in the main cities in the different municipalities. The availability of suitable infrastructure is just one of the key factors in investment attraction and business retention programme. Hence, local authorities need to be a step ahead in terms of achieving broad based infrastructure satisfaction of the business fraternity.

Infrastructure investment that optimises the use of resources and the effective use thereof (RDSP,2022/23);

- Provides adequate services to local communities;
- Without compromising the health of the environment;
- Through public and private partnerships.

Primary drivers for infrastructure development include:

- Demographic Trends (e.g. in–migration and population growth);
- Economic Growth (e.g., Mining sector and Renewable Energy Sector).

Bulk Infrastructure and distribution networks

Addressing the significant backlogs related to bulk infrastructure and distribution networks in all three local municipal areas remain a decisive priority for the District, not only to ensure equitable and equal access to services for all citizens, but particularly also to strengthen the development of people, the District economy and diversification thereof, sustaining the settlement growth that should coincide with the envisaged catalytic projects and positioning the District as desired place to stay should coincide with the envisaged catalytic projects and positioning the District as desired place to stay.

- Water, sanitation, electricity and refuse removal (particularly landfill sites) should receive priority and focused attention, together with expansion of infrastructure and distribution networks to prepare for future growth.

- The expansion and upgrading of the Vaal-Gamagara pipeline, as envisaged in the SIPs and SIP sub-projects be a decisive determinant for expansion and sustaining growth going forward.
- High-capacity power lines into and out of the district need to be improved and developed, to ensure that the potential to export alternative (specifically) energy from the district into the national grid, as well as across the border to Botswana and other SADEC countries can be embraced;
- Alternative energy solutions should be explored and embraced to ensure household access to affordable, reliable, and sustainable energy.
- Solar energy should be encouraged because it provides excellent potential to not only promote green energy and to reduce the district carbon footprint, but specifically to create new sources for economic development and diversification, economies of scale and SMME development.

Telecommunication and information infrastructure

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

- Priority areas should be identified for the improvement of telecommunication and information infrastructure.
- Significant backlogs in telecommunication and information infrastructure often requires additional funding. Securing funding from government budgets, international development funding, and private sector investment can help to ensure that the necessary resources are available to address the backlogs.
- Addressing the backlogs in telecommunication and information infrastructure often requires building technical and institutional capacity, such as providing training and education programs, establishing partnerships with technical organizations, and building a skilled workforce.
- Ensuring that the regulatory environment is supportive of telecommunication and information infrastructure development.

B3.10 Strengthening Of Institutional Arrangements

Rationale

The economic function in JTG DM has been constrained and extremely over-undermined over a period of time. Hence, the organisation of relevant bodies to participate in LED was not prioritised.

The level of willingness and enthusiasm from the local partners necessitate the formalisation of the relevant forum and execution of the programme as per conditions of the Partnership Agreement.

Objectives

- To formalise stakeholder engagements thereby allow them to find common economic ground for the district.
- To extend the area of responsibility to all people with personal stake of growing the district to be a home for all races and address collaboratively all existing social ills.
- To understand the scope of planned economic initiatives beyond the public sector or government driven initiatives.

Key Actions

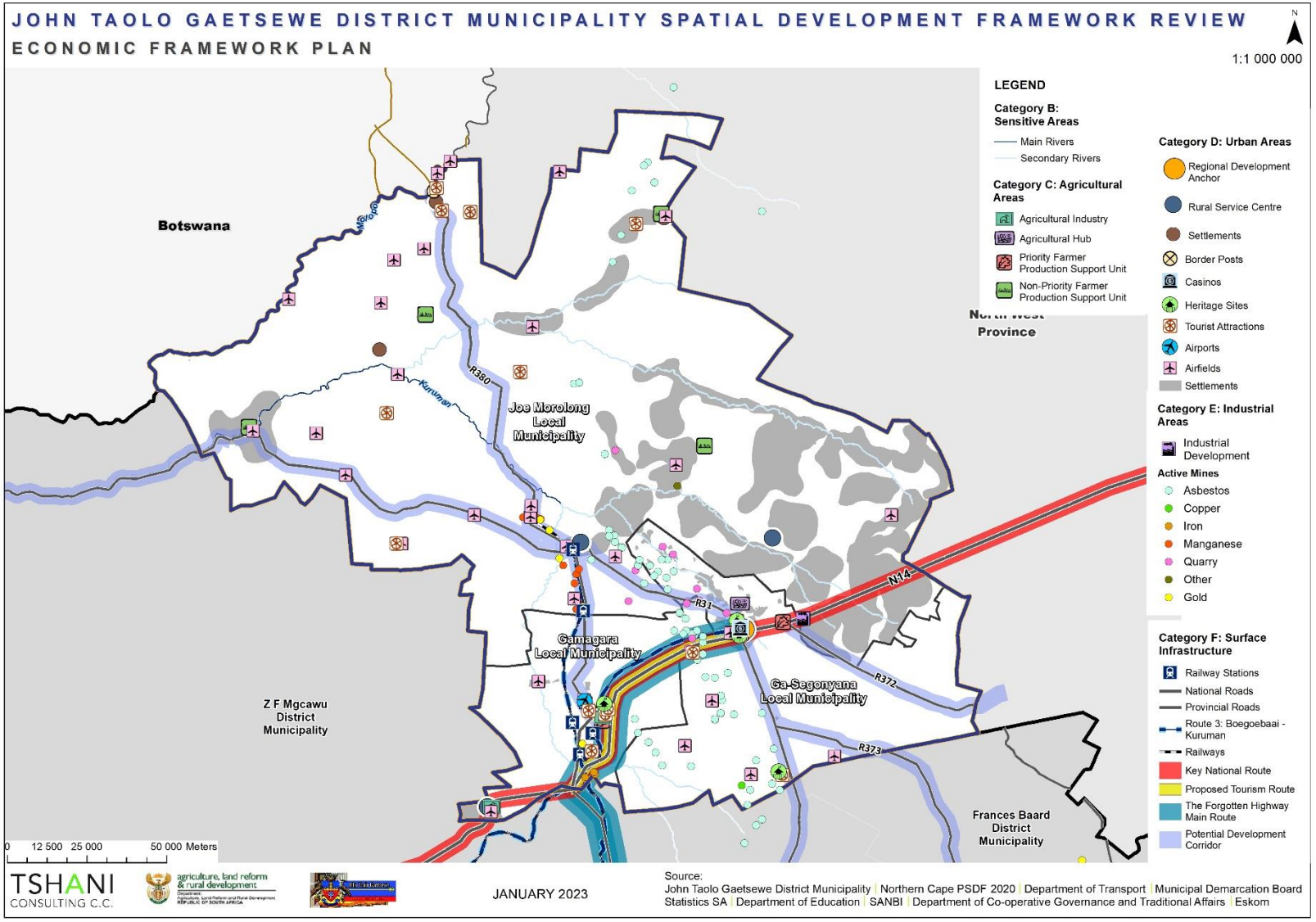
1. District municipal Economic Partnership Agreement

The JTGDM economic forum is proposed as a new body of stakeholders that will come together to plan, support, and monitor the implementation of economic strategy in the municipality. In the main, the Partnership forum will sign a memorandum of Understanding with the Council on how the partnership should function. On the other hand, the municipality will commit to provide secretariat and capable incumbents to drive strategy implementation.

2. Establish Business Chamber for Businesses

In general, the Business Chambers have a strong co-ordinating role to play in any economy and they further represent a united front of businesses that operate in the area. It is always easy to understand the planned business growth in the area through consultation and liaison with the Chamber.

So, the strategy encourages local businesspeople to drive the establishment of their chamber and the council will co-ordinate initial meetings and provide support where necessary.



PLAN 7: ECONOMIC FRAMEWORK

B 3.11. Tourism

Tourism is often used as an economic development tool to address issues such as unemployment, expanding the skills base as well as reducing poverty. The growth and development of tourism-based industries are complementary to the existing fabric and thus critical towards the prosperity of tourism areas.

The main challenges identified include:

- Low levels of compliance with tourism legislation;
- Lack of an events strategy;
- Lack of marketing and promotion of the Municipality, combined with lack of local knowledge/awareness of the tourism offerings of the area;
- Low levels of budgets and human capacity assigned to tourism;
- No functional tourism associations; and
- Lack of public and private sector partnerships.

John Taolo Gaetsewe has several tourist attractions that range from nature-based tourism, heritage, adventure, and cultural tourism. There is, in addition also a few unique opportunities that can be developed to infiltrate a niche tourism market (RDSP, 2022/23).

A number of tourists passing through the region en route to Namibia, Botswana, Western Cape, Free State and other surrounding provinces and other attractions using the N14, R31, and R380. I t should be noted however, that the R380 is currently more of a deterrent than an aid due to its upgrading.

Tourism promotion and development

The following should be taken into consideration pertaining the growth of Tourism sector.

- The continuous development of the district as a preferred destination for domestic and international tourism must receive focused attention;
- Linkage in terms of national corridors, regional anchors, and gateways, such as along the N14, R31, and R380 and particularly the catalytic projects will expand the tourism value chain within and outside district boundaries and across the border to other SADEC countries;
- Initiatives that may contribute to unlocking and stimulating economic growth, economic diversification, and knowledge-economy through the tourism sector, as well as to create niche markets include inter alia:
- Establishing of the District as preferred tourism destination and corridor, linked to the opportunities discussed above will provide new opportunities for SMME development;
- Positioning the District as domestic, regional, and global preferred destination requires the following non-negotiables:
    - High-quality infrastructure
    - Strong economy
    - Attractive living environment
    - Effective governance
    - Strategic location

- Cultural and natural attractions
- Skilled workforce
- Safety

Key Interventions

- Community awareness campaign
- YEDP programme
- SMME support
- Tourism Product Development
- Tour Guide Training
- Ablution facilities for tourists needs to be erected at attractions.
- Constant maintenance and upkeep of these natural assets
- Promote Township Tourism

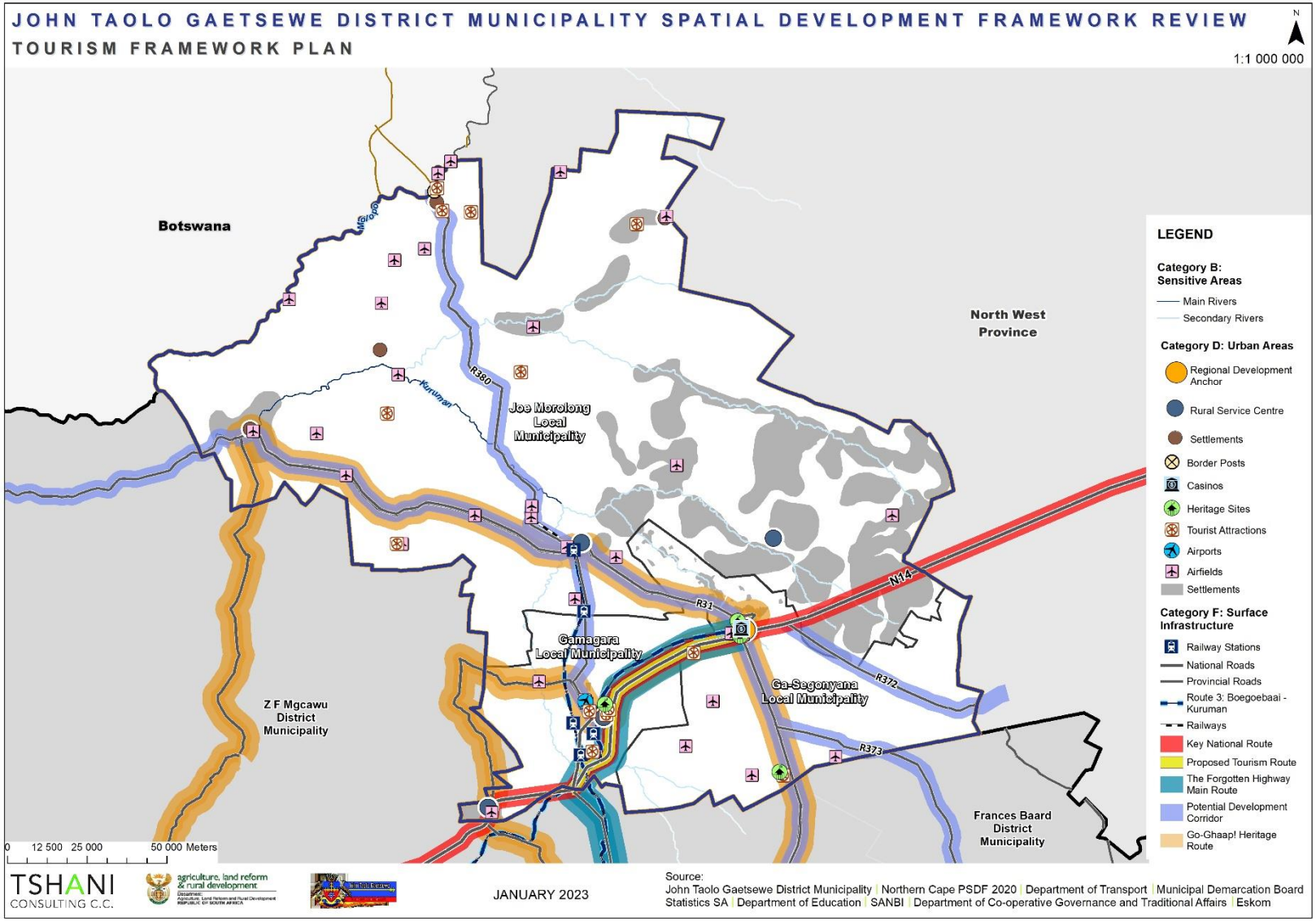
Tourism Marketing

Developing tourism attractions and the identification of new tourism attractions is a good starting point for tourism development, however, if the number of tourist visitations to these attractions is to increase, there needs to be an active marketing strategy to attract these tourists to the area. A detailed and comprehensive marketing strategy for the area should be developed and importantly linked to the provincial initiatives and available marketing means.

Developing tourist attractions and identifying new attractions is an ideal place to begin for tourism growth; however, if the number of visitors visiting these attractions is to expand, an active marketing strategy is required to attract these tourists to the area attractions is an ideal place to begin tourism growth. A detailed and comprehensive marketing strategy for the area should be developed and importantly linked to the provincial initiatives and available marketing means.

Development Interventions

- To develop a Strategic Marketing Plan that should incorporate the following goals and objectives:
- Promoting tourism attractions within the area;
- Update local tourism websites with new tourism activities in the area;
- Market the local accommodation opportunities within each town and help with bookings;
- Understand the motivations and preferences of visitors to the area;
- Marketing of niche markets and combining tourism attractions as packages to increase and diversify tourism product offerings;
- Mining tourism where by development of mining tours are promoted.
- The Forgotten Highway
- The Go-Ghaap Route



PLAN 8: TOURISM FRAMEWORK

B3.12 Social Facilities

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

SPC D: Urban Related Areas

To ensure the sustainability of urban development it is important to achieve a balance between the conflicting interests of land-use planning. In this regard, a key objective of the PSDF is to promote rehabilitation of existing settlements and to ensure that any future developments are sustainable (i.e., Supportive of environmental integrity, human well-being, and economic efficiency). Standard town planning criteria applicable in the evaluation and assessment of development applications, building plan approval, change of land-use, etc. are still relevant and will not be replaced by this policy. These criteria relate to inter alia taking due cognisance of natural and/or unique resources and land and coastal elements, prevention of urban sprawl, preference for strengthening and densification of existing nodes, and taking into consideration the cumulative impact of development.

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

The following strategy for social infrastructure is based on the criteria as stipulated in terms of the CSIR Human Settlement Guideline:

TABLE 8: CSIR HUMANS SETTLEMENT GUIDELINE

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

The section below aims to highlight the number of social facilities which are currently accessible to the people of the District Municipality, as well as determine if these social facilities are sufficient to cater to the population as per the CSIR thresholds above. The main towns within the district are spatially mapped on plan 9 which show the disbursement of the below social facilities.

TABLE 9: EXISTING SOCIAL FACILITIES

Social Facilities	No.
Primary schools	137
Secondary schools	34
Cemeteries	205
Libraries	48
Community Halls	24
Post Offices	9
Police Stations	13
Tertiary Institutions	2
Clinics	36
Hospitals	3
Sports Facilities	6

It is important to note the importance of an integrated planning approach towards service delivery to make sure that services are provided along with adequate supporting infrastructure. Based on the existing facilities with the Municipality, the following is a depiction of the number of facilities that are required to meet the population needs of the Municipality. Based on the growth projection of the Namakwa district to the year 2030, a drastic increase in the number of Social Facilities will be required.

TABLE 10: GAMAGARA LM SOCIAL FACILITIES

Gamagara LM – 53 656 (2016)					
Planning Thresholds	**Walking Distance**	**Minimum Requirements**	**Existing**	**Required**	**Shortfall**
Primary School	5 km Radius	1 000 - 7 000 people	6	14	8
Secondary/ High School	5 km Radius	2 500 - 12 500 people	3	8	5
Library	8-10 km Radius	5 000 - 20 000 people	5	5	0
Clinic	5 km Radius	5 000 – 7 000 people	6	9	3
Hospital	30 km Radius	300 000 - 900 000 people	1	1	0
Police Station	8 km Radius	60 000 – 100 000 people	4	1	0
Post Office	5-10 km Radius	10 000 – 20 000 people	3	4	1
Community Halls	10 km Radius	10 000 – 60 000 people	1	2	1

TABLE 11: JOE MOROLONG LM SOCIAL FACILITIES

Joe Morolong LM – 84 201					
Planning Thresholds	**Walking Distance**	**Minimum Requirements**	**Existing**	**Required**	**Shortfall**
Primary School	5 km Radius	1 000 - 7 000 people	97	22	0
Secondary/ High School	5 km Radius	2 500 - 12 500 people	17	12	0
Library	8-10 km Radius	5 000 - 20 000 people	34	7	0
Clinic	5 km Radius	5 000 – 7 000 people	24	15	0
Hospital	30 km Radius	300 000 - 900 000 people	0	1	1
Police Station	8 km Radius	60 000 – 100 000 people	5	2	0
Post Office	5-10 km Radius	10 000 – 20 000 people	3	6	3
Community Halls	10 km Radius	10 000 – 60 000 people	13	3	0

TABLE 12: GA-SEGONYANA LM SOCIAL FACILITIES

Ga-Segonyana LM – 104 408					
Planning Thresholds	**Walking Distance**	**Minimum Requirements**	**Existing**	**Required**	**Shortfall**
Primary School	5 km Radius	1 000 - 7 000 people	34	27	0
Secondary/ High School	5 km Radius	2 500 - 12 500 people	14	14	0
Library	8-10 km Radius	5 000 - 20 000 people	9	9	0
Clinic	5 km Radius	5 000 – 7 000 people	6	18	9
Hospital	30 km Radius	300 000 - 900 000 people	2	1	0
Police Station	8 km Radius	60 000 – 100 000 people	4	2	0
Post Office	5-10 km Radius	10 000 – 20 000 people	3	7	4
Community Halls	10 km Radius	10 000 – 60 000 people	10	3	0

TABLE 13: JTG DM 5 YEAR FORECASTING OF SOCIAL FACILITIES

JOHN TAOLO GAETEWE DISTRICT MUNICIPALITY															
				2023 295 936		2024 304 518		2025 313 350		2026 322 437		2027 331 787		2028 341 409	
Planning Thresholds	Walking Distance	Minimum Requirements	Existing	Required	Shortfall	Required	Shortfall	Required	Shortfall	Required	Shortfall	Required	Shortfall	Required	Shortfall
Primary School	5 km Radius	1 000 - 7 000 people	137	74	0	77	0	79	0	81	0	83	0	86	0
Secondary / High School	5 km Radius	2 500 - 12 500 people	34	40	6	41	7	42	8	43	9	45	11	46	12
Library	8-10 km Radius	5 000 - 20 000 people	48	24	0	25	0	26	0	26	0	27	0	28	0
Clinic	5 km Radius	5 000 – 7 000 people	36	50	14	51	15	53	17	54	18	56	20	57	21
Hospital	30 km Radius	300 000 - 900 000 people	3	1	0	1	0	1	0	1	0	1	0	1	0

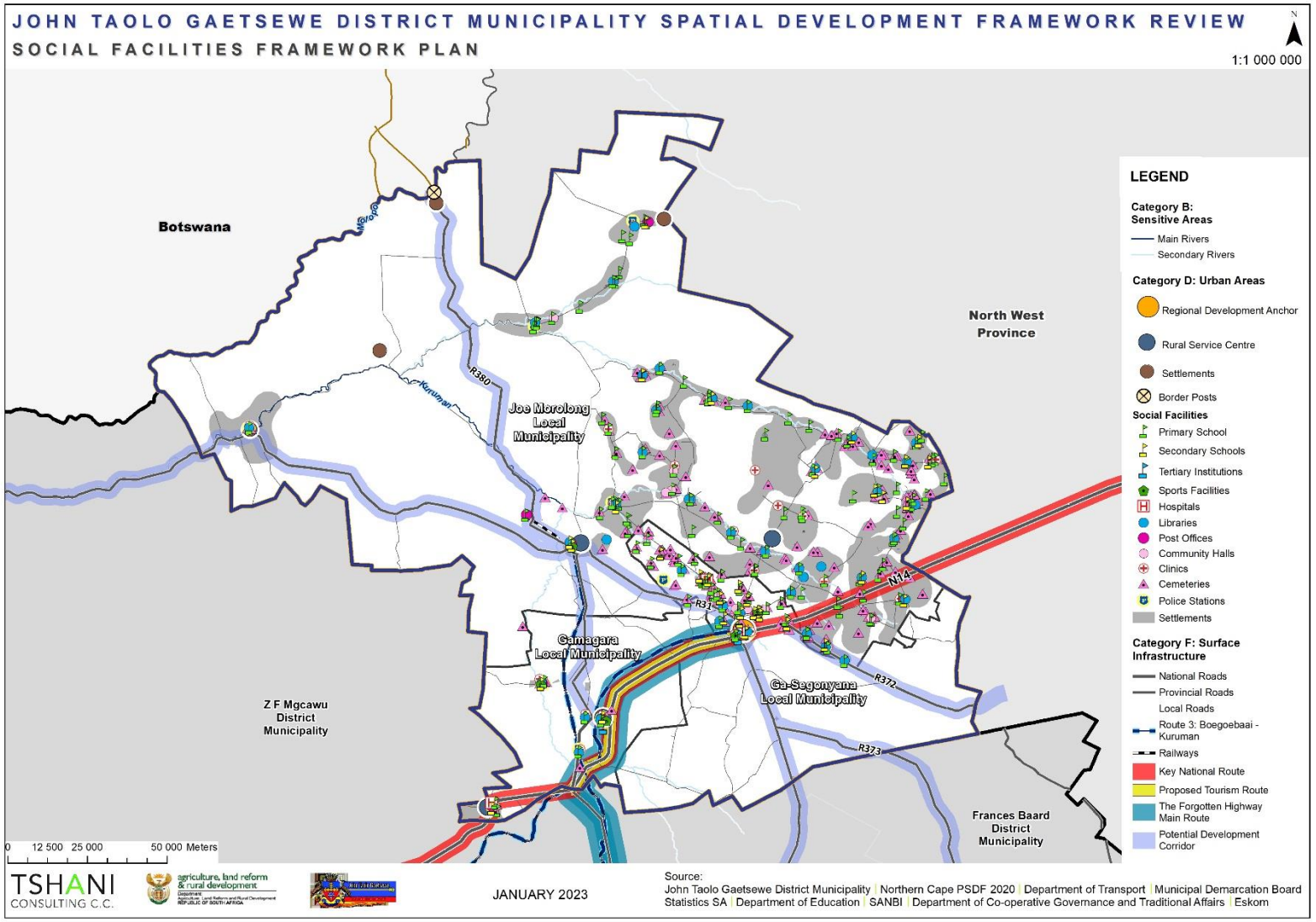
Police Station	8 km Radius	60 000 – 100 000 people	13	4	0	4	0	4	0	5	0	5	0	5	0
Post Office	5-10 km Radius	10 000 – 20 000 people	20	20	0	21	1	21	1	22	2	23	3	23	3
Community Halls	10 km Radius	10 000 – 60 000 people	9	9	0	9	0	9	0	10	1	10	1	10	1

New proposed Schools

TABLE 14: NEW PROPOSED SCHOOLS

Local Municipality	School Name
Ga-Segonyana	Abkolwane Primary School
Ga-Segonyana	Lareng Primary School
Ga-Segonyana	Mahikaneng Primary School
Ga-Segonyana	Bankhare Bodulong Off-Shoot Primary School
Ga-Segonyana	Kuruman New English Medium Secondary School (Wrenchville/Kalahari)
Ga-Segonyana	Magojaneng New Primary School
Ga-Segonyana	Magojaneng New Secondary School
Joe Morolong	JTG Dithakong New School And Hostel
Gamagara	Deben Off-Shoot Primary School
Gamagara	Laerskool Kathu Offshoot

The plan below identifies the current dispersion of social amenities within the municipality



PLAN 9: SOCIAL FACILITIES FRAMEWORK

B4. BUILT ENVIRONMENT FRAMEWORK

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

BUILT ENVIRONMENT

Settlement Patterns	Land Use & Activity Patterns
Settlement Role, Hierarchy & Function	Infrastructure
Spatial Structure & Form	Transport & Movement Networks
Built Heritage	Housing

D	Urban Related	D.a	Main Towns	D.h Residential Areas
		D.b	Local Towns	D.n Cemeteries
		D.c	Rural Settlements	D.o Sports Fields & Infrastructure
		D.d	Tribal Authority Settlements	D.p Airport & Infrastructure
		D.e	Communal Settlements	D.r Farmsteads & Outbuildings
E	INDUSTRIAL AREAS	E.a	Agricultural Industry	E.d Heavy Industry
		E.b	Industrial Development Zone	E.e Extractive Industry
		E.c	Light Industry	
F	SURFACE INDUSTRIAL BUILDINGS	F.a	National Roads	F.h Telecommunication Infrastructure
		F.b	Main Roads	F.i Renewable Energy Structures
		F.c	Minor Roads	F.j Dams & Resevoirs
		F.d	Public Streets	F.k Canals
		F.e	Heavy Vehicle Overnight Facilities	F.l Sewerage Plants & Refuse Areas
		F.f	Railway Lines	F.m Mixed Use Development Areas
		F.g	Power Lines	

SPC D: Urban Related Areas

To ensure the sustainability of urban development it is important to achieve a balance between the conflicting interests of land-use planning. In this regard, a key objective of the PSDF is to promote rehabilitation of existing settlements and to ensure that any future developments are sustainable (i.e., Supportive of environmental integrity, human well-being, and economic efficiency). Standard town planning criteria applicable in the evaluation and assessment of development applications, building plan approval, change of land-use, etc. are still relevant and will not be replaced by this policy. These criteria relate to inter alia taking due cognisance of natural and/or unique resources and land and coastal elements, prevention of urban sprawl, preference for strengthening and densification of existing nodes, and taking into consideration the cumulative impact of development.

B4.1 Sustainable Human Settlements

This framework will be prepared entirely on the basis of existing housing development initiatives and/or contributions from various officials within the municipality, as well as institutional knowledge of housing needs within the municipality.

Sustainable human settlements and improved quality of household life are defined by the following:

- access to adequate accommodation that is suitable, relevant, appropriately located, affordable and fiscally sustainable.
- access to basic services such as water, sanitation, refuse removal and electricity.
- security of tenure irrespective of ownership or rental, formal or informal structures
- access to social services and economic opportunities within reasonable distance.

JTG is characterised as a rural district and there is also a fairly huge spatial distribution of agricultural activities in the district.

There is rapid development taking place within the municipality, which has led to several challenges such as inadequate infrastructure. The growth must be supported by suitable planning, design, and assessment standards.

Settlements within JTG are located to the North-East of Kuruman town. Urban towns are in Kuruman and rural settlements between Hotazel and Kuruman.

Integrated human settlement development should be prioritised in order to respond to the challenges of human settlements. The following interventions should be considered in order to address the Human settlements issues.

- Human settlement development should be done in terms of the District and Local Human Settlement Sector Plans, in line with the Implementation Protocol with CoGHSTA and Level 2 Accreditation requirements.
- The formalisation of existing settlements, especially in the Joe Morolong area, eradication of mud houses, and in situ upgrade of informal housing should take preference;
- There should be continuous linkage to disaster management initiatives to respond to future disasters.
- There must be strict adherence to planning-related requirements and legislation, with emphasis on SPLUMA. In this regard, both the requirements contained in the spatial development frameworks of all three spheres of government, as well as the SPLUMA By-law and Land Use System of the concerned municipality must be adhered to. Urban edges must be enforced.
- The existing Hotazel town urban edges in Joe Morolong Municipality should be reviewed in order to guide the development growth and accommodate the demand for housing.
- The principles of SPLUMA should guide human settlement planning and to this end, the human settlement should be developed on “brownfields,” i.e., already disturbed land. Infill planning should be prioritised to ensure that access to economic and employment

opportunities are maximized. In this regard vulnerable groups and military veterans should receive priority attention;

- Geo-technical conditions and requirements are of particular importance and where there is dolomite prevalence, the requisite care should be taken to address it;
- Bulk infrastructure and distribution networks must be upgraded in existing settlements and in terms of new extensions should be put in place prior to occupation by beneficiaries.
- There must be strict adherence to environmental legislation, specifically, such as The National Environmental Management Act, etc.

B4.2 Housing

Achieving sustainable human settlements is one of the main spatial goals within an area such as JTG DM which is characterised by a settlement pattern that has encountered a high level of disintegration and fragmentation.

An opportunity still exists to turn the situation around through facilitating and promoting the evolution of these discrete pockets of settlements into sustainable, integrated human settlements clusters.

The housing need in Gamagara Municipality remains high with a total backlog of 7 300. The effects of the “resource curse thesis” are certainly evident in Kathu and Kuruman, where the mining boom is creating rapid demand for labour and skills (thus driving up wages), leading to distortions in the property market.

To address the impact of mining on housing in JTG District, the district can implement several strategies:

- The district can engage with mining companies operating in the area and negotiate agreements that include provisions for the construction of housing for workers and local communities.
- Create an enabling environment that encourages public-private partnerships between the government, local businesses, and the mining industry.
- Implement programs that encourage the development of affordable housing, such as tax incentives for developers, low-interest loans for homebuyers, and subsidies for low-income households.
- By investing in infrastructure development, the district can attract private investment in the housing sector, create jobs, and increase the availability of affordable housing.
- JTG district can work closely with government agencies such as the Department of Human Settlements and the National Housing Finance Corporation to ensure that their resources and expertise are leveraged to address the housing shortage.

Housing Projects

The following Housing Projects mentioned below are for Gamagara, Ga-Segonyana and Joe Morolong Local Municipalities

TABLE 15: HOUSING PROJECTS

Project Name	Municipal Area	Developmental Impact	Current Implementation Status And Challenges
Individuals	All Jtg	Top Structures	Running-Inadequate Funding
Gamagara Kathu 5700	Gamagara	Services	Running-Inadequate Funding
Kathu Bulk	Gamagara	Town Planning	Running-Inadequate Funding
Mig 1510: Gamagara : Dibeng Sewer Network Phase 4 – 797 Stands	Gamagara	797 Households – Access To Sanitation	Construction
Bankhara Bodulong 63	Ga-Segonyana	Top Structures	Running-Inadequate Funding
Wrenchville 200	Ga-Segonyana	Services	Running-Inadequate Funding
Promised Land 5662 Bulk	Ga-Segonyana	Bulk	Running-Inadequate Funding
Magobing 89	Ga-Segonyana	Town Planning	Running-Inadequate Funding
Military Veteran	Ga-Segonyana	Top Structures	Running-Inadequate Funding

Project Name	Municipal Area	Developmental Impact	Current Implementation Status And Challenges
Mig 1459: Ga-Segonyana: Construction Of Kuruman Fire Station	Ga-Segonyana	32669 Households – Access To Disaster Services	Construction
Mig 1611: Vergenoeg: New Lined Double Pit Toilets	Ga-Segonyana	419 Households – Access To Dry Sanitation	Pre-Implementation
Mig 1629: Maruping - Itireleng Section: Extension Of Water Network	Ga-Segonyana	300 Households – Access To Water	Pre-Implementation
Mig 1639: Kagung Rethabile & Harvard Section Upgrading Internal Roads From Gravel To Paved	Ga-Segonyana	1479 Households – Access To Paved Roads	Pre-Implementation
Mig 1599: Joe Morolong: Washington Internal Road	Joe Morolong	275 Households' Access To Roads	Construction
Mig 1598: Joe Morolong:	Joe Morolong	122 Households Access To Roads	Construction

Tsaelengwe Internal Road			
Mig 1590: Joe Morolong: Penryn Water Supply	Joe Morolong	152 Households' Access To Water	Construction
Mig 1594: Joe Morolong: Shalaneng Water Infrastructure	Joe Morolong	345 Households' Access To Water	Construction
Mig 1618: Ganghaai Water Supply	Joe Morolong	85 Households – Access To Water	Pre-Implementation
Mig 1617: Perdmonkie Village Water Supply (Molomo-Wa-Petsona)	Joe Morolong	160 Households – Access To Water	Construction
Mig 1595: Goodhope: Dry Sanitation	Joe Morolong	117 Households' Access To Dry Sanitation	Construction
Mig 1619: Rowell 1&2: Dry Sanitation	Joe Morolong	35 Households – Access To Dry Sanitation	Construction

B4.3 Disaster management centre

- A high-capacity district disaster management centre is envisaged to provide a second responder service throughout the district. To this end, the existing centre will either have to be beefed up, or replaced with a modernised centre that can deal with disasters;
- It is vitally important that the capacity of local municipalities to function as first responders is beefed up.
- Planning for the centre requires compliance with the Disaster Management Act, as well as the Forest and Veldfires Act;
- Despite existing disaster risks, such as fires and flooding, the nature of the disaster risk profile is expected to change in order to include accidents related to hazardous materials, particularly the transportation thereof through the district; and
- Compliance with legislation related to disaster management, planning and environmental management is vital.

B4.4 Cemeteries

Key Interventions:

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

B4.5 Bulk Infrastructure

SPC F: Surface Infrastructure

An effective, competitive, and responsive infrastructure network is imperative for ongoing economic development of the province and the local municipalities.

The relevant sectoral departments therefore have a vitally important task in providing the infrastructure and bulk services required by the various economic sectors, the human settlements of the province, and the rural hinterland. Key challenges are a lack of basic infrastructure in rural areas and the proliferation of informal settlements in urban areas. Both these challenges are beyond the sole institutional and fiscal capabilities of the relevant municipalities. It is therefore important that the relevant funding mechanisms and institutions function efficiently and equitably.

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

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

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

Engineering services within the municipal area should be of an adequate standard before any new developments or densification may be permitted. Services such as water reticulation and waste management (sewage disposal, solid waste) are particularly important since portions within the municipal area have not been serviced.

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

Addressing the lack of engineering infrastructure in mining areas is crucial for sustainable development in these regions. The following steps can be taken to address this issue:

- Governments and mining companies should invest in upgrading and building infrastructure in mining areas to ensure that basic necessities such as water, energy, transportation, and communication are available to the communities.
- Partnerships between governments, mining companies, and local communities can lead to the development of sustainable infrastructure that addresses the needs of the communities and supports the mining operations.
- Community involvement is essential in the development of infrastructure in mining areas. Community members should be consulted and included in the decision-making process to ensure

that the infrastructure meets their needs and addresses their concerns.

- Providing education and training to local communities and workers in the industry can help to build capacity and support sustainable infrastructure development.

B4.5 Green Building Design

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

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

B4.6 Green Infrastructure Technology

These are some of the proposed interventions to curb the gap of service delivery and infrastructure.

Rainwater harvesting – Rainwater harvesting involves collecting, storing, and using rainwater for other uses. These uses can include household uses (drinking water, sanitation etc) and agricultural uses (irrigation). Rainwater harvesting can be used by those wishing to reduce their carbon footprint, those wishing to reduce their municipal utility bill or those who have no access to formal water supply.

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

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

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

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

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

B4.7 Roads

Key Informants and Policy for Transportation in the JTG DM

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

The following should be considered as a strategic intervention:

- Transport corridor and gateway, with related infrastructure and networks
  - Upgrading both the N14, R31, and the R380 and maintaining Kuruman as a regional anchor and the district as a transportation and knowledge-based economic gateway and development corridor. This includes the upgrading of connector roads;
  - The envisaged regional airport is expected to play a key role in this corridor and gateway.
  - Mining related exports from the district, as well as importing mining and industrial related products to the district, by road must be eradicated over time in favour of reliable, fast rail transport. The Hotazel to Gqeberha, Boegoe Bay, and Sishen to Saldanha railway lines, with connector lines are of strategic importance in this regard. Rapid rail;
  - Bus passenger transport should also be rolled out in line with the polycentric nodes, hubs, and service centres in the different district functional economic regions.
  - The introduction of air quality transport levies for especially freight transport through the district should be explored from an air quality management perspective and as source of revenue for the District Municipality. This should also assist in positioning the district to qualify for carbon credits, as an additional revenue source for development;
  - This catalytic project will also provide many opportunities to diversify and strengthen the district economy, as well as

to contribute to entrepreneurial development and also for vulnerable sections of our society. Additionally, to provide a basis for a knowledge-based economy-related transportation

- Compliance with planning and environmental related legislation should receive attention throughout
- Mining related transport, similar to the domestic taxi industry should be brought under urgent control, with law enforcement agencies taking charge of their responsibilities sooner rather than later. Establishment of a District Transport Authority and the introduction of weighbridges may assist in this regard. Roadworthy inspections of all modes of transport must be stepped up.
- Transportation infrastructure and networks are of make-or-break importance in all aspects of the development of the district and must be stepped up.

B4.8 Rail

The rail transport is mainly used in the mining sectors. Ore is transported in this manner. A railway line extends from Blackrock southwards past Sishen to Kimberley where it connects with the main Cape Town – Johannesburg line. A second line used to transport ore from this area extends from Sishen southwards to Saldanha Bay where it supplies the Saldanha Steel Plant.

There is a proposal by Transnet for the Boegoebaai railway that will connect Kuruman within the JTG municipality. The proposed route will connect the Boegoebaai Port to the surrounding mines within the province. The proposed railway will benefit from connecting to an existing railway system, namely the Sishen to Saldanha line, as it could then service mines along that route. Mines that would benefit from this connection include Orien Mineral's and Kumba Sishen Mine which is fully capacitated.

TNPA aims to have the new port in operation by 2026 and the investment in the project is expected to have a catalytic effect on the local economy. The investment will also provide an additional, cost-effective channel to market for manganese exporters in the province, bringing much-needed relief to emerging miners who are currently restricted by high road transport costs and lack of access to current export channels due to capacity constraints.

FIGURE 8: NCEDA ANNUAL REPORT

B4.9 Electricity

The provision of energy is vital in a modern society. The availability of energy remains a serious resource challenge. ESKOM does not have the generation capacity to meet the rising energy demand resulting from the rapid economic growth in South Africa (DME-2008). Electricity fuels

industry. Electrical railway transportation, and telecommunications and determines among other aspects what cooking methods a household uses, how households warm themselves, and what methods they use for lighting.

B4.10 Renewable Energy Industry

Rationale for Intervention

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

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

The New Growth Path

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

“Technological innovation opens the opportunity for substantial employment creation. The New Growth Path targets 300 000 additional direct jobs by 2020 to green the economy, with 80 000 in manufacturing and the rest in construction, operations, and maintenance of new environmentally friendly infrastructure. The potential for job creation rises to well over 400 000 by 2030.” (NGP). There is no doubt that government views the green industry as the potential sector for job creation.

Industrial Policy Action Plan 2 and Renewable Policy instruments

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

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

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

Developing the Green Industries

The policy framework indicates high level of willingness from South African government to transform the economy and cease the opportunity while the window is still open. Interestingly the proposals on localisation of solar geysers and panel manufacturing and improvement of investment climate

within the industrial set-up of the green sector are surely gaining the momentum.

Objective

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

Key Action Areas

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

a) Promote JTGM DM through the activities of Renewable Energy partnership

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

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

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

e) Develop a comprehensive range of training and support opportunities that will bring home better understanding of Green Economy and related products.

Renewable Energy Prospects:

Renewable energy plays a fundamental role in tackling climate change, environmental degradation, and energy security. JTG District is characterized by extreme temperatures with a fluctuation between 33.1oC as the mean annual maximum and 0.1-2.0oC as the mean annual minimum. The extreme high temperature that has been recorded is 41.6oC in summer, this suggests that investment in and exploitation of solar energy will result in the district becoming self-reliant in the generation of solar electricity which will provide a sizeable injection into the national electricity grid while creating employment opportunities in the JTG District.

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

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

Solar Energy:

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

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

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

B4.3.7 Telecommunication

- Rolling out high-level, reliable, fast and affordable telecommunication and information infrastructure and access thereto is a critical and game-changing requirement to (1) promote continued economic growth and diversification, (2) enhance the economic value chains across economic sectors, (3) establishing and promoting the envisaged knowledge-based economies, (4) enhancing access to education and training, (5) improving education and training levels, and by extension the ability of citizens to access the mainstream economy in the age of the fourth and fifth industrial revolution;
- Telecommunication and information infrastructure will be an enabler in the roll-out of the key catalytic projects in particular, but for all the identified projects in general. The arrival of the still ongoing COVID-19 pandemic provided ample motivation for the importance of this infrastructure, to connect people and institutions. It is likely that telecommunication and information infrastructure may change the employment and educational landscape over time, as well as to lessen the financial travel and subsistence burden of all stakeholders and in doing so make critical resources available for development initiatives. In addition, it is likely to contribute to the reduction of the carbon footprint of the district, caused by the consumption of fossil fuels.
- Mainstreaming of telecommunication and information infrastructure in the district should create additional possibilities for SMME and entrepreneurial development. It will also promote equal and equitable access to all citizens, but particularly also the vulnerable groups in our society.
- Compliance with planning and environmental related legislation. In this context the spatial development frameworks of all three spheres of must be considered, more especially those of the three local municipalities. Their respective SPLUMA By-laws and land use systems are particularly relevant; and

- The visual impact of telecommunication and information infrastructure must be managed and limited.

B.4.11 Water

The Local Municipalities are water service authorities in the District, and they all have Water Master Plans and are also responsible for the development and maintenance of water sources like boreholes; construction, operation, and maintenance of bulk pipeline; construction, operation, and maintenance of reticulation network; construction, process operation and maintenance of water treatment works to ensure rendering of portable water to the community.

The local municipalities are now planning to use Vaal Gamagara water supply to augment the current water shortages due to the depletion of the underground source.

B4.12 Sanitation

Sewerage and sanitation are basic needs of communities which can pose serious health and hygiene risks for communities and the environment at large scale, if not properly managed and monitored.

The Provincial Department of Water and Sanitation and CoGHSTA are running sanitation projects in the district to eradicate inadequate toilets and provide toilets where there is a lack.

This intervention will address the high concern that JTGDM has a percentage of the population with no access to any form of sanitation and large numbers of the population still using pit latrines and compared to the provincial.

B4.13 Solid Waste Management

The JTGDM has established a regional waste management plan that ensures participatory and effective waste management in a sustainable manner.

A professional waste management strategy should adhere to the following principles as stipulated in the JTG waste management Strategy:

1. Increased waste minimisation through recycling and waste re-use;
2. Regionalisation of landfills and centralisation of waste management facilities;
3. Improvement of waste monitoring and establishment of a waste information system;
4. Increased education awareness of households and small-medium businesses regarding waste management;
5. Improved landfill management and waste disposal;
6. Sustainable funding for waste management;
7. Strategic partnerships and arrangements regarding waste management;
8. Enhance waste collection in the local municipalities;
9. Increase skills and capacity building within the waste management sector of the JTGDM; and
10. Enforce and monitor by-laws and waste management arrangements.

B4.14 Refuse Removal

The Joe Morolong Municipality has one landfill facility in Vanzylsrus in which general waste is disposed of. There are no other official licensed landfill sites in the area.

The status of the Vanzylsrus landfill:

Position of site:	Portion Of Skool Plaas Restant 31, Northern Cape Province
Permit: (Please indicate ownership)	John Taolo Gaetsewe District Municipality
Year issued:	12 June 2012
Classification of site:	G:C:B
Type of Operation (end – tip, trench, cell):	Trench
Estimated size of site:	0.6 ha
Estimated remaining life of site:	19 years
Volumes per day, week, or month:	Volumes of waste is not measured
Is cover material available?	Yes
Is drainage sufficient?	Yes
Volumes per day, week, or month:	
Is the site fenced?	Yes
Is there access control?	No
Operating hours:	Mon- Friday from 07h30 until 16h30
Type of equipment used on site:	Tractor and open trailer

The Ga-Segonyana Local Municipality has one licensed landfill site (Kuruman Landfill), which is about 5km from the urban area of Kuruman. The management of the landfill has been outsourced to Uhuru Company. There is no compaction of waste at the landfill site. The machinery present at the Kuruman Landfill site consists of one tractor and a loading vehicle which is in disrepair.

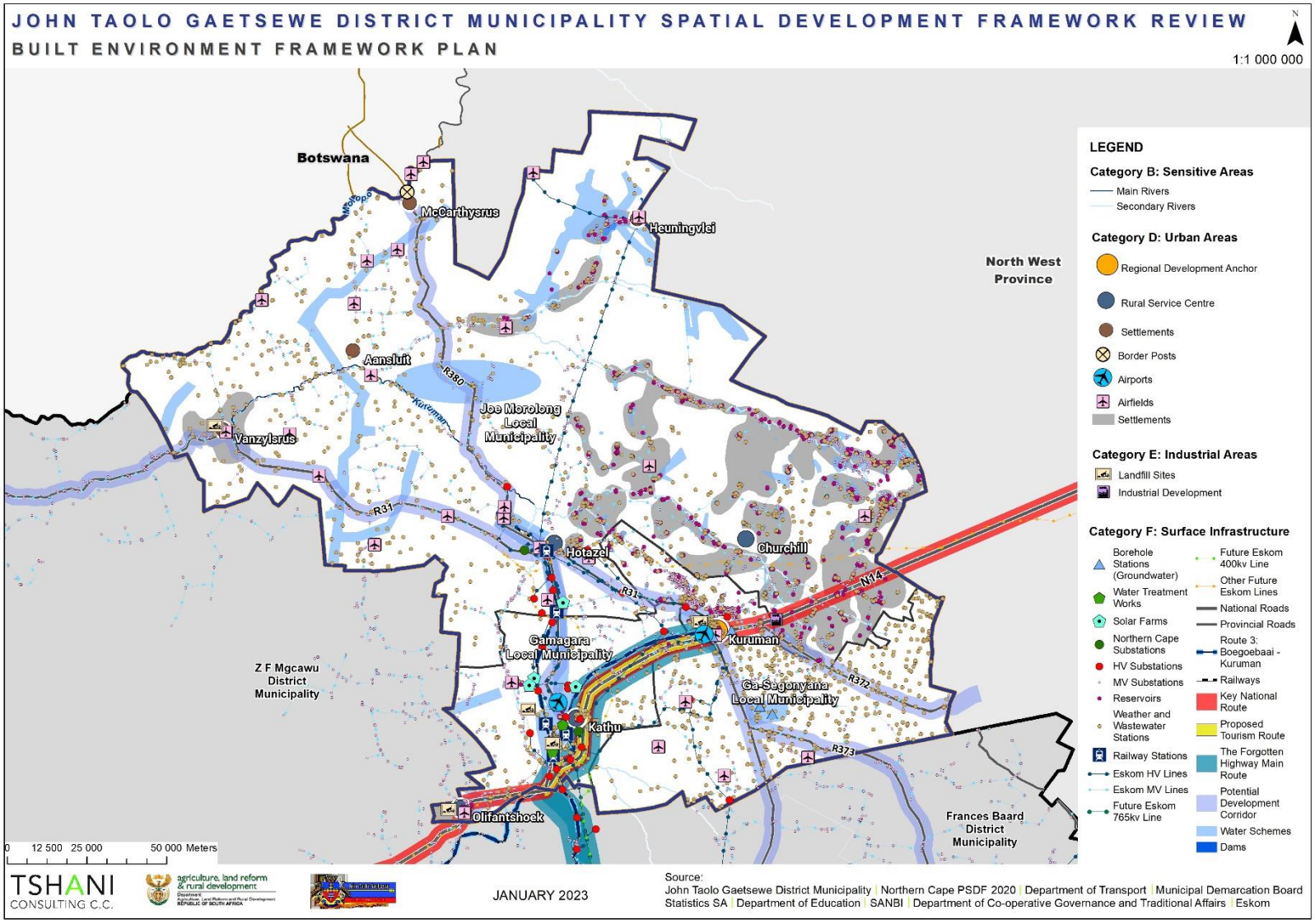
There are three landfills in operation within the Gamagara Local Municipality; they are situated at Olifantshoek, Deben and Dingleton. Hazardous and medical waste is transported and disposed of at a facility in Gauteng. General and household waste is disposed of at landfill sites.

1. Deben landfill
2. Dingleton landfill:
3. Olifantshoek Landfill:

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

- 'Green Exchange'
    - It is a programme whereby the city rewards people with complementary currencies for separating organic and non-organic waste and bringing it to the waste stations.
- Implementation of a litter control programme for the Local municipalities in the district
- Possible Recycle strategies to be implemented.
- Development of partnerships with community-based Organisations & Non-Government
- Waste to energy plant-
    - A catalytic initiative to be located in Ga-Segonyna
    - There must be a suitable location for the plant in Ga-Segonyana Local Municipality
    - There must be strict adherence to environmental legislation, specifically (but not limited):

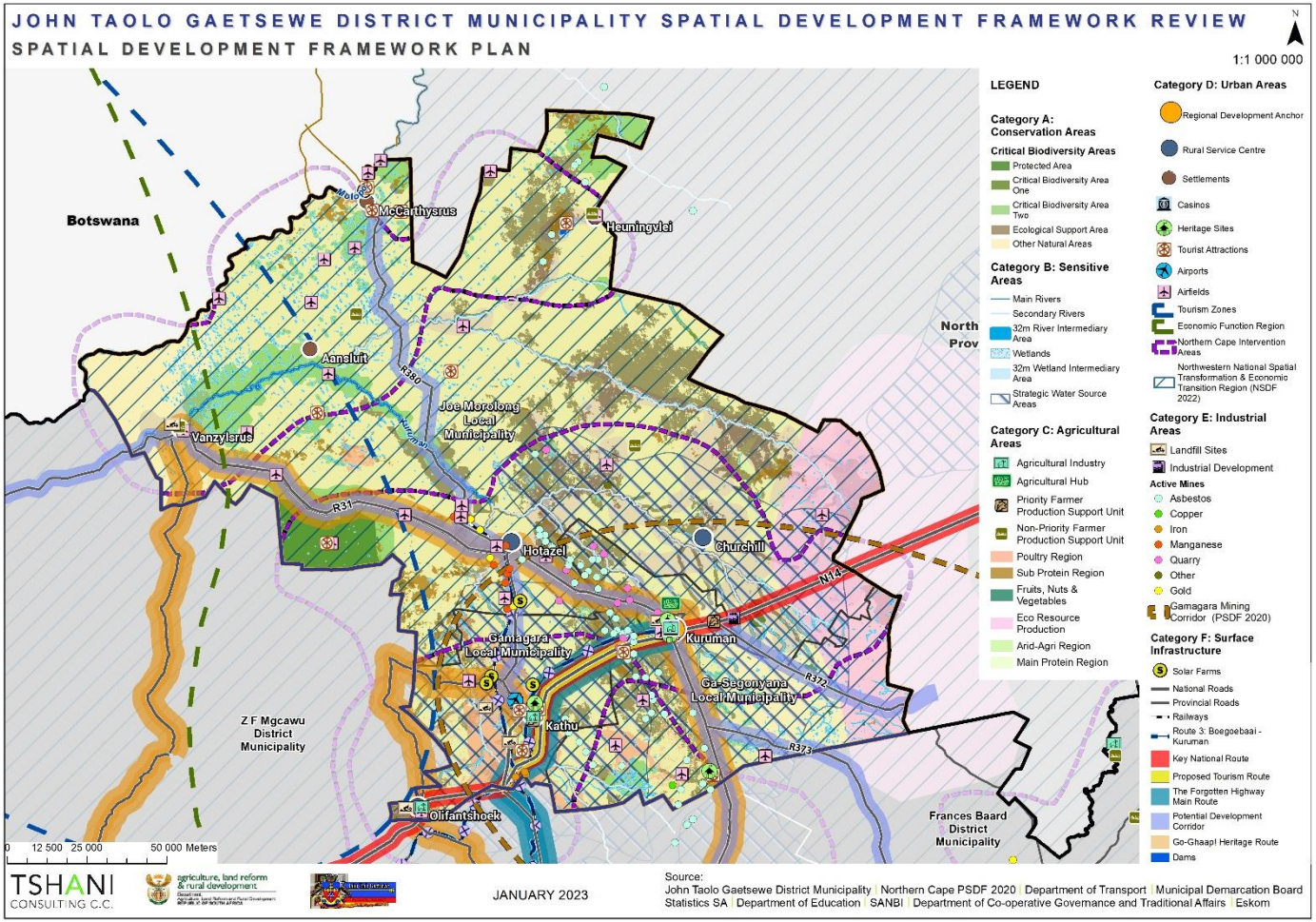
- The National Environmental Management Act; Biodiversity Management Act;
- National Water Management Act;
- Air Quality Management Act;
- Waste Management Act;
- Disaster Management Act;
- National Health Act; and particularly the
- District Environmental Management Framework



PLAN 10: BUILT ENVIRONMENT FRAMEWORK

OVERALL SPATIAL DEVELOPMENT FRAMEWORK

The overall Municipal Spatial Development Framework is an accumulation of all the identified frameworks; built environmental, socio-economic, and biophysical frameworks. These frameworks thus serve as basis for the future development trajectory of the municipality.



PLAN 11: SPATIAL DEVELOPMENT FRAMEWORK

SECTION C: LAND USE MANAGEMENT GUIDELINES

"Bringing nature back to the city is a way to deal with urban sprawl. If cities feel a little more natural, people like to live there rather than moving out and dividing up another piece of land that should not be touched. "-Stone Gossard

The term land use management includes the following activities:

- The regulation of land-use changes such as, for example, the rezoning of a property from residential to commercial use;
- The regulation of 'green fields' land development, i.e., the development of previously undeveloped land;
- The regulation of the subdivision and consolidation of land parcels;
- The regulation of the regularization and upgrading process of informal settlements, neglected city centres and other areas requiring such processes; and
- The facilitation of land development through the more active participation of the municipality in the land development process, especially through public-private partnerships.

Land-use management has two main underlying rationales. The first is the widely felt resistance to the idea of uncontrolled land development and the second is the commonly expressed wish by particular sectors in society to promote various types of desirable land development.

The resistance to uncontrolled development is motivated by a number of concerns, the precise mix of which is determined by the particular social, economic and political contexts of different times and places.

Essentially however these concerns include the following:

- Environmental concerns: uncontrolled development of land can have adverse effects on natural habitats, cultural landscapes and air and water quality.
- Health and safety concerns: uncontrolled development can lead to overcrowding and unsafe building construction. Certain land uses can also be detrimental to the health and safety of neighbours.
- Social control: the control of land uses and building types has long been a means of exerting social control, particularly through the exclusion of certain types of people, household, or economic activity from certain areas through the application of particular development

controls limiting, for instance, plot sizes, plot coverage and home industries.

- Efficiency of infrastructure provision and traffic management: increasingly it has become clear that the where the granting of development permissions is not coupled with the provision of adequate infrastructure and traffic management the consequences can be severe. Similarly, where infrastructure is provided, at high financial cost, without considering likely and relevant land-use and settlement patterns the opportunity costs to society are very high.
- Determination of property values for purposes of rating: the market value of land is the basis on which property valuation is determined and the extent and nature of the development permitted on the land is a key factor in that determination.
- Aesthetic concerns: the control of land development enables government to prescribe certain design parameters for buildings.
- The wish to promote desirable development is also driven by a number of different concerns:
- The land development needs of the market seldom match precisely the social and political needs of government: government may well want to promote a type of land development in an area that the market neglects. It then has to take certain steps to facilitate that development or provide incentives. The history of land ownership in South Africa also inevitably skews the land market in favour of white people, thus creating a situation where the needs of the market reflect only those of an already privileged minority.
- Investment promotion: changing the applicable land-use management instruments is often seen as a prerequisite for attracting certain types of investment to certain areas. This can take the form of both relaxing controls in those areas and increasing controls in other areas which might be more favoured by the market. These strategies are likely to be linked to local economic development initiatives." Investment promotion and red tape reduction are linked as they both aim to create an environment that is conducive to business growth and development. By reducing red tape, governments aim to make it easier for businesses to start and operate, thus creating a more favourable environment for investment.

Land Use Management & the District Municipality

With due regard to the above, the setting of Land Use Management Guidelines in a District Spatial Development Framework poses some complex challenges, given the fact that the District Municipality is not, in the first instance, the primary Land Use Regulator charged with reviewing land development applications.

Rather, it is understood that the function of Land Use Regulator falls within the broadly applicable term "Municipal Planning" and is the responsibility of a designated Land Use Regulator at the local level, which is the relevant Local Municipality (unless this function has expressly been assigned to the District Municipality). It is further understood that all of the Local Municipalities in the JTGDM have been assigned the Municipal Planning function and perform this themselves (or, in certain instances, are assisted by external agencies or make use of service providers).

Therefore, and in line with its mandate, it is accepted that the John Taolo Gaetsewe District Municipality ultimately seeks to support and facilitate activities that would assist the Local Municipalities in the district to formulate appropriate Land Use Management Systems when enabling legislation such as the Spatial Planning & Land Use Management Act 16 of 2013 is implemented.

In the interim, for the purposes of this SDF, the approach adopted is that the Land Use Management Guidelines from the District Municipality's side are intended to assist, guide, and direct the activities of Local Municipalities in day-to-day consideration of their land use management function as well as serve as a platform for the formulation of a LUMS System in future. The three municipalities in the district have their Land Use Schemes that guide all the developments that take place.

Whilst, in terms of the timelines applicable to the implementation of SPLUMA, every LM, although some may be problematic, will have 5 years from the date of implementation of the Act to develop a single, integrated Land Use Scheme and associated regulations (an integrated Land Use Management system), it is proposed that it is possible to set in place procedures and protocols based on adopted principles relating to best practice. This is the ultimate objective of these guidelines.

Accordingly, this section sets out some key elements to a more holistic approach to land use management. These are noted as follows: -

- Firstly, in reflecting on the current land use management system(s) in place, a brief overview of the currently applicable legislation and relevant spatial planning and land use management tools is provided;
- Secondly, in considering the character of the settlement pattern and typical forms of land use arrangements found in the John Taolo Gaetsewe District, the importance of Land Use Management as an activity that underpins the sound use of resources and contributes directly to economic and environmental sustainability is affirmed;
- Thirdly, broad input is given on the need to manage relationships and formulate binding agreements and protocols on how to deal with land use management issues in the district.

SPLUMA Impact

The fact that a complex pattern of fragmented legislation applies across the John Taolo Gaetsewe district may not, in effect, be simply dealt with unless and until the Northern Cape Provincial government enacts Provincial legislation. In this regard, then, it should be noted that the Province is presently engaged in such a law-making process.

Therefore, in the interim, it is suggested that the specific role that John Taolo Gaetsewe DM may be called upon to play in the implementation of SPLUMA will be focused on the following activities: -

- Supporting Local Municipalities to respond to the requirements placed upon them by SPLUMA, in the first instance in taking required decisions regarding the establishment of decision-making bodies (Municipal Tribunals) to consider land use management applications;
- Land use planning: JTGDM will be responsible for overseeing and implementing land use planning in the district, which involves the

creation of land use management plans and ensuring that land use decisions align with the plans.

- Zoning and rezoning: JTGDM will be responsible for the classification of land into different zones and the implementation of zoning regulations.
- Building control: JTGDM will be responsible for enforcing building regulations and issuing building permits to ensure that all construction in the district complies with the relevant regulations.
- Infrastructure development: JTGDM will be responsible for planning and implementing infrastructure development in the district, including roads, water and sanitation, and electrification.
- Environmental management: JTGDM will be responsible for implementing environmental management plans and ensuring that all development in the district considers environmental sustainability.

Spatial Planning Categories

SPCs are consistent with UNESCO's MAB Programme and include all land zonings that are provided for under the existing Zoning Scheme Regulations. The designation of SPCs does not change existing zoning or land-use regulations or legislation. SPCs merely help to clarify and facilitate coherent decision-making that can lead to better zoning, laws, and regulations. The SPCs, furthermore, provide a framework in terms of which land-use decisions can be standardised throughout the province. It is advisable that all zoning scheme regulations be aligned with the SPCs. The SPCs are to be applied in land-use classification at all levels of planning.

A comprehensive set of SPCs and Sub-Categories have been created to serve as a guide for more detailed land-use planning at the district and local municipal sphere. The sub-categories may be refined as required to address site-specific needs at the district and local municipal sphere.

Some of the key applications of SPCs in decision-making and planning include the following:

1. The SPCs provide a system in terms of which all land units or entities within the district will eventually be recorded in the Spatial Planning Information system (SPIsys), facilitating effective administration of land-use issues.
2. The SPCs can be used to indicate both the status quo of official land-use and the desired land-use of all land within a planning area. In addition, they identify specific types of land uses that are not included in the existing Zoning Scheme Regulations, providing for a non-statutory and more detailed land-use classification.
3. The SPCs indicate desired land usage which might in certain instances be aligned with the current zoning of properties and in other instances differ from that.
4. Existing Zoning Scheme Regulations are to be amended/upgraded in order to include these new concepts. It is envisaged that the Provincial Model Scheme Regulations will contain certain new overlay zonings in this regard.
5. The SPCs facilitate decision-making regarding applications for a change in land-use. In this regard, it is important to note that an SPC designation which differs from the current zoning, implies that any new development will be considered a diversion from the status quo, requiring that applications

will have to be considered by the relevant authorities in accordance with specific guidelines.

6. Application of SPCs in natural landscapes – SPC A and SPC B and, to an extent, SPC C areas primarily relate to the natural landscape, which contain the inhabited (human-made) landscape (SPC C.b, D, E, and F).

The Importance of Land Use Management in the John Taolo Gaetsewe District Municipality

From the preceding sections of this document, it is clear that the nature of land use and settlement dynamics in the JTGDM is distinct in that, socio-economically, the patterns observed are dominantly rural and peri-urban in nature, with only a few of the towns exhibiting characteristics of intensifying urban environments.

Within this context, it is acknowledged that the most important economic resources available within the district relate to its natural endowments: mining and potential in the first instance; and scenic attractions as these relate to the possibilities of developing a sustainable tourism industry in the second instance.

If this is accepted, it is necessary, too, to acknowledge that, to a large extent, the dynamics informing people's choices regarding settlement in the areas outside of formal urban environments is less formal in nature (at least, less formal in the legal sense). Settlement patterns appear to be spontaneous in many cases or, at the very least, poorly regulated, with people drawn to settle closer to main transportation routes or to areas where potential economic activity is evident.

In the urban context, this "informality" also is a feature. The existing towns remain important nodes of economic activity (Service Centres), but their effective functioning is deeply compromised by a history of inadequate spatial planning, maintenance of infrastructure and the enforcement of basic land use management and building controls.

Therefore, in order to ensure that the most important resources available to support and facilitate economic development now and in the future, it must be acknowledged that the practise of land use management to engender wise land use is a critical need in the JTGDM.

In order to achieve this objective (of wise land use), it is necessary to accept that, in the John Taolo Gaetsewe district, the possibility of practising sound land use management faces some difficult challenges:

- The challenge, in many cases, of poor local capacity to appreciate the importance of land use management and to support its practise in a technically sound manner. The wise land-use management will result in sustainable development, including the regulation of mining activities, uncontrolled settlement expansion will not take place and environmental damage will be minimised.
- The challenge of the regulatory framework for land use management in rural areas within which overlapping jurisdictions (in both a legal and a perceived sense) complicate decision-making processes in relation to settlement and land development permissions;
- Land degradation is a major feature of specific parts of the JTGDM. The main cause of land degradation is poor land use management.

Land Use Management comprises a Spatial Development Framework; Plans and Reports; Land Use and Development Policies and Strategies; Land Use Management Guidelines and the regulation of land use

involving Zoning Schemes and Building Regulations. The purpose of creating a Land Use Management System is to promote coordinated and environmentally sustainable development. This is important in order to achieve the following:

Amenity	A pleasant living environment is established by residential areas that look good, where people feel safe, and which are close to facilities.
Conservation	Certain buildings, places or areas need to be conserved for future generations.
Convenience	People need to be located in neighbourhoods in order to be able to access employment opportunities and community facilities.
Efficiency and Economy	Maximum use of scarce resources.
General Welfare	By creating a healthy and safe environment, and by ensuring that adequate provision has been made for all necessary services and facilities, the whole community is benefited.
Healthy Living Environment	Land uses such as open spaces and community facilities are required to create healthy communities, whereas the land uses causing nuisance or pollution need to be carefully monitored.
Order	Land uses that are not compatible need to be separated. People need to be certain when they buy or rent property, that their amenity and property values will be protected.
Access of Land	Provision of land and services to enable mixed use precincts to ensure access for marginalised communities and support for livelihood initiatives to fight poverty.
Safety	Land uses harmful to health need to be placed in areas where it can be controlled. Adequate space between neighbouring properties provides for stormwater and fire control.
Social Networking	Social networking provides a platform for individuals and communities to connect, share information, and collaborate on initiatives and projects that benefit their communities. This can help to create a sense of social connectedness and foster collective action towards common goals.

JTGM & SPLUMA Implementation

The section below highlights how the District Municipality is aligning to SPLUMA from a Land Use Management Perspective: -

The President of RSA signed the Spatial Planning and Land Use Management Act no.16 of 2013 on the 02 August 2013, this is a National

Planning Legislation which is intended to create a single and uniform approach towards Spatial Planning and Land Use Management Systems.

The main purposes of the SPLUMA are as follows " To provide a framework for spatial planning and land use management in the Republic; to specify the relationship between the spatial planning and the land use management system and other kinds of planning; to provide for the inclusive, developmental, equitable and efficient spatial planning at the different spheres of government; to provide a framework for the monitoring, coordination and review of the spatial planning and land use management system; to provide a framework for policies, principles, norms and standards for spatial development planning and land use management; to address past spatial and regulatory imbalances; to promote greater consistency and uniformity in the application procedures and decision-making by authorities responsible for land use decisions and development applications; to provide for the establishment, functions and operations of Municipal Planning Tribunals; to provide for the facilitation and enforcement of land use and development measures; and to provide for matters connected therewith.

SPLUMA provides a framework for spatial planning and land use management in South Africa. SPLUMA:

- Specifies the relationship between the spatial planning and the land use management system and other kinds of planning;
- Ensures that the system of spatial planning and land use management promoted social and economic inclusion;
- Provides for development principles, norms, and standards;
- Provides for the sustainable and efficient use of land;
- Provides for cooperative government and intergovernmental relations amongst the national, provincial, and local spheres of government; and
- Redresses the imbalance of the past and to ensure that there is equity in the application of spatial development planning and land use management systems.

SPLUMA applies to the whole of South Africa (urban and rural areas) and governs informal and traditional land use development processes.

General Guidelines Applicable to All Development

The National Building Regulations and Building Standards Act (No 103 of 1977) sets out the standards and requirements for building construction and the approval of building plans. This act also establishes the National Regulator for Compulsory Specifications (NRCS), which is responsible for enforcing the regulations and standards.

Another relevant act is the National Road Traffic Act (No 93 of 1996), which regulates the advertising and signage along national roads and highways in South Africa. This act sets out requirements for the size, placement, and content of advertisements, and restricts the placement of advertisements near intersections and traffic lights to ensure road safety.

The National Environmental Management Act (No 107 of 1998) and the National Environmental Management: Air Quality Act (No 39 of 2004) also play a role in building construction in South Africa, as they set out the

environmental standards and requirements for development projects, including air quality standards and emissions control requirements.

In addition to these national acts, there may also be local bylaws and regulations that affect building construction and advertising in specific areas, so it is important to check with the relevant local authorities before starting any building or advertising project.

Any prospective applicant or developer is required to comply with the requirements of the Community Land Rights Act (CLARA) in terms of procedures and protocols described in Section 20.5. In all aspects they must fully inform the affected communities by means of advertisements in the press and public meetings where any development type as described below is contemplated. The following general guidelines apply: -

- The abstraction of water for any use from any river within the study area must have prior approval from DWAF and should require a full EIA to ensure that environmental impacts are negligible;
- The erection of tunnels for farming as well as the clearing of land where indigenous vegetation is affected is to be subject to an EIA.
- A suitable setback for development from any identified Sub Tropical Thicket Biome and/or indigenous vegetation corridors (conservation area) shall be determined in the EIA process; and
- Should rezoning and subdivision applications be submitted separately for the same property, environmental scoping/EIA's will be required.
- The Motivation Report of any application for development must motivate how the application complies with the principles of the Development Facilitation Act, the development principles, the conceptual framework, and the guidelines contained in this framework plan.
- The motivation Report must be supported by a report confirming availability of a sustainable water supply must be submitted as part of any land use application, a storm water management plan, an agricultural assessment report which considers current and future agricultural potential, with written comment obtained from the Department of Agriculture (if applicable);
- Environmental Impact Assessment/Scoping and ROD Reports will be required.
- A Site Development Plan for all development (including subdivisions) must contain details of proposed development density, coverage, layout, landscaping, building design, position of all structures, stands, and the 100-year flood line above any water course, proposed parking and internal roads.

Defined Nodes Outside of the Urban Edge

These encompass the proposed rural service centres. Shops; service industries, offices and limited size tourist related businesses could be allowed at such nodes. In addition, social, health, education and safety and security facilities are to be encouraged to locate in these nodes. Standard provisions of approved policies, Town Planning controls, building by-laws, aesthetic and signage controls are in place for these areas as defined in municipal policy documents and this SDF.

1. Nature Tourism Areas

These are areas where limited development may occur subject to an environmental assessment and management plan, the STEP guidelines, and associated protocols.

- Limited and regulated tourism facilities; Small accommodation facilities that are low-key, low-impact and in harmony with the natural environment;
- Agricultural activities;
- Existing rural settlement.

Any development contemplated in the Nature Tourism Areas would need to adhere to the Environmental Management Framework, including the following guidelines:

- The development of a site must not be dependent on the creation of a new road. Existing roads may be upgraded to improve access but where there is no existing road, this should inform the type of tourism facility that is developed.
- The maximum carrying capacity for all development sites, until a SEA or EIA has taken place, is 36 beds or 20 small units. All development sites should be well located in the Nature Tourism buffer area to safeguard the sense of place and eco-tourism opportunities available to that site.
- Development of these sites requires a full EIA and a live Environmental Management Plan that addresses, inter alia, the disposal of solid waste.
- Full IEM procedures are to precede any development whereby the precautionary principle shall apply with approval conditions requiring rehabilitation of the environment and specifications regarding the use of the remainder (for example; conservation, private nature reserve etc);

2. No Development Areas

These areas are where no development is to be contemplated:

- No development is to be permitted on any nature reserves and the outer boundary of the vegetation of coastal forests and reserves.
- All river valleys and ground with slopes equal to or exceeding 1 in 3 should be demarcated as no-development zones.
- The locality of launching sites is to be determined by DEDEA.
- Areas below the 1 in 100-year flood line are excluded from development (including boundary walls and fences). The practice of raising the floor level of buildings above the 1:100-year flood line is not favoured from a flood risk point of view.
- Areas required for the rehabilitation of indigenous vegetation identified in the environmental management plan are excluded from development;
- Areas that are developable but cannot be accessed without going through undevelopable land are also regarded as undevelopable.
- Any other areas as determined by DEDEA (such as coastal grasslands).
- Access to rivers is only to be created after specialist evaluation and prior approval from the relevant authorities.
- Due to the dangerous nature of asbestos, areas containing the material should be declared no-go areas.

3. Subdivision of Agricultural Land

The subdivision of farms into multiple individual farms to avoid the rezoning process and/or to achieve de facto residential development is not considered desirable, as it negates the intention and spirit of the zoning categories provided in the Subdivision of Agricultural Land Act 70 of 1970.
The Subdivision of Agricultural Land Act 70 of 1970 (SALA), Scheme 8 Regulations, indicate that the minimum subdivision of agricultural land is 0.8 Hectares. Where no subdivision is involved, a density of one dwelling unit for every 10 Hectares, up to a maximum of 5 dwelling units, is permitted, subject to consent and proof that the farming programme is sustainable and economically viable.

Accordingly, and with due cognisance of the trends and pressures for land development on land currently zoned for agricultural purposes, it is proposed that the guidelines of Subdivision of Agriculture Land Act 70 of 1970 be applied within the John Taolo Gaetsewe District, but with a recommended minimum subdivision size of 10 Hectares for agricultural land.

Should an applicant with to pursue intensive farming activities on land holdings smaller than 10 Hectares, the application for Subdivision of Agricultural Land must be accompanied by a full motivation, including an Agricultural Feasibility Report indicating sustainability of the proposed enterprise.
The development of this land for non- agricultural purposes should only be allowed if:

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

The Department of Agriculture Forestry and Fisheries does not consider anything less than 20 Ha as a viable unit, however, the carrying capacity in the JTG district ranges between 10ha and 16ha per large animal unit. This information is also recommended for inclusion into the draft Land Use Management Guidelines.

The "One Household One Hectare" program is a government initiative aimed at promoting tenure security for rural households. The program provides small-scale farmers with access to land for agricultural purposes, with the goal of increasing food security and improving rural livelihoods.
Under the program, participating households are granted the use of one hectare of land for agricultural production. In exchange, they are expected to make investments in the land and use it for sustainable agriculture practices. The program also provides support services such as training, technical assistance, and access to markets. The program is designed to address the issue of tenure insecurity in rural areas, where small-scale farmers often lack formal ownership rights to the land they work.

Cooperative Governance Approach to Spatial Planning

The Constitution makes it clear that all the three spheres of governments are interdependent and interrelated. The Constitution therefore assigns planning responsibilities to the provinces to undertake the following:

- Implementation of provincial and regional planning policies and regulations as enshrined in Schedules 4 and 5 of the Constitution;
- Implementation and regulations to monitor and support municipalities in exercising their municipal functions.

The Spatial Planning and Land Use Management Act, 2013 (SPLUMA) is a framework act for all spatial planning and land use management in South Africa, which seeks to promote consistency and uniformity in procedures and decision-making as well as addressing historical spatial imbalances and the integration of the principles of sustainable development into land use and planning regulatory tools and legislative instruments. SPLUMA, mandates the Northern Cape Government to be responsible for the co-ordination, integration, and alignment of the following:

- Provincial plans and development strategies with policies of National Government;
- The plans, policies, and development strategies of Provincial Departments; and
- The plans, policies and development strategies of district and local municipalities.

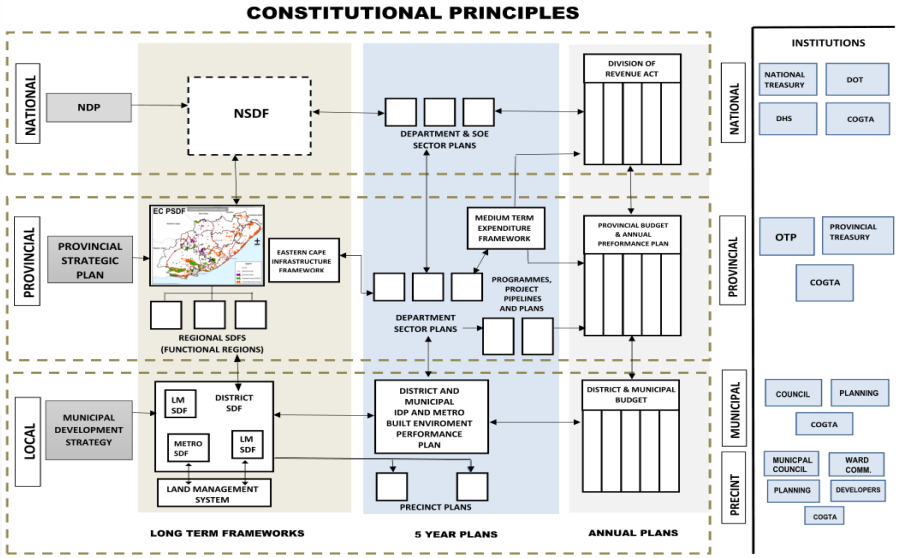
The Northern Cape PSDF role is to facilitate the required coordination, integration, and alignment that SPLUMA prescribes. Section 17 (2) prescribes that all provincial development plans, projects, and programmes must be consistent with the PSDF.

There should be inter-governmental relation (IGR) structures that should be used to facilitate implementation of the PSDF, that is, there should be co-operative approach to spatial planning and land use management to achieve sustainable governance system in the PSDF.

In the Northern Cape, proposals for PSDF governance, amongst others, should include the following:

- A need to establish interdepartmental spatial coordination committee in the Office of the Premier with the necessary oversight to formulate the PSDF, resolve the responsibilities for spatial planning within the provincial government level, remove duplications and recommend that COGTA be responsible for overseeing spatial planning in the province.
- PSDF and MSDFs should ensure limiting peri-urban sprawl through strong local land use controls.
- Establish an integrated LUMS in the province involving all stakeholders.
- Preparation of credible “wall-to wall” SDFs by LMs with both technical and tradition leaders / indigenous approach to land use management.
- Regular capacitating of municipal planners with guidelines from SACPLAN
- There should be CoGTA’s capacity assistance to LMs in terms of co-operative governance.

The above proposals should be implemented within the John Taolo Gaetsewe District as a way of alignment with the province and to guide efficient spatial planning within the Municipality.



In asserting the importance of wise land use and effective land use management in the John Taolo Gaetsewe district, it is necessary to accept that a fundamental challenge is the formulation of a Land Use Management System that draws together as active participants and administrators the parties most involved in land use decisions:

- Local municipalities, who are charged to conduct Municipal Planning and, as such, are acknowledged as Land Use Regulators;
- The traditional authorities (most likely in the form of duly constituted Traditional Councils) who most often regulate land use decisions in rural environments; and
- The communities themselves, who, in many instances, have developed “codes of practice” over generations that guide and inform land use “norms” in their areas.

Aside from the above role players, any functioning system must also draw in the existing role players (e.g., from an environmental perspective, an infrastructure perspective as well as relevant resource perspectives such as agriculture). It is strongly suggested that, in moving toward a situation where a commonly accepted Land Use Management System will be developed once enabling legislation is in place, it is necessary to start to explore the possibilities of formulating locally based Social Compacts in relation to establishing forums for the consideration and recommendation of land use and land development applications. In contemplating such arrangements, role players should be informed and guided by the Inter-Governmental Relations Framework Act (No. 13 of 2005).

SECTION D: IMPLEMENTATION FRAMEWORK PLAN

An implementation plan is a management tool designed to illustrate the critical steps in developing the various sectors within a Municipality. It is a guide that helps the municipality be initiative-taking in developing an identifying any challenges along the way. It also allows any person to fully understand the goals of the municipality. The aim of the Implementation Plan is to assist the municipality achieve their development goals by identifying staged development processes, supporting institutional arrangements as well as defining clear and implementable projects.

The Implementation Framework for this SDF is made up of two parts. The first section comprises of an implementation action matrix that sets out the priority actions needed to bring the SDF proposals into reality The second is an outline and proposed foundation for a "Capital Investment Framework" for John Taolo Gaetsewe District Municipality. This action agenda is organised in relation to the main SDF strategies and includes three main categories of action, namely:

- Policy Actions
- Institutional Actions
- Project Actions

The implementation matrix provides a description of the action, indicates the agency responsible for the action, an estimated timeframe and (where this information is available) provides a high-level indication of the budget required to implement the action. In cases where the implementing agent may be different to the responsible agency, this has also been highlighted.

PART 1: IMPLEMENTATION PLAN

This section serves as the Project Identification and Implementation Plan section of the report. Based on the key development proposals identified in Spatial Proposals and the overall Spatial direction of all sectors of the district municipality. This section also includes an Implementation Plan of the identified projects completed with a list of funders of the projects, as well as budget estimates and the period of Implementation over a three (3) year period linked to the Medium-Term Expenditure Framework (MTEF).

This section serves to conclude the JTGDM Spatial Development Framework by reinforcing the link between the SDF and the IDP. In this regard, the Plans overleaf illustrate the spatial pattern of investment currently being implemented through the IDP and, as such, provides a "picture" of the IDP's planned pattern of expenditure.

Understanding the Implementation Plan Table

The Implementation Plan table includes the following components:

Project Name: This is the title of the project. It also includes a brief description of the project.

Responsible Department: The Responsible department outlines the department which will lead the proposed project. The role of this identified department is responsible for ensuring the Implementation of the project, including presenting the proposal of the project at various tiers to acquire buy-in to the project.

The role of the responsible department further includes the sourcing of Funding for the respective project, preparing the Tender document (should the project be tendered out), ensuring the smooth and timeous implementation of the project. This department may also request to seek assistance from another department should assistance be needed. Their responsibility further includes any applications which need to be made or studies that need to be conducted to acquire funding.

Municipality / Region: The location in which the project will be implemented within.

Source of funding: Identifies suggestions of where the funding can be sourced for the implementation of the project.

Total Project Cost: This is the total cost of the project.

Budget 2022/23: The amount of the Total project cost that is expected to be spent on the project during the 2022/2023 financial year.

Budget 2023/24: The amount of the Total project cost that is expected to be spent on the project during the 2022/2024 financial year.

Budget 2024/25: The amount of the Total project cost that is expected to be spent on the project during the 2024/2025 financial year.

Budget 2025/26: The amount of the Total project cost that is expected to be spent on the project during the 2025/2026 financial year.

Budget 2026/27: The amount of the Total project cost that is expected to be spent on the project during the 2026/2027 financial year.

Project Prioritization Matrix

When it comes to potential and long-term capital expenditure, these projects are usually considered urgent by different stakeholders. In noting that government's resources are limited, and without enough time or funds to tackle them all at once, it becomes important to prioritize these projects towards implementation.

Prioritizing capital projects for expenditure is not an easy process. With many different parties involved, all of which have differing opinions about how projects should be managed, however, implementing strategies to help with project prioritization and creating a prioritization system can make this task more efficient and effective.

Developing a Matrix bis necessary to involve all relevant stakeholders to establish what criteria will be used to judge each of the projects. These criteria will be specific to each Municipality and should be specifically catered to match the Municipality's needs. However, when crafting these criteria, it is important to ensure that they are factors that can be measured objectively and easily rather than subjectively or with difficulty (open to interpretation).

Once the relevant criteria have been identified, a weighting should be allocated to each of the criteria based on a scale of 1 to 5 - with one being the least important and 5 being the most important.

Once each criterion has been identified and weighted, the Matrix can now be used to evaluate specific projects that are identified for capital expenditure in the long-term. Using a similar rating scale (1 – 5), each project will be rated based on the impact that it will have on each criterion identified. For example, a project rating of 1 would indicate that a project will have the least positive impact on a particular criterion (such as ease of implementing); whereas a project rating of 5 would mean that the project will have the most positive impact on the established criterion. For elements that include costing or a direct measurable such as the number of beneficiaries impacted by a project or the potential economic benefit of a project, the investment amount and number of people that benefit from a program can be categorised from 1 – 5 where 5 could be the greatest number of people (e.g., >10,000) or the highest amount of money (e.g., > R500 million). In terms of the example of estimated cost of the development, it would have to be reversed because higher costs are often bad and ill afforded. This would mean that 1 would relate to the highest cost amount (e.g., >R500 million) and 5 would be the least.

Please see below a criteria-based matrix which has been developed for the focus area projects above.

Project Name	Project Owner	Funding Source	Local Municipality	Funded / Unfunded	Funding Committed By	Total Project Cost	Balance	Mtef 2022/23	Mtef 2023/24	Mtef 2024/25	Mtef 2025/26	Mtef 2026/22
Tourism Route Development	Department Of Economic Development And Tourism	Department Of Economic Development And Tourism	All Regions/ Municipalities	Funded	Department Of Economic Development And Tourism	R 650 000,00		R 650 000,00				
Kathu Industrial Park	Nceda	Infrastructure South Africa (Isa) – Catalytic Projects Fund		Unfunded								
Community Network Program	Zenzeleni Non-Profit Company / DEDaT	Funding From The Government Of The United Kingdom Of Great Britain And Northern Ireland Acting Through The Foreign, Commonwealth & Development Office	Ga-Segonyana LM	Funded		R3 907 789, 90						

Department Of Education												
Project Name	Project Owner	Funding Source	Local Municipality	Funded / Unfunded	Funding Committed By	Total Project Cost	Balance	Mtef 2022/23	Mtef 2023/24	Mtef 2024/25	Mtef 2025/26	Mtef 2026/22
Ab Kolwane Primary School	Education	Education	Ga-Segonyana			R 13 483 074,00						
Lareng Primary School	Education	Education	Ga-Segonyana			R 14 182 045,00						
Mahikaneng Primary School	Education	Education	Ga-Segonyana			R 14 604 258,00						
Jtg Dithakong New School And Hostel	Education	Education	Joe Morolong									
Bankhare Bodulong Off-Shoot Primary School	Education	Education	Ga-Segonyana									
Deben Off-Shoot Primary School	Education	Education	Gamagara			R 76,599,739						
Jtg Dithakong New School And Hostel	Education	Education	Joe Morolong			R 109 277 807,00						
Kuruman New English Medium Secondary School (Wrenchville/Kalahari)	Education	Education	Ga-Segonyana			R 98,398,802						
Laerskool Kathu Offshoot	Education	Education	Gamagara			R 76 599 739,00						

Magojaneng New Primary School	Education	Education	Ga-Segonyana			R 85 654 069,00						
Magojaneng New Secondary School	Education	Education	Ga-Segonyana			R 79 751 102,00						

Public Works												
Project Name	**Project Owner**	**Funding Source**	**Local Municipality**	**Funded / Unfunded**	**Funding Committed By**	**Total Project Cost**	**Balance**	**Mtef 2022/23**	**Mtef 2023/24**	**Mtef 2024/25**	**Mtef 2025/26**	**Mtef 2026/22**
Blading Project Jtg Proj 2 (Ntalo Inst)	Public Works	Public Works				R 16 621 000,00						
Spot Regravelling Between Severn And Concordia Dr3463	Public Works	Public Works				R 15 849 000,00						
Blading Project Jtg Proj 1 (Maria Carm)	Public Works	Public Works				R 16 802 000,00						
Expand Internet Connectivity To 220 Public Libraries	Dsac	Dsac				R4,68 m						

Rural Sport Development	Dsac	Dsac	Joe Morolong & Ga-Segonyana			R 500 000,00						
Skate Boarding	Dsac	Dsac										
Supporting Professional Sport	Dsac	Dsac										
Support To Community Arts Centres	Dsac	Dsac										
Celebration Of National And Historical Days	Dsac	Dsac										
Project Name	**Project Owner**	**Funding Source**	**Local Municipality**	**Funded / Unfunded**	**Funding Committed By**	**Total Project Cost**	**Balance**	**Mtef 2022/23**	**Mtef 2023/24**	**Mtef 2024/25**	**Mtef 2025/26**	**Mtef 2026/22**
Feasibility Study	Dsac	Dsac										
Langeberg War Rlhr	Dsac	Dsac										
Garden Of Remembrance	Dsac	Dsac										
Alternative Memoralisation	Dsac	Dsac										
Department Of Mineral Resources And Energy												

Electrification Of 150hh In Bankhara Ph2	Dmre	Dmre	Ga-Segonyana									
Electrification Of 850hh In Diamond View Ph2	Dmre	Dmre										
Electrification Of 300hh In Ditloung Ext Ph1	Dmre	Dmre										
Electrification Of 500hh In Mapoteng Ph3	Dmre	Dmre	Ga-Segonyana									

Municipal Infrastructure Grants & Local Municipality												
Project Name	**Project Owner**	**Funding Source**	**Local Municipality**	**Funded / Unfunded**	**Funding Committed By**	**Total Project Cost**	**Balance**	**Mtef 2022/23**	**Mtef 2023/24**	**Mtef 2024/25**	**Mtef 2025/26**	**Mtef 2026/22**
Mig 1510: Gamagara : Dibeng Sewer Network Phase 4 – 797 Stands	Gamagara Lm	Mig & Lm	Gamagara	Funded	Mig & Lm	R 21 584 800,52	R 12 711 850,00	R 12 711 850,00				
Mig 1459: Ga-Segonyana: Construction Of	Ga-Segonyana	Mig & Lm	Ga-Segonyana	Funded	Mig & Lm	R 34 990 753,00	R 3 301 408,35					

Kuruman Fire Station												
Mig 1611: Vergenoeg : New Lined Double Pit Toilets	Ga-Segonyana	Mig & Lm	Ga-Segonyana	Funded	Mig & Lm	R 12 012 147,00	R 11 652 620,05	R 12 012 146,55				
Mig 1629: Maruping - Itireleng Section: Extention Of Water Network	Ga-Segonyana	Mig & Lm	Ga-Segonyana	Funded	Mig & Lm	R 9 998 644,00	R 9 378 578,17	R 9 998 643,80				
Mig 1639: Kagung Rethabile & Harvard Section Upgrading Internal Roads From Gravel To Paved	Ga-Segonyana	Mig & Lm	Ga-Segonyana	Funded	Mig & Lm	R 13 848 949,00	R 12 984 057,99	R 13 000 000,00				
Project Name	**Project Owner**	**Funding Source**	**Local Municipality**	**Funded / Unfunded**	**Funding Committed By**	**Total Project Cost**	**Balance**	**Mtef 2022/23**	**Mtef 2023/24**	**Mtef 2024/25**	**Mtef 2025/26**	**Mtef 2026/22**
Mig 1599: Joe Morolong: Washington Internal Road	Joe Morolong	Mig & Lm	Joe Morolong	Funded	Mig & Lm	R 15 342 061,00	R 8 230 604,75	R 8 200 000,00				

Mig 1598: Joe Morolong: Tsaelengwe Internal Road	Joe Morolong	Mig & Lm	Joe Morolong	Funded	Mig & Lm	R 23 209 171,00	R 9 316 058,15	R 11 900 000,00				
Mig 1590: Joe Morolong: Penryn Water Supply	Joe Morolong	Mig & Lm	Joe Morolong	Funded	Mig & Lm	R 13 123 078,00	R 6 989 767,55	R 7 124 000,00				
Mig 1594: Joe Morolong: Shalaneng Water Infrastructure	Joe Morolong	Mig & Lm	Joe Morolong	Funded	Mig & Lm	R 16 570 047,00	R 12 685 572,73	R 13 500 000,00				
Mig 1618: Ganghaai Water Supply	Joe Morolong	Mig & Lm	Joe Morolong	Funded	Mig & Lm	R 5 647 057,00	R 5 647 057,00	R 5 647 057,00				
Mig 1617: Perdmonkie Village Water Supply (Molomo-Wa-Petsona)	Joe Morolong	Mig & Lm	Joe Morolong	Funded	Mig & Lm	R 14 465 000,00	R 14 465 000,00	R 14 465 000,00				
Mig 1595: Goodhope: Dry Sanitation	Joe Morolong	Mig & Lm	Joe Morolong	Funded	Mig & Lm	R 1 291 439,00	R 1 291 439,00	R 1 291 439,00				
Mig 1619: Rowell	Joe Morolong	Mig & Lm	Joe Morolong	Funded	Mig & Lm	R 4 319	R 4 319 716,00	R 4 319				

1&2: Dry Sanitation						716,00		716,00				

Department Of Social Development												
Project Name	**Project Owner**	**Funding Source**	**Local Municipality**	**Funded / Unfunded**	**Funding Committed By**	**Total Project Cost**	**Balance**	**Mtef 2022/23**	**Mtef 2023/24**	**Mtef 2024/25**	**Mtef 2025/26**	**Mtef 2026/22**
Gamagara Ysc		Dsd	Gamagara Lm	Funded	Dsd	R 126 153,85			R 126 153,85	R 126 153,85	R 126 153,85	
Seoding Cme		Dsd	Gasegonyana Lm	Unfunded	Dsd	R00.00			R -	R -	R -	
Seoding Ysc		Dsd	Gasegonyana Lm	Funded	Dsd	R 126 153,85			R 126 153,85	R 126 153,85	R 126 153,85	
Promise Land Cme		Dsd	Gasegonyana Lm	Unfunded	Dsd	R00.00			R -	R -	R -	
Kutlwano Ysc		Dsd	Joe Morolong Lm	Funded	Dsd	R 126 153,85			R 126 153,85	R 126 153,85	R 126 153,85	
Remmoqo Cme		Dsd	Joe Morolong Lm	Unfunded	Dsd	R00.00			R -	R -	R -	
Banana Ba Thari Ysc		Dsd	Joe Morolong Lm	Funded	Dsd	R 126 153,85			R 126 153,85	R 126 153,85	R 126 153,85	
Project Name	**Project Owner**	**Funding Source**	**Local Municipality**	**Funded / Unfunded**	**Funding Committed By**	**Total Project Cost**	**Balance**	**Mtef 2022/23**	**Mtef 2023/24**	**Mtef 2024/25**	**Mtef 2025/26**	**Mtef 2026/22**

Bokamoso Ysc		Dsd	Joe Morolong Lm	Funded	Dsd	R 126 153,85			R 126 153,85	R 126 153,85	R 126 153,85	
Ipopeng Support Group Orphas And Vulnerable People		Dsd	Joe Morolong Lm	Funded	Dsd	R 116 501,00			R 222 110,00	R 222 110,00	R 222 110,00	
Camden Cme		Dsd	Joe Morolong Lm	Unfunded	Dsd	R00.00			R -	R -	R -	
Kopanang Ysc		Dsd	Joe Morolong Lm	Funded	Dsd	R 126 153,85			R 126 153,85	R 126 153,85	R 126 153,85	
Perth Ysc		Dsd	Joe Morolong Lm	Funded	Dsd	R00.00			R 126 153,85	R 126 153,85	R 126 153,85	
Housing												
Gamagara Kathu 5700		Housing	Gamagara									
Kathu Bulk		Housing	Gamagara									
Bankhara Bodulong 63		Housing	Gasegonyana									
Wrenchville 200		Housing	Gasegonyana									

Project Name	Project Owner	Funding Source	Local Municipality	Funded / Unfunded	Funding Committed By	Total Project Cost	Balance	Mtef 2022/23	Mtef 2023/24	Mtef 2024/25	Mtef 2025/26	Mtef 2026/22
Promised Land 5662 Bulk		Housing	Gasegonyana									
Magobing 89		Housing	Gasegonyana									
Military Veteran		Housing	Gasegonyana									
Individuals		Housing	All Jtg									
Mig 1510: Gamagara: Dibeng Sewer Network Phase 4 – 797 Stands		Housing	Gamagara									
Mig 1459: Ga-Segonyana: Construction Of Kuruma		Housing	Ga-Segonyana									

n Fire Station												
Mig 1611: Vergenoeg: New Lined Double Pit Toilets		Housing	Ga-Segonyana									
Mig 1629: Marupiing - Itireleng Section : Extention Of Water Network		Housing	Ga-Segonyana									
Project Name	**Project Owner**	**Funding Source**	**Local Municipality**	**Funded / Unfunded**	**Funding Committed By**	**Total Project Cost**	**Balance**	**Mtef 2022/23**	**Mtef 2023/24**	**Mtef 2024/25**	**Mtef 2025/26**	**Mtef 2026/22**
Mig 1639: Kagung Rethabile & Harvard Section Upgrading		Housing	Ga-Segonyana									

Internal Roads From Gravel To Paved												
Mig 1599: Joe Morolong: Washington Internal Road		Housing	Joe Morolong									
Mig 1598: Joe Morolong: Tsaelengwe Internal Road		Housing	Joe Morolong									

Project Name	Project Owner	Funding Source	Local Municipality	Funded / Unfunded	Funding Committed By	Total Project Cost	Balance	Mtef 2022/23	Mtef 2023/24	Mtef 2024/25	Mtef 2025/26	Mtef 2026/22
Mig 1590: Joe Morolong: Penryn Water Supply		Housing	Joe Morolong									
Mig 1594: Joe Morolong: Shalaneng Water Infrastructure		Housing	Joe Morolong									
Mig 1618: Ganghaai Water Supply		Housing	Joe Morolong									
Mig 1617: Perdmonkie Village Water Supply (Molomo-Wa-Petsona)		Housing	Joe Morolong									
Mig 1595: Goodho		Housing	Joe Morolong									

pe: Dry Sanitation												
Mig 1619: Rowell 1&2: Dry Sanitation		Housing	Joe Morolong									
Project Name	**Project Owner**	**Funding Source**	**Local Municipality**	**Funded / Unfunded**	**Funding Committed By**	**Total Project Cost**	**Balance**	**Mtef 2022/23**	**Mtef 2023/24**	**Mtef 2024/25**	**Mtef 2025/26**	**Mtef 2026/22**
Vaal Gamagara Bws Phase 1			Gamagara									
Construction Of Water Supply Augmentation In Kagung And West Derby			Ga-Segonyana									
Extension Of Pietbos Water Supply			Ga-Segonyana									
Refurbishment Of Non-Functional Boreholes And			Ga-Segonyana									

General Water Infrastructure												
Maruping And Batlharos Bulk Water Supply Phase 3			Ga-Segonyana									
Project Name	**Project Owner**	**Funding Source**	**Local Municipality**	**Funded / Unfunded**	**Funding Committed By**	**Total Project Cost**	**Balance**	**Mtef 2022/23**	**Mtef 2023/24**	**Mtef 2024/25**	**Mtef 2025/26**	**Mtef 2026/22**
Magojaneng And Tswelelopele Water Supply			Ga-Segonyana									
Mokalamosane Water Supply			Ga-Segonyana									
Promise Land Bulk Water Supply			Ga-Segonyana									
Upgrading Of Internal Water Supply In Kuruman And			Ga-Segonyana									

Wrenchville												
Mmamebe Water Supply			Joe Morolong									
Majankeng Water Supply			Joe Morolong									
Molatswaneng Water Supply			Joe Morolong									
Project Name	**Project Owner**	**Funding Source**	**Local Municipality**	**Funded / Unfunded**	**Funding Committed By**	**Total Project Cost**	**Balance**	**Mtef 2022/23**	**Mtef 2023/24**	**Mtef 2024/25**	**Mtef 2025/26**	**Mtef 2026/22**
Mentu Water Supply			Joe Morolong									
Gamakgatle Water Supply			Joe Morolong									
Gamatlong Water Supply			Joe Morolong									
Gasehunelo Wyk 4			Joe Morolong									
Dithakong Water Supply Phase 5			Joe Morolong									
Heiningsvlei - Gamokwane			Joe Morolong									

Water Supply												
Gatshekedi Water Supply			Joe Morolong									
Resealing Of Reservoir In Olifantshoek			Gamagara									

Project Name	Project Owner	Funding Source	Local Municipality	Funded / Unfunded	Funding Committed By	Total Project Cost	Balance	Mtef 2022/23	Mtef 2023/24	Mtef 2024/25	Mtef 2025/26	Mtef 2026/22
1. Groudwater Supply In Olifantshoek: Construction Of Bulk Link Line From 6 Boreholes To 7ml Reservoir : Phase 1			Gamagara									
Replacement Of Asbesto			Gamagara									

s Cement Pipes In Kathu												
Groundwater Supply In Olifantshoek: Construction Of Bulk Water Link Line From 6 Boreholes To 7ml Reservoir : Phase 2			Gamagara									

Project Name	Project Owner	Funding Source	Local Municipality	Funded / Unfunded	Funding Committed By	Total Project Cost	Balance	Mtef 2022/23	Mtef 2023/24	Mtef 2024/25	Mtef 2025/26	Mtef 2026/22
Kathu Bws Phase 1 (Seshen g)			Gamagara									
Vaal Gamagara Bws Phase 2			Gamagara									
Dikhing Water Supply			Joe Morolong									

Heiso Water Supply			Joe Morolong									
Kuruman Wwtw And Bulk Sewer (Feasibility Study)			Ga-Segonyana									
Bojelapotsane Water Supply			Joe Morolong									
Bush Buck Water Supply			Joe Morolong									
Metsimantsi Wyk 3, 4, & 6			Joe Morolong									
Project Name	**Project Owner**	**Funding Source**	**Local Municipality**	**Funded / Unfunded**	**Funding Committed By**	**Total Project Cost**	**Balance**	**Mtef 2022/23**	**Mtef 2023/24**	**Mtef 2024/25**	**Mtef 2025/26**	**Mtef 2026/22**
Geelboom Water Supply			Ga-Segonyana									
Rural Refurbishment			Joe Morolong									
Extension Of Bankhara Bodulong Bulk Water Supply			Ga-Segonyana									

Extension Of New Mokala-Mosesane Bulk Water Supply			Ga-Segonyana									
Kortnight Water Supply			Joe Morolong									
Madula Ranch Water Supply			Joe Morolong									
Doxon 1 & 2 Water Supply			Joe Morolong									
Churchill / Esperenza Water Supply			Joe Morolong									
Olifantshoek Gw Development Phase 2b			Gamagara									

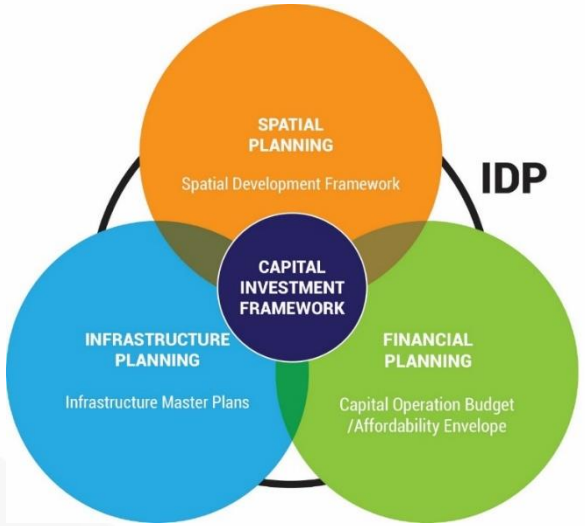
PART 2: CAPITAL INVESTMENT FRAMEWORK

A Capital Investment Framework (CIF) is a particularly important component of the Spatial Development Framework (SDF). CIF is a sound step towards a more systematic approach to infrastructure planning and coordination.

Legislative Requirements

The Spatial Planning and Land Use Management Act 16 of 2013 requires that municipal spatial development frameworks determine a Capital Expenditure Framework (CEF) for the municipality's development programmes, depicted spatially. SPLUMA does not elaborate on the content or purpose of a Capital Expenditure Framework or distinguish between the focus of such a CEF in district versus local municipal SDFs. In line with current thinking within National Treasury, this SDF contains a "Capital Investment Framework" (CIF), which is the foundation for more effective integration of the municipality's spatial development strategies with the IDP and budget. These instruments are central to implementation and unless the implementation framework of an SDF connects explicitly with these, there is little chance of the proposals being realised. By providing more specific guidance on what investments should be made where and in what order of priority, will ensure alignment between the municipality's strategies, plans and policies. In addition, the risk that budget allocations undermine or contradict the SDF are mitigated.

The John Taolo Gaetsewe District Municipality SDF's key spatial strategies are central to financial sustainability and should inform the district's approach to its Capital Expenditure Framework. Among these strategies, regional accessibility is key to inclusive and equitable growth and co-ordinated growth management is of particular importance. The District's Capital Expenditure Framework is also an essential tool for realising the SDF's fourth, foundation strategy - the need to plan, budget and manage as one government. Developing the CEF into an effective tool for co-ordinated development based on a shared set of development strategies and speaks directly to the municipalities mandate to co-ordinate infrastructure planning.



Preparing a Capital Expenditure Framework

This section refers to the preparation of a Capital Expenditure Framework supported by a Medium-Term Integrated Infrastructure Investment Framework (MTIIF).

Several tools exist to project the capital investment needs in space, against which the available resources can be matched, sequenced, and prioritised. This is informed by the leadership priorities of the respective councils.

Why Undertake Spatial Integrated Infrastructure Investment Planning

- Resources are limited.
- Municipalities in the district need to understand the drivers of growth and respond with infrastructure to support growth and development – no more, no less.
- Planning is fragmented and regional scale issues are missed in local scale planning.
- The most appropriate funding mechanisms need to be selected to match the source of the demand, i.e., balance grant funding, municipal own sources (including borrowing), development charges and Public-Private Partnerships (PPPs).
- Costs vary in space and spatial planning decisions may have long-term consequences.
- There is a need to balance investment in what you have (asset renewal) versus creating new infrastructure to address backlogs This can be described as catering for growth and the ability to operate and maintain infrastructure in the long-term.

What Should a Capital Expenditure Framework Look Like?

The underlying questions that the CEF needs to provide guidance on is:

- How much do we need to spend where and on what?
- Is the spatial growth trajectory affordable now and sustainable on an ongoing basis?
- How do we ensure that investment planning is supporting the local and district municipalities' SDF Vision Directives? Does it enable the implementation of the SDF's spatial proposals?

To answer these questions, the ideal function of a Medium-Term Integrated Infrastructure Investment Framework (MTIIF) is to:

- Project the impact that the anticipated population and future economic growth and service delivery targets (to address backlogs), is likely to have on the demand for infrastructure services, and identify where this demand will occur in space;
- Estimate the cost of the infrastructure required to service this demand, given its location;
- Project the timing of investment required to "unlock" developable land;
- Account for the capital that is required to renew existing assets;
- Identify the most appropriate funding mechanisms for the overall capital investment requirements, as well as any potential funding gaps; and

- Identify the trade-offs that need to be made if there is a funding shortfall. This may include adjusting growth forecasts; revising the levels of service or technical solution to the service demand; adjusting the location of development; or increasing the available funding to match the investment need (e.g., increased borrowing or increased rates and tariffs).

The above scope has clear overlaps with engineering master planning and the capital budgeting processes. Rather than seeing this as an over-ambitious task, the idea is that these three planning processes (spatial, technical, and financial) should be undertaken simultaneously and iteratively. A MTIIIF, as described above, can only be done if some level of engineering master planning has been undertaken. Likewise, a capital budget can only be concluded once the competing needs have been addressed in a balanced and fair manner. Importantly, the Capital Expenditure Framework, based on the findings of the MTIIIF, should recommend investment priorities within the context of the Council's leadership's priorities within a longer-term view than the capital budget and should consider the investment pipeline related to the phasing of growth and development.

How Would One Do This

The conceptual methodology that has been used to undertake this type of long-term infrastructure investment planning is as follows:

- Have a common set of growth assumptions. These may need to be varied or adjusted over time, which implies a flexible model that can vary assumptions and produce future implications. Growth assumptions should have a solid evidence base;
- Project forward over a sufficient time frame to allow for proper infrastructure planning and for life cycle costing of decisions. Between 20-30 years is an appropriate time frame;
- Use the growth projections, backlogs, levels of service, and evidence-based unit demands to project the service demands in a spatially disaggregated way as possible. Differentiate users with distinct consumption patterns, or with clear revenue or funding characteristics;
- Once the future service demands are understood, these can be costed by either identifying projects to address the demands (where master planning has been undertaken), or by applying high level unit costs to the future demands. Unit costs should be spatially differentiated if possible. A project-level assessment allows for more spatial differentiation of the costs;
- Use technical asset registers to calculate the cost of asset renewal based on prevailing costs and asset condition;
- Match the funding stream to the type of infrastructure required, i.e., conditional grants should be allocated to their intended beneficiaries or service, and development charges should be allocated to nonindigent residential development and non-residential development based on the municipal development charges policy. The balance of the funding will need to come from municipal resources (reserves and borrowing); and

- Once a capital programme has been determined and aligned to spatial planning objectives, the operating account implications can be calculated to assess the on-going affordability of the growth plan. This will also inform assessments of borrowing capacity. In sophisticated analyses, these operating costs can be varied in space according to the authority providing the service and their underlying cost drivers.

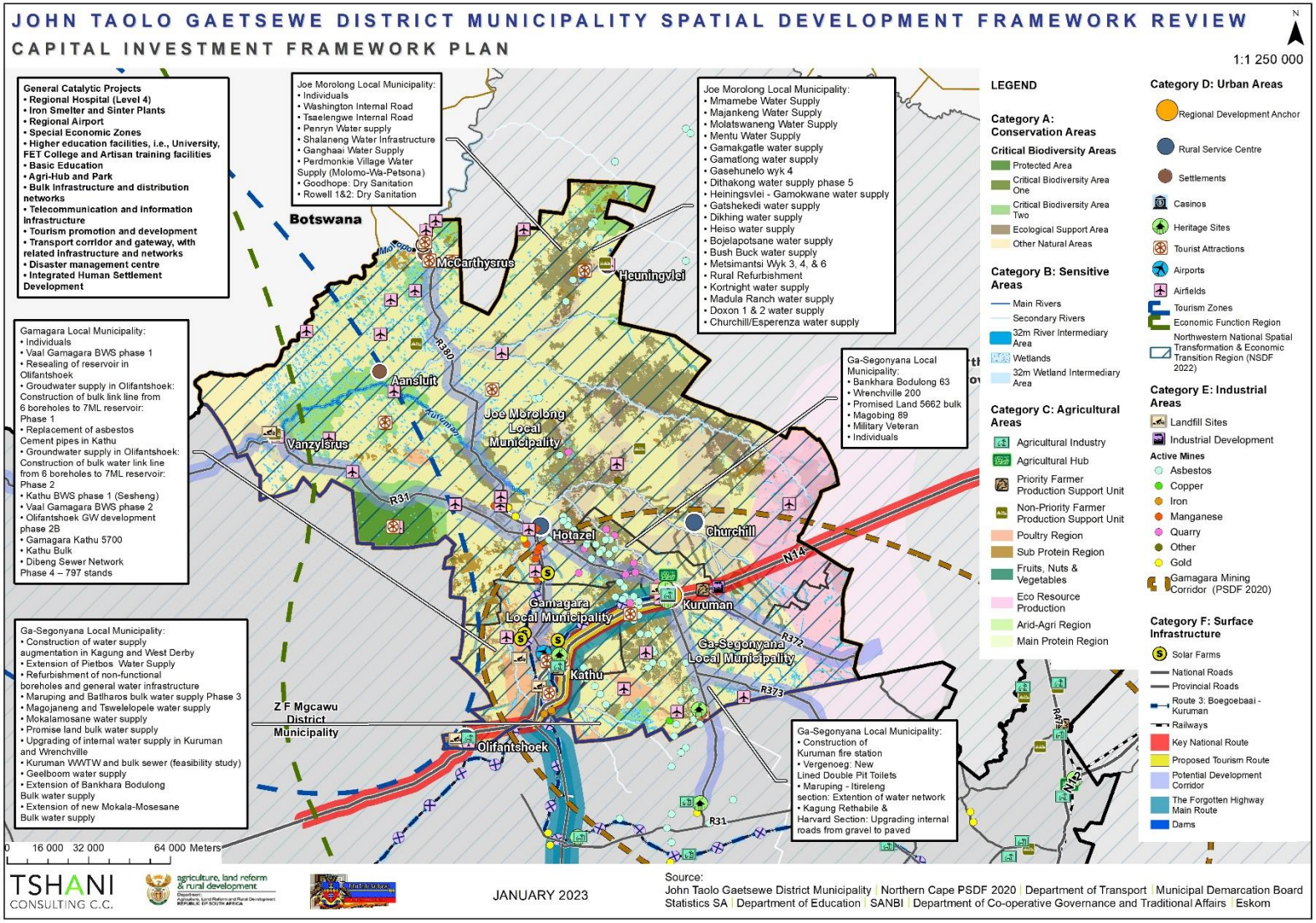
What Would this Exercise Produce?

The potential outputs of a long-term infrastructure planning process are multiple and varied and depend on the level of effort and funding that is allocated to the exercise. The following potential outputs, projected over a period of 20-30 years, are listed in order of level of effort, from lowest to highest, together with the benefits that such a consolidated set of planning instruments would produce.

Preparing a Pipeline of Projects

A Capital Expenditure Framework should endeavour to articulate a portfolio of investment priorities aligned to strategic development and spatial planning objectives in the municipalities' IDP and SDFs. The CEF should be informed by the above-mentioned MTIIIF, and position these within a pipeline based on a robust project preparation methodology. This will allow for the progressive realisation of development projects and avoid wasteful expenditure based on poor project planning. In addition, this will empower the DM to ensure that major investment projects are adequately prepared and prioritised in a manner that they do not compete with one another for the same investment resources, and the most critical investment projects are prioritised based on an understanding of the DM's long-term sustainability. This is critical in the context of substantial fiscal constraints. There are three important questions to consider when presenting this pipeline:

- Are the proposed projects supporting or detracting from the IDP Priorities and SDF Strategies?
- Is there a line of sight from the DM's holistic understanding of its growth projections (demand), backlogs (capital and operating), network functionality, affordability envelope and financial sustainability;
- Are the resources (people and funding) present and available to run the project through a rigorous project preparation?



PLAN 12: CAPITAL INVESTMENT FRAMEWORK

SECTION E CONCLUSION

"There is no logic that can be superimposed on the city; people make it, and it is to them, not buildings, that we must fit our plans."- Jane Jacobs

In conclusion, this section serves as a Draft Spatial Development Framework for John Taolo Gaetsewe Municipality.

It is envisaged that over the next 20 – 30-years, the district will be a prominent Municipality that is built upon the vision set forth in this SDF, supported by the Municipal IDP. The proposals will be realised through key interventions, by developing strong infrastructure linkages with the neighbouring municipalities.

Based on state investment in infrastructure linkages and private sector investment in existing and new industries, the major settlements identified for the opportunity, support, enablement, research, diversification, and connectivity, it is envisaged that an integrated and well-planned, good quality human settlements and increased employment will accompany the growth within the Municipality.