Development of the **LAINGSBURG MUNICIPALITY** SPATIAL DEVELOPMENT FRAMEWORK

Phase 4: Draft Spatial Development Framework (Text and Mapping)

October 2024

agriculture, land reform & rural development
Department:
Agriculture, Land Reform and Rural Development
REPUBLIC OF SOUTH AFRICA

TSHANI CONSULTING C.C.

TSHANI
CONSULTING C.C.

CONTACTUS

Tyger Terraces II, DJ wood Way, Bellville, Cape Town, 7535

082 940 2502

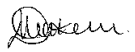
086 435 7631

info@tshani.co.za

DOCUMENT CONTROL SHEET

Project	Review of the Spatial Development Framework for Laingsburg	**Rf.**	WC004

Report Status	Draft Spatial Development Framework (Text and Mapping)		
Submission Date	September 2024		
Client	Laingsburg Local Municipality 2 Van Riebeek Street Laingsburg 6900	**Consultant / Applicant**	Tshani Consulting CC Tyger Terraces II, DJ wood Way Bellville Cape Town 7535

Prepared By	Bongane Mpande Muvhofololi Makhema	Town Planner C/9612/2023 (SACPLAN) Town Planner C/9933/2023 (SACPLAN)	
Checked By	Darshika Parbhoo	Professional Town Planner A/2908/2019(SACPLAN)	
Approved By	Kreason Naidoo	Professional Town Planner A/1454/2011 (SACPLAN)	

RECORD OF REVISION

Revision No.	Status	Description	Date
1	Draft	Draft Spatial Development Framework (Text and Mapping)	24 September 2024
2	Draft	Draft Spatial Development Framework (Text and Mapping)	02 October 2024
3	Final Draft	Draft Spatial Development Framework (Text and Mapping)	16 October 2024

TABLE OF CONTENTS

LIST OF PLANS

LIST OF TABLES

LIST OF DIAGRAMS

LIST OF IMAGES

LIST OF ACRONYMS

CBA	Critical Biodiversity Areas
CEA	Critical Environmental Areas
CoGTA	Cooperative Governance and Traditional Affairs
COO	Chief Operating Officer
CKDM	Central Karoo District Municipality
CSIR	Council for Scientific and Industrial Research
DALRRD	Department of Agriculture, Land Reform, and Rural Development
DM	District Municipality
Du	Dwelling Unit
e.g.,	Example
EMF	Environmental Management Framework
EMP	Environmental Management Plan
FAR	Floor Area Ratio
FPSU	Farmer production support unit
ha	Hectare
IDP	Integrated Development Framework
IGR	Inter-Government Relations
IPCC	Intergovernmental Panel on Climate Change
IWMP	Integrated Waste Management Plan
ITP	Integrated Transport Plan
km	kilometre

km²	square kilometres
LED	Local Economic Development
LHR	Liberation Heritage Route
LLM	Laingsburg Local Municipality
LM	Local Municipality
LUMS	Land Use Management Scheme
WC	Western Cape
NDP	National Development Plan 2030
NSDF	National Spatial Development Framework
NEMA	National Environmental Management Act
NGO	Non-Governmental Organisation
NSDP	National Spatial Development Plan
NERSA	National Energy Regulator of South Africa
PGDP	Provincial Growth and Development Plan
PSDF	Provincial Spatial Development Framework
SA	South Africa
SDF	Spatial Development Framework
SEA	Strategic Environmental Assessment
SMMEs	Small Medium and Micro Enterprises
SPLUMA	Spatial Planning and Land Use Management Act 16 of 2013
SWOT	Strengths, Weaknesses, Opportunities, and Threats
WTP	Water Treatment Plant

SECTION A: INTRODUCTION

A1. INTRODUCTION

The Department of Agriculture, Land Reform and Rural Development (DALRRD) has appointed Tshani Consulting CC to review the Municipal Spatial Development Framework for Laingsburg Local Municipality.

The existing municipal SDF is outdated, having been completed before the release of the National Spatial Development Framework (NSDF), 2022, and after the Western Cape Provincial Spatial Development Framework (PSDF), 2014. As part of the update, the new SDF will be aligned not only with the NSDF, PSDF, and KRSDF but also with the District One Plan, which was adopted in 2019 by Cabinet, the Presidential Coordinating Council, and various MINMECS. This alignment ensures that the SDF is coherent with broader national, provincial, and district-level planning strategies, addressing contemporary development needs and priorities.

This document serves as the Draft Spatial Development Framework (Text and Mapping) report prepared by TSHANI CONSULTING CC as part of Phase 4 of the project.

PROJECT PHASING

The following table highlights the project phases.

Phase 1: Inception	Complete
Phase 2: Situational Analysis	Completed
Phase 3: Spatial Development and Sectorial Analysis	Completed
Phase 4: Draft SDF Framework	**Current Phase**
Phase 5: Stakeholder Engagement	
Phase 6: Final Comprehensive MSDF	
Phase 7: Close-Out	

Image 1: Laingsburg Town

SECTION B: SPATIAL DEVELOPMENT FRAMEWORK

The Spatial Development Framework of a town/city should direct and arrange the development activities and the built form in such a way that it can accommodate the 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 Strategic Framework and Concept Plan. It aims to build on the concept plan and identify Spatial proposals to facilitate growth. These proposals align with NSDF, WCBSP, KRSDF, RDSP, DSDF, and other relevant frameworks.

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

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

The structure of the Spatial Development Framework will include the Spatial Structuring Elements covered in the previous phase, which will be aligned to the 3 SPLUMA Pillars, as seen in the diagram below.

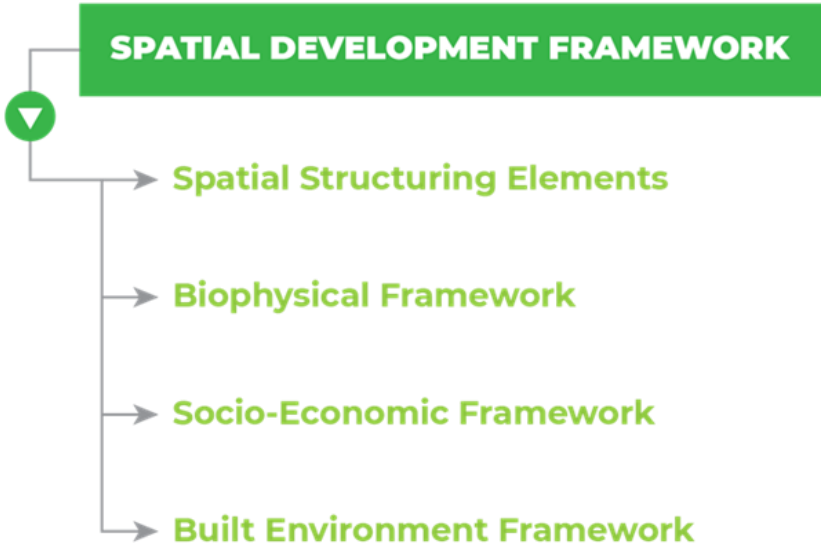


Diagram 1: Spatial Structuring Elements and SPLUMA Alignment

The Western Cape Rural Land Use Planning Guidelines and WCBSP, 2017 recognizes 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 the spirit of creating and fostering an organized 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 help clarify and facilitate coherent decision-making that can lead to better zoning, laws, and regulations. The SPCs, furthermore, provide a framework for land-use decisions to be standardized throughout the province. All zoning scheme regulations should be aligned with the SPCs.

The diagram below depicts the alignment of the SPLUMA Pillars to the Spatial Planning Categories, both of which originate from the Western Cape

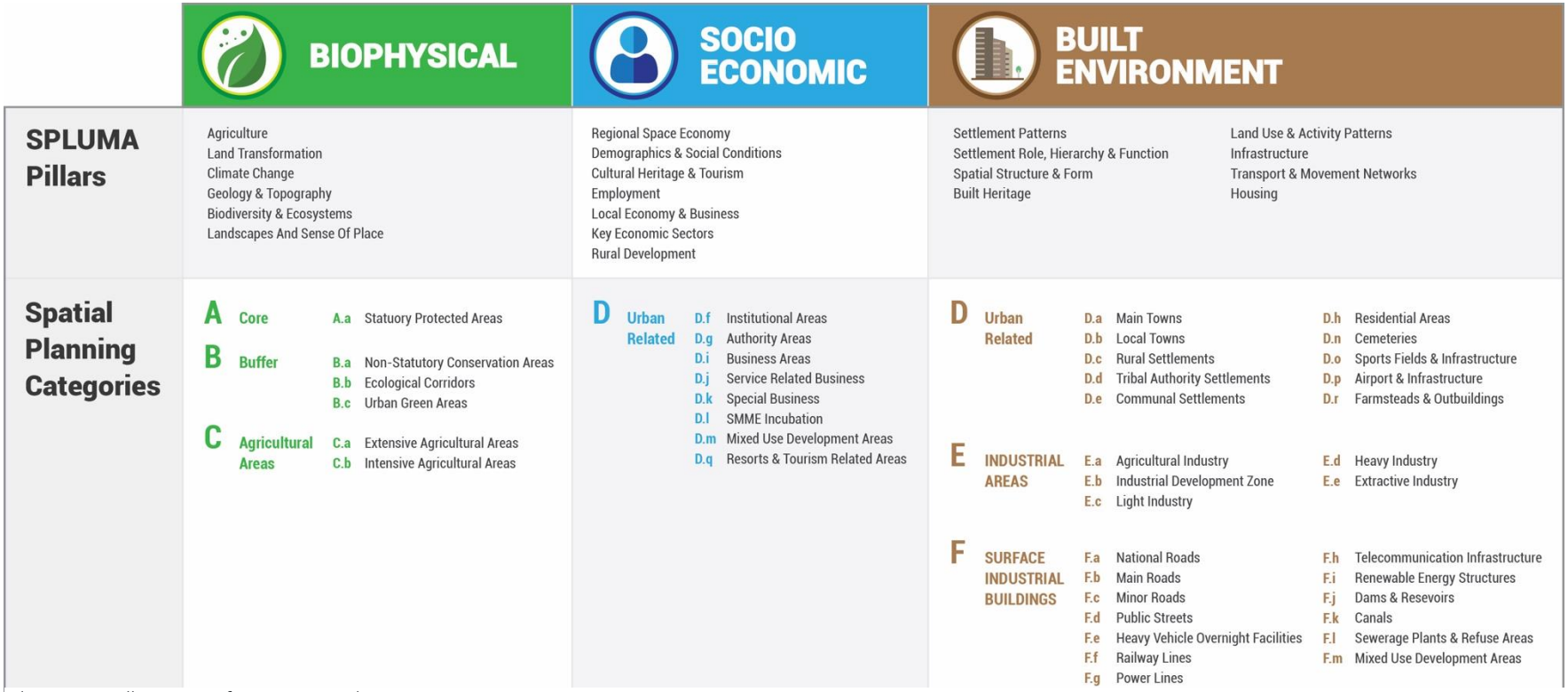
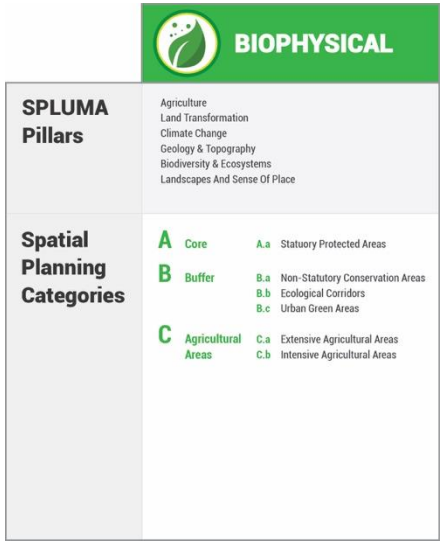


Diagram 2: Alignment of SPLUMA and SPCs

Rural Land Use Planning Guidelines and Western Cape Biodiversity Spatial Plan of 2017.

B1. BIOPHYSICAL FRAMEWORK

This sub-category relates to the consideration of environmental aspects in spatial planning for current public benefit and sustainable social and economic utilization. They also address the preservation, development, and sustainable use of agricultural land to ensure long-term food security in South Africa.



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

1. Environmental Framework
2. Climate Change
3. Agricultural Framework
4. Rural Development Framework

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.

Core areas include the Anysberg, Klein Swartberg, and Gamkaspoort Nature Reserves and Mountain Catchment Areas.

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 latter 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 Western Cape, these include the provision of water, arable soil, disaster amelioration, recreational opportunities, etc.). Only activities that have an acceptable ecological footprint are permitted in SPC B. Where applications are made for such developments, the onus is on the applicant to prove the desirability and sustainability of the proposed development.

B1.1 ENVIRONMENTAL FRAMEWORK

The Environmental Framework outlines strategies for conserving natural ecosystems, protecting biodiversity, and promoting sustainable resource management. It identifies environmentally sensitive areas, sets regulations to prevent degradation, and integrates climate resilience measures. This framework ensures land use planning aligns with environmental

sustainability goals, balancing development with conservation efforts. It also supports the mitigation of environmental risks such as flooding, erosion, and pollution, fostering long-term ecological health while guiding growth and infrastructure development.

There are three (3) types of conservation areas that can be found within the Laingsburg Local Municipal area:

- Rivers Systems
- Critical Biodiversity Areas
- Ecological Support Areas

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 undergo deposition, resulting in the accumulation of sediment within channels and on floodplains.

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 in delivering ecosystem services. Critical Biodiversity Areas and Ecological Support Areas may be terrestrial or aquatic.

Ecological Support Areas are designated zones or areas within a region or municipality that are recognized for their ecological significance and the need for their protection and management. ESAs are typically identified based on their ecological value, including unique habitats, biodiversity, or critical ecological functions they provide. The primary purpose of establishing ESAs is to conserve and sustainably manage natural resources, protect biodiversity, and maintain the ecological balance within a given area. They play a crucial role in ensuring the long-term health and functioning of ecosystems and promoting sustainable development practices.

B1.1.1 NATURAL RESOURCE AREAS

Preserving the unique Karoo landscape and its biodiversity is crucial for maintaining environmental quality and resources in Laingsburg Local Municipality. This involves safeguarding physical, biological, and cultural assets, such as distinctive vegetation and nature reserve areas. Analysing these natural resources helps understand their status and trends in exploitation and identifies opportunities for sustainable use. Conservation should be viewed as a dedicated form of land use, managing specific areas for purposes like monuments, sustainable animal breeding, and habitats. Careful management ensures these conservation areas remain viable resources for the future.

Laingsburg Municipality contains critical biodiversity areas (CBAs) and ecological support areas (ESAs), including formally protected and conservation areas. Despite limited formal conservation, the municipality faces high environmental degradation, and the true threat to its vegetation is

likely underestimated in national biodiversity assessments, which focus solely on fully transformed areas. The ecosystem's low transformation rate should not justify minimal environmental protection, as unmanaged vegetation could become threatened in the future.

The Western Cape's high-potential agricultural land for intensive agricultural production is limited, and it is the mandate of the Western Cape Department to preserve it. Given that the region experiences winter rainfall, it is heavily reliant on adequate water storage to ensure irrigation during the dry summer months. It is, therefore, imperative that the Laingsburg SDF prioritizes the preservation of these natural resources.

Key nature reserves include:

- Anysberg Nature Reserve and Towerkop Nature Reserve (Type 1 - national/provincial reserves)
- Buffelspoort Nature Reserve (Type 2 - mountain catchment/DWAF forest area) south of Rouxpos
- Gamkaspoort and Klein Swartberg catchment areas along the eastern and southeastern boundaries.

Protection of CBAs and ESAs is crucial to prevent future degradation.

B1.1.2 ENVIRONMENTAL MANAGEMENT/GUIDELINES

As per Critical Biodiversity Areas of the Western Cape, key identified biodiversity priority areas include:

- Critical Biodiversity Areas (CBAs).
- Ecological Support Areas (ESAs).

Protected areas, alongside conservation efforts, play a vital role in preserving a diverse range of ecosystems and species, ensuring the long-term ecological functioning of the landscape. The Western Cape faces challenges of biodiversity loss due to habitat transformation and degradation of natural resources.

In the region, grasses are more prevalent in depressions and sandy soils, while clayey soils have fewer grasses. Grazing accelerates the growth of shrubs, and the insufficient fuel load limits the occurrence of frequent fires.

The growing population necessitates urban expansion, which poses a threat to habitats with high diversity and agricultural potential. Strategic land use planning in Laingsburg Local Municipality should prioritize information from Environmental Studies, discouraging development in sensitive areas and identifying suitable locations for urban expansion.

Laingsburg Local Municipality has minimal areas that need environmental management. However, that does not mean that minimal environmental management should occur in the municipality. The main protection and management guidelines need to consider the identified critical biodiversity Areas.

The following section outlines the environmental considerations relating to the various Land use types:

B1.1.2.1 FORMAL RESIDENTIAL:

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. Where possible, natural habitats should not be disturbed.

Formal residential areas that are proposed within the proximity of the CBA need to be mainly for tourism accommodation to enhance and support environmental protection and conservation of the critical biodiversity area identified in the municipality.

B1.1.2.2 INFORMAL RESIDENTIAL:

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

B1.1.2.3 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).

B1.1.2.4 INDIGENOUS VEGETATION

Laingsburg Municipality is in a unique biodiversity area of South Africa, with a typical Karoo-type veld. The municipality has no identified indigenous vegetation but has two biomes that occur, which are the Nama Karoo Biome and the Grassland Biome.

The Nama-Karoo Biome is a semi-arid inland biome dominated by dwarf shrubs. Grasses, shrubs, geophytes, and herbs are abundant at varying levels. This biome is important for farming purposes, particularly for meat and wool-based stock farming. In fact, almost the entire Nama Karoo is grazed by livestock, mostly sheep and goats.

The Grassland Biome is described as a generally open and continuous, flat areas of grass, and they are often located between temperate forests at high latitudes and deserts at subtropical latitudes. This biome is also important in farming for grazing, but it also assist in reducing soil erosion.

The existing identified vegetation needs to be protected and well managed as it plays an important role in the municipality.

Whole plant removal is not recommended in protected areas. Although firewood harvesting may occur in all ecological systems, it should be restricted to dry, dead, and fallen branches or trees only. Living branches or trees should not be removed in protected areas. Areas Identified as Limited Development Areas.

Limited development areas are those areas that (although sensitive) may be open to specific types of developments that 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.

Environmental Impact Assessments/ Authorisation:

The Environmental Impact Assessment Regulations published in terms of NEMA (107/1998) require that certain activities need an application for environmental authorization before commencing such activities. Some of the activities which could trigger the need for environmental authorizations 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 municipal 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.

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

B1.1.2.5 CRITICAL BIODIVERSITY AREAS

Critically Biodiversity Areas are areas which maximize the retention of biodiversity pattern and ecological process. They are areas where strictly no development can occur.

The National SDF and the Western Cape PSDF identify a framework for Linking the Spatial Planning Categories (CBA Map Categories) to Land Use Planning and Decision-Making Guidelines. Table 1 is outlined below.

B1.1.2.6 ENVIRONMENTALLY SENSITIVE AREAS

Environmentally sensitive areas (ESAs) are landscape elements or places that 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 NEM: PAA, 57 of 2003, NEM: AQA, 39 of 2004, NEM: BA, 10 of 2004, NEM: WA, 59 of 2008, CARA, 43 of 1983 and NWA, 36 of 1998.

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 habitats, to name a few. Preserving sensitive areas often provides an additional benefit of protecting citizens and property against natural hazards. For example, the protection of floodplains and the wildland-urban interface not only safeguard natural resources but 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.

The Laingsburg local municipality is faced with the pressures of balancing economic development with environmental protection and recognizes that uncontrolled development may lead to an irreversible loss of ESAs. Without an ESA, the municipality will use this exercise to identify these areas.

Table 1: Critical Biodiversity Areas

CBA MAP CATEGORY	ADAPTION MEASURES
Protected Areas & Critical Biodiversity Area 1 (CBA1)	Maintain as natural conservation or production landscapes that maximize the retention of biodiversity pattern and ecological process: • Ecosystems and species fully intact and undisturbed • These are areas with high irreplaceability or low flexibility in terms of meeting biodiversity pattern targets. If the biodiversity features targeted in these areas are lost, then targets will not be obtained.
Critical Biodiversity Area 2 (CBA2)	Maintain as near-natural production landscapes that maximize the retention of biodiversity pattern and ecological process: • Ecosystems and species largely intact and undisturbed. • Areas with intermediate irreplaceability or some flexibility in terms of area required to meet biodiversity targets. There are options for loss of some components of biodiversity in these landscapes without compromising our ability to achieve targets. • These are landscapes that are approaching but have not passed their limits of acceptable change.
Ecological Support Area 1 (ESA1)	Maintain as ecologically functional landscapes that retain basic natural attributes (generally natural or near-natural areas): • Ecosystem still in a natural or near-natural state and has not been previously developed. • Ecosystems moderately to significantly disturb but still able to maintain basic functionality. • Individual species or other biodiversity indicators may be severely disturbed or reduced. • These are areas with low irreplaceability with respect to biodiversity pattern targets only.
Other Natural Areas and No Natural Habitat Remaining	Production landscapes: manage land to optimize sustainable utilization of natural areas.

B1.2 CLIMATE CHANGE

The growing awareness of climate change and the crucial role played by the natural environment in providing the essential ecosystem goods and services upon which all life on Earth depends is the context for this section.

Laingsburg's economy relies heavily on agriculture, making it vulnerable to climate change. Key impacts include rising temperatures, unpredictable precipitation, shifting rainfall patterns, and changes in growing seasons. These factors will significantly affect water availability, which is critical for both rain-fed and irrigated farming. Water scarcity is already a major challenge for crop production, and drier conditions will also harm livestock farming. This poses risks to food security in the region.

Laingsburg's semi-arid climate, characterized by hot summers and freezing winters, experiences summer rainfall and periodic droughts, which severely impact farming and the local economy. Increasing floods and extreme weather events are also predicted to become more frequent and intense.

As climate change accelerates, Laingsburg is expected to experience shifts in temperature and rainfall patterns, driven by predominantly easterly winds, followed by south-south westerly, westerly, and west-north westerly winds. These changes will likely reduce vegetation, negatively impacting agriculture, with declines in productivity and crop yields. This, in turn, could harm the local economy. It is crucial for the Municipality to actively reduce greenhouse gas emissions to mitigate the effects of climate change.

In terms of climate change resilience, the municipality must focus on protecting key areas such as kloofs, south-facing slopes, topographically diverse regions, and riverine corridors. These areas are critical for maintaining micro-climates and providing habitat refuges necessary for climate adaptation.

To combat climate change, Laingsburg must adopt two strategies: Climate Mitigation, aimed at reducing greenhouse gas emissions and enhancing carbon absorption, and Climate Adaptation, focusing on enabling communities to adjust to climate variability. The municipality will collaborate with the district to develop a Climate Change Response Plan and integrate it into the Disaster Management Plan. Furthermore, the municipality will seek funding through the Integrated Development Plan (IDP) for climate-related projects and enhance climate awareness through education, training, and capacity building.

B1.2.1.1 CLIMATE CHANGE INITIATIVES

The following initiatives are proposed to mitigate climate change impacts, particularly water scarcity, flooding, and carbon emissions while promoting sustainable development in Laingsburg Municipality:

Water Source Identification and Conservation

- Identify and establish alternative water sources to supplement groundwater.
- Promote water-wise measures and responsible water use across the municipality.

- Raise public awareness about water scarcity and encourage water-saving strategies.

Flood Protection

- Enforce development standards and location criteria to protect properties from flood risks.
- Integrate flood resilience into infrastructure planning, especially in high-risk areas.

Sustainable Urban Development

- Promote compact, walkable development that supports public transit and reduces vehicle use.
- Discourage vehicle-dependent development patterns to lower carbon emissions.

Environmental Protection

- Preserve open spaces and protect environmentally sensitive areas identified in Biodiversity Spatial Plans.
- Prioritize conservation of these areas in future planning.

Green Infrastructure

- Develop special-use facilities with sustainable designs and secure financial strategies for their operation.
- Use recycled (green) water in urban ablution facilities to conserve blue water resources.

Table 2: Climate Change Impacts for CKD (Source: Central Karoo IDP)

Projection	Example of Possible Impacts
Higher mean annual temperature	• Increased evaporation and decreased water balance, contributing to an overall drying effect, even in wetter years. • Increased wildfire danger (higher frequency and intensity).
Higher maximum temperatures, more hot days, and more heat waves	• Heat stress on humans and livestock. • Increased incidence of heat-related illnesses and deaths, especially among older adults. • Increased heat stress on livestock and wildlife. • Decreased crop yields and rangeland productivity. • Extended range and activity of pests and disease vectors.

Projection	Example of Possible Impacts
	• Increased threat to infrastructure due to temperatures exceeding design limits (e.g., traffic lights, road surfaces, electrical equipment). • Increased demand for electric cooling, stressing energy supply. • Exacerbation of the urban heat island effect.
Higher minimum temperatures, fewer cold days and frost days	• Decreased risk of damage to some crops; increased risk to crops such as deciduous fruits that require a cooling period in autumn. • Reduced demand for heating energy (though extremes may still occur). • Extended range and activity of pests and disease vectors. • Reduced risk of cold-related deaths and illnesses.
General drying trend in the western part of the country	• Decreased average runoff and stream flow. • Reduced water resources, potentially increasing water costs. • Decreased water quality. • Shorter growing seasons, threatening Western Cape fruit crops. • Increased fire danger due to drying. • Impacts on river and wetland ecosystems.
Shifts in seasonality	• Changes in the onset of the rainy season, causing planning challenges for agriculture.
Intensification of rainfall events	• Increased risk of flooding. • Greater strain on stormwater systems in urban areas. • Increased soil erosion and riverbank erosion, requiring protective structures. • Increased pressure on disaster relief systems. • Higher risk to human lives and health. • Negative impacts on agriculture, including lower productivity and harvest losses.

B1.2.1.2 STRATEGIES FOR CLIMATE CHANGE MITIGATION:

Agriculture:

- Promoting Sustainable Livestock Production: Encourage livestock producers, including horse breeders and merino sheep farmers, to adopt sustainable practices. This involves optimizing feed efficiency, implementing rotational grazing to preserve pasture health, and managing manure to reduce methane emissions.
- Climate-Resilient Crop Cultivation: Support farmers cultivating crops like maize and lucerne in adopting climate-resilient agricultural practices. This includes promoting drought-resistant crop varieties, efficient water management, and soil conservation techniques to mitigate the impact of extreme weather events.
- Carbon Sequestration: Encourage the incorporation of agroforestry practices, which involve planting trees on farmland. Trees can sequester carbon dioxide from the atmosphere, thus mitigating greenhouse gas emissions and contributing to climate change adaptation.

Human Health:

- Heat Mitigation and Health Awareness: Develop heat action plans to protect vulnerable communities during heatwaves. Educate residents about the health risks associated with extreme heat and the importance of staying hydrated and seeking shade during hot weather.
- Disease Surveillance and Preparedness: Strengthen disease surveillance systems to monitor and respond to vector-borne diseases like malaria and dengue, which may spread with changing climate patterns. Implement proactive measures to control disease vectors and promote community health.

Human Settlements:

- Climate-Resilient Housing: Integrate climate-resilient design principles into the construction of new housing developments. This includes using energy-efficient materials, proper insulation, and incorporating passive cooling and heating techniques to reduce energy consumption.
- Disaster Risk Reduction: Conduct vulnerability assessments and develop disaster preparedness plans for settlements at risk of climate-related disasters, such as floods and storms. Implement early warning systems and establish safe evacuation routes to enhance community resilience.

Water:

- Groundwater Quality Management: Monitor and analyse groundwater quality regularly to address issues like high calcium levels. Implement appropriate water treatment technologies to ensure safe drinking water and minimize health risks associated with waterborne diseases.

- **Water Conservation:** To reduce overall water demand, promote water-saving practices among residents and industries. These can include installing water-efficient appliances, implementing rainwater harvesting systems, and raising awareness about responsible water use.
- **Natural Resources Preservation:** Given that the region experiences winter rainfall, it is heavily reliant on adequate water storage to ensure irrigation during the dry summer months. It is, therefore, imperative that the Laingsburg SDF prioritizes the preservation of these natural resources.

B1.2.1.3 URBAN GREENING INITIATIVES

Urban Greening Initiatives plays a crucial role in combating climate change by enhancing biodiversity, improving air quality, and reducing urban heat islands.

By integrating green spaces such as parks, community gardens, green roofs, and tree growth along streets into urban environments, the municipality can mitigate the impacts of climate change while promoting the well-being of residents.

These initiatives not only sequester carbon dioxide but also facilitate stormwater management, reducing flooding and improving resilience against extreme weather events. They also offer shade and foster a pleasant environment for pedestrians and users of public spaces. Moreover, urban greening fosters community engagement and social cohesion, creating vibrant spaces that encourage outdoor activities and enhance the overall quality of life. As Laingsburg Municipality continues to grow, prioritising urban greening will be essential in building sustainable, resilient communities capable of adapting to the challenges posed by climate change.

The **Matjiesfontein Northern Region** and **N1 Corridor** the SDF aims to foster sustainable development by prioritizing environmental preservation and responsible economic growth, ensuring the Karoo remains a nature-based tourism and heritage destination.

The **Carbon Basin Proposal**, which seeks to establish a carbon basin along the N1 corridor to enhance carbon sequestration, is central to this initiative. This project will restore indigenous plant species, combat soil erosion, and improve water retention while promoting sustainable agricultural practices that reduce farming's carbon footprint.

By aligning with national climate goals, the initiative not only contributes to a cleaner Karoo but also generates green jobs, positioning Laingsburg as a leader in environmental sustainability. Ultimately, the Carbon Basin Proposal exemplifies how economic growth can coexist with ecological preservation, paving the way for a greener future in the region.

B1.2.1.4 CLIMATE CHANGE IMPACT ON ROAD INFRASTRUCTURE

Climate change significantly impacts the road infrastructure within Laingsburg Municipality, manifesting through rising temperatures, increased flooding, and more frequent extreme weather events. These changes pose

substantial risks to the durability and connectivity of roads, particularly along the N1 corridor and rural access routes.

To address these challenges, we propose a Spatial Development Framework that emphasizes climate-resilient road designs. Key strategies include integrating improved drainage systems, elevating roadbeds, and using heat-resistant materials in road construction. Additionally, implementing proactive maintenance schedules and early warning systems will help prevent disruptions and extend the lifespan of road infrastructure. These initiatives aim to enhance regional mobility and economic stability while effectively responding to the ongoing challenges presented by climate change.

The SDF identifies implementing these strategies, Laingsburg Municipality can effectively enhance its road infrastructure's resilience to climate change, ensuring continued mobility and economic stability in the face of increasing environmental challenges.

Image 2: Buffel's River

Image 3: Matjiesfontein Wetland

B1.2.1.5 DISASTER MANAGEMENT

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

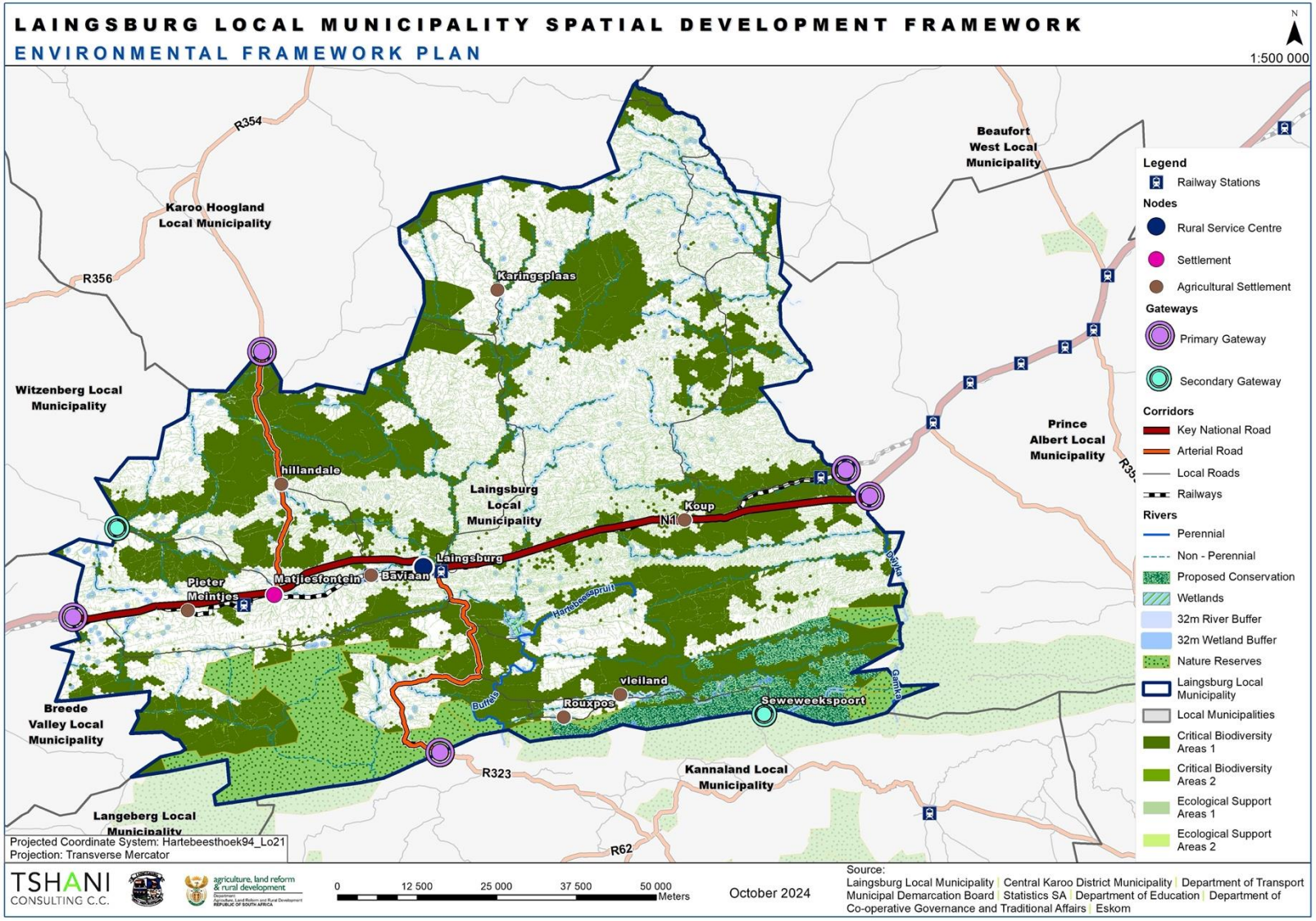
- Mitigation/prevention: Minimising the devastating impacts of the disaster. The focus here is on preventing or reducing the exposure to the disaster and mitigating vulnerability.
- Preparedness: This involves planning the response strategy and capacitating emergency managers to provide the best response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

The review of a Disaster Management Strategy is crucial to ensuring that communities can survive a disaster, whether natural or caused by a pandemic.

B1.2.1.6 ENVIRONMENTAL RECOMMENDATIONS

- The local municipality should prioritize the development of a comprehensive strategic environmental plan that closely aligns with both the provincial plan and the CSIR Green Book. This strategic plan will play a crucial role in safeguarding critical environmental areas within the region.
- The municipality must ensure that all required environmental studies and reports are completed prior to the construction phase of all municipal projects and that they are zoned correctly.

The *Environmental Framework Plan* serves as a spatial representation of the diverse environmental and climate change components.



Plan 1: Environmental Framework Plan

B1.3 AGRICULTURAL FRAMEWORK

An Agricultural Framework establishes guidelines to ensure sustainable land use, protect agricultural resources, and promote rural development. It identifies prime agricultural land, regulates land use to prevent urban sprawl, and supports agri-business and agri-tourism opportunities. The framework integrates environmental, economic, and social considerations to enhance food security, create jobs, and stimulate local economies while preserving biodiversity and managing natural resources efficiently. It also aligns agricultural development with broader regional and national planning objectives.

Commercial agriculture can be defined as the opposite of subsistence agriculture. Commercial agriculture involves growing crops intended to sell for profit in the local or export market. With reference to Laingsburg, the most common form of agricultural practice is livestock farming, with an emphasis on sheep, mutton, and wool farming.

SPC C: Agriculture Areas

Preserving and responsibly utilizing high-potential agricultural land is crucial for sustainable economic growth and food security. Often, such land near settlements faces non-agricultural development pressure, leading to negative social impacts that harm its production potential. Prioritizing the protection of high-potential agricultural land is essential, and measures should be implemented to foster conditions conducive to sustainable agriculture.

Those areas identified through the agricultural assessment as having the highest agricultural potential have been reflected on the Spatial Framework Map as areas of agricultural development only. In general, the subdivision of prime agricultural land is discouraged, and the development of this land for non-agricultural purposes should only be allowed if:

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

Climate Change, often referred to as Climate Breakdown, stands out as the foremost challenge to human development and survival in our era. Its far-reaching impacts on human livelihoods are already evident and will persist. The CSIR Green Book serves as an online planning support tool, offering quantitative scientific evidence on the anticipated effects of climate change and urbanization on South Africa's cities and towns. This resource provides valuable insights and proposes various adaptation actions for local governments to implement in support of climate-resilient development.

These adaptations include:

- Determining urban edge

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

The success of the land reform process relies heavily on agriculture, presenting an opportunity for growth in the sector. Despite being the primary source of food for the Municipality and making a significant national contribution, the agricultural sector's GDP contribution remains relatively small.

While many individuals already depend on agriculture, concerns arise about the sector reaching optimal production levels, especially with continuously increasing demand. Additionally, the declining food supply faces threats due to the necessity of producing additional products, such as biofuels. Balancing these challenges is crucial for sustaining the agricultural sector and meeting the growing demand for food and alternative products.

B1.3.1 AGRICULTURE AS AN ECONOMIC SECTOR

Economic pressures, like rising food and fuel prices, continuously challenge the agricultural sector. Sustainable solutions involve increasing production through research, developing new products, and investing in infrastructure. Agriculture-related investment should prioritize existing commercial farming activities and promote agrarian transformation in deep rural areas, aligning with the Comprehensive Rural Development Programme (CRDP) objectives. Typical investments should include:

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

B1.3.2 PROMOTING AGRICULTURE AS AN ECONOMIC SECTOR IN THE LLM

When assessing the role of agriculture in fostering rural development, its undeniable significance is evident in numerous rural communities. A compelling case can be observed in Laingsburg, where substantial unemployment and poverty prevail. In seizing the opportunity to propel the advancement of the agricultural sector, there lies the potential to ameliorate the current socioeconomic challenges. It is crucial not only for meeting the agricultural demand within the district/province/country but also for fostering job creation. This ensures that the local population not only benefits from the sector but also moves towards a state of reduced dependency on grants, leading to more sustainable livelihoods.

Agriculture stands out as a sector that generates more jobs per unit of investment than any other industry. However, relying solely on agriculture to drive rural development and alleviate poverty is an ineffective strategy. The key lies in prioritizing skills training and development within the agricultural domain. Equipping the local workforce with the necessary skills not only enables them to secure jobs in the sector but also serves as a catalyst for the district's overall prosperity. Therefore, placing emphasis on skills development becomes imperative for the district to thrive sustainably through the agricultural sector.

Other sectors with growth potential include industrial/agri-processing and logistics, which are essential for moving agricultural produce. Agriculture in the Laingsburg Local Municipality (LLM) is expected to expand, positioning Laingsburg as a key hub. This industry is attractive not only for income from small stock (goats and sheep) and stone fruit (apricots) and hunting but also for offering accommodation to international visitors.

The expansion of agriculture, particularly in high-value supply chains, contributes to enhanced wages and increased employment opportunities for both urban and rural residents. The positive indirect income effects play a significant role in lifting numerous households, whether rural or urban, out of poverty by boosting farm incomes. Additionally, the growth in agriculture leads to reduced food prices, enabling economically disadvantaged urban and rural households to afford essential food items.

Key to alleviate poverty in the area would require the following actions:

- Identify and support small-scale farmers with skills development and training.
- Development of transport infrastructure linking rural and urban.
- Facilitate the establishment of cooperatives of small farmers, contract farming, and other form of cooperation with the private sector.
- Identify and support competitive small and medium-sized enterprises.
- Create and nurture a useful environment for business and investment to take place.

B1.3.2.1 AGRI-HUB DEVELOPMENT

The focus of the Agri-Hub is primarily the processing of 'agricultural products and the mix of 'non-agricultural' industries. Of prime importance will be linkages between the proposed FPSUs and surrounding agricultural land for production. Laingsburg has One Farmer Production Support Unit in Laingsburg.

The nearest Agri-Hub is proposed to be located in Beaufort West (approximately 200 km from Laingsburg, along the N1), will serve as a central point for agri-processing, training, and support for smallholder farmers in the Central Karoo District. Its strategic position along the N1 highway provides excellent transport links to major markets like Cape Town and Johannesburg, facilitating efficient logistics and market access. Beaufort West's existing agricultural infrastructure and proximity to both emerging and commercial farmers make it ideal for value-added processing and

farmer collaboration. The farmer-controlled Agri-Hub will enhance agricultural productivity, offering access to processing facilities and markets while fostering rural development.

Key Proposals for the Beaufort West Agri-Hub:

- Selection and Training of Smallholder Farmers: The Agri-Hub will provide technical support, capacity building, and hands-on training to smallholder farmers, improving their agricultural practices and market access.
- Incubation of Agricultural Graduates and Agro-Entrepreneurs: The Agri-Hub will offer incubation and placement opportunities for unemployed agricultural graduates and agro-entrepreneurs, fostering innovation and entrepreneurship in agriculture.
- Agro-processing facilities: These include abattoirs, irrigated pastures, small packing, and cooling facilities for vegetables and fruit, which create value-added products from local produce.
- Market Access and Local Trading: The Agri-Hub will connect local farmers to domestic and international markets, facilitating improved market access and distribution of produce.

The Farmer Production Support Unit (FPSU) is a rural outreach and capacity-building centre for smallholder farmers. It offers primary production inputs, mechanization support, extension services, storage, and training. According to the District Rural Development Sector Plan, FPSU value chains include sheep, wool, mohair, and ostrich.

The FPSU in Laingsburg, strategically positioned to serve the surrounding agricultural community, will act as a feeder hub to the Beaufort West Agri-Hub. It will focus on:

- Small Stock Improvements: Enhancing sheep (Karoo Lamb) and goat farming through better livestock management and productivity.
- Fruit and Vegetable Production and Processing: Supporting cultivation and processing to create value-added products.
- Mechanization and Repair Centre: Providing access to equipment and repair services, reducing costs and improving efficiency.
- Local Market Facility: Enabling farmers to sell produce locally, boosting economic opportunities and food security.

To expand on the current growth of peaches and olives in the region, Laingsburg presents significant agro-processing opportunities for peaches and olives, capitalizing on the region's favourable climate and soil conditions. By establishing facilities for processing and packaging these crops, local farmers can enhance value-added products, such as dried peaches, canned peaches, olive oil, and preserves, etc. This initiative not only aims to boost the local economy and create jobs but also supports sustainable agricultural practices and promotes Laingsburg as a hub for quality fruit and olive production.

B1.3.3 AGRICULTURAL RESOURCES

Agriculture is the primary economic driver in the district, prevailing even in the predominantly semi-arid and arid environment. Fertile land is found alongside the west of the R323, northwest and west of Matjiesfontein, and around Vleiland and Rouxpos, defying the overall dry and hot conditions in the Laingsburg LM, which are characterized by summer rainfall and cold winters. The district's shallow soils cover a significant portion of the land, limiting the availability of areas suitable for irrigation to a small percentage.

Despite these challenges, Laingsburg serves primarily as an agricultural service centre, with the extent and quality of services provided contingent upon the intensity of farming practices in the surrounding areas. The majority of irrigation farming in the Laingsburg LM is concentrated around Vleiland and Rouxpos, where there is sufficient water for crop farming. The

There is significant potential to further intensify agricultural activities in Vleiland, leveraging its agricultural capacity. The town's proximity to the Beaufort West Agrihub, 274 km away, also positions it as a critical player in regional agricultural development. Strengthening its connection to the Farmer Production Support Unit (FPSU) or Agri Hub could enhance its role in the broader agricultural framework, supporting the district's drive towards sustainable economic growth.

Agriculture industry has been identified as the sector that is best positioned to address issues of high unemployment, poverty, and inequality and provide the foundation for inclusive growth.

Table 3: Agri-Park Initiative

Agri hub	FPSU's	Focus	Infrastructure Requirements	Logistics Services	Commercial Linkage	Market	Products	Economic Potential
Beaufort West	Laingsburg	Sheep (Karoo Lamb)	Cold storage Livestock Handling Facilities	Holding Pens	District Abattoirs	Local Regional National	Karoo Lamb Mutton Offal Skin Products	Very High
		Mohair	Shearing Facilities Sorting Facilities	Packaging and Transportation Services required	Western Cape Eastern Cape	Local Regional Provincial International	Clothing Socks Blankets Yarn	High
		Wool	Sorting Facilities Shearing Facilities	Packaging and Transportation Services	National International	Local Regional	Clothing Blankets	High

Agri hub	FPSU's	Focus	Infrastructure Requirements	Logistics Services	Commercial Linkage	Market	Products	Economic Potential
			Sheds	required		International	Upholstery Rugs Insulation	
		Ostrich	Meat Processing Facility Cold Rooms	Packaging and Transportation Services required	Western Cape	Local Regional Provincial International	Meat Feathers Leather Eggs Etchings	Medium
		Olives	Processing Facilities Cold Storage	Packaging and Transportation Services required	National International	Local Regional International	Olives Olive Oil	High
		Peach	Processing Facilities Cold Storage	Packaging and Transportation Services required	National International	Local Regional International	Peach Jam Dried Peach	High
		Fruit and Vegetable Seeds	Processing Facilities Sorting Facilities	Packaging and Transportation Services required	National International	Local Regional International	Seeds Seed oils Preserves	High

B1.3.3.1 AGRICULTURE PROGRAMS

Comprehensive Agricultural Support Program (CASP): According to the Progress Report on the Implementation of CASP (2004), the main aim of the farmer's support is to create a favorable and supportive agricultural service environment for the farming community.

Project Name	Municipality	Closest town	Project Type	Commodity
Beaufort West Hydroponics	Beaufort West	Beaufort West	Production input	Vegetables

Table 4: Key CASP projects in Laingsburg LM

B1.3.4 AGRICULTURE VALUE CHAIN

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. Value chains work best when their actors cooperate to produce higher-quality products and generate more income for all participants along the chain, as opposed to the simplest kinds of value chains, in which producers and buyers exchange only price information. Value chains may include a wide range of activities. An agricultural value chain might include the 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.

Key issues include:

- Low yields.
- Limited knowledge and confidence in especially the commercial agricultural sector.
- Poor quality produce.
- Lack of equipment.
- Labour challenges (capacity and skills development).
- Subsistence orientation.
- Cashflow management.
- Lack of storage facilities.
- Transportation and logistics support.
- No or limited supply guarantees.
- Informal market dominance, creating little value-adding.
- Product diversity; and
- Alignment to market needs.

B1.3.5 KEY RECOMMENDATIONS

Leveraging technology for market assessments and comprehending price fluctuations and indexes.

Implementing mechanization in agricultural value chains where skills and resources fall short of meeting demands.

Initiating government programs or platforms aimed at enhancing trust within the land reform sector, particularly in supplying produce to both commercial and local markets.

Establishing supportive infrastructure, as outlined in the proposed and recommended Agri-Park Program.

Conducting thorough investigations into suitable crops and yield potential for each farm or rural cluster, identifying the economic viability of different areas. While fertilizers may enhance yields, economic considerations may impact their widespread adoption.

Advocating for enhanced government regulatory capacity and support within the agricultural sector.

Prioritizing the reduction of input costs for subsistence farmers as a crucial initiative.

B1.3.6 FOOD SECURITY

The local economy is heavily reliant on the agricultural sector, playing a pivotal role in ensuring food security and employment, thus mitigating socioeconomic challenges in the region. Beyond its immediate impact, agriculture serves as the upstream supplier for various sectors, contributing raw materials and fostering the creation of secondary and tertiary jobs in metropolitan areas.

Furthermore, agriculture is a significant source of revenue through exports to other regions, actively propelling the economy. Interventions under the Agri-Park initiative encompass enhancing the compositeness of agricultural products, thereby fostering agricultural growth. This initiative also focuses on improving market development for all agricultural produce, increasing value addition, conducting extensive market research, and formulating policies. Successful implementation of these measures is poised to create a conducive environment for the flourishing and sustainable growth of agriculture.

To tackle unemployment and food security, the proposed agricultural programs will focus on creating sustainable jobs and increasing local food production. Initiatives such as community farming, urban agriculture, and training programs in permaculture and sustainable farming will equip residents with skills while generating employment. For example, community gardens can provide both food and jobs, while hydroponic farming systems offer modern, scalable solutions to food production in limited spaces. These programs not only address immediate food needs but also empower the community by fostering economic resilience and self-reliance.

B1.3.7 KEY ACTION AREAS

Invest in and reinvest in primary agricultural support systems.

The Local Economic Development (LED) initiative will conduct a municipal audit of farming land availability. This process aims not only to revitalize economic activities but also to gauge the quantity of readily available agricultural primary inputs and investment requirements. The outcome of this audit will contribute to the revival and support of existing storage facilities such as silos and production structures like abattoirs. Additionally, it will identify the investment needs for a feed mill to bolster the support for feedlots in the area and its surroundings. Adopting the value chain model is crucial.

Recognizing the significance of establishing a sustainable agricultural economy, it is imperative to embrace the value chain model, spanning from inputs to supply, processing, and marketing. This approach ensures growth and sustainability in local produce, encompassing key stages such as inputs, production, processing, and the supply chain involving logistics, packing, distribution, and exports.

Integrating Small-scale farmers

In addition to conducting the municipal audit of farming land availability, it is essential to ensure that land demarcation includes provisions for small-scale farmers. By designating specific areas or plots for small-scale farming, we can empower local individuals and families to participate in agricultural activities, thereby fostering inclusivity and economic empowerment within the community.

Supporting small-scale farmers not only diversifies agricultural production but also strengthens the resilience of the local food system. These farmers often cultivate a wide variety of crops, contributing to biodiversity and enhancing food security. Furthermore, investing in training programs and providing access to resources such as seeds, tools, and irrigation systems can significantly boost the productivity and sustainability of small-scale farming operations.

Moreover, integrating small-scale farmers into the value chain model is crucial for maximizing their potential contribution to the local economy. This involves facilitating access to markets, providing storage and processing facilities tailored to their needs, and establishing cooperative networks to collectively negotiate prices and share resources. By incorporating small-scale farmers into the broader agricultural support system, we can create a more inclusive and resilient economy that benefits all stakeholders.

B1.3.8 SECURE WATER FOR IRRIGATION AND SAFEGUARD WATER SOURCES FOR AGRICULTURE

Securing a reliable water supply for irrigation is essential for the sustainability of agriculture, particularly for farmers reliant on borrowed water and storage dams for growing vegetable seeds. To address this critical need and ensure the long-term viability of agricultural practices, the following strategies are proposed:

Water Resource Management Plans: Develop comprehensive water resource management plans that include assessments of current water availability and usage. These plans should focus on optimizing farmers' allocation of water for irrigation and prioritize sustainable practices that enhance water efficiency and reduce waste.

Rainwater Harvesting Systems: Encourage the implementation of rainwater harvesting systems on farms to supplement irrigation needs. By capturing and storing rainwater, farmers can reduce their reliance on borrowed water and storage dams, improving resilience to drought conditions.

Improved Irrigation Techniques: Promote the adoption of advanced irrigation techniques, such as drip irrigation and micro-sprinklers, which minimize water loss and increase efficiency. Providing farmers with training and resources to implement these systems can significantly enhance water use efficiency.

Protection of Water Sources: Implement measures to protect and restore local water sources, such as rivers, streams, and aquifers, by establishing

buffer zones and limiting agricultural runoff. This includes promoting practices that reduce pollution and sedimentation and ensure that water quality is maintained.

Collaboration with Local Authorities: Work closely with local authorities and water management bodies to ensure coordinated efforts in safeguarding water sources. This may involve advocating for policies that prioritize agricultural water needs and promote responsible land use practices in the surrounding areas.

Investment in Water Storage Infrastructure: Advocate for investment in new storage infrastructure, such as dams or reservoirs, to enhance water availability during dry periods. Additionally, upgrading existing facilities can improve their capacity and efficiency, ensuring a reliable water supply for irrigation.

Community Engagement and Education: Engage local farming communities in discussions about water conservation and sustainable practices. Educational programs can raise awareness about the importance of safeguarding water sources and promote collective action to protect these vital resources.

Incentives for Sustainable Practices: Introduce financial incentives or grants for farmers who adopt sustainable water management practices. By providing economic support for implementing water-saving technologies and practices, farmers will be more likely to invest in their long-term water security.

The SDF proposes implementing these strategies will effectively address the need for secure irrigation water and safeguard water sources critical to the agricultural sector. This will ultimately promote sustainable farming practices and enhance food security in the region.

Given the potential return of fracking in the Karoo, any agricultural plan must incorporate a thorough assessment of the possible impacts on local water sources. The Municipality should prioritize safeguarding water quality and availability for agricultural use by conducting comprehensive environmental impact assessments that evaluate the risks associated with fracking. This proactive approach will ensure the long-term sustainability of both agriculture and water resources in the region.

B1.3.9 AGRICULTURAL SETTLEMENTS IN THE SDF

The Spatial Development Framework (SDF) identifies small farm settlements in Laingsburg as agricultural settlements. These settlements are crucial for supporting the local agricultural economy, particularly in livestock farming and small-scale crop production. They serve as key areas for rural livelihoods and contribute to the region's food security. The SDF emphasizes their role in sustaining agricultural activities, promoting agri-business, and maintaining the rural character of Laingsburg LM.

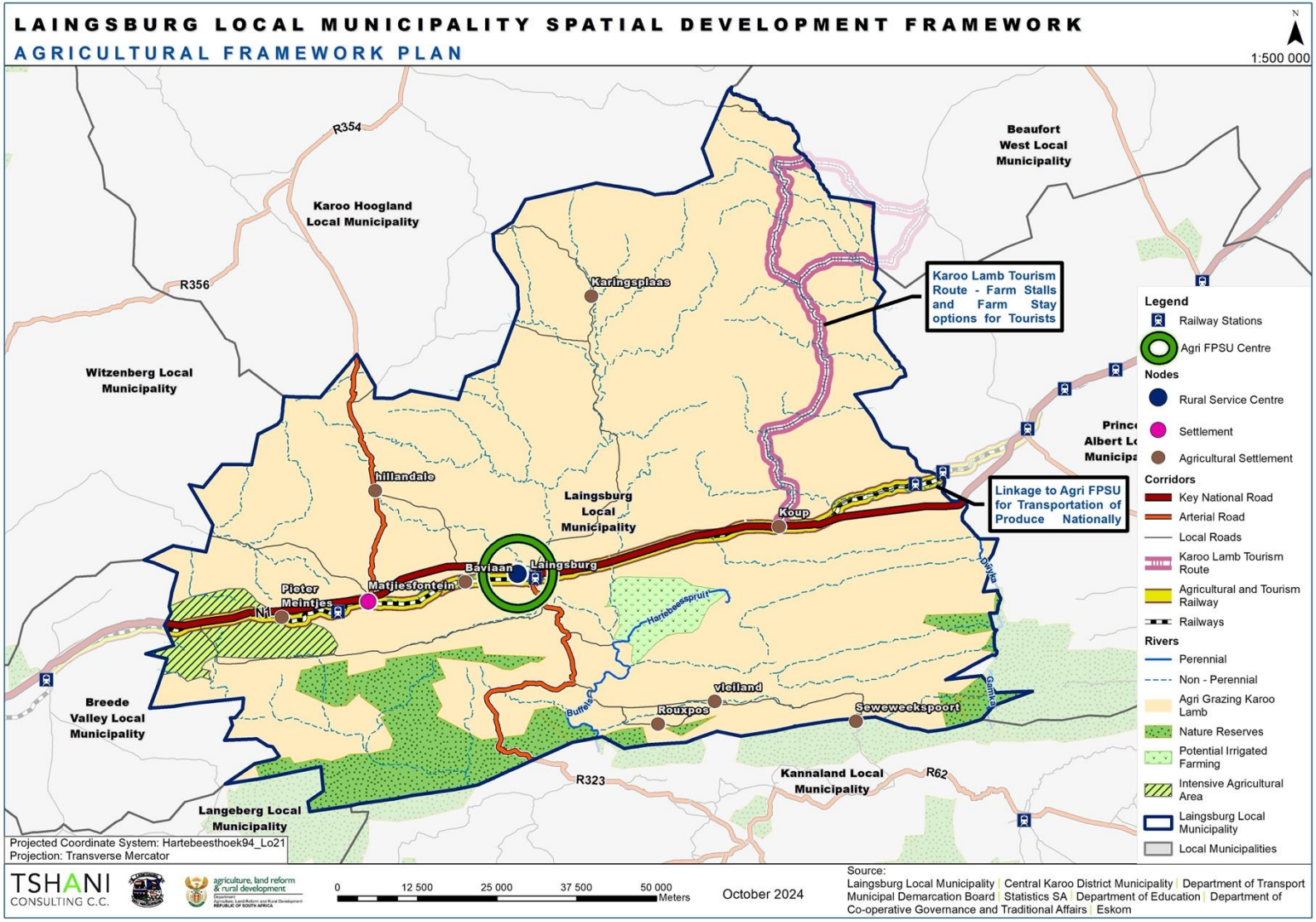
The SDF proposes :

Supporting the growth of small agri-businesses by linking them to government support programs, funding for competitiveness, and technical expertise in food innovation.

Expand Laingsburg's local processing capacity with a larger abattoir, a leather tannery, and facilities for fruit, goat cheese, and olive oil production to add value to agricultural products and create jobs.

Leverage Laingsburg's premium products like biltong and Karoo lamb to expand agricultural output and improve market access for local farmers.

Establish Laingsburg as a logistics hub by utilizing its strategic location near the railway and N1 to streamline the transport of agricultural goods to the Agri hub in Beaufort West and broader markets.



Plan 2: Agricultural Framework Plan

B2. SOCIO-ECONOMIC FRAMEWORK

The Socio-Economic Framework aims to address the social and economic issues pertaining to the Municipality. 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 municipality has huge potential for tourism.

The Socio-economic Framework is broken down into three spheres as follows:

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

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 the 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.

B2.1 ECONOMIC FRAMEWORK

The Economic Framework focuses on fostering sustainable economic growth, enhancing local economies, and attracting investment. It identifies key economic sectors, promotes strategic infrastructure development, and supports spatial initiatives like industrial zones, business hubs, and commercial areas. The framework aims to create jobs, boost competitiveness, and stimulate entrepreneurship while aligning economic activities with spatial planning priorities. It also encourages equitable access to economic opportunities, balancing urban and rural development to drive inclusive growth.

A wide and diversified range of South Africans concur that significant changes are required to resurrect economic growth, as well as to solve the current crisis and establish the framework for long-term stability and prosperity. South Africa needs a new consensus to do this. This section focuses on finding the most important opportunities for private and public investment that will strengthen the economy because there is a general

understanding of how difficult our current situation is and a recognition of the need to address the problems of unemployment, poverty, and inequality.

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

B2.1.1 AGRICULTURE

In Laingsburg, the climatic conditions limit the cultivation of certain crops. Similar to the finite availability of land, there are constraints on the range of agricultural products that can be cultivated. The economic and social impact of agriculture in the region hinges on the judicious utilization of these resources and effective risk management.

Given the economic importance of agriculture and the challenges posed by climate change and economic volatility, Laingsburg must focus on innovation and strategic investments to sustain and grow the sector. To ensure its long-term viability, the following proposals are recommended:

Climate-Resilient Farming Practices: Given the recurring drought conditions, it is essential to explore more sustainable and water-efficient farming methods, such as the adoption of hydroponics and aquaponics. These techniques allow for crop cultivation with minimal water usage, making them well-suited for the arid climate of Laingsburg.

Expansion of Sheep Farming: Since sheep farming is the largest agricultural enterprise in the area, further investments in this sector could drive growth. The municipality could support the expansion of value-added activities, such as processing wool and meat locally, which would create additional jobs and boost the local economy.

Agri-Tourism Development: Agri-tourism has already proven to be a growing contributor to Laingsburg's economy. This sector offers opportunities to diversify income streams for farmers while capitalizing on

the region's scenic landscape. Promoting activities like farm stays, agricultural tours, and farm-to-table experiences can attract tourists seeking to experience rural life, further driving economic growth.

This includes tourism stays where guests can be treated to a world class meal that includes the freshest of ingredients, including or centred around the Karoo Lamb and offering paring with wines from the region, vegetables grown in the region, etc.

Research and Development: Laingsburg should invest in research to explore the cultivation of new crops that can thrive in its climate. This could involve collaborating with agricultural institutes to test drought-resistant crop varieties or alternative farming systems tailored to the region's specific conditions.

Infrastructure and Technology Investments: Upgrading infrastructure, such as irrigation systems and transport networks, is critical to increasing the efficiency of agricultural production. Technological advancements, including precision agriculture and digital tools for farm management, should also be promoted to optimize resource use and enhance productivity.

Support for Adventure and Agri-Tourism Synergies: Adventure tourism is the largest economic activity in Laingsburg, offering activities such as 4x4 adventures, hiking, camping, and mountain biking. Creating synergies between adventure tourism and agri-tourism could further bolster both sectors, with cross-promotion of farm experiences alongside outdoor activities.

B2.1.2 MANUFACTURING

Laingsburg currently needs more manufacturing activities, resulting in limited production of goods and services within the municipality. The utilization of proposed industrial sites becomes pivotal for enhancing the industrial estate and addressing this shortfall. These sites can be strategically tailored for the manufacturing and storage of goods, with a particular focus on green economic space and agro-processing. Such an initiative holds the potential to stimulate beneficiation, attract investment, foster economic growth, and, critically, contribute to the development of skills and employment in the Laingsburg Municipal area. The proposed Laingsburg Industrial Area offers available land for the establishment of manufacturing sites or storage facilities.

Linkage to the Agricultural Sector in Laingsburg: The connection between manufacturing and the agricultural sector in Laingsburg is crucial for leveraging the district's potential. Key opportunities include:

- Agro-Processing: Given Laingsburg's strong agricultural base, there is significant potential to expand agro-processing activities, including the production of packaged meat and wool-based products. This could complete the value chain for agricultural products in the region, turning Laingsburg into a hub for agro-processing within the Central Karoo. Supporting agro-processing would not only strengthen the agricultural sector but also stimulate growth in the manufacturing sector.

- **Production of Packaging Materials:** A key linkage between manufacturing and agriculture could be the production of packaging materials locally. This would meet the needs of agro-processors and reduce dependency on external suppliers, enhancing the efficiency and sustainability of the agricultural value chain

Exploring Other Sectors in Laingsburg: Beyond agriculture, other sectors present opportunities for manufacturing growth:

- **Utilities Sector:** Laingsburg can drive economic growth by tapping into its rich uranium and shale gas reserves, attracting energy sector investments, and creating jobs. By securing exploration rights and developing infrastructure, the region can become a key energy hub. Promoting renewable energy projects, such as solar and wind, can diversify the economy and ensure sustainable growth while balancing environmental impacts.
- **Transport and Communications Sector:** Manufacturing within this sector can encompass vehicles, infrastructure requirements, and other related products.

the strong agricultural base in Laingsburg creates avenues for agro-industrial processing, such as dairy, meat, and mohair production. By investing in these sectors, Laingsburg can stimulate local job creation, add value to its raw materials, and drive economic growth through both the mining and agricultural value chains.

B2.1.3 ELECTRICITY, GAS AND WATER

Electrical infrastructure plays a pivotal role in shaping investor confidence and driving economic growth. The National Development Plan (NDP) advocates for diverse energy sources to fuel electricity generation and ensure the availability of liquid fuels. Expanding and enhancing the capacity of electrical infrastructure is crucial for unlocking the untapped economic potential within the manufacturing and agricultural sectors, as well as maximizing the profitability of ongoing and future high-impact projects.

In the context of Laingsburg, specific considerations must be made to cater to the region's unique needs and opportunities:

- **Renewable Energy in Laingsburg:** The recent emphasis on large-scale, grid-connected projects through the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) reflects South Africa's commitment to renewable energy. However, in Laingsburg, there is a significant opportunity to harness renewable energy on a smaller, stand-alone scale. This approach can directly benefit local communities, farms, businesses, and individuals.

Key Actions and Interventions for Laingsburg's Electrical Infrastructure: Several strategic actions and interventions are proposed to bolster electrical infrastructure in Laingsburg:

- **Maintenance:** Ongoing maintenance of existing electrical infrastructure to ensure reliability and efficiency.

- **Minisub Refurbishment:** Refurbishing mini sub-stations to enhance performance and extend their lifespan.
- **Solar Streetlights:** Replacing traditional streetlight furniture and lights with solar-powered alternatives to promote sustainability.
- **Electricity Master Plan:** Development of a comprehensive Electricity Master Plan to guide the expansion and improvement of the electrical network.
- **Bulk Supply Network Upgrade:** Upgrading the electrical bulk supply network to accommodate the growing needs of the region.

The future development of Laingsburg is intricately tied to the electricity industry. As electricity and water are fundamental to various activities, the utilities sector will play a crucial role in connecting key economic sectors within the municipality.

Laingsburg Current Electricity and Water Sector: Laingsburg's water and energy sectors are critical to its infrastructure and development. The municipality's water supply is sourced primarily from three rivers, Soutkloof Spring, reservoirs, and boreholes, with groundwater being the dominant source. While Laingsburg meets its current water demand of 1.56 Ml/day with a supply of 1.9 Ml/day, climate change and droughts pose long-term risks, particularly in Matjiesfontein, where borehole yields become unsustainable during dry periods. Expanding wastewater recycling and investing in ecological infrastructure, such as clearing invasive plants, could improve water supply and quality.

On the energy front, Laingsburg benefits from three major power lines, ensuring 100% of households have prepaid electricity. However, the rising use of alternative energy sources suggests shifting energy needs. Renewable energy projects, such as the 147MW Roggeveld Wind Farm, are set to contribute to local energy production, creating jobs and adding clean energy to the national grid. With strong infrastructure in place, ongoing investment in the water and energy sectors is vital to sustain growth and meet future demands. This approach will be emphasized in the Laingsburg Local Municipality Spatial Development Framework (LLM SDF) to stimulate the adoption of sustainable and locally generated energy solutions.

B2.1.4 CONSTRUCTION

The construction sector in Laingsburg experienced significant growth, with a rate of 3.2% annually, surpassing other secondary sectors. This growth is partly driven by the development of agricultural and water infrastructure aimed at enhancing water security in the region. However, despite this growth, the sector created only six jobs per year between 2015 and 2019, suggesting that many projects were outsourced to external contractors.

Increase Local Employment: Develop strategies to increase local job creation within the construction sector. This could involve prioritizing local contractors and skilled workers for projects to ensure that economic benefits are retained within the community.

Focus on Sustainable Infrastructure: Continue investing in agricultural and water infrastructure, with a focus on sustainability and resilience to climate

change. Projects should aim to improve water security and support agricultural productivity.

Enhance Training and Skills Development: Implement training programs to equip local residents with the skills needed for construction and related fields, boosting local employment and expertise.

B2.1.5 WHOLESALE& RETAIL TRADE, CATERING AND ACCOMMODATION

The trade sector in Laingsburg, encompassing Wholesale & Retail Trade, Catering, and Accommodation, has significant potential, especially in Agri-tourism. This sector involves the sale of goods, installation and repair services, and hospitality services. Opportunities abound in agriculture and agro-processing, with fertile land supporting diverse agricultural trading and irrigation technology advancements. The Beaufort West Agri hub promotes regional collaboration, and there are prospects for trade in food processing machinery, logistics, and tourism products. To leverage these opportunities, investment in infrastructure, collaboration, and exploration of export markets are essential.

Identified subsectors prioritized for development include:

- Leisure Tourism: A leading sub-sector with rich cultural and natural attractions, receiving strategic priority for immediate development.
- MICE Tourism: Targeting Laingsburg as a strategic centre for Meetings, Incentives, Conferences, and Exhibitions tourism, aiming for growth over the medium term.
- General Business Tourism: Leveraging its status as the district's primary business hub, with a focus on establishing administrative headquarters for long-term growth.
- Retail Tourism: Showcasing unique products like Karoo lamb, venison, and crafts, providing a basis for long-term retail tourism development.

Key Actions and Interventions:

- Tourism Infrastructure: Invest in developing tourism infrastructure to support leisure, MICE, and retail tourism.
- Promotion and Marketing: Implement robust marketing strategies to attract diverse tourists, emphasizing local products.
- Collaboration: Foster partnerships with stakeholders for a collaborative environment supporting sustainable growth.
- Skills Development: Invest in training programs for the local workforce to enhance service quality.
- Retail Tourism Initiatives: Showcase and market local products to boost retail tourism and support local businesses.

B2.1.6 TOURISM

Tourism and heritage significantly enhance Laingsburg's economy and cultural identity. Tourism, driven by the municipality's strategic location on the N1 Freeway and its rich historical and natural assets, including Matjiesfontein village and the aftermath of the 1981 flood, is pivotal. However, diversification and extended visitor stays are crucial. Agri-tourism,

featuring farm stays, hiking, and adventure activities like 4X4 drives and stargazing, is a growing sector that appeals to urban dwellers seeking rural experiences.

Strengthening hospitality, preserving Laingsburg's character, and leveraging local landmarks will bolster tourism. Additionally, emerging projects like renewable energy initiatives and the Square Kilometre Array could further impact the town's economic and tourism landscape.

There is considerable unexploited potential for tourism in the Laingsburg Municipality. Much of this potential appears to have been recognized in the tourism development plans that have been presented but an effective marketing and implementation strategy is required. Training and literacy will also be important as tourism is dependent on high levels of service.

The Central Karoo District Municipality's Local Economic Development Unit has identified tourism development as one of its strategic thrusts. The Strategy also recognises the need to ensure responsible tourism practices and bring host communities into the mainstream of the tourism industry, thereby creating opportunities for job creation and the development of small and medium enterprises. The following tourist activities exist in the Central Karoo region:

- Luxury trains, such as the Rovos rail and the Blue train, both stop in Matjiesfontien Laingsburg LM.
- The Karoo National Park offers hiking trails, accommodation, conference facilities, and some game species.
- Places of historic interest include the Victorian town of Matjiesfontein and the Chris Barnard Museum

Agricultural Sector:

The main activities here are wine tours, tours of farms, farming activities, game viewing, hunting, fly fishing, etc. Although some activities have started, there is a need to develop proper tourism packages to promote this type of tourism activity.

The municipalities in the district need to look at the agricultural sector, which provides some opportunities for SMMEs to benefit from—supplying temporary housing, markets (food stalls, arts and crafts, etc.), skills development, etc.

Manufacturing Sector

The municipality's rich agricultural heritage and manufacturing prowess give rise to lively festivals and events. Harvest celebrations, craft fairs, and manufacturing expos provide entertainment and learning opportunities for both locals and tourists. These gatherings foster a sense of community and cultural exchange.

The municipality's intensive agriculture sector opens doors to agritourism, allowing travellers to immerse themselves in the local farming culture. Visitors can partake in hands-on farming activities, harvest seasonal crops, and indulge in farm-to-table culinary experiences. Moreover, guided farm tours and farmer's markets provide valuable insights into sustainable agricultural practices, appealing to eco-conscious tourists. Guided tours

through local factories and production facilities offer visitors an up-close look at the craftsmanship and innovation behind various products.

B2.1.7 COMMUNITY AND PERSONAL SERVICES

These services significantly contribute to the municipality's GDP, underscoring their importance in enhancing the well-being and livelihoods of residents. Education plays a pivotal role in improving the community's overall welfare, fostering economic productivity, and expanding opportunities for career advancement. However, the data also reveals challenges related to education levels and poverty, affecting residents' prospects for financial independence and upward mobility. Additionally, a notable portion of the population relies on grants and is economically inactive, potentially impacting their engagement with personal services.

The financial, insurance, real estate, and business services sector, which constitutes a significant portion of the municipality's GDP, plays a critical role in supporting the local economy. Financial services facilitate the operation of businesses and the financial system, while business services contribute to the growth and functioning of various industries. Collectively, these services enhance economic stability and provide the necessary framework for businesses to thrive.

B2.1.8 TRANSPORT

The N1 Freeway bisects Laingsburg Municipality, and the main railway line is aligned from east to west. These routes connect the Municipality to Worcester, Cape Town, and Beaufort West, and they are the municipality's main lifeline. Laingsburg aims to enhance regional accessibility, especially in rural areas, by developing key public transportation routes. This involves clustering towns to create central access points through link roads, achieved by upgrading and maintaining existing infrastructure, prioritizing rural-urban linkages, transforming internal roads, and upgrading gravel roads. Additionally, the municipality encourages non-motorized transportation for a diversified public transportation system.

The transport sector is pivotal for LLM's economic development. Beaufort West serves as a logistics and manufacturing hub connected to central South Africa, coastal areas, and SADC regions through national routes. The existing rail infrastructure in Laingsburg offers potential for upgrades. Daily freight movement along these routes presents opportunities for trade, tourism, infrastructure investment, supply chain efficiency, and job creation.

Laingsburg's economic drivers include Beaufort West logistics and manufacturing hub, thriving agriculture focused on Karoo lamb production, tourism, and well-established transportation routes. These features collectively shape the municipality's economy. Economic sectors in Laingsburg may evolve over time due to changing conditions, policies, and market demands, influenced by proximity to larger urban centres and transportation routes.

Roads leading to businesses and tourism activities need upgrades and ongoing maintenance throughout the municipal area. There is a need for maintaining the rural roads to facilitate transport to/from farms in areas in the municipal area.

B2.1.9 AGRO-PROCESSING

Agro-processing involves the transformation of raw materials and intermediate products sourced from agriculture. The goal is to advance processing technologies from lab to commercial implementation, showcasing product and process capabilities at different scales.

The competitive performance of agriculture and agro-processing industries has the potential to foster inclusive economic growth and sustained development through interlinked stages. Initially, opportunities arise in primary food production, followed by processing, value addition, distribution, and, ultimately, retailing within the agro/food value chain. The expansion of the agro-processing sector can catalyse demand for raw materials from agriculture, creating new markets and boosting farmers' income. This increased income enables farmers to invest in capital equipment, enhancing overall productivity. The growth of the agro-processing industry is intricately connected with agriculture, offering latent potential to contribute significantly to reducing unemployment, inequality, and poverty levels through both backward and forward linkages (DALRRD, 2018).

Carrot and onion seed farming in Laingsburg presents a valuable agricultural opportunity, leveraging the region's favourable climate and soil conditions. By focusing on seed production, local farmers can diversify their income, tap into growing markets, and contribute to sustainable agriculture, supporting both local economic growth and food security.

The SDF proposes to diversify carrot and onion seed agriculture in Laingsburg by introducing complementary activities and expanding value chains. Strategies include crop rotation and intercropping with other high-value crops to maintain soil health and boost productivity. To add value and access broader markets, invest in seed processing and packaging facilities. Transitioning to organic seed production can tap into the growing demand for organic products, while developing value-added products such as seed oils or extracts can enhance market appeal.

Additionally, agritourism opportunities like farm tours and workshops will create new revenue streams, and partnerships with research institutions can drive innovation in hybrid seeds and climate-resilient farming techniques. These approaches will help farmers diversify their incomes, improve sustainability, and strengthen Laingsburg's agricultural sector.

The SDF identifies and explores agro-processing opportunities, such as olive production, cheese-making, seed production from a variety of fruits and vegetables, seed oil, and cold storage facilities.

B2.1.10 KNOWLEDGE-ECONOMY

One prominent trend across local, provincial, and national levels in contemporary society is the shift towards knowledge and information-based economies. The World Bank (2012) defines knowledge economies through four pillars:

1) institutional structures incentivizing entrepreneurship and knowledge utilization,
2) availability of skilled labour and robust education systems,
3) ICT infrastructure and accessibility, and

4) a vibrant innovation landscape involving academia, private sector, and civil society.

Within the district, certain observations highlight key challenges and opportunities:

- The district's lack of universities creates a gap in tertiary education. Establishing educational facilities that link to institutions like UNISA, CPUT, UFS, CSIR, and others is essential.
- Consideration for establishing a college of astronomy or a satellite campus of existing programs is viable.
- Limited ICT infrastructure in remote rural areas hampers accessibility.
- Skilled labour scarcity results from the distance to higher education facilities and training centres.
- The local knowledge economy, primarily anchored in agriculture, reveals a prevalence of unskilled populations in rural areas.
- Training initiatives for farmers and individuals involved in agri-business, food, and agro tourism are crucial. Building relationships between emerging and established agri-business entrepreneurs can support this endeavour.

Data Bank Development

Laingsburg is strategically positioned to host data banks, leveraging its abundant land availability, renewable energy potential, and the existing Fiber link between Cape Town and Johannesburg. By capitalizing on these assets, the municipality can attract data centres that require stable, low-cost energy and high-speed connectivity. Integrating renewable energy sources will ensure that these data banks operate sustainably, further positioning Laingsburg as a key player in the tech infrastructure sector and driving local economic growth and technological advancement.

Fostering growth in the knowledge economy is crucial for the community and industries heavily invested in research and development (R&D) and intellectual capital. This involves supporting existing sectors like agriculture, which has thriving potential, and fostering innovation clusters. These clusters are envisioned as dynamic, mixed-use small business districts that benefit from knowledge-sharing and resource collaboration, preparing the district for future economic growth.

B2.2 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 benefits 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.

B2.2.1 TOWNSHIP/RURAL ECONOMIES

'Township economy' refers to enterprises and markets based in the township area. These are enterprises operated by township entrepreneurs to meet primarily the needs of rural/township communities and, therefore, can be understood as '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, as shown in Table 5 below.

Table 5: Township/ Rural Economies

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

SECTORS	CLUSTERS
	•Research, awareness and skills development and knowledge management.

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

The SDF identifies Goldnerville and Bergsig as a township in Laingsburg that, due to socio-economic challenges such as unemployment, poverty, and limited business opportunities, should be the focus of township and rural entrepreneurship programmes to foster local economic growth and empowerment.

B2.2.2 INFORMAL TRADING

Informal trading ingrains itself deeply into the fabric of Laingsburg Local Municipality, persisting across past, present, and future alongside other economic activities. It plays a pivotal role in job creation, absorbing many who would otherwise face economic idleness. Much like the formal economy, it serves as a tool for poverty alleviation, ultimately curbing levels of petty crime and criminality over time.

The informal sector serves as the primary source of employment for a significant portion of both urban and rural poor populations, constituting a substantial portion of economic output in many developing nations. Statistics South Africa reported over two million individuals engaged in the informal economy (excluding agriculture) in 2015.

Regrettably, municipal planners often view the informal economy merely as a spatial issue, focusing on where to allocate informal trading zones rather than recognizing its integral role in the local economy and its potential to mitigate unemployment. Consequently, the regulation of informal business activity falls within the purview of local government.

Spatial development initiatives prioritize the gradual enhancement of designated informal trading spaces, typically lacking in aesthetics and adequate services. Such planning requirements extend to private property developers, particularly when new developments displace existing markets or hold potential appeal for informal traders in the long term.

The burgeoning employment within the informal sector holds significance against South Africa's unemployment backdrop. Notably, the poverty-alleviating impact of informal employment stands out. Recognizing its importance, the South African government embraces the informal economy as a vital avenue for employment and economic mobility for the impoverished. The National Informal Business Upliftment Strategy of 2014 outlines government assistance frameworks covering skills development, marketing, technical support, infrastructure enhancements, and management training. This strategy of "inclusive growth" aims to empower South Africa's poor to actively participate in the economy, rather than solely relying on wealth redistribution through social welfare programs.

Key actions and interventions include:

- Formalizing informal trader stalls.
- Implementing permit-controlled informal trading stalls.
- Enacting by-laws to regulate informal trading in specific areas.
- Incorporating informal trading regulations into Local Economic Development (LED) by-laws.

Key areas earmarked for action and interventions encompass corridor activity streets and CBD Flood Museum precinct in the town of Laingsburg along Voortrekker Street. As informal trading is increasing in the town if Laingsburg, it is also essential for the municipality to consider the development of an Informal trading policy to provide guidelines to informal traders and to develop a relationship with them where a monthly fee is paid by them and the municipality agrees to offer them with certain services.

The stalls are proposed to be close to the CBD, where there is a lot of movement. Having a designated place for informal trading will assist in keeping order in the town centres and also combat health hazards associated with lack of controlled areas for stalls.

Some examples of formalising Informal trader stalls are shown below.

B2.2.3 SMALL, MEDIUM, AND MICRO ENTERPRISES (SMME) DEVELOPMENTS

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

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

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

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

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

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

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

entrepreneurs and the empowerment of individuals or groups. The programmes, the specific interventions to be employed and where the responsibility lies is shown in table below.

Table 6: SMME Programmes

Programme	Specific Intervention	Responsibility
SMME relief programme	Assist local SMME's to access national support programs	CKDM and LM
	Provide a rates reduction intervention to businesses operating in the municipal facilities	LM
	Provide municipal financial support for stock acquisition for SMME's	CKDM and LM
Informal traders' relief programme	Develop the informal trader's database	CKDM and LM
	Assisting informal traders to access national support through formalisation	CKDM and LM
	Waiver permit and licence charges for a prescribed period	LM
	Offer stock stipends to the informal traders	CKDM and LM
	Promote and facilitate bulk buying for informal traders to cut on stock costs	CKDM and LM
	Promote product diversity amongst informal traders	CKDM and LM
Buy local campaign programme	Conducting campaigns for the local people to buy from the local informal traders	CKDM and LM
	Conducting campaigns for the local people to buy their goods and services from the local SMME's.	CKDM and LM
	Facilitate government buying from local SMME's	CKDM and LM
	Promote business to business buying activities	CKDM and LM
Capability programme	Educate local communities about the importance of buying local and from informal traders	CKDM and LM
	Advocate for municipal policy reviews that promotes re-entry into the informal trading sector	CKDM and LM

B2.3 REDUCTION OF RED TAPE

Establishing and fostering a conducive business environment is pivotal to nurturing a competitive and dynamic economy. The burdensome red tape and bureaucratic hurdles encountered by businesses in their dealings with government entities are recognized as significant impediments to economic progress and expansion.

At the core of fostering an enabling environment lies the notion of "ease of doing business" (EDB), as defined by the World Bank Group, which measures the extent to which regulatory frameworks facilitate the establishment and operation of local enterprises.

Red tape encompasses non-essential procedures, forms, licenses, and regulations that inflate the costs associated with government interactions, or any outdated, redundant, or confusing elements that hinder the competitiveness of the province, impeding economic growth, job creation, and squandering taxpayers' resources.

Red tape encumbers businesses in several ways:

- By increasing unnecessary costs and causing delays, hindering their ability to compete in the global market.
- By impeding the establishment of new businesses and stunting the growth and sustainability of existing enterprises.

Mitigating red tape involves deploying a diverse array of targeted tools aimed at fostering service delivery excellence. Service quality hinges on three main determinants: people, processes, and technology, which ideally intersect to achieve the "sweet spot of service quality" aligned with customers' preferences.

Efficiently reducing red tape necessitates a well-structured and coordinated approach encompassing the following stages:

1. Identifying critical red tape issues confronting local businesses within the municipality's sphere of influence through surveys or workshops.
2. Designing a participatory and consultative process involving both businesses and knowledgeable municipal officials to address identified red tape challenges.
3. Utilizing tools such as the Fish Bone diagram to pinpoint the root causes of red tape problems.
4. Developing a comprehensive Red Tape Action Plan, outlining practical solutions for each identified cause, and appointing a Red Tape Champion responsible for implementation oversight.

B2.4 RENEWABLE ENERGY INDUSTRY

South Africa is actively diversifying its energy sources to bolster energy security and curb greenhouse gas emissions. The country's favourable climate facilitates the widespread deployment of Renewable Energy (RE) technologies such as solar photovoltaic (PV) and wind generation.

The Western Cape Province stands out as a major contributor of renewable energy to the National Grid. Encouragingly, Laingsburg LM towns and settlements are urged to embrace renewable energy solutions, fostering the

development of low-carbon eco-cities and towns. Emphasizing resource conservation and the adoption of eco-friendly materials and manufacturing processes is paramount.

With the presence of renewable energy in areas located just outside Laingsburg, the town's significance in the renewable energy sector is further emphasized. This area is likely to host solar or wind farms, contributing significantly to the region's renewable energy generation. The proximity of such infrastructure underscores Matjiesfontein and Laingsburg's role as a focal point for renewable energy development in South Africa. Efforts to promote sustainability and eco-friendly practices in the town would be closely tied to the presence and operation of this renewable energy area, making it an integral part of Laingsburg's renewable energy landscape.

In this pursuit, district cities and towns, alongside their residents, should collaborate to cultivate sustainable smart districts, promoting lifestyles that harmonize with the environment. This entails advocating for an ecological civilization where human activities and the built environment coexist in symbiosis.

Efforts are underway among power regulators and stakeholders to envision a future characterized by minimal carbon emissions, recognizing the challenges posed by the current energy landscape, including financial implications. Solutions such as offshore wind farms, microgrids, and decentralized energy generation hold promise, but existing barriers must be addressed. Renewable energy sources must constitute a significant portion of the district's energy portfolio to achieve sustainability objectives.

Laingsburg presents significant opportunities for the development of renewable energy, particularly solar and wind energy projects. The Spatial Development Framework (SDF) recognizes the region's potential to harness these resources, which will contribute to energy resilience and economic growth for both Laingsburg and the wider Central Karoo district.

Municipal Renewable Energy Backup Plant: The municipality plans to develop a renewable energy backup plant southwest of Bergsig to serve as an additional power source. This facility will utilize solar and wind energy to produce electricity, with an expected output of 5 megawatts. Additionally, another potential renewable energy site has been proposed north of the wastewater treatment plant. This initiative demonstrates the municipality's commitment to sustainable energy solutions and its continued efforts to transition to green energy.

A Renewable Energy Information Centre is proposed as part of Laingsburg's Local Economic Development Strategy. This centre will serve as a resource for stakeholders, providing critical information on renewable energy opportunities, promoting investment, and facilitating the development of new energy-related industries. The Central Karoo District SDF designates Laingsburg as a priority area for solar and wind energy development. These projects align with regional efforts to diversify the energy mix and reduce reliance on coal-fired power. The proposed energy initiatives are expected to enhance energy security while promoting sustainable economic growth. The SDF further proposes additional renewable energy projects within the designated Renewable Energy Zone in Laingsburg. This area, noted for its

significant renewable energy potential, will see expanded solar and wind projects. These projects will align with regional goals to diversify energy sources and reduce reliance on coal-fired power.

B2.4.1 DIFFERENTIATING BETWEEN MUNICIPAL ENERGY RESILIENCE PROJECTS AND RENEWABLE ENERGY INDEPENDENT POWER PRODUCER PROCUREMENT PROGRAMMES

Municipal Energy Resilience Projects are designed to enhance local energy security and sustainability and are initiated by municipal governments to prioritize several key areas. These initiatives focus on ensuring local energy independence by providing reliable access during disruptions through decentralized, community-based solutions. They also emphasize the utilization of local renewable resources, such as solar and wind, to reduce transmission losses and bolster resilience. Community engagement is another vital aspect, involving residents in planning processes and fostering a sense of ownership. These projects aim to integrate energy solutions with local infrastructure, aligning them with municipal systems like schools and hospitals.

In contrast, Renewable Energy Independent Power Producer (IPP) Procurement Programmes aim to attract private investment in large-scale renewable energy projects. These programmes feature a competitive bidding process to select independent power producers based on cost and efficiency, focusing on substantial energy generation that contributes to the broader grid. Governed by national regulatory frameworks, they ensure compliance with energy and sustainability standards. However, these programmes tend to involve limited community engagement, prioritizing the scaling of renewable production over local involvement. Municipal projects emphasize local resilience and community participation, while IPP programmes concentrate on large-scale production and private investment.

B2.4.2 BALANCING RENEWABLE ENERGY DEVELOPMENT WITH AGRICULTURAL LAND PROTECTION

As renewable energy projects, particularly wind turbines, can shift land use away from agriculture due to financial incentives, it is essential to implement policies that protect agricultural land. To safeguard food security and maintain agricultural productivity, legislation should be updated to restrict the leasing of land for renewable energy infrastructure, such as wind turbines, to only the necessary footprint area. This approach will allow farmers to continue their agricultural activities on the remaining land.

In Agricultural Zone 1, it is vital to clearly designate agricultural land as the primary use. Renewable energy infrastructure should be classified as a "consent use," ensuring it does not compromise the integrity of agricultural practices.

Given the significant land requirements of solar energy plants, which can render large areas unusable for traditional farming, careful consideration must be given to the placement of solar energy developments. It is crucial to avoid unnecessarily sterilizing land designated for agriculture. Therefore, solar farms should be directed to less agriculturally valuable or degraded lands to minimize disruption to farming activities. Additionally, measures to promote dual land use should be encouraged, such as integrating livestock

grazing or shade-tolerant crops beneath solar panels, provided that adequate safeguards are in place to protect the infrastructure.

This balanced approach can yield financial benefits for landowners through renewable energy projects while preserving agricultural land for food production and supporting rural livelihoods.

The Spatial Development Framework (SDF) proposes the development of a policy framework that:

1. Defines clear guidelines for leasing land to renewable energy developers, restricting it to the footprint areas of the installations.
2. Ensures that all non-footprint areas within Agricultural Zone 1 remain dedicated to farming practices.
3. Promotes integrated land-use strategies that allow for the coexistence of renewable energy infrastructure and agriculture, ensuring long-term sustainability for both sectors.
4. Innovative Solar Solutions: Development and implementation of innovative solar technologies, such as agrivoltaics, which allow for the simultaneous use of land for agriculture and solar energy generation. This approach maximizes land use efficiency and supports farmers' livelihoods while contributing to renewable energy goals.

B2.4.3 RATIONALE FOR INTERVENTION

South Africa has set ambitious targets to reduce its emissions. By 2020, it aims to reduce emissions by at least 34% below baseline levels and 42% by 2025. This commitment underscores the country's dedication to combating climate change.

The strategy for transitioning to a low-carbon economy hinges on fostering widespread consensus regarding the challenges and trade-offs inherent in implementing climate policy, as outlined in Chapter 5 of the National Development Plan (NDP).

Crucially, realizing this transition necessitates strong leadership from a capable state. Such leadership is essential for enforcing regulations governing greenhouse gas (GHG) emissions and effectively addressing the impacts of climate change.

Furthermore, the success of the transition to a low-carbon economy hinges on the country's capacity to enhance workforce skills, particularly in the initial stages. Strengthening skills across various sectors is imperative for navigating the complexities of transitioning to a sustainable and resilient economic model.

SDF proposes Laingsburg renewable energy projects that focus on maximizing the region's solar and wind energy potential. The projects aim to promote energy resilience for the municipality and the larger Central Karoo region. The Laingsburg area is highlighted as a key location for renewable energy developments, particularly due to its excellent access to sunlight and wind, which are vital for solar and wind energy generation.

Renewable Energy Information Centre: A renewable energy information centre is proposed as part of Laingsburg's local economic development strategy, which aims to diversify the economy and support new industries.

Solar and Wind Projects: The Central Karoo District SDF identifies Laingsburg has significant solar and wind energy potential. The district is noted as a suitable location for solar and wind energy projects, which are part of ongoing regional planning efforts.

- Laingsburg and its surrounding areas are noted for their high suitability for solar and wind projects. They benefit from strong sunlight exposure and are close to key transport routes, making it easier to distribute the generated power.
- The renewable energy initiatives are expected to create jobs in the construction, maintenance, and operation of renewable energy plants.
- Local economic benefits include providing energy to nearby communities, reducing dependency on coal-fired energy, and positioning Laingsburg as a contributor to South Africa's broader renewable energy goals.
- Independent Power Producers (IPPs) are encouraged to set up operations, benefiting from Laingsburg's geographic advantages. The local population will gain from skills development and potential employment opportunities in renewable energy projects

B2.4.4 THE NEW GROWTH PATH

"Technological innovation presents a significant avenue for fostering job creation on a substantial scale. The New Growth Path outlines an ambitious target of generating 300,000 additional direct jobs by 2020 through the greening of the economy. This includes 80,000 jobs in manufacturing, alongside roles in construction, operations, and maintenance of new environmentally friendly infrastructure. Looking ahead, the potential for job creation in this sector is projected to exceed 400,000 by 2030."

"It is evident that the government regards the green industry as a promising sector for fostering employment opportunities."

B2.4.5 KEY ACTION AREAS

To cultivate Renewable Energy in Laingsburg for the benefit of local businesses and residents:

- Encourage collaboration between companies and the municipality to compile a Directory of Green Products that can be produced locally while also mobilizing the necessary investments for implementation.
- Prioritize the local manufacturing of Solar Geysers and Solar Panels to support the government's initiative of installing more solar geysers in low-cost housing.
- Develop a comprehensive array of training and support programs in partnership with the Western Cape Rural TVET College in Beaufort

West, aimed at enhancing understanding of the Green Economy and related products.

Expansion of Solar Farms in the vicinity of Laingsburg :

- Facilitate the expansion of Solar Farms surrounding Laingsburg to capitalize on the region's solar energy potential and bolster renewable energy production.

B2.5 SKILLS DEVELOPMENT AND TRAINING

Skills development and training are crucial for personal and professional growth in today's fast-paced world. These activities enhance both technical and soft skills, making individuals more adaptable and valuable in the workforce. Effective training programs identify skill gaps, offer tailored learning experiences, and assess outcomes. Embracing continuous learning is essential for staying competitive and fostering innovation. Overall, investing in skills development benefits individuals, businesses, and societies by enabling progress and economic growth.

Rationale for intervention

Training Institutions in LLM to serve as a focal point to equip LLM 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 in the main economic sector.

- Develop new markets and work with representatives of key sectors to develop training and educational content that meets future skill requirements at home.
- Provide gateways for local and other businesses to access expert staff and skills through a variety of channels, knowledge transfer partnership, sectoral groups, etc.
- Provide earning institutions for Renewable Energy and Agribusiness knowledge to enable the locals to work on the Projects.

The SDF proposed the development of a tertiary institution in Laingsburg to enhance educational access and skill development in the region. The institution will offer diverse programs tailored to local industries, including agriculture, tourism, and renewable energy, fostering economic growth and empowering the community. By creating partnerships with businesses and government entities, the institution will ensure relevant training and research opportunities, ultimately contributing to the sustainable development of Laingsburg and its surrounding areas.

B2.6 STRENGTHENING OF INSTITUTIONAL ARRANGEMENTS

Key Actions

1. Laingsburg Economic Partnership Agreement
2. Establish Agricultural and Tourism Chamber

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.

businesspeople to drive the establishment of their chamber, and the council will coordinate initial meetings and provide support where necessary.

B2.7 SMALL TOWN REVITALISATION

The small-town regeneration approach focuses on a town's unique traits and key sectors that can be leveraged to build a strong local economic and spatial base. The Spatial Development Framework (SDF) offers strategic guidelines for prioritizing infrastructure in small towns. Laingsburg's main town benefits from the Small-Town Revitalization Programme within the Western Cape.

These revitalization programmes aim to promote, encourage, and support the economy in and around small towns. Economically vibrant small towns play a crucial role in economic development by providing employment and commercial opportunities for residents as well as those in surrounding rural areas. Many small towns, where communities can quickly become economically active and which are situated along key transport corridors, have been earmarked for revitalization.

A concept introduced to the study is "livelihoods planning," which ensures that planning is people-centred, and that people are central to planning. This approach focuses on developing land use systems that serve a relevant purpose, particularly in poorer regions of both urban and rural areas. The aim is to integrate cultural and communal zones as essential components of a land use scheme.

The rehabilitation of stores along Voortrekker Road on the N1 plays a crucial role in boosting tourism and enhancing the sense of safety and beautification in the town. By revitalizing these key retail spaces, the town can create a more inviting and attractive environment for visitors, encouraging longer stays and increased economic activity. Improved lighting, facades, and pedestrian-friendly infrastructure will not only enhance the visitor experience but also foster a greater sense of security for both tourists and residents, contributing to the overall appeal and vibrancy of the town.

Matjiesfontein requires revitalization primarily through tourism enhancement, infrastructure upgrades, and the creation of stronger connectivity with regional transport hubs. Rehabilitating stores along Voortrekker Road on the N1 will boost tourism, enhance safety, and create a more attractive, vibrant environment for visitors and residents. The revitalization of towns in the Laingsburg Municipality with accompanying initiatives shows an alignment to the Laingsburg and Central Karoo LED Strategies.

The Laingsburg SDF identifies several key initiatives aimed at revitalizing the municipality's economic and social landscape. The **Agri-Processing Support Programme** focuses on expanding small agri-businesses by linking them to government support, improving product competitiveness, and promoting new ventures like leather tanning and cheese processing. The **Town Beautification Programme** aims to enhance Laingsburg's visual appeal through improved street furniture, signage, and infrastructure, positioning it as a key stop for tourists. The **Skills Development and Work Programmes** target youth empowerment by offering training and employment opportunities, while the **Contractor Support Programme** assists local SMMEs in accessing government tenders and services. These initiatives are designed to stimulate local economic growth, enhance tourism, and create sustainable job opportunities.

B2.8 RURAL DEVELOPMENT FRAMEWORK

Rural development is about enabling rural people to take control of their destiny, thereby dealing effectively with rural poverty through the optimal use and management of natural resources. It is a participatory process through which rural people learn over time, through their own experiences and initiatives, how to adapt their indigenous knowledge to their changing world.

The Land Reform Program aims to broaden access to land and address historical imbalances in South Africa's land ownership. This complex program impacts various sectors, including agriculture, housing, conservation, and industry, requiring a coordinated effort across all levels of government. Effective implementation must integrate land reform into planning and service delivery, while ensuring it contributes to sustainable and integrated development.

To guide future land reform in Laingsburg, key principles include clustering projects based on geography, social identity, and development opportunities to optimize resources and support. Emerging farmers should be settled near transport routes on fertile land with access to support services. Off-farm settlements should focus on areas with easy access to social services, while high-impact projects should align with the Municipality's Local Economic Development (LED) strategy. Opportunities in Laingsburg include game farming, forestry, and crop production. The program remains rights-based, focused on transforming land ownership in line with national goals.

Key Strategies:

The rural development strategies from the **"Rural Areas Guideline"** include the following key strategies with relevance to Laingsburg and the Central Karoo:

1. **Diversification of the Rural Economy**: Encouraging a shift from a reliance on single economic sectors, such as agriculture, towards a more diverse rural economy, including tourism and agri-processing. This is highly applicable to Laingsburg and the Central Karoo, where extensive grazing and agriculture are predominant, but tourism and mining (e.g., potential shale gas) could further diversify the economy.
2. **Small Town Regeneration (STR) Programme**: This program seeks to revitalize underperforming small towns by strengthening local

economies and enhancing quality of life. The Karoo STR Initiative is particularly relevant, aiming to regenerate towns like Laingsburg through partnerships with public, private, and community organizations.

3. Rural-Urban Linkages: Strengthening economic and transport connections between small rural towns and larger urban centres is crucial for integrating rural communities into broader regional economic activities. This is especially important in the sparsely populated Central Karoo, where towns like Laingsburg serve as key service centres for the rural hinterland.
4. Infrastructure Development: Investment in transport networks (roads, rail) and ICT infrastructure is emphasized to enhance rural-urban connectivity and enable access to markets and services, which is vital for isolated towns like Laingsburg and Matjiesfontein.

These strategies aim to build resilience and sustainability within rural areas, ensuring economic opportunities while protecting environmental and cultural assets.

B2.8.1 INTEGRATED RURAL DEVELOPMENT SECTOR STRATEGY (IRDSS)

The Laingsburg Spatial Development Framework (SDF) is primarily guided by the principles outlined in the DALRRD WE*Integrated Rural Development Sector Strategy (IRDSS) 2023*, which emphasizes sustainable land use, infrastructure development, and local economic revitalization. The 2023 DALRRD Strategic Plan aligns with this strategy by focusing on rural economic growth through land use optimization and infrastructure improvements, making it a key reference point for shaping the Laingsburg SDF. The integration of these strategies is crucial in ensuring that Laingsburg's development supports both economic and environmental sustainability.

In developing the Laingsburg Spatial Development Framework (SDF), the following key considerations for the municipality should be addressed:

Rural Development Focus: The SDF must align with the DALRRD 2023 Integrated Rural Development Sector Strategy (IRDSS), focusing on revitalizing the rural economy through sustainable land use, infrastructure development, and community engagement.

Land Use Optimization: Careful planning is needed to balance agricultural, residential, and commercial land uses while preserving green spaces and promoting sustainable practices.

Infrastructure Needs: Investment in infrastructure, such as transportation, water, and energy systems, is crucial for supporting growth and connecting rural areas to economic opportunities.

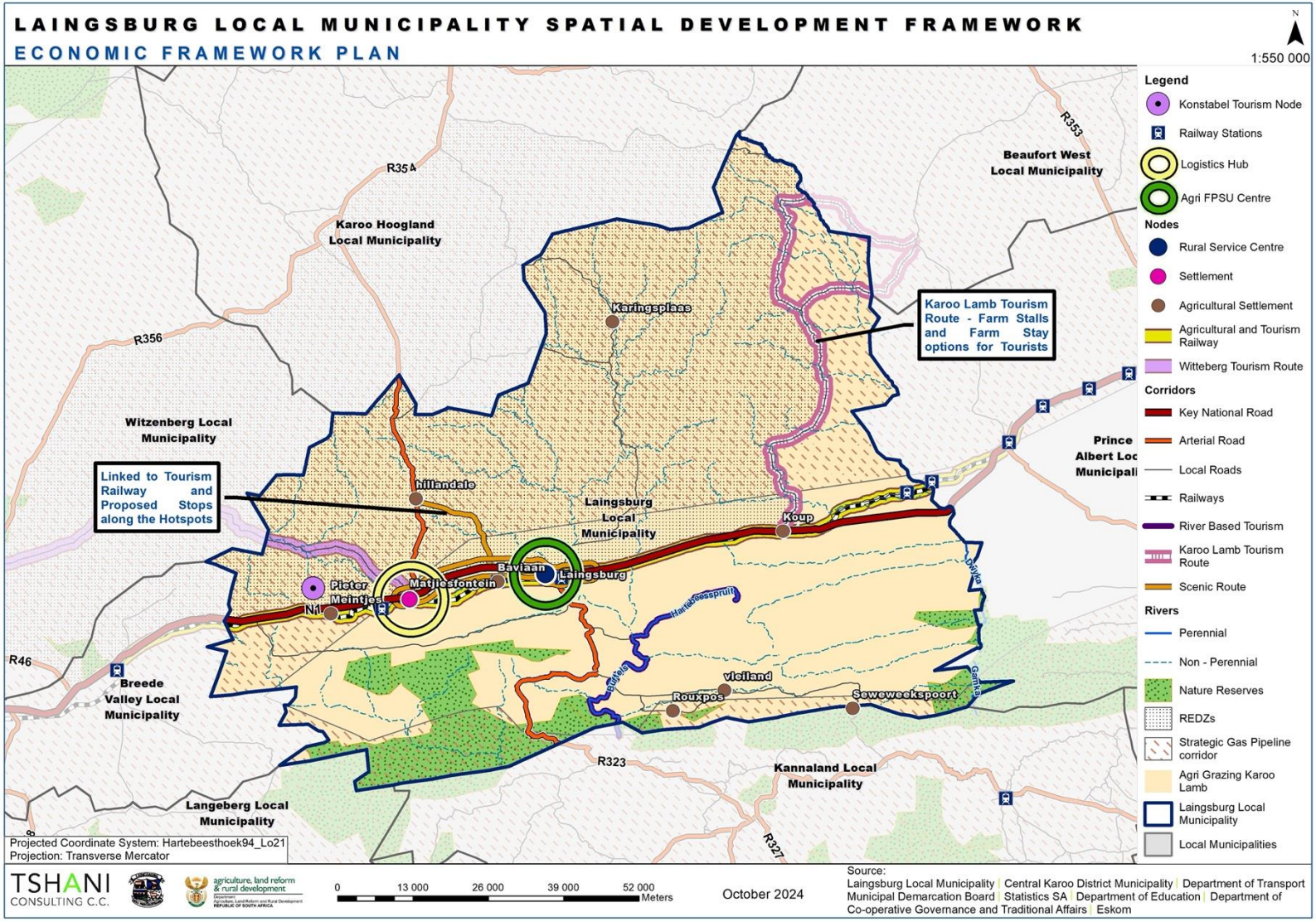
Community Involvement: The SDF should incorporate community input to ensure that local needs and priorities shape the municipality's development plans, promoting social cohesion and local ownership.

Sustainable Energy and Environment: Leveraging Laingsburg's potential for renewable energy, especially solar, can ensure that future developments are

both sustainable and cost-effective. The protection of natural resources and integration of environmental conservation into land use planning is essential.

Economic Stimulation through Mixed-Use Development: Encouraging mixed-use development that integrates housing, agriculture, and commercial spaces can stimulate local economies, create jobs, and improve service delivery in rural settlements.

By integrating these considerations, Laingsburg Municipality can ensure a balanced and forward-looking Spatial Development Framework.



Plan 3: Economic Framework Plan

B2.9 TOURISM FRAMEWORK

Tourism encompasses the organized and operational aspects of vacations and visits to points of interest, whether for leisure, business, medical, or religious purposes, including trips to see relatives or friends. The Tourism Framework aims to provide a structured approach to developing and promoting tourism in a way that maximizes economic benefits, enhances visitor experiences, and ensures sustainable use of local resources. It includes strategies for infrastructure development, marketing, stakeholder collaboration, and preserving the cultural and natural assets of a region to attract diverse types of visitors.

Tourism has been identified as one of the sectors with the largest potential for growth and development in the Western Cape. This is particularly valid in the CKDM, where the unique diversity of communities, cultures, and natural resources implies huge potential for sustainable tourism. The Central Karoo does not share in the tourism industry of the Western Cape, though. Only 2.2% of all tourists to the Western Cape visit the region. The length of stay and the average expenditure per day is also significantly lower than the rest of the province. The Central Karoo hosts one of the country's busiest national roads, the N1, and is in proximity to the Garden Route and the newly established R62 tour route that passes through the Klein Karoo to Oudtshoorn.

To foster tourism development, it's crucial to identify and enhance existing attractions while also discovering new ones. However, attracting more visitors to these attractions requires an active marketing strategy. In this context, developing/reviewing the Laingsburg Tourism Strategy becomes essential, aiming to achieve the following goals and objectives:

1. Promoting the array of tourist attractions within the area to attract both domestic and international visitors.
2. Marketing the diverse accommodation options available in each town, facilitating bookings, and enhancing visitor experiences.
3. Conducting thorough research to understand the motivations and preferences of visitors to tailor offerings and services accordingly, ensuring a memorable and fulfilling experience.

Through strategic planning and effective marketing efforts, the Laingsburg Municipality can leverage its rich tourism potential to bolster economic growth and community prosperity within the Western Cape region.

B2.9.1 LAINGSBURG TOURISM ROUTES PROPOSALS

The Laingsburg Tourism Routes offer an immersive journey through the diverse landscapes, cultures, and experiences of the Karoo region in South Africa. These routes cater to various interests, from history enthusiasts to adventure seekers, providing a blend of natural beauty, cultural heritage, and culinary delights.

N1 Regional Tourism Route: Passing through Matjiesfontein and Laingsburg, this route serves as a gateway for transit tourists en route to popular destinations like Cape Town or the Kgalagadi attractions. Recognizing the potential of transit tourism, efforts are being made to enhance accessibility to the Karoo region. Proposals for a central Karoo

Airport in Beaufort West aim to alleviate the constraints posed by long driving distances, providing easier access for travellers, and promoting tourism growth in the area.

Local Tourism Scenic Route: This Local Scenic Tourism Route linking the R354, N1, and the local railway, offering seamless access to key attractions in Laingsburg. The route will highlight the Flood Museum, showcasing the town's historical significance, and provide entry points to nearby nature reserves for hiking, wildlife viewing, and outdoor recreation. The scenic route will integrate road and rail travel, allowing tourists to explore both the cultural and natural beauty of the region, with opportunities to hop on and off at key destinations for a diverse tourism experience.

Karoo Lamb Tourism Route: Unique journey through the Karoo landscape that highlights the region's agricultural heritage and natural beauty. This route will include stops at local Agri-farms and agribusinesses, offering visitors a firsthand look at sustainable farming practices, particularly focused on the famous Karoo lamb. Along the way, tourists will stop at farm stalls offering locally produced goods, including lamb products, preserves, and artisanal crafts. This route will not only provide a rich cultural and culinary experience but also promote local businesses and support agritourism in the region.

Tourism Rail: the proposed railway route connects Laingsburg with Johannesburg and Cape Town, offering travellers a unique way to experience the Karoo landscape from the comfort of their cabins. The journey will include key stop-offs at destinations like Matjiesfontein, enhancing the experience of these historic towns. In addition, a local train service will operate between Laingsburg and Matjiesfontein, allowing passengers to hop on and off and explore the attractions in both towns. This service creates new opportunities for tourists to enjoy the rich heritage, natural beauty, and activities available in the region, promoting tourism growth and local business development.

Overall, the Laingsburg Tourism Routes showcase the diverse attractions and experiences of the Karoo region, inviting travellers to embark on a journey of discovery and adventure through this captivating corner of South Africa.

B2.9.2 TOURISM NODES

The tourism nodes below are identified in alignment with the Karoo Regional Spatial Development Framework (RSDF) and District Spatial Development Framework (DSDF).

- Laingsburg
- Matjiesfontein

Rural communities surrounding these prominent tourism nodes could greatly benefit from tourism activities that are wider than selling crafts and artwork to tourists. The limited accommodation within these areas could indicate a gap in the industry, which the local communities could explore. Ideas of "home stays" could be explored to expand the accommodation spectrum, especially during peak months such as the December / January period.

B2.9.3 LAINGSBURG TOURISM AND HERITAGE ATTRACTIONS

The following attractions have been identified within the LM:

Heritage Sites:

- Flood Museum: Showcasing the 1981 Great Flood, a significant historical event.
- Matjiesfontein Village: Matjiesfontein is a Provincial Heritage Site of great historical significance. Located along the N1, it is known for its Victorian-era architecture, and it is an important part of the region's tourism. Well-preserved cultural landscapes, including the old railway infrastructure, attract around 10,000 visitors annually.

Scenic Routes:

- Flood Route: This historical route traces key locations affected by the 1981 flood, which significantly impacted the region's infrastructure and heritage. It explores remnants of sites linked to the flood's devastation, offering visitors a unique historical perspective on how the region has recovered and adapted over time.
- 4x4 Routes: Several off-road routes are available for adventure tourism in the rugged landscapes of the Witberge Range. These routes, which run through the mountainous terrains and valleys of the region, provide scenic views and access to remote heritage sites such as rock art and stone-walled kraals, making them ideal for tourists seeking both adventure and cultural exploration

Nature & Dams:

- Floriskraal Dam: Identified as a site with high potential for tourism development, Floriskraal Dam is located in a region characterized by dramatic landscapes and agricultural significance. It is poised for eco-tourism activities such as bird watching and fishing, leveraging the natural beauty of the surrounding area.
- Gamkapoort Dam: This dam offers significant ecological and tourism opportunities. Situated in a scenic wilderness, it is a key site for water-based activities, nature conservation efforts, and adventure tourism, such as hiking and 4x4 routes through the rugged Karoo terrain.

Agri-tourism:

- Farm Stays Visitors can experience authentic farm life with overnight accommodations at various locations including Josephkraal, Oskopvlakte, Blockhouse, Wagendrift, and Rouxpos farms. These stays offer a chance to engage with the daily activities of working farms while enjoying the scenic landscapes of the Karoo, making them ideal for those seeking an immersive rural experience.
- Farm Stalls: The Oewer Farm Stall is one of several farm stalls in the region, These stalls offer tourists access to locally grown produce and handmade goods, a taste of the area's agricultural richness, and a vital connection between tourists and the region's farming community.
- Farm Tourism Expansion in Vleiland and Surrounding Areas: Vleiland, with its fertile land and close-knit agricultural community, is positioned as a growing hub for farm tourism. Its proximity to irrigation farming and productive agri farms makes it an attractive location for tourists looking to explore both the farming lifestyle and the area's natural beauty. The potential for developing eco-friendly lodges and agricultural workshops in Vleiland further strengthens the appeal of farm tourism. Visitors can explore the rich agricultural landscapes, sample farm-fresh products, and even participate in seasonal farming activities.

Historic Karoo Character: The town's architecture and urban character reflect the traditional Karoo style, providing a unique cultural experience.

These attractions, combined with Laingsburg's strategic location on the N1 Freeway, offer significant tourism opportunities.

B2.9.4 KONSTABEL TOURISM NODE

Located in the scenic Central Karoo, the Konstabel node presents unique opportunities for tourism development by promoting historical sites, natural landscapes, and strategic road connections. This proposal outlines key attractions, assesses road network connectivity, and establishes an essential linkage to Matjiesfontein, a Provincial Heritage Site (PHS) of national significance.

Key Tourism Attractions

Konstabel Station and Railway Infrastructure: Featuring early 20th-century corrugated iron houses and a Cape Dutch revival gabled farmhouse, Konstabel station is a historical highlight along the route. It provides visitors with an authentic experience of the region's railway heritage and rural charm, with many original structures still intact.

Stone-Walled Structures and Rock Art Sites: The route passes several heritage sites, including Later Stone Age (LSA) rock art at Duitsershoek. These sites feature fine line paintings, handprints, and pottery that are remnants of the region's rich pre-colonial past. Moreover, stone-walled kraals provide insight into the area's agricultural history.

Witberg Mountain Views and Karoo Landscape : The proposed road network traverses the Witberg mountains, offering spectacular views of the surrounding landscape. Tourists will enjoy the natural beauty of the wilderness areas, including untouched fynbos and Karoo shrubland. The region's dramatic geological features, including rock formations, enhance the scenic experience.

Linkage to Matjiesfontein

Matjiesfontein is an important cultural and historical node that serves as the gateway to the broader region. The proposed Konstabel tourism route will establish a vital linkage to Matjiesfontein for the following reasons:

- Proximity to the N1 Scenic Route: The connection to Matjiesfontein along the N1 Scenic Route increases tourism flow, linking the Konstabel node to a broader network of travelers between Cape Town and the interior of South Africa.
- Cultural Synergy: Matjiesfontein's Victorian-era architecture and railway heritage complement the Konstabel route's historical and

cultural offerings, allowing travelers to seamlessly explore colonial and pre-colonial histories in one journey.

- Tourist Amenities and Services: Matjiesfontein offers accommodations, guided tours, and dining, making it an ideal partner destination for tourists traveling the Konstabel route, enhancing the overall experience and encouraging longer stays

B2.9.5 PROMOTING THE TOURISM SECTOR

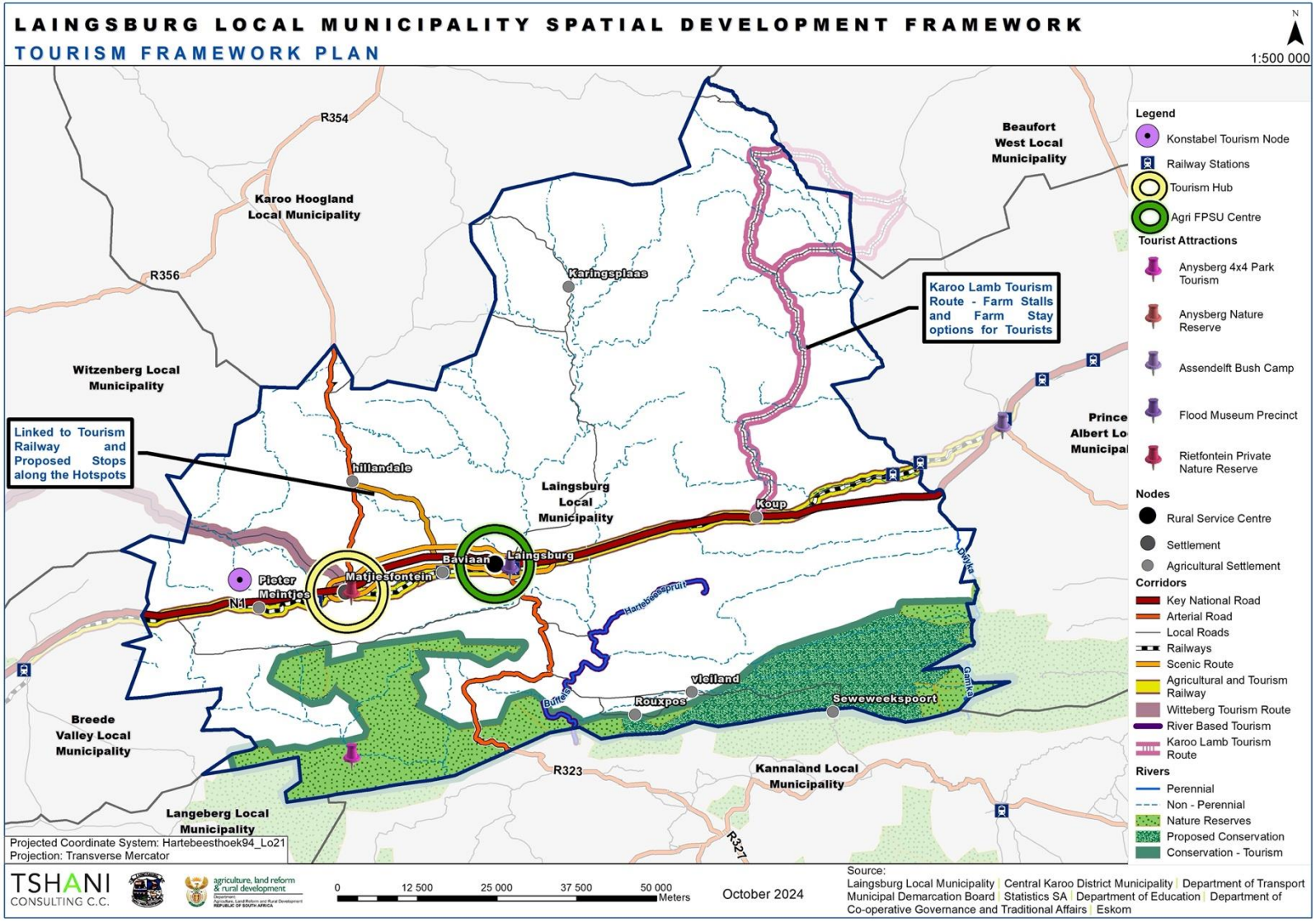
1. Facilitating Collaborative Ventures with Stakeholders The municipality can play a pivotal role in fostering collaborations between investors and various stakeholders. Such partnerships can take shape between municipalities and businesses or community organizations, serving as effective institutional mechanisms for Local Economic Development (LED). Different partnership models prove effective both at the program and project levels. However, it's crucial to meticulously assess the specific conditions and requisites outlined in the Municipal Finance Management Act.
2. Establishing Program-Level Partnerships Local governments frequently forge partnerships with diverse stakeholders to streamline program-level LED initiatives and to cultivate a shared community vision as the foundation for LED efforts. These partnerships hold legal entity status, enabling them to enter contracts with other entities and individuals, as well as to own assets and liabilities in their own capacity. Despite their efficacy, establishing such partnerships can be resource-intensive and time-consuming. The Registrar of Companies must ensure that the formation of these partnerships aligns with their stated objectives rather than being driven by profit motives, which may elongate the legal establishment process. Notably, members of Section 21 companies are shielded from personal liability for the company's debts in the event of bankruptcy, akin to ordinary companies.

Registration as a Private Company or Close Corporation Most businesses opt to register with the Registrar of Companies in Pretoria either as a Private Company (Pty) Ltd or a Close Corporation (CC). Application forms for registration can be obtained from business consultants or chartered attorneys.

B2.9.6 CRITICAL SUCCESS FACTORS FOR THE TOURISM SECTOR

In order for Laingsburg to be a flourishing tourism destination, the following factors are fundamental:

1. Support and buy-in from the council and top management are essential.
2. Adequate budget allocation coupled with proper planning.
3. Adequate human resource competency is needed to drive tourism development.
4. Full participation of all stakeholders in the tourism development process
5. The strategy must be consistently implemented over the stipulated period if it is to achieve the desired outcomes.



Plan 4: Tourism Framework Plan

B3. SOCIAL FACILITIES

Social facilities are essential components of human settlements, providing crucial services such as healthcare, education, recreation, cultural activities, and spaces for social interaction. Access to these facilities plays a significant role in attracting and retaining residents in an area. Thus, the subsequent section outlines the quantity of social facilities within the municipal jurisdiction. The strategy for social infrastructure aligns with the criteria outlined in the CSIR Human Settlement Guideline.

SPC D. Urban Related Areas

To ensure the sustainability of urban development, it is important to strike a balance between the competing interests of land-use planning. A key objective of the PSDF is to promote the rehabilitation of existing settlements and ensure that future developments are sustainable (i.e., supportive of environmental integrity, human well-being, and economic efficiency). Standard town planning criteria, which are applicable in the evaluation and assessment of development applications, building plan approvals, land-use changes, etc., remain relevant and will not be replaced by this policy. These criteria include, among others, taking into account natural and/or unique resources, land and coastal elements, preventing urban sprawl, prioritizing the strengthening and densification of existing nodes, and considering the cumulative impact of development. Access to and availability of social facilities are important factors that attract and retain people in an area. Therefore, the section below outlines the number of social facilities within the municipality's jurisdiction. The following strategy for social infrastructure is based on the criteria stipulated in the CSIR Human Settlement Guideline.

Table 7: CSIR Human Settlement Guideline

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

Highlighting the significance of an integrated planning approach for service delivery is crucial to ensure that services are accompanied by sufficient supporting infrastructure. A depiction of the required number of facilities within the Municipality is based on existing facilities. Considering the growth projection of the Laingsburg Local Municipality up to the year 2040, there will be a substantial increase in the demand for social facilities. The provided maps illustrate both the current distribution of social facilities per ward and

the projected requirements based on the current population size and CSIR guidelines. These plans outline the existing dispersion of social amenities within each ward and project population growth over the next five years, with 2024 and 2029 highlighted. Shortfalls are calculated by comparing existing facilities to those still needed for construction.

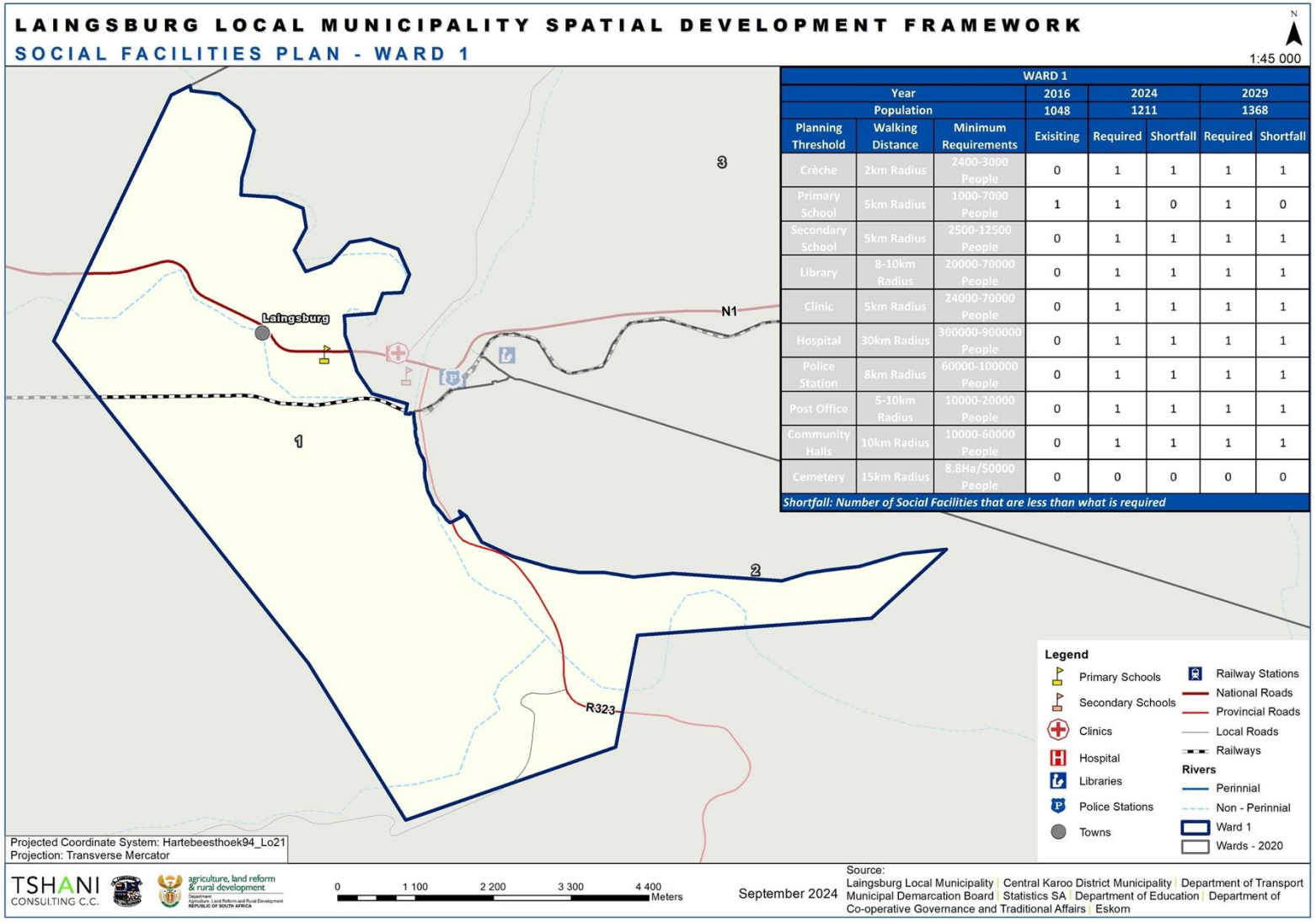
Ward 1 Plan highlights significant infrastructure gaps due to projected population growth by 2029. Key services required include a **crèche, primary and secondary schools, a library, clinic, hospital, police station, post office, and community hall**. None of these facilities currently meet the required standards, underscoring a critical gap in service provision. Immediate prioritization of these infrastructures is essential to meet future community needs.

Ward 2 Plan shows a critical **shortage of crèches and primary and secondary schools**, reflecting an urgent need for educational infrastructure to accommodate the growing population. While the library, hospital, police station, and post office meet current demands, **clinical services are insufficient**, posing health risks. Community halls are adequate, but cemetery space requires assessment. To enhance well-being, the focus should be on expanding educational and healthcare facilities, improving library resources, and evaluating burial space needs.

Ward 3 Plan highlights critical social facility shortages, particularly in early education, with an **absence of crèches and primary schools**. Although one secondary school is sufficient, healthcare services remain inadequate due to a **shortage of clinics**. The library, hospital, police station, and post office meet current needs, but additional community halls are required. An assessment of cemetery space is also necessary. Prioritizing educational, healthcare, and community infrastructure is vital for improving quality of life.

Ward 4 Plan highlights significant shortfall in educational and healthcare facilities, with no crèches and primary schools, and only one clinic instead of the required two. Although the library and hospital meet community needs, there are no community halls or post offices, limiting civic participation. Additionally, cemetery capacity needs evaluation. Addressing these gaps in education, healthcare, and community spaces is crucial to enhancing well-being in the ward.

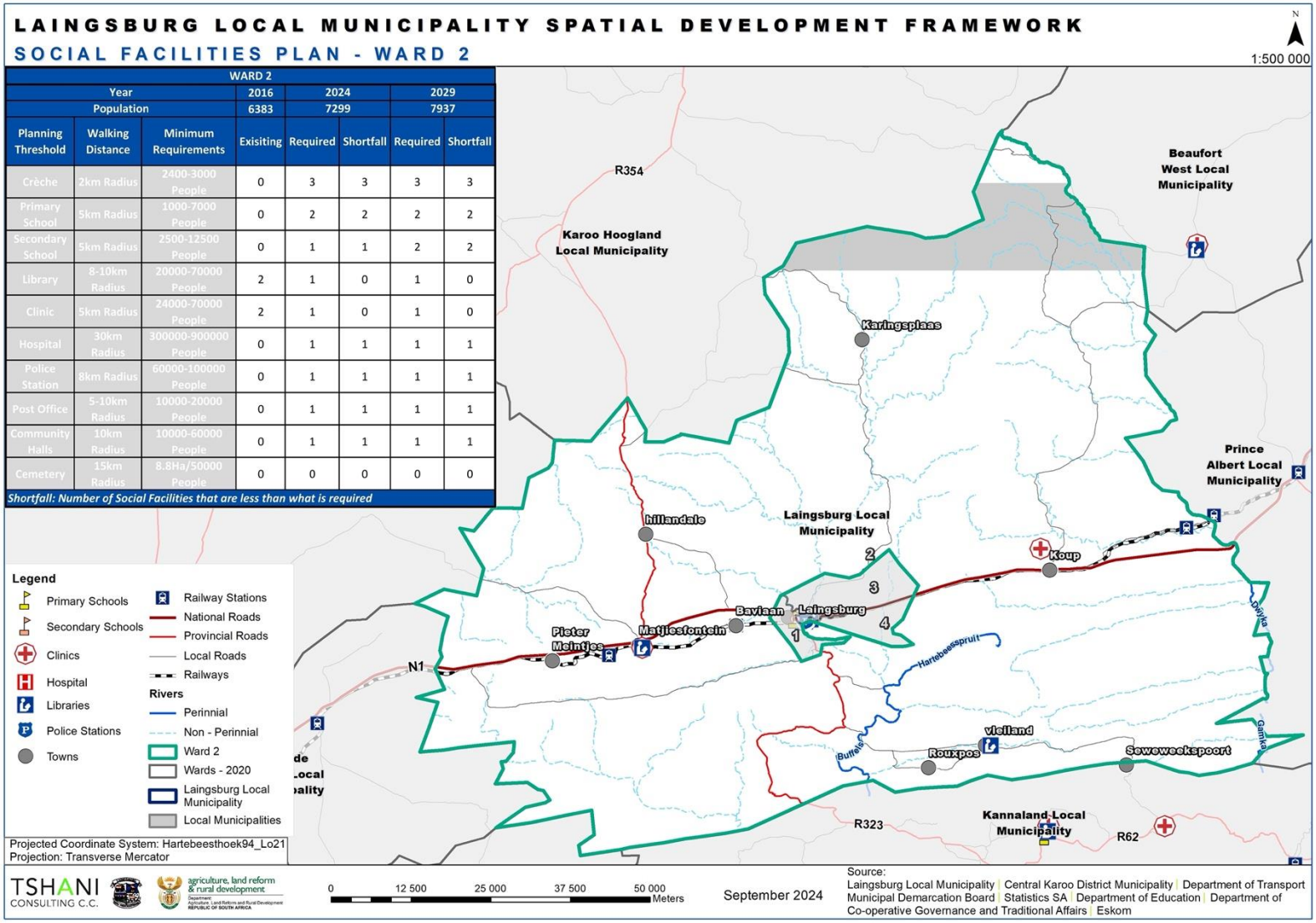
Image 4: ECD Social Facilities



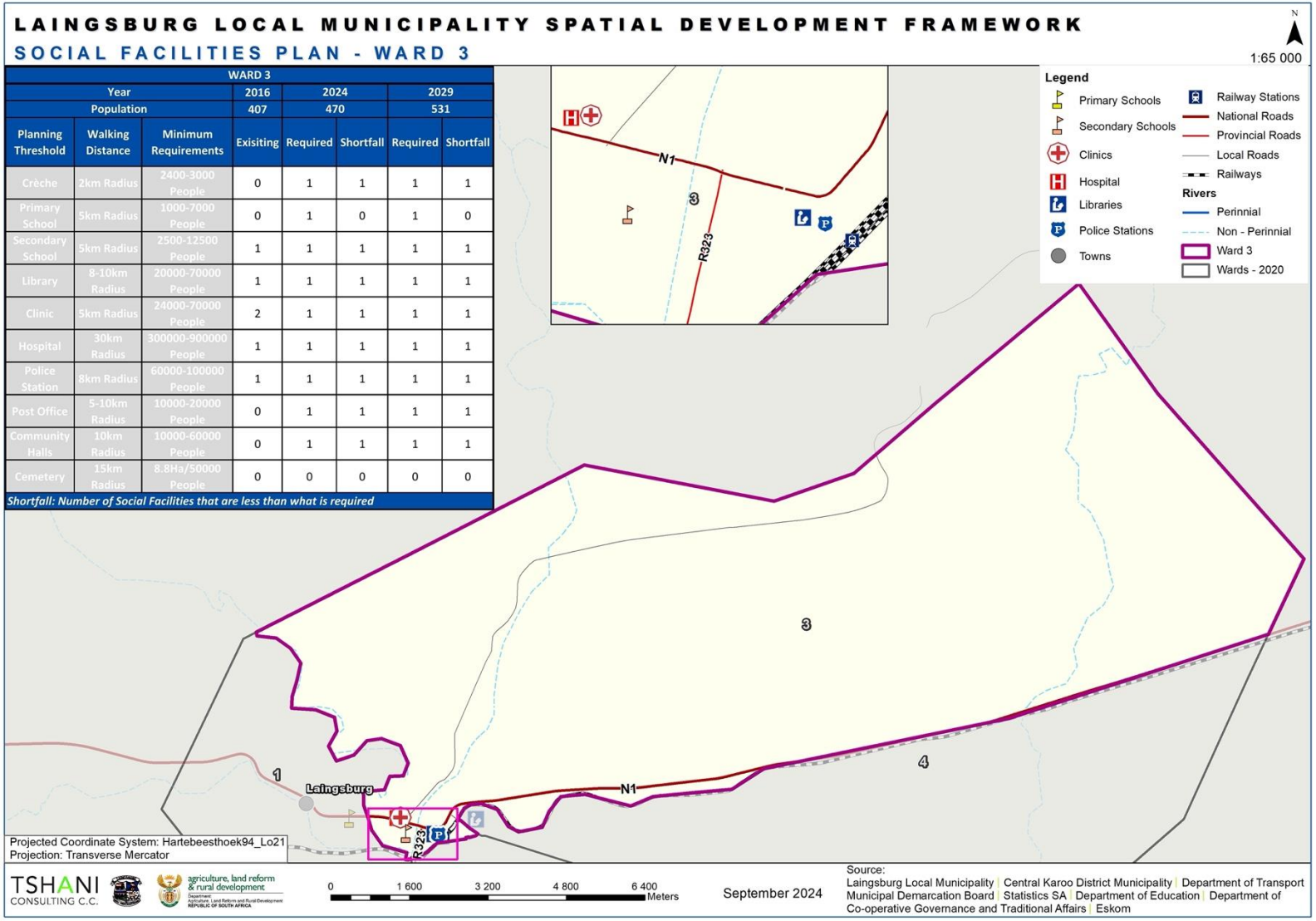
WARD 1							
Year			2016	2024		2029	
Population			1048	1211		1368	
Planning Threshold	Walking Distance	Minimum Requirements	Exisiting	Required	Shortfall	Required	Shortfall
Crèche	2km Radius	2400-3000 People	0	1	1	1	1
Primary School	5km Radius	1000-7000 People	1	1	0	1	0
Secondary School	5km Radius	2500-12500 People	0	1	1	1	1
Library	8-10km Radius	20000-70000 People	0	1	1	1	1
Clinic	5km Radius	24000-70000 People	0	1	1	1	1
Hospital	30km Radius	300000-900000 People	0	1	1	1	1
Police Station	8km Radius	60000-100000 People	0	1	1	1	1
Post Office	5-10km Radius	10000-20000 People	0	1	1	1	1
Community Halls	10km Radius	10000-60000 People	0	1	1	1	1
Cemetery	15km Radius	8.8Ha/50000 People	0	0	0	0	0

Shortfall: Number of Social Facilities that are less than what is required

Plan 5: Social Facilities Ward 1



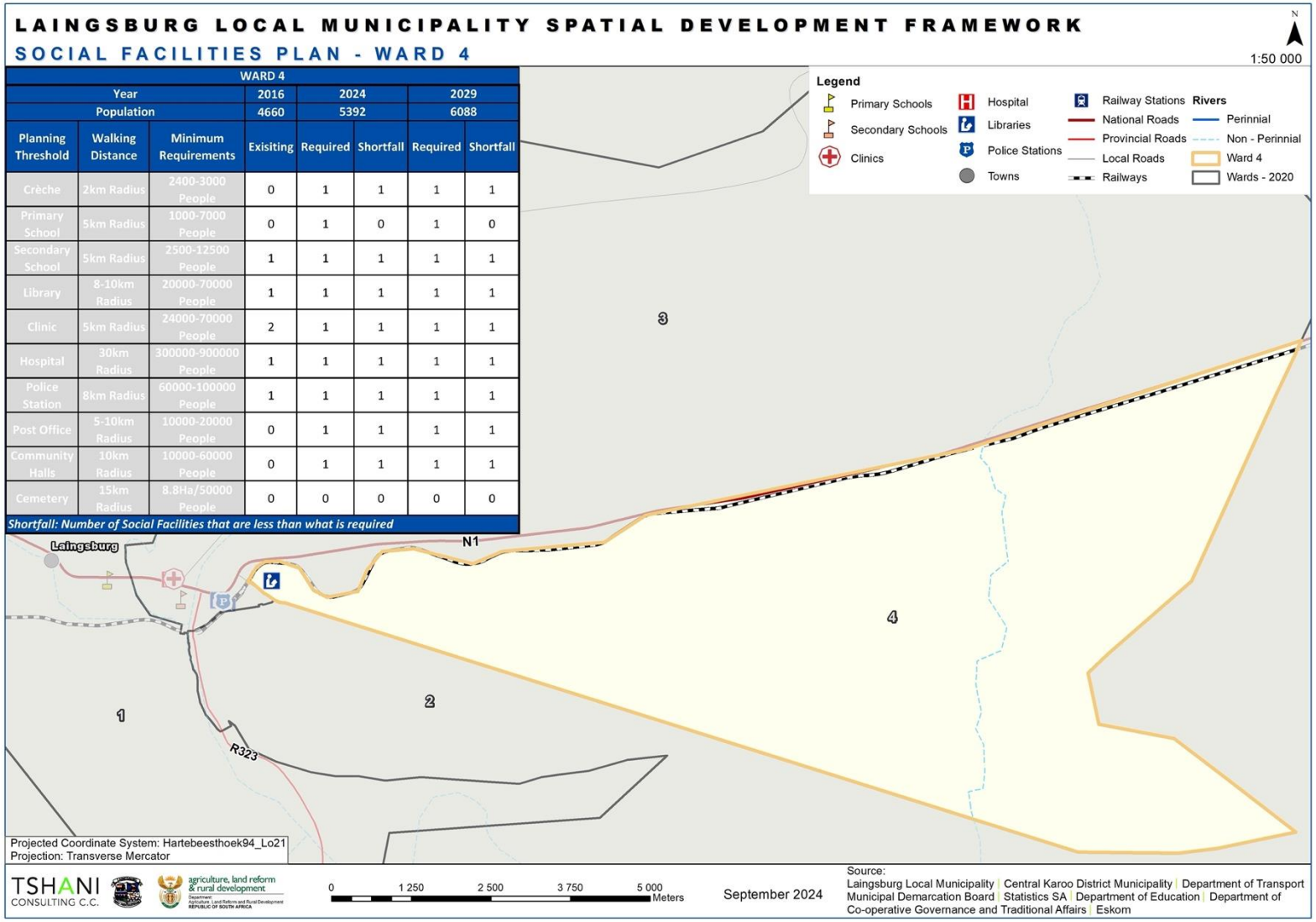
Plan 6: Social Facilities Ward 2



WARD 3							
Year			2016	2024		2029	
Population			407	470		531	
Planning Threshold	Walking Distance	Minimum Requirements	Exisiting	Required	Shortfall	Required	Shortfall
Crèche	2km Radius	2400-3000 People	0	1	1	1	1
Primary School	5km Radius	1000-7000 People	0	1	0	1	0
Secondary School	5km Radius	2500-12500 People	1	1	1	1	1
Library	8-10km Radius	20000-70000 People	1	1	1	1	1
Clinic	5km Radius	24000-70000 People	2	1	1	1	1
Hospital	30km Radius	300000-900000 People	1	1	1	1	1
Police Station	8km Radius	60000-100000 People	1	1	1	1	1
Post Office	5-10km Radius	10000-20000 People	0	1	1	1	1
Community Halls	10km Radius	10000-60000 People	0	1	1	1	1
Cemetery	15km Radius	8.8Ha/50000 People	0	0	0	0	0

Shortfall: Number of Social Facilities that are less than what is required

Plan 7: Social Facilities Ward 3



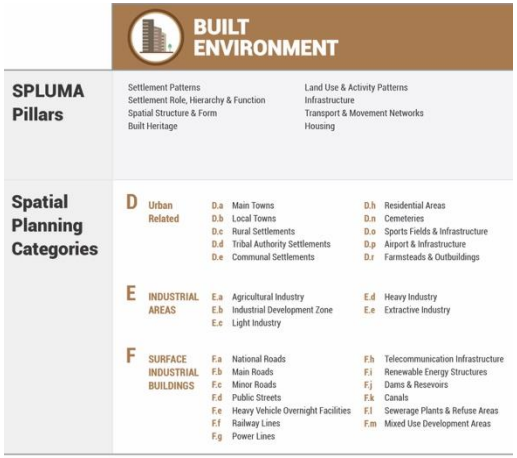
WARD 4							
Year			2016	2024		2029	
Population			4660	5392		6088	
Planning Threshold	Walking Distance	Minimum Requirements	Exisiting	Required	Shortfall	Required	Shortfall
Crèche	2km Radius	2400-3000 People	0	1	1	1	1
Primary School	5km Radius	1000-7000 People	0	1	0	1	0
Secondary School	5km Radius	2500-12500 People	1	1	1	1	1
Library	8-10km Radius	20000-70000 People	1	1	1	1	1
Clinic	5km Radius	24000-70000 People	2	1	1	1	1
Hospital	30km Radius	300000-900000 People	1	1	1	1	1
Police Station	8km Radius	60000-100000 People	1	1	1	1	1
Post Office	5-10km Radius	10000-20000 People	0	1	1	1	1
Community Halls	10km Radius	10000-60000 People	0	1	1	1	1
Cemetery	15km Radius	8.8Ha/50000 People	0	0	0	0	0

Shortfall: Number of Social Facilities that are less than what is required

Plan 8: Social Facilities Ward 4

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."



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 SDF is to promote the 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 LAND USE PROPOSALS

Local Towns, their land use as well as development of land within the municipal area is what is addressed in this section. The LLM Land Use Scheme, 2023 complies with Chapter 2 of the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013), and it also needs to align with the Spatial Development Framework of the municipality.

The link between the SDF and LUMS is Land use in relation to Zoning.

The concept of Zoning is different from the Land use proposed in Spatial Development Frameworks, Precinct Plans, and policy plans associated with forward planning to guide developers and decision-makers.

Spatial planning involves planning guidelines for medium- and long-term development and conservation but does not allocate or take away rights. Spatial plans include strategies for environmental, economic, spatial, social, and infrastructure development and are essential guidelines for the Municipality and the public. Mixed-use zoning has a more precise application as the legal statement of rights and obligations for a property, although other laws may also apply.

Zoning should work in conjunction with (and be linked to) policy plans and other tools in the land use management system to enable the Municipality to manage land and development in the municipal area. Zoning further unpacks the required regulations / permissions and limitations associated for properties according to the zone allocated.

The LLM LUMS has provisions for consent and departure applications; this will enable the spatial proposals to be realized through rezoning applications that are permitted in the different areas of the municipality. The Western Cape Provincial Spatial Development Framework formulated bio-regional planning principles and illustrated the desired matrix of land uses to be used throughout the province. The spatial planning categories (SPCs) provide a framework to guide land use planning in the province.

Five growth and development strategies are proposed in the 2020 PSDF to assist the municipality in managing future settlement growth. The first four strategies were developed in line with the findings of the Socio-Economic Potential of Town Study Review. During various consultation processes, the need was identified to include an additional strategy to manage development associated with mining activities. These strategies have been adopted for the land use proposals in LLM.

B4.1.1 OTHER STRUCTURING ELEMENTS APPLICABLE TO LAINGSBURG LOCAL MUNICIPALITY

Local Towns and applicable to a specific area or community, including:

B4.1.1.1 LOCAL TOWNS

As per the WCPSDF, the inter-relationship of settlements or local towns should be recognized and understood within the LLM. The local towns within LLM include Laingsburg and Matjiesfontein.

B4.1.1.2 MIXED USE

Activity streets are found along major connector routes, usually between two important destinations (e.g., an activity node on either end). Access to land uses is allowed to some degree along an activity spine, but the effective movement of traffic is still a key component to consider. It is important for an activity street to achieve a balance between promoting access, creating a pedestrian-friendly environment, and accommodating traffic mobility. Furthermore, incorporating small-town revitalization efforts can enhance the vibrancy of these areas, fostering community engagement and stimulating local economic growth. By attracting new businesses, supporting existing ones, and creating jobs, revitalization can help reduce unemployment and boost local revenue.

B4.1.1.3 CBD PRECINCT

Densification and the combination of various land uses must be promoted within the CBD area to promote economic and social integration of the community. Although all the Urban Related land uses as associated in SPC D categories are to be developed within the CBD, the normal public input will be of the utmost importance to guide and help with decision-making by the Planning Tribunal. CBD's and nodes should be seen as priority areas for road surface improvement, landscaping (both hard and soft), street lighting and placement of infrastructure such as bins, parking, and seating. This should be done to build a strong central business identity for each community.

Business development and community services should be encouraged in the CBD earmarked areas. Any commercial endeavour in these areas should be

seen in a more positive light than outside of it. High intensity uses can be considered only in CBD demarcated areas, Mixed Use areas and Business Nodes.

B4.1.1.4 CORRIDOR ACTIVITY STREETS

According to the WCPSDF, the LLM SDF has identified certain streets as "activity streets," which function as local roads or high-activity areas featuring linear and mixed-use development, albeit at a lower intensity and market threshold compared to precincts. These streets, primarily attracting pedestrian traffic, offer viable opportunities for local businesses and community facilities to thrive within residential zones without altering their primary residential function. Each area's unique characteristics dictate permissible activities; for instance, areas near schools may accommodate educational and institutional activities, while those connecting different nodes may host smaller businesses.

Identifying such activity streets involved analysing existing movement patterns and land uses through comprehensive site visits to communities and settlements, particularly along main routes.

The following policies govern these Corridor Activity Street areas:

1. Encourage diverse land uses within the activity street, catering specifically to the community utilizing the area.
2. Typically, these streets retain a predominantly residential character.
3. Prohibit high-intensity uses within activity streets.
4. While certain developments like accommodations, commercial establishments, and mixed-use structures are permissible, public input remains crucial for decision-making.
5. Consider the development of street cafes in areas with available public spaces, such as squares or underutilized segments, with approval contingent upon input from surrounding property owners.
6. Recognize activity streets as hubs of business potential due to their accessibility and traffic flow, prioritizing upgrades in roads, beautification, landscaping, and lighting.

B4.1.1.5 INDUSTRIAL PRECINCT

The Industrial Precinct areas have high business potential due to locational factors but are found outside of the CBDs of settlements.

The locational factors generally include high visibility, high accessibility, and strategic locations at road intersections, as well as other existing public amenities. Higher impact/higher order business/mixed-use developments may still be considered in these areas.

These areas are ideal for the consideration of high impact/ higher order land uses which may not be ideal in any other location within residential areas, such as bottle stores, casinos, taverns, and places of entertainment normally part of Business Premises usage.

The SPCs below have been taken into consideration for the spatial proposals.

Diagram 3: Spatial Planning Categories

In the previous Phase 3 report, the structuring elements of the Spatial Development Framework (SDF) were presented, focusing on guiding urban settlement expansion and formalization. These elements help organize development according to the LLM Spatial Vision Plans. Based on the Western Cape Provincial SDF (WCPSDF 2020), these structuring elements are essential in shaping sustainable, high-quality urban environments.

Key functions of the structuring elements include:

- Urban Sprawl Containment: Defined urban edges are essential to manage sprawl, reduce service delivery costs, and protect agricultural land. The Department of Agriculture, Forestry, and Fisheries (DAFF)'s input is integrated into defining these boundaries.
- Urban and Social Integration: Compact urban areas are promoted by identifying CBD precincts in nearly all communities. This ensures access to economic, social, and recreational opportunities.
- Environmental Protection: The plan incorporates rivers, ecological corridors, and stormwater management areas in urban centres to support bioregional planning and protect natural ecosystems.
- Transportation Infrastructure: Existing and future road networks, including major roads, are identified to improve connectivity and accessibility within the municipality.
- Future Growth and Land Use: Zones for residential expansion, institutional uses, and public amenities are identified, ensuring balanced growth and development.
- Higher Density Promotion: Encouraging optimal land use and densification within the urban edge areas ensures that land is utilized efficiently.

Additionally, the Services Edge defines areas where urban densification and service delivery are focused, promoting efficient resource allocation. The Transition Zone, situated between the Services Edge and the Urban Edge, is reserved for future developments such as industrial, agro-processing, residential, and commercial uses, aligned with the municipality's growth strategy.

The urban edge defines the outer boundary within which no urban expansion can occur beyond the boundary. It controls and directs growth, preventing urban sprawl while protecting valuable natural resources and agricultural land. The edge helps reduce service delivery costs and infrastructure strain, limiting ad-hoc, low-density developments.

Key considerations for the urban edge include:

- Infrastructure: The urban edge incorporates all current and planned municipal infrastructure.
- Expansion Areas: Future residential, business, and industrial land uses are included, excluding noxious uses.
- Agricultural Protection: High-value agricultural land is minimally included within the urban edge, focusing on maintaining agricultural functions.

Negative Impacts of Unregulated Development Beyond the Edge:

- Inefficient settlement patterns.
- High infrastructure costs.
- Loss of natural environments and agricultural land.
- Increased transport and energy demands.

Policies for land within the urban edge include:

- Permitted developments such as residential, industrial, business, tourism, education, and mixed-use.
- Development applications must align with the SDF, Spatial Vision Plans, and relevant legislation.
- Sustainable Development Initiatives (SDI) may be required for new projects.

For land outside the urban edge:

- Strict guidelines prevent the fragmentation of high-potential agricultural land.
- Non-agricultural developments must prove environmental and economic benefits, including tourism and conservation.
- Sustainable Development Initiatives are encouraged for all projects.

The proposed urban edge expansion for Laingsburg is driven by population growth, economic development, and the need for additional residential and social facilities. The urban edge is designed to accommodate housing needs until 2034 It includes provisions for land uses such as tertiary institutions, industrial and agricultural industries, the municipal landfill site, and recreational sports fields which are activities which are currently in the pipeline for potential development.

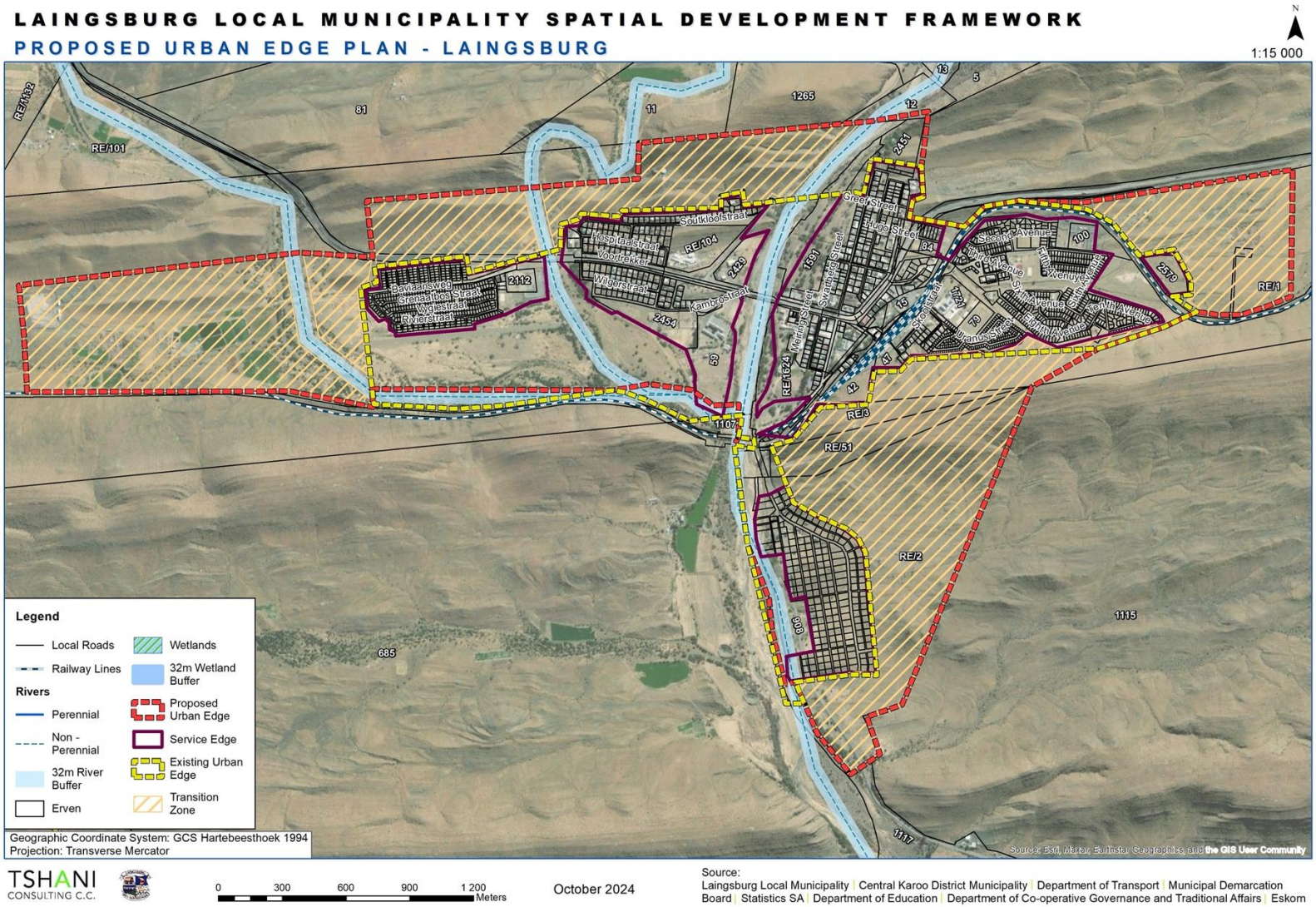
The proposed expansion on the left side of the municipality aims to include existing municipal activities, such as the landfill site and wastewater treatment facility. A new sports field is also under construction in this area. Expanding the urban edge in this direction will allow the municipality to better plan and provide the necessary infrastructure and services to support these developments, ensuring efficient service delivery and future infrastructure growth.

On the right side of the municipality, the urban edge expansion will encompass an existing cemetery and local piggery stalls located to the north. As part of its broader development strategy, the municipality plans to support piggery owners and local businesses, particularly in manufacturing, by extending the urban edge. This expansion will also streamline the approval process for future developments by avoiding delays associated with environmental assessments under the National Environmental Management Act (NEMA).
These proposed urban edge expansions on both sides of Laingsburg are essential for managing current activities while planning for future growth.

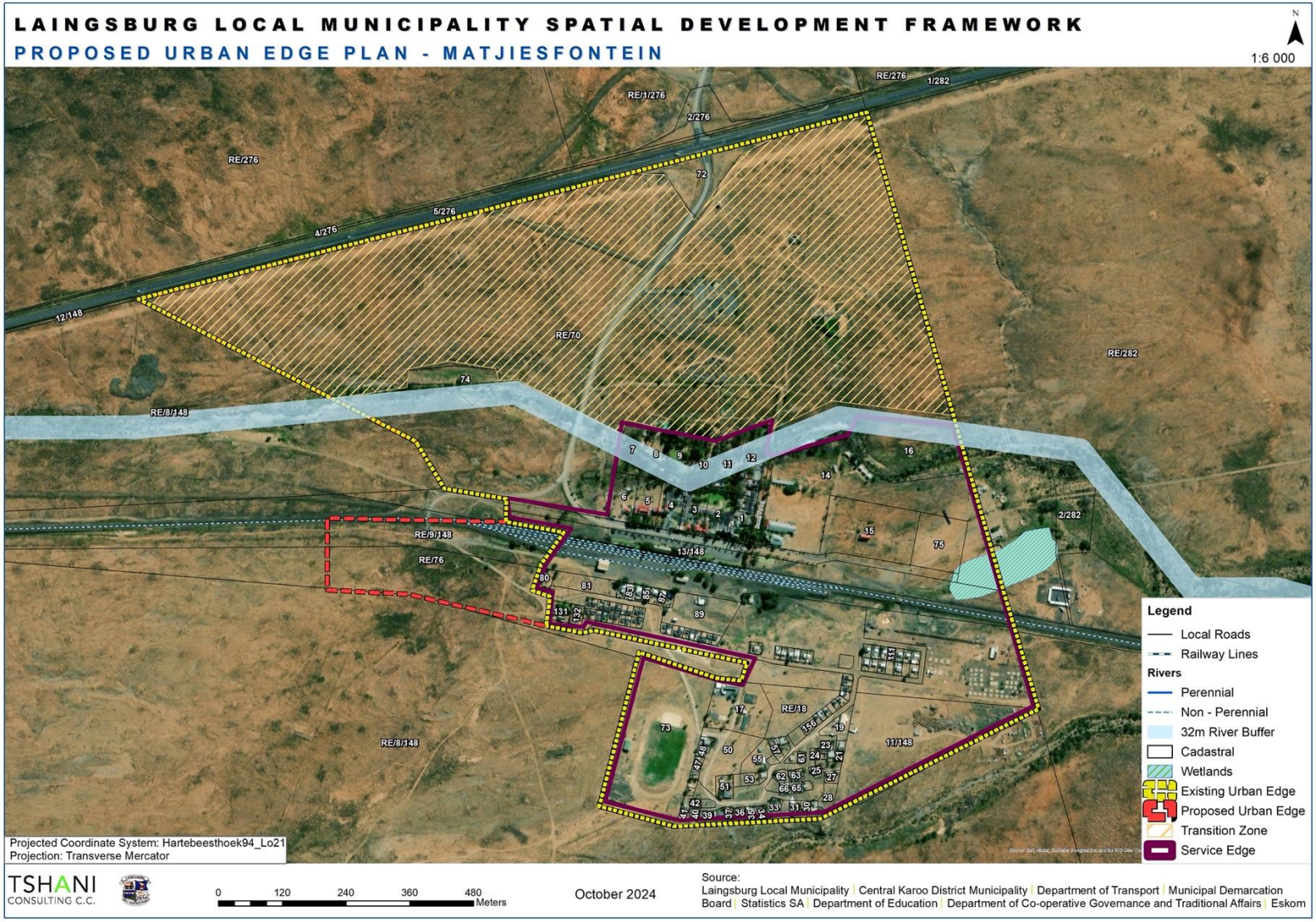
Similarly, the proposed urban edge expansion for Matjiesfontein is driven by the need for increased residential development. The municipality has identified sites for subdivision and sale, targeting medium-sized housing and land uses such as industrial activities, agriculture, renewable energy projects, and logistics infrastructure to support economic growth and social facilities.

Image 5 :Laingsburg Town

Image 6:Laingsburg CBD



Plan 9: Proposed Urban Edge Plan (Laingsburg)



Plan 10: Proposed Urban Edge Plan (Matjiesfontein)

B4.1.2 LAINGSBURG NODE

Laingsburg serves as the primary rural service centre for the Laingsburg Local Municipality and is designated as a Regional Services Centre in the Provincial Spatial Development Framework (SDF). The N1 is a critical national route, facilitating regional mobility and tourism, while the SDF highlights its importance as a key transport corridor. Laingsburg is strategically located on the main railway line connecting Johannesburg, Cape Town, Port Elizabeth, and Namibia, with paved roads extending to surrounding towns. It is the largest node in the municipal area, Located approximately 280km northeast of Cape Town, 199km to Beaufort West, and 1300km to Johannesburg along the N1.

The town is connected to smaller villages and hamlets by several road networks:

- The N1 runs through Laingsburg, connecting Cape Town to the southwest and Beaufort in the northeast, continuing from Johannesburg.
- The R323 runs southeast from Laingsburg, linking the town to Vleiland and Rouxpos, smaller agricultural settlements.

Furthermore, the town sits in one of South Africa's region's largest solar power facilities and the largest abattoir. It is also the primary commercial distribution centre for a large area of the Upper Karoo and is the major centre for the production and supply of the uniquely flavoured Karoo lamb and mutton, as well as wool. It is evident that Laingsburg holds a very significant role as a town and thus needs to be developed as such. Therefore, proposals for this town are to align and enhance the current role played by Laingsburg.

From the above, it is evident that there is already much development occurring in Laingsburg. There is room for expansion in the town, however there some level of limitation in terms of the expansion due to the limited availability of desirable and/or suitable land in the town.

Future expansion for the town is expected to occur towards the South and West of the N1. The CBD precinct for Laingsburg is proposed to be along Voortrekker Street, the main commercial hub, which runs parallel to the N1. Station Street provides access to the railway, and erven mainly earmarked for Business Purposes.

According to the growth and development strategies set forth in the PSDF, Laingsburg is a settlement with Low Social Need / High Development Potential. It should primarily focus on :

- Growth and Expansion.
- Diversification and Identification of new opportunities.
- Provide social services infrastructure.
- Eradicate backlogs in social infrastructure.
- Enhancing the urban environment through ongoing urban regeneration initiatives.

The proposals should prioritize and accelerate the provision of basic services, social infrastructure, and economic infrastructure. To improve the education levels of the local youth, the area will also see the development of

a Technikon and a Smart-Enabled Secondary School. Inland streets attract enough passing trade to create viable opportunities for local businesses and community facilities within residential plots. Provisions are made for agricultural expansion, with light industrial activities planned along Railway Erf 42, southeast of Station Street, to enhance the area's economic viability.

The SDF identifies residential developments in and around the town to accommodate future population growth. In terms of bulk infrastructure, electricity lines run near the N1 throughout the town and will require extensions for future developments. Laingsburg town also has a water scheme covering the entire area, along with a reservoir and borehole water source.

Vacant land is available along R323 to the south of the CBD, with additional vacant pockets within the CBD and along Voortrekker. The required land for future human settlement developments is outlined below.

RESIDENTIAL

- The residential proposal is low density which will provide opportunities where the poor have limited access or inadequate access to accommodation, and where the provision of BNG housing can contribute to redressing structural, economic, social and spatial dysfunctionalities. It is also aimed to improve and contribute to the overall functioning of the housing sector
- The vacant land situated on the golf course is middle and high-income housing.
- The vacant land parcels on the east of Dorrington Street are earmarked for housing development.
- The mix of middle and high-income housing encourages socio-economic diversity, fostering a more inclusive and integrated community.
- Future residential expansion along the expanded urban edge south of Laingsburg will focus on sustainable growth, optimizing land use, integrating infrastructure, and providing BNG and RDP housing options to meet community needs.
- The SDF also proposes formalisation of informal settlements in Laingsburg to improve the living conditions of residents in informal settlements while addressing issues of tenure security, basic services, and overall urban development.
- There are opportunities for infill development

BUSINESS/ COMMERCIAL

- An activity street on Voortrekker Street, where most of the business activities take place, is proposed.
- There is an opportunity for a light industrial centre in the town. It is proposed to be situated between the railway and the river.
- There is potential for a CBD expansion. This would amalgamate the businesses in the area and ensure a larger office precinct that can host several offices. A lot of commercial activities take place in this area.

MIXED-USE DEVELOPMENT

- There is a proposal for a truck stop at the entrance of Baviaansweg Street along the N1, featuring essential facilities such as refuelling stations, rest areas, food outlets, and maintenance services to support truck drivers and stimulate local economic growth.
- The proposed mixed-use development in Laingsburg offers an exciting opportunity to create a well-rounded and vibrant community.
- Cultural and recreational spaces featuring a cultural centre or museum showcasing the town's history, public parks with recreational amenities, and railway heritage tours with vintage train rides, exhibits, and festivals.
- There is a proposal for a logistics centre strategically located near major transport routes, aligned with the Agri-FPSU in Laingsburg and the Agri hub in Beaufort West, featuring modern warehousing, transportation infrastructure, customs services, and integrated technology to enhance efficiency, create jobs, and boost local economic development in the agricultural sector
-
- Mixed-use development will attract visitors and investors, boosting the local economy in Laingsburg Municipality.
- The mixed-use development will increase economic activity, create synergy between businesses and residents, generate higher foot traffic, and support local commerce.
- Social interactions will be encouraged through shared spaces and amenities, contributing to a sense of community and belonging.

INFRASTRUCTURE

The upscale development might lead to infrastructure improvements in the area, such as upgraded roads, utilities, and public services. This could benefit both the new residents and the existing community.

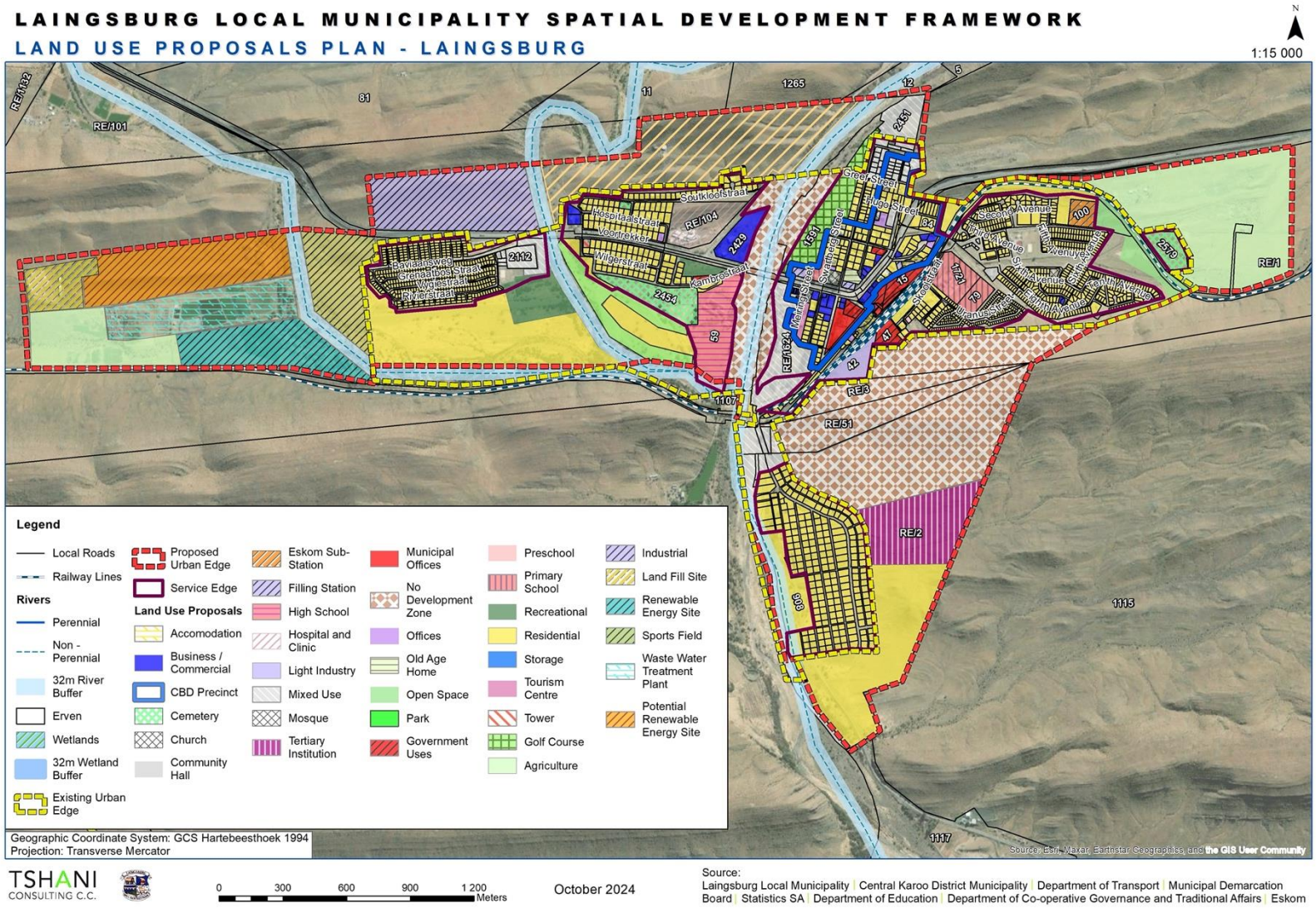
- Proposal for maintenance of the priority road (N1). This road can have street designs that give a feeling of the area.
- The proposal for a truck stop along the N1 will position Laingsburg as a key transit hub. This facility will offer refuelling, rest, and maintenance services for long-distance drivers. It will also enhance road safety, stimulate local businesses, generate municipal revenue, and support regional transport and logistics.
- Proposal for a riverfront recreational stop with picnic spots along the N1 to attract visitors and enhance Laingsburg's appeal.
- A proposal to revive the railway precinct and develop a rail tourism initiative would create activity there and attract tourists to the area.
- The proposed integration of public art installations, sculptures, or landmarks that reflect the town's identity and history when driving into Laingsburg. These features will contribute to the LM's character and provide points of interest for both residents and visitors.
- Upgrade the road between Laingsburg and the Klein Swartberg region, focusing on creating a scenic route through Bergsig and Matjiesfontein.

- Light industrial and creative workshops featuring spaces for craftsmen, artists, and small-scale manufacturers alongside food processing and packaging facilities to support local agriculture and promote agri-tourism.
- Improve signage and road infrastructure, such as pedestrian and bicycle paths, bridges, and truck stops.
- Construction of a Waste Water Treatment Works
- Construct Internal Network
- Upgrade Storm Water Management, Building of Kerb Stones, and External Drainage
- Construction of solid waste sites/transfer sites
- Implementation of New Cemetery
- An Activity Spine is proposed between the CBD and Agricultural Precincts, with a focus on reinforcing and supporting the current nodes and the linear development between them. Such linear development should allow land use and transportation to complement each other and improve the efficiency of the public transport system and the infrastructure network.
- The demand for skilled labour in various industries will encourage workforce development programs, training initiatives, and educational opportunities for local residents, enhancing their employability and skills.
- The availability of local industrial job opportunities will help prevent skilled individuals from seeking employment opportunities in other regions, contributing to brain gain instead of brain drain

AGRICULTURE

- The development of an Agri FPSU Precinct in the area north-west of Labour Street presents a strategic opportunity to boost Laingsburg's local economy. By fostering industrial activities, this precinct will attract investment, enhance trade and commerce, and significantly contribute to municipal revenue. Introducing an industrial component will diversify the local economic base, reducing reliance on agriculture and making the region more resilient to economic fluctuations. This diversification will not only support long-term economic stability but also create new employment opportunities and stimulate broader growth within the community.
- Proposal for Agri Processing and Skills Development Centre in Laingsburg to boost the local economy, attract investment, and enhance agricultural productivity through advanced processing and vocational training.
- The proposal for a piggery farm and value chain development aims to establish a sustainable operation that integrates breeding, production, processing, and distribution, creating local jobs.
- The proposal for a community farmers hub seeks to create a centralized space for local farmers to access resources, training, and markets, fostering collaboration, enhancing productivity, and supporting sustainable agricultural practices.

Plan 13 below represents the Laingsburg Spatial Vision Land Use Plan, which establishes a sustainable framework for growth that harmonizes development with environmental conservation. The urban edge delineates the boundaries of expansion, while the transitional zone acts as a buffer between urban and rural settings, accommodating flexible, low-impact developments. The service edge along primary transport routes improves logistics and infrastructure, while mixed-use areas integrate commercial, residential, and light industrial uses to foster a vibrant live-work-play environment. The light industrial zone promotes small-scale manufacturing in proximity to transport routes, and the Agricultural FPSU Centre supports local farming and food processing. Designated open spaces preserve natural areas and encourage recreation, while residential zones provide diverse housing options to meet the needs of a growing population.



Plan 11:Land Use Proposal Plan (Laingsburg)

B4.1.3 MATJIESFONTEIN NODE

Matjiesfontein functions as a key settlement node for the Laingsburg Local Municipality and is classified as a Secondary Settlement in the Provincial Spatial Development Framework (PSDF). It is strategically positioned along the critical N1 national route, which enhances regional mobility and tourism. The R354 and other secondary routes further connect Matjiesfontein to the surrounding areas. The town boasts a rich tourism infrastructure, with its main street flanked by the railway station to the south and the Lord Milner Hotel to the north. The historical character of the village, combined with its convenient access via the N1 and railway line, attracts visitors seeking a glimpse into South Africa's Victorian past. The residential extension across the railway line includes schools, clinics, and shops, catering to the local community's needs while supporting tourism.

The PSDF underscores its significance as a vital transport corridor and an agricultural hub. Matjiesfontein's main railway line links Johannesburg and Cape Town.

The tourism town is connected to smaller villages and hamlets by several road networks:

- The N1 runs through Matjiesfontein, connecting it to Laingsburg, Cape Town, Beaufort West, and Johannesburg.
- The R354 Provincial Road connects Matjiesfontein to Sutherland in the north.

Furthermore, Matjiesfontein is located near one of South Africa's largest solar power facilities. It also serves as a primary commercial distribution centre for the Upper Karoo, supporting the production and supply of Karoo lamb, mutton, and wool.

Matjiesfontein is a significant tourism and economic hub, and proposals for the town must align with and enhance this role.

Matjiesfontein Northern Region, N1 Corridor

This SDF aims to guide sustainable development along the N1 corridor, emphasizing environmental preservation and responsible economic growth. It aligns with the strategy to maintain the area as a nature-based tourism and heritage destination.

Carbon Basin Proposal: N1 Corridor

The proposal is to establish a carbon basin along the N1 to support carbon sequestration and promote ecotourism. The basin would integrate indigenous plant restoration and sustainable agricultural practices while reducing the region's carbon footprint. This initiative would align with national climate goals, generate green jobs, and position Laingsburg as a leader in environmental sustainability.

From the above, it is clear that Matjiesfontein is undergoing substantial development. However, future expansion is somewhat limited due to the availability of suitable land. Expansion is expected to occur towards the north of the N1.

According to the growth and development strategies set forth in the PSDF, Laingsburg is a settlement with Low Social Need / High Development

Potential. Proposals for Matjiesfontein aim to align with its current role as a tourism and commercial hub by focusing on:

- Tourism growth and expansion.
- Diversifying the local economy and identifying new opportunities.
- Enhancing social services infrastructure.
- Addressing social infrastructure backlogs.
- Improving the urban environment through ongoing urban regeneration initiative

The proposals should prioritize and accelerate the provision of basic services, social infrastructure, and economic infrastructure. Additionally, the area will see the development of a solar and wind power station, along with the exploration of shale gas as a potential energy source to further enhance economic growth. Inland streets attract sufficient passing trade to create viable opportunities for local businesses and community facilities within residential plots. There is also provision for agricultural expansion, with light industrial activities planned along the railway, west of Lord Milner Hotel, to enhance the area's economic viability.

The SDF identifies residential developments in and around the town to accommodate future population growth. In terms of bulk infrastructure, electricity lines run near the N1 throughout the town and will require extensions to support future developments. Laingsburg also has a water scheme that covers the entire area, which is supported by a reservoir and borehole water source.

Vacant land is available along local roads south of the railway line, with additional vacant pockets within the town, such as Erf 156 and 157. The land required for future human settlement developments is outlined below.

RESIDENTIAL

- BNG and RDP housing opportunities are identified in the town, and these were considered as housing proposals for the LLM SDF. Different housing types are proposed for the area.
- The vacant land situated on the railway is middle and high-income housing.
- The vacant land parcels on the east Erf 107 and 111 are earmarked for housing development.
- The municipality has identified sites for subdivision and sale, targeting medium-sized housing developments to promote affordable homeownership, optimize land use, and support sustainable community growth.
- The mix of middle and high-income housing encourages socio-economic diversity, fostering a more inclusive and integrated community.
- The SDF also proposes formalisation of informal settlements in Laingsburg to improve the living conditions of residents in informal settlements while addressing issues of tenure security, basic services, and overall urban development.
- There are opportunities for infill development.

MIXED-USE DEVELOPMENT

- Establishing an EV station and coffee shop at the Matjiesfontein-Sutherland Road intersection will enhance visitor amenities and promote sustainable transportation in the area.
- The Konstabel Tourism Node proposal seeks to develop key historical and natural attractions while enhancing road connectivity to Matjiesfontein, creating a cohesive cultural and scenic experience in the Central Karoo.
- Support Farm Stalls by promoting and supporting farm stalls along important tourism routes to offer local produce and unique retail opportunities to tourists.
- Develop and enhance overnight facilities, accommodations, and tourist information centres along key routes like the N1.
- A tourism and hospitality hub featuring boutique hotels, local-themed guesthouses, restaurants, cafés with outdoor seating, and a centrally located tourist information centre near the railway station to showcase local attractions and provide a personalized experience for visitors.
- Commercial and retail spaces with craft markets, artisan shops, convenience stores, boutiques, and seasonal farmers' markets promote local culture, essential goods, and agricultural businesses.
- Cultural and recreational spaces featuring a cultural centre or museum showcasing the town's history, public parks with recreational amenities, and railway heritage tours with vintage train rides, exhibits, and festivals.
- Mixed-use development will attract visitors and investors, boosting the local economy in Laingsburg Municipality.
- The mixed-use development will increase economic activity, create synergy between businesses and residents, generate higher foot traffic, and support local commerce.
- Social interactions will be encouraged through shared spaces and amenities, contributing to a sense of community and belonging.

INFRASTRUCTURE

The upscale development might lead to infrastructure improvements in the area, such as upgraded roads, utilities, and public services. This could benefit both the new residents and the existing community.

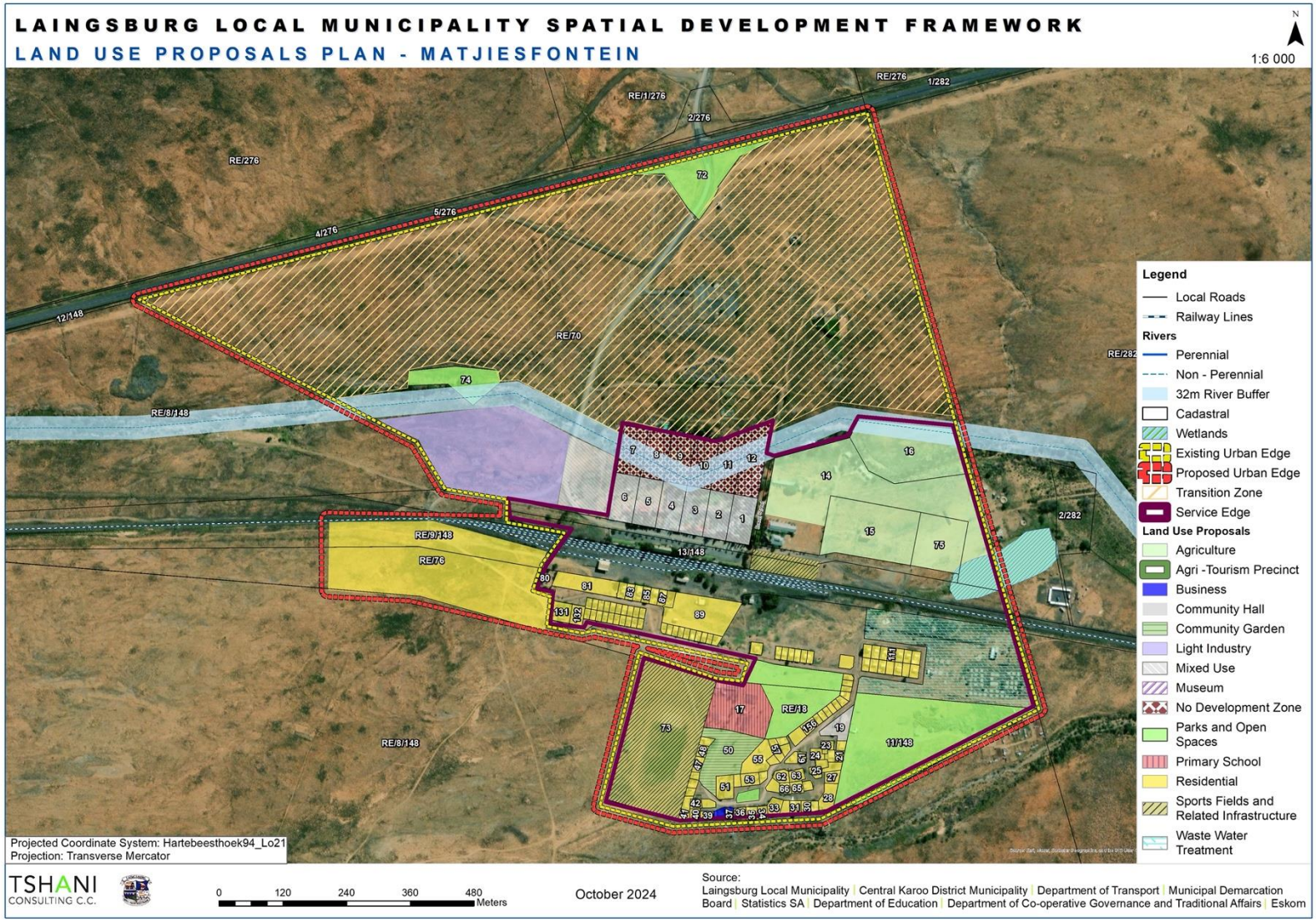
- Proposal to preserve Matjiesfontein's heritage by ensuring all infrastructure developments are carefully designed to complement the town's historical integrity and cultural significance.
- Proposal for maintenance of the priority road (N1). This road can have street designs that give a feeling of the area.
- Proposal for the revitalization of the train station
- The proposed integration of public art installations, sculptures, or landmarks that reflect the town's identity and history when driving into Laingsburg. These features will contribute to the LM's character and provide points of interest for both residents and visitors.
- Construction of a Waste Water Treatment Works
- Construct Internal Network

- Upgrade Storm Water Management, Building of Kerb Stones, and External Drainage
- Construction of solid waste sites/transfer sites
- Implementation of New Cemetery

AGRICULTURE TOURISM

- The proposal to develop an Agritourism Precinct northwest of Labour Street offers a strategic opportunity to boost Laingsburg's economy. By integrating tourism with agriculture, the precinct will attract investment, promote local products, and increase trade and commerce. This initiative will diversify the local economic base, reducing dependence on tourism alone and enhancing resilience against economic fluctuations. The Agritourism Precinct will also create new employment opportunities, stimulate community growth, and significantly contribute to municipal revenue through tourism and agriculture-related activities.
- A proposal to establish a carbon basin along the N1 corridor in the Matjiesfontein Northern Region to restore native vegetation, sequester carbon, and enhance biodiversity, aligning with the region's nature tourism and heritage preservation strategy while promoting eco-tourism and sustainable economic growth.
- An Agri project in which the Municipality uses available land to create small farm holdings. By transforming underutilized urban spaces into vibrant agricultural hubs, this project will empower residents to engage in sustainable food production.
- Agri-tourism featuring farm-to-table restaurants with local produce, urban farming tours, and wine or craft beer tasting rooms showcasing local wineries, breweries, and distilleries.

Plan 14, presented below in the Matjiefontein spatial vision land use plan, establishes a sustainable framework for growth that balances development with environmental preservation. The urban edge defines the limits of expansion, while the transitional zone serves as a buffer between urban and rural areas, featuring flexible, low-impact developments. The service edge along key transport routes enhances logistics and infrastructure, and mixed-use areas blend commercial, residential, and light industrial uses to create a vibrant live-work-play environment. The light industrial zone focuses on small-scale manufacturing near transport routes, while the agricultural precinct supports local farming and agri-tourism. Open spaces are designated to preserve natural areas and promote recreation, and residential areas offer diverse housing options to accommodate future population growth.



Plan 12:Land Use Proposal Plan (Matjiesfontein)

B4.2 SUSTAINABLE HUMAN SETTLEMENTS

Housing demand for various sectors, location, and proposed densities (SPLUMA 21 (f)). The preparation of this framework will be entirely based on existing housing development strategies and/or inputs from the various officials within the municipality, based on institutional knowledge of housing needs within the district.

Achieving sustainable human settlements is one of the main spatial goals within an area such as LLM, which is characterized by settlement patterns that have encountered a high level of disintegration and fragmentation. In addition, settlements are not static. They respond to change and are continuously in the process of transformation. Housing takes into cognisance the densified areas and the rate at which they are being densified. This assists in planning for the future, looking at the current growth projections to tenure, basic infrastructure, and top structure and using this to plan. The delivery of housing and linkage with the government's land reform program is unclear. Land reform projects listed in the District IDP within the Laingsburg LM are focused on supporting and expanding the agricultural sector (agrarian reform).

The development of housing projects should be considerate of the future trajectory of LLM and be cognisant of increased growth rates. The type of housing development will have a direct impact on land availability for future settlements or the expansion of the economic nodal areas.

Table 8: Western Cape Housing Demand Data

Municipality	Waiting
Laingsburg	1138

Table 9: Age Breakdown of Applicants

Laingsburg Municipality Age Range	Waiting
0 - 29	187
30 - 39	317
40 - 44	165
45 - 49	153
50 - 54	126
55 60	190

Table 10: Income breakdown of applicants on Waiting status

Income Range	Number of Applicants
R0 - R3500	1010
R3501 - R7000	103
R7001 - R15000	24

R15001 - R22000	1
R22001 and Above	0

Laingsburg has 1138 applicants on the housing waiting list, with the majority falling into younger age groups, particularly ages 30-39 (317 applicants) and 0-29 (187 applicants), indicating a long-term housing demand. The income breakdown reveals that 89% of applicants (1010 out of 1138) fall within the lowest income bracket (R0 - R3500), reflecting a significant need for affordable housing. The demand decreases sharply in higher income brackets, with minimal applicants earning above R7000. This data highlights the municipality's pressing need for affordable housing solutions.

Table 11: Human Settlement Housing Projects

	2024/2025			2025/2026			2026/2027		
Programme	Sites Serviced	Houses Built	Funding (R '000)	Sites Serviced	Houses Built	Funding (R '000)	Sites Serviced	Houses Built	Funding (R '000)
Laingsburg Site G (200 of 1000) IRDP	0	0	4,407	0	19	3,800	200	0	16,000
Matjiesfontein (20 mud brick units)	0	0		0	19	3,800	200	0	16,000

The housing pipeline for Laingsburg and Matjiesfontein aligns with the significant demand for affordable housing, as evidenced by the 1,138 applicants on the waiting list, predominantly in lower-income brackets.

For Laingsburg Site G (IRDP), while no sites will be serviced or houses built in 2024/2025, R4.4 million is allocated for preparatory work. In 2025/2026, 19 houses are planned with R3.8 million, followed by servicing 200 sites and increasing the budget to R16 million in 2026/2027. This approach directly addresses the urgent housing needs.

In Matjiesfontein, redevelopment of existing mud-brick structures will be prioritized due to the settlement's fragile economic potential, which restricts new low-income housing. No construction is scheduled for 2024/2025, but 19 houses are anticipated in 2025/2026, supported by R3.8 million, with 200 sites serviced and R16 million budgeted for 2026/2027.

Overall, the housing pipeline strategically addresses the urgent demand while considering the economic realities of each area.

B4.2.1 HOUSING BACKLOG PROJECTION FOR LAINGSBURG MUNICIPALITY 5-10 YEARS (POPULATION GROWTH 2.46% PER ANNUM)

Table 12: Housing Demand Projection

Municipality	Current Housing Demand	Projected Demand in 5 years	Projected Demand in 10 years
Laingsburg	1138	1285	1451

With a population growth rate of 2.46% per annum, the housing backlog in the Laingsburg Municipality is expected to rise from 1138 units to approximately 1285 units in five years and 1451 units in ten years. The distribution of housing demand remains largely unchanged, with Laingsburg accounting for most of the demand. Given the projected increase, it is critical to focus housing development efforts on Laingsburg, as it will experience the greatest surge in demand. At the same time, Matjiesfontein and rural areas will see more modest growth. Proactive planning and investment in infrastructure will be required to keep pace with this rising need over the next decade.

B4.2.2 LAND REQUIRED FOR RESIDENTIAL DEVELOPMENT

To accurately calculate the land required for future housing developments, the following assumptions are applied:

- Gross Development Density: 25 dwelling units (du) per hectare.
- Additional Space Requirement: 10% additional land for local community facilities, public spaces, and other urban uses.

Land Requirement Calculations

The table below summarizes the land required to meet the current and projected housing demand based on the gross development density and additional land requirements.

Table 13: Current Land Requirement and Projected Land Requirement

Housing Demand	Housing Units	Land Required (ha)	Additional 10% Space (ha)	Total Land Required (ha)
Current (2024)	1138	45.52 ha	4.55 ha	50.07 ha
Projected (2034)	1451	58.04 ha	5.80 ha	63.92 ha

To meet the current housing demand of 1138 units, approximately 50.07 hectares of land are required, including an additional 10% for urban infrastructure and community services. By 2033, the housing demand is

projected to increase to 1451 units, requiring approximately 63.92 hectares of land, also accounting for the 10% space allocation for community facilities. These housing units will be distributed across the municipality according to the housing backlog in each town, with the bulk of the development concentrated in Laingsburg town, which accounts for the largest portion of the demand.

Current Housing Units Backlog Calculation:

Total Housing Units = 50.07 ha×25 du/ha

= 1251.75 units

The current land requirement of **50.07 hectares**, with a gross development density of **25 dwelling units (du) per hectare**, can accommodate approximately **1251.75 housing units**. This total exceeds the immediate housing backlog of **1138 units**, which indicates that the allocated land would provide a slight surplus of around **114 units**. This surplus could be useful for addressing any unforeseen population growth or future housing needs in Laingsburg Municipality.

Projected Housing Units Backlog Calculation:

Total Housing Units = 63.92 ha×25 du/ha= 1598 units

With a projected land requirement of **63.92 hectares** in 10 years and a gross development density of **25 dwelling units (du) per hectare**, approximately **1598 housing units** can be accommodated. This exceeds the projected housing demand of **1451 units** by around **147 units.**

B4.3 CEMETERIES

There are numerous cemeteries, and graveyards found in the municipal area. These are associated with townscapes, rural landscapes, farmsteads, and Churchland. Although formal cemeteries are reflected in existing databases, there are no accurate records of informal cemeteries and graves. The two main towns have areas that have been earmarked for the extension of their cemeteries. Laingsburg cemeteries include the following:

Table 14: Laingsburg Cemeteries

Laingsburg	Matjiesfonfein
• Laingsburg Town • Göldnerville • Bo Dorp • Nuwe Dorp	• Matjiesfontein Graveyard

Key Interventions:

- Municipalities should reassess their Integrated Development Plans (IDPs) to evaluate existing and proposed cemeteries and crematoria, incorporating future budgetary considerations for acquisition and establishment.
- It is imperative that Municipal Schemes designate appropriate zones to accommodate the development of such facilities and implement suitable additional regulations.

- Municipal planning personnel should collaborate with relevant departments on public-oriented projects to ascertain optimal and sustainable locations.
- Exploring alternative methods for disposing of human remains, considering their impact on the natural environment, and identifying opportunities to create innovative open spaces are essential. The Sustainable Development Framework (SDF) recommends the establishment of a crematorium within the municipality.
- Communal cemeteries situated within farmsteads should be mapped as part of the formulation of Traditional Settlement Master Plans or within the framework of Scheme development.

It is recommended that Laingsburg Municipality not pursue the establishment of new cemeteries, as the existing facilities are deemed adequate for current needs. However, it is essential to plan ahead to ensure sufficient capacity for future demands.

B4.4 BULK INFRASTRUCTURE

Bulk infrastructure offers numerous prospects for job creation and can be seen as the foundation for growth and development. The infrastructure network efficiently provides Laingsburg's economy with transportation, telecommunications, water, and electricity needs. It further supports manufacturing, trade, and exports. It gives citizens of the province a means to improve their lives and boost their incomes, effectively contributing to improving the human dignity of all.

SPC-F Surface Infrastructure

A robust infrastructure network is vital for economic development in both provinces and local municipalities. Sectoral departments play a key role in providing essential infrastructure and services to various sectors and settlements. Challenges such as inadequate rural infrastructure and urban informal settlements surpass the capacities of individual municipalities, necessitating efficient funding mechanisms.

The sustainable land management approach emphasizes integrating public transportation with land use patterns. Effective public transport relies on serving densely populated areas. Infrastructure encompasses crucial facilities like roads, power, and water supply, contributing to competitiveness and liveability. Technological advancements such as smart urban systems and green energy enhance cities' global competitiveness.

Before new developments, municipal engineering services must meet standards, especially in water and waste management. Urban areas should ideally be adequately serviced with water, sanitation, and waste management. Assessing the environmental impact of new infrastructure is crucial to prevent pollution. Adequate capacity in sewerage treatment works and landfills is necessary to accommodate growth sustainably.

B4.4.1 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

B4.4.2 GREEN INFRASTRUCTURE TECHNOLOGY

These proposed interventions aim to address gaps in service delivery and infrastructure:

Rainwater harvesting involves collecting, storing, and utilizing rainwater for various purposes, including household and agricultural uses. It offers benefits such as reducing carbon footprints, cutting municipal utility bills, and providing access to water for those lacking formal water supplies.

Stormwater harvesting focuses on collecting, treating, and storing runoff from roadsides for reuse. This water can be diverted to irrigate gardens and farmlands, while planting trees in steep areas helps intercept rainfall, minimizing soil erosion.

Solid waste recycling aims to decrease landfill waste by repurposing discarded materials. Solid waste encompasses a range of materials in different states, including solid, liquid, semi-solid, or gaseous forms stored in containers.

Greywater reuse involves recycling gently used water from bathroom sinks, showers, and washing machines for non-potable purposes like watering gardens. It excludes water contaminated with faecal matter and offers an eco-friendly solution for water conservation.

Solar panels provide electricity with minimal disruption to residents and can be installed locally on individual houses, allowing residents to take ownership. These photovoltaic cells generate solar electricity, particularly benefiting rural areas without formal electricity supply and individuals seeking to reduce fossil fuel dependency and lower electricity bills.

B4.4.3 ELECTRICITY

In the quest to meet the electrical needs of the municipality, these are some of the alternatives to consider:

Renewable Energy Assessment:

Amidst escalating electricity costs and the adverse effects of load shedding in recent years, there is a pressing need for studies to explore the viability of renewable energy as a supplementary electricity source. This report delves into the potential of solar and hydro energy resources within the district while pinpointing suitable areas for their development.

The introduction of alternative energy sources carries significant financial ramifications, intertwined with the necessity of constructing essential infrastructure and enhancing accessibility. Moreover, it entails environmental considerations across various categories:

- Highly Sensitive Areas: These regions may harbour potential for hydro and solar energy but have been designated as off-limits due to their sensitivity.
- Moderately Sensitive Areas: While suitable for solar energy generation, these locations necessitate environmental authorization and may require specific conditions to safeguard the natural environment.
- Transformed Locations: Areas already altered by human activity pose minimal environmental implications that can be effectively mitigated against.

This comprehensive assessment aims to inform decision-making processes by delineating the intricate interplay between renewable energy development, financial investments, and environmental stewardship.

Solar Energy:

Solar energy stands as a pivotal renewable energy source, encompassing various techniques such as photovoltaic systems (PV), concentrated solar power, and solar water heating. PV systems span from small-scale rooftop installations to massive utility-scale power stations, providing a versatile means of electricity generation. These systems can be seamlessly integrated onto rooftops of residential, commercial, and industrial buildings, as well as ground installations. The primary requirement for successful PV implementation lies in identifying suitable land that is available, complies with environmental impact assessment standards, and receives ample solar irradiation.

Despite its potential, the widespread adoption of solar technology in South African communities could be improved by its substantial initial capital outlay, particularly concerning energy storage solutions. Forecasts indicate limited progress in cost reduction for PV systems and a lack of accessible residential PV markets due to technology cost barriers, barring significant government-driven incentive programs during the forecast period.

Given the municipality's constrained revenue base and challenges in revenue collection, capital grants are relied upon to address infrastructure deficiencies. Consequently, a review of the electrical sector plan is imperative to address these challenges effectively.

Recommendations are made to expand the Solar sector within the Laingsburg Local Municipality, particularly in the Laingsburg region. The following is proposed to expand the solar industry in the Laingsburg Local Municipality's Matjiefontein region:

1. Develop public-private partnerships.
2. Implement community solar programs.
3. Provide training for solar technology.
4. Streamline the permitting processes.
5. Support research and development.
6. Integrate solar with existing infrastructure.

Shale Gas

The analysis determined that the Laingsburg municipality has been identified for shale gas opportunities that exist within its landscape, covering almost half of the municipality and presenting significant potential for sustainable use. Shale gas is a natural gas that occurs and can be extracted from shale, and it can be utilized for energy production. South Africa is estimated to have 390 trillion cubic feet (tcf) of technically recoverable natural gas embedded in the Karoo Basin. Further investigations with Laingsburg LM officials and surrounding municipalities should be undertaken to encourage and exploit this opportunity.

The SDF also identifies the proposed gas pipeline through the Laingsburg LM from the Beaufort West LM to the northwestern region.

Information & Communication Technology (ICT)

Information and communication technology (ICT) is a key driver of development across various economic sectors, including industrial development, commercial enterprises, and agriculture. To foster growth and innovation in the Laingsburg Municipality, it is crucial to unlock investment opportunities in ICT. Additionally, the Matjiesfontein NASA project presents a unique opportunity to leverage advanced technology and enhance local capabilities, further supporting the region's economic development.

The proposed Matjiesfontein NASA project has the potential to transform the local economy by creating jobs, stimulating investment, and fostering innovation. By positioning Laingsburg as a hub for technology and research, the project can attract further investment in ICT and related sectors, driving long-term economic growth.

B4.4.4 WATER

Laingsburg relies on a combination of surface and groundwater sources, including the Soutkloof fountain, wells, and boreholes. With a daily water demand of 1.56 Ml and a supply of 1.9 Ml, the town has a slight surplus, though ongoing infrastructure development is necessary. Key projects include the upgrade of the Soutkloof fountain and equipping additional boreholes to secure long-term supply. Monitoring systems such as data loggers and water meters are also planned to enhance resource management and sustainability.

In Matjiesfontein, water supply meets demand through two operational boreholes, though some boreholes have dried up, and the high iron content in one requires cleaning. Future interventions include equipping newly drilled boreholes and connecting them to existing infrastructure. Both Laingsburg and Matjiesfontein prioritize groundwater exploration and effective monitoring to ensure the resilience of their water supply in the face of growing demand and environmental pressures.

The Western Cape's high-potential agricultural land for intensive agricultural production is limited, and it is the mandate of the Western Cape Department to preserve it. Given that the region experiences winter rainfall, it is heavily reliant on adequate water storage to ensure irrigation during the dry summer months. It is, therefore, imperative that the Laingsburg SDF prioritizes the preservation of these natural resources.

To address these pressing challenges, the Municipality of Laingsburg must prioritize investment in the upkeep and modernization of its water infrastructure. This includes addressing the maintenance backlog, repairing damaged boreholes, and implementing efficient water management practices. Additionally, exploring alternative funding mechanisms and partnerships could help overcome financial limitations and accelerate progress toward achieving a resilient and sustainable water supply system for all residents.

B4.4.4.1 KEY INITIATIVES INCLUDE:

- Groundwater management strategy for the Municipal region.
- Water use and management initiatives to capacity the local community for the sustainable use of water resources.

The Department of Water and Sanitation has a pipeline of water projects for the local municipality, and this will be shown in the implementation plan.

B4.4.5 SANITATION

Laingsburg Municipality operates two wastewater treatment plants, one in Laingsburg and one in Matjiesfontein. The Laingsburg plant exceeds the Basic RDP (Reconstruction and Development Programme) standards, while the Matjiesfontein plant is below these standards. However, this statement contradicts the fact that Water Affairs has approved and licensed a package plant for Matjiesfontein, indicating compliance with required standards. The licensing of the package plant suggests that Matjiesfontein's wastewater treatment facilities meet regulatory standards for operation and discharge despite earlier perceptions of inadequacy.

Laingsburg Municipality should conduct a thorough assessment of both wastewater treatment plants to verify compliance with RDP standards and confirm the effectiveness of the Matjiesfontein package plant. Upgrades or optimizations to both facilities should be explored to ensure consistent performance and long-term sustainability. Implementing regular monitoring and transparent reporting on water quality and treatment capacity will build community trust and ensure ongoing compliance with national regulations.

B4.5 MOVEMENT AND TRANSPORTATION

The Movement and Transport outlines the strategic approach to enhancing connectivity and mobility within the municipality. Efficient movement networks are essential for supporting economic growth, providing access to social services, and promoting sustainable land use patterns. This section examines existing transportation infrastructure, identifies key routes and corridors, and highlights opportunities for improvement and expansion. The focus is on creating an integrated, accessible, and resilient transport system

that accommodates various modes of transport while fostering regional linkages and reducing environmental impacts.

Road Network: Laingsburg is well-connected by the N1 freeway, which serves as a major national transport route linking Cape Town to Gauteng. However, traffic volumes through Laingsburg, especially from heavy trucks, cause congestion and noise pollution. Strategic interventions such as traffic calming measures and further landscaping are essential to mitigate these effects. Key provincial roads such as the R323 and R354 also serve as important transport corridors, with plans to upgrade sections for better connectivity and economic stimulation.

Rail Connectivity: Laingsburg benefits from a railway line that connects it to major hubs like Cape Town and Johannesburg. The railway services goods and sleeper trains, including luxury services such as the Blue Train. Enhancing rail services, especially in terms of goods transport, could help reduce road traffic and support the local economy. There is potential to leverage scenic rail routes to boost tourism, especially with connections to Matjiesfontein and other historic stops.

Non-motorized Transport (NMT): Laingsburg has existing pedestrian and cycle pathways, particularly connecting residential areas like Bergsig to the town centre, school, and hospital. Expanding and upgrading these pathways is crucial for improving safety and access for non-motorized users. Additionally, upgrading road shoulders for cyclists and pedestrians along key roads like the R323 and R354 should be prioritized.

Public Transport: Currently, there is no established public transport system in Laingsburg, except for a school bus service and stops for long-distance buses. Exploring opportunities to provide more frequent public transport services, especially for residents and tourists, is necessary to improve mobility. The municipality could investigate the potential for a dedicated public transport node, in line with provincial transport strategies, to better serve both local and regional needs

B4.5.1 ROADS

Key Informants and Policy for Transportation in the LLM

The National and Provincial Road movement network has been highlighted in the Spatial Structuring Elements. **Emphasis is placed on the maintenance and upgrading of the roads.**

The key movement linkages which would require further upgrades include the N1 linkage, which would ensure safe interprovincial movement and further links to the R354 and R323

B4.5.1.1 THE N1

The N1, a prominent national route in South Africa, stretches from Cape Town, passing through Bloemfontein, Johannesburg, Pretoria, and Polokwane, all the way to Beit Bridge on the Zimbabwe border. The N1 traverses the municipal area in a northeast to southwest direction, serving as the primary corridor between Johannesburg and Cape Town, and vice versa. This road constitutes the initial segment of the renowned Cape to Cairo Road.

B4.5.2 RAIL

Roads are currently the primary mode of transport for freight for various reasons, with rail taking the backseat due to the sector's being characterised by significant constraints. While road freight delivery has significant advantages, the great number of freight vehicles on the road contributes to overloading and the subsequent significant deterioration of the road network and traffic congestion.

Upgrading and maintenance of rail infrastructure to increase the viability of the logistics freight and tourism in Laingsburg and Matjiesfontein and to promote the shift from road to rail.

B4.5.3 AIR

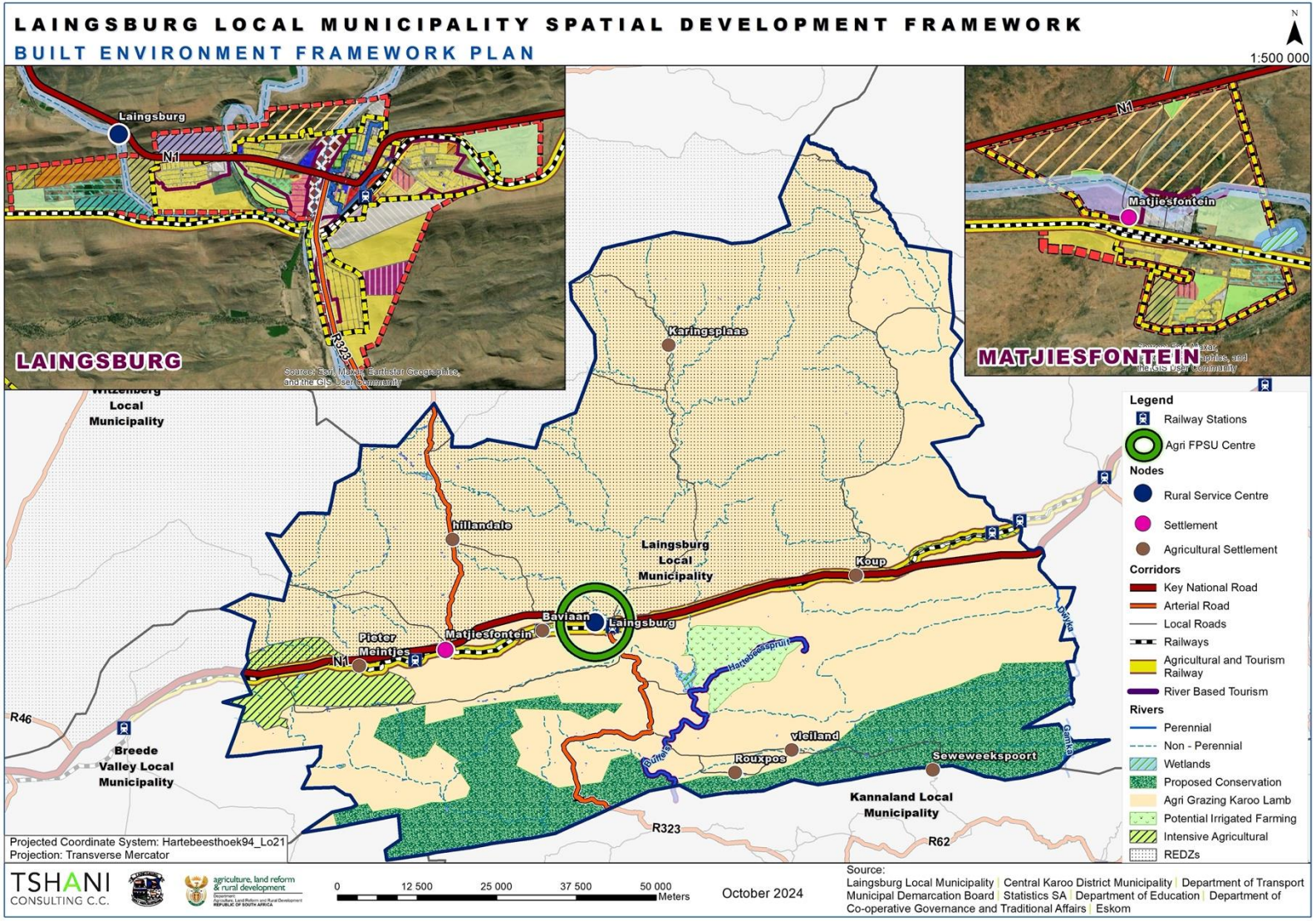
LLM lacks its own airport and is not situated near a public airport. However, there is one landing strip located close to Laingsburg. This airfield primarily caters to general aviation needs, including private and charter flights, flight training, and emergency medical services.

To enhance the region's aviation and logistics capabilities, it is proposed to formalize and upgrade the Landing Strip. This would involve improving the existing infrastructure and reserving the surrounding land for future aviation and logistics purposes, ensuring long-term functionality and growth.

Collaboration with neighbouring municipalities and regions could facilitate the creation of regional air transport hubs or the sharing of air infrastructure resources. This collaborative effort has the potential to boost the export/import of agricultural goods from the municipality, contributing to its economic growth and development.

Image 7: Local Road Network

Image 8: Voortrekker Road



Plan 13: Built Environment Framework Plan

B5. GOVERNANCE FRAMEWORK

For a governance framework for the Laingsburg Municipality Spatial Development Framework (SDF), the following structure is recommended based on the Karoo Regional Spatial Development Framework (KRSDF) and relevant documents

Intergovernmental Collaboration and Cooperation:

- Establish an Intergovernmental Forum (IGF), in line with the Intergovernmental Relations Framework Act (IGRFA), to ensure cross-municipal and provincial collaboration. This forum should include representatives from local municipalities, district municipalities, provincial government departments, and relevant national departments.
- Create sub-committees within this forum to focus on key spatial issues for Laingsburg, such as infrastructure, economic development, land use management, and environmental sustainability. This will allow for the integration of sectoral plans with spatial objectives.

Community Engagement and Participation:

- Laingsburg Municipality should promote inclusive decision-making by ensuring public participation in the spatial planning process. This includes involving local communities, private sector stakeholders, and civil society in planning discussions and feedback sessions.
- Establish transparent communication channels where updates, decisions, and progress related to the SDF are shared with the public to foster trust and accountability.

Monitoring and Review Mechanism:

- Implement a monitoring system within the governance framework to track the progress of SDF implementation. The system should periodically assess how well the SDF aligns with regional development goals and local needs.
- Set up a review mechanism that allows for adjustments to the SDF in response to changing socio-economic conditions, land use patterns, or emerging regional priorities.

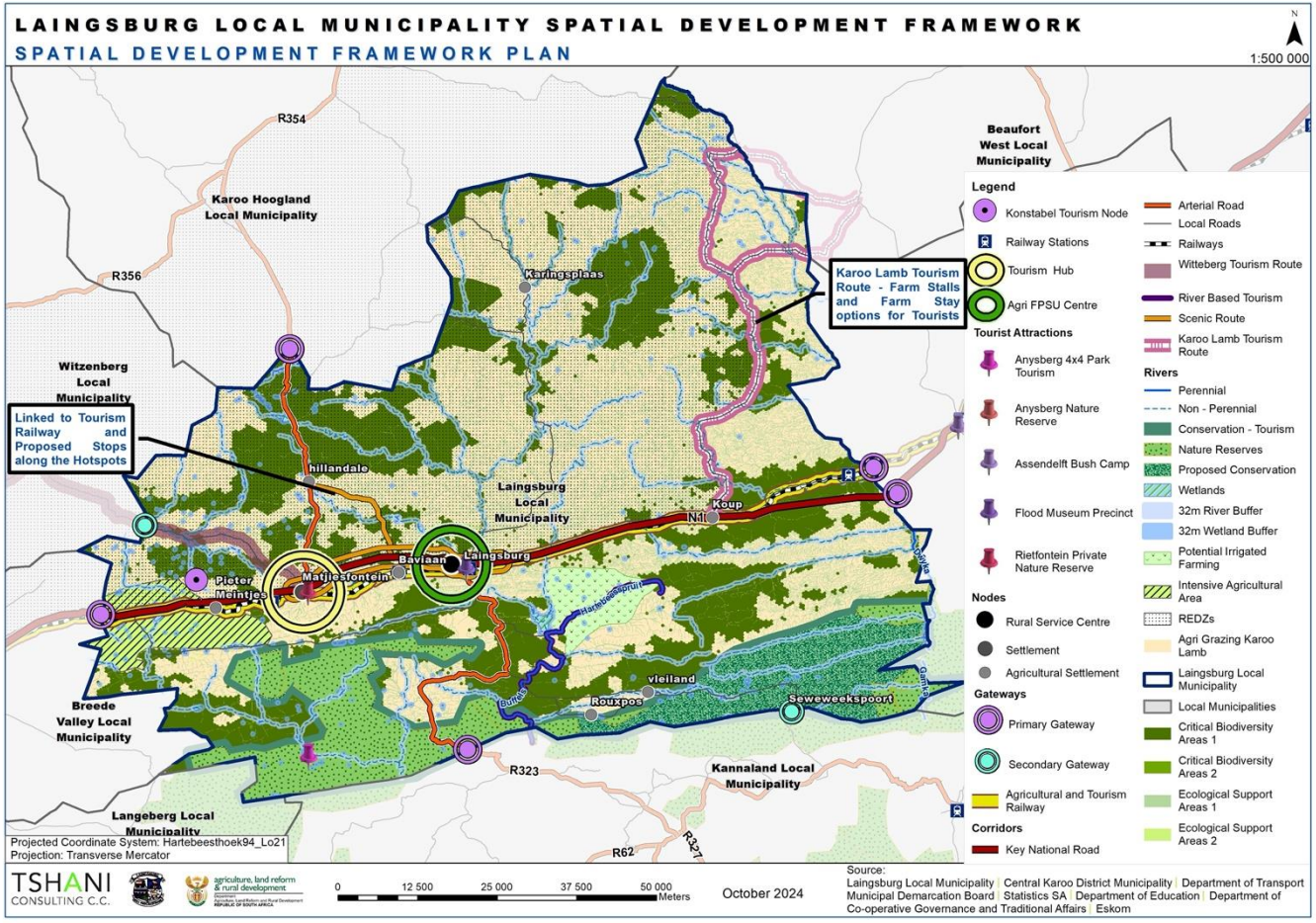
Capacity Building and Support:

- Through training programs, provide support for municipal staff and stakeholders involved in the SDF implementation, ensuring that they have the necessary skills to plan, manage, and execute spatial development projects effectively.
- Where needed, the municipality should leverage regional expertise and partnerships, such as with the Karoo Regional Development Agency, to enhance its governance and operational capacity.

This governance framework ensures accountability, collaboration, and community involvement in Laingsburg's spatial development while aligning with regional strategies outlined in the Karoo RSDF.

B6. 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 the basis for the future development trajectory of the municipality.



Plan 14: Composite Spatial Development Framework

SECTION C: LAND USE MANAGEMENT FRAMEWORK 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 shouldn't be touched. "-Stone Gossard

Land Use Management is the system of legal requirements and regulations that apply to land to achieve desirable and harmonious development of the built environment. Land Use Guidelines and regulation of land include Zoning Schemes and Building Regulations.

C1. PURPOSES OF A LAND USE MANAGEMENT SYSTEM:

The aim of a Land Use Management System (LUMS) is to foster coordinated and environmentally sustainable development. Key objectives of LUMS include:

- Addressing spatial inequality.
- Promoting efficient land systems.
- Encouraging comprehensive planning.
- Stimulating development in historically marginalized areas.
- Preserving environmentally sensitive areas.
- Striking a balance between human and economic development needs and biodiversity conservation.
- Maintaining ecological corridors to connect critical biodiversity areas.
- Supporting infrastructural enhancements and efficient public transport systems.
- Upholding laws and regulations pertaining to archaeological and historic heritage preservation.

The Laingsburg Local Municipality has a Land Use Management Scheme, approved in 2023, which regulates land use within the municipal area and guides development restrictions. This scheme specifies the controls applicable to each zone, aiming to promote and facilitate the realization of the vision and proposals outlined in this Spatial Development Framework (SDF).

C2. SPATIAL PLANNING CATEGORIES

SPCs are generally consistent with UNESCO's MAB Programme and include all land zonings that are provided for under the existing Zoning Scheme Regulations. The designation of SPCs does not change existing

zoning or land-use regulations or legislation. SPCs merely help to clarify and facilitate coherent decision-making that can lead to better zoning, laws and regulations.

The SPCs, furthermore, provide a framework in terms of which land-use decisions can be standardised throughout the province. It is advisable that all zoning scheme regulations be aligned with the SPCs. The SPCs are to be applied in land-use classification at all levels of planning in the Northern Cape (refer specifically to the preparation of IDPs and SDFs).

A comprehensive set of SPCs and sub-categories has been devised to guide detailed land-use planning at the district and local municipal levels. These sub-categories can be adjusted as necessary to accommodate site-specific requirements within districts and local municipalities.

Furthermore, the Laingsburg Land Use Management System (LUMS) has been developed in alignment with the SPCs. Several frameworks are recommended in the SDF. It is recommended that, where possible, strategies or by-laws be developed to support these.

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. The Existing Zoning Scheme Regulations are to be amended/upgraded to include these new concepts. In this regard, certain new overlay zonings are envisaged in the Provincial Model Scheme Regulations.
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).

C2.1 SPATIAL PLANNING CATEGORY A & B: CORE AND BUFFER AREAS

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

The Key Strategies and Interventions related to A & B are as follows:

- Implementation of the provincial and local municipal air quality and waste management plan.
- Conserve existing ecological corridors and consolidate and rehabilitate any remnants of corridors that link coastal ecosystems with one another and with terrestrial ecosystems.
- Secure additional potential SPC A areas with the aid of institutions such as the WWF, IUCN, SKEP, SANParks Private Sector, and GEF.
- Establish a system of protected areas incorporating diverse coastal landscapes, ecosystems, habitats, communities, species, and culturally significant sites. The Special Management Area concept, in combination with an efficient Stewardship agreement, is to be implemented.

C2.2 SPATIAL PLANNING CATEGORY C: AGRICULTURE AREAS

The protection and appropriate use of high-potential agricultural land (the areas along the Orange River, Vaal River, and Riet River and those falling within the existing irrigation scheme areas) are of critical importance for sustainable economic growth and food security. High-potential agricultural land near settlements is often subjected to non-agricultural development pressure, while negative social impacts associated with such settlements often have a significant detrimental impact on the production potential of such land. It is, therefore, imperative that the highest priority be given to the protection of high-potential agricultural land and that measures be instituted to create and maintain circumstances conducive to sustainable agriculture (PSDF, 2020)

The Key Strategies and Interventions related to C is as follows:

- Give effect to the ideals of the Sustainable Development Goals (SDG 2 and 12) pertaining to the promotion of sustainable agriculture and rural development.
- Development of an Agricultural Master Plan for the Province to identify and protect the most fertile land for cultivation and food security purposes.
- Consider the rezoning of low-potential agricultural land as a mechanism to promote sustainable economic development by unlocking the latent capital vested in non-agricultural uses through the Sustainable Development Initiative (SDI) approach. Encourage

bona fide game farms to combine their landholdings to create extensive SPC B areas that would support biodiversity conservation in a meaningful manner. Such areas should be managed as Special Management Areas.

- Encourage local processing of farm products and the provision of local farm services to enhance the rural economy, increase the viability of agricultural production and reduce rural poverty.

C2.3 SPATIAL PLANNING CATEGORY D: URBAN AND RURAL AREAS

The relationship between rural and urban areas is increasingly changing throughout the world. Rural and urban areas are no longer mutually exclusive. Farming areas and cities coexist along a continuum with multiple types of flows and interactions occurring between the two spaces. Typically, it is now widely recognised that there exist economic, social, and environmental interdependences between urban and rural areas.

The Key Strategies and Interventions related to Do is as follows:

- All spheres of government, especially municipalities, must provide quality spatial data and interpretation to land managers to assist decision-making and adaptive management and make regional natural resource information and knowledge widely available or accessible (i.e., the SPISYS).
- Accelerate and streamline township establishment processes and procedures to ensure sustainable development.
- Prioritise government spending and private sector investment in urban and rural development in accordance with a settlement category determined by the socio-economic potential of towns and the needs of their inhabitants.
- Improve the quality of subsidized housing settlements through innovative urban planning and design and cross-subsidizing.
- Ensure that development scale and design are determined by the carrying capacity of the environment.

C2.4 SPATIAL PLANNING CATEGORY E: INDUSTRIAL AREAS

A key challenge is to broaden and unlock the opportunities presented by the availability of natural resources. Industrial activities, whether large- or small-scale, have the potential to stimulate economic diversification and development in the province.

While immediate industrial development opportunities related to mining in the Western Cape, the Laingsburg local Municipality lie in brown-fields expansions and various types of downstream value-added activities (art, jewellery, souvenirs, etc.), there are several other possibilities in side-stream and indirect activities. 'Side-stream' activities refer to the service network, vendors, and key contracting firms directly affiliated with a particular mineral project's operation. Not only is this sector significant in terms of contributing to broadening the local and provincial employment base and enhancing the potential for further employment spin-offs, but it is of critical importance to the functioning of all departments within a particular mineral-based operation.

The Key Strategies and Interventions related to E are as follows:

- Develop the required industrial amenities and infrastructure in the defined development corridors which respond to the availability of Environmental Capital (e.g., water, suitable agricultural soil, mining resources, etc.) and Infrastructural Capital (e.g., roads, electricity, bulk engineering services etc.).
- Develop and adopt strategies for efficient water use and increase water conservation at mine sites.
- Continuous rehabilitation of mined land for agricultural and other rural development projects.
- Adjusting existing risk-identification processes to incorporate additional heat related health risks for industrial activities, such as underground mining.
- Prepare a provincial industrial development strategy.
- Prepare a Provincial Disaster Risk Reduction and Adaptation Plan.

C2.5 SPATIAL PLANNING CATEGORY F: SURFACE INFRASTRUCTURE AND BUILDINGS

An effective, competitive, and responsive infrastructure network is imperative for the ongoing economic development of the province, the CKDM DM, and LLM.

The LLM's ability to convey goods effectively and efficiently through the N1 is a key aspect that needs to be addressed. The relevant sectoral departments, therefore, have a vitally important task in providing the infrastructure and bulk services required by the various economic sectors, the human settlements of the province, and the rural hinterland. Key challenges are a lack of basic infrastructure in rural areas and the proliferation of informal settlements in urban areas. Both these challenges are beyond the sole institutional and fiscal capabilities of the relevant municipalities. It is, therefore, important that the relevant funding mechanisms and institutions function efficiently and equitably.

The Key Strategies and Interventions related to F is as follows:

- Development of a Master Infrastructure Plan to align and coordinate infrastructure investment Improve the levels of mobility, infrastructure development, and synergies in the transport planning activities.
- Maintained road, built, and bulk infrastructure development and integrated into the infrastructure planning activities throughout the province.
- Conduct Strategic Environmental Assessments in areas suited for renewable energy generation, to incentivise and streamline the administrative and development processes.
- Consider a carbon tax with tariffs that effectively penalise producers and emitters of high levels of carbon dioxide either in the manufacturing or vehicle industry.

- Investigate how affordable and sustainable mobility in rural areas can be enhanced through the roll-out of non-motorised transport initiatives, including the provision of safer pedestrian pathways and facilities.
- General Guidelines for Development:

The Spatial Planning and Land Use Management Act, Act No 16 of 2013 (SPLUMA), requires all municipalities in the province to develop and introduce wall-to-wall Land Use Schemes throughout their area of jurisdiction. This must occur within five years from the promulgation of SPLUMA, implying that the target is now 2018. According to the Municipal Systems Act, a Land Use Scheme is a key component of the Integrated Development Plan (IDP).

Table 15: Land Use Categories

LAND USE CATEGORY	DEVELOPMENT OBJECTIVE	LAND USE TYPE	COMMON TERMS	LUMS GUIDELINES PREFERRED OUTCOMES
Environmental Areas	To protect main biodiversity areas, natural resources, and the ecological systems through the integration of SDFs, environmental policy and other spatial frameworks	Conservation	Nature Reserves, heritage sites, cultural tourism	*Typical Land Uses:* Conference facilities; tourism, leisure, and adventure activities, limited residential accommodation. *Level of infrastructure and services:* limited infrastructure, management should include maintenance of existing trails and limited facilities, access
		Core	Wetlands, Protects areas	
Human Settlements	To manage and facilitate the development of integrated sustainable human settlements, with appropriate infrastructure, socioeconomic opportunities, and social amenities	Towns and Settlement Regions	Small Towns/ Local service centres	*Typical Land Uses:* Residential, business and offices, industrial parks, government and administration, transportation, leisure, and recreation *Level of infrastructure and services*: Basic to Full municipal services
		Major Settlements	Cities/ Large Towns/Large urban built-up areas with CBDs, industrial complexes etc	*Typical Land Uses*: Residential, large business and offices, industrial parks, government and administration, transportation, leisure and recreation, busy CBD *Level of infrastructure and services:* Full municipal services
		Dispersed Settlements	Villages/homesteads/Resorts	*Typical Land Uses:* Residential, agriculture and farming, shops, sporting facilities, resorts, nature, taverns, access roads

LAND USE CATEGORY	DEVELOPMENT OBJECTIVE	LAND USE TYPE	COMMON TERMS	LUMS GUIDELINES PREFERRED OUTCOMES
				Level of infrastructure and services: Basic services
		Informal Settlements	Informal settlements	*Typical Land Uses:* Residential, social facilities, shops, access roads, *Level of infrastructure and services:* Basic services
Resource Areas		Agriculture, forestry, oceans	Commercial and subsistence farming, commercial plantations,	Tourism attraction, agricultural activity, rural development, youth empowerment, infrastructure development
Infrastructure	To promote efficient and integrated infrastructure and transportation systems	Strategic transport routes, telecommunications, sustainable energy	Higher order infrastructure (rail, roads, sea, air), radio telecommunications, green buildings, solar panels, cellular masts, water services	-Requirements of NEMA are applicable. -Certain applications will require EIA and Special Consent Applications (e.g., cellular masts, radio telecommunications)

All applications are required to comply with the requirements of the applicable legislation such as the Spatial Planning and Land Use Management Act, Municipal Town Planning By-Laws. The following general guidelines are applicable to applications:

- A Site Development Plan for all developments must contain details of the proposed development, density, coverage, layout, landscaping, position of all structures, property building lines, proposed parking, internal roads and the 100-year flood line above any water course.
- Any developments occurring in properties with a water body, a Water Use License Application (WULA) should be submitted to the DWS 100-meter buffers (preferably 50 meters) are applicable to rivers.

- The abstraction of water for any use from any river must have prior approval from DWS and should require a full EIA to ensure that environmental impacts are negligible.
- All developments on heritage structures should comply with the processes of the National Heritage Act.
- All applications pertaining to land development or change the land use which has a high impact on the community must be applied for at the Municipality in a manner provided for in the municipal planning by-law.
- Newly developed buildings should comply with Green Building Standards and Norms. It is also encouraged to retrofit existing buildings, especially during the refurbishment of these buildings.
- Developments are required to allocate at least 10% of the site to green spaces for properties less than 1,000 square meters and at least 25% for properties with an area of 1,000 square meters or more, including parks and gardens.
- Developments must include community involvement in greening initiatives, such as the creation of community gardens or providing public access to green spaces.
- All storefronts on Vortrekker Street should maintain and restore historic building facades, preserving architectural features and materials that reflect the town's heritage.
- All storefronts must use a color scheme consisting of white, light yellow, light grey, and cream white to create a harmonious and inviting streetscape while maintaining the Karoo landscape.

C2.6 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.

C2.7 NATURAL TOURISM AREAS

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

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

Any development contemplated in the Nature Tourism Areas would need to adhere to the following guidelines:

- The development of a site must not be dependent on the creation of a new road. Existing roads may be upgraded to improve access but where there is no existing road, this should inform the type of tourism facility that is developed.

- The maximum carrying capacity for all development sites until an SEA or EIA has taken place is 36 beds or 20 small units. All development sites should be well located in the Nature Tourism buffer area to safeguard the sense of place and eco-tourism opportunities available to that site.
- Development of these sites requires a full EIA and a live Environmental Management Plan that addresses, inter alia, the disposal of solid waste.
- Full IEM procedures are to precede any development whereby the precautionary principle shall apply with approval conditions requiring rehabilitation of the environment and specifications regarding the use of the remainder (for example, conservation, private nature reserve etc).

C2.8 NO DEVELOPMENT AREAS

There are areas that have experienced land loss and have been exposed to various ecological threats within the province. Hence, they should be preserved. Areas that are highlighted as "no development areas" include, but are not limited to, the following:

- Areas of high environmental sensitivity.
- Within 500 meters of a sewage treatment facility.
- 50 meters within a wetland area.
- Below 7775-meter contour around an estuary.
- In areas with slopes of 1:3.
- Along ecological corridors

C2.9 LIMITED DEVELOPMENT AREAS

There are areas that indicate limited impacts on the environment and offer reasonable economic benefits. These are also areas that can be regarded as safe for development although they have certain levels of limitation and should thus follow applications of certain legislation and authorisation. These areas are:

- Areas outside of the urban edge, although authorisation is required.
- Establish an integrated LUMS in the province involving all stakeholders.

C2.10 SETTLEMENTS.

- Preparation of credible "wall-to-wall" SDFs by LMs with both technical and traditional leaders / indigenous approaches to land use management.

C2.11 DEVELOPMENTS.

- Establish an integrated LUMS in the province involving all stakeholders.
- Preparation of credible "wall-to-wall" SDFs by LMs with both technical and traditional leaders / indigenous approaches to land use management.
- Establish an integrated LUMS in the province involving all stakeholders.

- Preparation of credible "wall-to-wall" SDFs by LMs with both technical and traditional leaders / indigenous approaches to land use management.
- There should be CoGTA's capacity assistance to LMs in terms of co-operative governance.

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 Laingsburg Local Municipality, but with a recommended minimum subdivision size of 10 Hectares for agricultural land.

Should an applicant 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 the sustainability of the proposed enterprise.

The development of this land for non-agricultural purposes should only be allowed if:

- There should be CoGTA's capacity assistance to LMs in terms of co-operative governance.
- The land has already been developed for non-agricultural purposes.
- The proposed development does not compromise the primary agricultural activity of the property.
- The proposed development comprises a secondary activity to supplement a landowner's income.
- It will facilitate the implementation of the Land Reform Programme and Labour Tennant Projects.

The Department of Agriculture does not consider anything less than 20 Ha as a viable unit; therefore, it is proposed that subdivisions of less than 20 Ha should not be allowed. This information is also recommended for inclusion into the draft Land Use Management Guidelines.

C3. COOPERATIVE GOVERNANCE APPROACH TO SPATIAL PLANNING

The Constitution makes it clear that all three spheres of government 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 Western Cape province 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.

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

In the Laingsburg Local Municipality, proposals for SDF governance, amongst others, should include the following:

- A need to establish an interdepartmental spatial coordination committee in the Office of the Premier with the necessary oversight to formulate the SDF, resolve the responsibilities for spatial planning within the provincial government level, remove duplications, and recommend that COGTA be responsible for overseeing spatial planning in the province.
- Ensure limiting peri-urban sprawl through strong local land use controls.
- Establish an integrated LUMS in the province involving all stakeholders.
- Preparation of credible "wall-to wall" SDFs by LMs with both technical and tradition leaders / indigenous approach to land use management.
- Regular capacitating of municipal planners with guidelines from SACPLAN
- There should be CoGTA's capacity assistance to LMs in terms of co-operative governance.
- Several frameworks are recommended in the SDF. The Department of Economic Development and Tourism recommends that where possible, strategies or by-laws be developed to support these.

C3.1 SHORTENED APPLICATION PROCEDURES

From an administrative and institutional point of view there is also more flexibility and responsiveness built into Schemes. SPLUMA talks about the incremental introduction of regulations, shortened provisions in certain areas, promotion of incentives, and providing provisions that can respond to the application of policy and priorities. Together with flexibility and responsiveness, there is a stronger emphasis on provisions that allow a municipality to enforce a scheme.

SECTION D: 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 presents a preliminary Spatial Development Framework for the Laingsburg Local Municipality.

Leveraging state investments in infrastructure and private sector ventures in established and emerging industries, the framework identifies key settlements for fostering opportunity, support, research, diversification, and connectivity. This integrated and carefully planned approach is anticipated to lead to the development of high-quality human settlements and a rise in employment opportunities throughout the municipality.

Image 9: Flood Museum