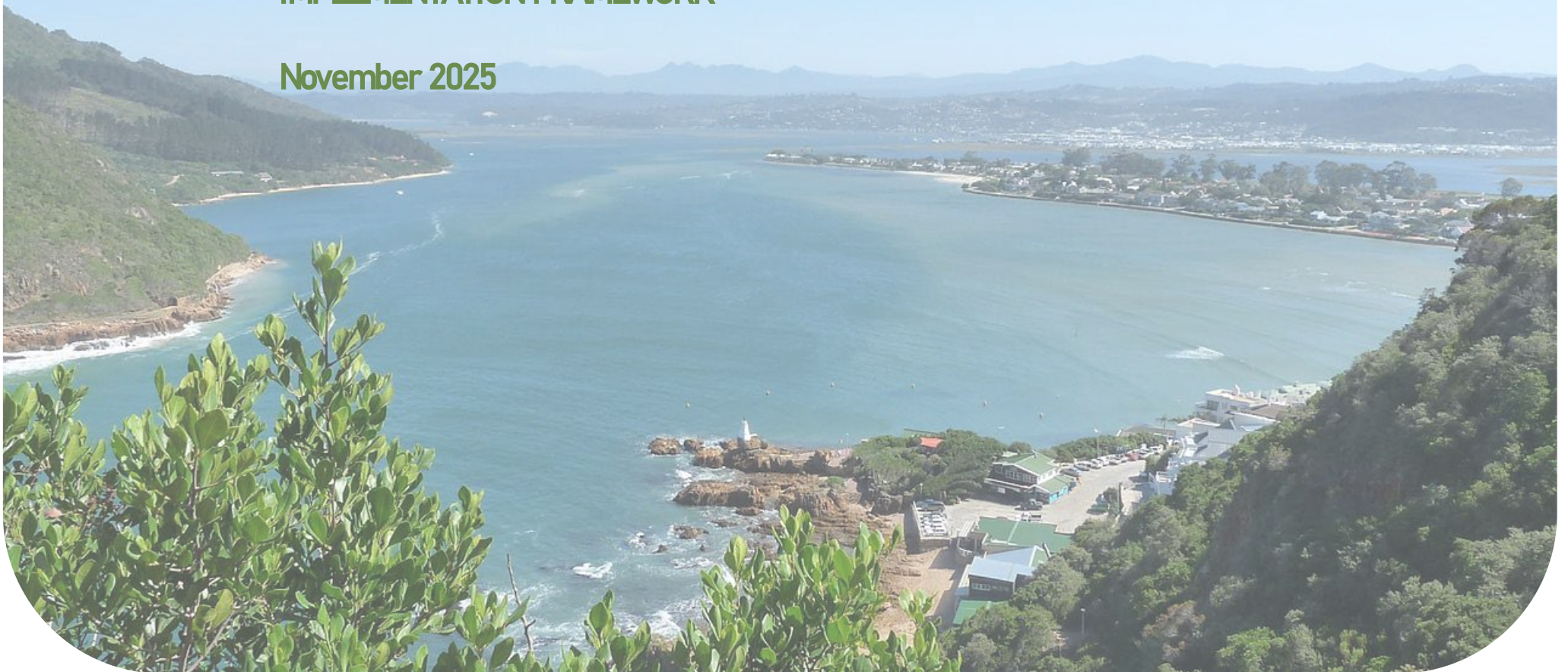


# GARDEN ROUTE DISTRICT MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK

FINAL DRAFT DOCUMENT: SPATIAL DEVELOPMENT FRAMEWORK AND  
IMPLEMENTATION FRAMEWORK

November 2025



**DOCUMENT CONTROL SHEET**

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<b>Consultant/ Application</b>	<b>Plan Associates Development Planners (Pty) Ltd</b> PostNet Suite 211 Private Bag x15 Menlo Park, 0102		

<b>Prepared by</b>	Herman Strydom	Professional Town Planner A/2027/2015 (SACPLAN)	(signature)
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**LIST OF ABBREVIATIONS**

AQMP	Air Quality Management Plan	GDPR	Gross Domestic Product Per Region
ARC	Agriculture Research Council	GIS	Geographic Information System
BCI	Business Confidence Index	GRDM	Garden Route District Municipality
BGWMA	Breede-Gouritz Water Management Area	GRNP	Garden Route National Park
BNG	Breaking New Ground	GVA	Gross Value Added
CBA	Critical Biodiversity Area	HSDG	Human Settlement Development Grant
CBD	Central Business District	ICM	Integrated Coastal Management
CEF	Capital Expenditure Framework	IDP	Integrated Development Plan
CML	Coastal Management Line	IPAP	Industrial Policy Action Plan
CMP	Coastal Management Programme	IPTN	Integrated Public Transport Network
CRU	Community Residential Unit	IRDP	Integrated Rural Development Programme
DA	Department of Agriculture	IRPTN	Integrated Rapid Public Transport Network
DLRRD	Department Land Reform and Rural Development	ISUPG	Informal Settlements Upgrading Partnership Grant
DEA&DP	Department of Environmental Affairs and Development Planning	IUDF	Integrated Urban Development Framework
DDM	District Development Model	JDMA	Joint District Metro Approach
DLG	Department of Local Government	JMO	Joint Marketing Organisation
DM	District Municipality	KRI	Key Regional Issue
DMA	Disaster Management Act	LM	Local Municipality
DRA	Disaster Risk Assessment	LSDF	Local Spatial Development Framework
DRR	Disaster Risk Reduction	LTO	Local Tourism Office
ECD	Early Childhood Development	LUPA	Land Use Planning Act
EMI	Environmental Management Inspector	MCC	Municipal Coastal Committee
EMF	Environmental Management Framework	MP	Master Plan
ESA	Ecological Support Area	MSA	Municipal Systems Act
FEPA	Freshwater Ecosystems Priority Area	MSDF	Municipal Spatial Development Framework
FLISP	Finance Linked Individual Subsidy Programme	MSPA	Marine Spatial Planning Act
FPSU	Farmer Production Support Unit	MTEF	Medium-Term Expenditure Framework
		MTREF	Medium Term Revenue and Expenditure Framework
		NAAQS	National Ambient Air Quality Standards
		NBSAP	National Biodiversity Strategy and Action Plan

NCCAS	National Climate Change Adaptation Strategy	SAHRA	South African Heritage Resources Agency
NDMF	National Disaster Management Framework	SBDM	Sarah Baartman District Municipal
NDP	National Development Plan	SDA	Spatial Development Area
NDPG	Neighbourhood Development Partnership Grant	SDF	Spatial Development Framework
NEMA	National Environmental Management Act	SDG	Sustainable Development Goal
NEM:AQA	National Environmental Management Air Quality Act	SLA	Service Level Agreement
NEMBA	National Environmental Management: Biodiversity Act	SMME	Small, Medium, and Micro Enterprise
NEM: ICMA	National Environmental Management: Integrated Coastal Management Act	SPLUMA	Spatial Planning & Land Use Management Act
NEMLA	National Environmental Management Law Amendment	SWSA	Strategic Water Source Area
NEMPAA	National Environmental Management: Protected Areas Act	TOD	Transit Orientated Development
NIPF	National Industrial Policy Framework	WCBSA	Western Cape Biodiversity Spatial Plan
NMT	Non-Motorized Transport	WCBSPG	Western Cape Biodiversity Spatial Plan and Guidelines
NPAES	National Protected Areas Expansion Strategy	WCDHS	Western Cape Department of Human Settlements
NPO	Non-Profit Organisation	WCG	Western Cape Government
NSDF	National Spatial Development Framework	WCIF	Western Cape Infrastructure Framework
NSDP	National Skills Development Plan	WMA	Water Management Area
NUSP	National Upgrade Support Programme	WSP	Water Service Plan
PDP	Personal Development Plan	WWTW	Wastewater Treatment Work
PHP	Peoples Housing Programme		
PSDF	Provincial Spatial Development Framework		
PHSHDA	Priority Human Settlement Housing Development Area		
PTN	Public Transport Network		
RDP	Reconstruction and Development Programme		
RGVA	Regional Gross Value Added		
RIDS	Regional Industrial Development Strategy		
RMA	Responsible Management Authorities		
RTO	Regional Tourism Office		
SAAQIS	South African Air Quality Information System		
SACNASP	South African Council for Natural Scientific Professions		

## CHAPTER 1: INTRODUCTION



## 1.1 BACKGROUND

The Department Land Reform and Rural Development (DLRRD) appointed Plan Associates Development Planners to review the Spatial Development Framework (SDF) of the Garden Route District Municipality (GRDM). The SDF must be in alignment with the Municipality's Integrated Development Plan (IDP) as part of the requirements in the Municipal Systems Act No. 32 of 2000 (MSA) and must comply with the Spatial Planning & Land Use Management Act, 2013 (SPLUMA). The time frame for review is twelve months.

SPLUMA, Chapter 4 and notably section 12(1) requires national, provincial and municipal spheres of government to prepare SDFs with a clear vision developed through an inventory and analysis of national spatial planning principles and local long-term development goals. SDFs are thus mandatory at all three spheres of government. Section 12(2) requires that all three spheres must participate in each other's processes of spatial planning and land use management and each sphere must be guided by its own SDF when taking decisions relating to land use and development.

Furthermore, Section 20 of SPLUMA, requires that Municipal SDFs must be prepared as part of a Municipality's Integrated Development Plan (IDP) to provide a spatial expression thereof, in accordance with the provisions of the MSA.

The SDF must lead the municipality's land use management system, guiding decisions and discretion exercised in spatial planning and land use management. It must also give leadership to spatial budgeting in the municipality's budget or Medium-Term Expenditure Framework (MTEF), using the Capital Expenditure Framework (CEF) to support this process.

## 1.2 STUDY AREA

The GRDM is one of five District Municipalities in the Western Cape Province, situated in the south-eastern extents of the province, along the Indian Ocean.

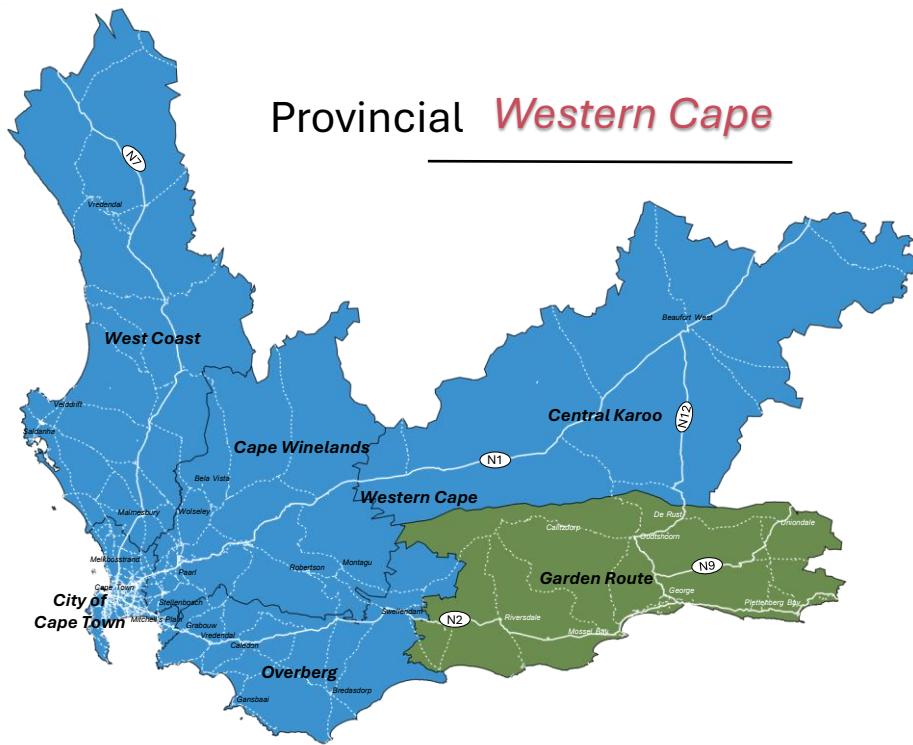
The GRDM comprises seven local municipalities namely:

- ❖ Kannaland LM situated in the north-western parts of the DM, and includes the towns of Ladismith, Calitzdorp and Zoar;
- ❖ Hessequa LM situated in the south-western parts of the DM is the largest LM in the district (572 840 ha) and includes the towns of Riversdale, Gouritsmond, Witsand, Jongensfontein and Stilbaai;
- ❖ Oudtshoorn situated in the northern-central parts of the DM and includes the towns of Oudtshoorn, Dysseidorp and De Rust;
- ❖ Mossel Bay LM situated in the south-central parts of the DM and includes the towns of Mossel Bay, Hartenbos, Great Brak River, Little Brak River and Dana Bay;
- ❖ George LM situated in the north-eastern parts of the LM and includes the towns of George, Wilderness, Uniondale, Herold's Bay, Victoria Bay and Hoekwil;
- ❖ Knysna LM situated in the south-eastern parts of the DM and comprises the towns of Knysna, Sedgefield, Brenton-on-sea, Buffels Bay and Rheenendal.
- ❖ Bitou LM is the smallest LM in the District (99,228 ha) situated in the far eastern extents of the DM and is bordered by the Indian ocean to its south and the Kou-Kamma LM (situated in the Sarah Baartman DM in the Eastern Cape Province) to the east. The main towns of the Bitou LM include Plettenberg Bay, Nature's Valley, Kranshoek, Kwanokuthula, New Horizons, Wittedrift, Keurboomstrand, and Kurland.

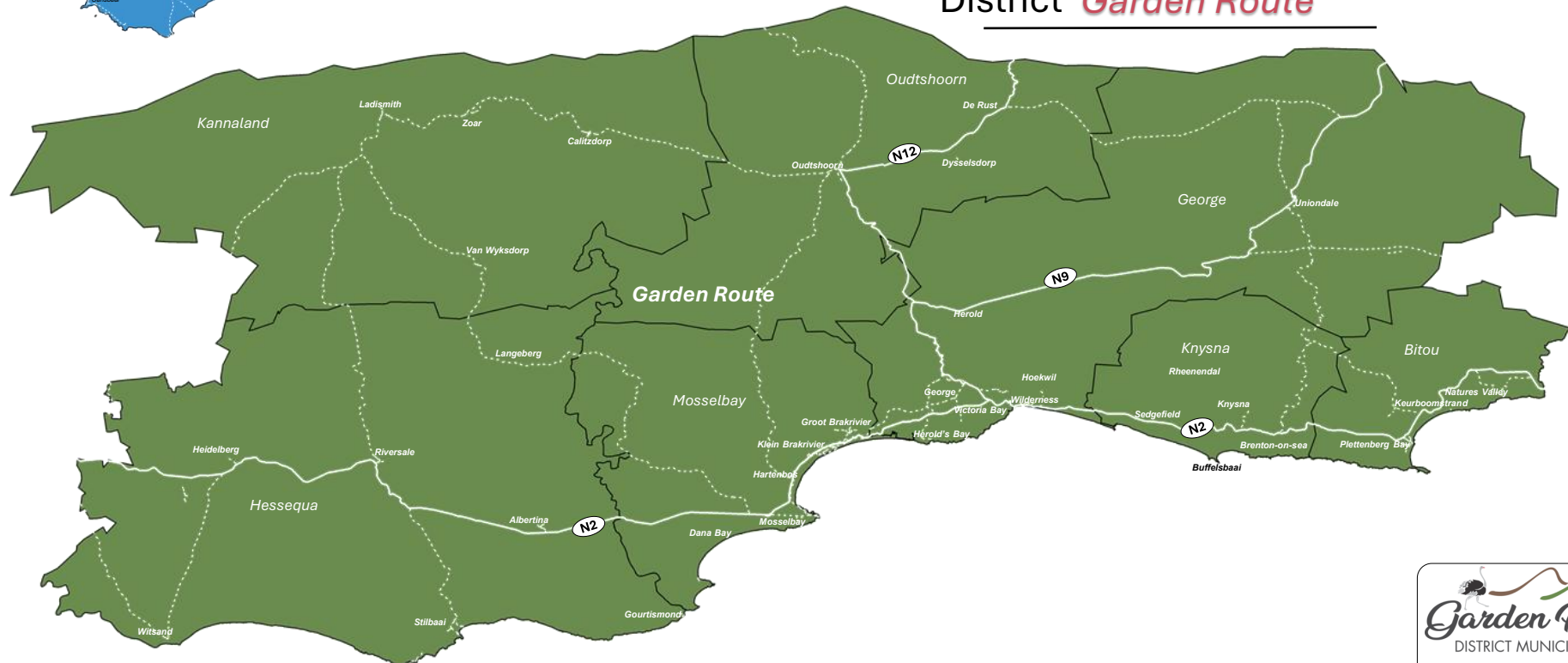
**Figure 1** depicts the GRDM and its Local Municipalities.

# GARDEN ROUTE DISTRICT MUNICIPALITY REGIONAL CONTEXT

Provincial *Western Cape*



District *Garden Route*



### 1.3 PROJECT AIM AND OBJECTIVES

The reviewed SDF for the GRDM will seek to address spatial, environmental and socio-economic issues confronting the district. It will also assist the municipality to efficiently manage current spatial development processes and pressures and strategically prepare for projected future developments in the municipal area.

The role of a District SDF is to bridge the gap between provincial and local spatial planning. It ensures that the local municipal SDFs within a district are coherent, aligned with broader regional infrastructure strategies, and that spatial development is coordinated across municipal boundaries.

More specifically, the SDF of the GRDM will aim towards achieving the following objectives:

- ❖ Providing a spatial representation of the land development policies, strategies and objectives of the district in the context of local, provincial and national directives;
- ❖ Coordinating and integrating the spatial expression of the sectoral plans of the local and/ or provincial sector departments;
- ❖ Addressing inefficient, impoverished and scattered land use patterns where the poor is generally located far away from places of socio-economic opportunities;
- ❖ Indicate the desired and intended pattern of land use development in the urban and rural parts of the district, including the delineation of areas in which development in general or development of a particular type would not be appropriate;
- ❖ Managing the conflicting demand between agriculture, forestry, urban expansion and biodiversity conservation areas;
- ❖ Providing mechanisms for the establishment of a functional relationship between urban and rural areas – both spatially and economically;

- ❖ Identifying priority investment areas in urban and rural parts of the municipality;
- ❖ Focusing on defining the economic footprint of the municipality and formulating strategies on how this can be enhanced in a sustainable manner;
- ❖ Coordination and alignment of the District SDF with the Provincial SDF's, neighbouring municipal SDFs, and any other regional plans applicable;
- ❖ Channel public and private investment into priority areas and align the capital investment programmes of the municipality and different government departments into these areas in pursuit of the five SPLUMA principles;
- ❖ Link all of the above to the Municipal Budget via the GRDM Integrated Development Plan (IDP).

## 1.4 PROJECT METHODOLOGY

The project approach and methodology followed in preparing the SDF of the GRDM is graphically illustrated on **Diagram 1** and discussed below.

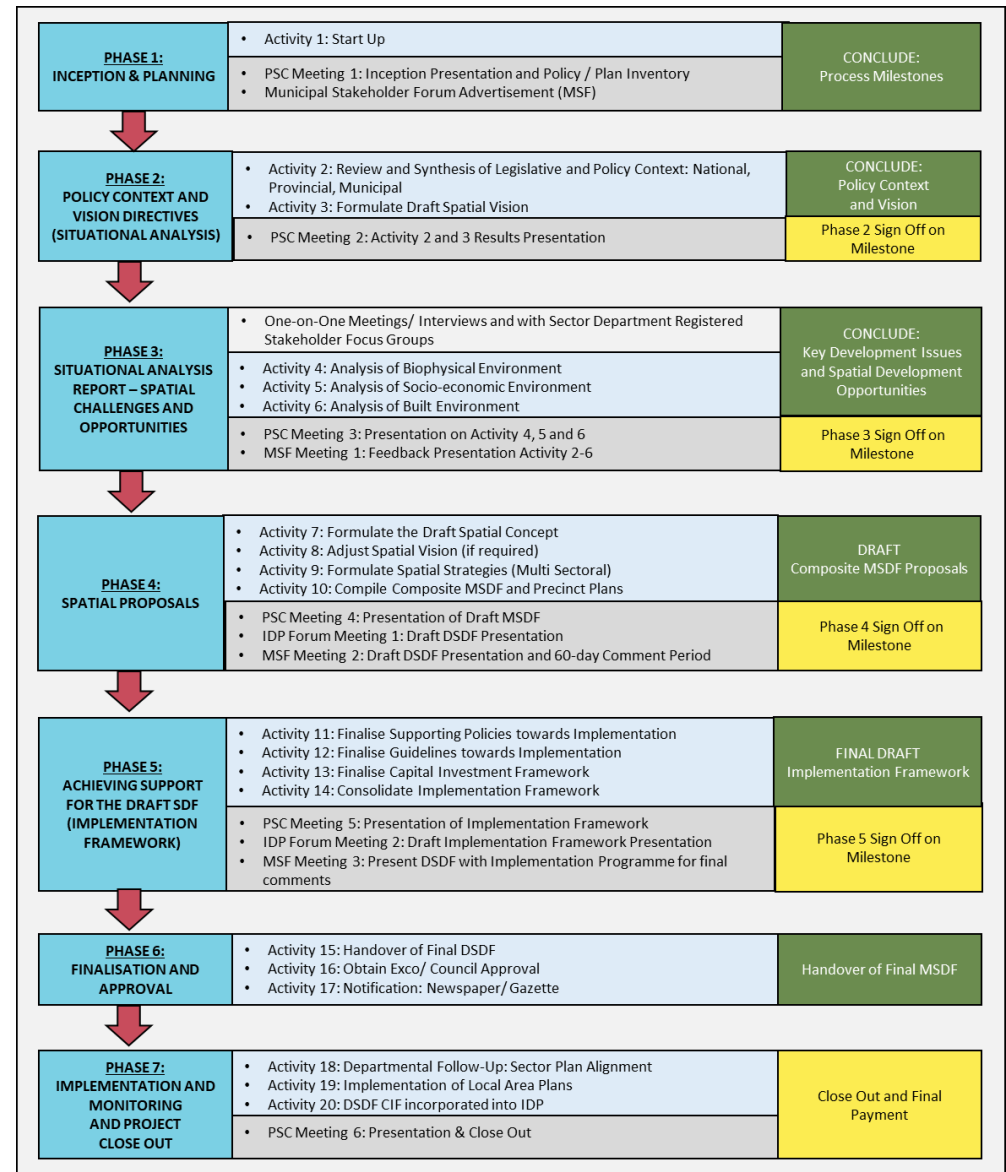
### PHASE 1: PROJECT INCEPTION AND PLANNING

- ❖ Phase 1 comprised the **Project Start Up and Inception**, including the following:
  - The Inception Report was completed during December 2024, which outlined the Project Methodology to be followed and confirmed the Timeline of completing all the tasks required as per the Terms of Reference.
  - An Inception Meeting was held in February 2025 to present the Inception Report and establish the Project Steering Committee.

### PHASE 2: POLICY CONTEXT AND VISION DIRECTIVES

- ❖ Phase 2 firstly entailed a review of *national* spatial policy directives which the SDF needs to align with (NDP, NSDP, MTREF, etc.), as well as a summary of the implications thereof for the SDF of the GRDM. Secondly, it confirmed key provisions and founding spatial principles of both *SPLUMA* and provincial and local spatial planning legislation; and gave an indication how these would be applicable to the SDF of the GRDM.
- ❖ The Draft Spatial Vision for the GRDM was then formulated, based on the outcomes of the Policy Analysis.
- ❖ This document represents Phase 2 of the project (February 2025).

**Diagram 1: GRDM SDF Project Methodology**



### **PHASE 3: SPATIAL CHALLENGES AND OPPORTUNITIES**

- ❖ Phase 3 comprised the identification of past, current and likely future **Spatial Challenges and Opportunities** in the GRDM area relating to the Biophysical, Socio Economic and Built Environment.
- ❖ Phase 3 was concluded with the identification and a synthesis of the **Key Development Issues** and **Spatial Development Opportunities** for the DM.
- ❖ A Project Steering Committee Meeting was held on 10 April 2025 to present the findings of the Draft Situational Analysis to the project team for inputs and comments.

### **PHASE 4: SPATIAL PROPOSALS**

- ❖ Phase 4, **Spatial Proposals** entailed the compilation of the **Draft Spatial Concept** for the future development of the district, highlighting the inherent spatial rationale/logic which all future development should be based on.
- ❖ The **Spatial Strategies** articulate how the spatial vision and concept are to be achieved, with specific focus on measures to (a) protect threatened or scarce spatial assets, (b) bring about spatial change and (c) initiate new development. It also incorporates aspects such as environmental management, economic infrastructure and job creation, social infrastructure, transportation, rural development, human settlement development, etc.
- ❖ Phase 4 was presented to the project team to obtain their inputs and comments. Inputs received were incorporated into the document and the Draft Garden Route SDF was published for a **60-day public commenting period** from **29 August to 29 October 2025**.

### **PHASE 5: IMPLEMENTATION FRAMEWORK**

- ❖ Phase 5 deals with the **Implementation Framework of the SDF** which includes the District **Policies** and **Guidelines** towards implementation of the SDF, with priorities and associated budgets (where applicable).
- ❖ Phase 5 further outlines a number of Monitoring Indicators, linked to the projects of the Implementation Framework.
- ❖ The comments received in Phase 4 of the project have been incorporated into the document.
- ❖ This document represents the Phase 5 deliverable, completed in November 2025.

### **PHASE 6: FINALIZATION AND APPROVAL**

- ❖ Phase 6, **Final SDF** will conclude with Council Approval and Notification on the approved SDF in local newspapers.
- ❖ Phase 6 is scheduled to be completed by January/February 2026.

### **PHASE 7: PROJECT CLOSE OUT**

- ❖ Phase 7 will comprise a Close-Out Meeting, as well as a Close-Out Report outlining how the milestones were completed and any Major Challenges that were faced during the project.
- ❖ The Close Out of the project is scheduled for the end of February 2026.

## CHAPTER 2: LEGISLATIVE AND POLICY CONTEXT



## 2.1 NATIONAL LEGISLATION AND POLICY FRAMEWORK

### 2.1.1 Constitution of the Republic of South Africa 108 of 1996

The Constitution of South Africa in Act 108 of 1996 is the supreme law of South Africa. Amongst other things, it ascribes different functions to different tiers of government to ensure the equitable and functional distribution of roles, responsibilities and duties.

In terms of Section 156 of the Constitution, municipalities have executive authority in respect of the right to administer the functional area of “municipal planning” and more specifically to:

- ❖ structure and manage its administration, budgeting and planning processes to give priority to the basic needs of the community;
- ❖ promote the social and economic development of the community, and
- ❖ participate in national and provincial development programmes.

The GRDM Integrated Development Plan and associated Annual Budget, as well as the Garden Route District SDF are three of the most important tools at the disposal of the municipality to fulfil these legal obligations.

### 2.1.2 Spatial Planning and Land Use Management Act 16 of 2013 (SPLUMA)

SPLUMA provides the legal foundation for all spatial planning and land use management activities in South Africa.

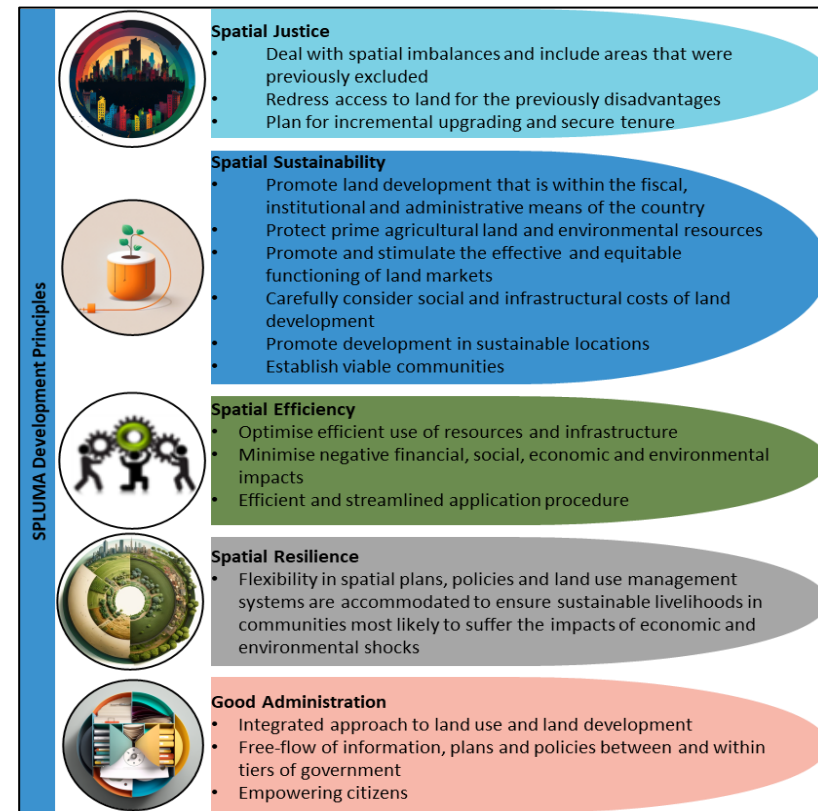
The Act seeks to promote consistency and uniformity in procedures and decision-making relating to land use and development across all three spheres of government.

It also requires that a Municipal SDF should be in line with the sectoral policies of national and provincial government and should be aligned with the plans, policies and development strategies of adjoining municipalities.

#### SPLUMA DEVELOPMENT PRINCIPLES:

As point of departure, SPLUMA defines five development principles (refer to **Diagram 2**) which should inform all spatial planning, land development and land use management processes.

**Diagram 2: SPLUMA Principles**



**CONTENTS OF A MUNICIPAL SDF**

Section 21 of SPLUMA stipulates that a municipal SDF must:

- ❖ give effect to the development principles and applicable norms and standards set out in Chapter 2;
- ❖ include a written and spatial representation of a five-year spatial development plan for the spatial form of the municipality;
- ❖ include a longer-term spatial development vision statement for the municipal area which indicates a desired spatial growth and development pattern for the next 10 to 20 years;
- ❖ identify current and future significant structuring and restructuring elements of the spatial form of the municipality, including development corridors, activity spines and economic nodes where public and private investment will be prioritised and facilitated;
- ❖ include population growth estimates for the next five years;
- ❖ include estimates of the demand for housing units across different socio-economic categories and the planned location and density of future housing developments;
- ❖ include estimates of economic activity and employment trends and locations in the municipal area for the next five years;
- ❖ identify, quantify and provide location requirements of engineering infrastructure and services provision for existing and future development needs for the next five years;
- ❖ identify the designated areas where a national or provincial inclusionary housing policy may be applicable;
- ❖ include a strategic assessment of the environmental pressures and opportunities within the municipal area, including the spatial location of environmental sensitivities, high potential agricultural land and coastal access strips, where applicable;

- ❖ identify the designation of areas in the municipality where incremental upgrading approaches to development and regulation will be applicable;
- ❖ identify the designation of areas in which—
  - i. more detailed local plans must be developed; and
  - ii. shortened land use development procedures may be applicable and land use schemes may be so amended.
- ❖ provide the spatial expression of the coordination, alignment and integration of sectoral policies of all municipal departments;
- ❖ determine a capital expenditure framework for the municipality's development programmes, depicted spatially;
- ❖ determine the purpose, desired impact and structure of the land use management scheme to apply in that municipal area; and
- ❖ include an implementation plan comprising of—
  - i. sectoral requirements, including budgets and resources for implementation;
  - ii. necessary amendments to a land use scheme;
  - iii. specification of institutional arrangements necessary for implementation;
  - iv. specification of implementation targets, including dates and monitoring indicators; and
  - v. specification, where necessary, of any arrangements for partnerships in the implementation process.

### 2.1.3 National Development Plan, 2030

The National Development Plan, 2030 - *Our future – make it work* - is a plan for the country to eliminate poverty and reduce inequality by 2030 through uniting South Africans, unleashing the energies of its citizens, growing an inclusive economy, building capabilities, enhancing the capacity of the state and leaders working together to solve complex problems.

The NDP sets out the following **principles** for development, which are enforced through SPLUMA:

- ❖ **Spatial justice:** The historic policy of confining particular groups to limited space, as in ghettoisation and segregation, and the unfair allocation of public resources between areas, must be reversed to ensure that the needs of the poor are addressed first rather than last.
- ❖ **Spatial sustainability:** Sustainable patterns of consumption and production should be supported, and ways of living promoted that do not damage the natural environment.
- ❖ **Spatial resilience:** Vulnerability to environmental degradation, resource scarcity and climatic shocks must be reduced, and ecological systems should be protected and replenished.
- ❖ **Spatial quality:** The aesthetic and functional features of housing and the built environment need to be improved to create liveable, vibrant and valued places that allow for access and inclusion of people with disabilities.
- ❖ **Spatial efficiency:** Productive activity and jobs should be supported, and burdens on business minimised. Efficient commuting patterns and circulation of goods and services should be encouraged, with regulatory procedures that do not impose unnecessary costs on development.

The key objectives and actions put forward by the NDP are summarised in **Table 1** (overleaf), with the specific objectives applicable to the GRDM elaborated upon in the second column.

Table 1 summarises the key objectives and actions of the NDP, with the objectives applicable to the GRDM elaborated upon in the second column.

**Table 1: National Development Plan Objectives and Actions**

NATIONAL DEVELOPMENT PLAN – OUR FUTURE - MAKE IT WORK	
OBJECTIVES AND ACTIONS	OBJECTIVES APPLICABLE TO THE GRDM
Economy and Employment	<ul style="list-style-type: none"> <li>❖ Reduce the cost of living for poor households and costs of doing business through microeconomic reforms.</li> <li>❖ Broaden the expanded public works programme to 2 million fulltime equivalent jobs by 2020.</li> </ul>
Economy Infrastructure – basic infrastructure	<ul style="list-style-type: none"> <li>❖ The proportion of people with access to the electricity grid should rise to at least 90% by 2030, with non-grid options available for the rest.</li> <li>❖ Ensure that all people have access to clean, potable water and that there is enough water for agriculture and industry, recognising trade-offs in the use of water.</li> <li>❖ By 2030 public transport will be user-friendly, less environmentally damaging, cheaper and integrated or seamless.</li> <li>❖ Consolidate and selectively expand transport and logistics infrastructure, with the N2 through the Eastern Cape being a key focus area.</li> </ul>
Environmental Sustainability and Resilience	<ul style="list-style-type: none"> <li>❖ Absolute reductions in the total volume of waste disposed to landfill each year.</li> <li>❖ Carbon price, building standards, vehicle emission standards and municipal regulations to achieve scale in stimulating renewable energy, waste recycling and in retrofitting buildings.</li> <li>❖ All new buildings to meet the energy efficiency criteria set out in South African National Standard 204.</li> </ul>
Integrated and Inclusive Rural Economy	<ul style="list-style-type: none"> <li>❖ Improved infrastructure and service delivery, a review of land tenure, service to small and micro farmers, a review of mining industry commitments to social investment, and tourism investments.</li> <li>❖ Create tenure security for communal farmers, especially women, investigate different forms of financing and vesting of private property rights to land reform beneficiaries that does not hamper beneficiaries with a high debt burden.</li> </ul>
Positioning South Africa in the Region and the World – economy	<ul style="list-style-type: none"> <li>❖ Implement a focused regional integration strategy with emphasis on road, rail and port infrastructure in the region.</li> </ul>
Transforming Human Settlements	<ul style="list-style-type: none"> <li>❖ Reform the current planning system for improved coordination.</li> <li>❖ Develop a strategy to densify cities, promote better located housing and settlements.</li> <li>❖ Ensure safe, reliable and affordable public transport.</li> <li>❖ Provide SDF norms, including improving the balance between location of jobs and people.</li> <li>❖ Provide incentives for citizen participation for local planning and development of spatial compacts.</li> </ul>
Improving Education, Training and Innovation	<ul style="list-style-type: none"> <li>❖ Improve access to Early Childhood Development Programmes.</li> </ul>
Promoting Health Care for All	<ul style="list-style-type: none"> <li>❖ Strengthen the health system.</li> </ul>
Social Protection (social welfare)	<ul style="list-style-type: none"> <li>❖ Expand existing public employment initiatives to create opportunities for the unemployed.</li> </ul>

NATIONAL DEVELOPMENT PLAN – OUR FUTURE - MAKE IT WORK	
OBJECTIVES AND ACTIONS	OBJECTIVES APPLICABLE TO THE GRDM
Building Safer Communities (policing)	<ul style="list-style-type: none"> <li>❖ Increase community participation in crime prevention and safety initiatives.</li> <li>❖ Implement the National Rural Safety Strategy Plan in high-risk areas involving all role-players and stakeholders.</li> </ul>
Building a Capable and Developmental State (institutional)	<ul style="list-style-type: none"> <li>❖ Improve relations between national, provincial and local government.</li> </ul>
Fighting Corruption (institutional)	<ul style="list-style-type: none"> <li>❖ Develop clear rules restricting business interests of public servants.</li> <li>❖ Develop restraint-of-trade agreements for senior civil servants and politicians at all levels of government.</li> <li>❖ All corrupt officials should be made individually liable for all losses incurred as a result of their corrupt actions.</li> </ul>
Nation Building and Social Cohesion – social compact	<ul style="list-style-type: none"> <li>❖ Improve public services and spaces as well as building integrated housing and sport facilities in communities to ensure sharing of common spaces across race and class.</li> <li>❖ Promote citizen participation in forums such as Integrated Development Plans, Ward Committees, School Governing Boards and Community Policing Forums.</li> </ul>

### 2.1.4 National Spatial Development Framework, 2022

The foundation for the National SDF consists of five frames. These emanate from the NDP 2030 priorities, the National Spatial Development Vision and Logic as well as development issues identified through the analysis process. The five frames are listed below:

- ❖ **Frame One: Urban Regions, Clusters and Development Corridors as the engines of national transformation and economic growth:** To focus and sustain national economic growth, drive inclusive economic development and derive maximum transformative benefit from urbanisation and urban living.
- ❖ **Frame Two: Productive Rural Regions and Regional Development Anchors as the foundation of national transformation:** To ensure national food security, rural transformation and rural enterprise development and quality of life in rural South Africa through a set of strong urban-rural development anchors in functional regional-rural economies.
- ❖ **Frame Three: National Ecological Infrastructure System as enabler for a shared and sustainable resource foundation:** To protect and enable sustainable and just access to water and other national resources for quality livelihoods of current and future generations.
- ❖ **Frame Four: National Connectivity and Economic Infrastructure Networks as enabler for a shared, sustainable and inclusive economy:** To develop, expand and maintain a transport, trade and communication network in support of national, regional and local economic development.
- ❖ **Frame Five: National Social Service and Settlement Infrastructure Network in support of national well-being:** To ensure effective access to the benefits of high-quality basic, social and economic services in a well-located system

of vibrant rural service towns, acting as urban-rural anchors and rural-rural connectors.

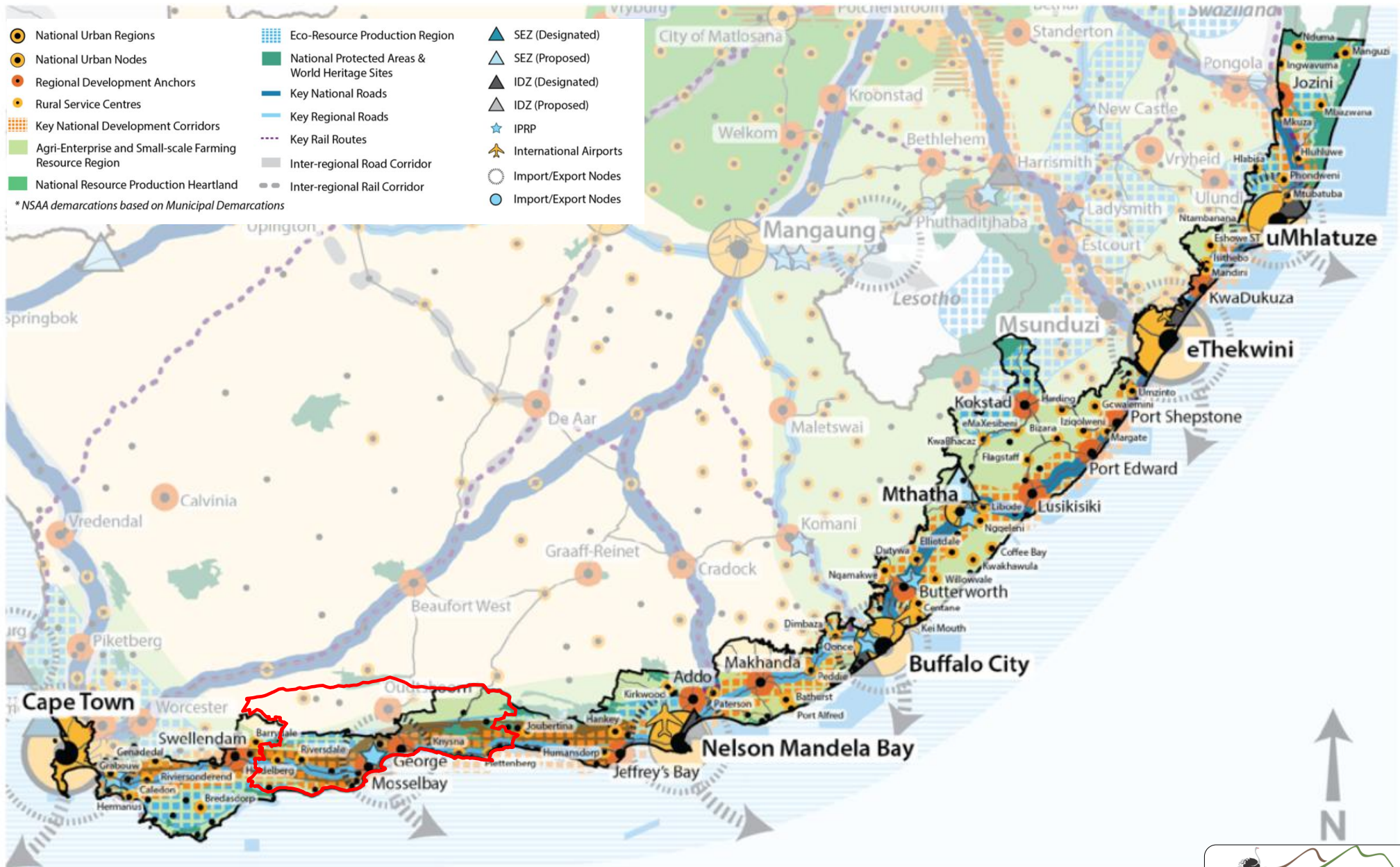
In terms of the National SDF (**Figure 2**) the GRDM falls within the Key National Development Corridor along the coastline of South Africa where the N2 freeway connects the cities of Cape Town, Mossel Bay, Port Elizabeth, East London, Durban and Richards Bay, which all have harbours and tourism potential. The Garden Route, which stretches from Mossel Bay to Storms River, is an important component of this corridor, with inherent freight and tourism potential. It is earmarked for Eco-resource Production and Livelihood, emphasising the importance of the sustainable use of natural assets in eco-tourism and economic development.

### 2.1.5 National Biodiversity Strategy and Action Plan, 2015-2025

The National Biodiversity Strategy and Action Plan (NBSAP) endeavours to integrate the country's obligations under the Convention of Biological Diversity and Global Development Agenda into South Africa's national development and sectoral planning frameworks. It provides a framework to integrate biodiversity needs into sectoral plans and strategies.

The NBSAP notes that South Africa ranks as the third most biologically diverse country in the world, containing three of the world's 34 biodiversity hotspots. One of these hotspots is the Cape Floristic located in the southwestern corner of South Africa (over large parts of the Garden Route DM) and is known for its wide variety of unique plant species found only in this area.

# NSDF: COASTAL NATIONAL SPATIAL TRANSFORMATION AND ECONOMIC REGION



### 2.1.6 National Climate Change Act, 2024 (Act 22 of 2024)

The Climate Change Act 22 of 2024 in South Africa, enacted in July 2024 and proclaimed in March 2025, is a comprehensive legal framework for climate action, aiming to transition the country to a low-carbon and climate-resilient economy. It provides a statutory framework for both climate adaptation and mitigation, with a focus on a just transition and the need for cooperation across all levels of government and the private sector. The Climate Change Act, No. 22 of 2024, requires municipalities to integrate climate change considerations into their SDFs. This includes conducting climate change needs and response assessments, developing climate change response implementation plans, and ensuring these plans are components of relevant planning instruments like the SDF. The Act emphasizes a move towards a low-carbon and climate-resilient economy and society, requiring municipalities to align their planning with these objectives.

In essence, the Climate Change Act 2024 mandates a significant shift in how municipalities plan and develop, requiring a proactive and integrated approach to climate change that permeates all aspects of their spatial planning and development.

### 2.1.7 National Climate Change Adaptation Strategy, 2019

The National Climate Change Adaptation Strategy (NCCAS), 2019 provides a common vision of climate change adaptation and climate resilience for the country, and outlines priority areas for achieving this vision.

*The Vision of the National Climate Change Adaptation Strategy is:*

*“To transition to a climate resilient South Africa, which will follow a sustainable development path, guided by anticipation, adaptation and recovery from a changing climate and environment to achieve our development aspirations.”*

### STRATEGIC OBJECTIVES

The strategic objectives of the NCCAS are as follows:

- ❖ **Objective 1:** Build climate resilience and adaptive capacity to respond to climate change risk and vulnerability.
- ❖ **Objective 2:** Promote the integration of climate change adaptation response into development objectives, policy, planning and implementation.
- ❖ **Objective 3:** Improve understanding of climate change impacts and capacity to respond to these impacts.
- ❖ **Objective 4:** Ensure resources and systems are in place to enable implementation of climate change responses.

### STRATEGIC INTERVENTIONS AND OUTCOMES

Each of the nine Strategic Interventions of the NCCAS has a dedicated list of actions intended to achieve the intended Outcomes as summarised in **Table 2**.

**Table 2: NCCAS Strategic Interventions**

<b>Intervention 1: Reduce human, economic, environmental, physical and ecological infrastructure vulnerability and build adaptive capacity.</b>	
<b>Outcome 1.1:</b>	Increased resilience and adaptive capacity achieved in human, economic, environmental, physical and ecological infrastructure.
<b>Intervention 2: Develop a coordinated Climate Services System that provides climate products and services for key climate vulnerable sectors and geographic areas.</b>	
<b>Outcome 2.1:</b>	Climate products and services for key climate vulnerable sectors and geographic areas developed and implemented.
<b>Intervention 3: Develop a vulnerability and resilience methodology framework that integrates biophysical and socio-economic aspects of vulnerability and resilience.</b>	

<b>Outcome 3.1:</b>	A Climate Risk and Vulnerability Assessment Framework developed and implemented across 100% of key adaptation sectors.
<b>Intervention 4: Facilitate mainstreaming of adaptation responses into sectoral planning and implementation.</b>	
<b>Outcome 4.1:</b>	Effective adaptation planning that covers at least 100% of the South African sectors identified in the NCCAS.
<b>Outcome 4.2:</b>	Achieve a 100% coverage of climate change considerations in sectoral operational plans.
<b>Intervention 5: Promote research application, technology development, transfer and adoption to support planning and implementation.</b>	
<b>Outcome 5.1:</b>	Increased research output and technology uptake to support planning and implementation.
<b>Intervention 6: Build the necessary capacity and awareness for climate change responses.</b>	
<b>Outcome 6.1:</b>	Capacity building and awareness for climate change response enhanced.
<b>Intervention 7: Establish effective governance and legislative processes to integrate climate change in development planning.</b>	
<b>Outcome 7.1:</b>	Adaptation governance defined and legislated through the Climate Change Act once approved by parliament.
<b>Outcome 7.2:</b>	Institutional structures for climate change adaptation strengthened.
<b>Outcome 7.3:</b>	Enhanced public-private-civil society collaboration and stewardship.
<b>Intervention 8: Enable substantial flows of climate change adaptation finance from various sources.</b>	
<b>Outcome 8.1:</b>	Adequate financial resources for national adaptation priorities from national fiscus and international sources.
<b>Intervention 9: Develop and implement a Monitoring and Evaluation System that tracks implementation of adaptation actions and their effectiveness.</b>	
<b>Outcome 9.1:</b>	A national Monitoring and Evaluation system developed and implemented.

### 2.1.8 National Biodiversity Assessment, 2018

This assessment captures the challenges and opportunities of South Africa's natural environment in the context of social and economic change and the requirements of ecosystem services. It was completed in terms of the National Environmental Management: Biodiversity Act (Act 10 of 2004) to monitor and report regularly on the state of biodiversity.

Specifically, it recommends that the following functional areas be taken into account in land use planning and environmental assessment:

- ❖ Critically Endangered and Endangered Ecosystems;
- ❖ Critical Biodiversity Areas and Ecological Support Areas;
- ❖ River and Wetland FEPAs (Freshwater Ecosystem Priority Areas);
- ❖ Priority Estuaries;
- ❖ Strategic Water Source Areas (SWSAs);
- ❖ Ecological Infrastructure (EI) areas; and
- ❖ Invasive Alien Species (IAS) risk areas.

These areas collectively represent the key ecological networks and assets that underpin sustainable development in the district and should guide spatial planning, environmental management, and land use decision-making.

### 2.1.9 Marine Spatial Planning Act, 2018

The Marine Spatial Planning Act (MSPA) of 2018 in South Africa guides the planning and management of marine and coastal spaces, ensuring that human activities are compatible with the health and productivity of marine ecosystems.

### 2.1.10 Integrated Urban Development Framework and Implementation Plan, 2016

The Integrated Urban Development Framework (IUDF) sets out the policy framework for transforming and restructuring South Africa’s urban spaces. The IUDF is guided by the vision of creating ‘liveable, safe, resource-efficient cities and towns that are socially integrated, economically inclusive and globally competitive, where residents actively participate in urban life’.

The IUDF’s premise is that **jobs, housing and transport** should be used to promote urban restructuring as outlined in the NDP. Critical levers for spatially transforming towns and cities are integrated transport and affordable mobility, which also helps to strengthen rural-urban linkages.

The IUDF advocates a **Transit Orientated Development (TOD)** approach to urban design. This promotes higher-density urban developments along mass transit corridors and should inform investments in human settlements to improve access and inclusion. To achieve this will require better alignment of transport, land-use, human settlements and resource-efficient, integrated infrastructure.

As illustrated in **Diagram 3**, the IUDF comprises a Vision (Intended Outcome), three Strategic Goals and nine Policy Levers which can be used to achieve the Strategic Goals and Vision.

Diagram 3: Core elements of the IUDF

INTEGRATED URBAN DEVELOPMENT FRAMEWORK	
<b>Outcome – Spatial Transformation:</b>	✓ Outcome Led Planning: Jobs, Housing and Transport
<b>Strategic Goals:</b>	<ul style="list-style-type: none"> <li>✓ Spatial Integration</li> <li>✓ Inclusion and Access</li> <li>✓ Growth Governance</li> </ul>
<b>Policy Levers – Objectives:</b>	<ul style="list-style-type: none"> <li>✓ Integrated Urban Planning and Management</li> <li>✓ Integrated Transport and Mobility</li> <li>✓ Integrated Sustainable Human Settlements</li> <li>✓ Integrated Urban Infrastructure</li> <li>✓ Efficient Land Management and Governance</li> <li>✓ Inclusive Economic Development</li> <li>✓ Empowered Active Communities</li> <li>✓ Effective Urban Governance</li> <li>✓ Sustainable Finances</li> </ul>

### 2.1.11 National Coastal Management Programme, 2014

The legal requirements for a National Coastal Management Programme (NCMP) in relation to an SDF are primarily derived from the Integrated Coastal Management Act (ICMA) of 2008 and the Marine Spatial Planning Act (MSPA) of 2018 in South Africa. The NCMP is a key tool for implementing the ICMA, which aims to promote the conservation of the coastal environment and ensure sustainable development within the coastal zone. The NCMP provides a framework for implementing the ICM Act and outlines strategies for coastal management, which should be reflected in the SDF.

### 2.1.12 National Environmental Management: Integrated Coastal Management Act, 2008

The National Environmental Management: Integrated Coastal Management Act (NEM: ICMA), Act 24 of 2008 in South Africa outlines the legislative requirements for managing the coastal environment. It establishes a system for integrated coastal and estuarine management, emphasizing ecological sustainability, social equity, and economic viability. Key aspects include defining the coastal zone, ensuring coordinated management, preserving the coastal environment, promoting equitable access, and fulfilling international obligations. SDFs, as part of municipal planning, are required to consider the principles and objectives outlined in the ICMA. The ICMA also provides for the establishment of Coastal Management Lines (CMLs), which are important spatial planning tools for managing the coastal zone and should be incorporated into SDFs.

The SDF must align with and incorporate several legal requirements related to coastal management, primarily stemming from the Integrated Coastal Management (ICM) Act and the Marine Spatial Planning (MSP) Act. These acts emphasize sustainable development, conservation, and equitable access to coastal areas.

### 2.1.13 National Disaster Management Framework, 2005

The Disaster Management Act (DMA) of 2002, specifically section 7(1), mandates the National Disaster Management Framework (NDMF) of 2005 as the legal instrument for a consistent, transparent, and inclusive national disaster management policy. The NDMF outlines the framework for disaster risk reduction across all spheres of government. Furthermore, Section 53(2)(a) of the DMA requires that a municipal disaster management plan be integrated into the municipality's Integrated Development Plan (IDP).

### 2.1.14 National Environmental Management: Biodiversity Act, 2004

The National Environmental Management: Biodiversity Act (NEMBA) Act 10 of 2004 mandates that SDFs incorporate biodiversity considerations and align with national biodiversity strategies and plans. SDFs must identify and protect critical biodiversity areas and promote the conservation and sustainable use of ecosystems and species.

### 2.1.15 National Environmental Management: Protected Areas Act, 2003

The National Environmental Management: Protected Areas Act, Act 57 of 2003 (NEMPAA) provides for the formal protection of a network of ecologically viable areas that represent South Africa's biodiversity and natural landscapes. It deals with stewardship programmes, such as conservancies, several of which exist in the GRDM including:

- ❖ **Western Heads-Goukamma Conservancy:** Located between the western bank of the Knysna Estuary and the eastern bank of the Goukamma Estuary, this conservancy aims to protect indigenous ecosystems, endangered species, and significant geological features.
- ❖ **Great Brak River Conservancy:** Focused on promoting the conservation of indigenous fauna and flora, this conservancy strives to preserve the natural beauty of the Great Brak River area.
- ❖ **Fransmanshoek Conservancy:** Situated near Vleesbaai, this conservancy is dedicated to the protection of marine and coastal environments, as well as the unique terrestrial habitats in the region.
- ❖ **Pledge Nature Reserve:** Located in Knysna, this reserve offers a sanctuary for a variety of plant and animal species, providing walking trails and educational opportunities for visitors.

The National Protected Areas Expansion Strategy (NPAES) makes recommendations about protected area expansion and includes marine protected areas, listing the Southwestern Cape bioregions as priorities in the marine environment for assessment.

### 2.1.16 Disaster Management Act, 2002

The Disaster Management Act (DMA), 2002 (Act 57 of 2002) in South Africa outlines legal requirements for disaster management, including its integration into SDFs. Municipalities must establish disaster management centers and plans aligned with the DMA. The SDF, a 20-year development plan, must be aligned with the DMA's principles and incorporate disaster risk reduction measures.

Municipalities must integrate disaster risk reduction (DRR) measures into their SDFs. This includes identifying risks, assessing vulnerabilities, and planning for mitigation and adaptation.

Climate change is also be addressed under the Disaster Management Act, 57 of 2002, as amended. The Act also outlines the roles of provincial and local authorities in disaster management, including their responsibility for disaster risk reduction and climate change adaptation. The Disaster Management Act emphasizes disaster risk reduction, including anticipating future risks, reducing existing exposure and vulnerability, and improving resilience. This aligns with climate change adaptation strategies. The Act recognizes adaptation as the process of adjusting to actual climate and its effects, both in natural and human systems.

The Disaster Management Act addresses climate change through:

- ❖ **Incorporating climate change into disaster management plans:**

The Act requires integrating climate change considerations into national, provincial, and local disaster management plans, ensuring they are prepared for the increased risks associated with a changing climate.

- ❖ **Early warning systems:**

The Disaster Management Act emphasizes the development and implementation of early warning systems for climate-related hazards like droughts, floods, and extreme weather events.

- ❖ **Post-disaster recovery and rehabilitation:**

The Act provides for post-disaster recovery and rehabilitation, including addressing the impacts of climate change on communities and infrastructure.

- ❖ **Specific measures for vulnerable populations:**

The Disaster Management Act emphasizes addressing the needs of vulnerable populations, such as women, children, the elderly, and persons with disabilities, during disaster management, including climate-related disasters.

### 2.1.17 National Heritage Act, 1999

The National Heritage Act of 1999 aims to:

- ❖ Introduce an integrated and interactive system for the management of the national heritage resources;
- ❖ Promote good government at all levels, and empower civil society to nurture and conserve their heritage resources so that they may be bequeathed to future generations;
- ❖ Lay down general principles for governing heritage resources management throughout the Republic;

- ❖ Introduce an integrated system for the identification, assessment and management of the heritage resources of South Africa;
- ❖ Establish the South African Heritage Resources Agency (SAHRA) together with its Council to co-ordinate and promote the management of heritage resources at national level;
- ❖ Set norms and maintain essential national standards for the management of heritage resources in the Republic and to protect heritage resources of national significance;
- ❖ Control the export of nationally significant heritage objects and the import into the Republic of cultural property illegally exported from foreign countries;
- ❖ Enable the provinces to establish heritage authorities which must adopt powers to protect and manage certain categories of heritage resources;
- ❖ Provide for the protection and management of conservation-worthy places and areas by local authorities.

The Act refers to resources which are of cultural significance or other special value for the present community and for future generations as part of the “national estate”, which falls within the responsibility of heritage resources authorities. The national estate may include:

- ❖ places, buildings, structures and equipment of cultural significance;
- ❖ places to which oral traditions are attached, or which are associated with living heritage;
- ❖ historical settlements and townscapes;
- ❖ landscapes and natural features of cultural significance;
- ❖ geological sites of scientific or cultural importance;
- ❖ archaeological and palaeontological sites;
- ❖ graves and burial grounds, including—

- ancestral graves;
- royal graves and graves of traditional leaders;
- graves of victims of conflict;
- graves of individuals designated by the Minister by notice in the *Gazette*;
- historical graves and cemeteries; and
- other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983).
- ❖ sites of significance relating to the history of slavery in South Africa;
- ❖ movable objects, including—
  - objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
  - objects to which oral traditions are attached, or which are associated with living heritage;
  - ethnographic art and objects;
  - military objects;
  - objects of decorative or fine art;
  - objects of scientific or technological interest; and
  - books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

### 2.1.18 National Environmental Management Act, 1998

Municipal SDFs in South Africa must align with national environmental legislation, particularly the National Environmental Management Act (NEMA), Act No. 107 of 1998, and address climate change impacts. The SDFs are required to promote environmental sustainability, guide spatial development, and integrate environmental considerations into all planning decisions. The SDF must align with the principles and requirements of the National Environmental Management Act (NEMA). NEMA emphasizes the need for sustainable development, requiring SDFs to prevent negative environmental impacts and promote restoration where impacts occur. Additionally, SDFs must consider environmental pressures and opportunities, including the spatial location of sensitive areas, agricultural land, and coastal access. NEMA mandates that all spatial planning decisions must promote environmental sustainability and prevent negative environmental impacts.

### 2.1.19 Regional Industrial Development Strategy, 2006

In 2006 the Department of Trade and Industry formulated the Regional Industrial Development Strategy (RIDS) with the aim to promote regions based on their key comparative advantages and to design support measures appropriate for each region.

The GRDM forms part of the Oudtshoorn-Garden Route area which is classified as a Major Trade/Tourism/Agriculture/Public Service Region with a scarcely populated hinterland.

The dominant economic base in this region is services/tourism, followed by manufacturing, infrastructure and lastly agriculture. It is located in close proximity to the Nelson Mandela-Kouga Region, which is an export corridor and port region likely to benefit from IDZ initiatives.

### 2.1.20 Industrial Policy Action Plan, 2014-2015

The Industrial Policy Action Plan 2012/13 to 2014/15 or the 'Revised IPAP2' as it has become known builds on the National Industrial Policy Framework (NIPF) which has the following core objectives:

- ❖ To facilitate diversification beyond the economy's current reliance on traditional commodities, focusing on tradable goods and services that compete in export markets and against imports;
- ❖ To promote labour-absorbing industrialization with the emphasis on goods and services and economic linkages that create employment;
- ❖ To promote the increased participation of historically disadvantaged people and marginalised regions in the industrial economy;
- ❖ To ensure long-term intensification of South Africa's industrialization process and movement towards a knowledge economy; and
- ❖ To contribute towards industrial development in Africa with a strong emphasis on building the continent's productive capacity and secure regional economic integration.

**Three sectors** are emphasised that are particularly well placed for scaling up through leveraging market growth and associated upgrading of supply capacity and capabilities. These are:

- ❖ **"Green" Industries:** In particular, the manufacture of components for the renewable energy generation programme and the production of solar heaters and components, and a range of other goods and services that arise from the requirements of higher energy efficiency in the economy.
- ❖ **Agro-processing:** In particular, the expediting of regulatory and support mechanisms to create a large-scale bio-fuels industry, the identification and

promotion of export market opportunities to major net food-importing countries; and investment, production development and standards support.

- ❖ **Metal fabrication, capital and transport equipment:** Significant opportunities arise from the leveraging of large public procurement in rail and electricity, the provision of associated investment and upgrading support, and exploitation of opportunities arising from mining capital equipment investment in South Africa and on the rest of the continent.

### 2.1.21 National Transport Master Plan, 2005-2050

The main purpose of the National Transport Master Plan, 2005-2050 is to motivate a prioritised programme for interventions to upgrade the transportation system in South Africa. Its goal is to develop a dynamic, long-term and sustainable land use/multi-modal transportation system for the development of networks, infrastructure facilities, interchange and termini facilities, and service delivery strategies for South Africa.

With respect to the GRDM, the N2 coastal corridor extending from the northern parts of KwaZulu-Natal, southwards along the coastline right up to Cape Town is of strategic significance to the Garden Route.

### 2.1.22 Sustainable Development Goals

The 17 Sustainable Development Goals (SDGs) were adopted by all United Nations member states in 2015 as part of the 2030 Agenda for Sustainable Development. They aim to address global challenges including poverty, inequality, climate change, environmental degradation, peace, and justice.

This transformative plan of action is based on 17 Sustainable Development Goals to address urgent global challenges towards the year 2030, which are summarised in **Table 3**, under their relevant spatial categories.

**Table 3: Sustainable Development Goals: 2030**

SUSTAINABLE DEVELOPMENT GOALS: 2030	
<b>Environment</b>	
❖	<b>Goal 1</b> – Conserve and sustainably use the oceans, seas and marine resources for sustainable development.
❖	<b>Goal 2</b> – Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
❖	<b>Goal 3</b> – Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy.
❖	<b>Goal 4</b> – Ensure sustainable consumption and production patterns.
<b>Human Settlements</b>	
❖	<b>Goal 5</b> – Make cities and human settlements inclusive, safe, resilient and sustainable.
<b>Social Welfare</b>	
❖	<b>Goal 6</b> – End poverty in all its forms everywhere.
❖	<b>Goal 7</b> – End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
❖	<b>Goal 8</b> – Ensure healthy lives and promote well-being for all at all ages.
❖	<b>Goal 9</b> – Ensure inclusive and equitable quality education and promote lifelong learning.
❖	<b>Goal 10</b> – Achieve gender equality and empower all women and girls.
❖	<b>Goal 11</b> – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

SUSTAINABLE DEVELOPMENT GOALS: 2030	
<b>Economic Development</b>	
❖	<b>Goal 12</b> – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
❖	<b>Goal 13</b> – Reduce income inequality within and among countries.
<b>Infrastructure</b>	
❖	<b>Goal 14</b> – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
❖	<b>Goal 15</b> – Ensure availability and sustainable management of water and sanitation for all.
❖	<b>Goal 16</b> – Ensure access to affordable, reliable, sustainable and modern energy for all.
❖	<b>Goal 17</b> – Strengthen the means of implementation and revitalize the global partnership for sustainable development.

## 2.2 PROVINCIAL POLICY CONTEXT

### 2.2.1 Western Cape Land Use Planning Act, 2014 and Regulations

The purpose of the Western Cape Land Use Planning Act, Act 3 of 2014 (LUPA) is to consolidate legislation in the Western Cape Province that relates to spatial planning and to co-ordinate public investment. It is strongly aligned with SPLUMA and requires all municipal SDF's (including district SDFs) to be aligned with provincial development plans and strategies.

### 2.2.2 Western Cape Provincial Spatial Development Framework, 2014

This framework was formulated by the Department of Environmental Affairs and Development Planning. The aims are:

- ❖ To give spatial expression to the Provincial Strategic Plan;
- ❖ To serve as a basis for coordinating, integrating and aligning “on the ground” delivery of national and provincial departmental programmes;
- ❖ To support municipalities to fulfil their Municipal Planning mandate in line with national and provincial agendas; and
- ❖ To communicate government’s spatial development intentions to the private sector and civil society.

**Figure 3** depicts the Western Cape Provincial SDF. The Provincial SDF indicates George as the regional centre for the eastern part of the province, with Knysna and Plettenberg Bay being smaller centres along the Regional Connector Route (N2).

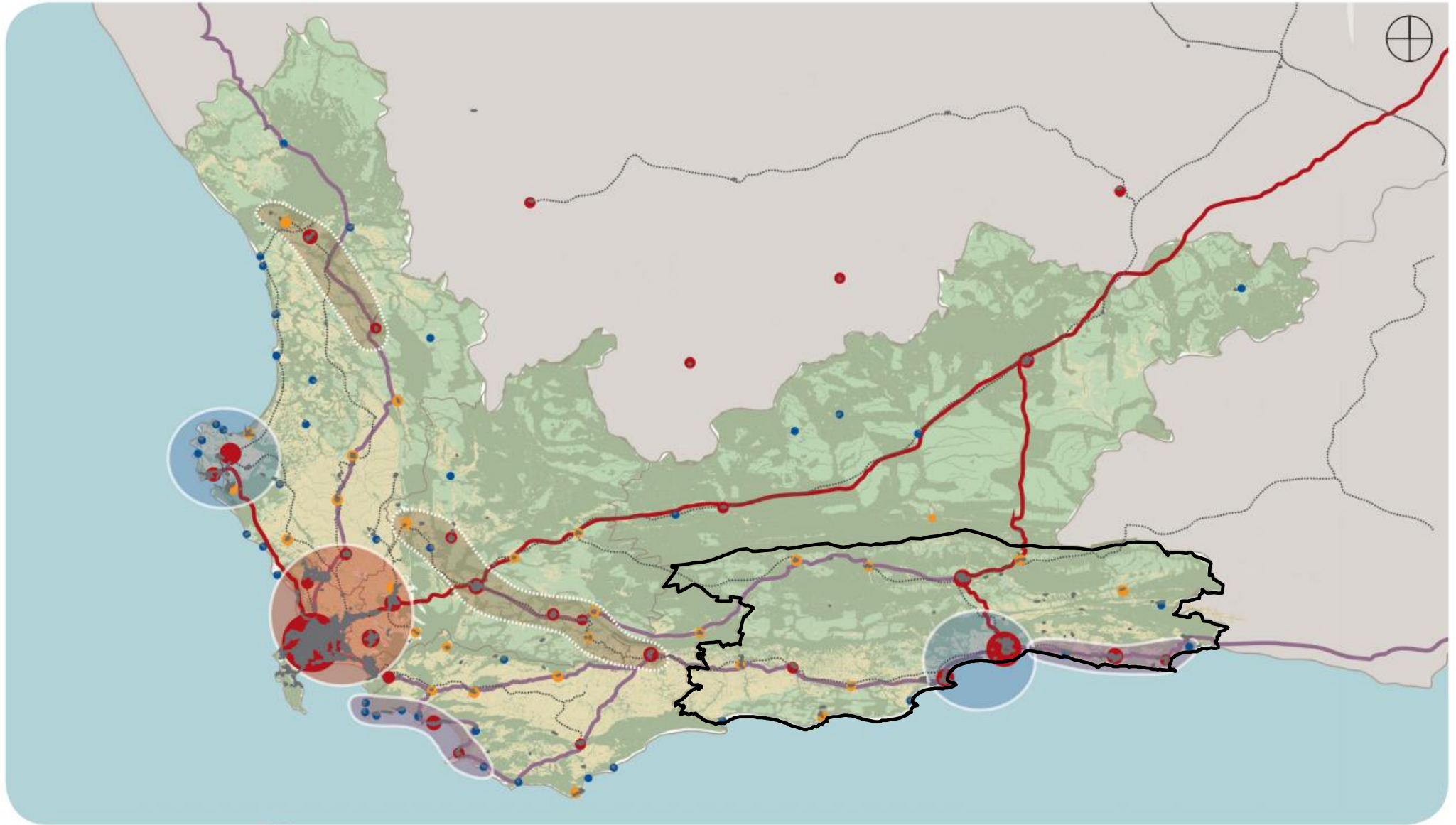
It earmarks the area along the Garden Route as a tourism route with leisure activities of provincial significance.

### 2.2.3 Western Cape Provincial Coastal Management Programme, 2022-2027

The legal requirements for a Western Cape Coastal Management Programme (CMP) within a SDF are primarily governed by the National Environmental Management: Integrated Coastal Management Act (NEM: ICMA) and the Western Cape Provincial Coastal Management Programme. The SDF must align with these, ensuring integrated coastal management, environmental protection, and sustainable development of coastal areas

The SDF must align with the Western Cape Provincial CMP, reflecting its strategies and priorities for coastal management.

# WESTERN CAPE PROVINCIAL SDF (2014)



**SPATIAL PLANNING CATEGORIES:**

- CORE
- BUFFER
- INTENSIVE AGRICULTURE
- SETTLEMENT

**PRIORITY URBAN FUNCTIONAL REGIONS:**

- CAPE METRO
- EMERGING REGIONAL CENTRES (GREATER SALDANHA & MOSSELBAY/GEORGE)
- LEISURE (OVERSTRAND & GARDEN ROUTE)

■ RURAL DEVELOPMENT CORRIDOR

- REGIONAL CENTRE
- SERVICE CENTRE
- SECONDARY SETTLEMENT

- REGIONAL CONNECTOR ROUTE
- TOURISM ROUTE
- ..... MAJOR RAILWAY LINE
- MAJOR ROAD

### 2.2.4 Western Cape Biodiversity Spatial Plan, 2023

The Western Cape Biodiversity Spatial Plan (WCBDSP) acknowledges that ecosystem goods and services are the foundation for the economy for inclusive economic growth and the sustainable delivery of basic services. It proactively identifies priority biodiversity areas and ecological infrastructure to enable forward planning as per Goal 4 of the Western Cape Government's Provincial Strategic Plan (2014 – 2019), *"to enable a resilient, sustainable, quality and inclusive living environment."* The plan is linked to the Aichi Targets for the UN's Convention on Biological Diversity and the National Biodiversity Strategy and Action Plan of 2015.

The plan describes the various biomes of the Western Cape, the sensitivities and ecosystem threat status which includes the following that may be relevant in the GRDM area:

- ❖ Critically endangered Garden Route Granite Fynbos, Knysna Sand Fynbos,
- ❖ Endangered Garden Route Shale Fynbos,
- ❖ Vulnerable Southern Cape Dune Fynbos, Southern Cape Valley Thicket

The document describes the most easterly marine protected areas (MPA) managed by Cape Nature as being Robberg MPA (see the *CapeNature Management Plan for Robberg*). Further east however, and into the Eastern Cape is the Tsitsikamma MPA which falls under the management of SANParks.

Furthermore; the Western Cape Biodiversity Act recognises the term *"Biodiversity Priority Area"* which is defined as follows in terms of the act: *means an area in the landscape or seascape that is important for conserving a representative sample of ecosystems and species, maintaining ecological processes and ecological infrastructure or the provision of ecosystem services.*

This term extends beyond the conventional term of *"Critical Biodiversity Areas"* which is one of the biodiversity priority areas.

The Act further stipulates in terms of section 37(3) that when a municipality adopts or amends its spatial development framework in terms of the Local Government: Municipal Systems Act in respect of land use matters in areas identified in the Biodiversity Spatial Plan as biodiversity priority areas, it must indicate how the land use planning categories in the spatial development framework have taken into account the desired management objectives in the guidelines contemplated in section 36(e).

### 2.2.5 ONECAPE 2040

ONECAPE 2040 is a deliberate attempt to stimulate a transition towards a more inclusive and resilient economic future for the Western Cape Province. It articulates a vision about how the people of the Western Cape can work together to develop the economy and society. It seeks to set a common direction to guide planning and action and to promote a common commitment and accountability to sustained long-term progress.

**Table 4** summarises the salient features of this initiative.

**Table 4: ONECAPE 2040 Initiatives**

GOALS	
Educated Cape:	
Provincial	<ul style="list-style-type: none"> <li>❖ Manage schools-based excellence</li> <li>❖ Facilitate local multi-sectoral knowledge &amp; innovation partnerships</li> </ul>
Local and District	<ul style="list-style-type: none"> <li>❖ Facilitate ECD provision and ensure every child has access to a library and sports facilities</li> </ul>

Enterprising Cape:	
Provincial	<ul style="list-style-type: none"> <li>❖ Fund provincial public and community works programmes at scale</li> <li>❖ Facilitate social enterprise creation and resourcing</li> </ul>
Local and District	<ul style="list-style-type: none"> <li>❖ Implement and provide supplementary funding for public and community works programmes</li> <li>❖ Reduce land development costs</li> </ul>
Green Cape:	
Provincial	<ul style="list-style-type: none"> <li>❖ Use transport, energy, housing and bulk service budgets to lead green change</li> </ul>
Local and District	<ul style="list-style-type: none"> <li>❖ Use bulk services and energy budgets to lead green change and incentivise green building technologies</li> </ul>
Connecting Cape:	
Provincial	<ul style="list-style-type: none"> <li>❖ Facilitate regional and global partnerships with emerging markets</li> </ul>
Local and District	<ul style="list-style-type: none"> <li>❖ Facilitate inter-community collaboration</li> </ul>
Living Cape:	
Provincial	<ul style="list-style-type: none"> <li>❖ Invest more in public transport services and community infrastructure</li> <li>❖ Incentivise rather than fund housing</li> </ul>
Local and District	<ul style="list-style-type: none"> <li>❖ Invest in public transport and safety</li> </ul>
Leading Cape:	
Provincial	<ul style="list-style-type: none"> <li>❖ Facilitate and reward service excellence</li> </ul>
Local and District	<ul style="list-style-type: none"> <li>❖ Collaborate to deliver world class services</li> </ul>

### 2.2.6 Western Cape Growth for Jobs Strategy, 2035

The WCG’s Growth for Jobs Strategy provides a long-term economic vision aimed at achieving higher and more inclusive economic growth in the province. It sets out a framework to address unemployment, spatial inequality, and infrastructure backlogs, while strengthening competitiveness, private-sector investment, and climate resilience. The strategy positions government primarily as an enabler of

growth, focused on creating a business-friendly environment, modernising infrastructure, improving coordination, and leveraging the province’s natural and human capital. It recognises that sustainable growth must be coupled with improved equity, resilience, and environmental stewardship, ensuring that economic expansion benefits communities across the Western Cape.

The strategy is guided by ten core principles, which form the foundation of its approach as follows:

- ❖ an open market economy that supports competitiveness and productivity
- ❖ horizontal enablement, where government focuses on providing a supportive business environment
- ❖ equality of opportunity to expand access to economic participation
- ❖ redress through active participation in the economy, including supporting SMMEs and informal/township enterprises
- ❖ partnerships and cooperation across spheres of government and the private sector
- ❖ innovation and openness to new ideas and expanded economic tools within constitutional mandates
- ❖ agility and flexibility in government interventions, especially in emerging sectors
- ❖ sustainability through decoupling growth from fossil-fuel dependency and resource depletion
- ❖ data-led decision-making to inform planning, monitoring, and investment decisions
- ❖ responsiveness to high-impact, private-sector-driven opportunities backed by evidence

The Growth for Jobs Strategy is structured around three key pillars that guide implementation and investment emphasis across the province. These pillars are:

- ❖ Economic Activators, focusing on skills, innovation, investment readiness, and the business environment
- ❖ Enablers, focused on infrastructure, energy resilience, streamlined regulation, digital systems, and effective government support
- ❖ Economic Drivers, which include core sectors such as agriculture, tourism, manufacturing, technology, green industries, and the township/informal economy

The strategy identifies a set of priority focus areas to accelerate growth, including improving energy security, modernising logistics and mobility networks, expanding broadband access, enhancing water security and climate resilience, strengthening export potential, supporting the green economy transition, boosting tourism and agri-processing value chains, and unlocking small business growth through regulatory reform and ecosystem support. These focus areas aim to stimulate catalytic investment, expand productive capacity, and position the Western Cape as a competitive regional and global player.

While the Growth for Jobs Strategy does not assign specific obligations to the Garden Route District Municipality, there is strong alignment between its objectives and the district's spatial and economic priorities. The Garden Route's economic base in agriculture, forestry, tourism, and the green economy aligns directly with the Strategy's economic drivers, while its climate exposure reinforces the emphasis on resilience and sustainable resource management.

The district's commitment to spatial efficiency, infrastructure-led development, environmental protection, and economic diversification supports the Strategy's principles and positions the Garden Route to benefit from provincial coordination, investment attraction programmes, and partnership-driven development initiatives.

### 2.2.7 Western Cape Provincial Land Transport Framework, 2013

The Western Cape Provincial Land Transport Framework, 2013 sets out a long-term vision for transport in the Western Cape and states that by 2050 the transport system in the Western Cape will be:

- ❖ Fully Integrated Rapid Public Transport Networks (IRPTN) in the higher-order urban centres of the province;
- ❖ Fully Integrated Public Transport Networks (IPTN) in the rural regions of the province;
- ❖ A safe public transport system;
- ❖ A well-maintained road network;
- ❖ A sustainable, efficient, high-speed, long-distance rail network (public and freight transport);
- ❖ An efficient international airport that links the rest of the world to the choice gateway of the African continent;
- ❖ International-standard ports and logistics systems;
- ❖ A transport system that is resilient to peak oil.

These aspects have to be followed through in the SDF for the GRDM through measures such as densification, clustering of civic and business activities, development along identified corridors and the promotion of public and NMT.

### 2.2.8 Western Cape Infrastructure Framework, 2050

The Western Cape Infrastructure Framework, 2050 (WCIF) is supported by the Western Cape Infrastructure Strategy 2050 (WCIS) and the Western Cape Infrastructure Implementation Plan 2050 (WCIIP), and replaces the previous WCIF, 2014.

The Western Cape Infrastructure Framework (WCIF) 2050 serves as the overarching policy framework that provides a long-term vision, principles, and structure for infrastructure development in the Western Cape. It aims to enable infrastructure-led growth and investment that creates sustainable, equitable, and resilient communities. It is founded on Panoptic Principles that integrate international, national, and provincial policy directives to advance spatial transformation, promote resilient infrastructure, and modernise public-sector governance. The framework is a living document, designed to be adaptable to changing circumstances, and is translated into a comprehensive strategy by the WCIS (2050). This strategy outlines key priorities across five sectors: social, economic, energy and water, technology, and ecological infrastructure. Finally, the WCIIP (2050) operationalises these priorities by detailing actionable, phased projects, with a primary focus on the short term (up to 2030). The WCIF 2050 prioritises risk management, stakeholder engagement, and innovative funding models to ensure that infrastructure investment enhances equitable access to economic opportunities and services for all citizens.

The WCIS 2050 specifically addresses infrastructure needs and strategic interventions relevant to the Garden Route District, aligning local development with the provincial vision, including:

- ❖ **Social Infrastructure:** The framework identifies the Garden Route as an area of anticipated future growth. Planned actions include the further rollout of the "Hub Model for DCAS Facilities" by consolidating existing infrastructure and building new facilities based on this model to meet the needs of the

growing population in the district. It also mentions that the training centre in Oudtshoorn provides services to the whole of the Garden Route area.

- ❖ **Economic Infrastructure:** To enhance economic competitiveness and logistics, the framework calls for a feasibility study to extend the runway at George Airport to accommodate wide-body aircraft. Additionally, a feasibility study is planned for the freight-handling export capacity of Mossel Bay harbour. These actions are intended to improve the provincial logistics value chain.
- ❖ **Ecological Infrastructure and Resilience:** The WCIS 2050 highlights the importance of enhancing ecological buffers around World Heritage Sites in the Garden Route to increase resilience. It also prioritises the optimal management and protection of the provincial conservation estate while ensuring public access for recreational and spiritual purposes. A specific project mentioned is the Blombos Museum/Interpretation Centre in Hessequa Municipality to support the new World Heritage Site at Blombos Cave. These measures are crucial for mitigating risks and ensuring sustainable development in a region vulnerable to climate change impacts like flooding and wildfires.

### 2.2.9 Western Cape Ecological Infrastructure Investment Framework (EIIIF)

Further to the WCIF discussed above, the Western Cape Ecological Infrastructure Investment Framework (EIIIF), developed by the Western Cape Government's Department of Environmental Affairs and Development Planning, serves as a crucial policy document for guiding public and private sector investment in the province's ecological infrastructure, ensuring that both built and ecological infrastructure priorities are recognised.

The purpose is to promote the resilience of ecological infrastructure, which includes naturally functioning ecosystems. The framework is aligned with existing national and provincial policies and plans, including the Provincial Spatial Development Framework (2014) and the Provincial Biodiversity Strategy and Action Plan (2017-2025).

The EIIF is structured around four key investment objectives: to improve water quality and quantity, reduce vulnerability to wildfires and flooding, and sustainably support local livelihoods from rangelands. The framework is designed as a point of departure, providing spatial priorities for investment and key strategic actions to be considered in further planning. It also emphasises the importance of partnerships and capacity building among all stakeholders to ensure the effective implementation of ecological infrastructure projects, and advocates for a “whole of society” approach to ecological infrastructure investment.

For the Garden Route District, the EIIF's catchment prioritisation process highlights its particular importance across all four investment objectives:

- ❖ **Water Quality and Quantity:** Catchments in the Garden Route are identified as having top priority for investment in addressing water security, which includes runoff reduction due to invasive alien plants (IAPs), town water security and groundwater dependence. The report notes that the most invaded areas in the Western Cape are found in the mountains of the Boland-Overberg and the Garden Route.
- ❖ **Wildfires:** The framework identifies priority areas for investment in the Garden Route to address increased wildfire hazard, especially due to a lack of fuel management and the spread of IAPs. The document explicitly mentions the area from Knysna to Plettenberg Bay as having a high fire risk. The Garden Route is also identified as a "fire ecology type" that requires regular fires for regeneration.

- ❖ **Flooding:** The framework identifies distinct groups of top-priority areas in the Garden Route for investment in addressing increased flood risk caused by land degradation. Catchments in the far west of the Garden Route are characterised by a combination of vegetation loss and the spread of IAPs along rivers, while those in the centre and east are mainly degraded by IAPs. The report also highlights the Groot Brak and Touw River catchments as top priorities for investment to address coastal vulnerability to erosion and flooding.
- ❖ **Rangelands:** The framework includes the Garden Route as a catchment cluster where a high priority for investment is needed to address rangeland degradation.

The EIIF therefore provides a critical basis for the Garden Route District Municipality's SDF by providing a policy-aligned and spatially prioritised approach to managing the district's ecological infrastructure challenges. The EIIF also serves as an important reference document for the recently established *Garden Route Risk Reduction Task Team.*, which can be accessed via the following link: [Garden Route Risk Reduction Task Team.](#)

#### 2.2.10 Western Cape Disaster Management Framework

The Western Cape Disaster Management Framework is mandated by the Disaster Management Act (Act No. 57 of 2002) and aligns with the National Disaster Management Framework. It outlines how the province will prevent or reduce the risk of disasters, mitigate their impact, ensure preparedness, and facilitate rapid response and recovery. The SDF plays a crucial role in this process by guiding spatial planning and land use decisions, ensuring that development aligns with disaster risk reduction strategies.

### 2.2.11 Western Cape Disaster Management Plan

Aims to prevent or reduce the risk of disasters, mitigate their severity, ensure preparedness, and facilitate rapid response and post-disaster recovery. The plan is guided by the Disaster Management Act 57 of 2002, the National Disaster Management Framework of 2005, and the Western Cape Disaster Management Framework. It focuses on five key areas: prevention/reduction of risk, mitigation, emergency preparedness, rapid response, and post-disaster recovery.

### 2.2.12 Western Cape Climate Change Response Strategy Vision 2050: A Vision for a Resilient Western Cape, 2022

The Western Cape Climate Change Response Strategy: Vision 2050 outlines the province's long-term commitment to achieving climate resilience, net-zero carbon development, and sustainable socio-economic transformation by the year 2050. The strategy provides a framework to guide provincial, municipal, and sector-level responses to climate risks and opportunities in an integrated and future focused manner.

#### **VISION STATEMENT:**

*"A climate-resilient, low-Carbon and equitable Western Cape by 2050".*

#### **KEY STRATEGIC PILLARS:**

##### **Climate-Resilient Development:**

- ❖ Integrate climate risk considerations into land use planning, infrastructure investment, and service delivery.
- ❖ Promote adaptive capacity across vulnerable communities and ecosystems.
- ❖ Prioritise nature-based solutions and ecosystem resilience, especially in coastal and water-stressed areas.

##### **Just Transition to a Low-Carbon Economy:**

- ❖ Support inclusive, low-emission growth through clean energy, green jobs, and sustainable transport.
- ❖ Align provincial economic strategies with decarbonisation goals.
- ❖ Facilitate skills development and capacity building for green economic sectors.

##### **Integrated Planning and Governance:**

- ❖ Strengthen intergovernmental collaboration on climate change across all spheres.
- ❖ Embed climate response into IDPs, SDFs, CMPs, and sector plans.
- ❖ Enhance data, monitoring, and decision-support systems for informed planning.

##### **Finance and Resource Mobilisation:**

- ❖ Enable climate finance readiness at local government level.
- ❖ Support the mobilisation of public and private investment into adaptation and mitigation projects.
- ❖ Promote innovation and partnerships to access green finance.

##### **Equity and Inclusion:**

- ❖ Address social and spatial inequalities through targeted resilience-building initiatives.
- ❖ Engage vulnerable groups, youth, and women in climate planning and decision-making.
- ❖ Ensure no one is left behind in the transition to a climate-smart future.

The Vision 2050 strategy provides a policy directive for integrating climate change into spatial planning and the local LMs in the Garden Route are expected to:

- ❖ Align land use and infrastructure planning with climate resilience principles.
- ❖ Incorporate risk reduction, biodiversity protection, and green infrastructure into SDFs and sector plans.
- ❖ Contribute to low-carbon development pathways, including energy efficiency, compact urban growth, and sustainable mobility.
- ❖ Build institutional capacity to access climate finance and implement locally driven adaptation responses.

### 2.2.13 Western Cape 110% Green Initiative

110% Green is a call-to-action platform launched by the Western Cape Government that invites organisations; public, private and civil society; to commit, act and create impact in building a green economy in the province.

It operates across multiple thematic areas including water, energy, waste, agriculture, and biodiversity. The aim is dual: to grow the economy, attract investment in green industries, and simultaneously improve resource efficiency, environmental performance and climate resilience.

110% Green acts as a brand and coordination platform; it helps network and cluster green economy actors, support flagship projects, build a green-economy ecosystem and promote practical action rather than just high-level policy.

It has specific features: organisations sign up as “flagships”, real projects are highlighted (in infrastructure, manufacturing, circular economy, clean tech etc.), and the initiative is backed by coordination within government (through the Department of Economic Development & Tourism, etc).

Key Objectives of 110% Green Initiative include to:

- ❖ Position the Western Cape as the green economic hub of Africa, leveraging its natural assets, innovation potential and competitive advantage in green economy sectors.
- ❖ Encourage organisations to invest in green industries and improve resource-efficiency in their operations (energy, water, waste) to boost competitiveness and create sustainable jobs.
- ❖ Build a transversal and cross-cutting governance approach: since the green economy touches multiple sectors and departments, the initiative supports coordination across government, business, academia and civil society.
- ❖ Showcase and support flagship projects that link innovation, social inclusion and economic opportunity - ensuring the green economy is inclusive and works for poorer communities too.

### 2.2.14 Western Cape Organic Waste Diversion Plan

The Western Cape Government, through the Department of Environmental Affairs and Development Planning (DEA&DP), has implemented the Organic Waste Diversion Plan to progressively phase out the disposal of organic waste to landfill. The plan mandates a **50% reduction of organic waste to landfill by 2022 and a complete ban by 2027**, aligning with national waste management objectives and the province’s broader circular economy vision. Organic waste, comprising food, garden, and other biodegradable materials, represents roughly 40% of the province’s total waste stream and is a major contributor to greenhouse gas emissions and limited landfill capacity.

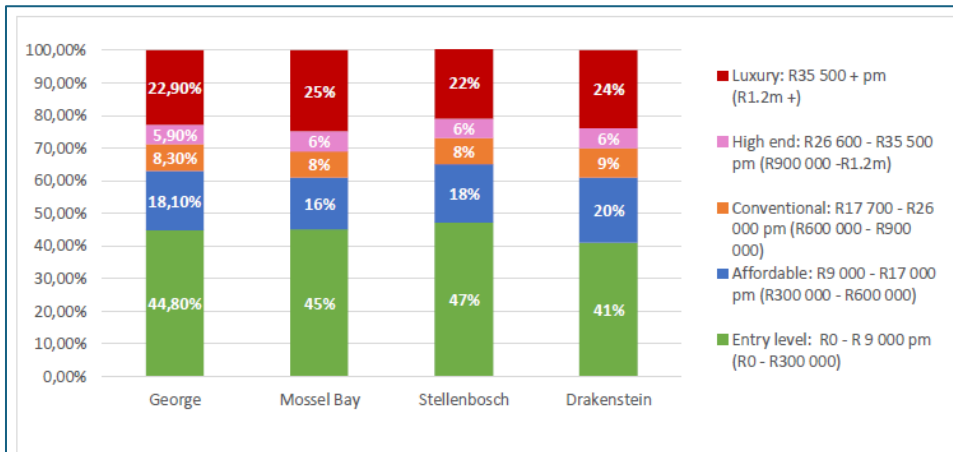
The key objectives of the plan are to reduce environmental impacts, extend landfill lifespan, and unlock economic opportunities through the beneficiation of organic waste into compost, biogas, and other resource products. To achieve these goals, municipalities are required to prepare and implement Organic Waste Diversion Plans as conditions of their waste disposal licences. These plans must include baseline data, targets, infrastructure requirements, and community

engagement strategies. The province also promotes source separation at household and business level, investment in processing infrastructure such as composting facilities and anaerobic digesters, and awareness campaigns to encourage behavioural change.

### 2.2.15 Western Cape Inclusionary Housing Policy Framework, 2022

The Western Cape Government (WCG) adopted an Inclusionary Housing Policy Framework in 2022 (see **Diagram 4**). Inclusionary housing is a spatially targeted mechanism that relies on the regulatory system of development planning permissions to oblige property developers to provide affordable housing, for sale or rent, within their development.

**Diagram 4: Income Distribution between Towns, 2021**



*Western Cape Inclusionary Housing Policy Framework, 2022*

The Policy states the provincial government’s commitment to (among other things):

- ❖ Assist municipalities and promote consistency between municipalities, with a framework for developing their own inclusionary housing policy and regulatory mechanism.
- ❖ Outline the support to be offered to municipalities in the development and implementation of municipal inclusionary housing policy and the monitoring and oversight role to be played by the WCG.
- ❖ Promote good governance by contributing to policy consistency and predictability – a key concern and risk for the property development sector – across the Western Cape.

Inclusionary housing is necessary as formal housing markets do not respond adequately to the needs of households who earn up to approximately R30,000 a month. These are middle- and lower-income households, many of whom undertake work critical to the well-being of the economy and society. Housing prices in the Western Cape are soaring because of migration of people from Gauteng, making housing even harder to afford. Past spatial patterns are exacerbated as the entry level and affordable housing that is built, is built away from areas of opportunity, transport and employment. Well-located areas are unaffordable for most citizens – even those with stable incomes and professions (such as teachers, nurses, police and other key workers). The consequences are not only borne by households. Broader society and the state bear the social, environmental and economic costs of persistent exclusionary development patterns.

Inclusionary housing targeted at the affordable market for well-located housing opportunities, presents an opportunity to empower households to climb the property ladder over time as they can save by reducing travel costs and invest saved time in household advancement.

The picture emerging from housing market studies conducted by the Centre for Affordable Housing Finance on behalf of the WCG in the urban centres of Mossel

Bay, George, Stellenbosch and Paarl-Wellington show a series of settlements defined by their unequal property markets.

Market analysis in the above-mentioned towns revealed that the markets are dominated by luxury market properties (above R1.2 million) and the entry market properties valued below R300,000) – except for Stellenbosch, which has a very limited share of housing below R300,000. For all towns, most of the market below R300 000 consists of government subsidised housing. In general (except for Paarl-Wellington), *the supply of houses valued between R300,000 and R1.2 million is extremely small compared to the other market segments.*

This means that the private housing market consists almost exclusively of properties above R1.2 million. The market is significantly skewed, particularly when considered against the income profiles of the residents in the four municipalities. As Diagram 27 shows, around one third of all households in each municipality falls into income categories that should theoretically be able to afford housing finance for properties valued between R300 000 and R1.2 million, (assuming a 10% deposit, 7.75% interest rate, a 20-year loan tenor, and no access to the FLISP subsidy).

These figures emphasise the need for government intervention, as stated in the policy. The City of Johannesburg adopted a similar policy in 2018.

The intention of inclusionary housing policy is to give clear signals to the market on where inclusionary housing contributions are required and under what circumstances. Prospective developers offset the cost of this contribution into the cost paid for the land and the amount of development rights requested. Municipalities may offer further incentives to offset these costs through reduced planning requirements such as parking, through expedited decision-making and possibly, discounted charges relating to the inclusionary component of the development.

Inclusionary housing can be achieved through either a carrot or a stick approach. There is no “one size fits all” approach, hence the GRDM should develop its own

policy based on local circumstances. Care should be taken not to make it unattractive for developers to invest in the housing market. The SDFs for the district and local municipalities should provide directives on where inclusionary housing should be promoted (well-located areas). The SDFs are binding on the Municipal Planning Tribunals and applicants. Overlay zones and special development zones are further instruments that can be used to enable supply in this market segment.

### 2.2.16 Provincial Transversal Strategies

Provincial transversal strategies are cross-cutting frameworks that guide how a provincial government organises its planning, budgeting, and implementation across multiple departments, sectors and spheres of government (provincial, municipal and national). In the Western Cape context, these strategies ensure that spatial, economic, social, infrastructure and environmental policies are not developed in departmental silos, but rather are aligned, coordinated and mutually reinforcing. They provide the mechanisms by which provincial goals (such as growth, job creation, infrastructure, resilience, equity) become coherent across all relevant sectors and levels of the state.

By embedding a transversal approach, the WCG aims to:

- ❖ ensure that spatial and investment decisions are integrated across departments (e.g., transport, environment, human settlements, economic development) so that the built-environment, movement systems, economy and ecology reinforce each other;
- ❖ support municipalities and district authorities by providing a “whole-of-government” direction, thereby improving alignment between provincial policy and municipal SDFs, IDPs and budgets;

- ❖ strengthen institutional arrangements for coordination, accountability and monitoring so that resources are directed efficiently, overlaps and conflicting priorities are reduced, and outcomes are measured;
- ❖ respond to complex challenges (e.g., unemployment, spatial inequality, infrastructure back-logs, climate risk) which cannot be addressed by one department alone, thereby requiring integrated interventions across portfolios.

In effect, the WCG uses transversal strategies as a “glue” to bring together spatial planning, infrastructure delivery, economic growth and social equity under a unified provincial logic.

The GRDM SDF will support the WCG’s transversal and whole-of-government approach by ensuring that spatial priorities, infrastructure investment, and development initiatives are aligned across all spheres of government. In this regard, the SDF provides a coordinated framework through which the district’s spatial agenda, municipal SDFs, and provincial strategies—such as the Western Cape Provincial Spatial Development Framework (2023) and the Growth for Jobs Strategy (2023–2035)—are integrated to achieve shared outcomes. The Implementation Plan (set out in *Section 5*) operationalises this alignment by identifying intergovernmental programmes and assigning lead and supporting institutions for implementation. Through these arrangements, the SDF aims to strengthen cooperative governance, avoid duplication of effort, and promote spatial transformation and sustainable development within the district.

## 2.3 LOCAL POLICY CONTEXT

### 2.3.1 Joint District Metro Approach (JDMA) and One Plan of Garden Route District

The Joint District and Metro Approach (JDMA) emanated from the directive to develop District Development models (DDM). The Western Cape Government endorsed the JDMA to be part of the DDM.

**Table 5** outlines the objectives of the DDM and JDMA.

**Table 5: Objectives of DDM and JSMA**

DDM	JDMA
<ul style="list-style-type: none"> <li>❖ solve the silos at a horizontal and vertical level;</li> <li>❖ maximise impact and align plans and resources at our disposal through the development of “One District, One Plan and One Budget”;</li> <li>❖ narrow the distance between people and government by strengthening the coordination role and capacities at the district level;</li> <li>❖ ensure inclusivity through gender-responsive budgeting based on the needs and aspirations of our people and communities at a local level;</li> <li>❖ build government capacity to support municipalities;</li> </ul>	<ul style="list-style-type: none"> <li>❖ is a geographical (District) and team based, citizen focused approach;</li> <li>❖ has the output of a single implementation plan to provide planning and strategic priorities, developmental initiatives, service delivery and capacity building;</li> <li>❖ has the desired outcome of improving the living conditions (lives) of citizens;</li> <li>❖ has a horizontal interface (between provincial departments) and a vertical interface (National, Provincial and local government spheres);</li> <li>❖ does not exclude local municipalities;</li> <li>❖ is not a functions and power debate; and</li> </ul>

<ul style="list-style-type: none"> <li>❖ strengthen monitoring and evaluation at district and local levels;</li> <li>❖ implement a balanced approach towards development between urban and rural areas;</li> <li>❖ ensure sustainable development whilst accelerating initiatives to promote poverty eradication, employment and equality; and</li> <li>❖ exercise oversight over budgets and projects in an accountable and transparent manner</li> </ul>	<ul style="list-style-type: none"> <li>❖ promotes collaboration using the District Coordinating Forum at the governance instrument for co-planning, co-budgeting and co-implementation to strengthen service delivery to communities.</li> </ul>
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The following key regional issues (KRI) are contained in the JDMA.

❖ **Key Regional Issues 1: Economic, Social, Environmental Vitality and Resilience:**

- The economic vitality is linked to natural resources and skill sets, constrained by mismatched skills, ICT availability, and fragmented settlements.
- Poor management of natural environments exposes urban areas to risks and undermines resilience.

❖ **Key Regional Issues 2: Rural Development and Diversification:**

- Tension between agriculture and biodiversity, with a need for resource-efficient land use and support for niche agricultural industries.
- Pressure for low-density housing in rural areas undermines landscape character and food security.

❖ **Key Regional Issues 3: People-Centered Quality Development, Equitable Access, Spatial Justice, and Efficiency:**

- Poor environmental quality undermines economic and social development.
- Inequitable access to resources and services, with a need for public transport options and efficient land use.

❖ **Key Regional Issues 4: Enhance and Capitalize on Existing Environmental and Built Assets and Promote Good Growth Management, Development, and Maintenance Practices:**

- The region's lifestyle, heritage, and sense of place are assets that need better management and branding.
- Growth management and compact development are essential for financial sustainability.

❖ **Key Regional Issues 5: Good Governance and Predictability:**

- A regional approach to resource management and strong governance is critical for predictability and trust.
- Coordination between municipalities and towns is necessary for cost efficiency and economic policy.

**2.3.2 Growth and Development Strategy, 2021**

The GRDM was highlighted as one of three Western Cape regions that is specifically suited for significant growth and development. This requires enabling and increasing economic diversification, skills development, and building a knowledge economy. Growth and development also demand the promotion of spatial resilience and climate change mitigation and adaptation, through the conservation of natural resources and sustainable resource management. A Growth and Development Strategy was formulated to address these aspects.

This strategy provides a framework for growth and development planning in the district for 2019-2039. It identified the following priorities and strategic outcomes:

### 1. A water secure future:

- ❖ Functional demand and supply-side water management by 2040.
- ❖ The preservation of mountain catchments and the expansion of storage capacity.
- ❖ Ensure sufficient, sustainable and equitable water to support people, business and supportive ecosystems.
- ❖ Integrated bulk water system for the region (requires a designated water authority).
- ❖ Well-planned and appropriately financed infrastructure with innovative and equitable models for public-private cooperation.
- ❖ Good water-use practices integrated into all domestic, public and business water consumption.

### 2. A circular economy:

- ❖ Consider the full lifecycle of waste at district level. Most landfill sites in the district are full, while waste is disposed of instead of considering the economic opportunities associated with reuse and recycling. Find district-wide solutions.
- ❖ Explore green economic opportunity: capture the value embedded in waste to create financial, economic, social, and environmental benefits.
- ❖ Common regional services for waste management services needs to become the new normal for the region, making each Rand stretch further as common resources and capacity creates resilience and allows for dynamic growth in the region.

### 3. Resilient agriculture:

- ❖ Progressively revitalise the agricultural economy through more sustainable agricultural practices, water use and enhancing value-chains.
- ❖ Make exports more desirable and valuable to add to the region's economy.
- ❖ Pursue successful partnerships between entrenched actors and investors and emerging Black farmers.
- ❖ Encourage and support niche agricultural industries and activities to be marketed globally.
- ❖ Promote beneficiation and added value of existing agricultural resources. This should be a primary right on properties zoned agriculture.
- ❖ Sustainable agricultural practices should promote spatial resilience and climate change mitigation and adaptation through the conservation of natural resources, sustainable resource management and capitalising on the region's inherent environmental, social and economic potential.

### 4. Sustainable tourism:

- ❖ Enhance natural asset conversation, the sense of place of the region, the rural character, and harmonise urban and agricultural development.
- ❖ Facilitate a sustainable base for inclusive tourism development.
- ❖ Promote spatial resilience and climate change mitigation and adaptation through the conservation of natural resources, sustainable resource management and capitalizing on the region's inherent environmental, social and economic potential.
- ❖ Sustainable tourism needs to be facilitated in a way that enables and increases economic growth, economic vitality, economic diversification, skills development, and that builds a value-add and knowledge economy. This translates into:
  - Managing the risks and opportunities from tourism development at regional level;

- Facilitating tourism development that does not reinforce socio-economic segregation and disconnected development;
- Harmonising the infrastructure requirements for tourists and residents;
- Maximising socio-economic and ecological conservation co-benefits from all tourism developments.

#### 5. Supporting wellbeing and resilience:

Resilience implies an openness to learning and transforming for the better. People-centred development means creating quality living environments, and enhancing the lives of the poor through poverty-alleviation and rural development strategies, including:

- ❖ Promote equitable access to quality and affordable transport, facilities, and services.
- ❖ Facilitate equitable access to meaningful employment.
- ❖ Pursue spatial justice and efficiency by integrating and densifying settlements, and promoting continuity, compaction, and mixed-use quality urban environments which are well consolidated and function in a collaborative and complementary manner, reversing the apartheid spatial form.

#### 6. A connected economy: transport and rural-urban integration:

Build on the existing asset base. A world-class movement network will facilitate the efficient and safe movement of goods and people both along the coastal N2-corridor, as well as an upgraded inland R62 tourism corridor. Improved information and communication technology is essential for a functional society and economy.

- ❖ Expand the capacity of the current N2 highway, improving flows of goods and people to the Eastern Cape and beyond.

- ❖ The R62, if upgraded, could relieve pressure on the N2 transport corridor in moving goods westwards. In time, this movement network can diversify away from solely road-based movement.
- ❖ Pursue an efficient, safe and reliable rail service, connecting people and goods to the broader South African region.
- ❖ The airport infrastructure in George provides air connectivity which could be further promoted and supported.
- ❖ Facilitate an integrated network of regional settlements that provide resilient, sustainable, quality and inclusive living environments for a growing population.
- ❖ Inter-settlement and regional transport ought to be strengthened between the larger urban settlements to promote connectivity, both within the region as well as between the region and major centres in South Africa.
- ❖ Improve internet access through broadband to enhance connectivity.
- ❖ Cluster economic infrastructure and facilities along public transport routes to maximise the coverage of these public investments and respond to unique regional identities within the Western Cape. Facilities need to be clustered, when appropriate, to ensure service can be delivered the most efficient and effective manner.
- ❖ Cluster airport co-related land uses to improve economy of scale.

#### 7. Sustainable local energy transition:

- ❖ Leverage municipal competencies while using spatially dependent local resources.
- ❖ Complement national level energy planning and inform the role of local government.
- ❖ Support decarbonisation of the energy system.
- ❖ Support a more resilient energy system.
- ❖ Common regional services for energy creation and distribution services needs to become the new normal for the region, making each Rand stretch

further as common resources and capacity creates resilience and allows for dynamic growth in the region.

The implementation vehicle for the Garden Route Growth and Development Strategy is critical to its success. It should take a 'systems and partnering approach', which needs to be managed by the District Municipality. It must be able to focus on a broader set of cross-cutting development issues and systems such as water and sanitation, energy, waste, mobility and transport, public safety, and township economies, i.e. the systems that underlie the development of a sustainable and inclusive economy, rather than narrowly focused growth sectors and economic projects.

### 2.3.3 Garden Route Integrated Development Plan

The Garden Route District IDP contains the following vision:

*"Garden Route the leading, enabling and inclusive district, characterised by equitable, sustainable development high quality of life and equal opportunities for all".*

The Garden Route District IDP identified key interventions which are critical for the delivery on its mandate as strategic coordinator, facilitator and enabler of service delivery.

The following key interventions have a spatial implication on the SDF that will be incorporated into the proposals.

- ❖ Invest in our economic infrastructure.
- ❖ Identify and implement new means to generate energy (Green/Energy Renewal).
- ❖ Explore possibilities to maximize the ocean's economy.

- ❖ Examine the possibilities for Human settlement Development (GAP Housing).
- ❖ Investigate the benefits of investing in the ocean's economy.
- ❖ Explore the possibility of establishing a Garden Route Industrial Development Zone (Section 76 Status).

### 2.3.4 Garden Route Spatial Development Framework, 2017

The Garden Route SDF, 2017 (see **Figure 4**) identifies several spatial drivers of change that need to be translated into policy for the Garden Route District. In order for the Garden Route to reach its full potential, six central issues were identified that needed to be addressed, based on the policy review and synthesis. These issues relate to:

- ❖ Regional resource capacity constraints;
- ❖ Regional competitive advantage;
- ❖ Sprawling low density settlements;
- ❖ Constrained regional accessibility;
- ❖ Erosion of biodiversity and cultural landscapes; and
- ❖ Sustainability of agriculture and rural settlements.

In line with the Garden Route District Vision and Mission adopted in the 2017 IDP, the SDF focused on four spatial drivers of change. These spatial drivers, underpinning a development approach, are:

















- ❖ **The Economy is the Environment:** A sustainable environment is an economy positioned for growth;
- ❖ **Regional Accessibility for Inclusive and Equitable Growth;**
- ❖ **Coordinated Growth Management for Financial Sustainability;**
- ❖ **Effective, Transversal Institutional Integration** – need to plan, budget and manage as one government. This speaks to the institutional context within

which spatial planning must take effect, with particular reference to municipal finance, coordinated infrastructure planning and delivery as well as robust project preparation and pipelines.

The composite SDF for the Garden Route District brings together the spatial strategies, policies and intentions of the municipality. It is necessary to capitalise on the town of George as an emerging 'regional node' as outlined in the Provincial SDF and re-brand the Garden Route District as part of the Garden Route and enhance support of the South Cape Economic Partnership. The environmental aspect of the Garden Route is important as it consists of diverse wilderness, agricultural landscapes, estuaries and lagoons, mountain backdrops and coastal settings including the verdant landscapes of the coastal belt. The district is also a host of formal and informal conserved areas which include National Parks, Provincial Nature Reserves, Protected Areas, Marine Protected Areas, World Heritage Sites (Swartberg Nature Reserve) Biosphere Reserves and RAMSAR sites. The environment is under stress as a result of population growth and demand for land associated with economic return. Poor land use that resulted in land erosion, infestation of invasive alien plants that increase chances of veld fires, unsustainable extraction of resources and the social, economic and financial undervalue of diversity are adding to the environmental stress. Garden Route has an extensive transport distribution network including national road, provincial and local road networks, an airport, as well as several landing strips and small craft harbours. The network accessibility provides an opportunity for the Garden Route to interact nationwide. The N2 and R62 are identified as major corridors traversing the district in an east-west direction. They serve as major distributors of people, goods and services to the rest of the country. The N9 and N12 serve as the key routes from the district to the northern part of the country.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF - COMPOSITE SDF (2017)



- |   |   |  |
|---|---|--|
|  Existing National East-West Routes          |  Harbours  |  Garden Route Landscape       |
|  Upgrade Routes to Serve East -West Function | <b>Environment</b>  | <b>Growth Management</b>   |
|  Upgrade Inland to Coastal Routes            |  Rivers  |  Settlement Hierarchy       |
|  Mountain Passes                             |  Critical Biodiversity Areas                   |  Grow Coastal Center        |
|  Airports                                    |  Cape Nature Protection and Conservation Areas |  Consolidate Coastal Centre |
|   |  Klein Karoo Landscape                         |  Grow Inland Center         |
|   |   |  Consolidate Inland Center  |

### 2.3.5 Garden Route District Municipality Corporate Disaster Management Plan, 2022

This policy summary is based on the 2022 GRDM Corporate Disaster Management Plan and outlines key elements and their implications for the Garden Route SDF.

#### **KEY POLICY ELEMENTS**

##### **Legal Framework & Governance:**

Rooted in the Disaster Management Act (57 of 2002) and Municipal Systems Act. Aligns with National and Provincial Disaster Management Frameworks and managed by the GRDM Disaster Management Centre (DMC) with oversight from the GRDM Governing Committee.

##### **Disaster Risk Reduction Focus Areas:**

Key risks include wildfires, floods, droughts, epidemics, and infrastructure failure. Emphasis on vulnerable communities, risk reduction planning, emergency response, and infrastructure adaptation.

##### **Disaster Management Continuum:**

Covers pre-disaster (prevention, mitigation, preparedness) and post-disaster (response, recovery, rehabilitation, development) phases with proactive planning and institutional readiness.

##### **Institutional Roles and Responsibilities:**

Clearly defined roles for each municipal department in service continuity, emergency communication, risk reduction, and disaster recovery. Includes regular review and testing of plans.

##### **Community Involvement:**

Includes public education, volunteer mobilisation, and communication during emergencies.

##### **Climate Change and Resilience:**

Climate adaptation strategies incorporated into disaster management with supporting plans for wetlands, biodiversity, coastal zones, and air quality.

#### **IMPLICATIONS FOR THE GARDEN ROUTE SDF**

##### **Risk-Informed Land Use Planning:**

Avoid development in high-risk areas like floodplains and fire-prone zones. Integrate hazard maps into land use decisions and promote climate-resilient development.

##### **Urban Resilience and Infrastructure Design:**

Ensure infrastructure is disaster-resilient with firebreaks, flood mitigation, and redundant utility services.

##### **Integration of DRR in Development Policies:**

Embed disaster risk reduction across all sectors of development. Require risk assessments for major new developments.

##### **Sustainable and Safe Rural Development:**

Support rural settlements with emergency services access and drought-resistant infrastructure.

**Coastal and Environmental Planning:**

Incorporate coastal, wetland, and other ecological infrastructure, as well as proper environmental management into planning. Restrict development in sensitive areas.

**Institutional Collaboration and Capacity Building:**

Align spatial planning with institutional readiness and strengthen links between IDP, SDF, and DRR strategies.

**Community-Centric Approaches:**

Include community vulnerability assessments and resilience-building in planning processes.

**2.3.6 Garden Route District Municipality Disaster Risk Assessment (DRA)**

The SDF must align with the Disaster Management Plans. The disaster risk assessment of the GRDM was conducted to identify potential hazards and vulnerabilities within their jurisdiction. This information should be used to inform the development of the SDF. SDFs should consider the impacts of climate change-related disasters, such as floods and droughts, and integrate disaster risk reduction strategies.

**2.3.7 Garden Route District Coastal Management Programme (CMP), 2012**

The SDF to guide development within the municipality, including coastal areas, (Coastal lines, setback lines, zones, coastal access points, etc.) and should be informed by the Garden Route District CMP.

**2.3.8 Garden Route Environmental Management Framework, 2010**

The EMF was developed in response to intense development pressure along the Garden Route's coast and lake systems. Its objectives are to:

- ❖ Facilitate consistent, integrated decision-making across national, provincial and local authorities;
- ❖ Map environmental sensitivity, opportunities and constraints; and
- ❖ Establish control zones guiding permissible land uses and level of assessment required.

It needs to be noted that the Garden Route EMF, 2010, did not cover the full GRDM jurisdiction and excluded areas such as the Mossel Bay and Hessequa Coastal Areas, as well as the dryer Ladismith (Kannaland LM) and Oudshoorn areas.

**Methodological Framework and GIS Platform:**

The EMF process comprised five technical phases, underpinned by a GIS database to integrate spatial layers:

1. **Baseline Data Collation** – assembly of biophysical, social, economic and cadastral data.
2. **Public Participation Process** – stakeholder registration, open days and comment rounds.

3. **Desired State of the Environment** – environmental objectives and priorities based on baseline and public input.
4. **Environmental Control Zones** – spatial constraint zones (high, medium, low) derived from cumulative sensitivity analyses.
5. **Strategic Environmental Management Plan (SEMP)** – performance standards and guidelines for each control zone.

#### **Strategic Environmental Management Plan (SEMP):**

The SEMP translates control zones into actionable guidelines:

- ❖ **High Control Zones:** “no-go” areas except for minimal infrastructure supporting conservation.
- ❖ **Medium Control Zones:** restricted land uses with stringent mitigation and offset requirements.
- ❖ **Low Control Zones:** broader development potential subject to standard environmental authorization.

Management measures include setback buffers, stormwater controls, invasive-alien species clearance, fire regime maintenance and visual design standards.

#### **2.3.9 Garden Route District Municipality Air Quality Management Plan, 2025**

Air quality in South Africa is governed under the National Environmental Management Air Quality Act, 2004 (Act No. 39, 2004) (NEM:AQA) and related legislation, for example the National Ambient Air Quality Standards (NAAQS) (Government Notice No. 1210, 2009). The NEM:AQA (Section 15(2)) requires municipalities to introduce Air Quality Management Plans (AQMPs) which are logical descriptions of interventions and required resources aimed at implementing strategies to achieve specific air quality objectives. Municipalities are required to include an AQMP as part of their Integrated Development Plans

(IDP). The SDF forms part of the IDP and also needs to include spatial directives from various sector plans. The GRDM reviewed its AQMP in 2025 and the main aims of the GRDM AQMP are:

- ❖ Ensure the sustained enforcement of air quality standards within the GRDM to promote environmental sustainability, as mandated by the NEM:AQA (Act No. 39 of 2004).
- ❖ Uphold the constitutional right of every citizen to live in a healthy environment, free from harm, as enshrined in the Bill of Rights (Section 24) of the Constitution of South Africa, 1996 and supported by the NEM:AQA (Act No. 39 of 2004).
- ❖ Define methodologies and procedures for monitoring pollution parameters aligned with national, provincial, and local standards, as stipulated by the NEM:AQA (Act No. 39 of 2004) (Section 9).
- ❖ Evaluate and enhance the municipality's air quality monitoring system for improved effectiveness, in accordance with Section 24 of the NEM:AQA (Act No. 39 of 2004).
- ❖ Revise protocols for data collection, processing, quality control, and assurance to ensure compliance with the requirements of the NEM:AQA (Act No. 39 of 2004) (Section 28).
- ❖ Update protocols for interpreting and archiving reports effectively, adhering to the guidelines set out in the NEM:AQA (Act No. 39 of 2004).
- ❖ Develop an emission inventory for the region, identifying sources and quantifying pollution using systems like the Geographic Information System (GIS), as per the Pollution Prevention Plan section (Section 29) of the NEM:AQA (Act No. 39 of 2004).
- ❖ Provide sustainable support and services for air quality management to all stakeholders within the GRDM, ensuring compliance with Section 24 of the NEM:AQA (Act No. 39 of 2004).

The Western Cape Province AQMP contains the following goals which subsequently informed the goals and objectives of the GRDM AQMP:

- ❖ **Goal 1:** Ensure effective and consistent air quality management.
- ❖ **Goal 2:** Continually engage with stakeholders to raise awareness with respect to air quality management and climate change response.
- ❖ **Goal 3:** Ensure effective and consistent compliance monitoring and enforcement.
- ❖ **Goal 4:** Support air quality and climate change response programmes, including promoting and facilitating the reduction of greenhouse gas emissions.

**Table 6** below outlines the objectives and key action points contained in the GRDM 4<sup>th</sup> generation AQMP:

**Table 6: Goals, Objectives and Action Points applicable to the GRDM from the Initiation to the Expiration of the 4th Generation AQMP**

OBJECTIVES	KEY ACTION POINTS
<b>Goal 1: Create Air Quality Management Awareness</b>	
<p><b>Objective 1.1</b></p> <p>Organisational (in-house) air quality awareness raising, capacity building, and training.</p>	<ul style="list-style-type: none"> <li>❖ Ensure approval of the 4th generation AQMP by GDRM Council and its inclusion in the IDP.</li> <li>❖ Include the objectives for implementation of the AQMP as a standing item on the agenda of the GRDM AQOF meetings.</li> <li>❖ Conduct an air quality training needs analysis and align the training needs with the GRDM employee Personal Development Plan (PDP).</li> <li>❖ Attend and support National and Provincial air quality training and capacity building events and programmes.</li> <li>❖ Enhance the training and knowledge of GRDM officials in the effective use of Air Quality Management Tools.</li> <li>❖ Ensure that an adequate budget for air quality management is included in the IDP for the GRDM</li> </ul>

OBJECTIVES	KEY ACTION POINTS
	<p>(recommended budgets provided, GRDM to determine internal budgetary management).</p> <ul style="list-style-type: none"> <li>❖ Collaborate with the legal department in the Garden Route DM to inform Senior Management regarding National Environmental Management Laws Amendment Act (NEMLA 4) implications.</li> <li>❖ Inform Senior Management regarding the risks associated with AQM in terms of litigation and inclusion in the Risk Register.</li> <li>❖ Participate in, collaborate with and support the Western Cape Environmental Management Inspectors (EMI) forum and Provincial AQOF Work Group.</li> </ul>
<p><b>Objective 1.2</b></p> <p>External awareness raising, capacity building, and training.</p>	<ul style="list-style-type: none"> <li>❖ Host quarterly GRDM Industry working group meetings and ensure proper administrative management thereof.</li> <li>❖ Host quarterly District AQOF meetings with local AQOs and provide administrative support.</li> <li>❖ Provide administrative assistance and training to industry, if and when required, with regards to the self-auditing Collaborator System and the submission of quarterly reports.</li> <li>❖ Continuous enhancement and improvement of the self-auditing Collaborator system.</li> <li>❖ Encourage arrangements between District and Local Municipalities via SLAs, where required.</li> <li>❖ Publish AQM newspaper articles.</li> </ul>
<p><b>Objective 1.3</b></p> <p>Improve and enhance education and communication mechanisms, strategies and programmes with respect to AQM and CCR.</p>	<ul style="list-style-type: none"> <li>❖ Continue to roll out the GRDM clean fires campaign.</li> <li>❖ Provide input in new developments where it involves air quality management, through awareness raising.</li> <li>❖ Conduct dispersion modelling studies on proposed developments.</li> <li>❖ <b>Liaise with Town Planning departments on proposed developments through the local air quality officers.</b></li> <li>❖ <b>Ensure two-way communication between local municipalities officials and EAPS regarding new developments where it impacts on ambient air quality.</b></li> </ul>

OBJECTIVES	KEY ACTION POINTS
	<ul style="list-style-type: none"> <li>❖ Support and attend CCR related matters if and when required.</li> </ul>
<b>Goal 2: Ensure effective and consistent AQM</b>	
<p><b>Objective 2.1</b></p> <p>Strengthen atmospheric emission licensing, compliance monitoring and enforcement.</p>	<ul style="list-style-type: none"> <li>❖ Monitoring of potential illegal listed activities.</li> <li>❖ Monitoring of compliance with emission standards in respect of the manufacture, sale or use of any appliance or conducting of an activity declared as a controlled emitter.</li> <li>❖ Monitoring of compliance in respect to reasonable steps to prevent the emission of any offensive odour caused by a listed activity.</li> <li>❖ Monitoring of compliance with directives to submit an atmospheric impact report.</li> <li>❖ Monitoring of compliance with conditions or requirements of an atmospheric emission license.</li> <li>❖ Monitoring of compliance with the requirements of the National Dust Control Regulations, for listed activities.</li> <li>❖ Evaluate all administrative systems required for atmospheric emission licensing and controlled emitter registration and identify gaps for improved service delivery.</li> <li>❖ Approve, renew, vary and transfer AELs as and when necessary, in the GRDM.</li> <li>❖ Flag all non-compliances with license conditions and prioritize administrative enforcement based on importance/ severity of the non-compliance.</li> <li>❖ Conduct inspection at each listed activity to ensure compliance.</li> <li>❖ Liaise with Industry to update their respective emission inventories during the NAEIS submission period and conduct annual auditing.</li> <li>❖ Implement AEL review processes in line with legislation.</li> <li>❖ Foster and facilitate Industry air quality improvements.</li> <li>❖ Initiate a recognition programme for Industry air quality best practice.</li> </ul>

OBJECTIVES	KEY ACTION POINTS
	<ul style="list-style-type: none"> <li>❖ Liaise and coordinate amendments to Section 21 and Section 23 through Provincial and National structures.</li> <li>❖ Collaborate with the Provincial Directorate of Compliance and Enforcement.</li> <li>❖ Review the current GRDM air quality by-laws and make recommendations to improve and update where required.</li> </ul>
<p><b>Objective 2.2</b></p> <p>Information Management.</p>	<ul style="list-style-type: none"> <li>❖ Review and update (when required) the Collaborator quarterly report submission portal.</li> <li>❖ Update the Collaborator Emission Inventory list system.</li> <li>❖ Create an AEL expiry date notification system.</li> <li>❖ Update and collaborate with DFFE regarding a data sharing system.</li> <li>❖ Ensure live data reporting and recording of GRDM portable ambient air quality monitoring on SAAQIS.</li> <li>❖ Create/compile an Air Quality Interested and Affected Party data base in the GRDM.</li> </ul>
<p><b>Objective 2.3</b></p> <p>Strengthen and enhance air quality complaints management.</p>	<ul style="list-style-type: none"> <li>❖ Evaluate the current complaints management system and flag recommendations for improvement.</li> <li>❖ Ensure acknowledgement of complaints within 24 hours of receipt.</li> <li>❖ Ensure proper feedback throughout the complaints management process.</li> <li>❖ Ensure closure of complaints.</li> <li>❖ Utilize Intergovernmental Task Teams to address complaints where it involves multisectoral departments and spheres of government.</li> </ul>
<b>Goal 3: Ensure effective and consistent air quality monitoring activities</b>	
<p><b>Objective 3.1</b></p> <p>Improve air quality monitoring and dispersion modelling.</p>	<ul style="list-style-type: none"> <li>❖ Identify gaps in the current air quality monitoring system and make recommendations for improvement.</li> <li>❖ Provide support to the Provincial department with their ambient monitoring stations within the GRDM jurisdiction.</li> </ul>

OBJECTIVES	KEY ACTION POINTS
	<ul style="list-style-type: none"> <li>❖ Ensure a proper maintenance programme for air quality equipment to protect the council assets and schedule annual calibration when required.</li> <li>❖ Motivate for capital and operational budget for ambient air quality monitoring.</li> <li>❖ Share air quality monitoring resources between GRDM, local municipalities and Industry.</li> <li>❖ Assist Local Authorities with their vehicle emissions monitoring programmes.</li> <li>❖ Ensure annual renewal of the EarthSense mobile sensor maintenance and lease agreement.</li> <li>❖ Conduct stack emissions monitoring when required.</li> <li>❖ Identify training needs on air quality monitoring and data analysis.</li> <li>❖ Ensure annual maintenance and calibration of the weather station and storing of weather data.</li> <li>❖ Ensure management of the Enviman Aermod Dispersion modelling software programme.</li> <li>❖ Conduct dispersion modelling exercises when required.</li> </ul>
<b>Goal 4: Coordinating air quality management in the district</b>	
<p><b>Objective 4.1</b></p> <p>Counter fragmentation of air quality management services through proper coordination and communication.</p>	<ul style="list-style-type: none"> <li>❖ Foster a good relationship between all air quality stakeholders and the public.</li> <li>❖ Ensure proper communication where it relates to air quality matters.</li> <li>❖ Ensure proper communication channels in line with the councils' communications policy.</li> <li>❖ Address public participation through innovative mechanisms to reach all affected communities.</li> <li>❖ With regards to AEL applications, provide oversight over EAPs complying with the requirements of the air quality act and public participation process.</li> <li>❖ Liaise with B- municipalities to comment on air quality matters where required.</li> </ul>

OBJECTIVES	KEY ACTION POINTS
<p><b>Objective 4.2</b></p> <p>Minimize air quality incidents through an anticipatory approach.</p>	<ul style="list-style-type: none"> <li>❖ Identify all the air quality hot-spot areas in the district with the assistance of the local municipalities.</li> <li>❖ Prioritize the hot spots based on the severity of the problem.</li> <li>❖ Ensure monitoring activities at the hot spots based on severity.</li> <li>❖ Participatory approach to address the hot spots.</li> <li>❖ Include the hot spots as a standing item on the GRDMs AQOF.</li> <li>❖ Co-opt waste managers, Fire Chiefs and Technical departments where it relates to offensive odours from WWTW and burning of landfill sites.</li> <li>❖ Share best practices between all spheres of government for capacity building and learning in the GRDM.</li> <li>❖ Ensure buy-in from industry through good cooperation and communication.</li> </ul>

Key action points that impact the SDF and the 4<sup>th</sup> generation AQMP is that the Town Planning departments on district and local level should liaise closely with the air quality officers and the District's Environmental Management Section.

### 2.3.10 Garden Route District Climate Change Adaptation Strategy, 2019

The South African Climate Change Act, Act No. 22 of 2024, mandates municipalities to integrate climate change considerations into their SDFs and Integrated Development Plans (IDPs). This includes reference to climate change vulnerability assessment and strategy. The SDF must address the impacts of climate change on coastal areas, including sea-level rise and increased storm surges. To ensure the transition to a climate resilient district, the Garden Route District Municipality has developed a Garden Route District Climate Change Adaptation Strategy 2019, which is currently being reviewed and updated to

ensure alignment with the Western Cape Climate Change Response Strategy: Vision 2050, the National Climate Change Response Policy of 2011, the Disaster Management Act, 57 of 2002 (as amended), as well as the draft South African Climate Change Act of 2024. The reviewed and updated Strategy was split into two documents in compliance with the Climate Change Act, namely the draft Garden Route District Climate Change Adaptation Needs and Response Assessment, as well as the draft Garden Route District Climate Change Adaptation Response Implementation Plan.

### 2.3.11 Garden Route District Municipality Invasive Species Monitoring, Control and Eradication Plan, 2019

The Invasive Species Monitoring, Control and Eradication Plan (2019) provides a coordinated framework for managing invasive species across municipal jurisdictions, focusing on preventing the introduction and spread of harmful alien species and ensuring compliance with national biodiversity legislation. The plan outlines a structured approach to identifying existing infestations, preventing new invasions, and guiding the control or eradication of species that threaten ecosystem integrity and municipal service delivery. It is built on key principles such as risk-based prioritisation, sustainability, and alignment with the South African National Biodiversity Institute (SANBI) protocols and the National Environmental Management: Biodiversity Act, 2004.

The plan emphasises the establishment of robust monitoring systems to track invasive species distribution, density, and ecological impact. Municipalities are required to develop species inventories, undertake regular site inspections, and maintain updated spatial datasets that map invasive species occurrences. This monitoring framework supports evidence-based planning by enabling authorities to target priority areas, assess ecological risks, and identify pathways through which invasive species spread. The plan also promotes early detection and rapid response mechanisms, recognising that quick intervention can significantly reduce long-term management costs.

Control and eradication interventions are structured around integrated management practices that combine mechanical removal, biological control, chemical treatments, and habitat restoration where appropriate. The plan highlights the importance of tailoring interventions to specific ecosystems and species characteristics to maximise effectiveness while reducing negative environmental impacts. Municipalities must allocate sufficient resources, develop annual control programmes, and ensure compliance with safety, environmental, and operational standards. A strong emphasis is placed on training municipal personnel, building institutional capacity, and establishing partnerships with environmental agencies and local stakeholders.

The plan also recognises that invasive species management has direct implications for water security, fire risk reduction, biodiversity conservation, and municipal infrastructure protection. It calls for cross-departmental cooperation, integration into spatial planning instruments, and alignment with municipal Environmental Management Frameworks (EMFs), Biodiversity Sector Plans, and disaster management strategies. Public awareness and community participation are identified as essential components, encouraging local stewardship and promoting responsible land management practices.

Overall, the Invasive Species Monitoring, Control and Eradication Plan establishes a coherent, legally compliant, and operationally practical framework for municipalities to systematically address invasive species pressures. By focusing on monitoring, prioritisation, targeted interventions, and institutional cooperation, the plan supports long-term ecological resilience and sustainable land-use planning across the district.

### 2.3.12 Garden Route District Municipality Incentive Policy Framework (Draft)

It is noted that a service provider is currently undertaking the GRDM Incentive Policy Framework which aims to promote partnerships for viable affordable rental housing programme opportunities in the GRDM and its' seven B municipalities.

The report is currently in draft format and is aimed at looking at various incentives such as overlays and bylaws. The report will furthermore include housing affordability assessments for all GRDM municipalities.

### 2.3.13 Local Spatial Development Frameworks

**Figure 5** depicts the SDF's of the local municipalities within the GRDM.

The status of the individual SDFs is expressed below:

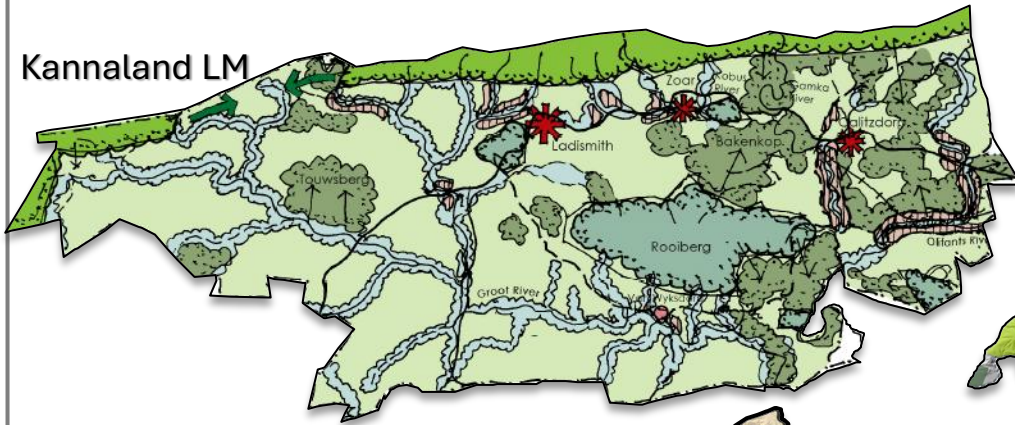
- ❖ Garden Route (Eden) District Municipality: Currently being reviewed – last approved in 2010.
- ❖ Bitou Local Municipality: amended and approved in 2022.
- ❖ George Local Municipality: approved in 2023.
- ❖ Hessequa Local Municipality: amended in 2024/2025.
- ❖ Kannaland Local Municipality: approved in 2017.
- ❖ Knysna Local Municipality approved in 2020.
- ❖ Mossel Bay Local Municipality: SDF and Environmental Framework 2022.
- ❖ Oudtshoorn Local Municipality: approved in 2020.

The GRDM will ensure that the principles, spatial structuring elements, and proposed actions of the GRDM SDF are aligned with those contained in the SDFs of the constituent local municipalities. This alignment will ensure that district-level strategies reinforce and complement local priorities, supporting a coherent

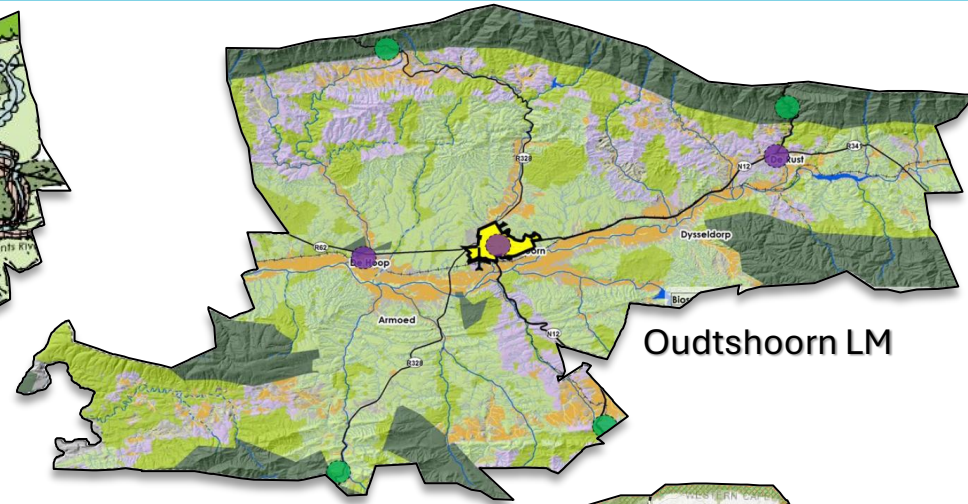
approach to spatial development and resource management across the region. Particular attention will be given to achieving consistency in the spatial representation of key elements such as settlement hierarchies, biodiversity networks, transport corridors, and coastal management zones along municipal boundaries. Through this process, the GRDM SDF will promote spatial integration and functional coordination across the district, strengthening the collective implementation of shared development objectives.

# GARDEN ROUTE DISTRICT: LOCAL SPATIAL DEVELOPMENT FRAMEWORKS

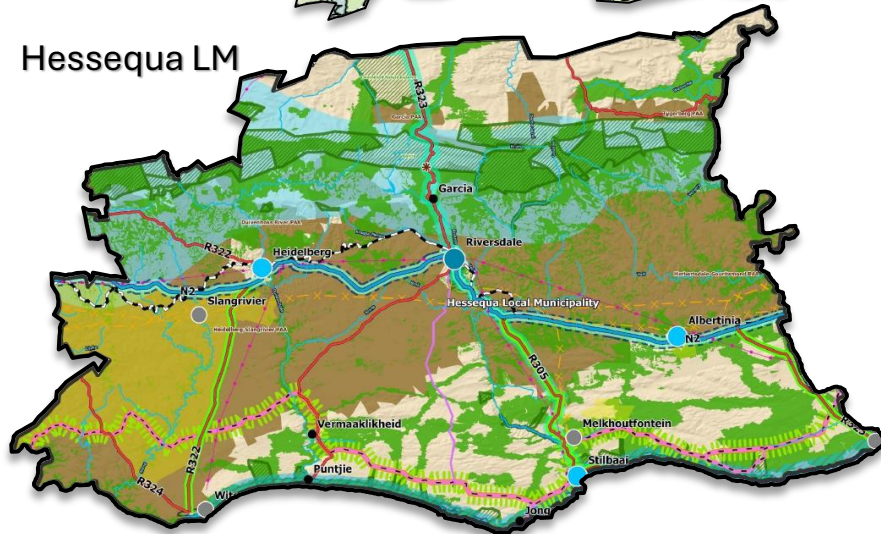
Kannaland LM



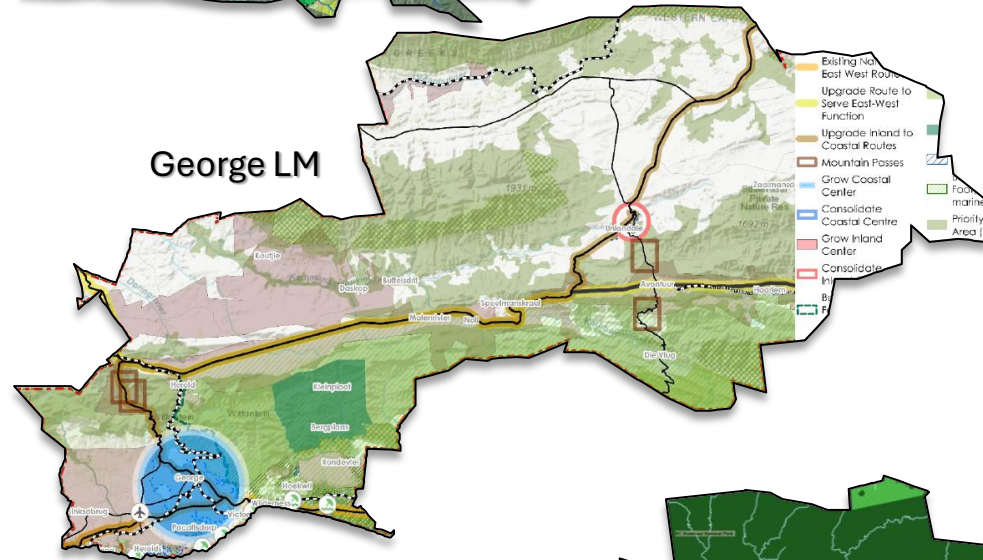
Oudtshoorn LM



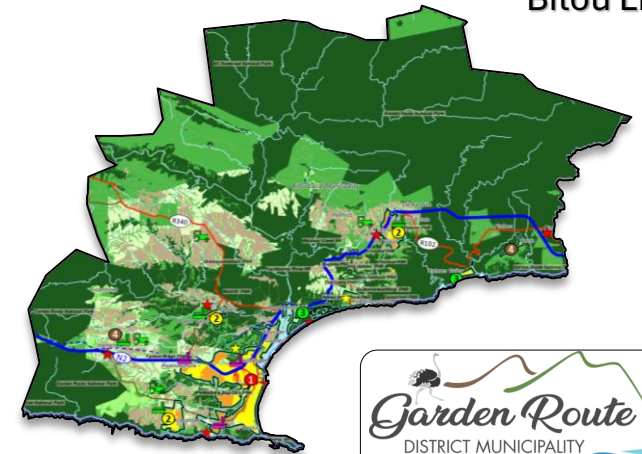
Hessequa LM



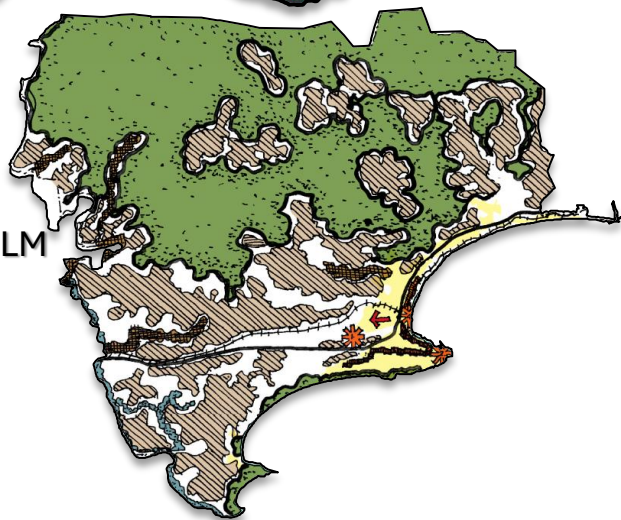
George LM



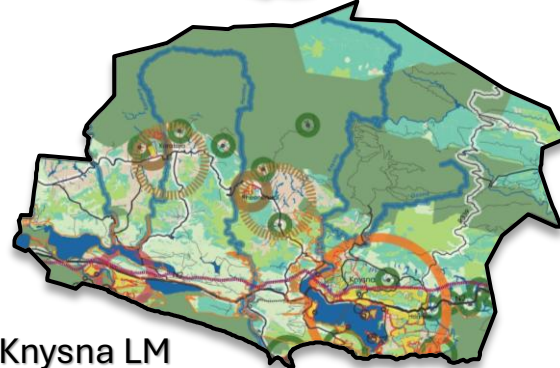
Bitou LM



Mosselbay LM



Knysna LM



### 2.3.14 Surrounding Spatial Development Frameworks

Another important structuring element to be considered during the formulation of the Garden Route SDF is the development proposals of the SDFs of the adjoining District Municipalities as described below:

- ❖ Central Karoo District Municipal SDF: 2019 (See **Figure 6**):
  - The Central Karoo DM is separated from by the Swartberg Mountain Range which has three connections: N12, R407 and R322.
  - The main attractions outlined in the SDF are the following: Laingsburg; Prince Albert and Beaufort West.
- ❖ Cape Winelands District Municipal SDF: 2021-2026 (See **Figure 7**):
  - The Cape Winelands District Municipal SDF prioritises a variety of agricultural produce: fruit production, grape production and lucerne production. The eastern parts have also been earmarked for a renewable energy development zone.
- ❖ Overberg District Municipal SDF: 2023 (See **Figure 8**):
  - The SDF identified the north-eastern section for the cultivation of small stock units and deciduous fruits. This borders on the Kannaland LM.
  - The R62 and N2 corridors continue through the district from GRDM.
  - The SDF proposes the protection of the environmental corridors and the prioritisation of tourist assets.
- ❖ Sarah Baartman District Municipal (SBDM) SDF: 2024 (See **Figure 9**):
  - The N2 and N9 through the GRDM traverse Sarah Baartman DM and link up with the main metropolitan areas of Gqeberha, Jeffreys Bay and the smaller nodes along the coast.

- The protected areas identified in SBDM also flow over into GRDM.
- The SDF identified a number of Renewable Energy Development Zones.

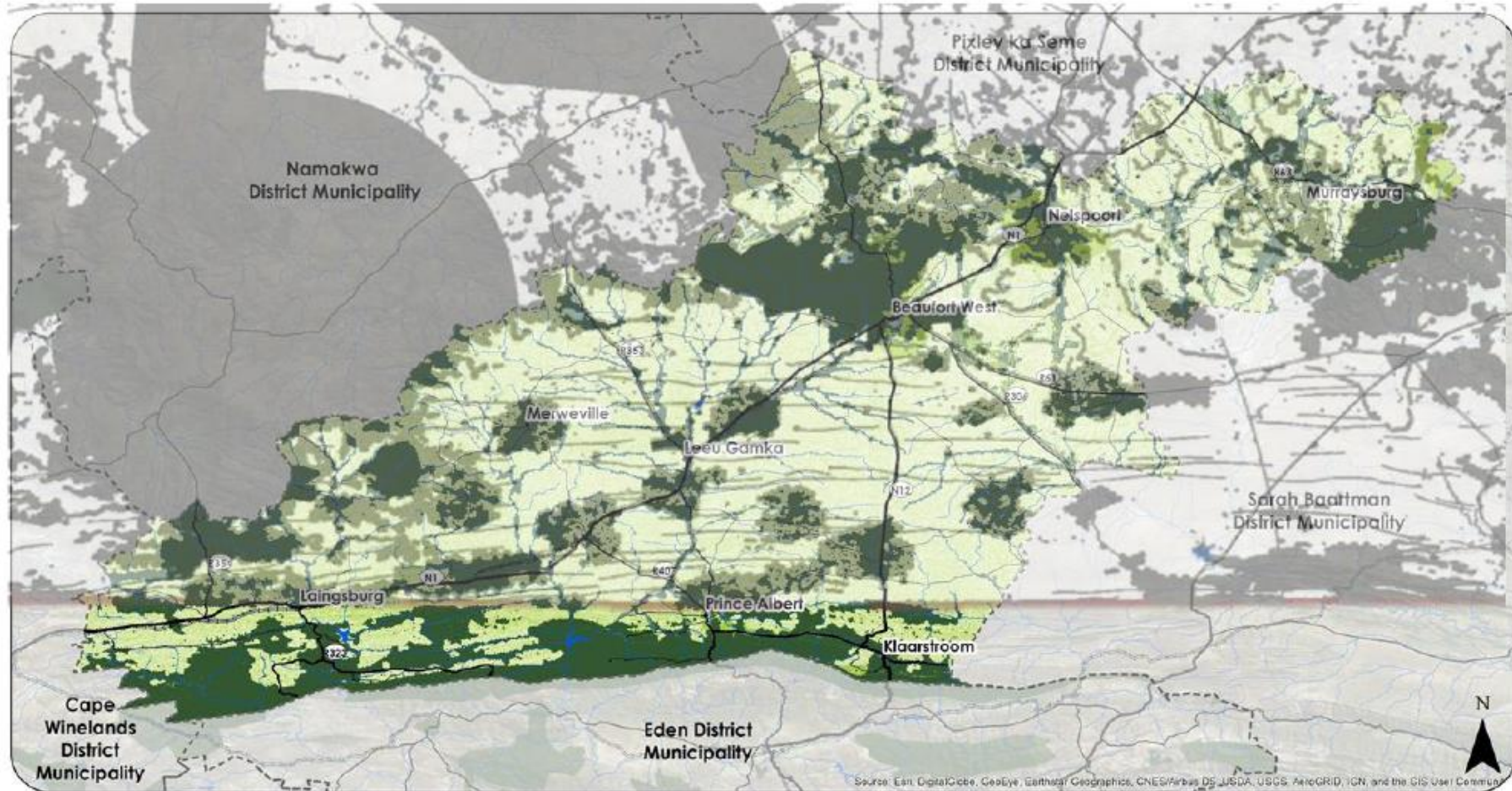
**Figure 10** provides a composite overview of the GRDM in relation to the other District SDFs.

## 2.4 POLICY CONSIDERATIONS

Summary of Key Policy Impacts:

- ❖ **Development Focus:** Aligning the Garden Route's local development agenda with national priorities like economic growth in tourism and agriculture.
- ❖ **Infrastructure and Service Delivery:** Ensuring investments in infrastructure, including ecological infrastructure, are aligned with local needs, focusing on energy, water, and transport improvements.
- ❖ **Environmental Sustainability:** Balancing development with the need to protect the region's unique ecological resources.
- ❖ **Urbanization and Growth Management:** Managing urban sprawl, promoting sustainable land use, and encouraging compact development.
- ❖ **Community and Climate Resilience:** Enhancing community participation and incorporating disaster risk management and climate change adaptation strategies into planning.

# CENTRAL KAROO DISTRICT MUNICIPALITY - COMPOSITE SDF



**Biodiversity Planning Land Use Map: Central Karoo District Municipality**

**Road Type**

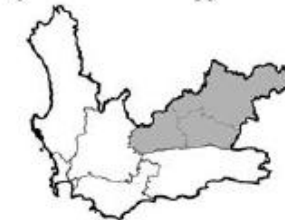
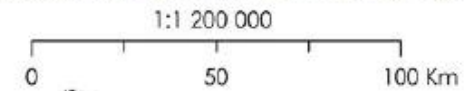
- National Road
- Arterial Road
- Secondary Road
- Railways

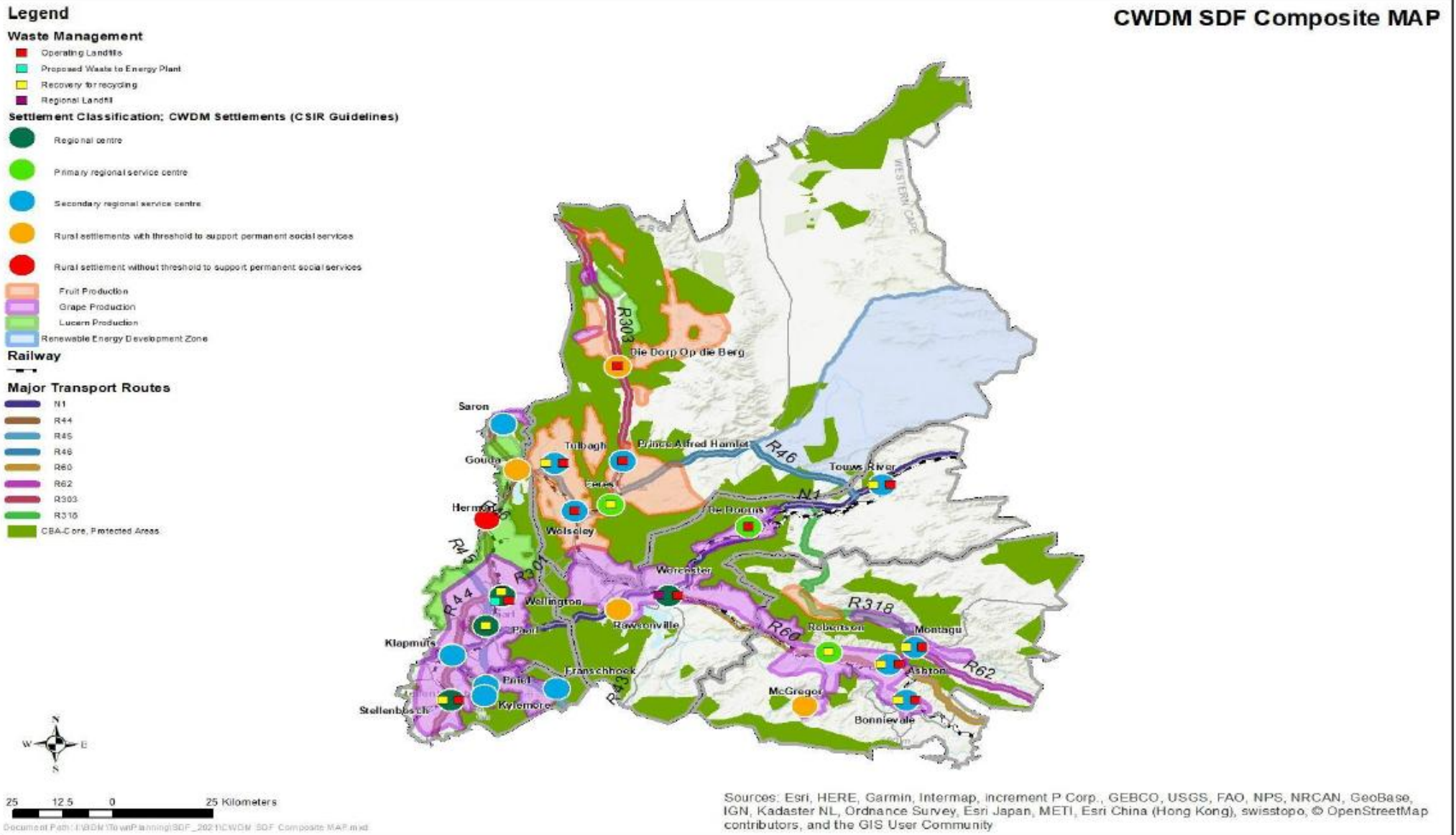
- - - DM Boundaries
- Dams
- River

**Biodiversity Spatial Planning Categories (SPCs)**

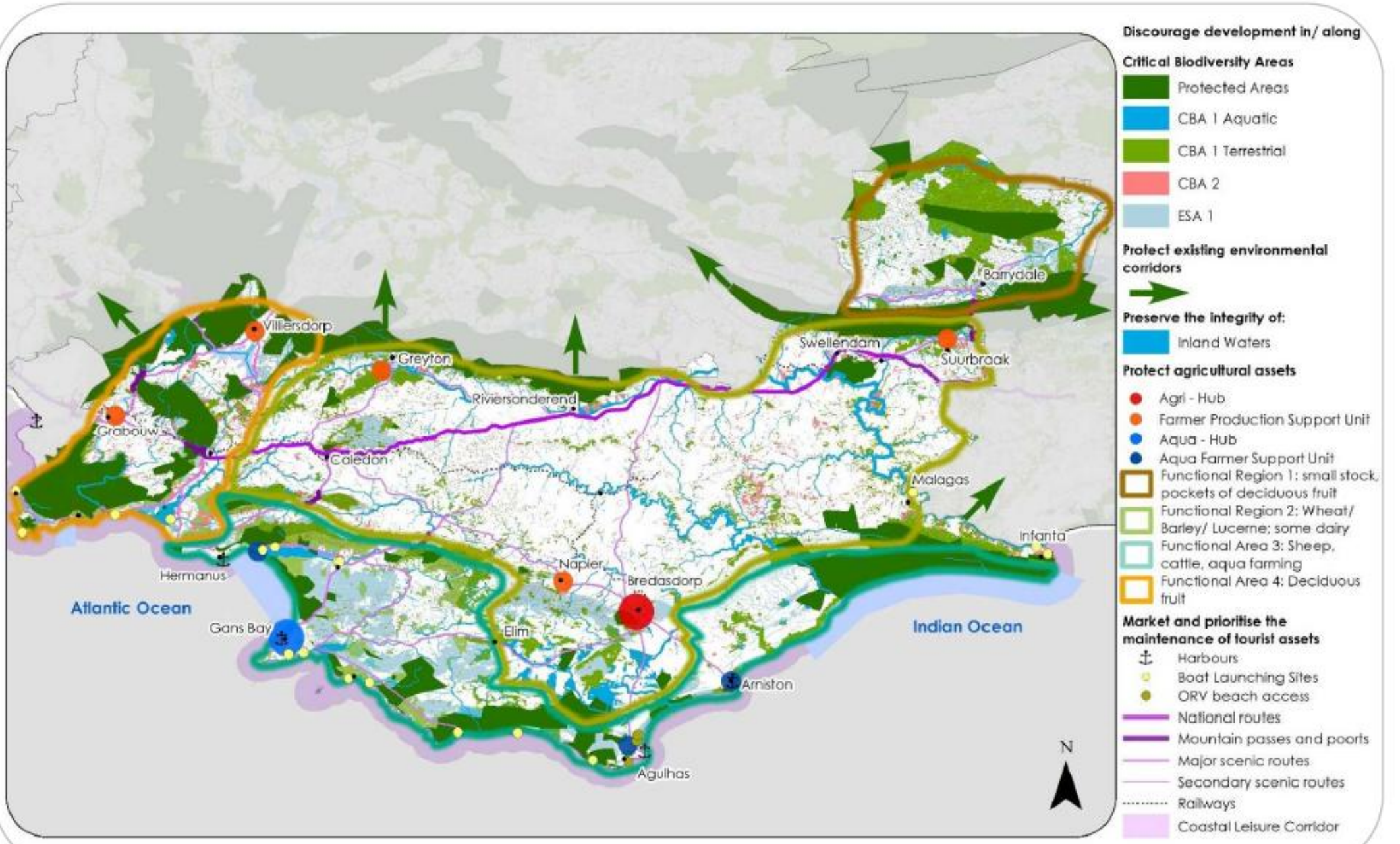
- SPC Core 1
- SPC Core 2
- SPC Buffer 1
- SPC Buffer 2

- Exclusion areas for Phase 1 Exploration for Shale Gas Extraction (as per Shale Gas Strategic Environmental Assessment, CSIR, 2017)

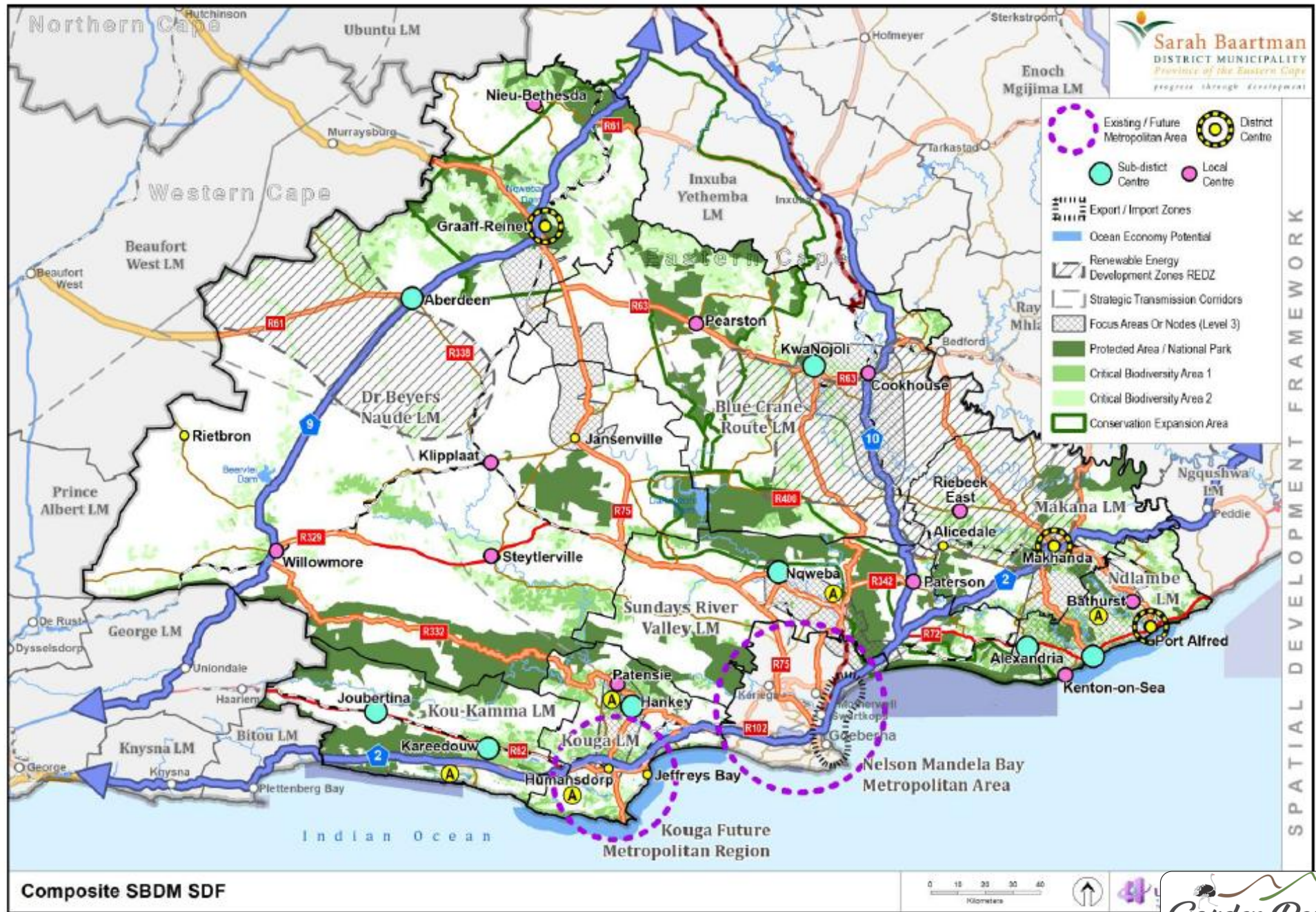




# OVERBERG DISTRICT MUNICIPALITY – CONCEPT SDF



# SARAH BAARTMAN DISTRICT MUNICIPALITY - COMPOSITE SDF

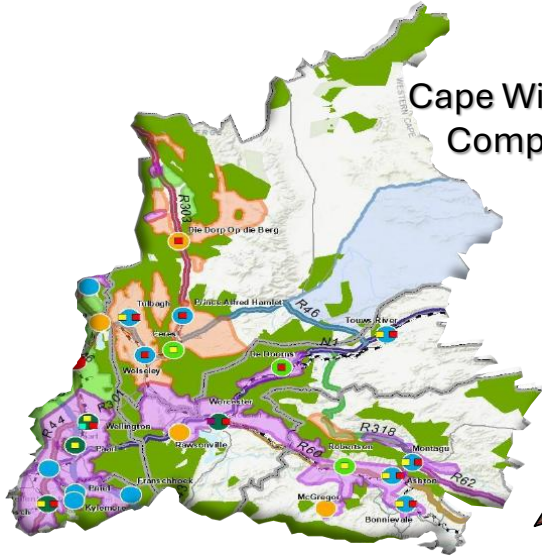


Composite SBDM SDF

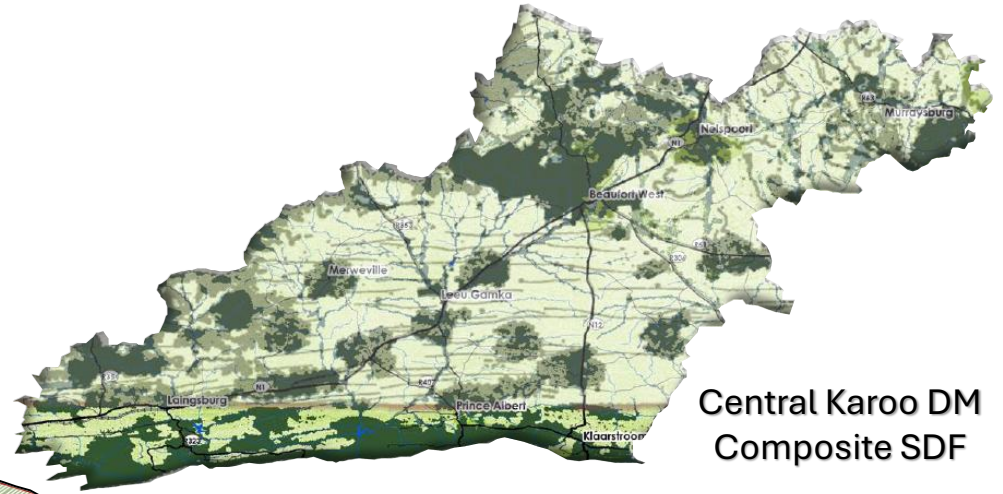


SPATIAL DEVELOPMENT FRAMEWORK

# GARDEN ROUTE DISTRICT SDF - ALIGNMENT WITH SURROUNDING DISTRICT SDF'S



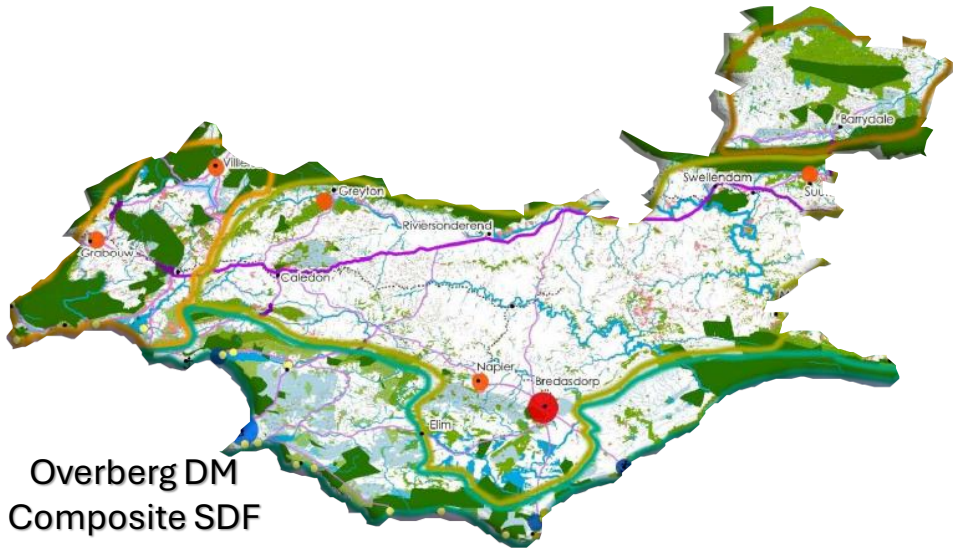
Cape Winelands DM  
Composite SDF



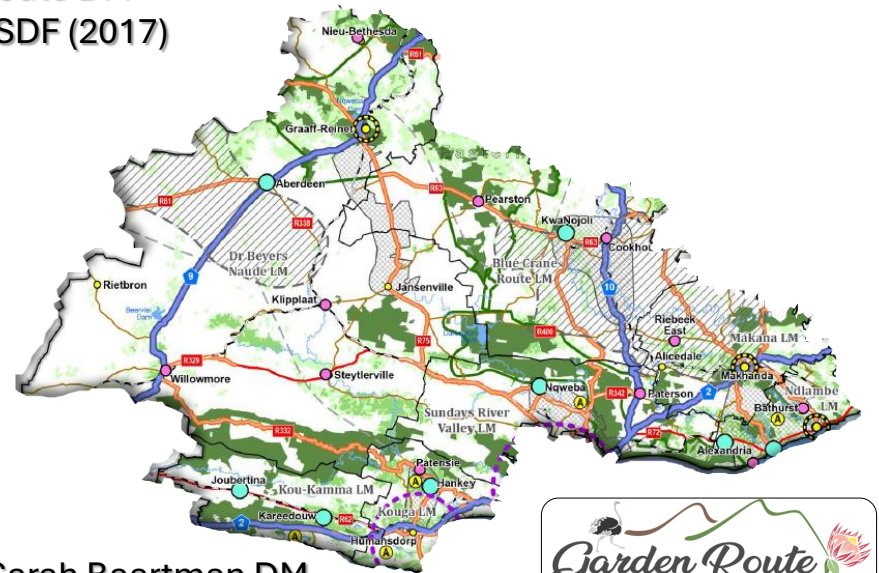
Central Karoo DM  
Composite SDF



Garden Route DM  
Composite SDF (2017)



Overberg DM  
Composite SDF



Sarah Baartman DM  
Composite SDF

## 2.5 GARDEN ROUTE SPATIAL VISION AND OBJECTIVES

In line with the directives emanating from National, Provincial and Regional Policies and Legislation. The following preliminary Spatial Vision and Spatial Objectives have been defined for the Garden Route District. The national, provincial and regional policies and legislation led to the Spatial Vision and Spatial Objectives identified for the Garden Route District as set out below.

### 2.5.1 Garden Route Spatial Vision

*“Garden Route the leading, enabling and inclusive district, characterised by equitable, sustainable development, high quality of life and equal opportunities for all”*

The vision is similar to the IDP (2022-2027) and also aligns to the 2017 SDF.

### 2.5.2 Garden Route DM Spatial Objectives

- ❖ **Conserve Natural Resources and Biodiversity:** Safeguard the region’s natural assets, particularly areas with high biodiversity and valuable agricultural land, which form the backbone of the Garden Route’s economy through sectors like agriculture and tourism.
- ❖ **Consolidate Urban and Rural Development:** Focus development efforts on key urban and rural nodes throughout the Garden Route, integrating residential areas, community facilities, and business hubs to improve spatial efficiency, enhance service delivery, and drive socio-economic growth.
- ❖ **Maintain Public Spaces and Infrastructure:** Ensure the upkeep of public spaces and infrastructure within the district’s development nodes, carefully managing land-use, urban density, and spatial structure to promote equitable

spatial transformation, efficiency, sustainability, and resilience to economic and climate-related challenges.

- ❖ **Enhance Regional Connectivity:** Strengthen both intra- and inter-regional connectivity by developing and upgrading road and rail transport corridors that link key development nodes within the Garden Route and connect the district to surrounding regions, improving accessibility and trade.
- ❖ **Support SMME Development:** Facilitate the growth of small, medium, and micro enterprises (SMMEs) in strategic locations across the Garden Route, promoting business and industrial development to create jobs and foster local economic growth. **Boost Agricultural Productivity and Processing:** Focus on enhancing agricultural output in the district's high-potential farming areas, while also promoting agri-processing industries that contribute to food security and job creation in the region.
- ❖ **Maximise Tourism Potential:** Leverage the district’s unique natural and cultural attractions to boost tourism, integrating local tourism offerings with the broader regional tourism network to attract visitors and stimulate local economies.
- ❖ **Promote Sustainable Infrastructure and Technology:** Pursue opportunities for the introduction of energy-efficient, environmentally sustainable infrastructure and technologies across the district, reducing the ecological footprint and improving long-term sustainability.

## CHAPTER 3: SPATIAL ANALYSES AND CHALLENGES



### 3.1 INSTITUTIONAL STRUCTURE

#### 3.1.1 Wards

**Figure 11** illustrates the institutional boundaries of the seven Local Municipalities in relation to the district boundary.

Hessequa LM covers the largest area and consists of nine wards, while George LM is the second largest municipality, covering 519,119 ha with eight wards.

#### 3.1.2 Cadastral

**Figure 12** illustrates the cadastral structures of the Garden Route District, and the following can be noted:

- ❖ George LM contains the greatest number of erven of the seven municipalities which represent the urban component of the municipality.
- ❖ Mossel Bay LM contains the second highest number of erven; however, the LM is the 5<sup>th</sup> smallest of the seven local municipalities.
- ❖ Knysna LM has the third highest number of erven, while it covers the second smallest area, followed by Bitou LM.

### 3.2 SOCIO-ECONOMIC PROFILE

#### 3.2.1 Population and Households

#### INFO BOX 1: POPULATION SOURCES AND PROJECTION METHODOLOGY

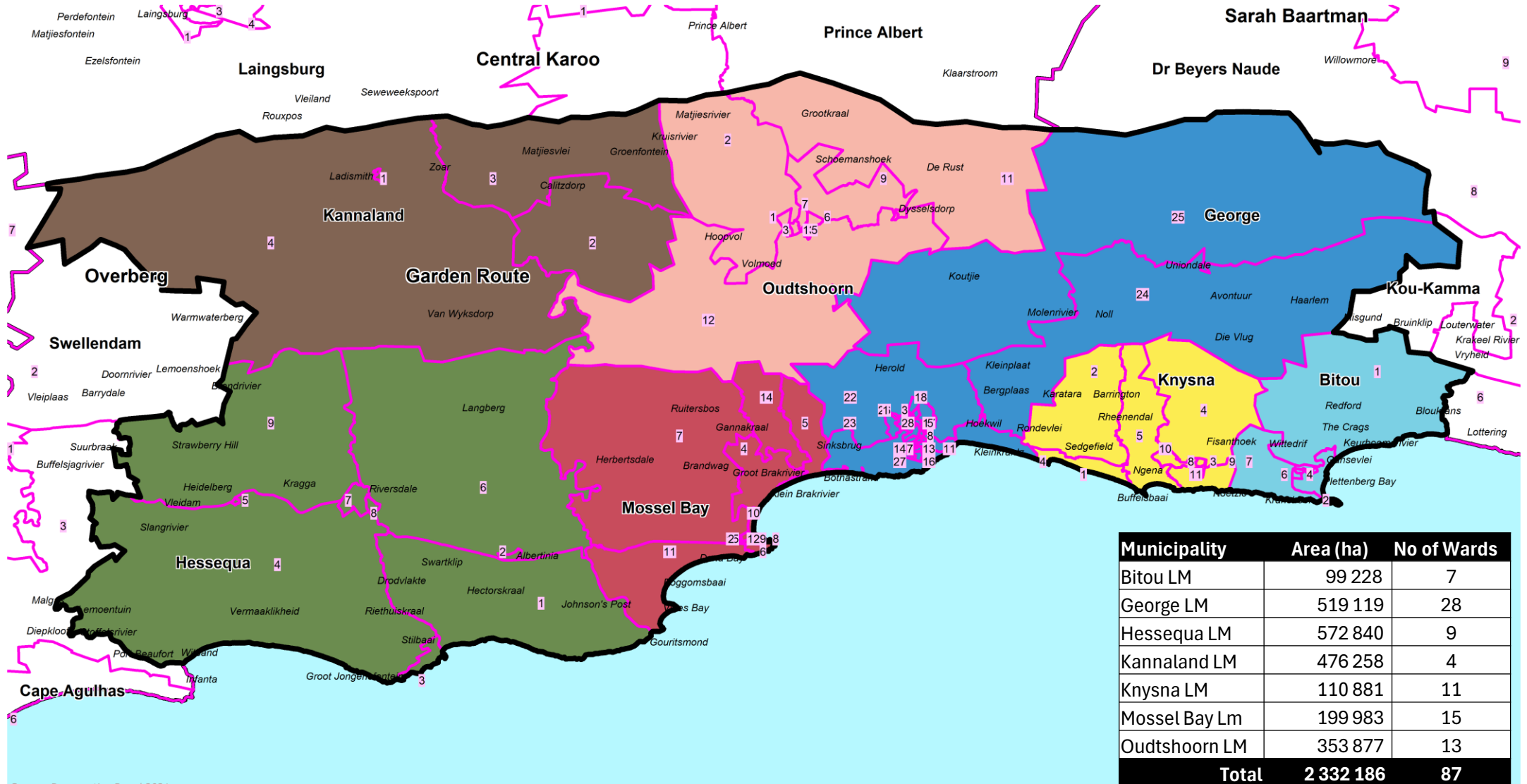
**Table 7** below outlines the methodology which was followed to compile the population and household figures for the district and the respective Local Municipalities. The table is briefly discussed below.

The census was utilized for the historical figures of 2001 and 2011. A combination of sources consisting of Census 2022 and Mid-Year 2024 Provincial Figures (STATSSA) were used to determine the current situation. The projected population figures were informed by the MYPE (WC Government). The trend growth observed from 2001-2022 was utilized to compile the projected populations. The trend growth was further compared to the existing District and Local SDFs.

**Table 7: Sources and Projection Methodology**

	Sources				
	Historic		Current		Projections
Provincial	Census 2001	Census 2011	Census 2022	2024 Mid -Year P0302, STATSSA	2034 Population Estimate: PERO 2024, WC Government
District Municipalities	Census 2001	Census 2011	Census 2022	2024: Derived totals (% per DM kept the same is in 2022)	2034: Used as WC Control Total. Applied Trend Growth to DM's population
Garden Route DM and Local Municipalities	Census 2001	Census 2011	Census 2022	2024: Used DM Total as Control Total: Applied Trend Growth to LM's, and check as far as possible against SDF	2034: Used DM Total as Control Total: Applied Trend Growth to LM's, and check as far as possible against SDF Projections.  2040: Applied Trend Growth to LM's, and check as far as possible against SDF Projections.

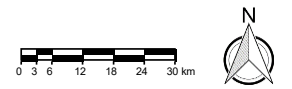
# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : MUNICIPAL AND WARD BOUNDARIES



Municipality	Area (ha)	No of Wards
Bitou LM	99 228	7
George LM	519 119	28
Hessequa LM	572 840	9
Kannaland LM	476 258	4
Knysna LM	110 881	11
Mossel Bay LM	199 983	15
Oudtshoorn LM	353 877	13
<b>Total</b>	<b>2 332 186</b>	<b>87</b>

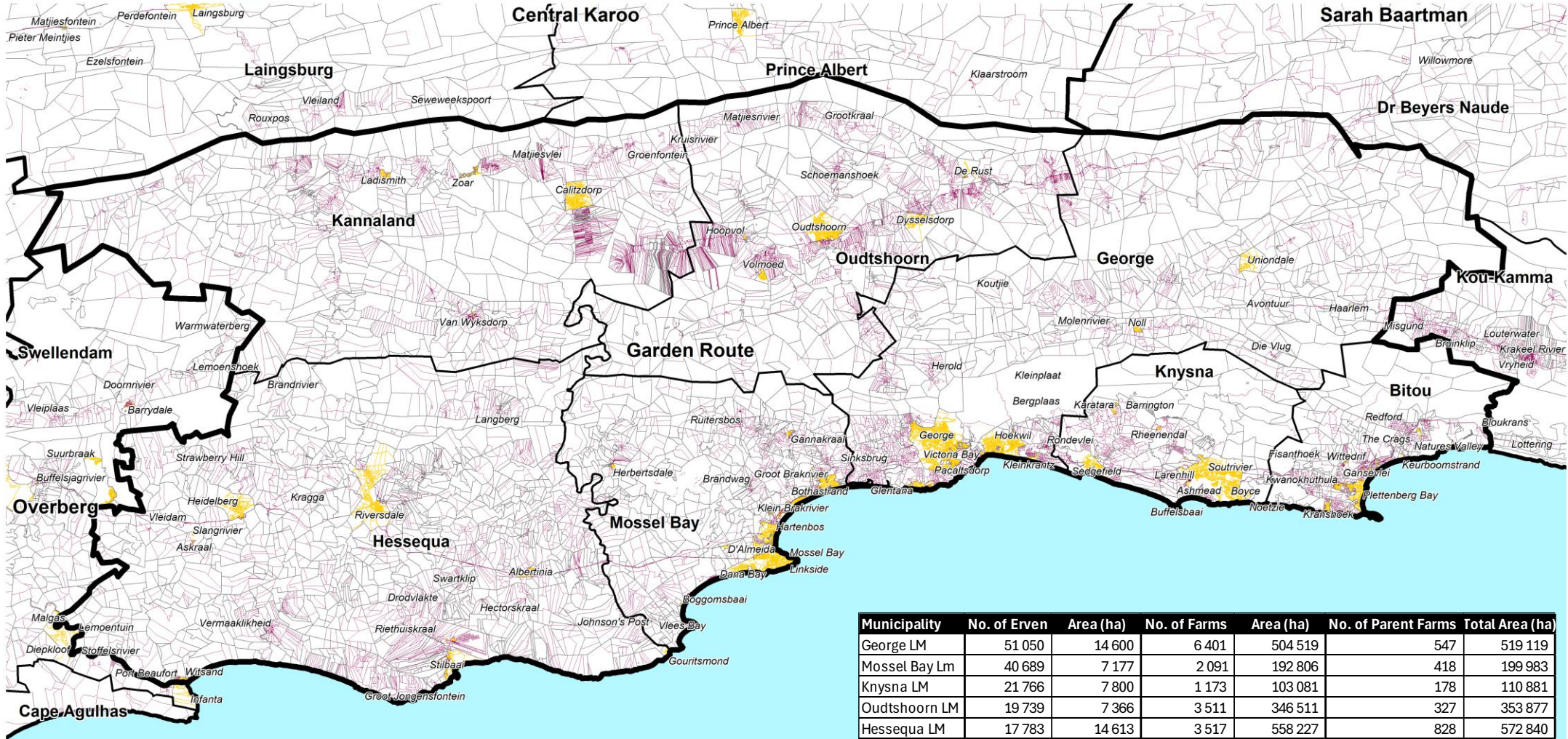
Source: Demarcation Board 2021

- Garden Route DM Boundary
- Local Municipality
- District Municipality
- Bitou LM
- George LM
- Kannaland LM
- Knysna LM
- Hessequa LM
- Mosselbay LM
- Oudtshoorn LM
- Ward Boundaries (2021)



SDF 2025 **Figure 11**

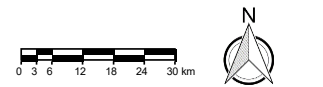
# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : CADASTRAL STRUCTURE



Municipality	No. of Erven	Area (ha)	No. of Farms	Area (ha)	No. of Parent Farms	Total Area (ha)
George LM	51 050	14 600	6 401	504 519	547	519 119
Mossel Bay Lm	40 689	7 177	2 091	192 806	418	199 983
Knysna LM	21 766	7 800	1 173	103 081	178	110 881
Oudtshoorn LM	19 739	7 366	3 511	346 511	327	353 877
Hessequa LM	17 783	14 613	3 517	558 227	828	572 840
Bitou LM	15 404	1 928	1 865	97 300	243	99 228
Kannaland LM	6 560	3 238	3 084	473 020	474	476 258
<b>Total</b>	<b>172 991</b>	<b>56 723</b>	<b>21 642</b>	<b>2 275 463</b>	<b>3 015</b>	<b>2 332 186</b>

Source: Demarcation Board 2021; Mowbray 2024

- Garden Route DM Boundary
- Local Municipality
- District Municipality
- Erven
- Farm Portions
- Parent Farms



**Table 8** outlines the historic (2011) Census and current (2024) population for the 6 DMs, Western Cape Province and South Africa. The Western Cape Province’s percentage contribution to SA population increased from 11.2% in 2011 to 12% in 2024. GRDM’s percentage contribution to the Western Cape Province increased by 1.4% since 2011.

**Table 8: Western Cape Province – Population per DM, 2011, 2022, 2024**

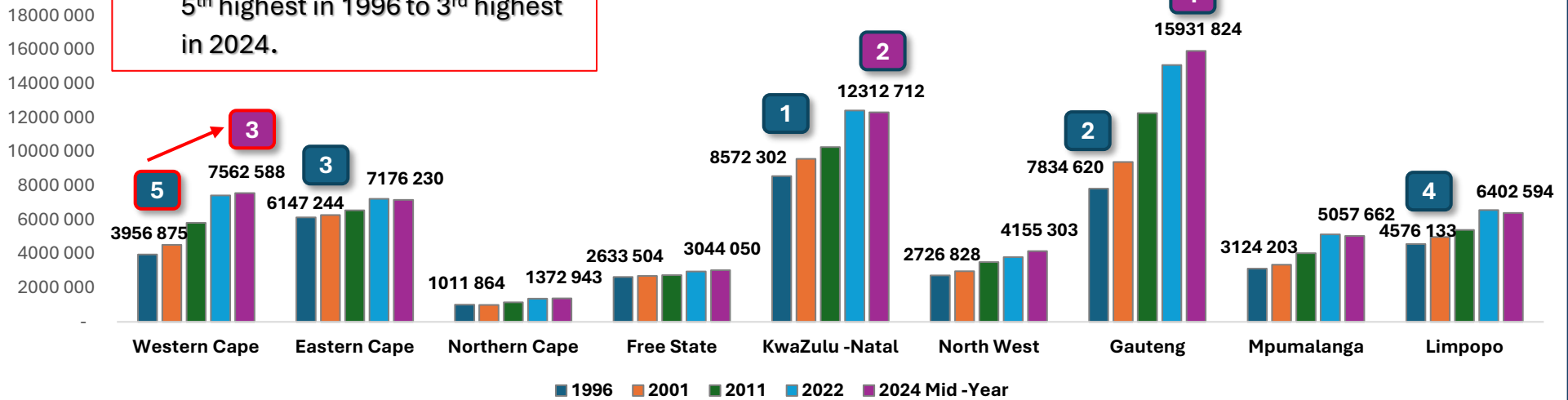
Municipality	Population						Incremental Population		Incremental Population p.a.		Growth p.a.	
	Census 2011	%	Census 2022	%	2024 Mid - Year	%	2011-2022	2022-2024	2011-2022	2022-2024	2011-2022	2022-2024
CAPE WINELANDS DM	787 485	13,5%	862 703	11,6%	877 741	11,6%	75 218	15 038	6 838	7 519	0,8%	0,9%
CENTRAL KAROO DM	71 011	1,2%	102 174	1,4%	103 955	1,4%	31 163	1 781	2 833	891	3,4%	0,9%
CITY OF CAPE TOWN	3 740 031	64,2%	4 772 846	64,2%	4 856 042	64,2%	1 032 815	83 196	93 892	41 598	2,2%	0,9%
OVERBERG DM	258 176	4,4%	359 446	4,8%	365 712	4,8%	101 270	6 266	9 206	3 133	3,1%	0,9%
WEST COAST DM	391 767	6,7%	497 393	6,7%	506 063	6,7%	105 626	8 670	9 602	4 335	2,2%	0,9%
GARDEN ROUTE DM	574 265	9,9%	838 460	11,3%	853 075	11,3%	264 195	14 615	24 018	7 308	3,5%	0,9%
<b>WC</b>	<b>5 822 735</b>	<b>100%</b>	<b>7 433 022</b>	<b>100%</b>	<b>7 562 588</b>	<b>100%</b>	<b>1 610 287</b>	<b>129 566</b>	<b>146 390</b>	<b>64 783</b>	<b>2,2%</b>	<b>0,9%</b>
<b>SA</b>	<b>51 770 561</b>	<b>11,2%</b>	<b>62 027 502</b>	<b>12,0%</b>	<b>63 015 906</b>	<b>12,0%</b>	<b>10 256 941</b>	<b>988 404</b>	<b>932 449</b>	<b>494 202</b>	<b>1,7%</b>	<b>0,8%</b>

**Diagram 5** (overleaf) outlines the various provincial population figures and respective growth. The following can be noted:

- ❖ The WC Province increased from the 5<sup>th</sup> highest population in 1996 to the 3<sup>rd</sup> highest in 2024 in South Africa.
- ❖ WC Province: The largest population increment (2011-2024) occurred in City of Cape Town, followed by Garden Route DM (278 810 people).
- ❖ GRDM is the 3<sup>rd</sup> largest DM in WC Province.

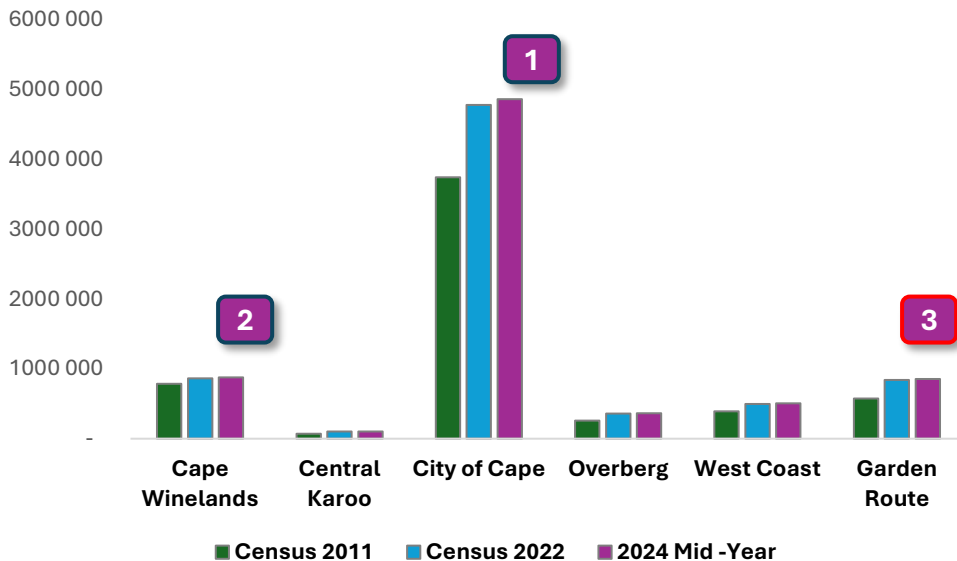
- WC population increased from 5<sup>th</sup> highest in 1996 to 3<sup>rd</sup> highest in 2024.

Population per Province

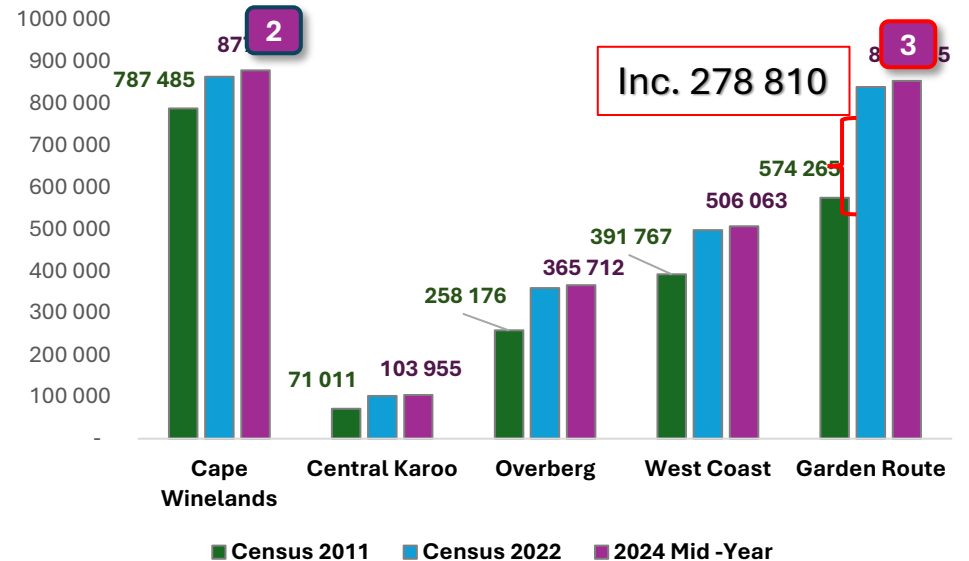


- DM: GRDM 3<sup>rd</sup> largest DM in WC (2024).
- DM: largest population increment (2011-2024) occurred in City of CT, followed by GRDM (278,810 people).

WC: Population per DM



WC: Population per DM (excl. City of Cape Town)



**Table 9** and **Table 10** outlines the population and household numbers for the district and the seven Local Municipalities, and the following can be noted:

- ❖ Currently George LM has the highest population, followed by Mossel Bay and Oudtshoorn.
- ❖ George LM grew with 44 236 people between 2001-2011 and 101 257 from 2011-2022 which translates to a growth per annum of 2.6% (2001-2011) and 3.9% (2011-2022) respectively.
- ❖ The incremental population growth or influx of people per annum increased from 11 934 (2001-2011) to 24 018 (2011-2022).
- ❖ The highest population growth per annum took place in Mossel Bay LM with 4.2% (2011-2022).
- ❖ The total number of households grew by a higher percentage in comparison to the population growth. Higher household growth in comparison to population growth may be attributed to declining household sizes, urban migration and better job opportunities. The household growth per annum increased from 3.2% (2001-2011) to 4.1% (2011-2022).
- ❖ Mossel Bay (6%) and George (4.4%) Local Municipalities have the highest household growth per annum of the seven LMs.

**Table 9: Garden Route District Municipality: Population 2001-2024**

	Population				Incremental		Incremental		Growth p.a.	
	Census 2001	Census 2011	Census 2022	2024	2001-2011	2011-2022	2001-2011	2011-2022	2001-2011	2011-2022
Kannaland	23,971	24,767	31,986	32,385	796	7,219	80	656	0.3%	2.4%
Hessequa	44,114	52,642	71,918	72,984	8,528	19,276	853	1,752	1.8%	2.9%
Mossel Bay	71,494	89,430	140,075	142,877	17,936	50,645	1,794	4,604	2.3%	4.2%
George	149,436	193,672	294,929	300,531	44,236	101,257	4,424	9,205	2.6%	3.9%
Oudtshoorn	84,692	95,933	138,257	140,598	11,241	42,324	1,124	3,848	1.3%	3.4%
Bitou	29,182	49,162	65,240	66,129	19,980	16,078	1,998	1,462	5.4%	2.6%
Knysna	52,035	68,659	96,055	97,571	16,624	27,396	1,662	2,491	2.8%	3.1%
<b>Total Garden</b>	<b>454,924</b>	<b>574,265</b>	<b>838,460</b>	<b>853,075</b>	<b>119,341</b>	<b>264,195</b>	<b>11,934</b>	<b>24,018</b>	<b>2.4%</b>	<b>3.5%</b>

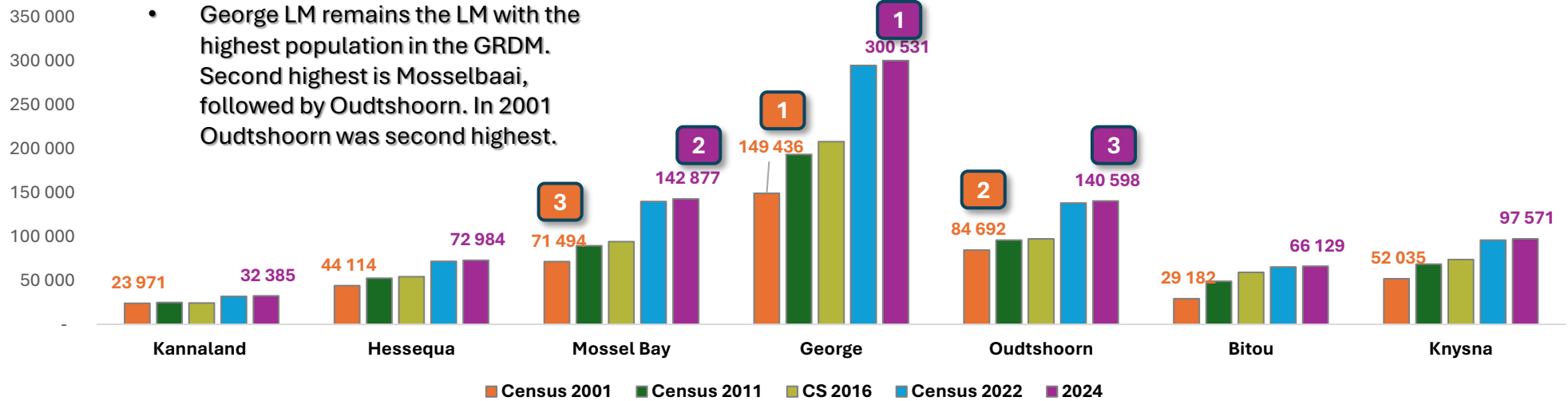
**Table 10: Garden Route District Municipality: Households 2001-2024**

	Households					Incremental Households		Incremental Households p.a.		Growth p.a.	
	Census 2001	Census 2011	Census 2022	2024	2034	2001-2011	2011-2022	2001-2011	2011-2022	2001-2011	2011-2022
Kannaland	6,070	6,212	8,686	8,823	10,370	142	2,474	14	225	0.2%	3.1%
Hessequa	12,510	15,873	22,333	22,690	28,296	3,363	6,460	336	587	2.4%	3.2%
Mossel Bay	20,060	28,025	52,985	54,366	74,177	7,965	24,960	797	2,269	3.4%	6.0%
George	38,867	53,551	85,931	87,722	116,595	14,684	32,380	1,468	2,944	3.3%	4.4%
Oudtshoorn	18,124	21,910	31,795	32,342	36,885	3,786	9,885	379	899	1.9%	3.4%
Bitou	8,763	16,645	21,848	22,136	27,241	7,882	5,203	788	473	6.6%	2.5%
Knysna	14,913	21,893	32,398	32,979	39,908	6,980	10,505	698	955	3.9%	3.6%
<b>Total Garden</b>	<b>119,307</b>	<b>164,109</b>	<b>255,976</b>	<b>261,058</b>	<b>333,472</b>	<b>44,802</b>	<b>91,867</b>	<b>4,480</b>	<b>8,352</b>	<b>3.2%</b>	<b>4.1%</b>

**Diagram 6** and **Diagram 7** graphically illustrate the population and household numbers for the district and the local municipalities, and the following is noted:

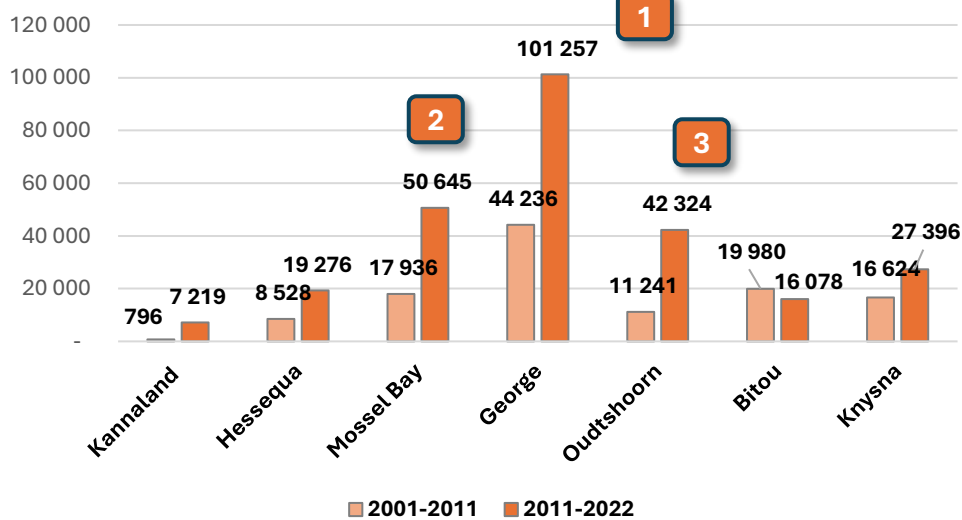
- ❖ George LM remains the Municipality with the highest population.
- ❖ In 2001 and 2011, Oudtshoorn LM had the 2<sup>nd</sup> highest population, but was surpassed by Mossel Bay LM in 2022.
- ❖ The largest household increment (2011-2022) took place in George, followed by Mossel Bay and Knysna.
- ❖ Bitou LM recorded a decline in household growth (increment 2001-2011) compared to 2011-2022.

Population per LM

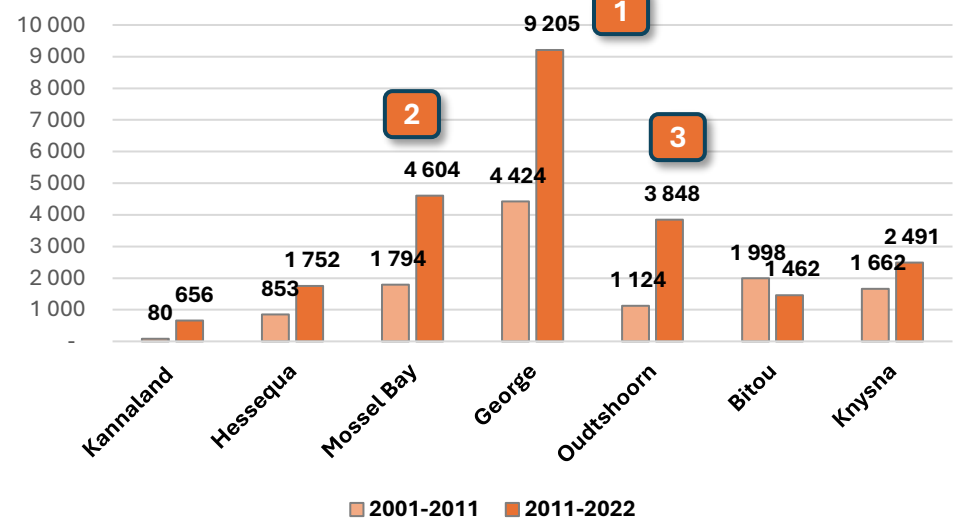


- Largest increment (2011-2022) took place in George, followed by Mosselbaai and Oudtshoorn.

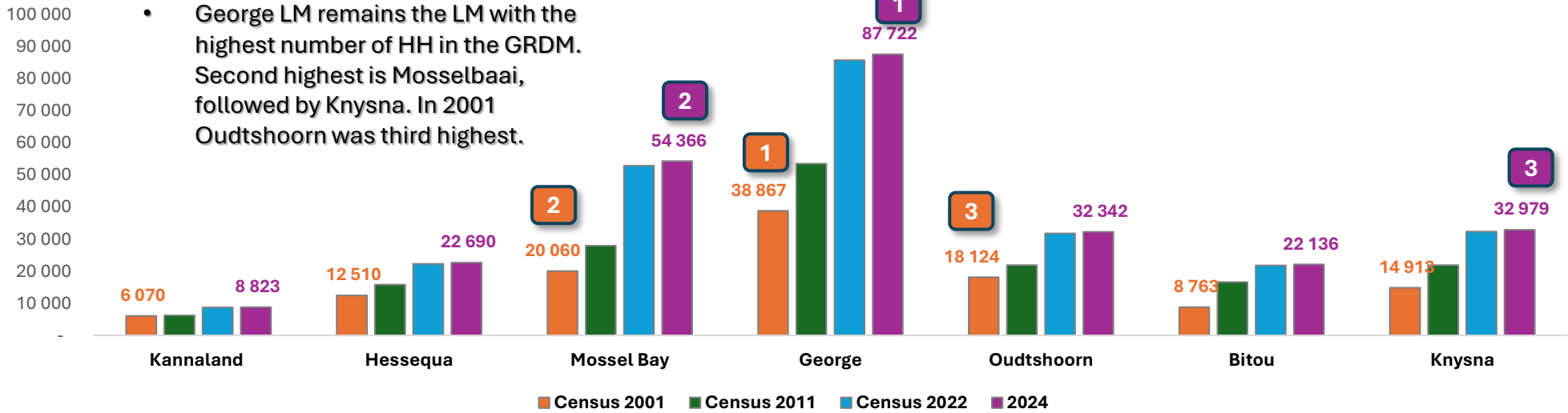
LM: Population Increment



LM: Population Increment p.a.

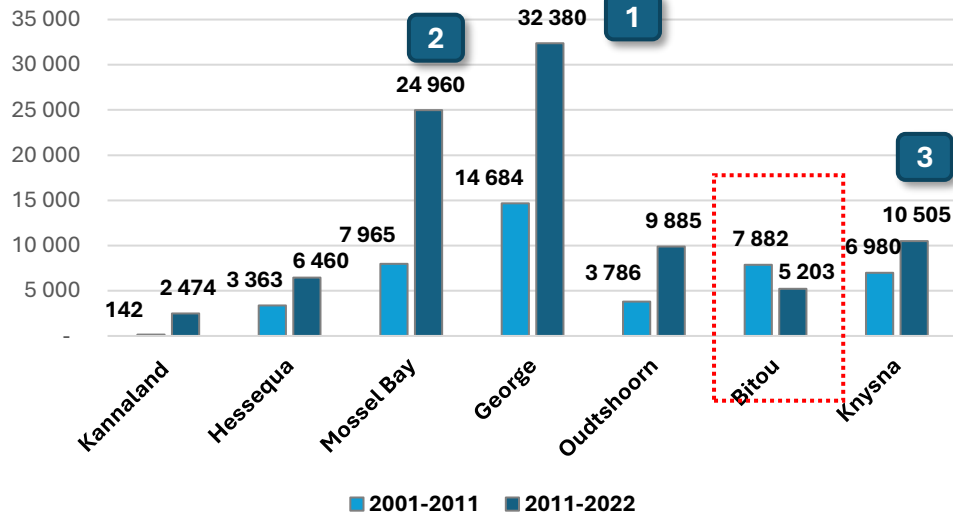


Households per LM

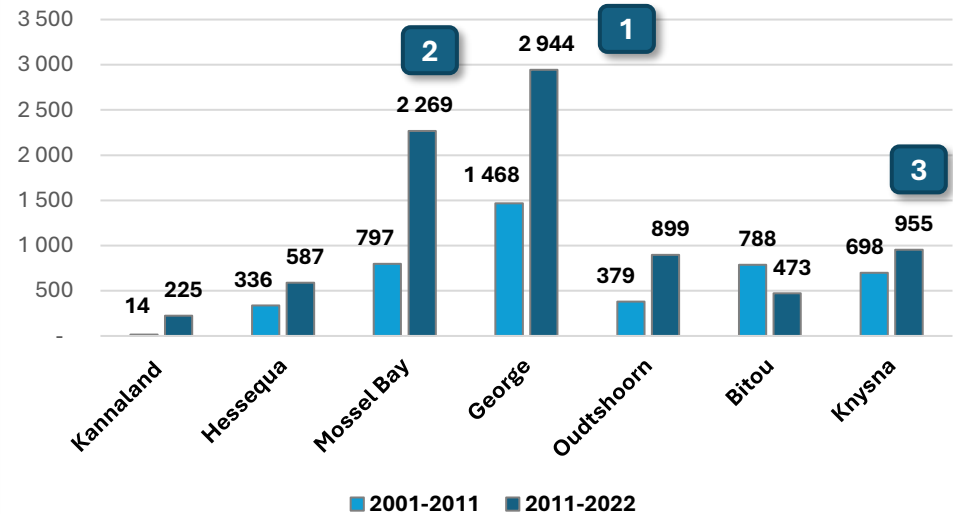


- Largest increment (2011-2022) took place in George, followed by Mosselbaai and Knysna.
- Bitou LM recorded a decline in household growth (increment 2001-2022) compared to 2001-2011.

LM: Incremental Households



LM: Incremental Households p.a.



## **POPULATION AND HOUSEHOLD PROJECTIONS**

**Table 11** outlines the historic, current and projected population for the 6 DM's, Western Cape Province and South Africa. The 2034 Projection is based on the projects for Western Cape, KwaZulu Natal and Gauteng Projects (PERO2024, WC Government). (refer to Info Box 1: Population and Projection Methodology).

The following can be noted from Table 11 and **Diagram 8**:

- ❖ Western Cape Province's percentage contribution to South Africa's population increased from 11,2% in 2011 to 12% in 2022 and 2024. It is expected to increase further to 12,4% in 2034 (PERO 2024, WC Government). The Total population in the Western Cape Province is expected to be approximately 8,76 million.
- ❖ GRDM's contribution gradually increased from 9,9% in 2011 to 11,3% in 2022 and 2014. It was assumed that (Based on the trend increase in contribution) it could further increase to 11,8% in 2034, becoming the second largest DM in the Western cape Province by 2034. The population in Garden Route DM is expected to be approximately 1,04 million by 2034.

**Table 12** outlines the historic, current and population projections for the 7 LMs within GRDM.

The projects are based on the following assumptions as described in (refer to Info Box 1):

- ❖ WC Population Control Total (2034 derived from PERO 2024) 8,75 million people.
- ❖ Assumption on % contribution of GRDM (11,9%) by 2034 (1,04 million people)
- ❖ % Population Contribution per LM follows historic Trend (2001 to 2022) through to 2040.

- ❖ Incremental population per annum per LM follows historic Trend (2001 to 2022) up to 2040.

The following can be noted from Table 12 and **Diagram 9**

- ❖ The total GRDM population is expected to increase from 838 450 (Census 2022) to 1,043 million in 2034 (an increment of 204 339), on to 1,125 million in 2040 (an increment of 82 500 people)
- ❖ George LM remains the LM with the highest population in GRDM (an increase from 294 2929 people in 2022 to an expected 432 531 by 2040 which translates to an increase in contribution from 35,2% in 2022 to 38,4% in 2040) see **Table 13**.
- ❖ The second highest contribution is by Mossel Bay LM (16,7% in 2022) and expected to increase to 17,6% by 2040 (an increase of 57 800 people from 2022 to 2040).

**Annexure A** includes diagrams per LM showing population and household projects, sources used and notes.

**Table 11: Western Cape Province – Population per DM, 2011 2022, 2024, 2034**

Municipality	Population								Incremental Population			Incremental Population p.a.			Growth p.a.		
	Census 2011	%	Census 2022	%	2024 Mid - Year	%	2034	%	2011-2022	2022-2024	2024-2034	2011-2022	2022-2024	2024-2034	2011-2022	2022-2024	2024-2034
CAPE WINELANDS DM	787 485	13,5%	862 703	11,6%	877 741	11,6%	941 607	10,8%	75 218	15 038	63 866	6 838	7 519	6 387	0,8%	0,9%	0,7%
CENTRAL KAROO DM	71 011	1,2%	102 174	1,4%	103 955	1,4%	127 101	1,5%	31 163	1 781	23 146	2 833	891	2 315	3,4%	0,9%	2,0%
CITY OF CAPE TOWN	3 740 031	64,2%	4 772 846	64,2%	4 856 042	64,2%	5 621 639	64,2%	1 032 815	83 196	765 597	93 892	41 598	76 560	2,2%	0,9%	1,5%
OVERBERG DM	258 176	4,4%	359 446	4,8%	365 712	4,8%	440 927	5,0%	101 270	6 266	75 216	9 206	3 133	7 522	3,1%	0,9%	1,9%
WEST COAST DM	391 767	6,7%	497 393	6,7%	506 063	6,7%	584 514	6,7%	105 626	8 670	78 451	9 602	4 335	7 845	2,2%	0,9%	1,5%
GARDEN ROUTE DM	574 265	9,9%	838 460	11,3%	853 075	11,3%	1 042 799	11,9%	264 195	14 615	189 724	24 018	7 308	18 972	3,5%	0,9%	2,0%
<b>WC</b>	<b>5 822 735</b>	<b>100%</b>	<b>7 433 022</b>	<b>100%</b>	<b>7 562 588</b>	<b>100%</b>	<b>8 758 588</b>	<b>100%</b>	<b>1 610 287</b>	<b>129 566</b>	<b>1 196 000</b>	<b>146 390</b>	<b>64 783</b>	<b>119 600</b>	<b>2,2%</b>	<b>0,9%</b>	<b>1,5%</b>
<b>SA</b>	<b>51 770 561</b>	<b>11,2%</b>	<b>62 027 502</b>	<b>12,0%</b>	<b>63 015 906</b>	<b>12,0%</b>	<b>70 871 906</b>	<b>12,4%</b>	<b>10 256 941</b>	<b>988 404</b>	<b>7 856 000</b>	<b>932 449</b>	<b>494 202</b>	<b>785 600</b>	<b>1,7%</b>	<b>0,8%</b>	<b>1,2%</b>

Sources:

STATSA Municipal Profile, 2011, 2022

Mid- Year Population Estimates, 2024, P0302, STATSSA

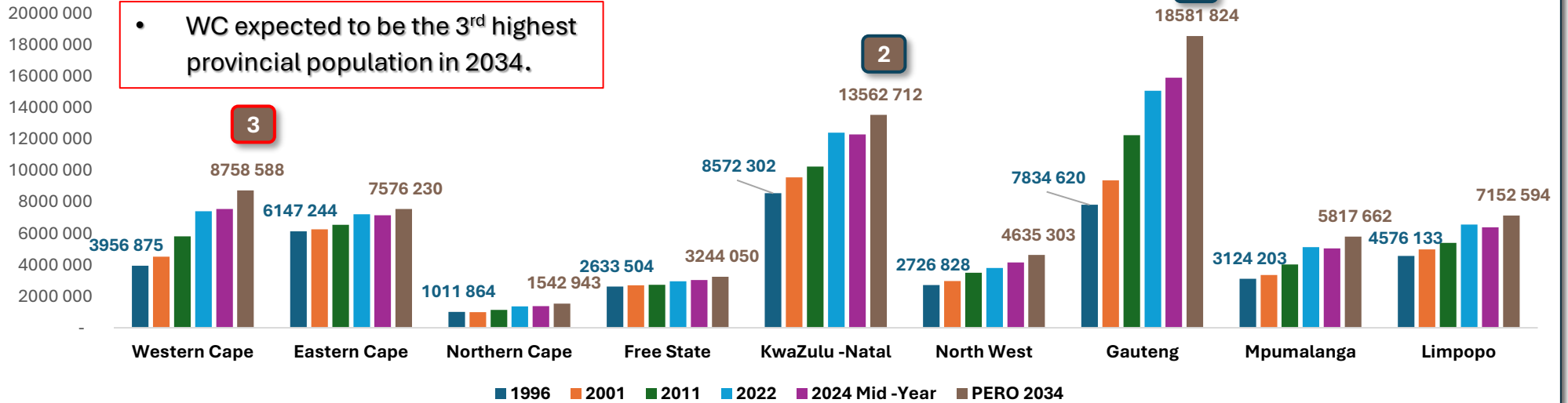
2034 Population Estimate: PERO 2024, WC Government, Projections for WC, KZN, Gauteng (Figure 4.2)

2034 Population per LM: Trend Growth Assumption

**Table 12: Garden Route District Municipality: Population Projects 2030, 2040**

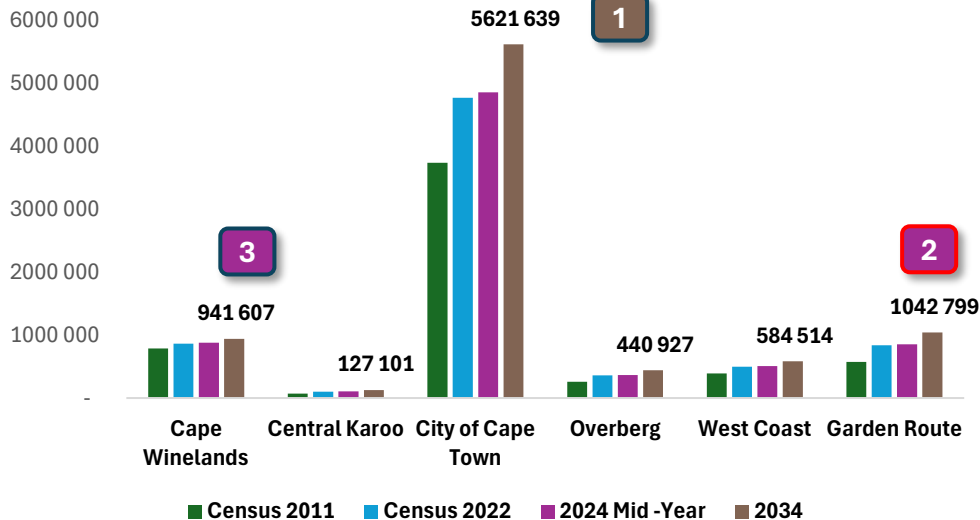
	Population							Incremental Population						Incremental Population p.a.					Growth p.a.						
	Census 2001	Census 2011	CS 2016	Census 2022	2024	2034	2040	2001-2011	2011-2022	2022-2024	2024-2034	2034-2040	2040-2040	2001-2011	2011-2022	2022-2024	2024-2034	2034-2040	2040-2040	2001-2011	2011-2022	2022-2024	2024-2034	2034-2040	2040-2040
Kannaland	23 971	24 767	24 168	31 986	32 385	36 885	38 685	796	7 219	399	4 500	1 800	6 300	80	656	200	450	300	394	0,3%	2,4%	0,6%	1,3%	0,8%	1,1%
Hessequa	44 114	52 642	54 237	71 918	72 984	82 984	87 484	8 528	19 276	1 066	10 000	4 500	14 500	853	1 752	533	1 000	750	906	1,8%	2,9%	0,7%	1,3%	0,9%	1,1%
Mossel Bay	71 494	89 430	94 135	140 075	142 877	182 877	197 877	17 936	50 645	2 802	40 000	15 000	55 000	1 794	4 604	1 401	4 000	2 500	3 438	2,3%	4,2%	1,0%	2,5%	1,3%	2,1%
George	149 436	193 672	208 237	294 929	300 531	390 531	432 531	44 236	101 257	5 602	90 000	42 000	132 000	4 424	9 205	2 801	9 000	7 000	8 250	2,6%	3,9%	0,9%	2,7%	1,7%	2,3%
Oudtshoorn	84 692	95 933	97 509	138 257	140 598	154 598	158 798	11 241	42 324	2 341	14 000	4 200	18 200	1 124	3 848	1 171	1 400	700	1 138	1,3%	3,4%	0,8%	1,0%	0,4%	0,8%
Bitou	29 182	49 162	59 157	65 240	66 129	79 353	85 353	19 980	16 078	889	13 224	6 000	19 224	1 998	1 462	445	1 322	900	1 202	5,4%	2,6%	0,7%	1,8%	1,2%	1,6%
Knysna	52 035	68 659	73 835	96 055	97 571	115 571	124 571	16 624	27 396	1 516	18 000	9 000	27 000	1 662	2 491	758	1 800	1 500	1 688	2,8%	3,1%	0,8%	1,7%	1,3%	1,5%
<b>Total Garden</b>	<b>454 924</b>	<b>574 265</b>	<b>611 278</b>	<b>838 460</b>	<b>853 075</b>	<b>1 042 799</b>	<b>1 125 299</b>	<b>119 341</b>	<b>264 195</b>	<b>14 615</b>	<b>189 724</b>	<b>82 500</b>	<b>272 224</b>	<b>11 934</b>	<b>24 018</b>	<b>7 308</b>	<b>18 972</b>	<b>13 750</b>	<b>17 014</b>	<b>2,4%</b>	<b>3,5%</b>	<b>0,9%</b>	<b>2,0%</b>	<b>1,3%</b>	<b>1,7%</b>

Population per Province (2034)

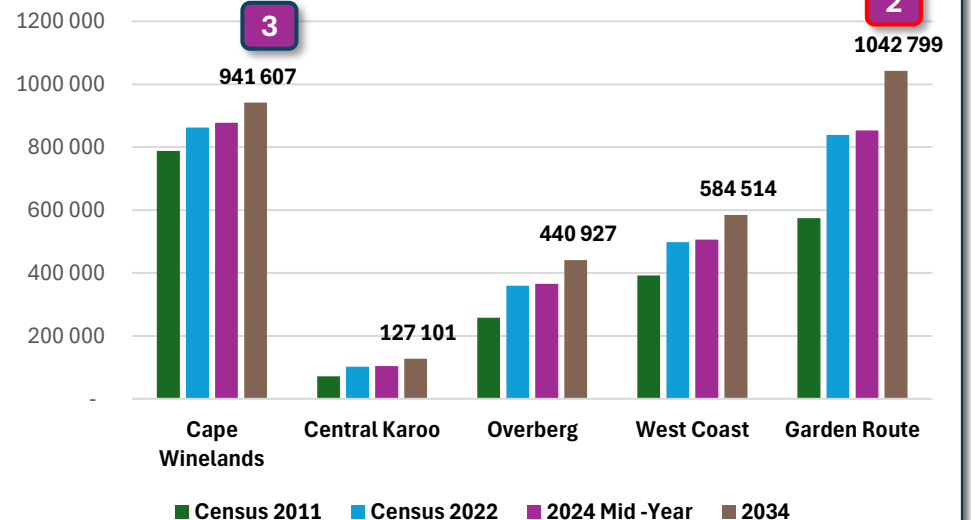


- DM: GRDM 3<sup>rd</sup> largest DM in WC (2024) but is expected to become the 2<sup>nd</sup> largest DM by 2034.

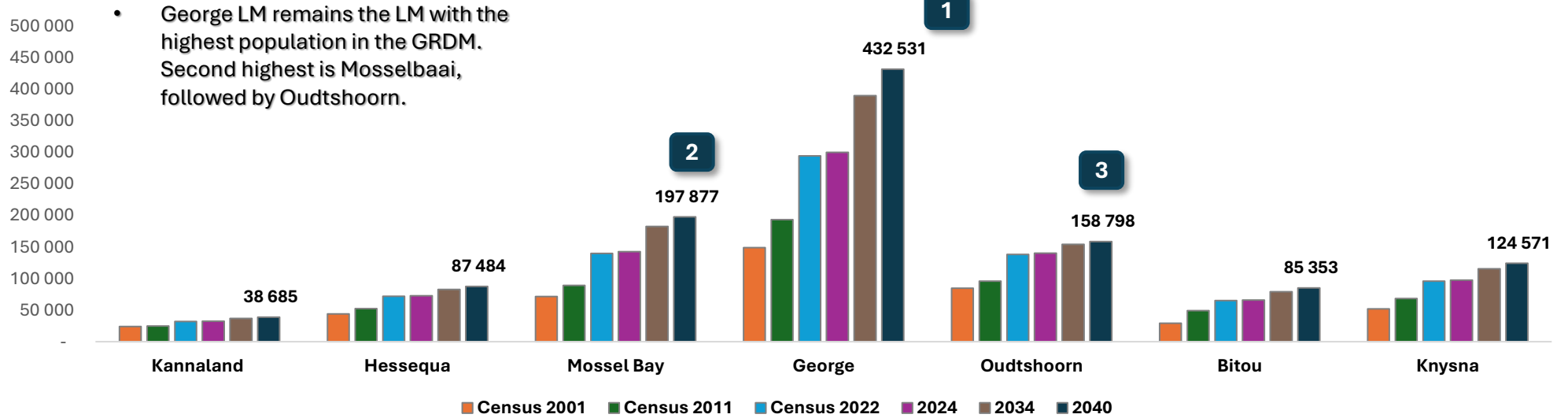
WC: Population per DM (2034)



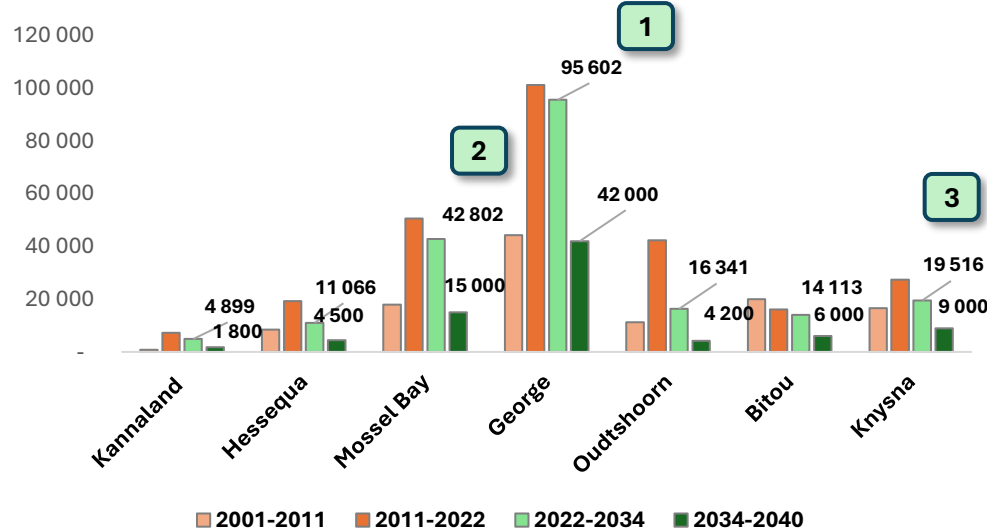
WC: Population per DM (2034) (excl. City of Cape Town)



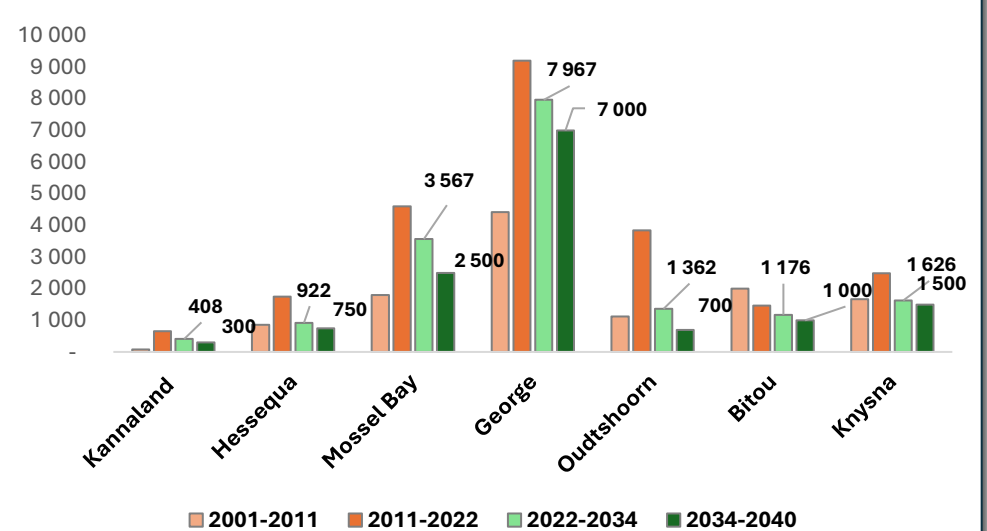
Population per LM



Incremental Population



Inc. Population p.a.



**Table 13: Garden Route District Municipality: Population (%)**

Population						
Local Municipality	Census 2001	Census 2011	Census 2022	2024	2034	2040
Kannaland	5,3%	4,3%	3,8%	3,8%	3,5%	3,4%
Hessequa	9,7%	9,2%	8,6%	8,6%	8,0%	7,8%
Mossel Bay	15,7%	15,6%	16,7%	16,7%	17,5%	17,6%
George	32,8%	33,7%	35,2%	35,2%	37,5%	38,4%
Oudtshoorn	18,6%	16,7%	16,5%	16,5%	14,8%	14,1%
Bitou	6,4%	8,6%	7,8%	7,8%	7,6%	7,6%
Knysna	11,4%	12,0%	11,5%	11,4%	11,1%	11,1%
<b>Total Garden</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>

**Table 14** represents the expected number of households per LM, following the same trend principles described above. Added to the calculation of households is the household size, which is expected to slightly decline in future, from 3,3 in 2022 to 3,1 by 2040 (based on declining household size since 2001) see **Table 15**.

The following can be noted from **Table 16** and **Diagram 10**:

- ❖ The number of households is expected to increase from 255 976 (Census 2022) to more than 367 400 in 2040.
- ❖ The largest contribution is George LM, which is expected to grow from 85 931 (Census 2022) to 131 244 in 2040 (a contribution which increased from 33,6% in Census 2022 to 35,7% in 2040).
- ❖ The second largest contribution to households in GRDM was Mossel Bay with 52 985 (Census 2022) and is expected to increase to 81 643 by 2040. (Increase in contribution from 20,7% in Census 2022 to 22,2% in 2040).

**Table 14: Garden Route District Municipality: Household Projections 2030, 2040**

	Households						Incremental Households						Incremental Households p.a.						Growth p.a.					
	Census 2001	Census 2011	Census 2022	2024	2034	2040	2001-2011	2011-2022	2022-2024	2024-2034	2034-2040	2024-2040	2001-2011	2011-2022	2022-2024	2024-2034	2034-2040	2024-2040	2001-2011	2011-2022	2022-2024	2024-2034	2034-2040	2024-2040
Kannaland	6 070	6 212	8 686	8 823	10 370	10 991	142	2 474	137	1 547	621	2 169	14	225	68	155	104	136	0,2%	3,1%	0,8%	1,6%	1,0%	1,4%
Hessequa	12 510	15 873	22 333	22 690	28 296	31 230	3 363	6 460	357	5 606	2 934	8 539	336	587	179	561	489	534	2,4%	3,2%	0,8%	2,2%	1,7%	2,0%
Mossel Bay	20 060	28 025	52 985	54 366	74 177	81 643	7 965	24 960	1 381	19 811	7 466	27 278	797	2 269	690	1 981	1 244	1 705	3,4%	6,0%	1,3%	3,2%	1,6%	2,6%
George	38 867	53 551	85 931	87 722	116 595	131 244	14 684	32 380	1 791	28 873	14 649	43 521	1 468	2 944	896	2 887	2 441	2 720	3,3%	4,4%	1,0%	2,9%	2,0%	2,5%
Oudtshoorn	18 124	21 910	31 795	32 342	36 885	38 368	3 786	9 885	547	4 543	1 483	6 026	379	899	273	454	247	377	1,9%	3,4%	0,9%	1,3%	0,7%	1,1%
Bitou	8 763	16 645	21 848	22 136	27 241	30 112	7 882	5 203	288	5 106	2 871	7 976	788	473	144	511	478	499	6,6%	2,5%	0,7%	2,1%	1,7%	1,9%
Knysna	14 913	21 893	32 398	32 979	39 908	43 824	6 980	10 505	581	6 929	3 917	10 845	698	955	291	693	653	678	3,9%	3,6%	0,9%	1,9%	1,6%	1,8%
<b>Total Garden</b>	<b>119 307</b>	<b>164 109</b>	<b>255 976</b>	<b>261 058</b>	<b>333 472</b>	<b>367 413</b>	<b>44 802</b>	<b>91 867</b>	<b>5 082</b>	<b>72 414</b>	<b>33 940</b>	<b>106 355</b>	<b>4 480</b>	<b>8 352</b>	<b>2 541</b>	<b>7 241</b>	<b>5 657</b>	<b>6 647</b>	<b>3,2%</b>	<b>4,1%</b>	<b>1,0%</b>	<b>2,5%</b>	<b>1,6%</b>	<b>2,2%</b>

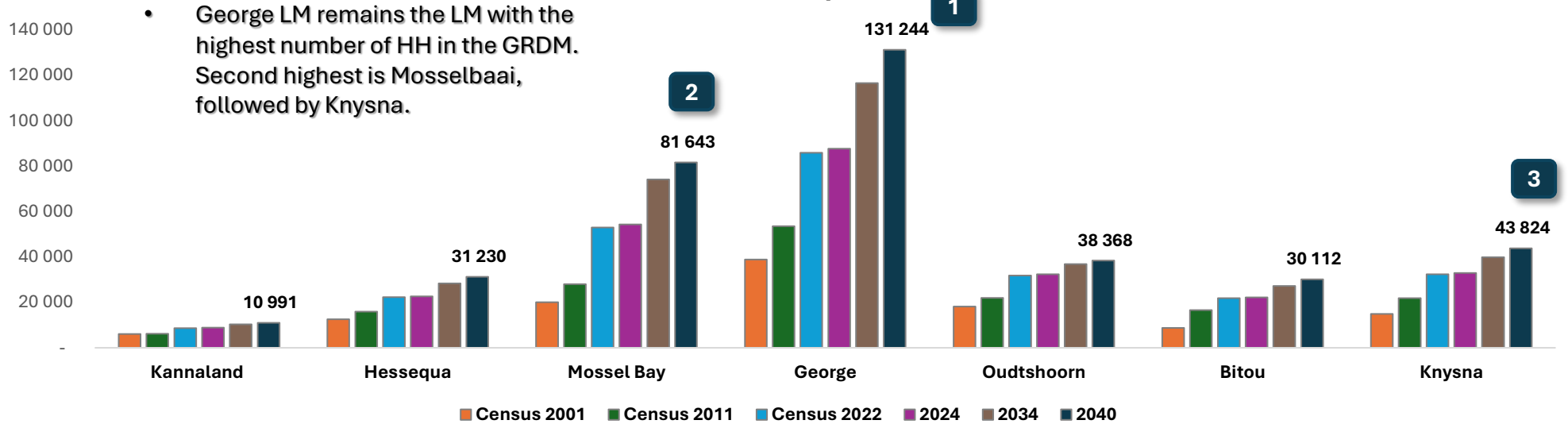
**Table 15: Garden Route District Municipality: Household Size 2001-2040**

	Census 2001	Census 2011	Census 2022	2024	2034	2040
Kannaland	3,9	4,0	3,7	3,7	3,6	3,5
Hessequa	3,5	3,3	3,2	3,2	2,9	2,8
Mossel Bay	3,6	3,2	2,6	2,6	2,5	2,4
George	3,8	3,6	3,4	3,4	3,3	3,3
Oudtshoorn	4,7	4,4	4,3	4,3	4,2	4,1
Bitou	3,3	3,0	3,0	3,0	2,9	2,8
Knysna	3,5	3,1	3,0	3,0	2,9	2,8
<b>Total Garden</b>	<b>3,8</b>	<b>3,5</b>	<b>3,3</b>	<b>3,3</b>	<b>3,1</b>	<b>3,1</b>

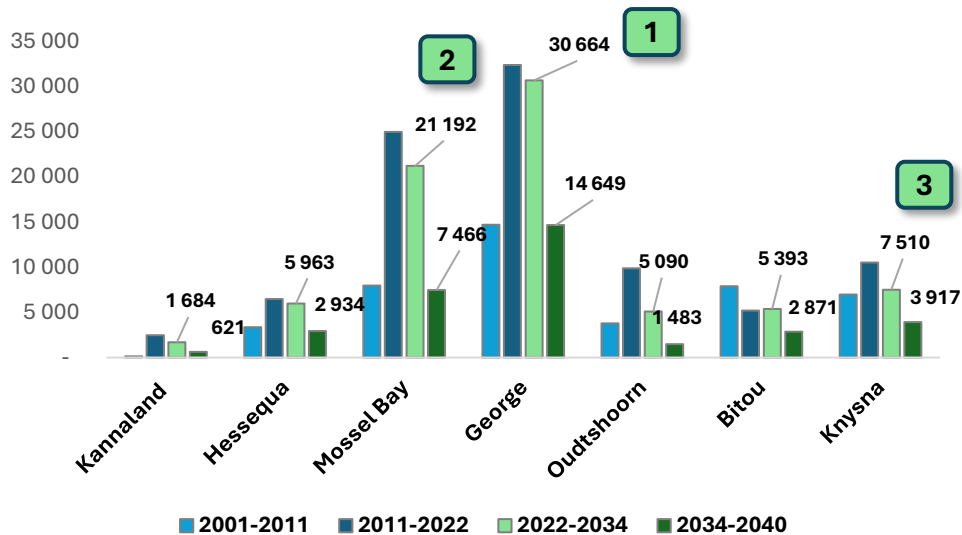
**Table 16: Garden Route District Municipality: Household (%)**

Local Municipality	Population					
	Census 2001	Census 2011	Census 2022	2024	Eden SDF 2040	2040
Kannaland	5,1%	3,8%	3,4%	3,4%	3,1%	3,0%
Hessequa	10,5%	9,7%	8,7%	8,7%	8,5%	8,5%
Mossel Bay	16,8%	17,1%	20,7%	20,8%	22,2%	22,2%
George	32,6%	32,6%	33,6%	33,6%	35,0%	35,7%
Oudtshoorn	15,2%	13,4%	12,4%	12,4%	11,1%	10,4%
Bitou	7,3%	10,1%	8,5%	8,5%	8,2%	8,2%
Knysna	12,5%	13,3%	12,7%	12,6%	12,0%	11,9%
<b>Total Garden</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>	<b>100,0%</b>

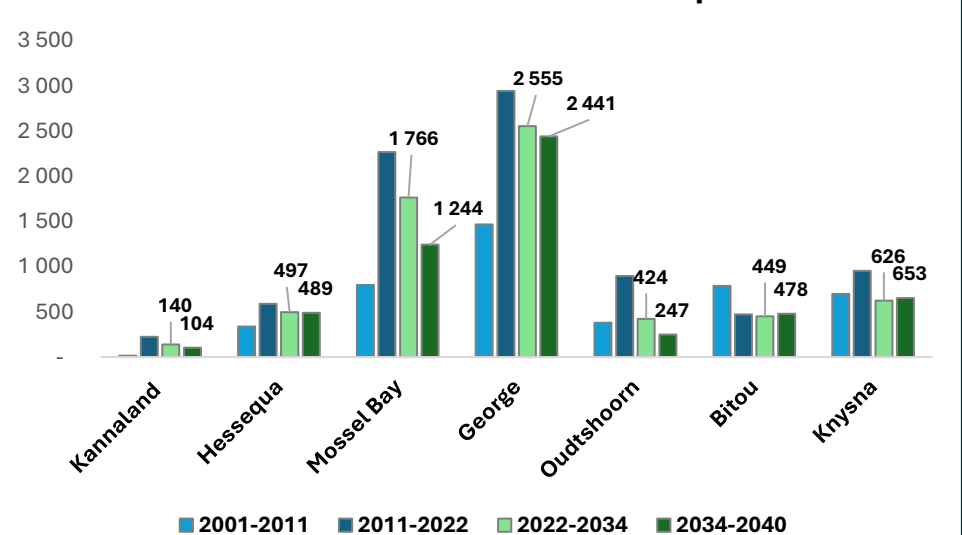
Households per LM



LM: Incremental Households



LM: Incremental Households p.a.



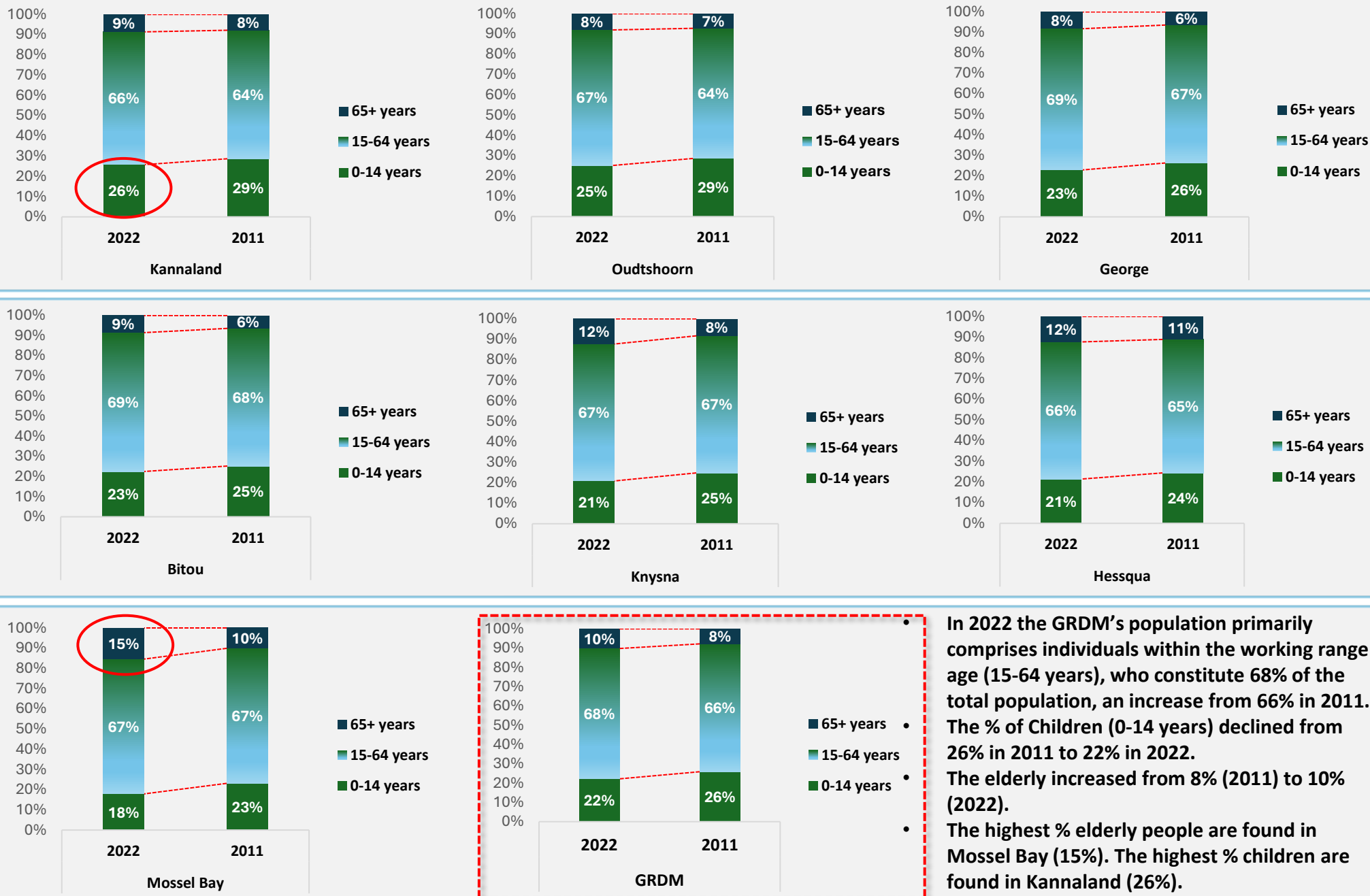
### 3.2.2 Age Distribution and Gender Profile

**Diagram 11** and **Diagram 12** outlines the District's Age Distribution and Gender Profile which is discussed below:

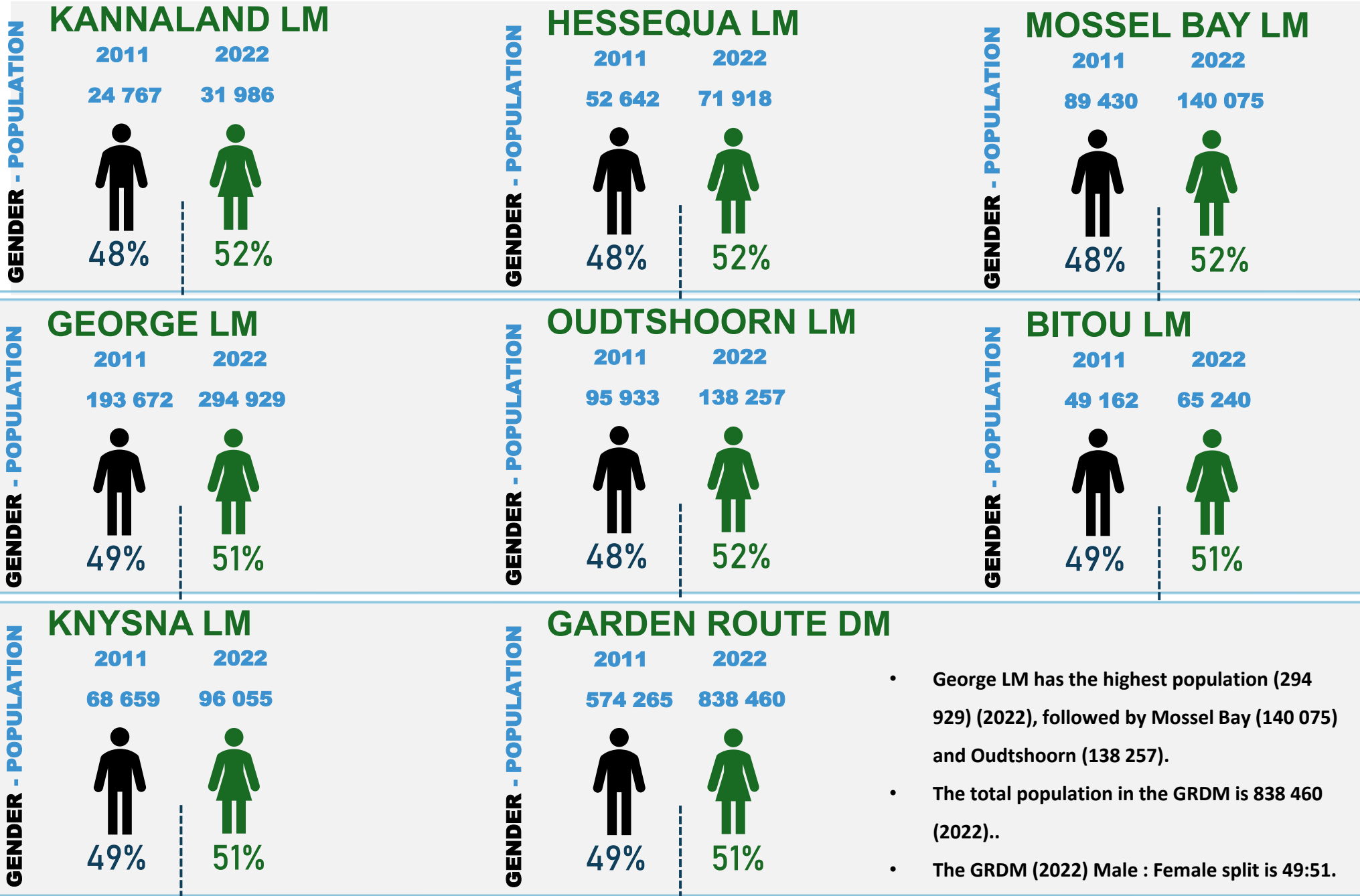
- ❖ In 2022 the GRDM's population primarily comprises individuals within the working range age (15-64 years), that constitute 68% of the total population, an increase from 66% in 2011.
- ❖ The percentage of children (0-14 years) declined from 26% in 2011 to 22% in 2022.
- ❖ The elderly increased from 8% (2011) to 10% (2022).
- ❖ The highest percentage elderly people are found in Mossel Bay (15%). The highest percentage children are found in Kannaland (26%).
- ❖ The GRDM (2022) Male: Female split is 49:51.
- ❖ Mossel Bay is viewed as a sought-after retirement area which may contribute to the incremental percentage of elderly people.

# GARDEN ROUTE DM: AGE PROFILE, 2011 vs 2022

Diagram 11



In 2022 the GRDM's population primarily comprises individuals within the working range age (15-64 years), who constitute 68% of the total population, an increase from 66% in 2011. The % of Children (0-14 years) declined from 26% in 2011 to 22% in 2022. The elderly increased from 8% (2011) to 10% (2022). The highest % elderly people are found in Mossel Bay (15%). The highest % children are found in Kannaland (26%).

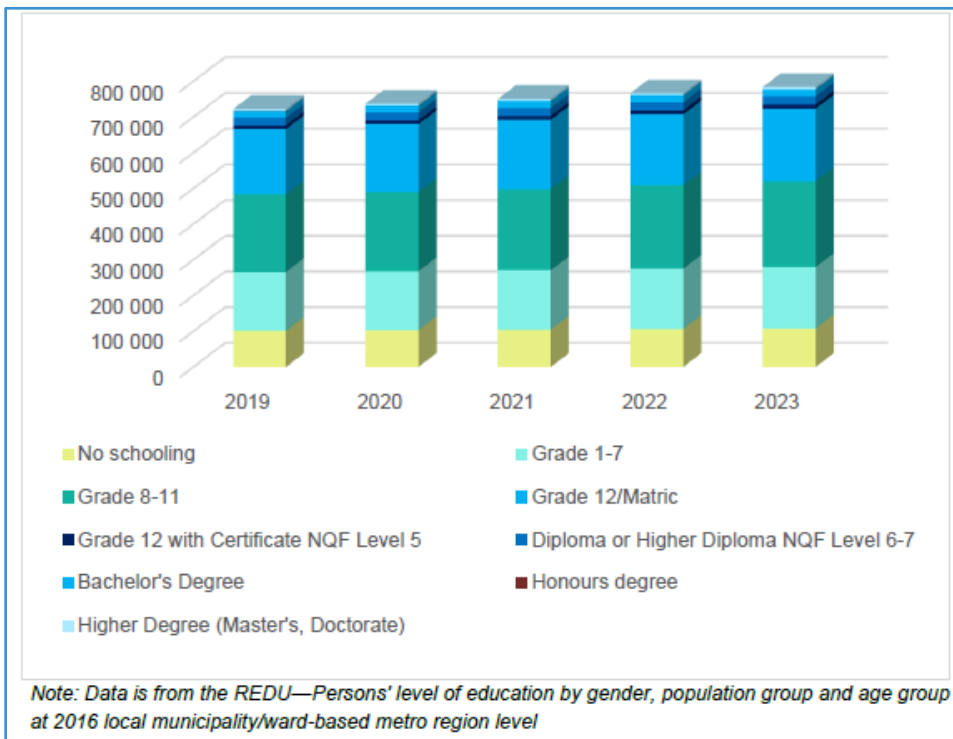


- George LM has the highest population (294 929) (2022), followed by Mossel Bay (140 075) and Oudtshoorn (138 257).
- The total population in the GRDM is 838 460 (2022)..
- The GRDM (2022) Male : Female split is 49:51.

### 3.2.3 Highest Level of Education

In the Garden Route, the population with no schooling was estimated at 12.55% in 2023 (see **Diagram 13**). Those with Grade 1-7 and Grade 8-11 were estimated at 20.09% and 28.03% respectively, in the same year. An estimated 23.72% of the population held a Grade 12/Matric in 2023. Those with bachelors, master's and higher education degrees totalled 3.02%.

**Diagram 13: Levels of Education in Garden Route, 2019-2023**



### 3.2.4 Employment

**Table 17** below provides a snapshot of indicators for employment in the Garden Route district in 2022 and 2023.

**Table 17: Employment Indicators, 2022 & 2023**

EMPLOYMENT INDICATORS, 2022 & 2023	
Population aged 15-64 years (2022 estimates)	632,187
Working-age population (15-64 years) (2022)	410,190
Labour force (economically active) (2022)	269,716
Labour force participation rate (%) (2022)	65.75%
Labour absorption rate (%) (2022)	52.68%
Employed (2023)	174,231
Informally Employed (2023)	51,927
Unemployed (2022)	53,612
Unemployment rate (%) (2022)	19.88%
Not economically active (2022)	140,474

Source: Quantec, 2024

The GRDM unemployment rate of 19.88% is significantly lower than the National Rate of 31.9%.

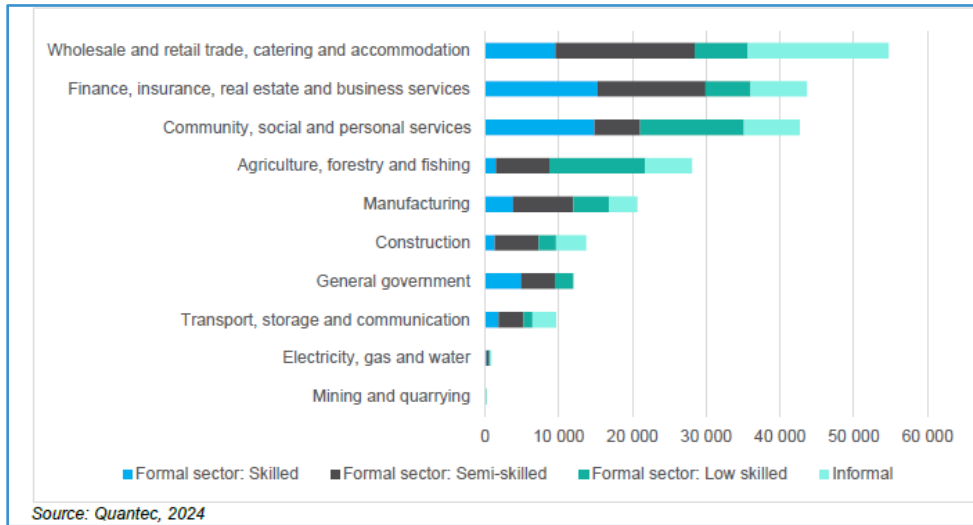
**Diagram 14** outlines the employment per sector and skills.

The wholesale and retail trade, catering and accommodation sector was the largest employing sector in the district in 2023 with 54,732 people employed. This was followed by the finance, insurance, real estate, and business services, which employed 43,648 people. The community, social and personal services sector in turn employed 42,687 people.

In terms of sector employment by skills, the finance, insurance, real estate, and business services sector employed the largest number of highly skilled people (15,326). While the wholesale and retail trade, catering and accommodation sector employed mostly the semi-skilled (18,907) and informal employment

(19,102). The low skilled (14,055) were mostly employed in the community, social and personal services sector.

**Diagram 14: The Employed by Sector and Skills in the Garden Route, 2023**



### 3.2.5 Economic Overview

The Garden Route economy grew by 1.0% y-o-y in 2023, reaching a RGVA value of ZAR45.08bn, up from a value of ZAR44.63bn in 2022 (**Diagram 15**). Looking 10 years back, between 2014 and 2023, the economy grew by 9.4%, from a value of ZAR41.22bn in 2014 to ZAR45.08bn in 2023. Moreover, on average, RGVA grew at an average annual growth rate (AAGR) of 1.2% over the period 2014 through 2023.

**Diagram 16** below shows the contribution share of Garden Route local municipalities to regional GVA for the period 2014 through 2023. Historically the George local municipality has always been the largest contributor to GVA in the Garden Route district, and in 2023, George contributed ZAR18.25bn to the

district’s economic output, equivalent to 40.49% of total RGVA. Mossel Bay and Oudtshoorn were the second and third largest contributors to the district’s GVA in 2023, contributing with 17.49% and 12.55% of total output, respectively.

**Diagram 15: Garden Route real Regional Gross Value Added (RGVA) & Growth, 2014-2023**

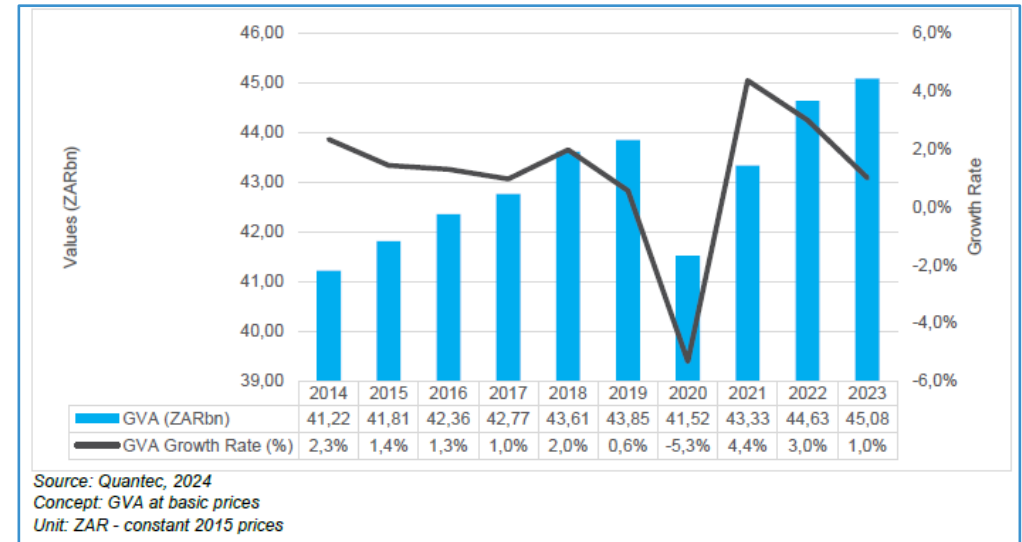
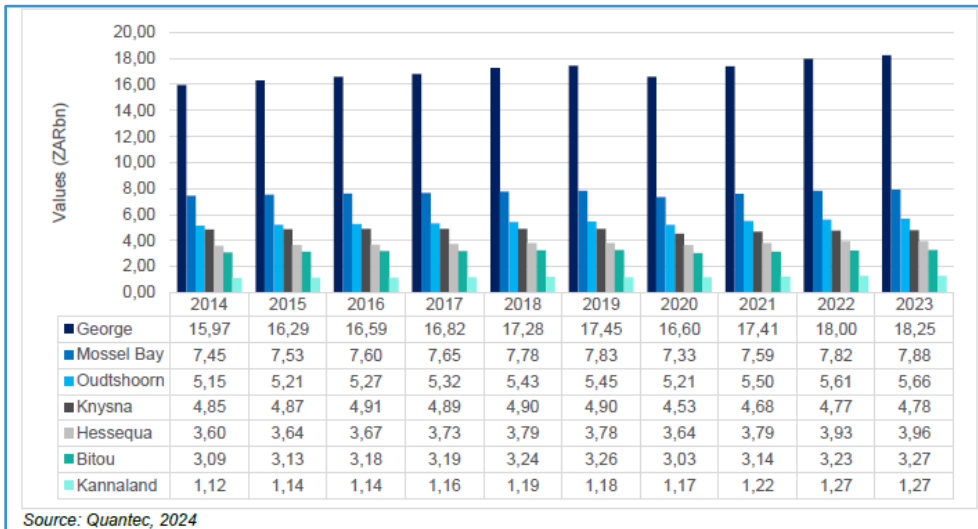


Diagram 16: Local Municipality RGBA Contribution to Garden Route, 2014-2023



**SECTOR GVA**

The finance, insurance, real estate, and business services sector was the largest contributor to the Garden Route’s GVA in 2023 (see **Table 18**), accounting for 43.15% of total GVA. It was followed by the wholesale and retail trade, catering, and accommodation sector (14.27%), and the manufacturing sector at (13.19%).

Table 18: Sector Breakdown of RGVA, 2019-2023

SECTOR	VALUE 2019 (ZARbn)	VALUE 2020 (ZARbn)	VALUE 2021 (ZARbn)	VALUE 2022 (ZARbn)	VALUE 2023 (ZARbn)	% SHARE 2023	% CHANGE 2022-2023
Finance, insurance, real estate and business services	13.71	13.82	14.43	14.99	15/30	34.15%	2.70%
Wholesale and retail trade, catering and accommodation	6.78	5.96	6.26	6.53	6.43	14.27%	-1.60%
Manufacturing	5.95	5.3	5.84	5.86	5.95	13.19%	1.50%
Community, social and personal services	4.81	4.68	4.83	4.88	4.94	10.96%	1.20%
Transport, storage and communication	4.53	3.8	4.02	4.49	4.71	10.46%	5.00%
Agriculture, forestry and fishing	2.08	2.53	2.62	2.67	2.54	5.64%	-4.90%
General government	2.38	2.4	2.33	2.33	2/33	5.17%	0.10%
Construction	2.47	1.99	1.93	1.84	1.8	3.99%	-1.90%
Electricity, gas and water	1.03	9.95	0.97	0.94	0.89	1.98%	-5.50%
Mining and quarrying	0.12	0.1	0.11	0.09	0.09	0.20%	-0.50%
<b>Total</b>	<b>43.85</b>	<b>41.52</b>	<b>43.33</b>	<b>44.63</b>	<b>45.08</b>	<b>100.00%</b>	<b>1.00%</b>

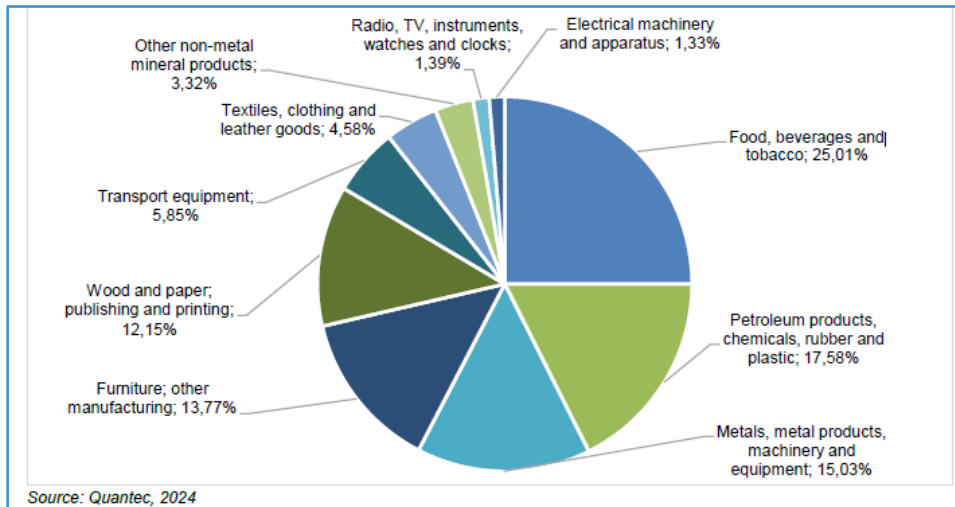
Source: Quantec, 2024

**MANUFACTURING SECTOR BREAKDOWN**

**Diagram 17** below shows the sub-sector contribution to the Garden Route’s manufacturing output in 2023. The top subsectors by largest contribution were:

- ❖ Food and beverages and tobacco sub-sector, which at a value of ZAR5.95bn was equivalent to a 25.011% share of manufacturing output.
- ❖ Petroleum products, chemicals, rubber and plastic sub-sector at ZAR1.49bn equivalent to a 17.58% share.
- ❖ Metals, metal products, machinery and equipment at ZAR0.893bn (15.03% share).

**Diagram 17: Garden Route Manufacturing Sector Breakdown, 2023**

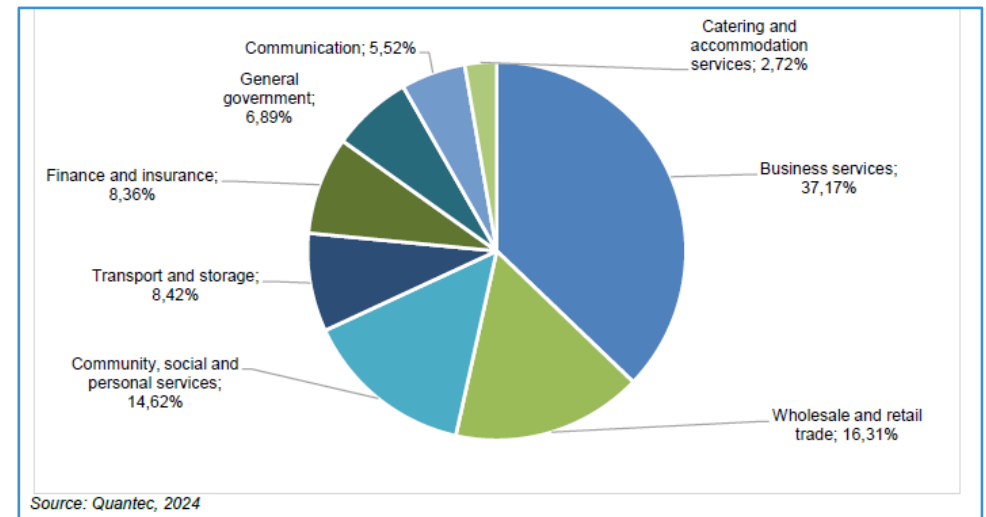


**SERVICES SECTOR BREAKDOWN**

**Diagram 18** below gives the breakdown of the Garden Route’s services sector output in 2023. The top subsectors by largest contribution were:

- ❖ Business services at a value of ZAR12.56bn, equivalent to a 37.17% share.
- ❖ Wholesale and retail trade at a value of ZAR5.51 bn (16.31% share).
- ❖ Community, social and personal services at ZAR4.94bn (14.62% share).

**Diagram 18: Garden Route Services Sector Breakdown, 2023**



**Table 19** outlines the District Top 10 export destination markets, and the value is ZAR7.69billion.

**Table 19: Garden Route Top 10 Export Destination Markets, 2023**

RANK	COUNTRY	VALUE 2023 (ZARm)	% SHARE, 2023	% AVE GROWTH, 2019-2023
1	United States	992.68	12.90%	30.22%
2	China	625.67	8.13%	6.30%
3	United Kingdom	613.53	7.97%	51.27%
4	Netherlands	571.47	7.42%	30.58%
5	United Arab Emirates	498.87	6.48%	84.46%
6	France	351.51	4.57%	20.01%
7	India	218.23	2.84%	82.63%
8	Italy	212.90	2.77%	17.44%
9	Malaysia	206.86	2.69%	56.94%
10	Hong Kong Special Administrative Region of China	194.52	2.53%	14.64%
<b>TOTAL EXPORTS</b>		<b>7696.74</b>	<b>100.00%</b>	<b>17.70%</b>

Source: Quantec (2024)

Note: the values are in nominal terms as specified by Quantec



Top 3 Garden Route exports (HS4) in 2023 to:

U.S.– 1) Pumice stone; 2) Leather further prepared after tanning; 3) Seeds, fruit and spores

China – 1) Skins and other parts of birds with their feathers; 2) Citrus fruit; 3) Apples, pears and quinces

U.K – 1) Apples, pears and quinces; 2) Tubes, pipes and hollow profiles; 3) Other prepared or preserved meat

**Table 20** outlines the Top 10 export markets and apples, pears and quinces make up almost 25% of the exported products.

**Table 20: Garden Route’s Top 10 Exports, 2023**

RANK	PRODUCT	VALUE 2023 (ZARm), 2023	% SHARE, 2023	% AVE GROWTH, 2019-2023
1	Apples, pears and quinces	1920.84	24.96%	19634.97%
2	Citrus fruit	1158.35	15.05%	0.21%
3	Seeds, fruit and spores	692.08	8.99%	22.16%
4	Leather further prepared after tanning or crusting	625.48	8.13%	14.03%
5	Skins and other parts of birds with their feathers or down	480.02	6.24%	19.19%
6	Pumice stone; emery; natural corundum	455.30	5.92%	-
7	Insecticides, rodenticides, fungicides, herbicides, anti-sprouting products	128.14	1.66%	13.51%
8	Other fruit	126.13	1.64%	1167.35%
9	Other prepared or preserved meat	118.28	1.54%	37.70%
10	Other aircraft, spacecraft (including satellites)	93.24	1.21%	334.95%
<b>TOTAL EXPORTS</b>		<b>7696.74</b>	<b>100.00%</b>	<b>17.70%</b>

Source: Quantec (2024)

Note: the values are in nominal terms as specified by Quantec



Top 3 Garden Route export markets for apples, pears and quinces (HS4) in 2023:

1) U.K (ZAR459.08m)

2) UAE (ZAR165.57m)

3) India (ZAR151.57m)

### 3.3 NATURAL ENVIRONMENT

#### 3.3.1 Topography and Hydrology

Two prominent mountain ranges run parallel to the coast with the Tsitsikamma, Outeniqua and Langeberg Mountains located along the coast (see **Figure 13**). The Swartberge Mountain range runs along the northern border of the district. The mountain contributes to the beautiful scenic nature for which the district is known. The section between the two mountain ranges forms the Klein Karoo which is characterized by semi-arid conditions, rolling hills and sparse vegetation, contrasting sharply with the lush coastal areas.

The Garden Route district is predominantly located within the Breede-Olifants Water Management Area (WMA), which is an amalgamation of the former Breede-Gouritz WMA and Berg-Olifants WMA. It lies largely within the Western Cape Province, with some portions of the upper Olifants River catchment extending into the Eastern Cape, and some northern parts into the Northern Cape. The WMA is bounded by the Atlantic Ocean on the southwest, the Vaal-Orange WMA to the north, and the Mzimvubu-Tsitsikama WMA to the east.

There are two large rivers within the WMA, the Breede and Gouritz Rivers:

- ❖ The Breede River – its main tributary, the Riviersonderend River, discharges into the Indian Ocean; and
- ❖ The Gouritz – has three main tributaries, the Groot, Gamka and Olifants Rivers, and includes a number of other smaller rivers in the WMA including the Touws, Duiwenhoks, Goukou, Hartenbos, Great Brak, Kaaimans, Knysna and Keurbooms Rivers.

Most of the districts falls within the primary catchment of the Gourits River which transverses through the Langeberg in the Central part. The Breede river's catchment is situated further west.

The Gouritz River is the main river, contributing 41% of the surface flow in the WMA. The other main rivers, which drain the inland area, are the Buffels, Touws, Groot, Gamka, Olifants and Kammanassie Rivers. The Duiwenhoks River supplies more than 1.2 million m<sup>3</sup> per annum to the Overberg Water Board potable Duiwenhoks Rural Water Supply Scheme (domestic supplies to Heidelberg, Slangrivier, Witsand and other smaller settlements as well as domestic and stock water), of which 0.7 million m<sup>3</sup> per annum is transferred into the Breede WMA to supply farmers (WC DMC, 2021).

The district further contains 5 of the 22 Strategic Water Source Areas (SWSA's), for surface water, including: Langeberg; Outeniqua; Tsitsikamma; Kouga and Swartberg.

There are further 4 Groundwater SWSA's, which are vital for municipal water security, particularly as drought buffers, for sustaining flows in rivers and wetlands, and as a key climate resilience measure which require protection. These areas include Van Wykskop, Outeniqua, Tsitsikamma, and Upper Keurbooms.

#### STRATEGIC WATER SOURCE AREA

SWSAs are the 10% of the land area of South Africa, Lesotho and eSwatini that supply 50% of water to these countries. They are a vital form of ecological infrastructure, feeding major dams and providing water that is essential for people and the economy, often in urban centres some distance from the SWSAs themselves.

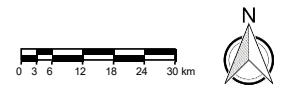
SWSAs are formally defined as natural source areas for water that supply disproportionately large volumes of water per unit area and that are considered of strategic significance for water security from a national planning perspective, either for surface water or groundwater or both.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : TOPOGRAPHY AND HYDROLOGY



Source: DWS Hydrology; WR2012\_WaterBodies; BGIS LUDS

- |                            |                                       |
|----------------------------|---------------------------------------|
| Garden Route DM Boundary   | <u>Watershed</u>                      |
| Local Municipality         | Primary Catchment                     |
| District Municipality      | Secondary Catchment                   |
| Wetlands/Dams/Estuaries    | National Strategic Water Source Areas |
| Primary Rivers             | National Ground Water Source Areas    |
| Secondary Rivers           |                                       |
| Estuaries                  |                                       |
| Mountain Ranges            |                                       |
| Hills/Mountain Range Peaks |                                       |




  
 DISTRICT MUNICIPALITY  
 SDF 2025 Figure 13

Diagram 19 illustrates mechanisms which may be used to secure SWSAs.

Diagram 19: Mechanisms to Secure Strategic Water Source

LEGAL:	SPATIAL PLANNING:	LAND MANAGEMENT:	REGULATIONS:	GOVERNANCE:
Explore options for restrictions on incompatible land uses in SWSAs in terms of water and environmental laws.	Integrate SWSAs into spatial plans from national to municipal levels.	Encourage production sectors to practice good management for land and water.	Consider SWSAs during Environmental Impact Assessments and Water Use Licencing to ensure compatible activities.	Improve governance in SWSAs by strengthening Catchment Management Agencies and co-operative governance.
RESTORATION:	PARTNERSHIPS:	COMPLIANCE:	PROTECTION:	RESEARCH:
Restore land, rivers and wetlands in poor ecological condition, including by removing invasive alien plants.	Maintain partnership platforms in catchments that include government, civil society, communities and the private sector.	Enforce penalties for illegal land and water use activities that impact SWSAs	Declare parts of SWSAs in terms of the Protected Areas Act, including through biodiversity stewardship.	Undertake research that supports better understanding of SWSAs and the returns on investment in SWSAs.
MONITORING:	WATER USE EFFICIENCY:	WATER RESOURCES:	FINANCING:	AWARENESS:
Monitor and evaluate the outcomes of efforts to secure SWSAs, to inform adaptive management.	Encourage water users to adopt water saving practices and the recycling of wastewater.	Use mechanisms under water laws to set strict management classes and water quality objectives.	Explore water charges and investment opportunities to realise financial resources to secure SWSAs.	Increase awareness of SWSAs by targeted communications for policy makers and the public.

The National Department of Forestry, Fisheries and the Environment (DFFE) highlight the following Mechanisms for securing SWSAs in South Africa:

- ❖ Strengthening governance by supporting or initiating joint-level SWSA plans for the Outeniqua and Tsitsikamma SWSAs in particular, which require coordinated interventions (e.g. clearing invasive alien plants).
- ❖ Contributing to the development of human capacity for SWSA management through skills development and training, which are critical for implementation and sustainability.
- ❖ Expanding on monitoring provisions for SWSAs by establishing collaborative data systems, repositories, and protocols for sharing and managing data across stakeholders.

There are three distinct water resource zones within the Gouritz WMA based on topography and climate, these include:

- ❖ The semi-arid Great Karoo consists of the Gamka River catchment to the north of the Swartberg Mountains and the Touws/Buffels/Groot River catchments, to the west of the Klein Swartberg Mountains.
- ❖ The Olifants River which is fed by mountain streams rising in the Swartberg Mountains to the north, the central Kammanassie Mountains and the coastal Outeniqua Mountains in the south.
- ❖ The Coastal Belt, which includes the Gouritz/Goukou/Duiwenhoks catchments, extends from the western boundary of the WMA to (and including) the catchment of the lower Gouritz River, and the remaining coastal belt extends to the eastern boundary of the WMA.

The Garden Route District also comprises five lakes and three lagoon estuaries, of which Swartvlei is the largest lake that is also a tidal lagoon. The other lakes include Groenvlei, Rondevlei and Upper Langvlei, which flows into Lower Langvlei (also known as Island Lake).

Wetland degradation is caused by inter alia: poor land management practices, spatial developments near urban areas, the spread of invasive alien plants; agricultural practices, pollution and the building of dams (Driver, *et al.*, 2012).

### 3.3.2 Climate

Quantification of the expected changes within the GRDM are provided in **Table 21** (overleaf), but in general projections indicate that by 2050, drought risk in the Garden Route District will increase marginally from 2 possible drought years per decade to 3.1 years per decade. Rainfall will decrease overall, although there is a potential for increased intensity rainfall in summer and winter. Temperatures will also continue to rise, resulting in up to 21 more hot days (temperatures above 30 degrees Celsius) per year by 2050 in the district. The decreasing rainfall combined with the higher temperatures will increase concerns over water security and the risk of wildfires.

Increased overall temperatures and lower river water flow will also aggravate issues with harmful algal blooms and vegetative clogging of waterbodies. Coastal erosion will also continue due to sea level rise.

**Annexure B** illustrates the Garden Route Climate Projections which cover the projections for rainfall and temperatures.

*(source: 2024 Climate Change Advisory: Summary of Climate Change Projections for the Garden Route District (WC Department of Environmental Affairs and Development Planning: Directorate Climate Change)*

### 3.3.3 Biodiversity and Conservation

The Garden Route District is home to numerous protected areas, including the Garden Route National Park, which is part of the larger Cape Floral Region Protected Areas World Heritage Site. The Fynbos biome, although the biome occupies a mere .04% at the southern tip of Africa in a tiny crescent of the

Western Cape, boasts of at least 45000 different plants, over 69% of which are endemic to the region and found nowhere else on earth. The Succulent Karoo biome is further situated in the GRDM, which, together with the Fynbos biome, are internationally acknowledged as biodiversity hotspots of global significance.

**Figure 14** outlines the prominent protected areas within the district. The figure also outlines the protected agricultural areas that relate to specific zones designated for the long-term protection of agricultural activities (to ensure food security, economic stability and environment sustainability).

**Figure 15** outlines the RAMSAR and World Heritage Sites within GRDM for illustration purposes. The RAMSAR and World Heritage Sites align with the prominent protected areas as illustrated on Figure 14.

**Figure 16** illustrates the Biodiversity Priority Areas (WCBSP, 2023) for the Garden Route District. The figure illustrates the spatial distribution of the following:

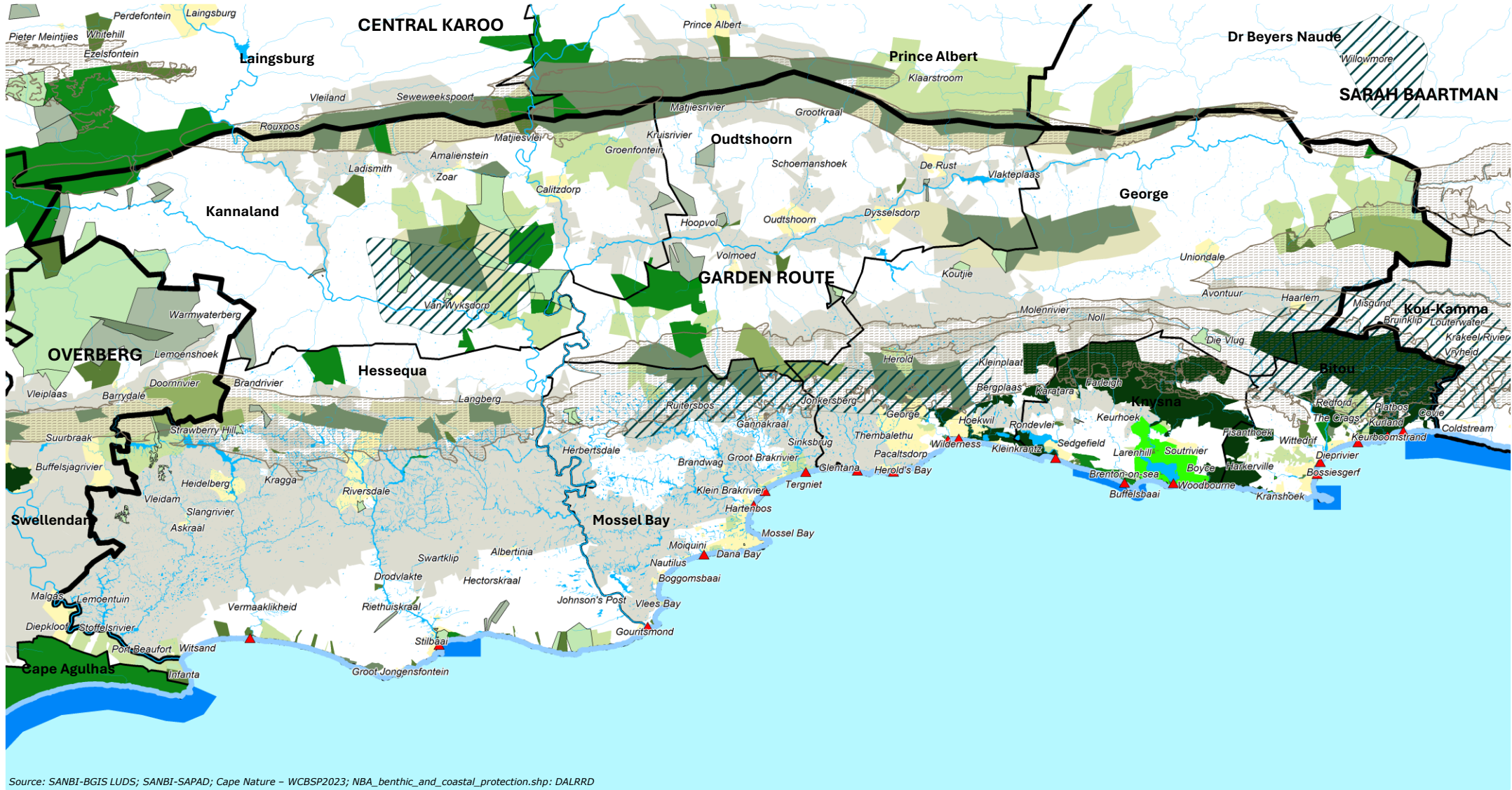
- ❖ **Protected Areas:**
  - Terrestrial Areas which include world heritage sites, Ramsar sites, national parks, nature reserves and forest nature reserves and mountain catchment areas; and
  - Marine which includes marine protected areas.
- ❖ **Critical Biodiversity Areas:** These include any terrestrial, freshwater aquatic or marine area required to meet biodiversity pattern and/or process thresholds.
- ❖ **Ecological Support Areas:** Supporting zone required to prevent degradation of critical biodiversity areas and protected areas.
- ❖ **Other Natural Areas:** Natural areas not included in the above listed categories.

**Table 21: Detailed Climate Change Outlook for Mid-Century<sup>1</sup>**

CLIMATE PARAMETERS <sup>2</sup>										
Climate Parameter <sup>(1)</sup>	Change from Present Conditions (Projections for 2050 <sup>(2)</sup> )								Seasonal	Implications
	Bitou	Knysna	Mosel Bay	Hassequa	George	Oudtshoorn	Kannaland	District		
Decrease in total annual precipitation <sup>3</sup>	-4.4 mm	-4.4 mm	-9 mm	-20 mm	-8 mm	-14 mm	-23 mm	-5 mm to -23 mm	More rain in summer and winter, less in autumn and spring	Look for seasonal dependencies
Change in number of days per year with >10 mm of rain	+1 day	+1 day	+1 day	-1 day	+1 day	-0.5 days	-1 day	+1 day in the East -1 day in the West	<1 day increase per season, but a 1-day decrease in spring	Drying trend in spring, but increasing intensity in other seasons
Change in maximum amount of rain in a 5-day period	8 mm	8 mm	7 mm	-5 mm (West) to +7 mm (East)	7 mm	+1.4 mm	-	+8 mm in the East -5 mm in the West	Slight decrease in spring and autumn, but an increase in winter	Intensification of rainfall events in winter
Addition of dry years per decade	3 years / decade (1 year more than at present)								-	Water security, ecosystem stress, fire risk, agriculture

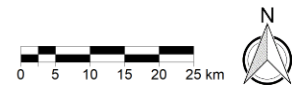
Increase in average annual temperature	1.2°C	1.2°C	1.2°C	1.1°C	1.2°C	1.3°C	1.3°C	1.1°C	All seasons	Increased biomass, drying
Addition of days per year with temperatures above 30°C	19 days	19 days	20 days	16 days	19 days	20 days	21 days	16 – 21 days	Significant change in summer and even likely in winter	Fire risk, heat stress, ecosystem stress
Decrease in number of days per year with temperatures below 0°C	-1.5 days	-1.5 days	-2 days	-2 days	-3 days	-5 days	-5 days	11.5 days to -5 days	Mostly limited to winter and the interior areas	On the whole, no more frost days. At least halves the frost days for the mountainous regions
Sea-level rise	-	-	42 cm	-	-	-	-	42 cm	-	Property, infrastructure, beaches
<sup>1</sup> <a href="https://www.elsenburg.com/wp-content/uploads/2022/08/SmartAgri-Climate-Change.pdf">https://www.elsenburg.com/wp-content/uploads/2022/08/SmartAgri-Climate-Change.pdf</a> <sup>2</sup> Also see the associated maps <sup>(1)</sup> Most data obtained from projections compiled by the Climate Systems Analysis Group at the University of Cape Town – <a href="https://www.elsenburg.com/wp-content/uploads/2022/08/SmartAgri-Climate-Change.pdf">https://www.elsenburg.com/wp-content/uploads/2022/08/SmartAgri-Climate-Change.pdf</a> <sup>(2)</sup> Projections are based on a conservative cluster of outputs from global climate models, avoiding extreme temperature and precipitation projections, and using an SSP2-4.5 scenario. They show a 2030-2060 mean as compared to the 1902-2020 historic mean for temperature, and 1982-2020 mean for precipitation. <sup>3</sup> Due to natural variability and lack of a definite historical trend, projections for precipitation remain statistically uncertain although most climate models agree on the negative trend.										

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : PROTECTED AREAS

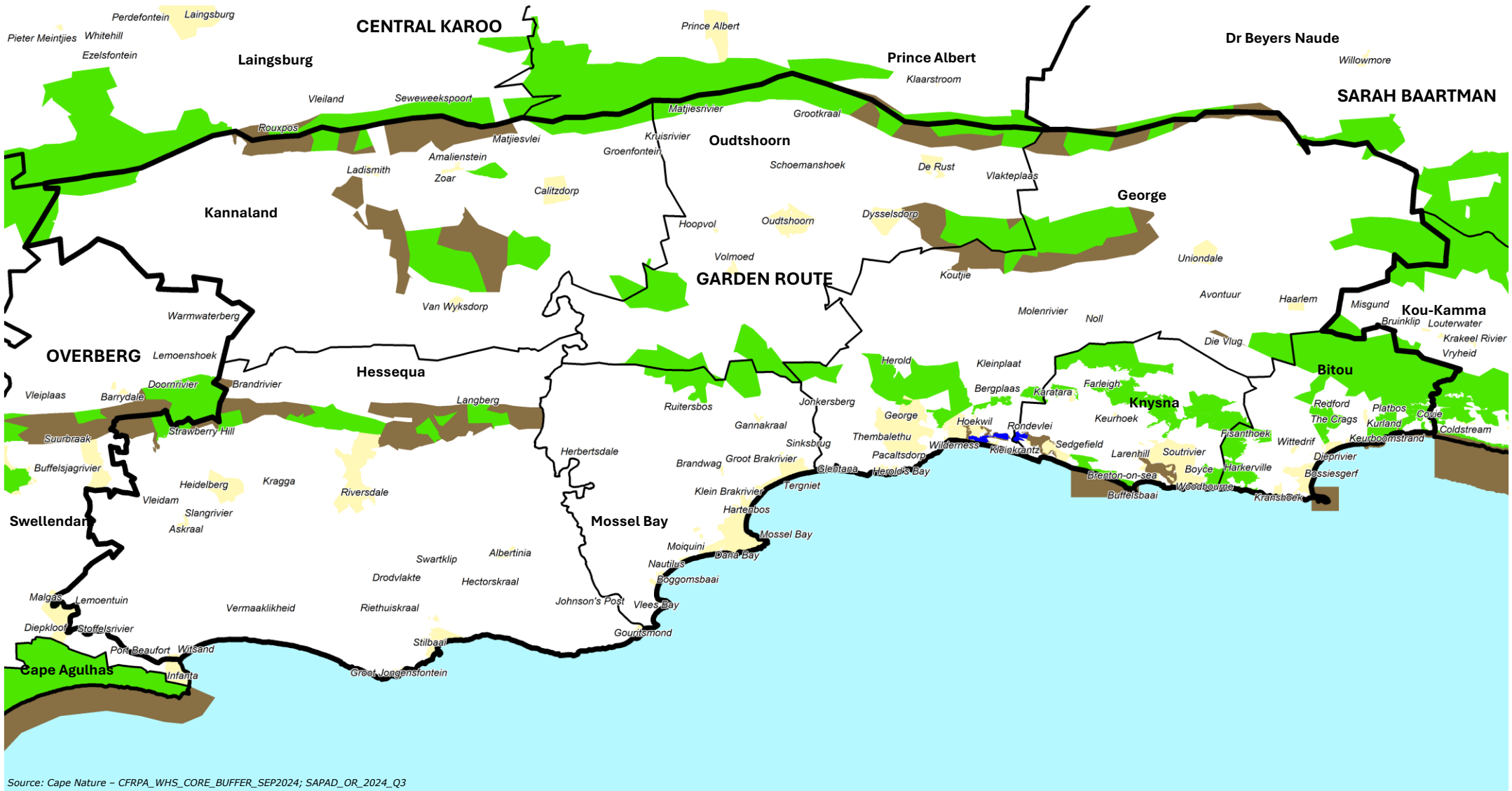


Source: SANBI-BGIS LUDS; SANBI-SAPAD; Cape Nature - WCBSP2023; NBA\_benthic\_and\_coastal\_protection.shp; DALRRD

- |                             |   |                      |
|-----------------------------|---|----------------------|
| District Municipality       | Provincial Nature Reserve                   | Coastal Line         |
| Local Municipality          | Contract Nature Reserve                     | Dams/Rivers/Wetlands |
| Towns and Settlements       | National Park                               | Estuaries            |
| Mountain Range              | Protected Environment                       |                      |
| Mountain Catchment Area     | Wilderness Area                             |                      |
| Protected Agricultural Area | Biodiversity Agreement                      |                      |
| Conservancies               | National Ground Water Source Area (SWSA_gw) |                      |
| Nature Reserve              | Marine Protected Environment                |                      |
| Forest Nature Reserve       | Stewardship Sites                           |                      |

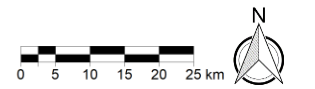


# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : WORLD HERITAGE / RAMSAR SITES



Source: Cape Nature – CFRPA\_WHS\_CORE\_BUFFER\_SEP2024; SAPAD\_OR\_2024\_Q3

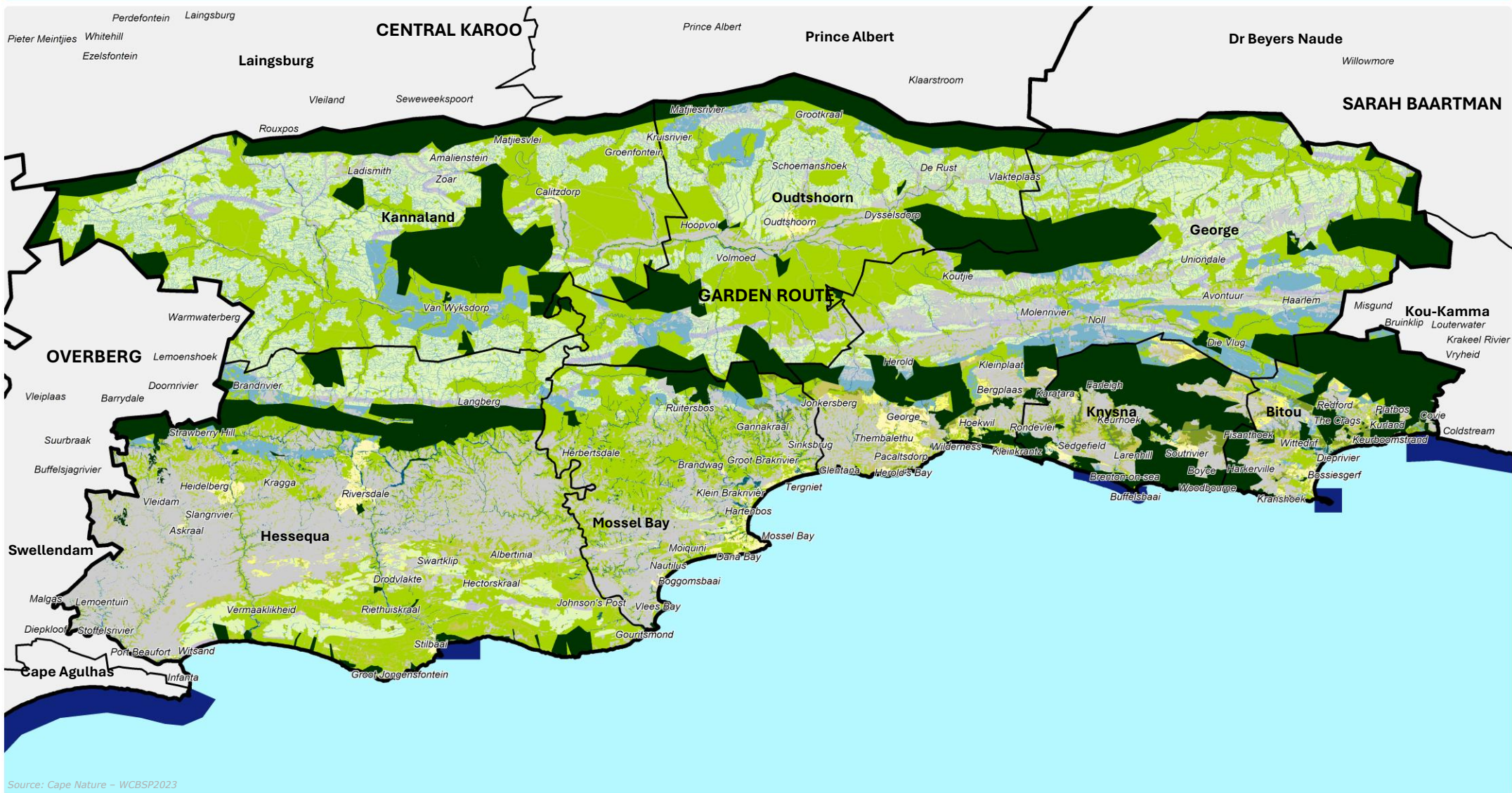
- A District Municipality
- A Local Municipality
- Towns and Settlements
- Ramsar Site
- World Heritage Sites Status
- Inscribed
- Buffer Zone



**Garden Route**  
DISTRICT MUNICIPALITY

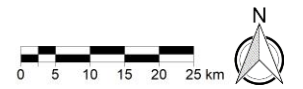
SDF 2025 Figure 15

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : BIODIVERSITY (WCBS,2023)



Source: Cape Nature – WCBS2023

- |                             |                                    |
|-----------------------------|------------------------------------|
| District Municipality       | ESA 2: Restore from other land use |
| Local Municipality          | Other Natural Area                 |
| Towns and Settlements       | No Other Natural Remaining         |
| Protected Terrestrial Areas | CBA 1: Wetland                     |
| CBA 1: Terrestrial          | CBA 1: Estuary                     |
| CBA 2: Terrestrial          | CBA 2: Aquatic                     |
| CBA 1: Forest               | ESA 1: Aquatic                     |
| CBA 1: River                | Marine Protected Areas             |
| ESA 1: Terrestrial / CoCT   |                                    |



Garden Route  
DISTRICT MUNICIPALITY

SDF 2025 **Figure 16**

The biodiversity in the GRDM has been positively influenced by conservation areas such as the Garden Route National Park (GRNP). However, dynamic pressures in the district also negatively influence biodiversity. These include land degradation, soil erosion, coastal erosion, frequent fires, the spread of AIPs, population growth, rapid urbanization, increased pollution, poor waste management and climate change. Of note is the slow erosion and fragmentation of critical biodiversity corridors in agricultural and urban development areas. These negative influences on biodiversity have knock-on effects, including detrimental effects on attempts to reduce poverty, inequality and unemployment, all of which may be further aggravated by the impact of climate change in the district. (*Source: GRD Climate Change Adaptation Needs and Response Assessment, 2024*).

**Table 22** (overleaf) outlines the meanings and desired management objectives for the various Biodiversity Priority Areas.

**Table 22: Summary of Map Categories and their Meanings**

Map Category	Definition	Desired Management Objective	Sub-Category
<b>Protected Area</b>	Areas proclaimed as protected areas in terms of national or provincial legislation.	Must be kept in a natural state, with a management plan focused on maintaining or improving the state of biodiversity. A benchmark for biodiversity.	
<b>Critical Biodiversity Area 1</b>	Areas in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.	Maintain in a natural or near-natural state, with no further loss of habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land-uses are appropriate.	<b>CBA: River</b>
			<b>CBA: Estuary</b>
			<b>CBA: Wetland</b>
			<b>CBA: Forest</b>
			<b>CBA: Terrestrial</b>
<b>Critical Biodiversity Area 2</b>	Areas in a degraded or secondary condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.	Maintain in a functional, natural, or near-natural state, with no further loss of natural habitat. These areas should be rehabilitated.	<b>CBA: Degraded</b>
<b>Ecological Support Area 1</b>	Areas that are not essential for meeting biodiversity targets but play an important role in supporting the functioning of PAs or CBAs and are often vital for delivering ecosystem services.	Maintain in a functional, near-natural state. Some habitat loss is acceptable, provided the underlying biodiversity objectives and ecological functioning are not compromised. Maintaining and improving protection of areas identified as ESA Water Source and Water Recharge important to secure water resources, particularly in Strategic Water Source Areas (SWSAs).	<b>ESA: Foredune</b>
			<b>ESA: Forest</b>
			<b>ESA: Climate Adaptation Corridor</b>
			<b>ESA: Coastal Resource Protection</b>
			<b>ESA: Endangered Ecosystem</b>
			<b>ESA: River</b>
			<b>ESA: Estuary</b>
			<b>ESA: Wetland</b>
			<b>ESA: Watercourse Protection</b>
			<b>ESA: Water Source Protection</b>
<b>ESA: Water Recharge Protection</b>			
<b>Ecological Support Area 2</b>	Areas that are not essential for meeting biodiversity targets but have an important role in supporting the	Restore and/or manage to minimise impact on ecological infrastructure functioning; especially soil and water-related service.	<b>ESA: Restore from Non-Natural</b>

Map Category	Definition	Desired Management Objective	Sub-Category
	functioning of PAs or CBAs and are often vital for delivering ecosystem services.		
Ecological Support Area: Species Specific Overlay	Terrestrial NNR modified areas that provide a critical support function to a threatened or protected species, for example agricultural land or dams associated with nesting/ roosting sites.	Maintain current land-use or rehabilitate to functional natural area.	ESA: Species Specific

Table 23 describes the land use guidelines for the Biodiversity Priority Areas (WC BSP 2023)..

Table 23: Land-use Guidelines for Biodiversity Priority Areas. *Spatial layers can be viewed in CapeFarmMapper and on SANBI BGIS.*

Map Category	Desired Management Objective	General Guidelines:	Specific Guidelines
Protected Area	Must be kept in a natural state, with a management plan focused on maintaining or improving the state of biodiversity. A benchmark for biodiversity.	<ul style="list-style-type: none"> <li>❖ All operational aspects of managing these areas must be subject to their main purpose, which is to protect and maintain biodiversity and ecological integrity and should be governed by a formally approved management plan including land-use activities that support the primary function of these areas as sites for biodiversity conservation.</li> <li>❖ The management plan must identify allowable activities, which should be consistent at least with the CBA 1 category; the location of these allowable activities should be captured in a zonation plan in the management plan.</li> <li>❖ Activities relating to the construction of roads, administrative or tourism infrastructure and services (such as water reticulation systems, power lines, etc.) that are required to support the primary function of the protected area and its allowable activities, are subject to NEMA authorisation and the protected area management plan.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Implementation of the Protected Management Plan.</li> </ul>

Map Category	Desired Management Objective	General Guidelines:	Specific Guidelines
<p><b>Critical Biodiversity Area 1: Terrestrial &amp; Forest</b></p>	<p>Maintain in a natural or near-natural state, with no further loss of habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land-uses are appropriate.</p>	<ul style="list-style-type: none"> <li>❖ Biodiversity loss and lan-use change in verified CBAs should not be permitted. Unauthorised land-use change or degradation by neglect or ignorance must be monitored as a matter of priority.</li> <li>❖ Ideally, conservation management activities should be the primary land-use in all irreplaceable areas, or they should at least be managed in ways that have no negative impact on species, ecosystems, or ecosystem services.</li> <li>❖ Conservation efforts should focus on conserving Species of Conservation Concern and populations of keystone species and species responsible for pollination and seed dispersal.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Ideally, developments should be avoided in these areas. If they cannot be avoided, it must be shown that the mitigation hierarchy has been applied. If the impact cannot be avoided or reduced to a residual low significance, a biodiversity offset may be considered as a last resort.</li> <li>❖ The features behind a site being identified as a CBA must be fully investigated. Some areas may appear degraded but still be important for water or ecological connectivity for example.</li> <li>❖ Relevant specialist studies must form part of a Basic Assessment or the Scoping and EIA process for all land-use applications in these areas, using the services of an experienced and locally knowledgeable biodiversity expert who is registered with the South African Council for Natural Scientific Professions (SACNASP).</li> <li>❖ Applications for land-use of any kind should be referred to the Land-use and Conservation Planning team at CapeNature for comment.</li> <li>❖ Degraded areas included in the land parcel, but not the land-use proposal, should be restored to natural ecosystem functioning where possible.</li> <li>❖ Alien clearing should be given high priority.</li> </ul>
<p><b>Critical Biodiversity Area 1: Aquatic</b></p>	<p>Maintain in a natural or near-natural state, with no further loss of natural habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity sensitive land-uses are appropriate.</p>	<ul style="list-style-type: none"> <li>❖ Freshwater CBAs should be maintained in good ecological condition, and those that are degraded should be rehabilitated to a good condition.</li> <li>❖ Land-use practices or activities that will lead to deterioration in the current condition of a freshwater CBA, or that will compromise rehabilitation, are not acceptable.</li> </ul>	<ul style="list-style-type: none"> <li>❖ There is no flexibility in land-use options in this category.</li> <li>❖ Any activities that may impact on CBA rivers, wetlands, or estuaries, even upstream or in sub-catchments, need to be avoided, or impacts mitigated if they cannot be avoided.</li> <li>❖ If the current ecological condition is good (either natural and unmodified, or largely natural with only small change in</li> </ul>

Map Category	Desired Management Objective	General Guidelines:	Specific Guidelines
		<ul style="list-style-type: none"> <li>❖ Any proposed land-use change must be subject to an EIA as it is likely to impact on the ecological drivers of the river or wetland ecosystem and potentially alter its functioning or lead to loss of species.</li> <li>❖ The hydrological regime and water quality of a river, wetland or estuary must be adequate to maintain the ecosystem in a desired or attainable condition.</li> <li>❖ Maintain the riparian vegetation and a buffer from other land-uses along watercourses and implement rehabilitation measures where there is erosion or other degradation present.</li> </ul>	<ul style="list-style-type: none"> <li>habitats and biota), then this condition needs to be maintained.</li> <li>❖ If the current ecological condition is fair to poor (i.e. moderately to severely degraded with significant loss of natural habitat, biota and ecosystem functions), then this needs to be improved through rehabilitation measures. Any further loss of area or ecological condition must be avoided.</li> <li>❖ Allow for future rehabilitation or restoration.</li> <li>❖ Specialist studies by a freshwater ecologist should be conducted if there is a watercourse that is likely to be affected.</li> </ul>
<p><b>Critical Biodiversity Area 2 (Degraded)</b></p>	<p>Maintain in a functional, natural, or near-natural state, with no further loss of natural habitat. These areas should be rehabilitated.</p>	<ul style="list-style-type: none"> <li>❖ Acceptable land-uses are those that are least harmful to biodiversity, such as conservation management, or extensive livestock or game farming. Large-scale cultivation, mining and urban or industrial development are not appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>❖ If small-scale land-use change is unavoidable, it must be located and designed to be as low impact and biodiversity sensitive as possible.</li> <li>❖ A specialist study must be part of the scoping and EIA process for all land-use applications in these areas, using the services of an experienced and locally knowledgeable biodiversity expert registered with SACNASP.</li> <li>❖ Should be targeted as high priority areas for rehabilitation and restoration.</li> </ul>

Land-use guidelines also exist for the ESAs Other Natural Areas and No Natural Remaining which can be viewed in the WCBSPG.

### 3.3.4 Garden Route District Wetland Strategy, 2019

The Eden District (now Garden Route) Wetland Strategy and Action Plan (2017-2022) highlights the critical role wetlands play in biodiversity support, water management, and climate resilience in the Garden Route District. The action plan covered the following features:

#### Ecological Value:

- ❖ Wetlands in the district are high-value ecological infrastructure offering vital **ecosystem services** including:
  - **Provisioning services:** food, medicinal plants, raw materials, and clean drinking water.
  - **Regulating services:** flood attenuation, erosion control, water purification, and climate regulation.
  - **Cultural services:** recreation, education, tourism, and spiritual value.
  - **Supporting services:** habitat provision and nutrient cycling.

#### Current Challenges:

- ❖ Wetlands are under **severe threat** from:
  - Urban expansion and agricultural conversion.
  - Pollution from wastewater and stormwater runoff.
  - Water abstraction and overuse.
  - Encroachment by invasive alien species.
  - Weak enforcement of protective regulations.

#### Governance and Gaps:

- ❖ There is **no dedicated wetland management authority**. Management is fragmented across municipalities, parastatals, and private landowners.
- ❖ **Lack of capacity and coordination** undermines conservation efforts.

#### Strategic Response:

The Wetland Strategy identified six key focus areas:

1. **Conservation and protection** of wetland ecosystems.
2. **Mapping and research** to understand wetland status and trends.
3. **Awareness and education** for local authorities and communities.
4. **Coordinated governance** and stakeholder engagement.
5. **Integration into planning instruments**, such as SDFs and IDPs.
6. **Sustainable use and rehabilitation** of wetlands, with pilot projects proposed.

### 3.3.5 Garden Route District Municipality Invasive Monitoring, Control and Eradication Plan (IMCEP)

The Garden Route District Municipality (GRDM) developed an Invasive Monitoring, Control and Eradication Plan (IMCEP) in response to its legislative obligation as an organ of state under National Environmental Management: Biodiversity Act 10 of 2004 (NEMBA). Section 76 of NEMBA requires all organs of state to adopt and implement a plan for the land under their control to monitor, control and eradicate listed invasive species.

The IMCEP was commissioned in 2019, with the key objective of mapping, prioritising and systematically reducing the presence of alien invasive plants across the GRDM. Through the Plan, GRDM commits to establishing baseline inventories, monitoring regimes, targeted clearing operations, post-clearance maintenance and rehabilitation of indigenous vegetation. The plan places emphasis on linked challenges such as water-resource depletion, increased fire-risk and biodiversity loss, especially critical in the district's mountain catchments, forest and fynbos ecosystems.

As a policy instrument, the IMCEP plays multiple strategic roles in the SDF context. It reinforces the district's spatial and environmental planning frameworks by ensuring that natural-area integrity and ecosystem services are

protected from further invasive species encroachment. It also provides a mechanism to align land-use decision-making (zoning, spatial reserves, conservation corridors) with active ecological management, thereby ensuring that future development does not compromise key ecological infrastructure.

In addition, the IMCEP supports climate-resilience objectives by reducing fire-hazard fuel loads and improving water-catchment yields via invasive plant removal and indigenous vegetation restoration. Finally, the plan helps to integrate municipal property management, environmental services and Expanded Public Works Programme (EPWP) interventions into a structured long-term programme of ecological rehabilitation and job creation.

The IMCEP is a foundational layer of the district's broader sustainable development strategy. It signals a proactive shift from reactive invasive-plant control to a strategic, risk-based, and spatially-integrated approach that directly supports biodiversity protection, water-security, and climate-smart development in the Garden Route region.

### 3.3.6 Environmental Vulnerability

According to the GreenBook (CSIR, 2019), the environmental dimension of vulnerability can be defined as the vulnerability and risk to the natural environment, and in the case of settlements, the impacts on the ecological infrastructure on which settlements are dependent. The environments at risk include populations and communities of organisms, ecosystems, habitats, physical and biological processes such as reproduction, diversity, energy flows, ecological resilience and natural selection (WC DMC, 2021).

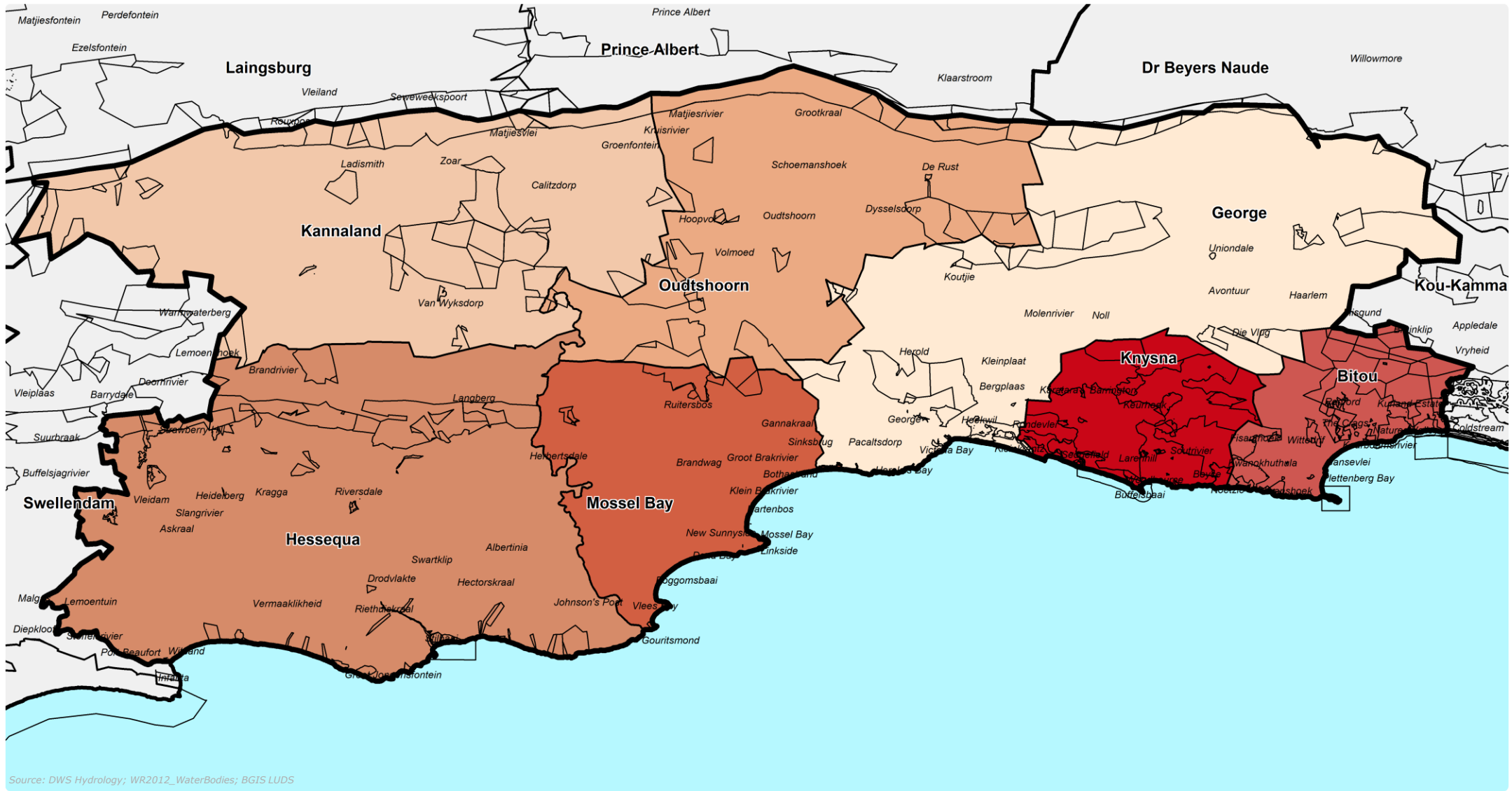
The CSIR Green Book has developed an Environmental Vulnerability Index that is measured on a scale from 1 (low vulnerability) to 10 (high vulnerability). The map below (**Figure 17**) shows the environmental vulnerability score of each municipality in the district visually. A high score (closer to 10) reflects significantly high conflict between preserving the environment and allowing land-use change

to occur. Criteria used to measure environmental vulnerability include air quality, environmental governance, and competition between ecology and urban encroachment.

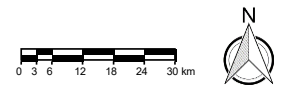
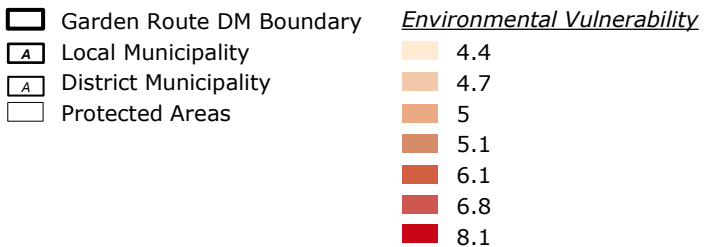
Given the rich environmental diversity in the Garden Route district, the environmental vulnerability within district varies between relatively low (4.4) to very high (8.1). Knysna Local Municipality, characterized by a high number of protected areas and estuaries and has the highest level of environmental vulnerability, followed by Bitou and Mossel Bay Local Municipalities respectively. George is considered to have the lowest level of environmental vulnerability relative to other Local Municipalities in the District, followed by Kannaland and Oudtshoorn respectively.

Municipalities' SDFs will need to realize the intrinsic and economic value of the regions' biodiversity and natural resources and consider hazard zones that buffer settlements and natural areas, as well as provide clear guidance on land-use management of the district's biodiversity assets. Appropriate land-use of Critical Biodiversity and Ecological Support areas and Spatial Planning categories could contribute to environmental ecosystem rehabilitation, protection and enhancement.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : ENVIRONMENTAL VULNERABILITY



Source: DWS Hydrology; WR2012\_WaterBodies; BGIS LUDS



**Table 24** summarises the Threatened Terrestrial Ecosystems in the GRDM.

**Table 24: Threatened Terrestrial Ecosystems**

Critically Endangered (CE)	Area (ha)
Cape Lowland Alluvial Vegetation	3 155,30
Eastern Ruens Shale Renosterveld	15 517,40
Knysna Sand Fynbos	394,60
Langkloof Shale Renosterveld	2 077,50
Muscadel Riviere	4 655,90
Ruens Silcrete Renosterveld	942,90
<b>Total</b>	<b>26 743,60</b>
Endangered (EN)	Area (ha)
Garden Route Granite Fynbos	8 432,60
Garden Route Granite Fynboss	4 333,20
Groot Brak Dune Strandveld	10 430,90
Mossel Bay Shale Renosterveld	32 500,90
Western Cape Milkwood Forest	539,40
<b>Total</b>	<b>56 237,00</b>
Vulnerable (VU)	Area (ha)
Albertina Sand Fynbos	814,80
Albertinia Sand Fynbos	36 168,00
Eastern Coastal Shale Band Vegetation	694,30
Eastern Little Karoo	87 233,60
Garden Route Shale Fynbos	4 745,30
Garden Route Shale Fynbos	17 467,00
Kango Limestone Renosterveld	25 886,80
Montagu Shale Renostervel	1 957,20
Montagu Shale Renosterveld	10 823,10
Swellendam Silcrete Fynbos	34 654,20
<b>Total</b>	<b>220 444,30</b>

### 3.3.7 Coastal Management

The coastal zone is the area comprising coastal public property, the coastal protection zone, coastal access land, coastal protected areas, the seashore, and coastal waters and includes the environment on, in or under these areas. The GRDM coastal zone includes the inshore, offshore and estuarine ecosystems alongside the coastline, all of which is continually changing where land and ocean meet. In measurement terms, the district coastal zone extends out to sea (roughly 370 km), up to the boundary of the exclusive economic zone, and inland up to one kilometre beyond the high-water mark (WCG: PDMC, 2021).

The National Environmental Management: Integrated Coastal Management Act (NEM: ICMA), Act 24 of 2008 and Maritime Zone Act 15 of 1994 refers to many different zones or demarcations within the coastal zone (**Figure 18 - overleaf**), which need to be explained in order to understand the context and responsibility (mandate) of specific coastal management issues and organs of state.

**Figure 19** graphically illustrates the Coastal Zone for the Garden Route District. (**Note:** The exact delineation of the Coastal Protection Zone, Estuary and Coastal Protected Area needs to be confirmed with the relevant officials).

The coastline of the Garden Route district stretches from the Bloukrans River in the east to the Breede Estuary (Witsand) in the west and comprises five local, Category-B Municipalities, namely the (from east to west) Bitou, Knysna, George, Mossel Bay and Hessequa Municipalities (Figure 18).

The coastal management lines are an effective means to demarcate areas where authorities can prohibit or restrict the building, alteration or extension of structures that are either wholly or partly seaward of the CML. The main uses of coastal management lines are to (WCG: DEA&DP, 2018):

- ❖ Protect coastal public property, private property and public safety;
- ❖ Determine features that should be protected under the coastal protection zone;

- ❖ Preserve the aesthetic values of the coastal zone;
- ❖ To contribute towards a proposed management scheme for the Garden Route district;
- ❖ To ensure connectivity along the coastline;
- ❖ To protect the aesthetic value;
- ❖ As a natural means of erosion protection;
- ❖ To serve as social buffers required along the coast, for example, allowance for public beach access through and along the coastal frontage, areas which have cultural significance and that will need to be preserved from development, or heritage resources and historically sensitive locations that require specific management;
- ❖ To allow for economic requirements for the coast, for example, allowance for new beach facilities that will need to be placed closer than normal development to serve the public. Economic demands often require a trade-off against environmental aspects at a particular site.

Figure 19 further indicates the formal coastal access points in the district that enable people to reach the coastline. The importance of coastal access points are outlined below:

- ❖ **Equitable Access:** Ensures all citizens, regardless of income, can enjoy the coastline.
- ❖ **Tourism & Local Economy:** Supports tourism-related activities which drive the local economy.
- ❖ **Environmental Protection:** Designated access helps control erosion, trampling of dunes, and biodiversity loss by directing foot traffic.
- ❖ **Cultural & Recreational Value:** Provides space for recreation, spiritual practices, and traditional livelihoods such as subsistence fishing.

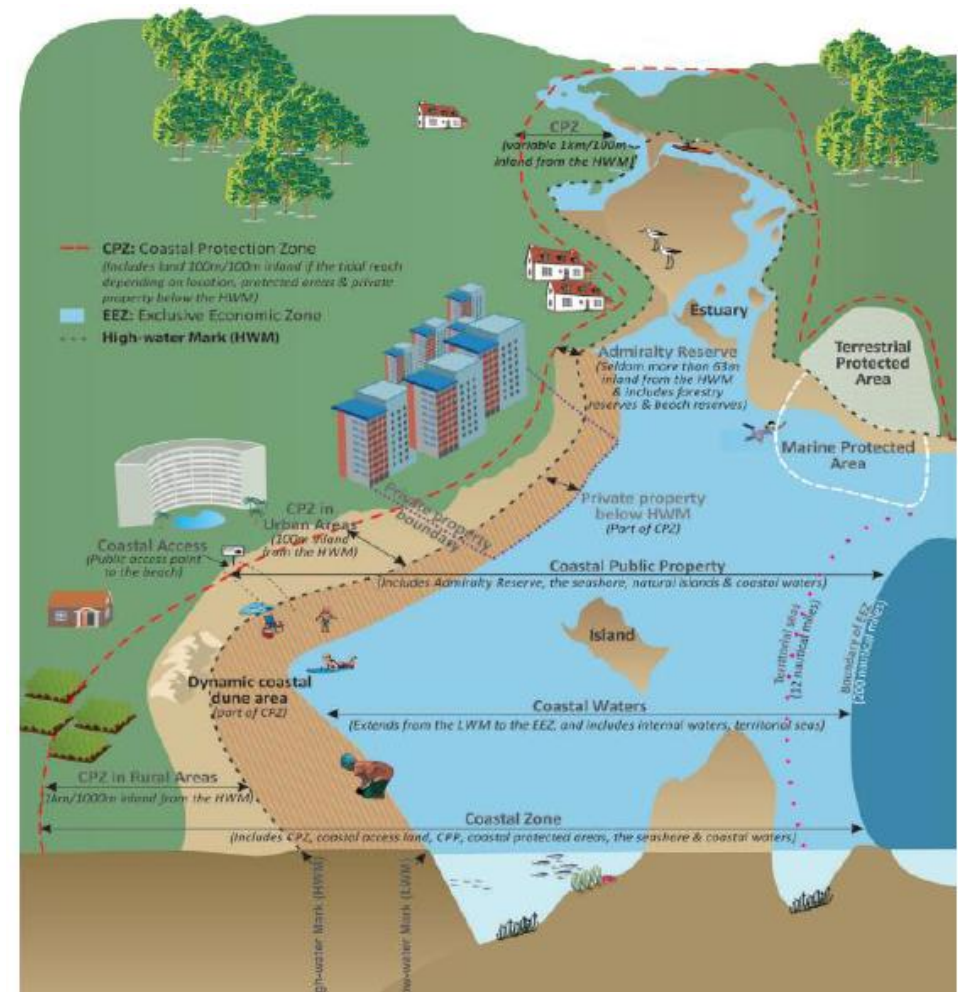
There are 22 estuarine systems of varying health conditions located totally in the Garden Route District Municipal area, with two (the Breede and Bloukrans estuaries) that mark the borders of the Municipal area. **Table 25** provides details of the levels of modifications of these estuarine systems. There are no estuaries in the district that are classified as ‘critically/extremely modified’).

Over and above the effects of climate change, the estuarine systems within the Garden Route district are vulnerable to anthropogenic impacts to varying degrees, which negatively affect biodiversity and ecosystem services in these systems. These impacts include ecosystem overuse (e.g. uncontrolled fishing and practices, uncontrolled bait collection, uncontrolled recreational use, amongst others), degradation, pollution from wastewater treatment works, and increased nutrient loads from coastal developments and upstream farming practices (WCG: PDMC, 2021).

**Table 25: Levels of Modification of Estuary Systems in the Garden Route District**

Unmodified, Natural	Largely Natural, Few Modifications	Moderately Modified	Largely Modified	Seriously Modified
Bloukrans	Groot (Wes)	Piesang	Hartenbos	Groot Brak
Sout (Oos)	Matjies	Klein Brak		
Keurbooms	Noetzie	Gouritz		
	Knysna	Goukou		
	Goukamma			
	Swartvlei			
	Wilderness			
	Kaaimans			
	Gwaiing			
	Maalgate			
	Blinde			
	Duiwenhoks			
	Breede			

**Figure 18: A Detailed Schematic of the Coastal Zones (DFFE, 2017, EDTEA, 2019)**

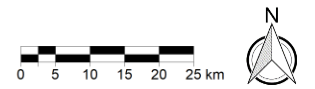


# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : COASTAL MANAGEMENT



Source: GRDM CML's DEA&DP, GRDM CM Report 2023/2024

- A District Municipality
- A Local Municipality
- Towns and Settlements
- Coastal Management Lines/Protected Areas (DEA&DP)
- Coastal Protection Zones (DEA&DP)
- Coastal Protection Zones (GRDM CM Report) *(Not to scale - Exaggerated for visibility)*
- Coastal Access Points
- ▲ Public Launch Sites
- ▲ Estuaries





**Garden Route**  
DISTRICT MUNICIPALITY

SDF 2025 Figure 19

### 3.4 MUNICIPAL SPATIAL STRUCTURES AND MOVEMENT NETWORK

#### 3.4.1 Spatial Structure and Historic Development

**Figure 20** shows the spatial structure of the district. The mountains are prominent form giving features and include the Outeniqua, Little Karoo, Kouga, Kammanassie and Swartberg Mountains. There is a significant difference in temperatures and rainfall north and south of the Swartberg Mountains resulting in different forms of agriculture and intensity of development.

The Indian Ocean is a further prominent form giving feature, with urban development concentrated along the coastline and intensive agriculture capitalising on the fertile conditions in the coastal plateau to the north. The district has high ecological diversity and sensitivity, hence there are numerous National Parks that should be protected in spatial planning. The ocean, rivers, fauna and flora contribute to the district's tourism potential.

Mossel Bay's human history can be traced back more than 164,000 years. The town is older than Cape Town, as the modern history of Mossel Bay began in February 1488, when the Portuguese explorer Bartolomeu Dias landed close to the site of the modern-day Dias Museum Complex. The first building was built in 1787 and shortly after this the first wheat grown in the area was shipped from the bay.

Mossel Bay acted as the major port serving the Southern Cape Region and its hinterland, the Little Karoo and Oudtshoorn during the ostrich feather boom of the late 19th and early 20th centuries. Roads rapidly developed to link Mossel Bay with Cape Town to the west and Gqeberha to the east. The construction of mountain passes across the Outeniqua and Swartberg Mountains was

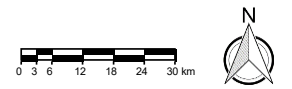
challenging and incredible engineering achievements for the time. The roads opened trade opportunities for agriculture and fishery.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : SPATIAL STRUCTURE AND MOVEMENT NETWORK



Source: BGIS Protected Areas; Demarcation Board 2021

- |                          |                                      |
|--------------------------|--------------------------------------|
| District Municipality    | Harbour                              |
| Local Municipality       | National Roads                       |
| Towns                    | Proposed N2 Bypass (to be confirmed) |
| Mountain Range           | Main Roads                           |
| Protected Natural Areas  | Secondary Roads                      |
| Airport                  | Railway                              |
| Aerodrome                | Railway Stations                     |
| Airfield / Landing Strip | Dams / Rivers                        |



Garden Route  
DISTRICT MUNICIPALITY

SDF 2025 **Figure 20**

George was established in 1777 because of the growing demand for timber and wood used in building, transport and furniture. It soon transformed into an administrative centre. George is now the second largest city in the Western Cape. It is a popular holiday and conference centre, as well as the administrative and commercial hub.

Plettenberg Bay has a similar modern history as Mossel Bay as it was also visited by Portuguese explorers. Knysna was traditionally inhabited by Khoekhoe people and emerged as a trading port. These two towns and the other towns along the coastline in the district are major tourist attractions with the population more than doubling over holiday periods. Riversdale further to the north acts as a central place and service centre to the surrounding agricultural community and to smaller towns, such as Stillbaai, Jongensfontein and Witsand.

The settlements in the DM are dispersed with low residential densities in the towns. The Western Cape government conducted a study on this issue in seven towns, revealing that the existing spatial patterns incur approximately 22% higher costs compared to a compact urban form.

From a movement perspective, the N2 which connects Cape Town and Gqeberha is also a structuring element, with linear development occurring along the route. Prominent roads that connect the district with the north of the country are the R323 through Riversdale, R327 as well as the R328 and N12 which converge at Oudtshoorn and the R339 to Plettenberg Bay. The N9 and N12/R341 run parallel to the N2 and provide east-west connectivity south of the Swartberg Mountains.

The development of railways in South Africa followed the discovery of diamonds in Kimberley, hence the first regional railway lines were built northwards from Cape Town, Gqeberha and East London. Over time the railways were extended eastward from Cape Town to East London, the alignment follows the alignment of the N2 freeway.

There is a regional airport in George, with smaller airports in Plettenberg Bay and Oudtshoorn and airfields in smaller centres.

The previous SDF for the GRDM (2017) highlighted the following transport issues that have to be addressed:

- ❖ **The N2 Bypass:** The alternative alignment of the N2 has been a topic of discussion for many years. The SDF suggested that the best solution lies in a combination of diverting some long-distance trips to the R62 through the Langkloof, while also applying smart growth principles to the settlements along both routes instead of allowing sprawling development.
- ❖ **The railway network:** Despite the national and provincial transportation policies aimed at encouraging the transfer of freight from roads to railways, a significant portion of the transportable goods that can be transported by either means is presently being carried by trucks.
- ❖ **Mossel Bay Port:** The port is classified as a district harbour, serving as significant gateway to local markets. It facilitates various activities both on land and at sea, including freight transportation. However, the port had limited capacity due to its shallow entrance depth of only 8 metres. This restricts the entry of large passenger liners into the harbour, although tourist ships frequently anchor offshore. The Transnet Ports Authority has devised a development plan to expand the harbour and utilise the land within the port area for residential and recreational purposes, creating a waterfront community. The aspects should be considered when planning for transportation infrastructure in the inland region.

### 3.4.2 Movement Network and Transport

The GRDM formulated an Integrated Transport Plan in 2023 as a composite plan of the Local Integrated Transport Plans (LITPs) of six of the local municipalities within its area of jurisdiction. George LM produced a Comprehensive Integrated Transport Plan due to having an Integrated Public Transport Network and is excluded from this District ITP. However, the DITP considers relevant overlaps with the George Comprehensive ITP. Updates are done yearly.

The District ITP put forward the following priorities:

1. Prioritise public transport and non-motorised transport.
2. Roads master planning for future growth.
3. Increase capacity and funding for transport.
4. Rail is critical component of future transport system.
5. Need for improved adaptation in tourism.

Within the GRDM, the range of modal options is limited due to the decline of the railway system and limited subsidisation available for road based public transport systems. The issues of the railway systems need to be improved to explore alternative linkages within and outside of the district and province. However, aviation in the district presents potential for enhanced economic competitiveness, particularly with the identified expansion opportunities for the airfields in Mossel Bay and Oudtshoorn.

The GRDM acts as an agent of the Western Cape Government to maintain its road network. Apart from this it has a limited mandate for transport planning. Revenue related to transport does not extend beyond the road maintenance function.

The following needs were identified as part of the formulation of the ITP:

- ❖ High levels of inequality and unemployment and a high demand for public transport.

- ❖ The under-investment in economic potential in rural settlements.
- ❖ Disconnection in economic activity between rural and urban settlements.
- ❖ Need for improved relationships and integration between tiers of government and within local municipalities.
- ❖ Lack of funding and capacity within local government.
- ❖ Need to improve regional connectivity along major networks.
- ❖ Poor condition of existing public transport facilities and infrastructure.
- ❖ Lack of non-motorised transport infrastructure in the GRDM.
- ❖ Lack of proactive planning of transport infrastructure to support economic development and be included in new housing and residential areas.
- ❖ The need for transport to support tourism activities.
- ❖ Future transport demand estimation.

#### 3.4.2.1 Road and Rail Network

**Figure 21** shows the local movement network in the district, including primary, secondary and tertiary roads, airports, harbours, the rail network and stations. The individual features are discussed below.

#### ROADS

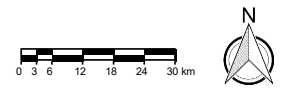
The GRDM consists of national, provincial and district roads which play a vital role in movement within and through the municipal area. The N2 is the primary road and offers east-west movement for both passengers and goods. It enables interprovincial travel between the Western Cape and Eastern Cape. It is also intended to be a coastal route between the harbours of Richards Bay, Durban, East London, Gqeberha, Mossel Bay and Cape Town. The N2 provides for the main freight movement between Cape Town and Gqeberha. The route is constantly under pressure, since it also accounts for passengers who travel between coastal towns.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : LOCAL MOVEMENT NETWORK



Source: Demarcation Board 2021

- |                       |                          |
|-----------------------|--------------------------|
| District Municipality | Airport                  |
| Local Municipality    | Aerodrome                |
| Towns and Settlements | Airfield / Landing Strip |
| National Roads        | Railway                  |
| N2 Bypass (Bitou SDF) | Railway Station          |
| Main Roads            | Harbour                  |
| Secondary Roads       |                          |
| Other Roads           |                          |



**Garden Route**  
DISTRICT MUNICIPALITY  
SDF 2025 **Figure 21**

Analysis of traffic volumes in the district revealed the following trends and insights:

- ❖ Mossel Bay LM has the highest number of vehicles (17 900) on paved roads among all municipalities, signifying a great reliance on paved roads for travel.
- ❖ Bitou LM, Knysna LM and Oudtshoorn LM all have significantly higher numbers of vehicles on paved roads compared to vehicles on unpaved roads. Hessequa LM has a slightly higher number of vehicles on unpaved roads.
- ❖ In Kannaland LM, the number of vehicles on paved roads is significantly lower than Hessequa and Bitou, while the number of vehicles on unpaved roads is consistent with Hessequa. This suggests a higher reliance on unpaved roads within this municipality.
- ❖ It is estimated that the DM’s paved roads carry in the order of 42 100 vehicle kilometres while the unpaved roads are estimated to carry around 1 400 vehicle kilometres in total.
- ❖ Paved roads are generally more preferred and heavily utilised for travel in the GRDM, with a few exceptions. Therefore, it is evident that the rural roads which are typically two-lane roads with or without paved shoulders, carry low to moderate traffic volumes and traffic flows are not characterised by high peak hour commuter volumes.

The LMs under consideration in the GRDM show a trend of an increase in the traffic volumes between 2011 to 2017. Oudtshoorn, Mossel Bay and Knysna have the highest travel demands due to their location. Traffic volumes from 2020 onwards were not used, due to the Covid pandemic and travel restrictions.

In terms of vehicle kilometres of each municipality within the GRDM, Mossel Bay LM takes the lead as the largest vehicle contributor in the district when excluding George LM, carrying approximately 50% of the GRDM’s total vehicle volumes. Bitou LM is the second largest vehicle contributor in the DM, carrying approximately 30% of the GRDM’s total vehicle volumes. Knysna LM (28%) is a

moderate vehicle contributor in the district. Hessequa LM is the third lowest vehicle contributor accounting about 14% of the GRDM’s total vehicle volumes, followed by Oudtshoorn LM at 13%. Kannaland LM has the least vehicle contribution in the district carrying less than 10% of the GRDM’s vehicle volumes.

**Figure 22** illustrates the surface type: gravel/paved for the Garden Route District. The national Roads and the roads connecting the various towns are paved. However, most of the roads in the more rural areas especially in Hessequa are gravel roads.

**Table 26** indicates the condition of paved and unpaved roads in the district, as well as replacement costs. (see Figure 20)

**Table 26: Road replacement costs and conditions in the district**

LM	REPLACEMENT COST		CONDITION	
	PAVED	UNPAVED	PAVED GOOD	UNPAVED POOR
Bitou	R1.4 billion	R10.3 million	≥90%	80%
George	R4.4 billion	R61.8 million	*	*
Hessequa	R2.4 billion	R20 million	≥90%	≥95%
Kannaland	R428 million	R23 million	≥60%	≥80%
Knysna	R2 billion	R23 million	≥60%	≥75%
Mossel Bay	R4.3 billion	R7.8 million	≥90%	≥80%
Oudtshoorn	R2.5 billion	R17 million	≥80%	≥90%
<b>DISTRICT</b>	<b>R17.4 billion</b>	<b>R162 900 million</b>		

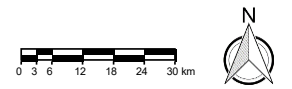
\*Information not available

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : ROAD TYPE



Source: [mis.westerncape.gov.za](http://mis.westerncape.gov.za)

-  District Municipality
-  Local Municipality
-  Towns and Settlements
-  Surfaced Road
-  Gravel Road
-  Railway
-  Railway Station



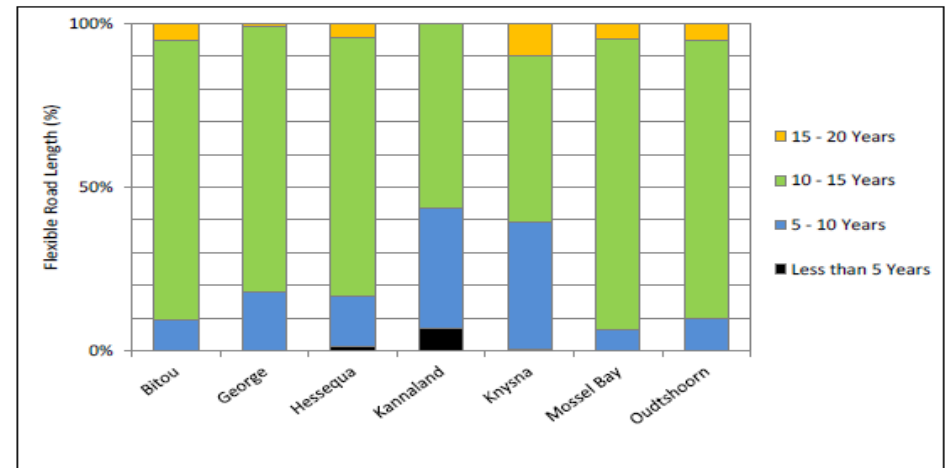
The logo for the Garden Route District Municipality, featuring a stylized landscape with a tree, a path, and a flower. Below the logo, it reads "DISTRICT MUNICIPALITY". At the bottom, it says "SDF 2025" and "Figure 22".

The replacement costs for paved and unpaved roads in the GRDM provide valuable insights into the financial investments required to maintain and upgrade the road infrastructure within each local municipality. The data highlights the significant differences in replacement costs between municipalities and emphasises the importance of prioritising budget allocations for road development and maintenance based on the specific needs of each LM. Effective financial planning and resource allocation will contribute to the overall upgrades of road infrastructure and enhancement of the road network and mobility within the DM.

**Diagram 20** shows the extent of remaining useful life for paved roads in the GRDM. Most of the paved roads in Bitou, Mossel Bay and Oudtshoorn, representing over 90% in each municipal area, have a remaining useful life falling within the 10 to 20-year category. Hessequa and Knysna LMs also have significant proportions of paved roads in this category, with more than 80% and 60% respectively. However, Hessequa and Knysna differ from the other LMs as they have a notable percentage of paved roads with only 5-10 years left. On the other hand, Kannaland stands out with many roads only having 5 to 10 years left and a proportion of roads having less than 5 years left. Hessequa and Kannaland have paved roads with a useful life of less than 5 years, which is problematic.

The importance of road maintenance and upgrade rather than rehabilitation cannot be overstated. Kannaland has the most urgent need for road intervention, with most of the roads having a life span of less than 10 years. It's replacement cost for paved roads is the lowest in the district and for unpaved it the cost is average compared to other LMs.

**Diagram 20: Estimated useful Life Span for Roads per Municipality**



**RAIL**

There is an extensive rail network in the GRDM as illustrated in Figure 20, but there are no passenger rail services in the district. There is a train used for tourism that operates on the Transnet rail network, called the Powervan (previously Diaz Express). It runs from Maalgate in the north of Mossel Bay to Hartenbos in the south. The rail network is also not used for freight transport.

A tender was recently awarded to repair and operate the railway line between Knysna and George. This was previously used for the Outeniqua Choo-Tjoe steam train. The intention with the tender is to restore use for tourism and freight purposes. The Kaaimansriver Bridge, a heritage landmark, forms part of the area to be restored.

### 3.4.2.2 Public/Private Transport

There are two main forms of public transport in the GRDM:

- ❖ minibus taxis (local, intra-municipal, inter-municipal and long distance); and
- ❖ long distance bus (inter-provincial access).

**Figure 23** shows the public transport corridors in the district for the different modes discussed in this section.

Minibus taxis is the dominant public transport mode in the district, primarily due to its flexibility and ability to adapt to different passenger demands between towns, neighbourhoods, and more rural farm areas. There is a strong functional relationship between the various towns along the Garden Route with George LM as the main administrative and commercial centre. There are a number of inter-municipal routes serving various towns within this functional area. Long distance services are also provided to Eastern Cape destinations and other locations outside of the Western Cape Province.

Public transport is the most accessible travel mode for people who do not have access to private vehicles and bicycles. Minibus taxis are the primary mode of travel in the district. Vehicle ownership is low, and many people rely on minibus taxi transport as an essential service in the GRDM.

#### **MINIBUS TAXIS**

Figure 21 shows the management and upgrading of minibus taxi ranks are the responsibility of the local municipalities in the GRDM. All the formal taxi ranks within the municipality are paved and off-street.

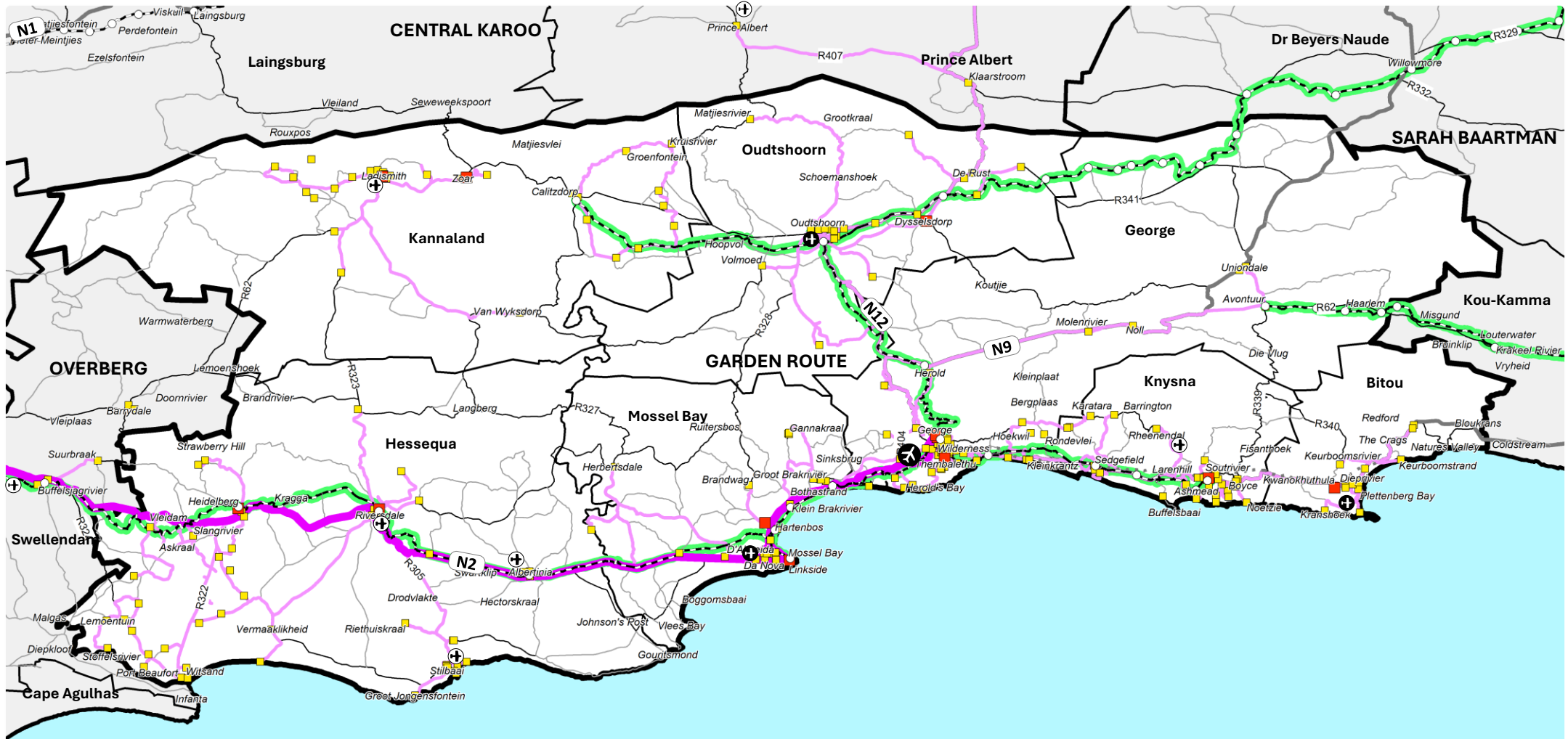
Minibus taxi services operate from various towns in the GRDM. There are 25 taxi ranks in the district and the service is administered by 14 taxi associations. The

flexible nature of minibus taxis enables them to respond to the diverse requirements of GRDM commuters. There are a total of 25 taxi ranks identified in conjunction with site visits and inputs from the taxi operators through consultation sessions as shown on Figure 21.

An infrastructure audit was undertaken on minibus taxi facilities in the district and the findings are as follows:

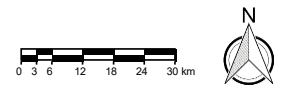
- ❖ Public transport is primarily facilitated by MBTs, charter services, and metered taxis.
- ❖ There is no provision for parking for bus terminals across the LMs under consideration.
- ❖ The formal ranks are designed to accommodate minibus taxis and the users. However, the facilities need to be improved for the dignified usage for the commuters. For example, all the audited areas require an upgrade of ablution facilities, maintenance, or inclusion of pavements to allow for accessibility for the elderly and individuals with disabilities, update of offices if commuters have inquiries and, increased surveillance at the ranks that are prone to criminal activities and have raises safety concerns.
- ❖ As a result of the safety issues and inaccessibility of some facilities are not operational and left abandoned. i.e., Dysseisdorp, Kannaland Informal stop.
- ❖ On the other hand, some facilities are over utilised and would benefit from the consideration of including more embayments and holding facilities. i.e., Plettenberg Bay Taxi Rank.
- ❖ Metered taxis (sedans) are primarily used instead of minibus taxis in Hessequa, and staff and learner transport are facilitated by charter services. This could be due to the demand and preference to users to use these vehicles because of their ability to transport them closer to their destinations.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : PUBLIC TRANSPORT CORRIDORS



Source: GRDM Integrated Transport Plan 2024-2029 (ITS Report Oct 2023); GRDM Human Settlement Sector Plan (2022)

- |                                      |                        |
|--------------------------------------|------------------------|
| District Municipality                | Aerodrome              |
| Local Municipality                   | Airfield/Landing Strip |
| Towns and Settlements                | Railway Line           |
| National Roads                       | Railway Station        |
| Proposed N2 Bypass (to be confirmed) | Regional Taxi Routes   |
| Main Roads                           | Local Taxi Routes      |
| Secondary Roads                      | Official Rank          |
| Other Roads                          | Unofficial Rank        |
| Airport                              | Passenger Rail Routes  |



Garden Route  
DISTRICT MUNICIPALITY

SDF 2025 **Figure 23**

- ❖ Rainy seasons often affect the mobility of minibus taxis in areas that are unpaved, and the gravel is uneven. This also affects the reliability and accessibility of the service and forces commuters to walk further to access the nearest available transport service.
- ❖ Some areas such as Kwanonqaba have minibus taxis that operate as a feeder service, whereby minibus taxis collect commuters on roadsides and feed passengers into other minibus taxis to transport the users to the taxi rank. This creates a need for such areas to introduce designated pick up and collection points on the roadside to reduce conflict points and congestion in the residential areas or establishments such as Shoprite.

Figure 23 also shows the main movement lines, namely:

- ❖ The main movements in Bitou LM are from Plettenberg Bay to surrounding neighbourhoods and locations such as New Horizon and Kwanonkuthula. There are also services to other local municipalities in the rest of the Garden Route District. These are largely served from the Plettenberg Rank and Kwanonkuthula to Knysna, Oudtshoorn and George. Routes beyond the GRDM are largely to the Eastern Cape Province.
- ❖ In the Hessequa LM, the main movements are from Riversdale to surrounding neighbourhoods and locations such as Heidelberg and Stilbaai. There are also services to other local municipalities in the rest of the GRDM.
- ❖ Kannaland LM has movements from Ladismith to surrounding neighbourhoods and locations such as Zoar and Nissenville.
- ❖ In the Knysna LM the main movements are from Knysna to surrounding neighbourhoods and places such as Knoetzie and Nekkie. There are also Inter-Municipal movements to other LMs within the GRDM to the towns of George and Plettenberg Bay.
- ❖ The Mossel Bay LM has movements to surrounding neighbourhoods and locations such as Langeberg Mall and Kwanonqaba. There are also services to

other local municipalities. The are Inter-Municipal movements from Great Brak River to George and Klein Brak River, Mossel Bay to Oudtshoorn, George, Plettenberg Bay, Thembalethu and Knysna. Other long distance/inter-provincial movements are from Mossel Bay LM towns to Beaufort West, De Rust, George, Oudtshoorn and Dysseisdorp.

The regional taxi route between Cape Town and George seem to terminate at George. However, there exists a strong link between the Western Cape and Eastern Cape Provinces along the N2. A number of commuters have been observed along the N2 towards Plettenberg Bay and therefore the regional taxi route may extend further east along the Northern Cape Province.

#### **BUS**

The GRDM lacks public bus services, with only Hessequa LM having a service. The coastal municipalities are served by several long-distance bus companies; these bus services connect various cities with Cape Town, such as East London, Durban and Gqeberha. The buses make stops at modern filling stations that offer amenities such as parking, convenience stores, take-away meals, public toilets, and public telephones.

#### **NON-MOTORISED TRANSPORT**

Non-motorised transport is defined as all forms of movement that are not propelled by battery and/or fuel combustion driven mechanisms. This typically includes walking, cycling, horse/donkey carting (generally found in the rural areas and poorer parts of urban areas). Non-motorised transport in the form of walking or cycling typically also form a portion of the public transport trip.

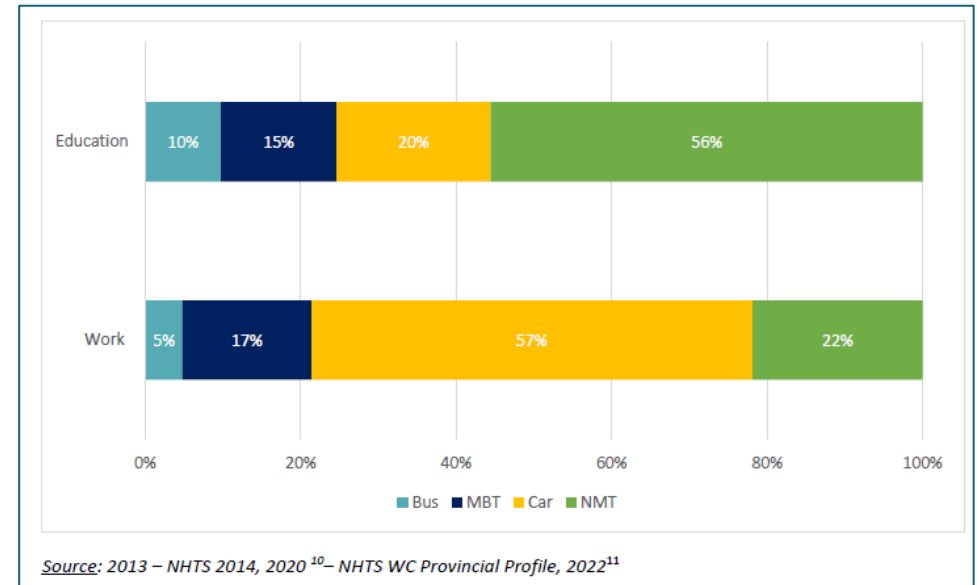
Particularly in rural areas, non-motorised transport is the largest mode of transport for scholar trips. Some key concerns around non-motorised transport were identified within the GRDM, which are mirrored in the LMs:

- ❖ Lack of road safety particularly for cycling and the N2 is a particular focus of concern.
- ❖ Lack of appropriate non-motorised transport infrastructure between origins and destinations in some areas (such as sidewalks).
- ❖ Lack of awareness and consideration of the non-motorised transport users in the transportation environment.
- ❖ Bicycles are not readily available for the poor.
- ❖ Long distances that people are forced to travel with non-motorised transport.
- ❖ The topography of the environment in some areas is also problematic, such as steep gradients.
- ❖ A perception exists that this mode of transport is only for the poor.

**Diagram 21** shows the modal split for work and education trips in the Western Cape. Most learners (56%) walk to school. This often covers long distances with no alternatives available when it is raining. Most people in the province travel to work by car (57%), with 22% that walks or cycles to work. A needs assessment and action plan are required at DM and LM level to assist with optimised route planning and service delivery. Regular monitoring and measurement of learner transport services are required to ensure that learner transport services are comprehensively implemented and effectively used.

Most of the municipal roads are planned with sidewalks either on one or both sides of the vehicle carriageways, but there is currently no non-motorised infrastructure inventory listing the location of sidewalks or cycleways. Cycling infrastructure in the municipal area is limited. There is currently no master plan designed specifically for non-motorised transport infrastructure in the district.

**Diagram 21: Modal Split for Work and Education Trips, WC**



**SPECIAL NEEDS PASSENGER TRANSPORT**

Special categories of passengers can be defined as persons with disabilities, the aged, pregnant woman and those who are limited in their movements by children. Provision should be made to plan for special categories of passengers. Some examples include:

- ❖ dropped kerbs on sidewalks,
- ❖ orientation blocks for sight impaired pedestrians
- ❖ audible traffic signals.

No recent data on people with special needs was available for update of the DM’s ITP. People with physical disabilities are the most affected by access to transportation and are therefore limited in their use of public transport. Thus,

universal access design principles should be incorporated in planning to assist passengers to move from one place to another comfortably.

### 3.4.2.3 Air Transport

George is home to a commercial airport. The airfields in Plettenberg Bay, Mossel Bay and Oudtshoorn offer expansion opportunities and can support tourism potential.

### 3.4.2.4 Freight

Freight transportation serves as a connection between a point of demand and a point of supply. The Provincial Freight Strategy was drawn upon to mirror the provincial position on freight. A key driver of the freight strategy is towards achieving the reduction of costs associated with the transportation of freight to the final customer.

Some of the key issues and concerns within freight include:

- ❖ Freight data and information. There is limited freight data on volume and movement patterns, which inhibits planning and infrastructure development.
- ❖ Communication. There is a general lack of communication and coordination between the various role players and agencies within freight transport.
- ❖ Security. Law enforcement capacity and skills are lacking and bribery in the trucking sector is a big problem especially in terms of overloading. Roadworthiness of trucks creates a safety issue,
- ❖ Law enforcement. The location of weighbridges on national and major routes leads to trucks evading stops and driving on smaller roads that are not suited for heavy vehicles.
- ❖ System capacity and connectivity. There is too much freight traffic on road that should be moved to rail. Rail needs to improve service levels before

freight can be moved to rail. There is a shortage of skilled truck drivers and current truck drivers need to be better educated and trained. There is a need for logistics hubs and intermodal facilities in the WC Province and across the country.

The primary freight transport mitigation measures relating to both road and rail are seen as being:

- ❖ A significant modal shift from road to rail freight, resulting in a shift from petroleum-based road transport to electricity-based rail freight.
- ❖ A shift in the road freight vehicle mix to 80% (more efficient) diesel engines, 10% natural gas-powered vehicles and 10% diesel hybrid electric vehicles.
- ❖ A 15% increase in rail engine efficiency by 2040. The Department of Transport and Public Works will have the greatest influence in effecting the modal shift from road to rail – which has also been incorporated as a key objective within the new Provincial Land Transport Framework and will be coordinated with Transnet.

### 3.4.2.5 Progress with Implementation of Projects

Past performance of LMs provides an indication of the capacity and challenges facing different municipalities in the district. The following is a succinct summary per LM (see **Table 27**):

**Table 27: Progress with Implementation of Projects**

MUNICIPALITY	DESCRIPTION
Bitou	Very good
Hessequa	Good
Knysna	Good
Kannaland	Good
Oudtshoorn	Poor due to limited funding
Mossel Bay	Good
George	No information available

*ITP 2022*

Oudtshoorn LM thus requires additional funding and assistance with project implementation.

### 3.4.2.6 Actions, Priorities and Projects

The following issues were identified for action by the LMs and have implications for the SDF:

- ❖ Investigate and debate the need for higher density settlement patterns. Lobby the National and Provincial departments of Human Settlements to increase the subsidy allocation for a housing unit, as and when this will translate in significant savings for generations to come.
- ❖ Plan public transport hubs in larger towns, which could include centralised parking, from where people can walk or use feeder public transport services for onward journeys.

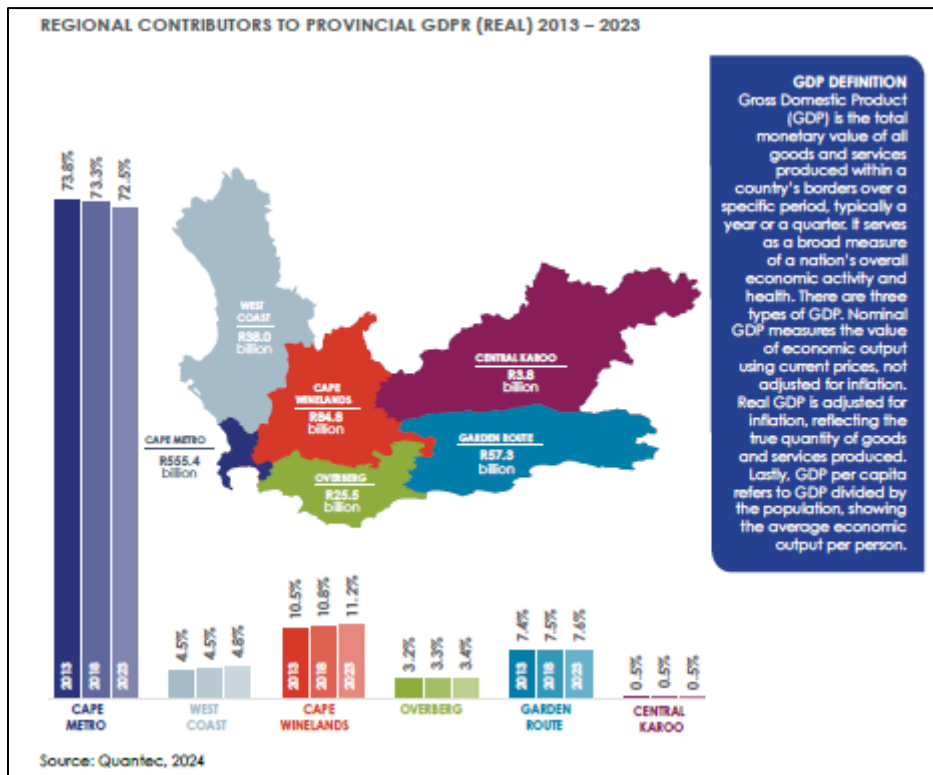
- ❖ Produce a non-motorised transport strategy or master plan for the DM and the LMs.
- ❖ Prepare a public transport strategy with guidelines for public transport improvements in the district which guides local municipalities in the design of public transport facilities that are spacious and well-lit and therefore are more conducive to safe operations.
- ❖ Engage in discussions with both Transnet and the provincial roads department to attract as much of the expected growth in freight volumes to rail.
- ❖ Plan adequate facilities for the road freight industry at regular intervals along the N2.

### 3.5 ECONOMIC ACTIVITIES

#### 3.5.1 Economy

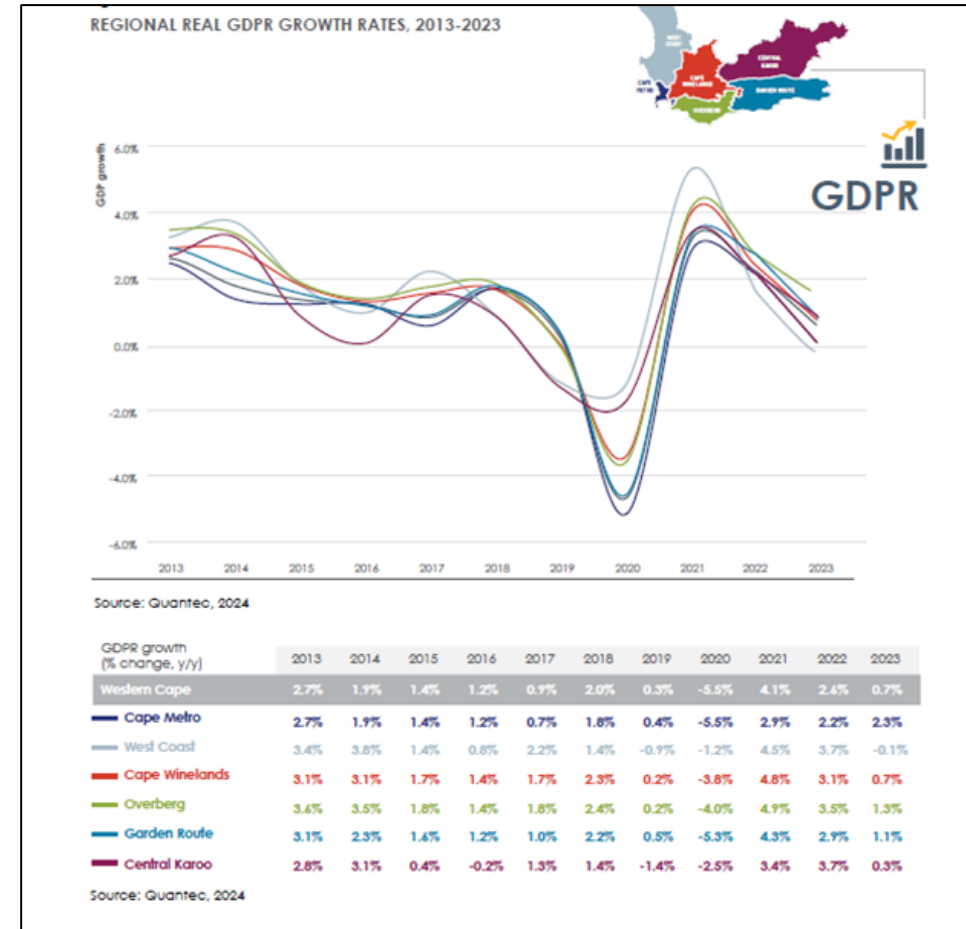
Diagram 22 illustrates the GDP for the Western Cape Province and it can be noted that the City of Cape Town has the highest contribution with over 70% and the Garden Route has the third largest contribution. The district’s economic contributions have remained relatively stable.

Diagram 22: Regional Contributors to Provincial GDP (Real) 2013 - 2023



The Western Cape’s economic growth has slowed, reaching a low of 0.7 per cent in 2023, despite a strong recovery in 2021 with a growth rate of 4.1 per cent (see Diagram 23). The robust post-2020 growth can be attributed to the economic rebound from the unprecedented disruptions caused by the pandemic.

Diagram 23: Regional Real GDP Growth Rates, 2013-2023



Conversely, the slowdown in the GDP growth rate reflects a return to historical growth trends, compounded by the adverse effects of climate change, the weakening of the Rand, and a challenging investment climate. Notably, the GDP of the Western Cape has exceeded the 2019 levels (R604.2 billion), reaching R613.8 billion in 2023. Similarly, all districts within the Western Cape have surpassed their 2019 GDP levels.

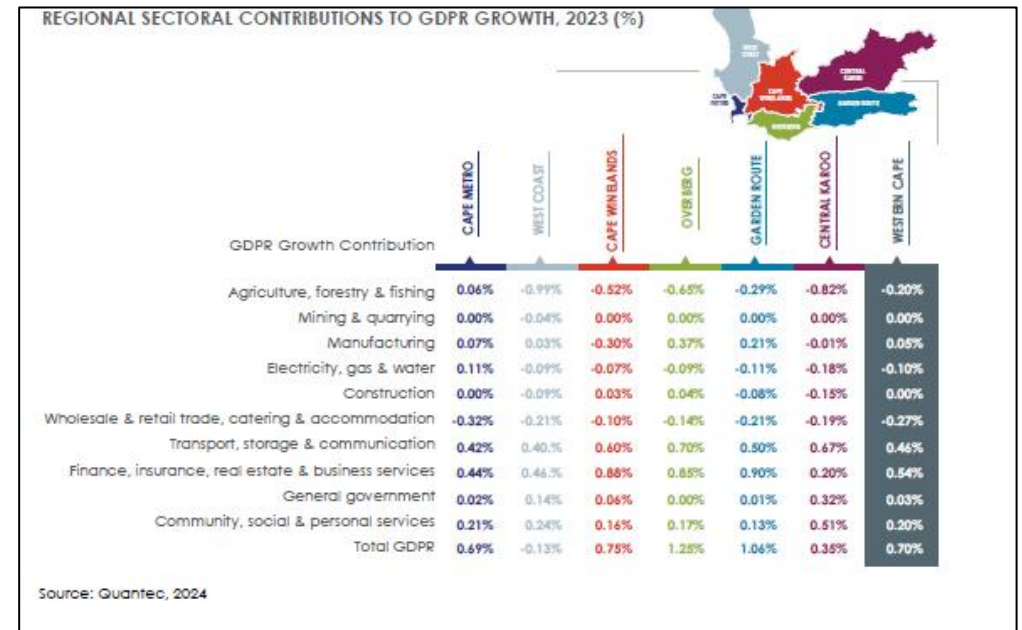
The regional GDP growth rates have been quite differentiated across the districts, indicating the need to diversify economic contribution from the districts. While the Cape Metro steers the performance of the Province, the OD and Garden Route District (GRD) have recorded above average growth rates.

The robust growth rates in the OD and GRD can be explained by the increased investments in

infrastructure, revival of the tourism industry and the internationally competitive agriculture industries.

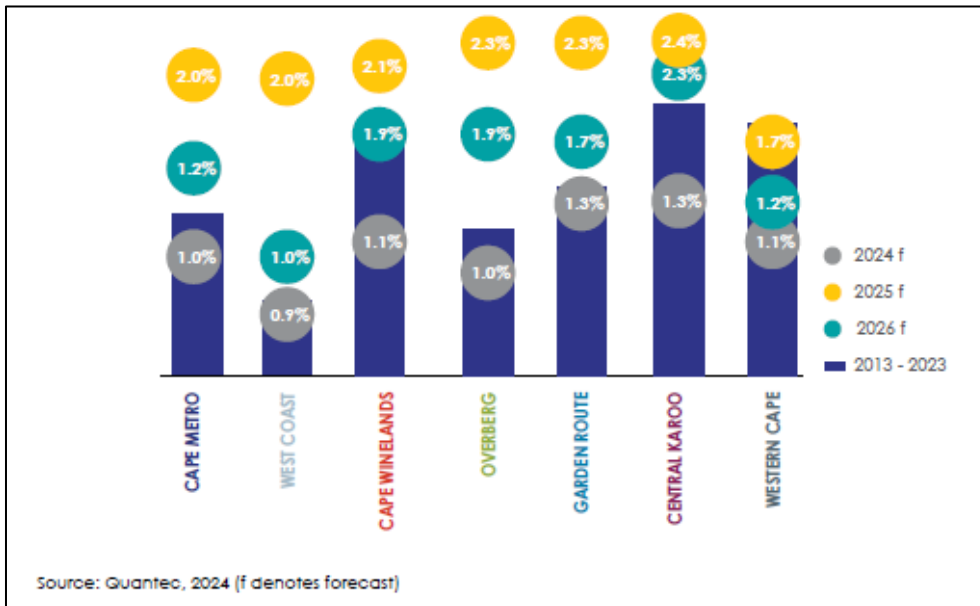
The most prominent sectoral economic contributors in the province are from manufacturing and growth enhancing services. **Diagram 24** provides a breakdown of the sectoral contributors for the province. The finance, insurance, real estate and business services is the top driver in the GRDM which is further supported by the transport, storage, communications and agriculture, forestry and fishing sectors.

**Diagram 24: Regional Sectoral Contributions to GDP Growth, 2023 (%)**



**The Western Cape and its regions are anticipated to outperform the national growth forecast, with an expected growth rate of 2.0 per cent per annum in 2024 (Diagram 25).** This outlook is fuelled by improved investor sentiment for the province, as evidenced by the above-average Business Confidence Index (BCI). Additionally, South Africa’s G20 Presidency, starting on 1 December 2024, will bring unique benefits to the Western Cape through the hosting of large-scale meetings and a range of related events. Lastly, the tourism industry has recorded significant improvement since 2019, which has stimulated further demand for provincial goods and services.

Diagram 25: Regional GDP Forecast, 2024-2026



The following key economic factors are important for the GRDM as outlined in the 2024-2025 MEGRO:

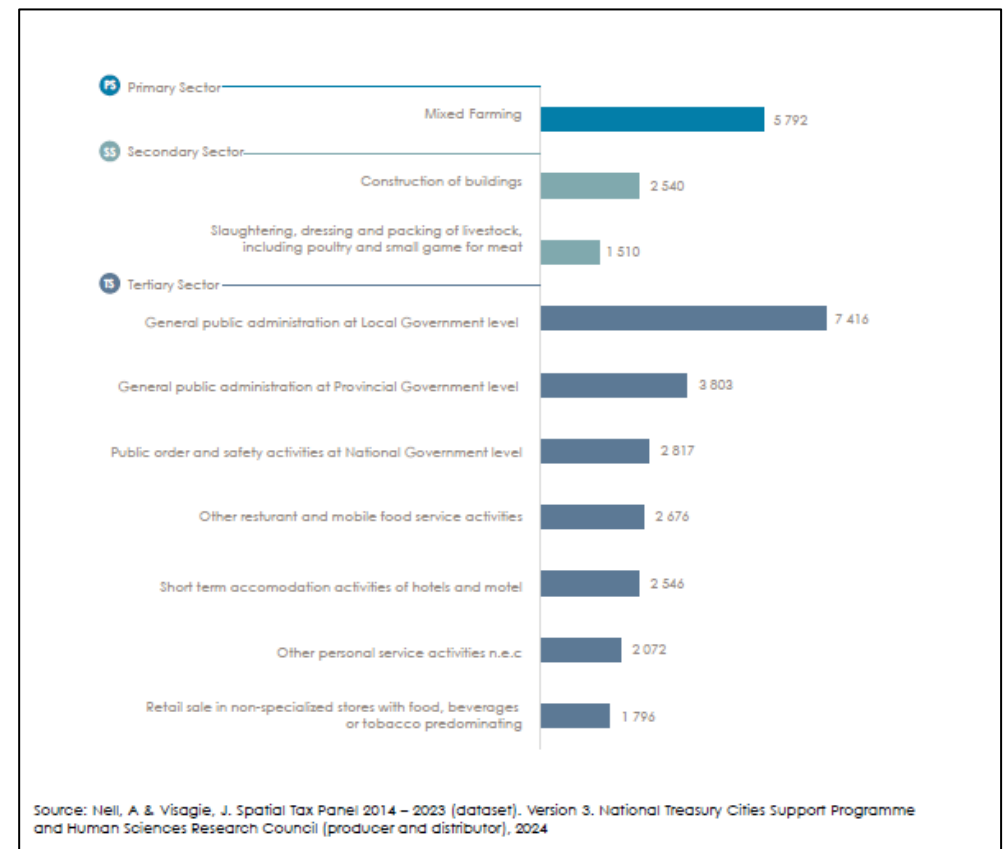
- ❖ The second contributions to employment and GDP growth from the transport, storage and communication sector was the standout performer in 2023.
- ❖ The sectoral contributions to employment and GDP growth reveals that the transport, storage and communication sector was the standout performer in 2023.
- ❖ Mixed farming is the largest source of employment in the district, followed by construction of buildings. A large portion of the mixed farming employment figures relates to the slaughtering, dressing and packing of

livestock underlining the importance of agri-processing and food production in the regions' economy.

Agriculture, particularly mixed farming, continues to drive the GRD's economic base, with fruit production and livestock farming being key contributors.

Diagram 26 outlines the top 10 sectors by number of FTE for the GRDM, 2023.

Diagram 26: Top 10 Sectors by Number of FTE, Garden Route District, 2023



### 3.5.2 Tourism

In the GRDM the economy is the environment and the environment is tourism. The fauna, flora and coast, ocean and mountains are conservation worthy in itself and are assets that attract tourists and spur economic development. It is part of a larger value chain and a complex system of inputs and outputs.

Increasing pressure for urban expansion, especially in the form of low-density urban sprawl is undermining the natural environment and tourism potential. The increasing demand for accommodation in coastal towns conflicts with the preservation of a coastal corridor. The SDF needs to give spatial directives to enable sustainable overall development, which means that economic development and conservation need to be balanced.

#### **OVERVIEW AND SIGNIFICANCE**

The tourism sector constitutes a set of industries that facilitate traveling for leisure and business by providing necessary and desired infrastructure, products and services. The sector will both affect and be affected by the socio-economic and environmental performance and impact of several industries including hospitality, attractions and recreation, entertainment, transport and retail. This interconnectedness may, however, offer opportunities for coordinated strategies with other sectors to provide innovative new products and serve new markets.

**Figure 24** (GR & KK Plan) shows the variety of tourism assets in the district, which offer a multitude of attractions for visitors such as cycling, golf, beaches, wine routes, leisure, wildlife, birding, hiking, camping, canoeing, kayaking and picnicking.

WESGRO Research revealed that a total of 155,331 domestic and 2,740 international tourists visited the GRDM in 2023. Within the domestic data set over 50,000 of the sampled tourists were from the City of Cape Town, whereas the greatest number of international visitors (446), were from the United States.

Research revealed that more domestic tourists sampled stay over in the Garden Route and Klein Karoo (64.5%), than in the rest of the Western Province (50.1%). This trend is even more dominant for international tourists, with 66.9% staying over in the Garden Route and Klein Karoo and only 60% in the Western Cape.

Tourism is seasonal in the Garden Route and Klein Karoo, with a large influx of domestic tourists in December and January. This provides a major boost for local businesses during that time, with an increase in demand for fuel, retail goods and services. A small proportion of tourists (1.48 per cent) stay in holiday homes. Tourists with holiday homes tend to stay much longer (7 nights or more) which provides a valuable injection to the local economy. Knysna and Stilbaai are popular towns for people from Gauteng to invest in second homes (Garden Route and Klein Karoo Tourism Strategy 2019).

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : TOURISM



**WESTERN CAPE PROVINCIAL SDF SPECIALIST STUDY**

The Western Cape Provincial SDF Specialist Study on Scenic and Cultural Landscapes identifies key risks to Grade 1 Heritage Resources, namely:

- ❖ Development outside the urban edge in rural landscapes of scenic and cultural significance;
- ❖ Historic structures such as historic mission settlements being replaced or inappropriately modernised (common in rural areas);
- ❖ Ribbon development along coastal landscapes;
- ❖ Landscapes under pressure from large scale infrastructure development;
- ❖ Town gateways and historic mountains passes and ports at risk being transformed by inappropriate development;
- ❖ Under-leveraged tourism and historical assets in the region degrading and becoming burdens rather than assets;
- ❖ A decline of the historic cores of settlements, degrading their sense of place with poor development decisions and a lack of appreciation for their quality.

The SDF furthermore identifies three broad landscape assets that require preservation, enhancement and that entail different lifestyle, tourism, agricultural and scenic asset offerings. These are:

- ❖ the Klein Karoo Landscape Asset;
- ❖ the Outeniqua Mountain Range; and
- ❖ Landscape Asset and the Garden Route Landscape Asset.

**WESTERN CAPE TOURISM BLUEPRINT, 2030**

This is a long-term growth strategy to support the recovery of the tourism sector from Covid while also providing a vision for the future of tourism in the Western Cape. The strategy will see the Western Cape Government investing in five core components, namely:

- ❖ Tourism infrastructure
- ❖ Tourism product development
- ❖ Destination marketing
- ❖ Visitor services
- ❖ Institutional arrangements and regulation

One of the key aims is to drive the geographic spread of tourism benefits throughout the province.

As part of Tourism Blueprint 2030, a comprehensive analysis was done of what over 300 000 people were saying online about the Garden Route District over the duration of one year. To get a better understanding of the current product offering in the district and identify possible opportunities to stimulate demand, an audit of 18 attractions took place. The following key aspects should be noted:

- ❖ The Cango Caves provides a benchmark for most attractions in the district in terms of visitor numbers and attracts over 250 000 visitors per annum.
- ❖ The Garden Route National Park, which has several entry points, attracts over 400,000 / day visitors per annum.
- ❖ Many attractions in the district see over 100 000 predominately domestic tourists and provide child-friendly activities.
- ❖ Admission fees for popular attractions are all over R150.
- ❖ SANParks is the only attraction in the district with a dual pricing strategy. Conservation fees per day (adult) are R59 for South African citizens and R235 for international visitors. SADEC rates are also available.

- ❖ The district offers a wide range of outdoor activities, animal encounters and child-friendly experiences.
- ❖ All major sites are open seven days a week.
- ❖ Attractions have the right mix of local and international visitors with the majority being reliant on domestic travellers. A
- ❖ Attractions offer an excellent range of dwell time, allowing visitors the opportunity to enjoy more than one attraction a day.

Based on the attractions audited, the tourism nuclei for the Garden Route Municipal District are:

- ❖ **Primary nucleus:** The Garden Route acts as an iconic drawcard for its scenery, coastal beauty and outdoor activities. The Cango Caves is a primary nucleus for domestic tourists.
- ❖ **Secondary nucleus:** Cango Wildlife Ranch and Conservation Centre, Featherbed Co and Ostrich Farms.
- ❖ **Tertiary nucleus:** Monkeyland Primate Sanctuary, Birds of Eden, Tenikwa Wildlife and Red Berry Farm.

The following investment projects (**Table 28**) were identified through different sources and included in the Tourism Blueprint. There is an opportunity, through innovative funding mechanisms with the National Department of Tourism, Western Cape Government and the private sector, to fund these projects. **The projects should however be assessed in terms of their location in relation to the primary, secondary and tertiary nuclei identified above.**

**Table 28: Possible investment projects**

PROJECT	TOWN	TYPE	STAGE OF DEVELOPMENT
De Hoek Mountain resort	Oudtshoorn	Resort: chalets, caravan and camping sites	Looking for private sector investor
Calitzdorp Spa Resort	Calitzdorp	Resort: chalets, caravan and camping sites	Upgrade
Swartvlei Camping Site	Sedgefield	Camping site	Upgrade
Victoria Bay Camping Site	George	Camping and caravan site	Upgrade
Kleinkrantz Holiday Resort	Sedgefield	Resort	Upgrade

The Blueprint identified the following gaps that should be addressed to explore tourism opportunities:

- ❖ Connecting neighbours through scenic drives. The Swartberg Circle route can become known as one of the great scenic drives in the world.
- ❖ Maximising revenue at the Cango Caves. The maximising of ticket yield needs attention.
- ❖ Animal encounters. There is an opportunity for the Garden Route District to lead and ensure that all animal experiences are ethical and approved by the relevant body governing ethical animal interaction.
- ❖ Active outdoor experiences (adventure tourism). The Garden Route could be branded as the active-outdoor region of the Western Cape.

There are many tourism opportunities available to the GRDM and the industry to attract visitors and their spend, such as the six aspects listed above. This would require a public-private partnership and solutions for removing barriers in this regard.

The GRDM has a wide range of visitor attractions embedded in nature and attractive to the adventurous of spirit. There is a need to connect these experiences into one cohesive offering and destination brand.

**GARDEN ROUTE AND KLEIN KAROO TOURISM STRATEGY, 2025-2030**

The **Regional Tourism Office (RTO)** under Garden Route District Municipality coordinates tourism efforts across all municipalities in partnership with Wesgro and the private sector.

Each municipality in the Garden Route District has a **Local Tourism Office (LTO)** that either operates in-house or as an independent non-profit organisation as outlined in **Table 29** below.

**Table 29: Local Tourism Offices (LTOs)**

MUNICIPALITY	KEY TOWNS	LTO MODEL
<b>Bitou</b>	Plettenberg Bay, Kranshoek, Kurland	Plett Tourism (independent NPO with board; grant + sponsorship)
<b>George</b>	George, Wilderness, Uniondale, Haarlem	In-house (George Municipality)
<b>Hessequa</b>	Riversdale, Stilbaai, etc.	In-house (Hessequa Municipality)
<b>Kannaland</b>	Ladismith, Calitzdorp, Zoar	Funded LTOs in Ladismith and Calitzdorp
<b>Knysna</b>	Knysna, Sedgfield, Rheenendal	Contracted service via Visit Knysna Tourism
<b>Mossel Bay</b>	Mossel Bay, Hartenbos, etc.	Independent NPO (Mossel Bay Tourism; grant + memberships)
<b>Oudtshoorn</b>	Oudtshoorn, De Rust, Dysselsdorp	Independent NPO (grant + memberships)

The coordination of the various tourist activities in the district is a key aspect outlined in the tourism strategy.

**Strategic Objectives, 2025-2030**

The strategy aims to position the GR&KK as a “*unique destination with memorable experiences from Karoo to Coast*”. The **key objectives** are:

- ❖ **Effective Marketing:**
  - Grow domestic and international tourism numbers.
  - Improve event-based tourism to reduce seasonality.
  - Develop Route 62 as a joint brand with the N2 corridor.
- ❖ **Enhance Visitor Experience:**
  - Diversify tourism offerings (e.g. film tourism, agri-tourism).
  - Improve safety, service quality, and town aesthetics.
- ❖ **Destination Management:**
  - Strengthen institutional capacity and coordination.
  - Align LTOs, municipalities, and private sector efforts.
- ❖ **Transformation:**
  - Promote inclusivity and empower small tourism businesses.
  - Support SMMEs and transformation through skills and enterprise development.
- ❖ **Ease of Access:**
  - Enhance infrastructure, signage, digital marketing, and transport.
  - Improve air access (e.g. international status for George Airport).

The plan is phased across short-term (0-1 year), medium-term (1-3 years), long-term (4-10 years), and **Table 30** depicts the key actions contained in the strategy.

**Table 30: Garden Route and Klein Karoo Tourism Strategy Key Actions**

PRIORITY AREAS & KEY ACTIONS	
Focus Area	Key Actions
<b>Marketing &amp; Promotion</b>	Develop a unified brand; digital campaigns; niche tourism (astro, agri, rail)
<b>Product Development</b>	Invest in infrastructure, Route 62 branding, “Green Card” loyalty program
<b>Skills &amp; Training</b>	Ongoing tourism ambassador training hospitality skills via Garden Route Skills Mecca
<b>Inclusion &amp; Transformation</b>	Reduced LTO membership for small businesses; inclusive event support
<b>Events &amp; Festivals</b>	“Cape of Great Events” strategy; develop off-peak events
<b>Mobility &amp; Infrastructure</b>	Improve inter-town transport; advocate for air and rail revitalisation
<b>Coordination &amp; Governance</b>	Establish Joint Marketing Organisation (JMO); improve collaboration across region

**WESTERN CAPE GROWTH FOR JOBS STRATEGY OUTCOMES**

**Table 31** depicts a summary of the Priority Focus Areas (PFA’s) of the G4J Strategy, the Objectives and the Goal Statement of each.

**Table 31: G4J Strategy Outcomes**

PFA	DESCRIPTION	OBJECTIVE STATEMENT	GOAL STATEMENT
1	<b>Driving Growth Opportunities through Investment</b>	Enable and accelerate private-sector investment as a key driver of economic growth.	“Private-sector investment will be 20% of regional GDP (translating to R200-billion) by 2035.”
2	<b>Stimulating Market Growth through Exports and Domestic Markets</b>	Expand both domestic and export markets, enabling firms to scale and access global value chains.	“The value of Western Cape exports of goods and services (inclusive of tourism) will triple by 2035.”
3	<b>Energy Resilience and Transition to Net Zero Carbon</b>	Increase energy resilience, reduce dependence on Eskom, and transition to a low-carbon economy.	“Reduce reliance of energy from Eskom of between 1 800 – 5 700 MW by 2035, estimated to attract between R21.6-billion and R68.4-billion in related investment.”
4	<b>Water Security and Resilience</b>	Secure water resources for economic and social use, especially for secondary/tertiary economic sectors, ensuring sustainable supply.	“Double the amount of water available for secondary and tertiary economic sectors (primarily from non-productive use) by 2035 and honour existing allocations to agriculture.”
5	<b>Technology and Innovation</b>	Foster R&D, innovation ecosystems and high-growth technology sectors to boost productivity and competitiveness.	“By 2035, research and development expenditure will increase by 300% in real terms, reaching R35 billion and venture capital deals will total R20 billion.”
6	<b>Infrastructure and a Connected Economy</b>	Develop infrastructure (transport, digital, logistics) and connectivity	“By 2035, the Western Cape economy will have the infrastructure

PFA	DESCRIPTION	OBJECTIVE STATEMENT	GOAL STATEMENT
		across urban, rural, regional nodes to support a R1-trillion economy.	required to support and enable a R1 trillion economy and public-sector capital investment in the Western Cape will be 10% of regional GDP.”
7	<b>Improved Access to Economic Opportunities and Employability</b>	Ensure citizens, including youth, township, rural entrepreneurs and workers, are enabled via skills, pathways and access to participate in economic growth.	“All citizens who want to be economically active have improved access to economic opportunities and employability through at least one pathway.”

### 3.5.3 Agriculture

The Agricultural sector is an important sector in the Garden Route District Municipal area (Garden Route District Municipality, 2017a, 2017b). It is characterized by irrigated and rainfed pastures and crops as well as intensive livestock farming along the coast (i.e. using relatively high levels of capital, labour and fertilizer compared to land size) and extensive livestock farming further inland (i.e. using relatively low levels of capital, labour and fertilizer compared to land size) (Garden Route District Municipality, 2017a, 2017b). Intensive agricultural activities in the coastal areas are attributed to the higher levels of rainfall and soil fertility that occur there (Garden Route District Municipality, 2016). Away from the coast, agriculture strongly corresponds to where rivers occur, especially in the drier Oudtshoorn Local Municipal Area (Garden Route District Municipality, 2017b). Additionally, some commercial forestry occurs in the District Municipal Area in the areas around Tsitsikamma and George (Garden Route District Municipality, 2017). Furthermore, commercial agriculture and commercial forestry cover much of the land in the District Municipal Area and are

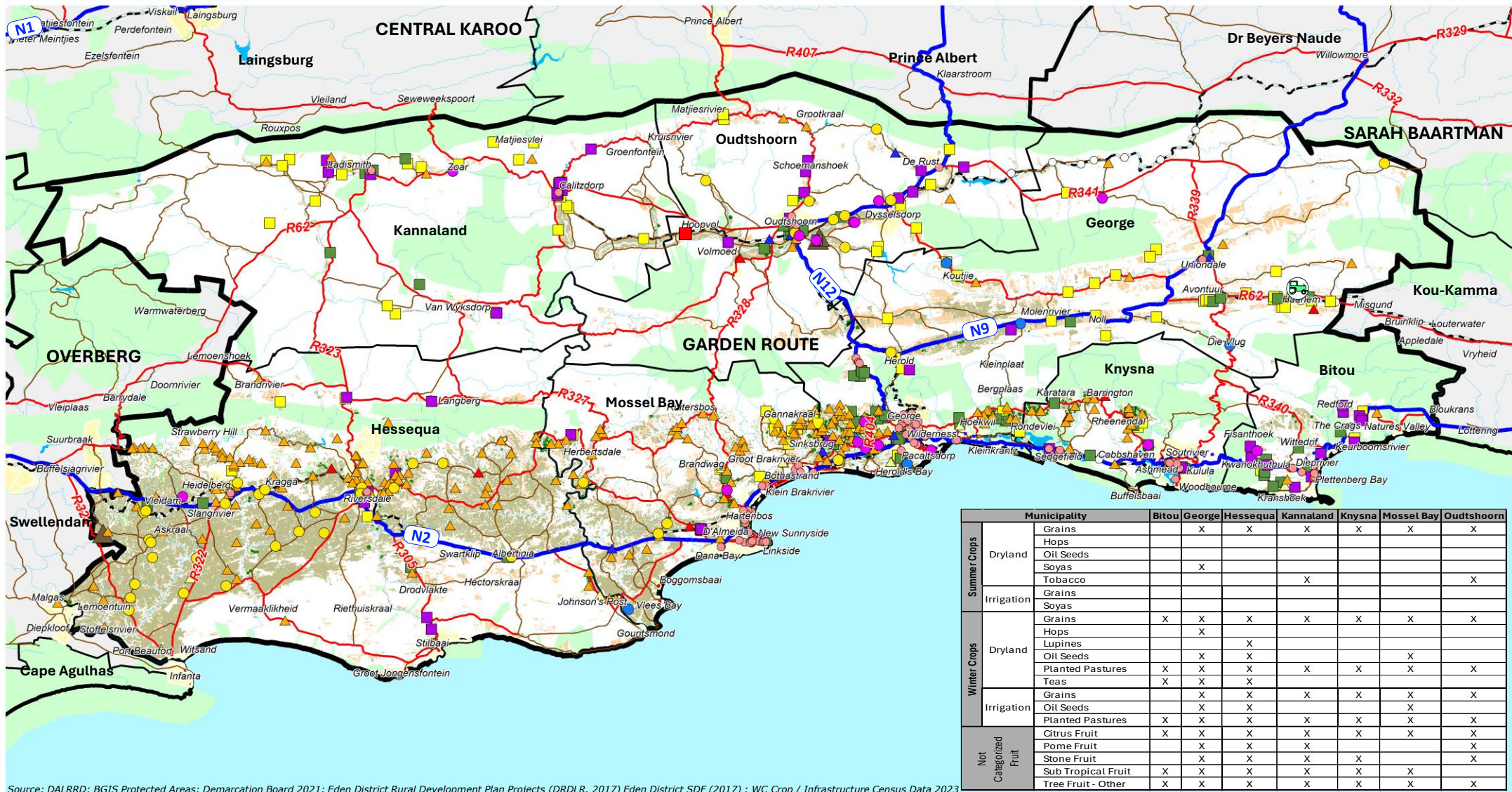
said to be the main drivers of the loss of biological diversity in the District Municipal Area (Garden Route District Municipality, 2016).

The main commercial agricultural activities in the Garden Route District Municipal Area are the production of ostriches and deciduous fruit (**Figure 25**) (Garden Route District Municipality, 2016). Other commercial agricultural activities in the District Municipal Area include port (fortified wine), aloe products, vegetable crops, honeybush tea and dairy products (Garden Route District Municipality, 2016). Small areas of production with potential to expand their production in the District Municipal Area include aqua farming (fish), honey, flowers, essential oils, livestock and poultry (Garden Route District Municipality, 2016). Furthermore, agri-processing plants in the District Municipal Area mostly occur in the area surrounding George and to a lesser degree, the area surrounding Oudtshoorn (Garden Route District Municipality, 2017a).

The GRDM in collaboration with Casidra, Department of Local Government (DLG), Department of Agriculture (DA), Oudtshoorn LM and the Agriculture Research Council (ARC) have established the Agro-processing facility at Oudtshoorn with the specific focus on honeybush beneficiation.

Being so varied and large, the agriculture sector is one of the most important employers in the Garden Route District Municipal Area; however, employment in the agriculture sector is declining (4.9%) (Garden Route District Municipality, 2017a, 2017b). Overall, employment in the agriculture, forestry and fisheries sector accounted for approximately 5.64%.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : AGRICULTURE (Combined)



Source: DALRRD; BGIS Protected Areas; Demarcation Board 2021; Eden District Rural Development Plan Projects (DRDLR, 2017) Eden District SDF (2017) ; WC Crop / Infrastructure Census Data 2023

- A District Municipality
- A Local Municipality
- Towns
- Protected Natural Areas
- Protected Agricultural Areas
- F FPSU
- Feedlot
- Packhouse
- Abattoir
- Agro Processing
- Agro Processing (Honeybush)
- Aqua Culture
- Cellar
- Chicken Battery
- Grain Storage
- Piggery
- Dryland Crops
- Irrigated Crops
- Other Not Categorized
- National Roads
- Main Roads
- Other Roads
- Estuaries / Dams / Rivers

Municipality		Bitou	George	Hessequa	Kannaland	Knysna	Mossel Bay	Oudtshoorn
Summer Crops	Dryland	Grains	X	X	X	X	X	X
		Hops						
		Oil Seeds		X				
		Soyas				X		X
Winter Crops	Dryland	Grains	X	X	X	X	X	X
		Hops		X				
		Lupines			X			
		Oil Seeds		X	X			X
Not Categorized Fruit	Irrigation	Planted Pastures	X	X	X	X	X	X
		Teas	X	X	X			
		Grains		X	X	X	X	X
		Oil Seeds		X	X			X
Not Categorized Fruit	Irrigation	Planted Pastures	X	X	X	X	X	X
		Citrus Fruit	X	X	X	X	X	X
		Pome Fruit		X	X	X		X
		Stone Fruit		X	X	X	X	X
		Sub Tropical Fruit	X	X	X	X	X	X
Not Categorized Fruit	Irrigation	Tree Fruit - Other	X	X	X	X	X	X

Municipality	Bitou	George	Hessequa	Kannaland	Knysna	Mossel Bay	Oudtshoorn
Feedlot		X	X				X
Other Livestock	X	X	X	X	X	X	X
Packhouse	X	X	X	X	X	X	X
Abattoir	X	X	X	X	X	X	X
Agro Processing	X	X	X	X	X	X	X
Aquaculture					X	X	
Auction Facility		X	X		X	X	
Cellar	X	X	X	X	X	X	X
Chicken Battery	X	X	X			X	
Dairy	X	X	X	X	X	X	X
Grain Storage		X	X			X	X
Piggery	X	X	X	X	X	X	X

**Garden Route**  
DISTRICT MUNICIPALITY

SDF 2025 Figure 25

Regarding grazing capacity, the northern part of the Garden Route District Municipal area has the highest grazing capacity (i.e. the highest number of hectares required per large stock unit for viable grazing) in the district, while the south-east has the lowest grazing capacity (**Figure 26**) (Western Cape Department of Agriculture, 2017). Much of the south of the district has been categorized as “*transformed rangeland*” and thus has no grazing capacity (Western Cape Department of Agriculture, 2017).

Despite the potential for expanding agricultural production in the Garden Route District Municipal area, it is predicted that climate change will affect the agriculture sector both positively and negatively.

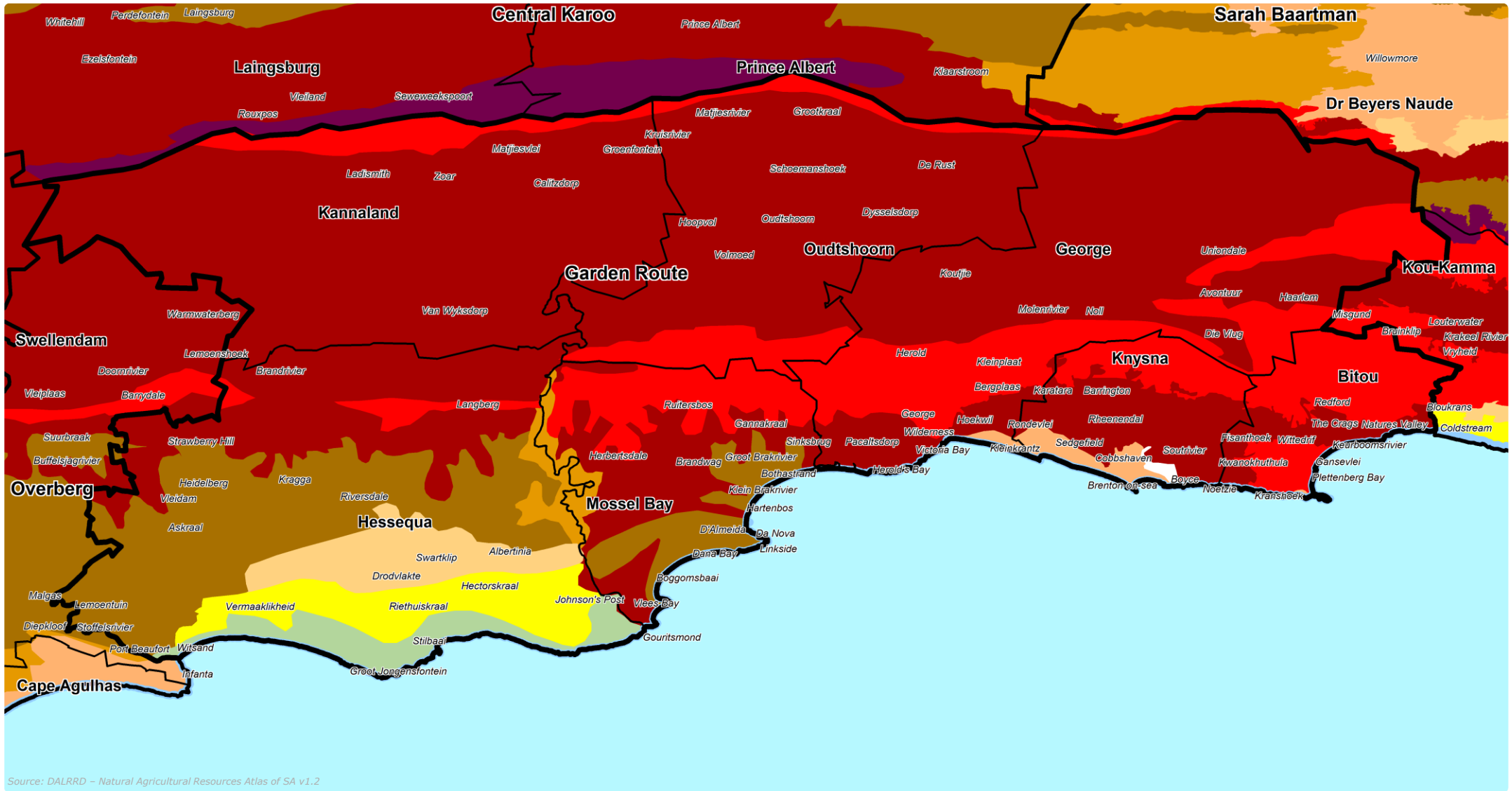
The predicted changes in average rainfall and temperature are forecast to reduce the areas that are suitable for viticulture or shift them to areas that are higher or cooler than current locations (Department of Environmental Affairs, 2013c).

The reduction in rainfall (and runoff) is forecast to reduce the yields of fruit and vegetables, notably deciduous fruit and rain-fed wheat production in the Western Cape (Department of Environmental Affairs, 2013c). Furthermore, the production of fruit (such as apples and pears) and sugar cane will be increasingly vulnerable to damage from a predicted expansion of the areas affected by agricultural pests (Department of Environmental Affairs, 2013c).

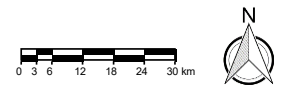
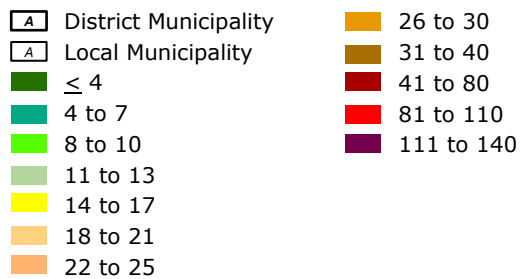
By decreasing agricultural yields, climate change could also impact the agriculture sector by reducing profitability and job opportunities in the sector as well as increasing food security risks, especially amongst subsistence farmers and their dependents (Department of Environmental Affairs, 2013c; Garden Route District Municipality 2014, 2017b). Indeed, the Garden Route District Municipality’s 2017/2018 Integrated Development Plan has noted that climate change impacts could have dire consequences for the agriculture sector in the District Municipal Area (Garden Route District Municipality, 2017a).

Specifically, it is anticipated that climate change will result in higher temperatures, lower rainfall and increased rainfall variability in the Garden Route District Municipality (Garden Route District Municipality, 2014, 2017b). Furthermore, impacts such as more frequent and intense droughts, fires and floods are predicted to not only result in agricultural losses but also impact other sectors of the local economy as well (Garden Route District Municipality 2014, 2017b, 2017a). Nevertheless, the Garden Route District Municipality’s 2017/2018 Integrated Development Plan has noted that agriculture in the District Municipal Area has high adaptive capacity on a production level (Garden Route District Municipality, 2017a).

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : GRAZING CAPACITY (ha/LSU)



Source: DALRRD – Natural Agricultural Resources Atlas of SA v1.2



### 3.6 HUMAN SETTLEMENTS

The development pressure between the preservation of the natural environment and urban expansion has been listed as one of the key issues within the district. The district has further grown with 91,867 households from 2011-2022 which were predominantly characterized by low-density urban development.

The average household sizes have also declined, which can be attributed to an influx of single working-age individuals and a broader trend towards smaller family sizes.

- ❖ GRDM features a mix of housing types, including formal housing, informal settlements, and government-subsidized units. Access to formal housing has risen significantly, addressing housing shortages for low-income households.
- ❖ There are 46,173 indigent households with a median income of R5,618, underscoring the need for affordable housing solutions.
- ❖ Access to essential services such as water, electricity, and sanitation has improved overall, though disparities remain, particularly among marginalized communities.

Various government housing initiatives have been undertaken to address the housing need and access to services. The most targeted interventions being undertaken by the Government are the Restructuring Zone and Priority Human Settlement Housing Development Areas (PHSHDAs).

#### 3.6.1 Restructuring Zones

Restructuring zones are a demarcated area of investment identified by the municipality, supported by the province for targeted investment with a subsidy commitment, and approved by the Minister for Human Settlements in line with the Social Housing Act, Act 16 of 2008. Restructuring zones are characterized by:

- ❖ Spatial Restructuring by bringing lower to middle income people into areas where there are major economic opportunities and from which they would otherwise be excluded because of the dynamics of the land market on the one hand and the effects of land use planning instruments on the other hand, etc.
- ❖ Social Restructuring by promoting a mix of races and classes.
- ❖ Economic Restructuring by promoting spatial access to economic opportunity and promoting job creation.

The designated area should not be a project site, township, hostel, or public renewal site.





**Restructuring Zones** are essential components of South Africa's urban planning strategy, driven by the need to rectify past inequalities and **promote sustainable human development**. By focusing on these areas, municipalities can work towards creating more **inclusive, resilient, and liveable urban environments** for all residents.


#### 3.6.2 Priority Human Settlement Development Areas (PHSHDAs)

The Priority Human Settlement Development Areas (PHSHDAs) are designated regions focused on addressing housing needs through intergovernmental cooperation and integrated planning to expedite housing delivery. They are identified based on housing demands that current programs cannot meet, specifically targeting low-income earners through upgrading urban areas, accelerating shelter provision, and addressing high-demand locations with low housing supply.

**Table 32** provides a comparative overview between the Restructuring Zones and PHSHDAs.

**Table 32: Comparative Overview of Restructuring Zones and Priority Human Settlement Development Area – Roles and Functions**

		RESTRUCTURING ZONES	PRIORITY HUMAN SETTLEMENT AND HOUSING DEVELOPMENT AREAS
	<b>Definition and Purpose</b>	<ul style="list-style-type: none"> <li>❖ A geographic area which has been identified by the municipality, with the concurrence of the provincial government, for purposes of social housing and designated by the Minister in the Gazette for approved projects (Social Housing Act, 2008)</li> </ul>	<ul style="list-style-type: none"> <li>❖ The PSHSDAs intends to advance Human Settlements Spatial Transformation and Consolidation by ensuring that the delivery of housing is used to restructure and revitalize towns and cities, strengthen the livelihood prospects of households and overcome apartheid spatial patterns by fostering integrated urban forms (Government Gazette 526 of 2020)</li> </ul>
	<b>Housing Programme Focus</b>	<ul style="list-style-type: none"> <li>❖ Social housing programme and projects: Social Housing means a rental or co-operative housing option for low to medium income households at a level of scale and built form which requires institutionalized management, and which is provided by social housing institutions (SHIs) and other delivery agents (ODAs) in approved projects in designated restructuring zones with the benefit of public funding as contemplated in the Social Housing Act No. 16, 2008.</li> </ul>	<ul style="list-style-type: none"> <li>❖ All national housing programmes (IRDP, SH, ISUP, FLISP, SPP, EPHP)</li> <li>❖ Seeking to implement integrated and sustainable housing development</li> </ul>
	<b>Underlying Principles</b>	<ul style="list-style-type: none"> <li>❖ Informed by the Social Housing Programme Guidelines (2006)</li> <li>❖ Focusing on:                             <ul style="list-style-type: none"> <li>○ spatial restructuring - social housing will be located in specific, defined localities (mostly urban) which have been identified as areas of opportunity (largely economic) where the poor have limited or inadequate access to accommodation</li> <li>○ social restructuring – within selected social housing schemes, and across the programme as a whole, a mix of race and income levels in the beneficiary profile will be aimed for</li> <li>○ economic restructuring – social housing will contribute to job creation and economic revitalization</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>❖ Informed by the NDP, National SDF and IUDF</li> <li>❖ Focusing on:                             <ul style="list-style-type: none"> <li>○ promotion of spatial transformation</li> <li>○ promotion of regeneration, densification and integration</li> <li>○ access to connectivity, economic and social infrastructure</li> <li>○ access to adequate accommodation</li> <li>○ provision of quality housing options</li> </ul> </li> </ul>
	<b>Driving Platform</b>	<ul style="list-style-type: none"> <li>❖ As part of local municipal integrated planning processes</li> <li>❖ Supported by National Government, Provincial Government, Municipalities, Social Housing Regulatory Authority (SHRA), Social Housing Institutions (SHIs), Other Delivery Agent (ODA), Other Role-players (National Housing Finance Corporation (NHFC), Donors, etc.</li> </ul>	<ul style="list-style-type: none"> <li>❖ As part of the District Development Model (One Plans) – includes municipal integrated planning</li> <li>❖ Supported by Local Authorities</li> </ul>

		<ul style="list-style-type: none"> <li>❖ Areas targeted by RZs:                     <ul style="list-style-type: none"> <li>○ Most municipalities have identified nodes and corridors in their planning processes. These are likely to be suitable as restructuring zones because of proximity to both job opportunities and consumption opportunities</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>❖ Areas targeted by PSHDAs:                     <ul style="list-style-type: none"> <li>○ areas of urgent housing need where there is an established high demand and low supply of housing opportunities</li> <li>○ areas requiring upgrading and/or redevelopment for purposes of delivering housing choices including subsidized housing</li> <li>○ areas requiring improved access to infrastructure, amenities, and services</li> <li>○ areas that support the integration of different housing typologies, land uses and economic development</li> </ul> </li> </ul>
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Source: GRDM Human Sector Development Plan

Various PSHDAs and Restructuring Zones have been declared in the district. **Table 33** outlines the existence of PSHDAs and Restructuring Zones within the District (see **Figure 27**).

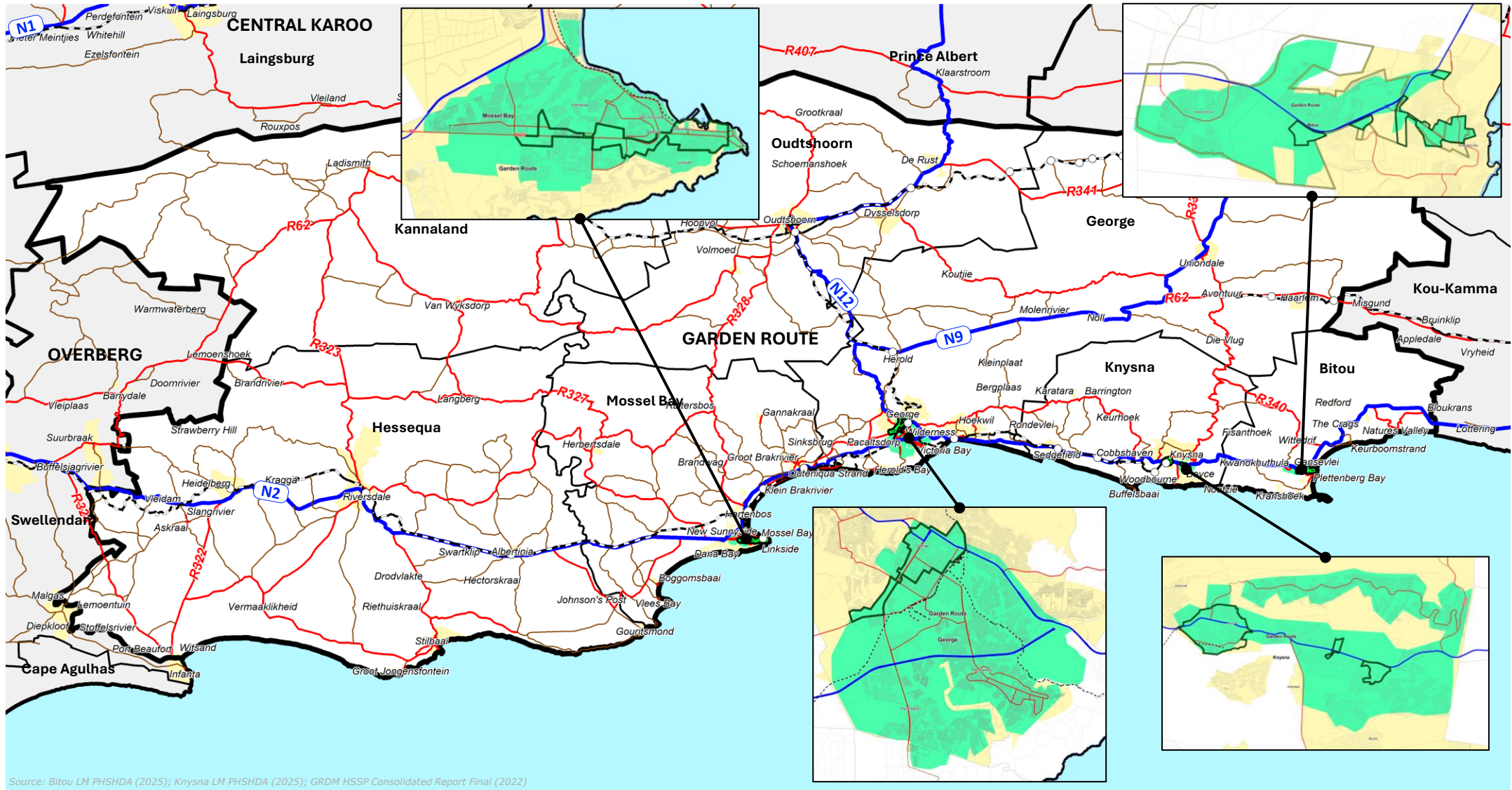
It is noted from Table 33 that there are no Restructuring Zones (RZ's) within the Kannaland and Hessequa Municipalities due to the fact that these municipalities do not address one or all of the following: structural, economic, social and special dysfunctionalities and demand.

**Figures 28 to 31** illustrate the position of each Restructuring Zone and PSHDA.

**Table 33: Existence of PSHDAs and Restructuring Zones in Garden Route District**

LOCAL MUNICIPALITY	RZ	PSHDA	COMMENT
Kannaland	X	X	No PSHDA has been declared for Kannaland.
Oudtshoorn	√	X	
George	√	√	PSHDA plan is being compiled for George LM and will be completed in April/May 2025.
Bitou	√	√	PSHDA plan for Bitou LM was completed April 2025.
Knysna	√	√	PSHDA plan is being compiled for Knysna LM and will be completed in April/May 2025.
Mossel Bay	√	√	PSHDA plan is being compiled for Mossel Bay LM and will be completed in April/May 2025.
Hessequa	X	X	No PSHDAs have been declared for Hessequa. The LM is in the process of reviewing their SDF and according to the GRDM Human Settlements Sector Plan the LM may identify a Restructuring Zone. The location of the proposed Restructuring Zone has not been confirmed.

# GARDEN ROUTE DM SDF : PRIORITY HUMAN SETTLEMENT HOUSING DEVELOPMENT AREAS

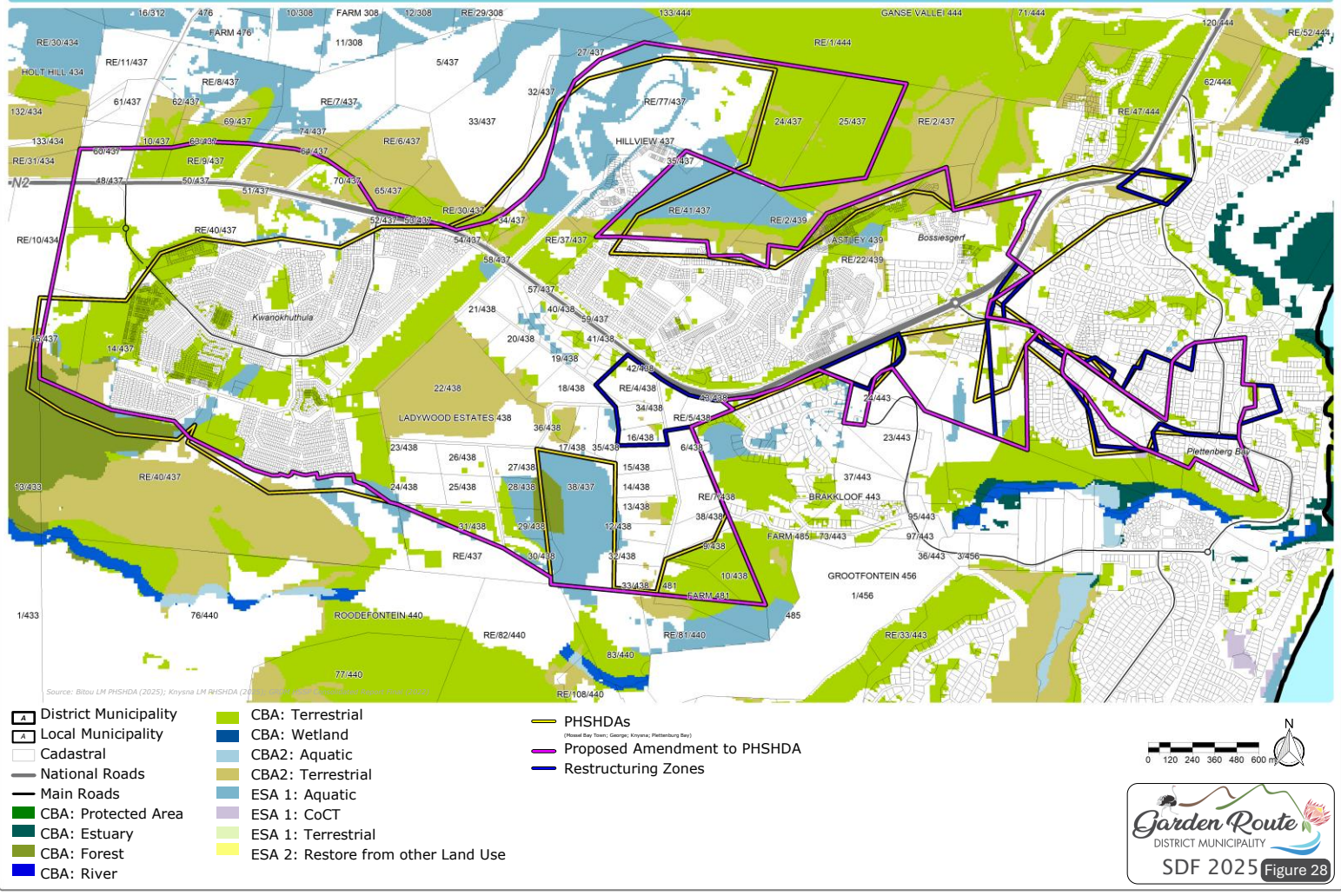


Source: Bitou LM PSHDA (2025); Knysna LM PSHDA (2025); GRDM HSSP Consolidated Report Final (2022)

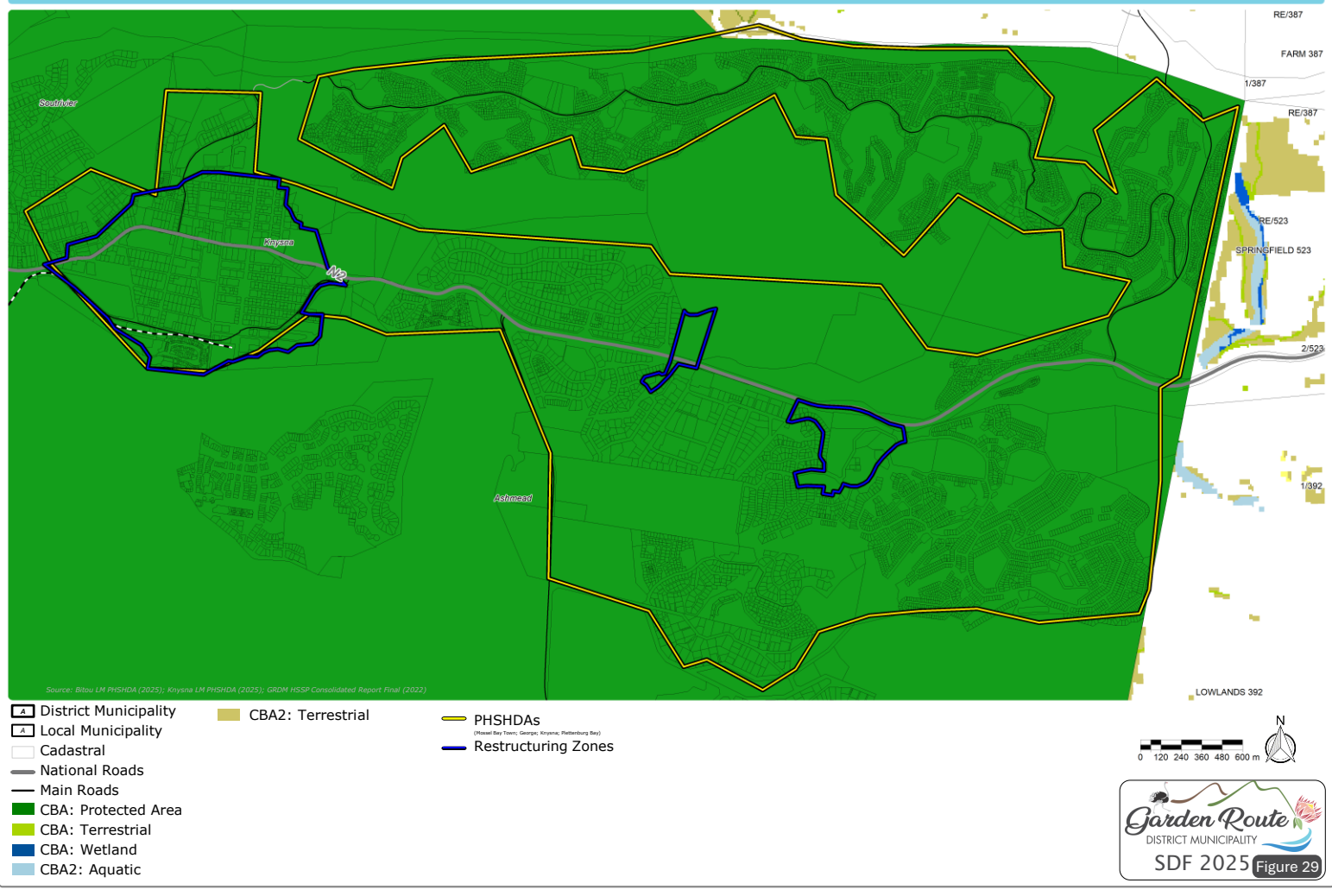
- District Municipality
- Local Municipality
- Towns and Settlements
- National Roads
- Main Roads
- Secondary Roads
- Other Roads
- Railway Line
- Railway Station
- PSHDAs  
(Mossel Bay Town; George; Knysna; Plettenburg Bay)
- Proposed Amendment to PSHDA
- Restructuring Zones



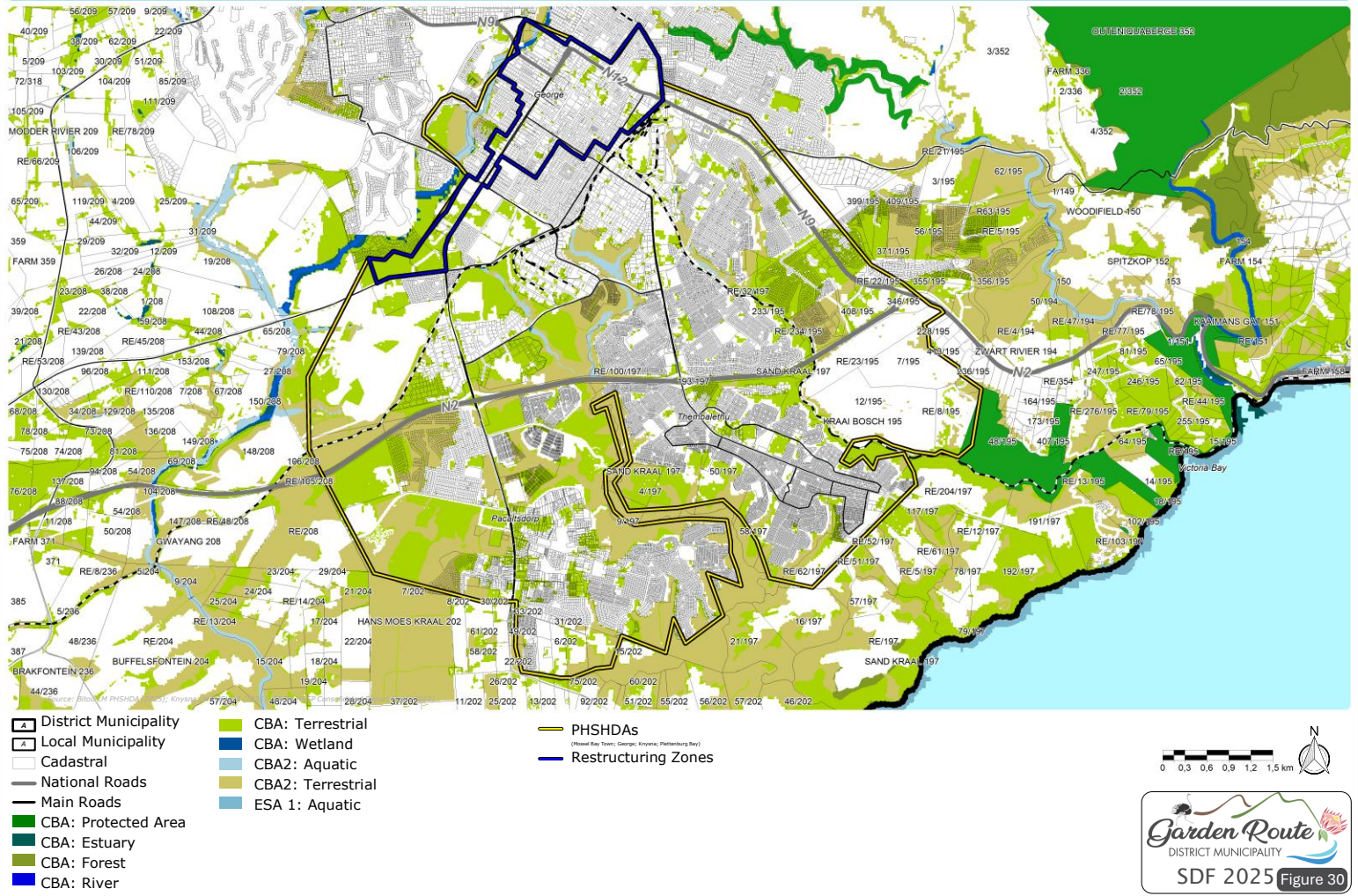
# GARDEN ROUTE DM SDF : BITOU PHSFDA (Revised as per HSMP)



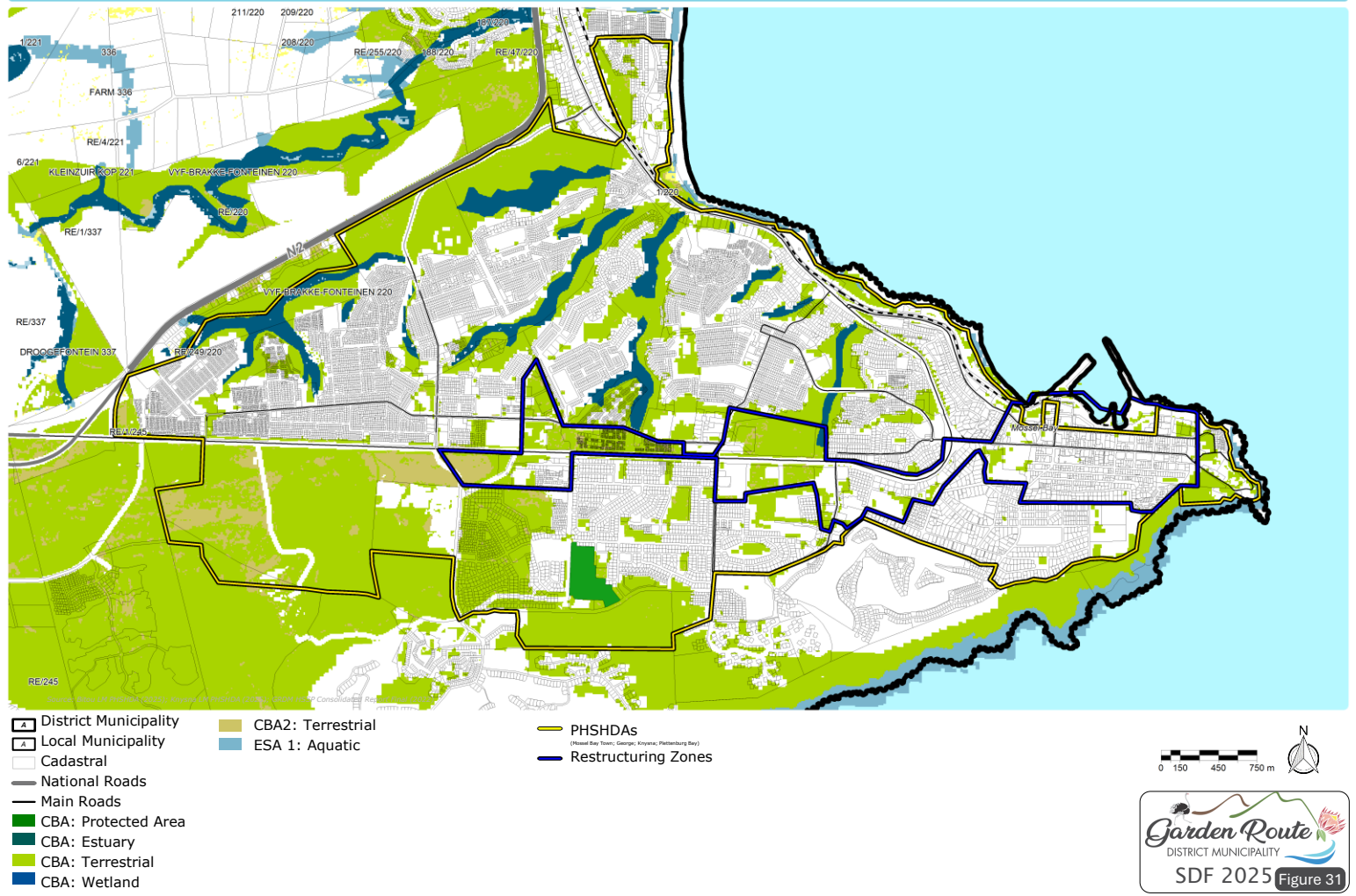
# GARDEN ROUTE DM SDF : KNYSNA PHSFDA / RESTRUCTURING ZONES



# GARDEN ROUTE DM SDF : GEORGE PHSHTA / RESTRUCTURING ZONES



# GARDEN ROUTE DM SDF : MOSSELBAY PHSHTA / RESTRUCTURING ZONES



### 3.6.3 Forest Villages

**Figure 32** illustrates the position of the various forest villages that emanated from previous government programmes. The villages were utilized to house employees and people still reside in these areas. An initiative has been launched to subdivide the various erven/stands in the villages to provide security of tenure to the occupants. However, the villages are in very isolated areas, with limited social and economic facilities. The emphasis for the district should be to consolidate development in the Urban Nodes.

### 3.6.4 Informal Settlements

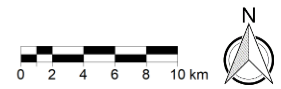
**Figure 33** illustrates the occurrence of informal settlements in the GRDM. It should be noted that the GRDM did undertake the compilation of a Comprehensive Human Settlement Plan.

# GARDEN ROUTE DM SDF : FOREST VILLAGES



Source: WOF Forestry Support Program; Ex Plan, Google Earth 2025

- A District Municipality
- A Local Municipality
- Towns and Settlements
- National Roads
- Main Roads
- ★ Forest Villages



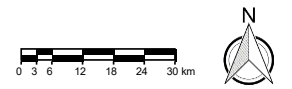
**SDF 2025** Figure 32

# GARDEN ROUTE DM SDF : INFORMAL SETTLEMENTS



Source: Western Cape Dept of Infrastructure – Human Settlements Planning

- District Municipality
- Local Municipality
- Towns and Settlements
- National Roads
- Main Roads
- Secondary Roads
- Other Roads
- Railway Line
- Railway Station
- Informal Settlements



  
**Garden Route**  
 DISTRICT MUNICIPALITY  
 SDF 2025 Figure 33

### 3.6.5 Housing Market Studies

Housing Market Studies were conducted for George and Mossel Bay, and more recently, for Knysna, Plettenberg Bay and Oudtshoorn. The findings of each area are briefly summarized below.

#### **3.6.4.1 GEORGE**

George's housing market is highly polarized, with over 40% of properties valued below R300,000 due to past subsidised delivery, 25% in the middle market, and up to 35% in the luxury segment. Demand for affordable housing remains high and far outpaces private delivery, while developers overwhelmingly favour high-end estates. Inclusionary housing could help diversify new projects, but its limited scope in the new-build market reduces its overall impact. A more transformative approach lies in activating the low-end resale market and stimulating private sector supply in the underdeveloped middle market, thereby expanding access, enabling wealth creation, and strengthening the municipal rates base.

#### **3.6.4.2 MOSSEL BAY**

Mossel Bay's housing market is marked by a wide base of low-value properties and strong demand for housing below R600,000, despite private developers focusing on luxury estates in Hartenbos, Dana Bay and similar suburbs. While over half of households earn under R8,000 per month, the affordable stock remains inadequate, with unmet needs hidden in informal settlements and rental backyards. An inclusionary housing policy could help redirect some private investment into affordable supply, while a stronger resale market in the lower end would increase access and affordability. Critical interventions are also needed in the missing R300,000–R600,000 market band, where supply remains thin.

#### **3.6.4.3 KNYSNA**

Knysna faces acute land constraints due to topography and biodiversity, while semigration and demand for second homes continue to increase prices. High-income development dominates, leaving lower- and middle-income households with limited access, fuelling backyard dwellings in Hornlee and White Location and creating persistent affordability gaps. Rental options are constrained by the dominance of short-term lets, further squeezing permanent residents. Delivery of government housing has slowed, worsening shortages. Local policy responses in the Municipal SDF and IDP highlight the need for land audits, release of well-located public land, and tools such as inclusionary housing to diversify markets. Without stronger municipal capacity and incentives, affordability challenges and market segmentation will intensify.

#### **3.6.4.4 BITOU**

Bitou's housing market is spatially fragmented across multiple nodes, with Plettenberg Bay dominating formal activity but Kwanokuthula and New Horizons driving the fastest stock growth through both formal and informal means. High-value properties cluster in Plettenberg Bay and Keurboomstrand, while subsidised housing shapes the lower-value markets. Affordable housing gaps remain stark: the lowest-income households concentrate demand in Kwanokuthula and New Horizons, while middle-income gaps are visible in higher-value coastal nodes. Municipal strategies call for denser, mixed-use, and mixed-income development, as well as tighter settlement containment. To succeed, stronger local implementation and targeted inclusionary housing policies are needed to rebalance growth and improve access across income groups.

#### **3.6.4.5 OUDTSHOORN**

Oudtshoorn's housing market is shaped by its semi-rural appeal to retirees and higher-income households, alongside growth in subsidised areas such as Bongoletu and Bridgeton, where multi-generational households and informal

activity are common. Formal private development remains limited, and affordability gaps persist across low-income households requiring subsidised housing and the middle-market in Oudtshoorn. Resale and rental markets are underdeveloped, with most first-time buyers concentrated in subsidised areas. Inclusionary housing could contribute to diversifying new developments, but complementary interventions are needed to stimulate middle-market supply and build a more balanced, resilient housing system.

### 3.6.6 Human Settlement Demand and Supply

The GRDM currently fulfils a human settlement coordinating function; however, the district has submitted a Municipal Accreditation Level 1 application. In light of the above it is important to outline the current housing demand (based on Western Cape Waiting List Database, 2025) and proposed supply (extracts from LMs' SDFs).

**Table 34** below illustrates the current subsidised housing demand which is contained in the Draft GRDM Human Settlement Plan and is graphically illustrated in **Figure 34**. George LM has the highest demand followed by Oudtshoorn LM. Mossel Bay LM, which has shown more growth than Oudtshoorn, is the third highest demand. The demand does not include non-subsidised housing.

**Table 34: GRDM: Housing Waiting list**

Municipality	Housing Backlog	Source
Kannaland	3,591	WC Province Waiting List Database, 2025
Hessequa	5,955	WC Province Waiting List Database, 2025
Mossel Bay	10,955	WC Province Waiting List Database, 2025
George	20,834	WC Province Waiting List Database, 2025
Oudtshoorn	12,016	WC Province Waiting List Database, 2025
Bitou	9,122	WC Province Waiting List Database, 2025
Knysna	9,529	WC Province Waiting List Database, 2025
<b>Total Garden Route DM</b>	<b>72,002</b>	<b>WC Province Waiting List Database, 2025</b>

Source: GRDM HSSP, V2, May 2025. WC Province Waiting List Database, 2025

The potential yield/supply in the district is contained in **Table 35** (overleaf). The section below outlines the methodology utilised to calculate the yield:

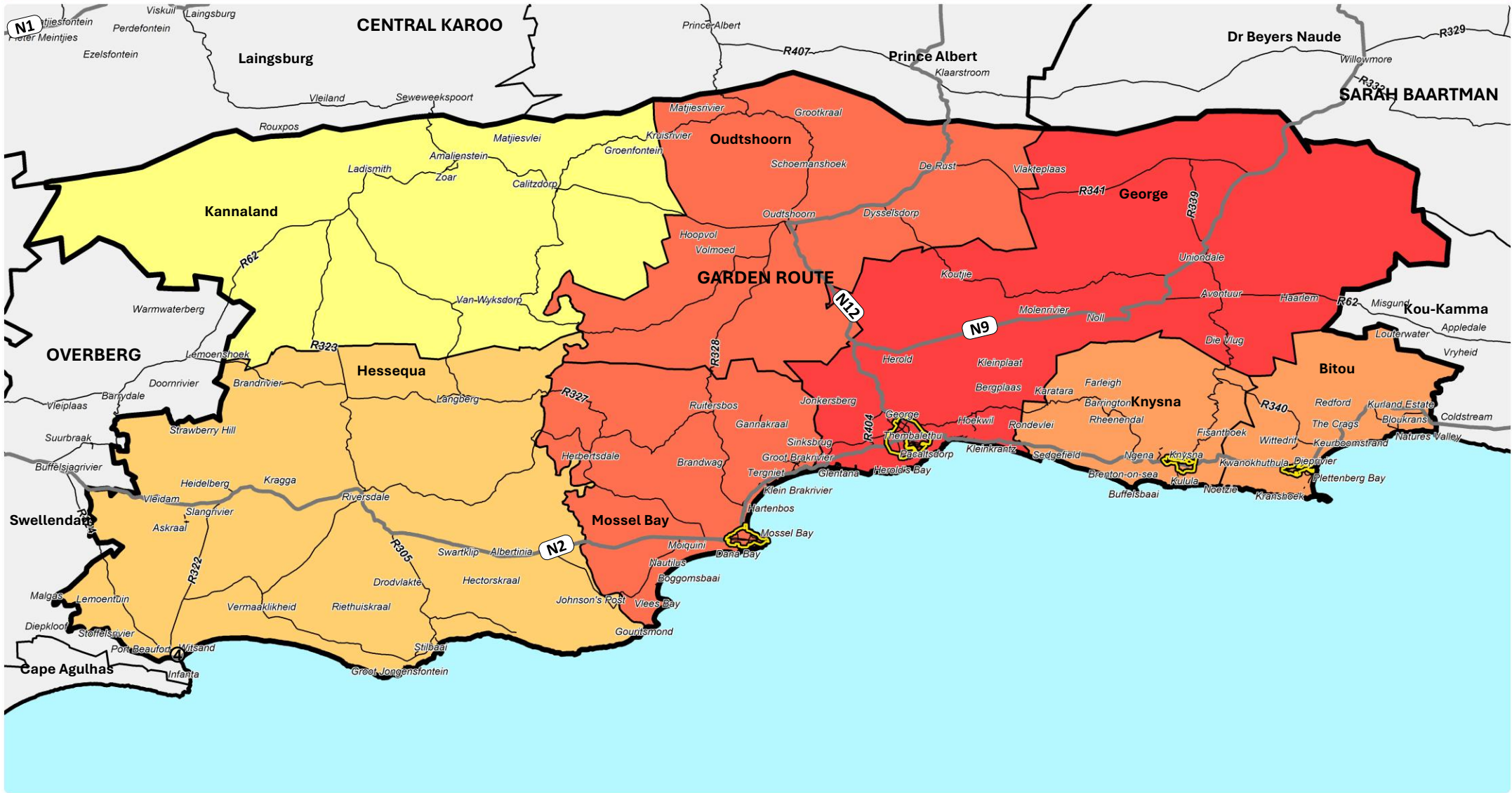
- ❖ The Strategic Development Area (see Figure 32) of each LM was utilised to calculate the available land (ha) and a density as per the SDF was applied to calculate the potential yield.
- ❖ The SDF Human Settlement Proposals in the various SDFs (SDAs, Restructuring Zone, Vacant Erven) were extracted to further reference the potential yield.
- ❖ The Human Settlement project pipelines in each SDF was also included in the potential yield calculation.

The following can be noted from Table 35:

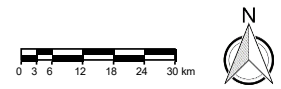
- ❖ The various LMs (excluding Kannaland LM – in the process of reviewing SDF) has identified in SDAs approximately 9,341 ha of land.
- ❖ The various SDAs, restructuring zones, vacant erven and project pipelines may be able to yield approximately 210,124 opportunities.
- ❖ The total demand which includes the Waiting List and projected growth is approximately 178,357 which leaves a surplus of 31,767. The highest surplus is found in Knysna LM, whilst George and Bitou are the lowest.
- ❖ The district may require 4,362 ha of land to accommodate the residential demand and a total of 6,357 ha to accommodate the residential demand including the socio-economic facilities, roads and ancillary uses.

**Annexure C** outlines the potential yield for each LM.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : HUMAN SETTLEMENT – HOUSING WAITING LIST



- |                       |                             |
|-----------------------|-----------------------------|
| District Municipality | <u>Housing Waiting List</u> |
| Local Municipality    | 0 – 4000 units              |
| Towns and Settlements | 4000 - 6000                 |
| National Roads        | 6000 - 10000                |
| Main Roads            | 10000 - 15000               |
| PSHDA                 | 15000+                      |



**Table 35: GRDM: SDF Residential Development Area (ha), and approximate Yield (units), compared with Demand**

Municipality	SDF Yield Compared with Future Demand							GRDM LUB					
	SDF Proposals			Future Demand (Units)				Surplus/ Deficit (Units)	GRDM LUB (ha)			Gross Density on Total Area	Surplus/ Deficit (ha)
	Proposed Strategic Development Area (SDA) Size (ha)	Approximate Residential Yield (Units)	Gross SDA Density (du/ha)	WC: Waiting List DB Backlog (2025)	GRDM MSDF:Expected HH Growth (2024-2040)	Total Demand	Total SDF Yield minus Du Demand		Area Needed to accommodate Waiting List Backlog*	Area Needed to accommodate growth (2024-2040)**	Total Area Needed to accommodate Backlog and growth (2024- 2040)		
Kannaland				3,591	2,169	5,760	- 5,760	72	137	209	28	- 209	
Hessequa	1,093	17,694	16	5,955	8,539	14,494	3,200	131	574	704	21	388	
Mossel Bay	2,765	39,674	14	10,955	27,278	38,233	1,441	243	1,755	1,998	19	766	
George	504	64,494	128	20,834	43,521	64,355	139	462	2,335	2,797	23	- 2,292	
Oudtshoorn	1,452	18,470	13	12,016	6,026	18,042	428	235	349	585	31	867	
Bitou	928	17,138	18	9,122	7,976	17,098	40	174	499	672	25	256	
Knysna	2,599	52,653	20	9,529	10,845	20,374	32,279	192	708	900	23	1,699	
<b>Total Garden Route DM</b>	<b>9,341</b>	<b>210,124</b>	<b>22</b>	<b>72,002</b>	<b>106,355</b>	<b>178,357</b>	<b>31,767</b>	<b>1,508</b>	<b>6,357</b>	<b>7,865</b>	<b>23</b>	<b>1,476</b>	

**Sources:**

- Hessequa SDF phase-3-spatial-proposals-draft 2024-2025.
- Mossel Bay SDF SECTION B – SPATIAL DEVELOPMENT FRAMEWORK PROPOSALS MAY 2022
- George MSDF-2023-Final-Version-4-30052023 (V4 May 2023)
- Oudtshoorn SDF Final Report MAY 2022
- Bitou Spatial Development Framework, 2022
- Draft-Knysna-MSDF\_2025, Draft-Sedgefield-LSDF, 2024.
- GRDM MSDF (Plan Associates)

**Notes:**

- \* Backlog calculated at 100m<sup>2</sup> and 300m<sup>2</sup> erven based on Waiting List Income Distribution. LUB further includes Business, Community Facilities and Streets.
- \*\* Growth LUB includes Residential erven (average erf size based on current erf size database per LM), Business, Community Facilities and Streets.

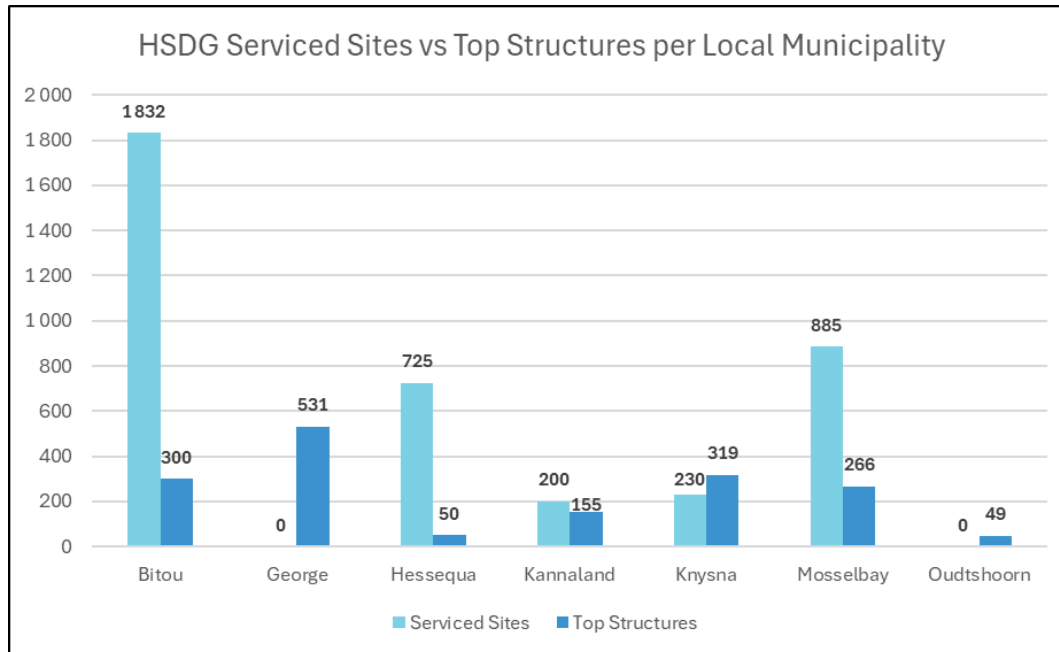
### 3.6.7 Human Settlement Projects

Various housing projects are being planned by the Western Cape Department of Human Settlements (WCDHS) which will be implemented by the 7 LMs.

**Diagram 27** illustrates the projects contained in the approved three-year Business Plan of WCDHS for the Human Settlement Development Grant (HSDG). The Grant’s primary purpose is to fund the creation of sustainable and integrated human settlements that align with national housing and development objectives

**Table 36** illustrates that more serviced sites are being provided/planned for in the three years.

**Diagram 27: HSDG Serviced Sites vs. Top Structures per Local Municipality**



**Table 37** outlines the projects in terms of the Informal Settlements Upgrading Partnership Grant (ISUPG) as contained in the approved WCDHS Business Plan. The ISUPG aims to enhance living conditions by providing funding for the incremental improvement of infrastructure services, and housing in informal settlements.

There are currently 22 UISP projects contained in the Business Plan for GRDM.

Diagram 26 illustrates the type of projects that is planned for the three-year period. As indicated above, more services sites are programmed as opposed to top structures.

**Figure 34** provides the spatial distribution of the various housing projects located within the GRDM. The projects are largely clustered around each of the nodes.

**Table 36: WCDHS: Human Settlement Development Grant Projects**

2024/25 (15 Feb 2024) Draft HSDG BP		2024/2025 15 Feb 2024			2025/2026 15 Feb 2024			2026/2027 15 Feb 2024		
2024/25 to 2026/27 Business Plan HSD Grant	PROGRAMME	SITES	HOUSES	FUNDING	SITES	HOUSES	FUNDING	SITES	HOUSES	FUNDING
		SERVICED	BUILT	R '000	SERVICED	BUILT	R '000	SERVICED	BUILT	R '000
<b>GARDEN ROUTE DISTRICT</b>										
<b>Bitou (Plettenberg Bay)</b>		<b>377</b>	<b>0</b>	<b>83,553</b>	<b>673</b>	<b>100</b>	<b>74,867</b>	<b>782</b>	<b>200</b>	<b>85,250</b>
New Horizons Ebenhaeser (Portion 20)	IRDP			22,000						
Qolweni/Bossiesgif Ph3a (433) Tops Structures (169Transfer @R228)	IRDP			228						
Kwanokuthula Ph5 (914 incr to 1182)	IRDP							250		25,000
New Horizons Ebenhaeser (Portion 3)(725)	IRDP	377		60,351	347	100	39,200		200	42,000
New Horizons Ebenhaeser (Portion 4) (708)	IRDP			0	326	0	35,000	382	0	7,000
Green Valley/Wittedrif Ph2 (425)	IRDP			0	0		0	0		0
Kranshoek (450)	IRDP			0	0	0	667	150	0	11,250
EHP Fire Damage Houses Kwanokwathula				208						
Kwanokwathula 641 (Transfers 300)	IRDP			405						
Kwanokwathula 441 (Transfers 247)	IRDP			334						
Green Valley Sportsfield (Transfers 20)				27						
Ebenhaeser (2026)				0						
Kurland (1500)	IRDP				0		0		0	0
Kranshoek Toilets										
<b>George</b>		<b>0</b>	<b>257</b>	<b>89,678</b>	<b>0</b>	<b>174</b>	<b>31,750</b>	<b>0</b>	<b>100</b>	<b>33,620</b>
Thembalethu Bungalows (200) DDISP	IRDP		0	0		0	0			
Thembalethu (718 additional sites)	IRDP		50	9,750		50	9,750		100	18,500
Golden Valley (165) IRDP (Transfers 18)	IRDP			24						
Syferfontein East Ph A (359/179)	MV									
Syferfontein East Ph A (99 FLISP)	IRDP									
Syferfontein East Ph B1 (173)(Simply do)	IRDP									
Syferfontein Combined (transfer 200)	IRDP		57	36,230		124	22,000			120
Syferfontein East Ph B4 (234)	IRDP									
Syferfontein East Ph B5 (199)	IRDP									
Syferfontein East Ph C (30 tops)(MM)	IRDP		30	9,000						
Europe (505)	IRDP					0	0	0		15,000
Protea Park transfers	IRDP									
Thembalethu Ex 42 & 58 Transfer 40 @R54)	IRDP			54		0	0			
Thembalethus EPHP Transfers 200 @ R270				270						
Metro Grounds (664) (Transfers 200@R	IRDP		120	34,350						

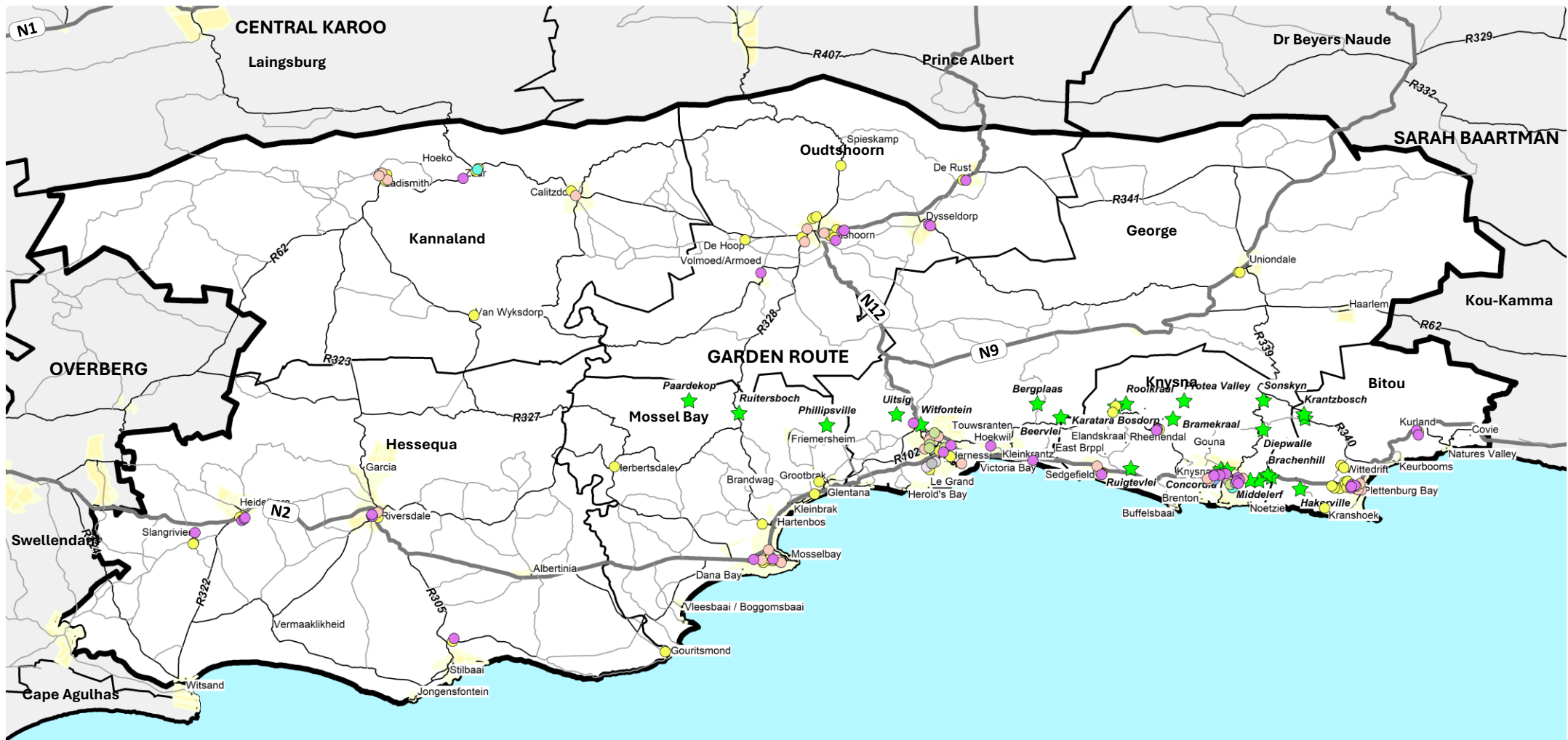
2024/25 (15 Feb 2024) Draft HSDG BP		2024/2025 15 Feb 2024			2025/2026 15 Feb 2024			2026/2027 15 Feb 2024		
2024/25 to 2026/27 Business Plan HSD Grant	PROGRAMME	SITES	HOUSES	FUNDING	SITES	HOUSES	FUNDING	SITES	HOUSES	FUNDING
		SERVICED	BUILT	R '000	SERVICED	BUILT	R '000	SERVICED	BUILT	R '000
<b>GARDEN ROUTE DISTRICT</b>										
<b>Hessequa</b>		<b>40</b>	<b>50</b>	<b>14,582</b>	<b>0</b>	<b>0</b>	<b>3,553</b>	<b>685</b>	<b>0</b>	<b>57,074</b>
Stilbaai Melkhoutfontein (585)(100 transfers	IRDP		50	10,067		0	0			
Slangrivier Infill (83) (Top structures only)	IRDP									
Heidelberg Site 1 (73)	IRDP			456						
Heidelberg Site 4 (180)	IRDP		0	0	0	0	0			
Upper Bekker Street (40)	IRDP	40		2,885						
Lower Bekker Street (35)	IRDP			156		0		35		2,800
Aloeridge (500)	IRDP			0			2,221	500		40,000
Riversdale Kwa Nokuthula Site C (300)	IRDP			0			1,332	150		12,000
Gouritsmond (50)	IRDP			90			0			222
Albertina (250)	IRDP			451			0			1,110
Slangrivier Infil (212)	IRDP			382			0			942
Riversdale Kwa Nokuthula (42) Transfer				57						
Melkhoutfontein (170) Transfer 12				16						
Slangrivier (66) Transfer 10				14						
Heidelberg Diepkloof (122) Transfer 6				8						
<b>Kannaland</b>		<b>0</b>	<b>55</b>	<b>14,167</b>	<b>100</b>	<b>0</b>	<b>8,000</b>	<b>100</b>	<b>100</b>	<b>29,000</b>
Zoar Park Infill (100)	IRDP	0	0	0	100	0	8,000		100	21,000
Ladismith Parmalat (364)	IRDP	0	0	1,300	0	0	0	100		8,000
Calitzdorp (671) (transfer 124)	IRDP		55	12,867						
<b>Knysna</b>		<b>100</b>	<b>79</b>	<b>29,880</b>	<b>130</b>	<b>110</b>	<b>36,800</b>	<b>0</b>	<b>130</b>	<b>27,300</b>
Vision (459)	IRDP		34	6,630		30	6,300		30	6,300
Hlalani (273/165/96)	IRDP		15	3,150		0	0		0	0
Ethembeni (180/200/175)	IRDP		0	0		0	0		0	0
Happy Valley (95/120/104)	IRDP		0	0		0	0		0	0
Xolweni (220)	IRDP		0	0						
Flenters/Robololo	IRDP									
Sedgefield Infill (207)(500)	IRDP	100	0	8,000	130	50	21,000	0	100	21,000
Heidevallei (2300)(2800)	IRDP						0			
Khayaletu Bungalows EHP	EHP		30	12,100		30	9,500			

2024/25 (15 Feb 2024) Draft HSDG BP		2024/2025 15 Feb 2024			2025/2026 15 Feb 2024			2026/2027 15 Feb 2024		
2024/25 to 2026/27 Business Plan HSD Grant	PROGRAMME	SITES	HOUSES	FUNDING	SITES	HOUSES	FUNDING	SITES	HOUSES	FUNDING
		SERVICED	BUILT	R '000	SERVICED	BUILT	R '000	SERVICED	BUILT	R '000
<b>GARDEN ROUTE DISTRICT</b>										
<b>Mossel Bay</b>		<b>0</b>	<b>141</b>	<b>52,344</b>	<b>125</b>	<b>0</b>	<b>34,829</b>	<b>760</b>	<b>125</b>	<b>88,050</b>
Mountain View (Louis Fourie Corridor) (Transfers 725 @R978)	IRDP			6,700			5,000			5,000
Yakh'indlu (150)	IRDP		21	4,070						
New Rest (285)	IRDP		120	22,308		0	0		0	0
Spekboom Portion of Erf 2001 (3000)	IRDP			0	0	0	13,329	500		36,000
Site K (400)	IRDP			1,777	0		0	200	0	16,000
Mossel Bay Erf 19201 and 14702 (260)	IRDP			1,155			0	60		4,800
Wolwedans Remedial Works	EHP			15,000			6,500			
Emergency Kits (flood & fire)	EHP									
Groot Brak River Farm 129 &137 (100)	IRDP			444	100		8,000	0	100	21,000
Groot Brak Toekoms (25)	IRDP			111	25		2,000		25	5,250
Asazani Izinyoka (Transfers 70)	IRDP			95						
Sonskynvallei Phase 3 (616) (Transfer 27)	IRDP			36						
Bartelsfontein EHP (10 FarmHouses)	EHP			614						
Kwanonkwaba(transfers 25)				34						
<b>Oudtshoorn</b>		<b>0</b>	<b>49</b>	<b>11,585</b>	<b>0</b>	<b>0</b>	<b>6,310</b>	<b>0</b>	<b>0</b>	<b>0</b>
Dysseldorp (534)(522 residential)(Transfers)	IRDP		24	4,750						
Disaster kits	EHP									
Bongolethu (19 Mud Houses Rebuild)	EHP		25	6,835						
Volmoed and Dehoop (520)	IRDP			0			0			
Dysseldorp Traingel Prjt				0			2,704			
Grootkop							3,606			
Rosebank (146) (Transfers)				0						
<b>SUB TOTAL</b>		<b>517</b>	<b>631</b>	<b>295,789</b>	<b>1,028</b>	<b>384</b>	<b>196,109</b>	<b>2,327</b>	<b>655</b>	<b>320,294</b>

**Table 37: Informal Settlements Partnership Grant (ISUPG) Projects**

2024/25 (15 Feb) Draft ISUPG BP		2024/2025			2025/2026			2026/2027		
2024/25 to 2026/27 BP ISUP Grant	PROGRAMME	SITES	HOUSES	FUNDING	SITES	HOUSES	FUNDING	SITES	HOUSES	FUNDING
		SERVICED	BUILT	R '000	SERVICED	BUILT	R '000	SERVICED	BUILT	R '000
<b>GARDEN ROUTE DISTRICT</b>										
<b>Bitou (Plettenberg Bay)</b>		50	0	16,650	50	0	8,000	50	0	9,000
Qolweni/Bossiesgif Ph4 (350) UISP	UISP	50		10,000	50		8,000	50		8,000
EHP Toilets	EHP			0						
Kurland (1500)				6,650	0		0	0		1,000
<b>George</b>		200	0	23,000	143	0	24,500	0	0	0
Thembalethu (1753 of 4350)(1753-456=1297)	UISP	200		13,000	143		14,500			
Thembalethu Interim Basic Services	UISP			10,000			10,000			
Thembalethu Bulks (Package Plant)										
Wilderness Heights (117)	UISP			0						
<b>Hessequa</b>		27	0	2,257	0	0	202	0	0	0
ISSP Heidelberg Site 6 (27) Eikeweg	UISP	27		2,160	0		0			
ISSP Heidelberg (88) Dollar Square	UISP	0		97	0		202			
ISSP Riversdale (32) Kwanokuthula	UISP	0		0						0
ISSP Slangrivier (140) Bo Kraal	UISP									
<b>Kannaland</b>		0	0	500	65	0	5,200	0	0	0
Fire Kits										
Zoar UISP (65)	UISP	0		0	65		5,200			
Chemical Toilets (IBS)	EHP			500						
		30	0	2,400	30	0	2,400	0	0	0
Vision (1393)	UISP	30		2,400	30		2,400	0		0
Hlalani (273/165/96)	UISP									
Ethembeni (180/200/175)	UISP									
Happy Valley (95/120/104)	UISP									
Khayelethu Bungalows (6 EHP from Prvfunding)	EHP			0						
Sedgefield ISSP	UISP			0			0			
Xolweni -added on BP										
<b>Mossel Bay</b>		220	0	13,000	93	0	16,500	0	0	2,000
NUSP Projects (23 Areas)(total 3493 sites)	UISP	220		11,000	93		6,500	0		0
NUSP Security Fees										
NUSP Projects (23 Areas)(total 3493 sites) ESS	UISP									
NUSP Projects (23 Areas)(total 3493 sites) TRA	UISP									
NUSP Projects (23 Areas) land purchase	LAND									
Mossel Bay NUSP IBS				2,000			10,000			2,000
Fire Kits	UISP									
<b>Oudtshoorn</b>		0	0	1,885	0	0	0	0	0	0
De Rust (289)	UISP	0		0	0		0			0
Dysseldorp Retaining Walls	UISP									
Central Inf Settlements (Kanaal/Black Joint Tavern/GG Kamp)	UISP						0			
Rose Valley Ph 4 (132) (transfers 128 )	UISP			1,885						
<b>SUB TOTAL</b>		<b>527</b>	<b>0</b>	<b>59,692</b>	<b>381</b>	<b>0</b>	<b>56,802</b>	<b>50</b>	<b>0</b>	<b>11,000</b>

# GARDEN ROUTE DM SDF : PIPELINE PROJECTS PER PROGRAMME



Source: Garden\_Route\_Housing\_Pipelines\_Nov\_2024.dbf; WOF Forestry Support Program

- |                       |            |                 |
|-----------------------|------------|-----------------|
| District Municipality | CRU        | TRA             |
| Local Municipality    | FLISP      | UISP            |
| Towns and Settlements | FLISP/OPM  | Forest Villages |
| National Roads        | IRDP       |                 |
| Main Roads            | IRDP/AH    |                 |
| Secondary Roads       | IRDP/FLISP |                 |
| Other Roads           | PHP        |                 |
| Railway Line          | REC        |                 |
| Railway Station       | Social     |                 |



### 3.6.8 Social Housing Projects

Table 38 depicts the existing Social Housing Project Pipeline of the GRDM.

Table 38: GRDM Social Housing Projects

2025/26-2030/31 SH	2025/2026		2026/2027		2027/2028		2028/2029		2029/2030		Potential Project Risks and Mitigation Measures
	Number SH Units	Funding R	Number SH Units	Funding R	Number SH Units	Funding R	Number SH Units	Funding R	Number SH Units	Funding R	
<b>Garden Route District</b>											
<b>George</b>											
Omega Close - Erf 26823 (GRDM)			166	70 767 128							Departure application approved by GM. Appeal submitted against the approval. Appeal report finalised and submitted to the Mayor (Appeal Authority) for a decision. Mayor is aware of the urgency in finalising the application.
Crocodile Farm (George Municipality)				200 000		6 200 000	150	172 123 441	350	34 830 559	All environmental and planning approvals in place. GP is approved at SG. Item for approval for the land release and to commence with the process of appointing a SH partner finalised and will be submitted to October Section 80 Committee.
<b>Mossel Bay</b>											
Mountain View Erf 9442, 9234, 9233, Erf 2001 (Mossel Bay Municipality)					255	76 000 000	327	132 111 256			Project funding due to budget cuts. Applicable to all projects currently with the SHRA for assessment and approval.
GRDM site - Erf 3803 (GRDM)								42 630 800	150	63 946 200	Project funding due to budget cuts.
<b>Bitou</b>											
Greenwood Mews (Bitou Municipality)			171	72 898 668							The project is currently with the SHRA. Post assessment, the project was referred back for compliance.

Source: GRDM MSDF - Social Housing Project Pipeline - 08October2025

### 3.7 COMMUNITY FACILITIES

The district's urban structure is characterized by relatively clustered (at low density levels) urban development at specific nodes/centers. The urban structure allows for the provision of community facilities which is able to serve a broader area. The provision of community facilities and the challenges they face are briefly discussed below.

#### 3.7.1 Health, Safety and Security

##### HEALTH

**Figure 36** illustrates the distribution of health facilities and cemeteries.

In 2022, only 15.8% of South Africa's population had access to medical aid, highlighting the importance of government healthcare facilities in providing essential primary healthcare to most residents. In the GRDM there are 45 primary healthcare facilities, with 13 (29%) of them located in the George municipal area, reflecting its larger population.

The GRDM IDP (2024-2025) outlined that in an attempt to improve emergency services, the district had 28 Provincial ambulances in the 2022/2023 fiscal year or 0.4 ambulances per 10,000 residents, a slight increase from the previous year.

Health service planning in the Western Cape is guided by the *Primary Health Care (PHC) and Hospital Norms and Standards (October 2025)*, which establish how facilities should be sized, located, and prioritised relative to the population they serve. A central consideration is the distinction between the dependent population, meaning households that cannot afford private medical scheme contributions and therefore rely solely on public healthcare, and the non-dependent population, who have access to private healthcare services. This differentiation is critical for determining the public-sector demand and for calculating appropriate facility sizes and service levels. The private sector also

provides a significant buffer that must be considered when assessing the burden on public facilities.

The Health Infrastructure Portfolio System (HIPS) underpins the analytical approach for health planning. It assesses what facilities currently exist and identifies gaps in terms of space and utilisation, location and accessibility, and condition and functionality. These pillars also guide the prioritisation of investments. Areas with long travel times to facilities, large populations, vulnerable communities, or limited healthcare availability are prioritised for intervention, especially where existing facilities have low Government Immovable Asset Management Act (GIAMA) condition ratings.

Norms and standards for PHC facilities set out minimum ratios and accessibility requirements. In rural areas, one clinic or Community Day Centre (CDC) is required per 10 000 dependent people, and one Community Health Centre (CHC) per 60 000. In urban and metro areas, this threshold increases to one clinic or CDC per 24 000 dependent people and one CHC per 144 000. Travel distances should not exceed 10 km, with a maximum drive time of 30 minutes to a clinic or CDC and 120 minutes to a CHC. Facility size is calculated based on headcount projections, consulting room requirements, and the density of the surrounding catchment population, with minimum site sizes ranging from 2 000 m<sup>2</sup> for satellite clinics to 2.5 ha for CHCs.

For hospitals, minimum dependent population thresholds are 300 000 for district hospitals, 1.4 million for regional hospitals, and 1.6 million for central hospitals. Accessibility guidelines recommend that no resident should travel more than 60 minutes or 100 km to reach a district hospital, with 120 minute and 200 km thresholds applied to regional and central hospitals. Overall, the norms highlight the need to consider population vulnerability, spatial accessibility, catchment demographics, and facility condition when assessing the adequacy of health services across the district. This provides a consistent framework for identifying gaps, prioritising upgrades, and ensuring equitable access to health and wellness services.

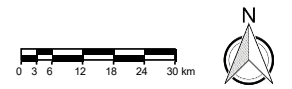
# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : HEALTH FACILITIES AND CEMETERIES



Source: GRDM Water Infrastructure GDB; EX Google

Municipality	Clinic	Hospital	PHC, CDC and CHC	Cemetery
Bitou LM	4	1	1	4
George LM	10	3	2	6
Hessequa LM	3	1	0	10
Kannaland LM	4	1	0	5
Knysna LM	4	2	1	3
Mossel Bay LM	3	2	2	2
Oudtshoorn LM	5	2	1	6
<b>Total</b>	<b>33</b>	<b>12</b>	<b>7</b>	<b>36</b>

- A District Municipality
- A Local Municipality
- Parent Farms
- Farm Portions
- Towns
- National Roads
- Main Roads
- Railway
- Railway Station
- × Clinic (Private/Public)
- + Hospital (Private/Public)
- PHC, CDC and CHC
- × Cemetery



## SAFETY AND SECURITY

**Figure 37** outlines the distribution of safety and security facilities, from which it is noted that there are 21 Police Stations, 8 Fire Stations, 6 Correctional Services, and 9 Magistrates Courts in the GRDM.

A decrease in crime is noted for the 2021/22 – 2022/23 period with COVID-19 lockdown playing a role in reducing crime. The police stations are well distributed in the district with police stations at each of the towns/centers.

The following key factors contribute to crime in GRDM (IDP 2024/25):

- ❖ Lack of surveillance cameras in high-risk areas
- ❖ Inadequate lighting
- ❖ High unemployment rates
- ❖ Drug and alcohol abuse
- ❖ Domestic violence
- ❖ Repeat offenders
- ❖ Seasonal influx of laborers
- ❖ Social intolerance

In the George area, contact crimes like murder, sexual offences and assault are prominent. Areas with high poverty, such as Oudshoorn and Kannaland, see more drug-related crimes and residential burglaries.

The provision of fire safety is a district responsibility and the GRDM has 8 fire stations. The permanent and modern fire facility in George was completed in January 2024. The extent of the district, including the scattered forest villages, creates a challenge to provide adequate firefighting services.

## 3.7.2 Educational Facilities

**Figure 38** illustrates the distribution of educational facilities.

According to the 2024/2025 IDP, the GRDM had 111,336 registered learners and the growing population resulted in an increase of 2,592 pupils between 2020 and 2022. This growth is linked to the influx of families relocating to the region for employment opportunities, resulting in increased school enrolments. As a result, the learner-teacher ratio improved and fell below the provincial average, benefiting from a higher number of teachers.

The number of various education facilities in the GRDM is outlined in Figure 38. However, urban sprawl, especially in George and Mossel Bay, poses challenges for the school facilities and ensuring proximity to schools for the increasing population.

Strong advocacy is required for additional school building programmes in George and Mossel Bay.

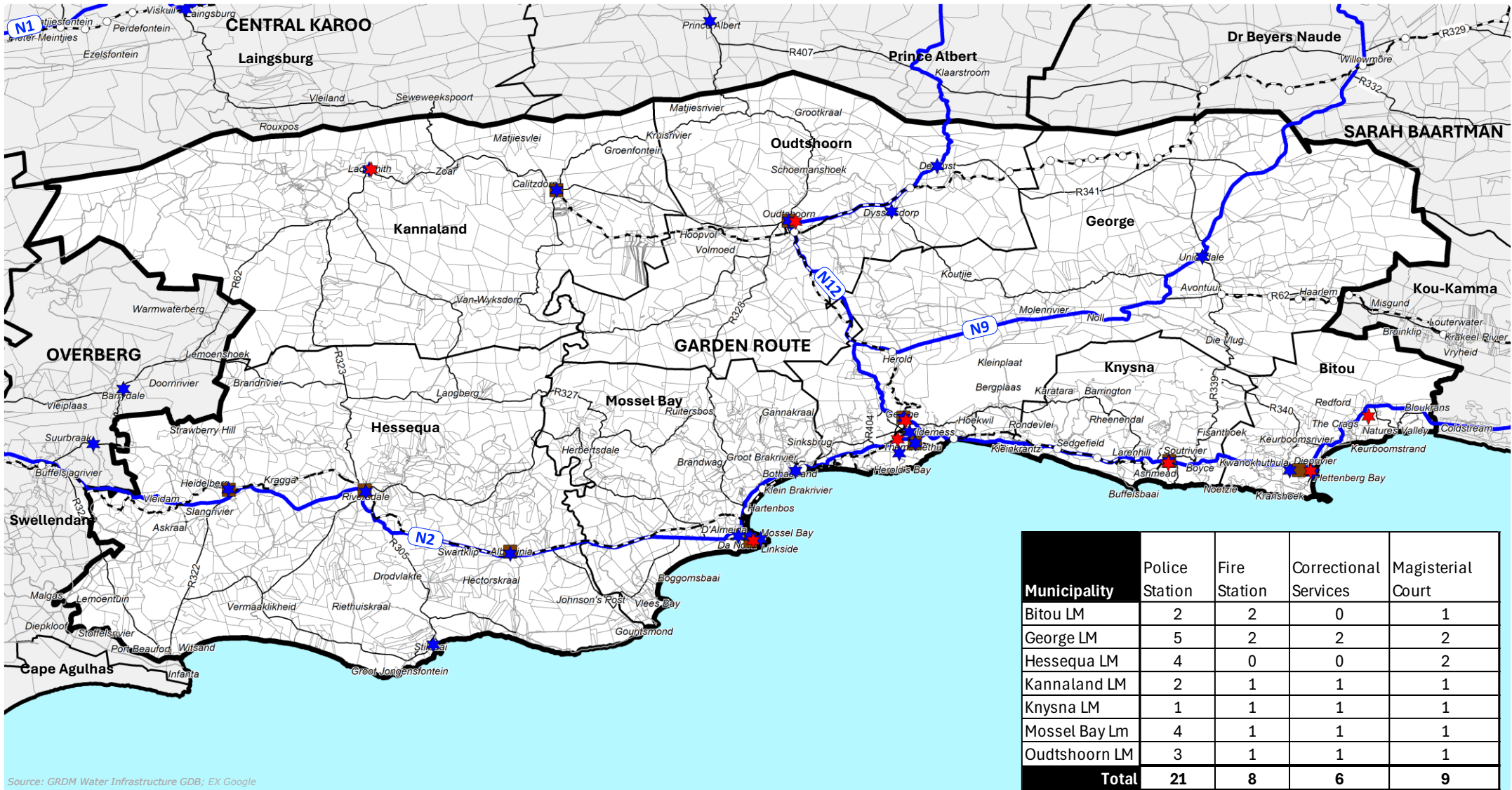
The WCG currently has one project under construction which is the development of a new high school on Erf 5342, Kwanokuthula.

There are further two project within the GRDM which are currently in a planning and feasibility phase, namely:

- ❖ The development of a new high school on Erf 6979, George; and
- ❖ The development of a new high school on Erf 5287, Mossel Bay.

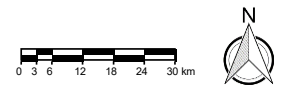
While these projects will provide some relief to growing pressure in the DM, short-term demand is expected to persist in George. Mossel Bay and Bitou where enrolments already exceed available capacity and where in-migration is strong. In the short-term, the planned schools, coupled with classrooms expansions, are expected to accommodate growth but in the medium to long-term pressures are likely to persist, particularly in areas experiencing high urbanisation and in-migration.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : SAFETY AND SECURITY

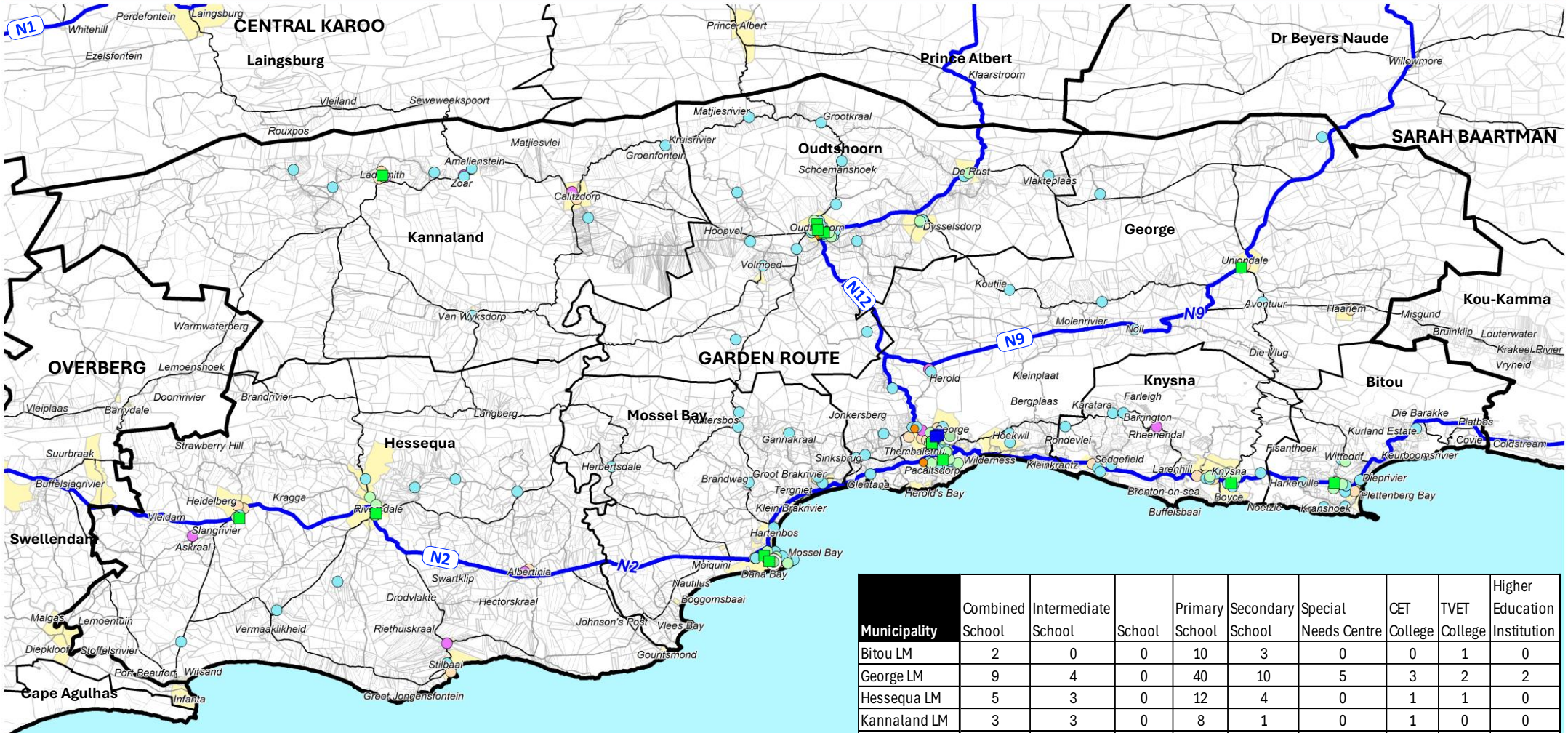


Source: GRDM Water Infrastructure GDB; EX Google

- District Municipality
- Local Municipality
- Parent Farms
- Farm Portions
- Towns
- National Roads
- Main Roads
- Railway
- Railway Station
- ★ Police Station
- ★ Fire Station
- Correctional Services
- Magisterial Court



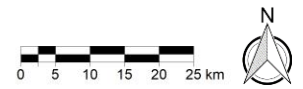
# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : EDUCATIONAL FACILITIES



Source: National Department of Education - Western Cape Schools June 2023; Special Needs Centres June 2023

Municipality	Combined School	Intermediate School	School	Primary School	Secondary School	Special Needs Centre	CET College	TVET College	Higher Education Institution
Bitou LM	2	0	0	10	3	0	0	1	0
George LM	9	4	0	40	10	5	3	2	2
Hessequa LM	5	3	0	12	4	0	1	1	0
Kannaland LM	3	3	0	8	1	0	1	0	0
Knysna LM	6	1	0	16	4	0	1	0	0
Mossel Bay Lm	4	2	1	20	5	0	1	1	0
Oudtshoorn LM	1	0	0	27	9	2	2	1	0
<b>Total</b>	<b>30</b>	<b>13</b>	<b>1</b>	<b>133</b>	<b>36</b>	<b>7</b>	<b>9</b>	<b>6</b>	<b>2</b>

- District Municipality
- Local Municipality
- Parent Farms
- Farm Portions
- Towns
- National Roads
- Main Roads
- Railway
- Railway Station
- Combined School
- Intermediate School
- Primary School
- Secondary School
- School
- Special Needs Centre
- CET/TVET Colleges
- Higher Education Institutions
- Proposed New High School



### 3.8 ENGINEERING SERVICES

Water scarcity is the main concern in the SDFs and service master plans of the local municipalities in the Garden Route District. The 2018 threat of “day zero” - the point at which Cape Town’s water supply would run out, was a dire warning for South Africa. Climate change and associated disasters such as fires and floods cause severe damage to infrastructure.

Sanitation services require water to work. Inadequate maintenance results in sewer discharge into water sources and the ocean, with disastrous consequences.

This emphasizes focused, rationalised spending on infrastructure to ensure optimum benefit for all, which is the purpose of the SDF. The GRDM IDP states that: “Rather than “creating more supply” (such as water), the SDF needs to recognise water capacity as a real limiting factor. This implies a radical shift in thinking about how and where to accommodate growth so that it is generative and cyclical rather than wasteful and linear. New ways of integrating development with infrastructure must be embraced to secure a sustainable future for municipal finances, citizens and the economy.”

The GRDM is responsible for promoting bulk infrastructural development and services for the district in terms of the Local Government: Municipal Structures Act 1998.

#### 3.8.1 Water Services

##### WESTERN CAPE SUSTAINABLE WATER PROTECTION PLAN (2024-2029)

The Western Cape is a water scarce province, and the protection of this resource is of paramount importance for development and growth of the economy and its people. The holistic plan considered other provincial initiatives in its formulation,

such as the Growth for Jobs Plan and the One Health System, where linkages between health, the economy and the environment receive a special focus.

The overall objective of the plan is:

*To support healthy catchments and ecosystem services by investing in and collaborating on Ecological Infrastructure, for the overall benefit of water management and quality in the Province.*

The plan identified three Strategic Focus Areas, namely:

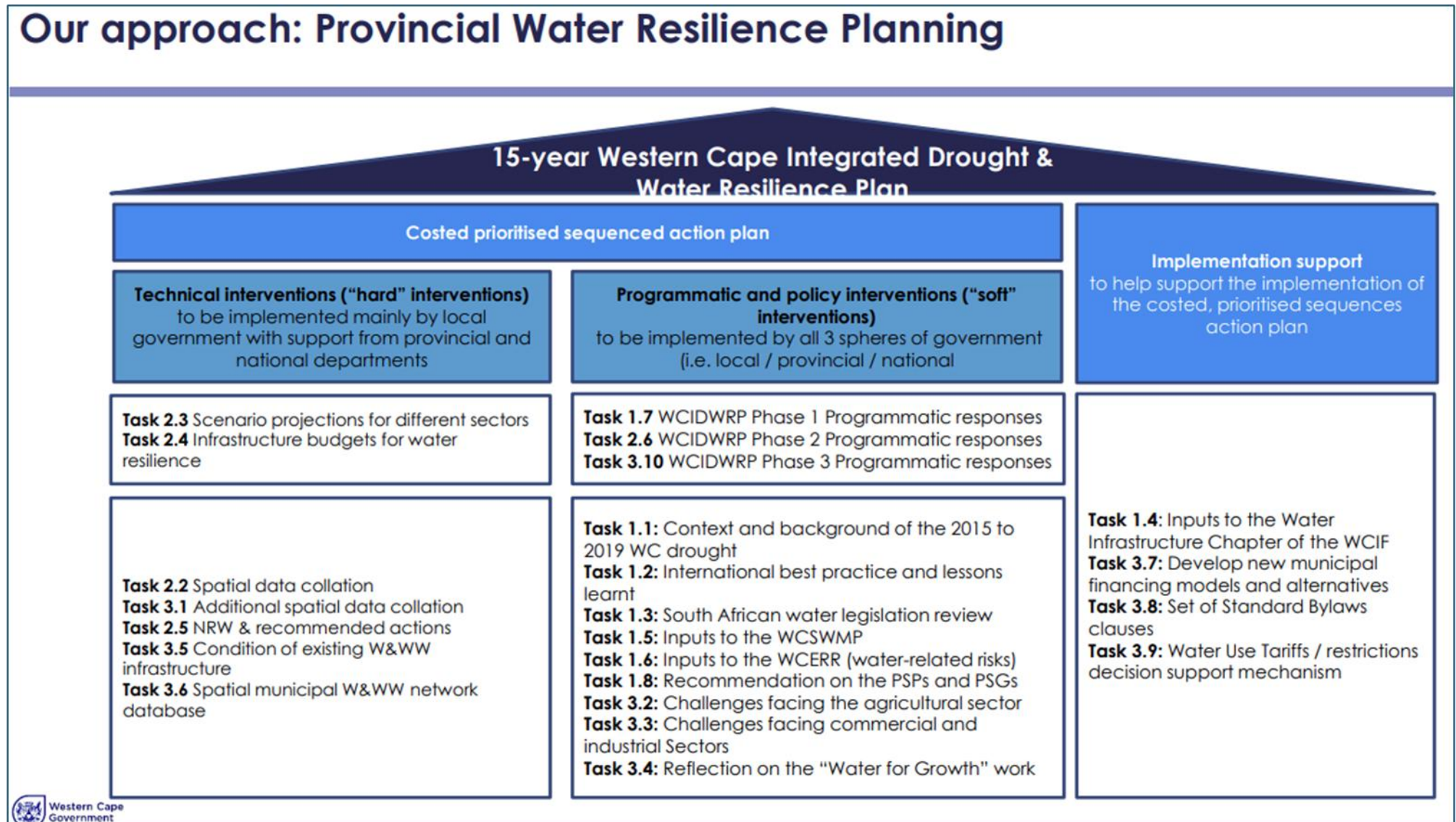
- ❖ ecological infrastructure
- ❖ water quality and pollution management
- ❖ water sensitive design.

The plan emphasises that the Provincial Department of Environmental Affairs and Development Planning should focus its attention on interventions that improve environmental water resilience on a catchment scale. This will increase resilience across all other sectors and enable the department to focus constrained budgets on areas of maximum impact that align with their core mandate. It will also address the gaps in the 15-year Western Cape Integrated Drought and Water Response Plan 2023 and the SmartAgri plan (which focuses on agricultural water resilience).

The Western Cape Integrated Drought and Water Response Plan 2023 contains specific proposals with technical, programmatic and soft interventions as well as implementation support actions that should filter through to district and local water service plans. **Diagram 28** is a summary of the 2023 plan.

The GRDM is responsible for aligning water services planning and expenditure in the district with these provincial plans.

Diagram 28: Western Cape Integrated Drought and Water Response Plan 2023



The Strategy identified the following priority actions for the district municipality:

1. Set in place a regional water management system including a “war on leaks” programme, that improves its resilience to climate change and decreasing water availability.
2. Expand the bulk water storage capacity in the region – investigate the development and implementation of a regional bulk water system and inter-municipal water sharing schemes
3. Set in place a regional water management system including a “war on leaks” programme, that improves its resilience to climate change and decreasing water availability.
4. Re-establish an overarching water forum for bulk infrastructure.
5. Convene a water indaba to explain oversight and coordination.
6. Revise the water services plan for the region.
7. Establish a regional water authority – the application is underway.

Progress made on undertaking these actions needs to be determined.

#### **JOINT DISTRICT METRO APPROACH, 2021**

The Joint District Metro Approach (JDMA) seeks to integrate the efforts of the national, provincial, and local governments for more efficient service delivery and developmental impact. The "One Plan" of the JDMA aims to create synergies between different spheres of government to drive accountability and improve governance across a range of sectors. A critical component of the JDMA is the emphasis on equitable access to essential services. The strategy prioritizes service delivery to informal settlements and underserved rural areas, ensuring that vulnerable communities receive the necessary infrastructure to improve their living conditions.

#### **INSTITUTIONAL ARRANGEMENTS**

The Water Services Act, 1997 requires municipalities as water services authorities to produce water service plans (water master plans). These plans deal with long term planning for the provision of water supply and sanitation services. It should further contain service level targets, management efficiency criteria and tariffs to enable performance assessment of the municipality and service providers working for them.

**Table 39** summarises the status of Water Service Plans (WSPs) and SDFs in the district and indicates whether the WSPs were incorporated into the SDFs:

**Table 39: Status of water service plans**

MUNICIPALITY	WSP DATE	SDF DATE	INCLUDED
Garden Route District	2011	2017	✓
Bitou	2020	2022	✓
George	2021	2023	✓
Hessequa	-	2025	-
Kannaland	2022	-	-
Knysna	2018	2020	✓
Mossel Bay*	-	2018	-
Oudtshoorn*	-	2020	-

\*The municipality's website provides information on progress made and future projects

The GRDM, Hessequa, Mossel Bay and Oudtshoorn require urgent revision of their WSPs to ensure that SDFs are based on recent information. The tick marks show where the water service plans preceded SDFs and were likely included. The priority actions emanating from the GRDM Growth and Development Strategy 2021 listed above should be incorporated in the WSPs.

**BULK WATER SERVICES CAPACITY: GEORGE**

The *George Municipality Bulk Water Resource Study (2024)*, undertaken by GLS Consulting Engineers, assessed the current and future water resource options available to George and its outlying towns of Uniondale and Haarlem. The study focused on diversifying the municipal water supply to improve long-term water security and resilience against drought, climate variability, and growing urban demand.

The analysis evaluated a range of surface water, groundwater, effluent re-use, and desalination options. Among surface water sources, the Malgas River was identified as the preferred option due to its available surplus water and proximity to the George New Water Treatment Plant, making it cost-effective for transfer. By contrast, the Maalgate River has limited availability due to existing allocations to ecological water requirements (EWRs), and the Kaaimans River, although partially utilised, poses significant ecological and capital challenges for expansion. Options to transfer water from the Wolwedans Dam and rivers near Knysna were also assessed but found to be economically or environmentally impractical.

Groundwater development emerged as a key strategy for all three towns, offering supply diversity and drought resilience. The study recommends a hydrogeological exploration project for George targeting a yield of 10 ML/day over a 3–5-year period, with groundwater sufficient to meet the full demands of Uniondale and Haarlem. The municipality is encouraged to adopt a proactive groundwater management policy, promote non-potable boreholes for irrigation, and strengthen in-house hydrogeological capacity.

Effluent re-use was identified as a critical future supply component, particularly as surface water resources near full allocation. While the associated operational costs are high, they remain lower than desalination. The study suggests modular upgrades to allow for continuous operation and servicing, ensuring that re-use remains a base component of the town's supply even during periods of high dam levels. Desalination, though technically feasible, was deemed cost-prohibitive at

scale, but small-scale systems such as a proposed plant at Kleinkrantz could supply Wilderness independently from the main George system.

A multi-criteria decision-making workshop guided the sequencing of future water resource development. Stakeholders identified strategic and environmental factors as key priorities. The preferred implementation programme begins with the development of groundwater sources, followed by expansion of the effluent re-use plant, and subsequently the Malgaskraal Dam — provided that ecological impacts are mitigated. This phased approach, combined with continued alien vegetation clearing and selective decentralised supply (such as for Wilderness), provides a flexible and sustainable framework for meeting George Municipality's future water demands.

It has been confirmed that the projects identified in the Resource Study have been successfully implemented, supported by R1.1 billion in funding from National Treasury. As a result, George Municipality now enjoys a substantially enhanced and resilient water supply system, with adequate capacity to meet both present and future growth needs

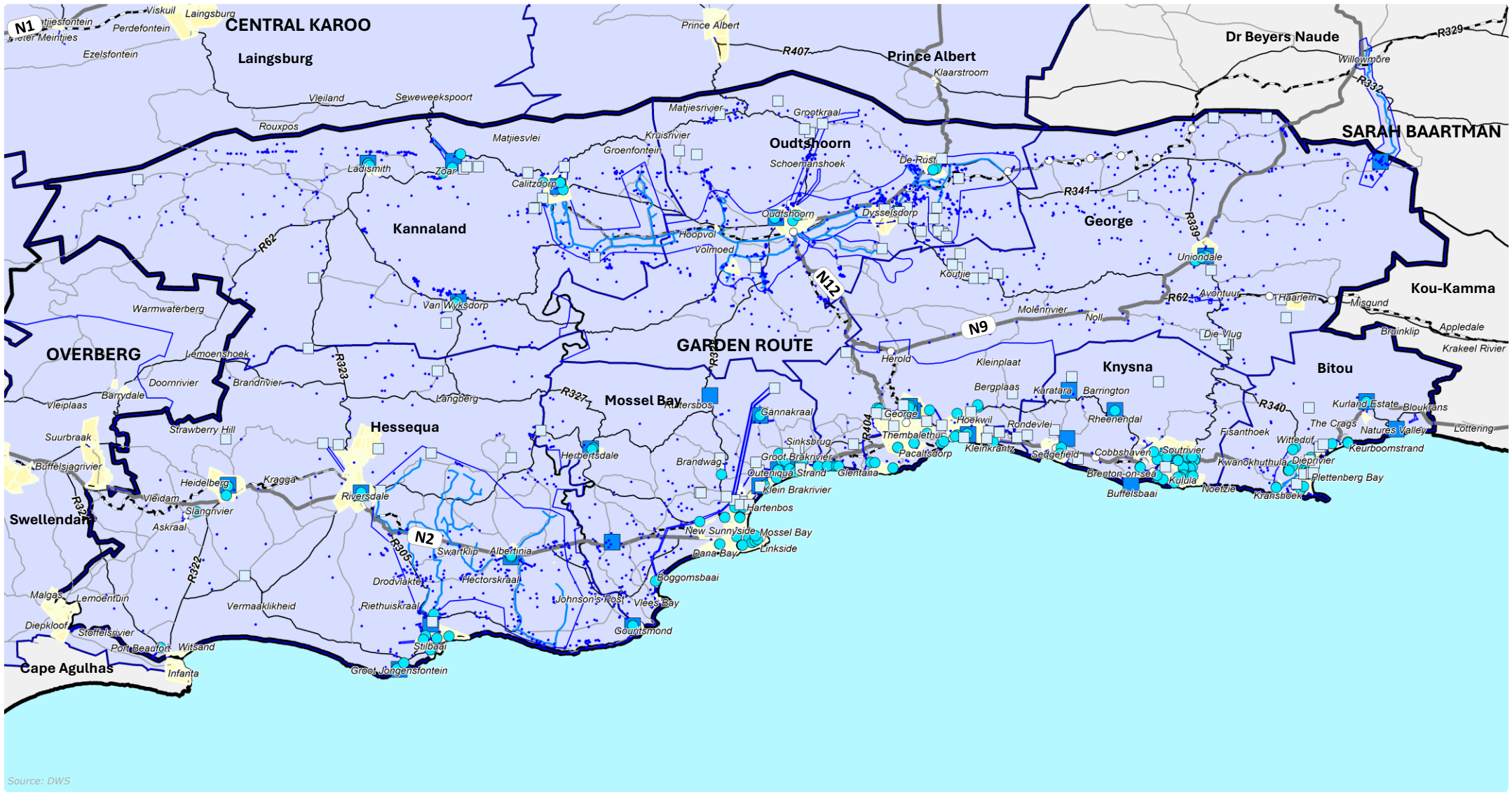
**BULK WATER SERVICES CAPACITY: OTHER MUNICIPALITIES**

**Figure 39** shows the bulk water services at district level. The distribution of services follows the spatial structure, with a concentration of reservoirs in nodes and settlements connected by bulk water pipes. Boreholes and wind pumps provide water in the rural areas.

GRDM has appointed a PSP to determine if the District's Capacity in terms of Section 78 of the MSA, to become a Water Service Authority.

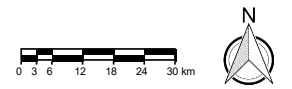
The district has 16 raw water storage dams and 31 operational water treatment facilities. Desalination plants to augment water supply exists at Mossel Bay, Sedgefield, Knysna and Bitou. Effluent re-use schemes are operational in George and Knysna. There are rural water supply schemes in Oudtshoorn and Heidelberg areas (GRDM IDP 2022).

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : ENGINEERING SERVICES - WATER



Source: DWS

- |                       |                                 |
|-----------------------|---------------------------------|
| District Municipality | Water Scheme Area               |
| Local Municipality    | WTW                             |
| Parent Farms          | Reservoirs                      |
| Farm Portions         | Water Quality Monitoring Points |
| Towns                 | Boreholes                       |
| National Roads        | Bulk Water Pipeline             |
| Main Roads            |                                 |
| Railway               |                                 |
| Railway Station       |                                 |



The logo for Garden Route District Municipality features a stylized landscape with a tree, a river, and a sun. Below the logo, it reads "DISTRICT MUNICIPALITY". At the bottom, it says "SDF 2025" and "Figure 39".

Many of the local municipalities reported that they have insufficient bulk capacity for further development. **Table 40** and **Figure 40** shows the status of future capacity per municipality obtained from the water service plans, where available. The areas with rapid growth and urbanisation are mostly indicated as areas that will not have adequate future capacity. This could hamper growth and economic development. Water infrastructure in the district is however old and needs ongoing maintenance and upgrading to maintain service levels. There should thus be a balance between augmenting capacity and maintenance of existing infrastructure.

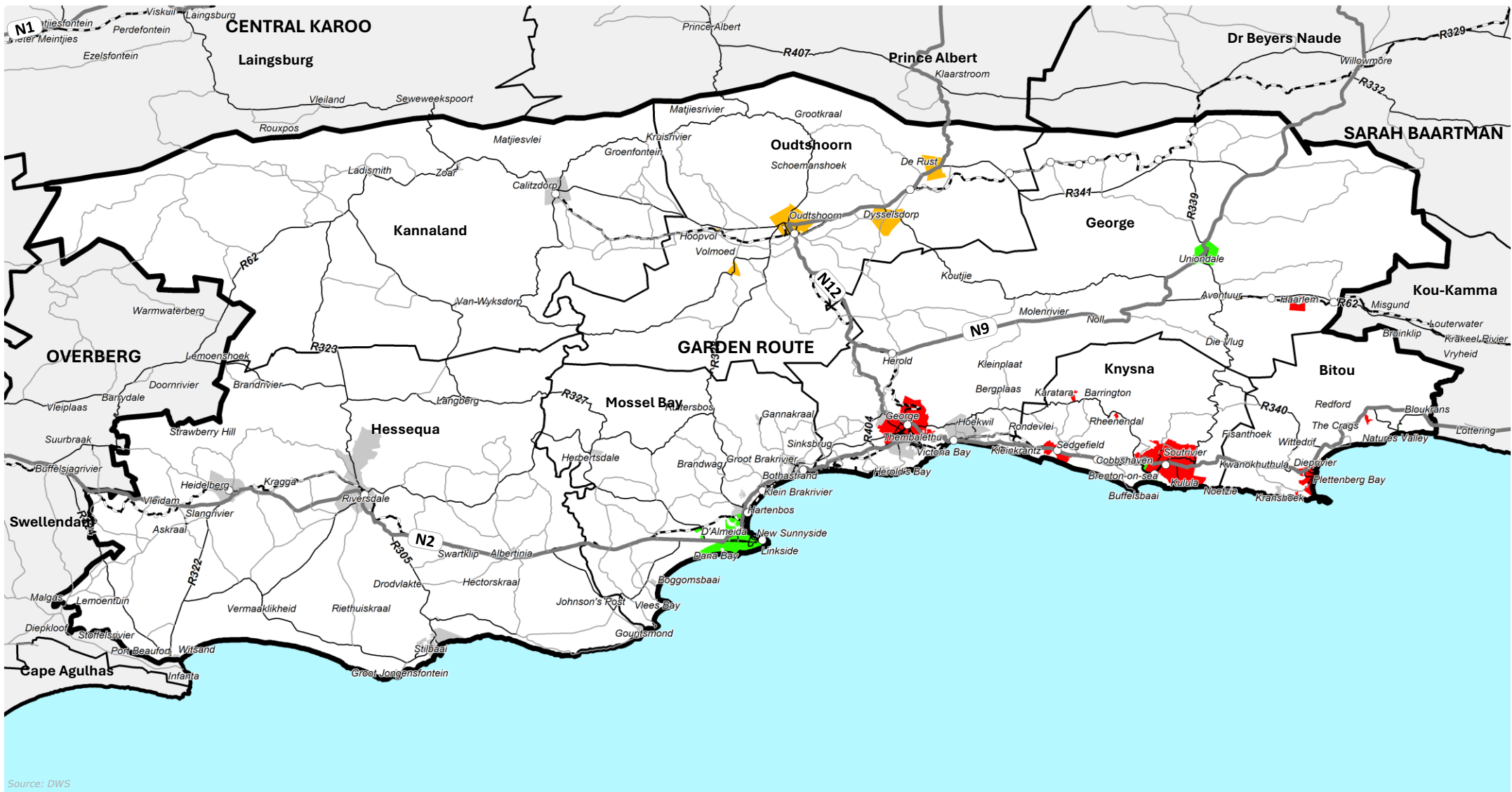
**Table 40: Bulk water capacity for estimated future demand**

WATER SERVICE AREA PER LM	STATUS
<b>Bitou</b>	
Plettenberg Bay	Insufficient
Kurland	Insufficient
Nature's Valley	Sufficient
Harkerville and Forest View	Inadequate information to determine capacity
<b>George</b>	
George	Sufficient
Uniondale	Sufficient
Haarlem	Insufficient
<b>Hessequa</b>	
Riversdale	No information
Other settlements	No information
<b>Kannaland</b>	
All settlements	No information
<b>Knysna</b>	
Knysna	Insufficient
Belvidere	Sufficient
Brenton	Sufficient

WATER SERVICE AREA PER LM	STATUS
Buffels Bay	Sufficient
Karatarra	Insufficient
Rheenendal	Insufficient
Sedgefield	Insufficient
<b>Mossel Bay</b>	
Mossel Bay	Sufficient – desalination plant
<b>Oudtshoorn</b>	
Oudtshoorn	At capacity
Dysseldorp	At capacity
De Rust	At capacity
De Hoop	At capacity
Volmoed/Armoed	At capacity

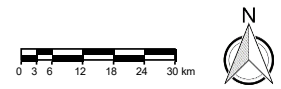
Mossel Bay has a saltwater desalination plant with a capacity of 15 ML/day. This is the largest in South Africa and ensures water security for the entire municipal area while the municipality is able to sell water (source: <https://www.mosselbay.gov.za/news-display>). While the plant currently ensures a reliable and sufficient water supply, it remains important to plan proactively for future population and economic growth, particularly given the broader water scarcity challenges experienced across the Western Cape.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : ENGINEERING SERVICES – BULK WATER CAPACITY



Source: DWS

- |                       |   |
|-----------------------|---|
| District Municipality | <b>Bulk Water Capacity</b>              |
| Local Municipality    | Sufficient                              |
| National Roads        | At Capacity                             |
| Main Roads            | In Sufficient                           |
| Railway               | Information inadequate / No Information |
| Railway Station       |   |



  
 DISTRICT MUNICIPALITY  
 SDF 2025 Figure 40

**Table 41** summarises the needs raised by the LMs from the DM's Integrated Development Plan 2022 (IDP):

**Table 41: Bulk water needs raised for the GRDM**

MUNICIPALITY	DESCRIPTION
Bitou	<ul style="list-style-type: none"> <li>❖ Increase water capacity</li> <li>❖ Support with sector plans</li> </ul>
Hessequa	<ul style="list-style-type: none"> <li>❖ Water security</li> </ul>
Knysna	<ul style="list-style-type: none"> <li>❖ Water assessments on sources and quality</li> </ul>
Kannaland	<ul style="list-style-type: none"> <li>❖ Water services</li> <li>❖ Water storage dams</li> </ul>
Oudtshoorn	<ul style="list-style-type: none"> <li>❖ Water project for Volmoed and Kliplokasie</li> </ul>

#### FOREST VILLAGES IN THE DISTRICT

There are 20 forest villages (section 3.6.3) in the GRDM. Forest villages were informally established to allow forestry workers to be closer to their workplaces. These settlements became permanent or primary homes for generations of families who previously worked or are currently working in the plantations. There was no long-term planning when these forest villages were formed. These villages are situated outside the urban edge and pose a challenge in terms of the provision of services.

On 16 March 2024, a Ministerial Resolution was issued based on stakeholder engagement which states (among other things) as follows:

1. Security of tenure - all the houses should be transferred to the beneficiaries free of charge.
2. The Department of Public Works and Infrastructure (DPWI) should establish a Western Cape Forest Village Task Team comprising various key

departmental and government entities. The Forest Villages Provincial Committee as a body that will be integrated into the Western Cape Village Task Team.

3. Special funding for forest villages should be investigated to cater for the upgrading of the existing infrastructure including the upgrading/refurbishing of the existing houses.
4. The unwillingness of villagers to relocate to suitable areas closer to economic opportunities and access to basic services is a constraint.

There are forest villages in Bitou, George, Knysna, Mossel Bay and Hessequa LMs. These villages fall outside the prioritised areas for service provision in terms of the municipalities' SDFs and the principle of the District IDP that states that *"new ways of integrating development with infrastructure must be embraced to secure a sustainable future for municipal finances, citizens and the economy."* The GRDM should thus engage with the DPWI to access special funding to provide basic infrastructure. These villages should also be prevented from growing, as they are not connected to the bulk water infrastructure network. The availability of water in these villages is also critical for firefighting.

#### 3.8.2 Sanitation Services

**Figure 41** shows the distribution of sanitation services across the district. The areas where waterborne sewerage services are available are indicated in purple and are clearly concentrated in the urban areas. The vast area of the district and low overall densities make the provision of sewerage services very expensive. The landscape and particularly the mountain ranges in the middle of the district further complicate service provision.

In the GRDM sewage sludge is currently classified as a hazardous waste requiring it to be transported to Visserhok in Cape Town, with high transport costs due to

the weight and volume of the sludge. For the sludge to be cleaned it is treated at wastewater treatment works (WWTW) with a significant cost implication.

The GRDM wants to clean sewage sludge in the district and intends to establish the Gwaiing WWTW as a regional facility. The Gwaiing WWTW has a digester and nearby access to the railway system. The sludge can easily be transported to the site by truck (transport distances are relatively short, as opposed to Cape Town), although the option in the future exists for a potential rail scheme, which also incorporates solid waste streams (GRDM IDP 2022).

The cost of this WWTW is not provided in the IDP but will require funding from provincial level and the DPWI. The IDP states that the bulk of the GRDM's infrastructure budget i.e., 60.1 % or R723.958 million is allocated towards the provision of basic services. Most of spending on trading services was towards wastewater management (R294.314 million) and water management (R193.030 million) in light of recent droughts. Investment in a district facility could therefore save the DM and all the LM's a significant amount of money.

Knysna LM indicated that it needs to upgrade its wastewater treatment works. Oudtshoorn LM reported that wastewater treatment capacity is exceeded at most of the bulk wastewater treatment facilities.

### 3.8.3 Electricity Services

**Figure 42** shows the electricity infrastructure in the district. Eskom is the bulk supplier of electricity to the local municipalities as well as rural areas and major private consumers. There are major power lines throughout the district that supply the rural areas and power stations with power. The electrical substations are concentrated in the towns and service centres. George is the only town that shows use of solar power.

Municipalities generate revenue from electricity sales, which is often used to cross-subsidise other services. The provision of affordable, accessible and reliable electricity is an important mandate for municipalities, but this is hampered by insufficient supply from Eskom. Electricity supply constraints and high costs result in a demand for alternative, sustainable energy sources.

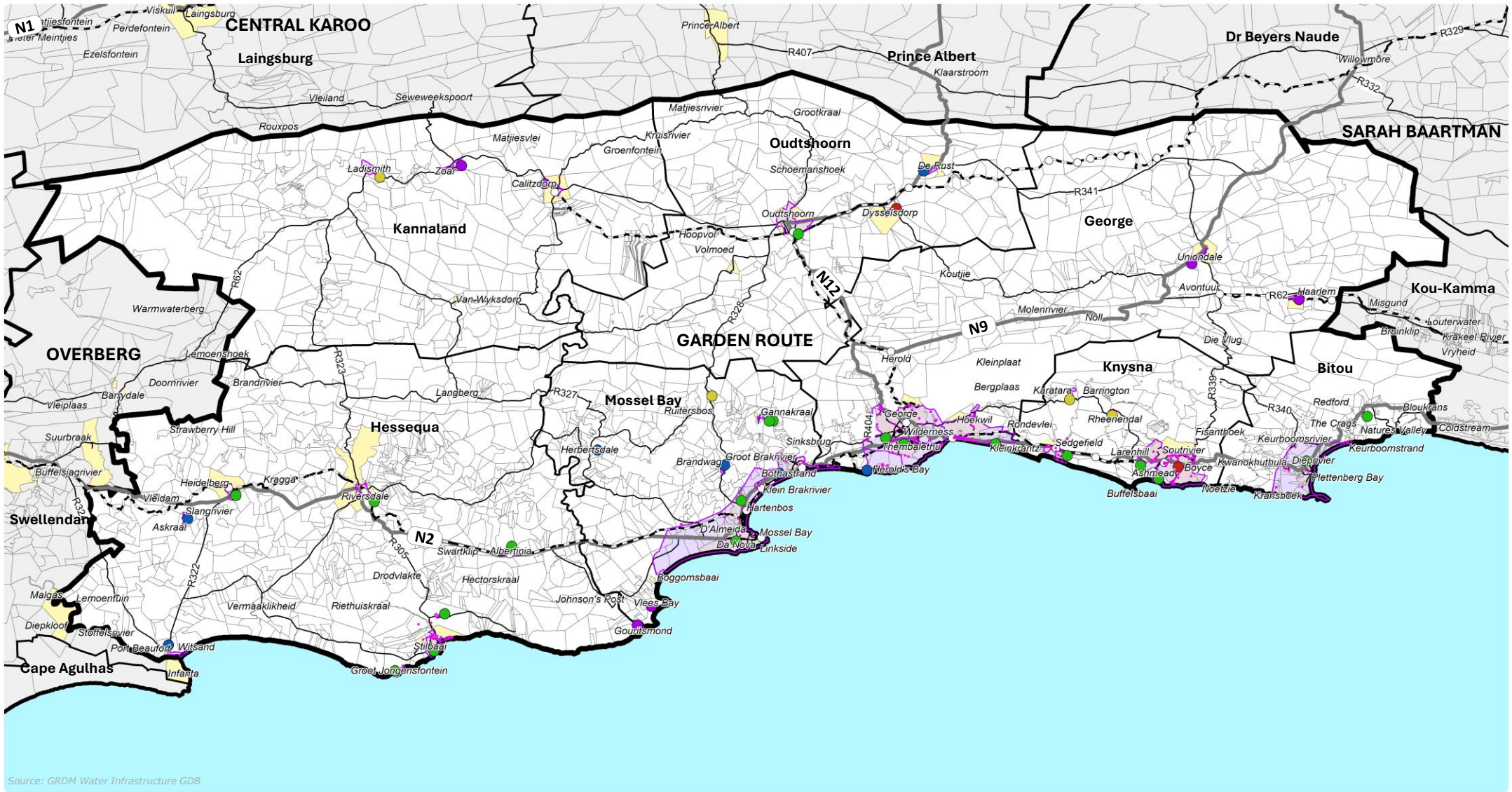
The GRDM is in a process of rolling out renewable energy projects. One such project is a first-of-its-kind, large-scale, green hydrogen plant that contributes to the identity of a green Garden Route (IDP 2022).

The GRDM produced an Electricity Master Plan in 2022. The Master Plan (MP) forms the business case for the municipality's role in the sustainable energy transition and integration with national level energy planning as undertaken by the Department of Energy.

Figure 42 also illustrates the position of REEA applications for Wind, PV and Biomass.

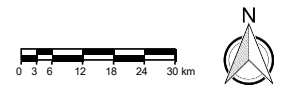
The MP shows that the district has a peak demand of around 250 MVA and annual consumption is about 1.3 TWh (less than 1% of the national demand). The annual Eskom sales for the GRDM is 1,298 GWh. The top three purchasers - George (33%), Mossel Bay (24%) and Knysna (13%) constitute more than 70% of the sales. Electricity is the GRDM's third biggest expenditure (R150.629 million) after sewer and water (IDP 2022).

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : ENGINEERING SERVICES - SANITATION

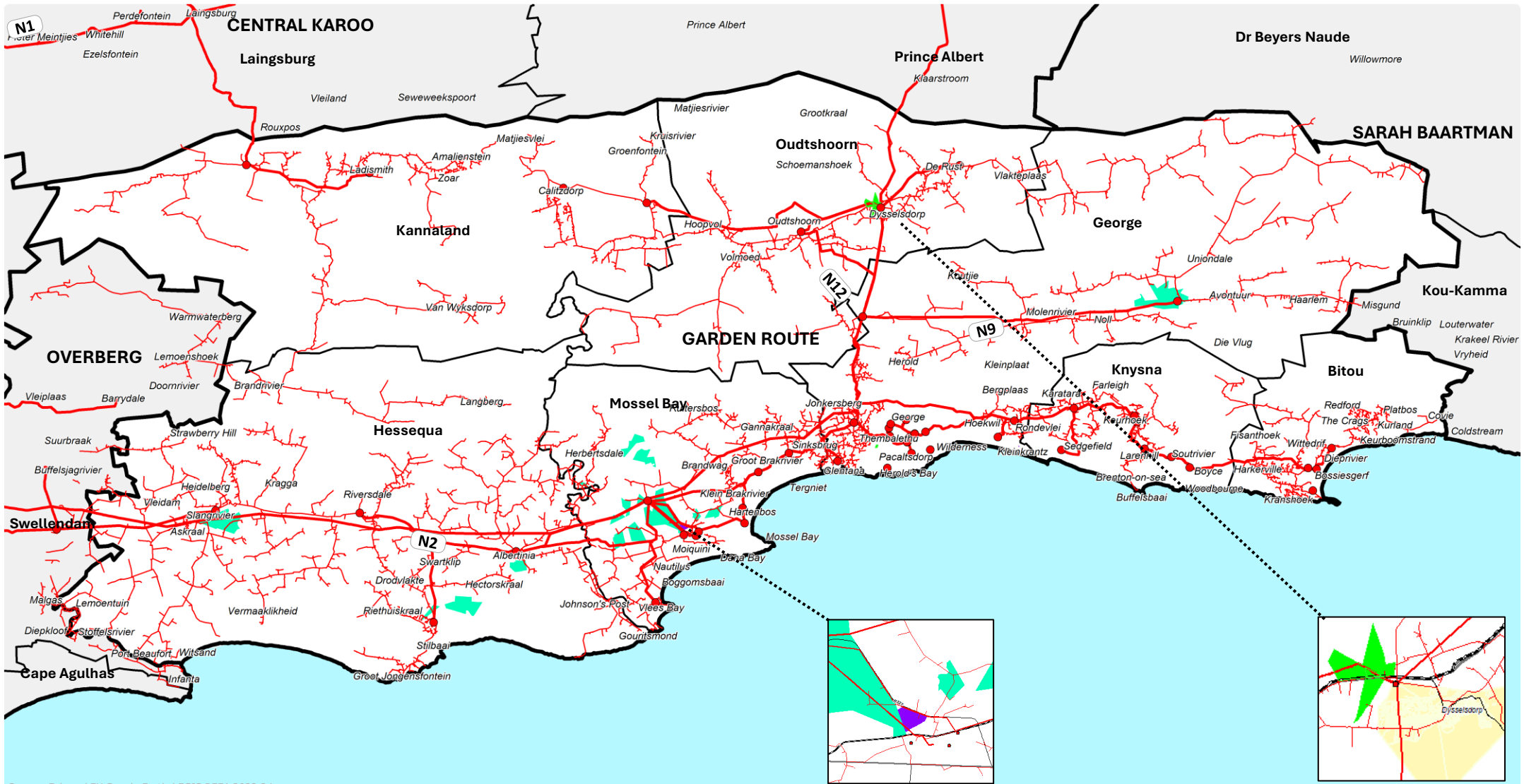


Source: GRDM Water Infrastructure GDB

- |                       |                               |
|-----------------------|-------------------------------|
| District Municipality | Sanitation Scheme Area        |
| Local Municipality    | WWTW: Activated Sludge        |
| Parent Farms          | WWTW: Bio-Filter              |
| Farm Portions         | WWTW: Maturation Ponds        |
| Towns                 | WWTW: Oxidation Ponds         |
| National Roads        | WWTW: Oxidation Ponds Unlined |
| Main Roads            | Pump Stations                 |
| Railway               |                               |
| Railway Station       |                               |

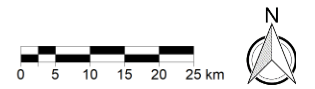


# GARDEN ROUTE DM SDF : ENGINEERING SERVICES – ENERGY - ELECTRICAL/SOLAR



Source: Eskom / EX Google Earth / EGIS REEA 2023 Q4

- |  |                       |                                   |                       |
|--|-----------------------|-----------------------------------|-----------------------|
|  | District Municipality |                                   | Eskom HV Power Lines  |
|  | Local Municipality    |                                   | Eskom MV Power Lines  |
|  | Parent Farms          |                                   | Eskom HV Sub Stations |
|  | Farm Portions         |                                   |                       |
|  | Towns                 | <b>REEA Approved Applications</b> |                       |
|  | National Roads        |                                   | Wind                  |
|  | Main Roads            |                                   | PV / Solar            |
|  | Railway               |                                   | Biomass_Biofuels      |
|  | Railway Station       |                                   |                       |

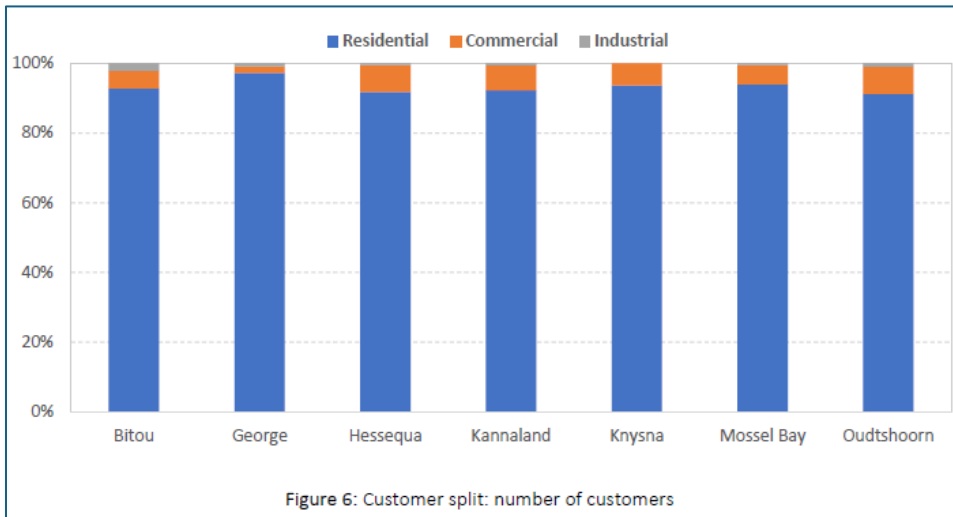


**Garden Route**
  
 DISTRICT MUNICIPALITY

SDF 2025 Figure 42

**Diagram 29** indicates the demand or customer split according to number of customers per local municipality. At district level households clearly constitute the most customers (94%), followed by commercial uses (5%), with a very small proportion industrial customer (1%). The diagram emphasises the lack of diversification in the economy. Tourism forms part of residential and commercial consumption.

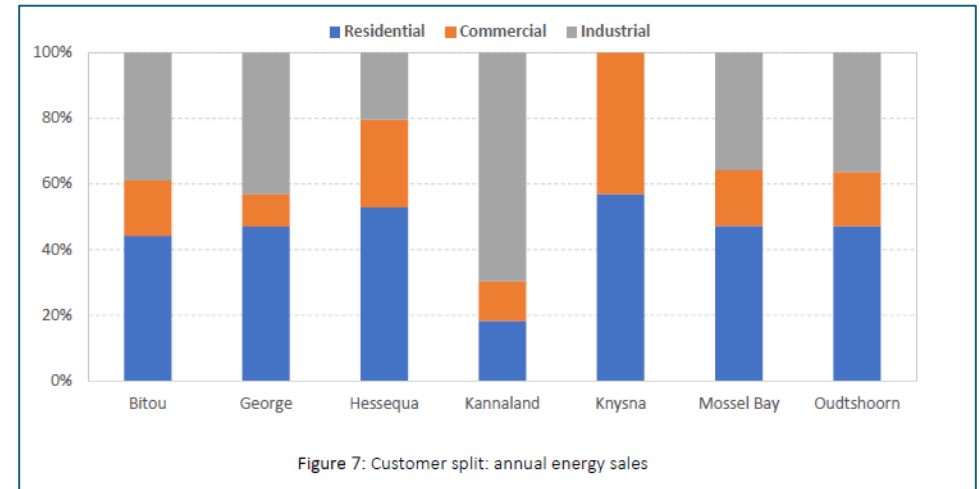
**Diagram 29: Customer Split per LM (demand)**



Source: GRDM Electricity Master Plan 2022

**Diagram 30** shows the customer split according to annual sales per local municipality (different customer types pay different tariffs, hence the different profile). For the GRDM the total is 1,182 GWh with an overall split of 48% residential, 18% commercial and 34% industrial sales. Kannaland is an outlier with almost 70% of annual sales coming from industrial customers that only make up 1% of their customer base. It is evident that tariffs for industrial customers are very high.

**Diagram 30: Customer Split per LM (Sales kWh/Customer)**



Source: GRDM Electricity Master Plan 2022

The GRDM is in the Outeniqua Customer Load Network. The load in the Outeniqua area is forecast to grow by 29%, from 847 MW in 2022 to 1093 by 2031. As the demand grows in an area, so does the potential to connect generation sources on the load side.

The primary objective of the MP is to provide insight on possible electricity futures for the region. Two focus areas were considered, first the potential of rooftop PV was identified. Secondly, techno-economic optimisation of utility scale generation technologies to provide an optimal energy mix for the region, similar to the Integrated Resource Plan (IRP). The business case analysis shows that rooftop solar PV currently makes sense in many instances. Due to increasing municipal tariffs and declining solar PV costs the business case improves with time. By 2040 solar PV makes financial sense for all customer classes and scenarios.

The Least Cost Plan has cost benefits as well as societal benefits derived from reducing CO<sub>2</sub> emissions and consuming less water. It is not recommended that municipalities make all the new capacity investment at once but rather make firm investment decisions in the medium term and then revise the IRP once every three years to determine the next phase of investment. The cost of not acting is very high.

### 3.8.4 Waste/Recycling Services

The Western Cape Department of Environmental Affairs and Development Planning undertook produced a report on the **Assessment of the Municipal Integrated Waste Management Infrastructure in the District** in 2015 and updated this assessment in 2025. The main objective of the assessment was to:

1. Determine compliance with existing waste management licences;
2. Determine the additional infrastructure required to achieve the diversion from landfill target of 20% by 2030; and
3. Determine the additional infrastructure required to remain compliant up to 2030.

The diversion from landfill target originates from the National Waste Management Strategy 2020 and is the mass of solid waste generated that should be diverted from landfill sites by means of waste reduction, reuse and recycling.

The section below is an extract of the provincial report and the most important findings in respect of the three aspects above.

**Table 42** is a summary of the existing waste management facilities in the district, according to type of facility and local municipality.

**Table 42: Existing Waste Management Facilities in the GRDM**

MUNICIPALITY	FACILITY
<b>Operating Landfills</b>	
Hessequa	Albertinia
	Droëkloof
	Gouritsmond
	Melkhoutfontein
	Slangrivier
	Steynskloof
	Witsand
Kannaland	Ladismith
	Zoar
Oudtshoorn	De Rust
	Dysseldorp
	Oudtshoorn
<b>Total</b>	<b>12</b>
<b>Landfills to be decommissioned</b>	
George	Gwaing GW&BR
Hessequa	Jongensfontein
Kannaland	Van Wyksdorp
	Calitzdorp
Knysna	Sedgefield
	Knysna Old Place
Mossel Bay	D'Almeida
	Dysseldorp
	Great Brak
	Herbertsdale
	Louis Fourie

MUNICIPALITY	FACILITY
Oudtshoorn	De Rust Old
	Desseldorp Old
<b>Total</b>	<b>13</b>
Storage facilities	
Bitou	Nature's Valley RTS
	Bitou IWMF
George	George Waste Management Facility
Knysna	Knysna RTS (Spoornet)
	Sedgefield GW & BR
Mossel Bay	Kwanonqaba Drop-off
	Sonskynvallei Drop-off
<b>Total</b>	<b>7</b>
Rehabilitated Landfills	
Plettenberg Bay	Plettenberg Bay
George	Gwaing
<b>Total</b>	<b>2</b>
Diversion facilities	
Bitou	Bitou Integrated Waste Management Facility
George	George Waste Management Facility
	George Compost
Knysna	Sedgefield GW & BR
Mossel Bay	Herbertsdale Materials Recovery Facility
<b>Total</b>	<b>5</b>

In total there are 25 landfill sites in the district, of which 13 are operating at capacity and will be decommissioned. This will leave a total of 12 working sites in three local municipalities. There are also five Diversion Facilities in the district.

In 2016, the Garden Route District produced 8% (229 520 tonnes a year) of the Western Cape's waste volumes. Due largely to the dispersed settlement form, the district's access to refuse removal services is low at 86.5%. **Figure 43** shows the existing landfill sites and transfer stations. George is the only municipality that has a recycling facility.

### 1. Cost of compliance with existing licences

**Table 43** summarises the costs required to make infrastructure compliant with current licences.

**Table 43: Cost requirement for infrastructure to be compliant with current licences**

MUNICIPALITY	OPERATIONAL COMPLIANCE COST	REHABILITATION COMPLIANCE COST
Bitou	-	-
George	-	R71,370,073
Hessequa	R21,956,870	R6,009,648
Kannaland	-	R68,753,583
Knysna	R3,380,234	R16,301,505
Mossel Bay	-	R163,834,415
Oudtshoorn	R10,681,846	R31,662,131
<b>Total (excluding VAT)</b>	<b>R36,018,949</b>	<b>R357,931,355</b>

Rehabilitation compliance cost is the highest for the district as a whole and almost half of this cost is attributed to the Mossel Bay LM. Bitou LM is fully compliant.


# GARDEN ROUTE DM SDF : ENGINEERING SERVICES – ENERGY – WASTE/RECYCLING



Source: Ex Google 2024; <https://sst.org.za/african-marine-network-map>

- A District Municipality
- A Local Municipality
- ▭ Parent Farms
- ▭ Farm Portions
- ▭ Towns
- National Roads
- Main Roads
- Railway
- Railway Station
- ▲ Landfill
- ▲ Waste Transfer Station
- ▲ Recycling





**Garden Route**  
DISTRICT MUNICIPALITY

SDF 2025 Figure 43

## 2. Cost of additional infrastructure to achieve 55% diversion by 2030

The proposed Integrated Waste Management Facilities required to achieve 55% diversion by 2030 are detailed in **Table 44**.

**Table 44: Cost requirement for infrastructure for 55% diversion**

MUNICIPALITY	ESTABLISHMENT COST
Bitou	R1,782,134
George	R1,770,398
Hessequa	R37,950,661
Kannaland	R29,154,740
Knysna	R42,998,498
Mossel Bay	R27 033 862
Oudtshoorn	R24 201 238
<b>Total (excluding VAT)</b>	<b>R164,891,531</b>

The cost for Bitou and George LMs are low, with the remaining cost shared almost evenly between the other municipalities. The highest cost is in Knysna LM.

## 3. Cost of additional infrastructure to remain compliant up to 2030

The GRDM will require a total R145,620,156 (excluding VAT) to ensure that waste management infrastructure remains compliant with existing standards as set out in **Table 45**.

**Table 45: Cost requirement for infrastructure until 2030**

MUNICIPALITY	ESTABLISHMENT COST
Bitou	-
George	-
Hessequa	R49 575 421
Kannaland	R28 149 701
Knysna	R29,890,825
Mossel Bay	R27 573 793
Oudtshoorn	R10 430 414
<b>Total (excluding VAT)</b>	<b>R145,620,156</b>

The table shows that no additional infrastructure cost is required in Bitou and George Local Municipalities. The establishment cost for the Hessequa LM is the highest in the district.

The total investment required for waste management infrastructure in the district up to 2030 will be **R668,443,042 excluding VAT**. Although this is very high, the implications of not reducing the mass of solid waste have a much higher cost in environmental terms.

The GRDM is busy with the compilation and implementation of a Waste Minimisation Plan for the district and inclusion into the Integrated Waste Management Plan. The objective with waste management is to reduce waste through reuse, recycling and waste to fuel initiatives. All formal residential erven receive a weekly door-to-door waste collection service. A two-bag system is in operation at five of the seven local municipalities to encourage recycling. Most healthcare risk wastes are managed by private contractors. No significant waste avoidance is presently being done.

The development of a regional landfill site is still underway but not through a public private partnership as originally planned. The proposed site is located in close proximity to PetroSA in Mossel Bay LM. Phase 1 is nearing completion;

however, due to the contractor's poor performance the GRDM utilised emergency procurement mechanisms to complete Phase 1.

The high cost of compliance with licence requirements and diversion targets for individual municipalities makes the option of a regional landfill site very attractive. The long-term operating cost and the overall carbon footprint should however be considered in weighing up the options. The district covers a large physical area; therefore, transportation of waste will be costly. The air pollution generated from heavy vehicles, wear and tear of roads and potential spillages all have high long-term costs. Should it be possible to use biogas for transport of waste, the impact on the environment and carbon footprint could be lower.

### 3.8.5 Telecommunication Services

This is not strictly speaking a local government function; however, internet connectivity is a basic necessity for households, businesses and every land use and hence is addressed. The supply of this service is mostly private sector driven, but government should ensure that marginalised communities have access to these services as part of basic need fulfilment.

**Figure 44** shows the current cell phone and internet network coverage in the DM. It follows the configuration of most other infrastructure (water and road network).

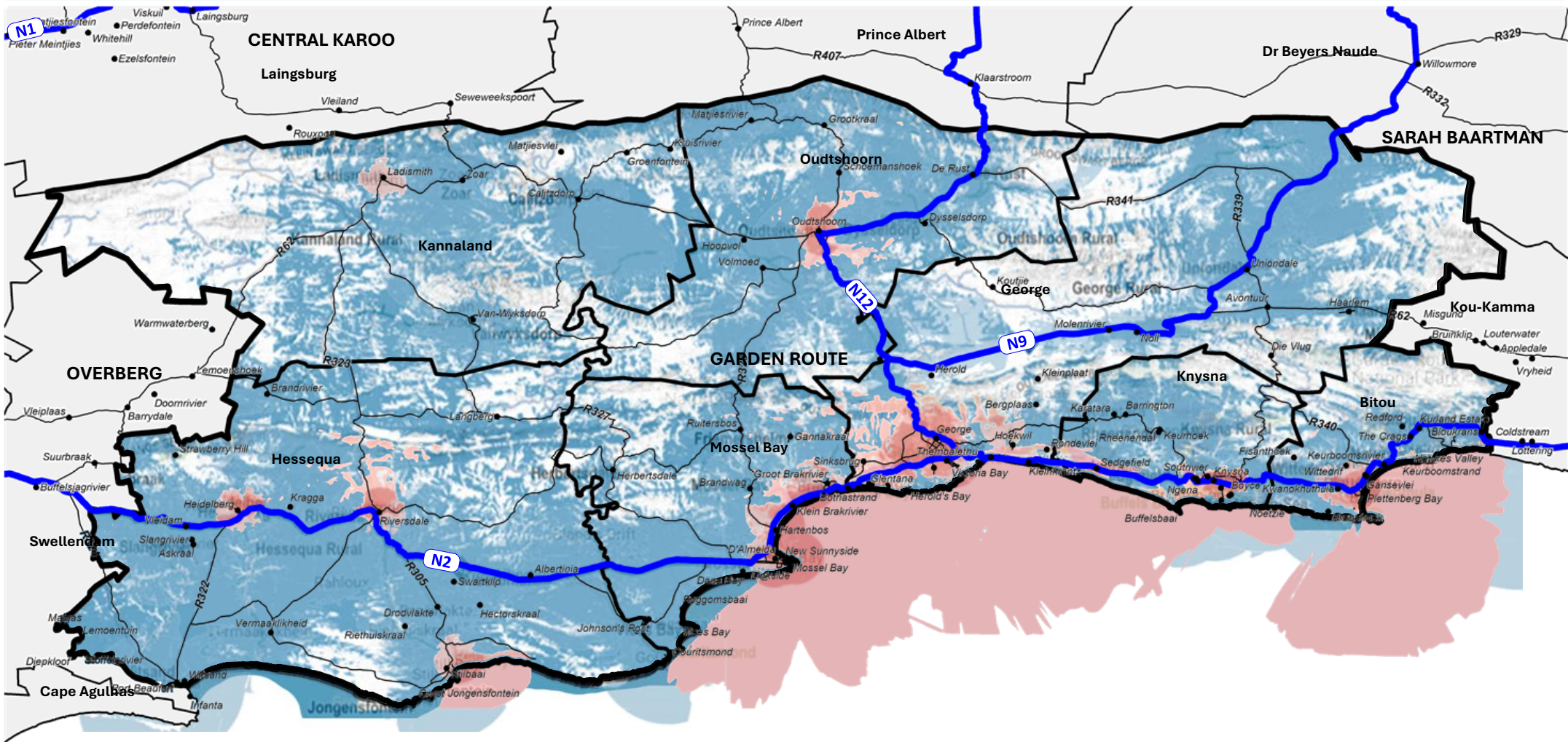
The availability of high-speed internet is central to efficient communications and economic development. Like most other services, the supply is concentrated in areas with high demand and population density, thus in this DM along the coastline. Connectivity in the rural areas is lower. The high cost of this service is a challenge for marginalised communities, especially for learners and students.

Spatial strategies in the marginalised and rural areas, such as concentration of services at multi-purpose community centres will also make the provision of internet services more viable for service providers. Free access to Wi-Fi should be

enabled at educational facilities, government buildings, municipal buildings and modal transfer points. This is also essential for disaster reporting and management. Cell phone and internet communication are pertinent in crime prevention, reporting and emergency assistance in rural areas.

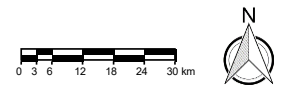
The GRDM's IDP and Growth and Development Strategy emphasises the importance of the rollout of internet networks and provision of Wi-Fi hotspots in the district. There are however no specific projects or action plans to enable this. Integration with spatial proposals remains the best approach.

# GARDEN ROUTE DM SDF : NETWORK COVERAGE



Source: Ex Google 2024; <https://sst.org.za/african-marine-network-map>

- District Municipality
- Local Municipality
- National Roads
- Main Roads
- No Coverage
- Coverage (Vodacom; MTN; Cell C; Telkom)
- 5G Coverage (Vodacom; MTN; Cell C; Telkom)



**Garden Route**  
DISTRICT MUNICIPALITY  
SDF 2025 **Figure 44**

### 3.9 SYNTHESIS

The district has the following **opportunities**:

- ❖ The District boast various comparative advantages in agriculture, construction, trade finance and manufacturing.
- ❖ The Garden Route District has significant tourism potential linked to the scenic characteristics linked to the coastal line.
- ❖ The District is well connected to the N2, N9 and N12. The district contains an extensive road network with well-maintained roads.
- ❖ GRD is home to the largest producer of ostrich related products and one of the district's main exports is agricultural-related produce (pears, quiches and apples).
- ❖ Four PHSDA's areas have been declared in the District and the planning of the areas is nearing completion.
- ❖ The district boasts a number of Natural Heritage Sites.

The district has the following **Constraints**:

- ❖ The increased urban development in the district causes a threat to the biodiversity which is one of the main tourist attractions.
- ❖ The increase urbanization / influx of people to the district places strain on the provision of engineering services and social facilities.
- ❖ Increased crime rates is one of the symptoms of unemployment.
- ❖ Various forest villages are scattered in the district which place a strain on the provision of social facilities and possible reactions to disasters (fire, storm water).
- ❖ The restructuring zones in the district have not been actively utilized for the intended purpose (social housing).

- ❖ The tariff hikes (trade wars) which may be imposed by external countries may have a negative effect on the agricultural exports of the district.

CHAPTER 4: GARDEN ROUTE DISTRICT SPATIAL DEVELOPMENT  
FRAMEWORK



## 4.1 OVERVIEW

The main purpose of the District Spatial Development Framework is to define a spatial rationale with development concepts and guidelines that can be used by the local municipalities to achieve sustainable spatial development in a consistent/coherent manner across the district.

The District Spatial Development Framework is multi-sectoral in nature and should enable decision-makers in the region – particularly municipalities and provincial and national government departments – to make well-informed decisions that are strategically sound, and in line with the development principles outlined in the District SDF.

Furthermore, it will ensure that development decisions across the district are made on the basis of **sound argument and a common spatial logic/rationale** rather than subjective opinions of individuals.

Hence, the GRDM Spatial Development Framework is a broad conceptual framework aimed to achieve a range of strategic goals as summarised below:

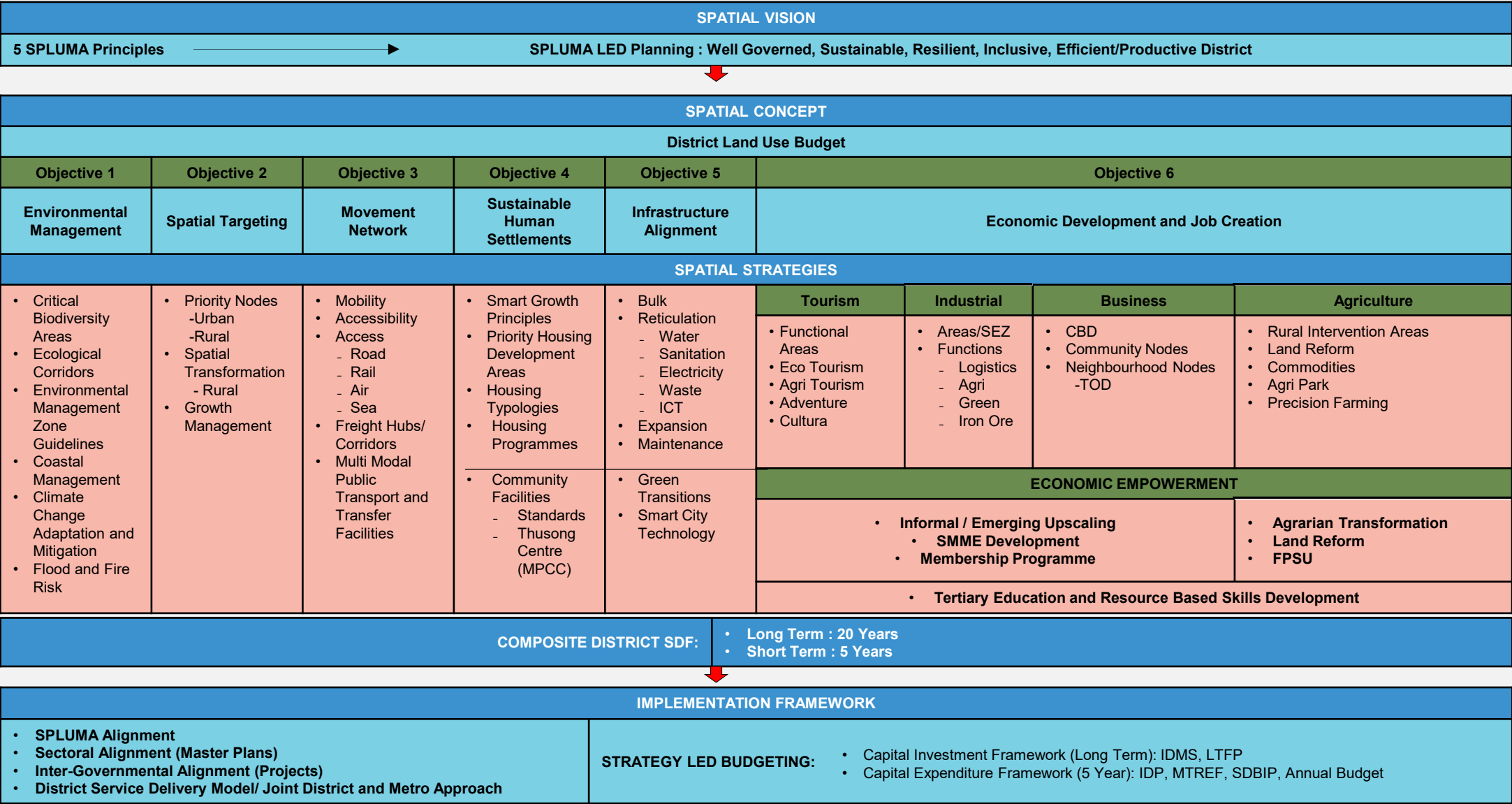
- i. **Outcomes Led Planning role:** Provide the spatial planning basis for achievement of the Outcomes defined in national and provincial policies and the Garden Route District One Plan / Joint District and Metro Approach.
- ii. **Strategy Led Budgeting role:** Ensure different spheres of government are able to plan and programme budgets towards an accepted district strategic purpose in line with the broad spatial concept and strategies defined in the District SDF.
- iii. **Spatial Structuring/Restructuring role:** Assist local and surrounding district municipalities to structure/restructure their space in a manner that integrates the district and region and ensures that the principles of equity and sustainability are achieved.

- iv. **Multi-Sectoral Guiding role:** Provide a useful set of guidelines to municipalities to assist them in the incorporation of the objectives contained in the framework into their local spatial planning processes.
- v. **Enhanced Land Use Management role:** Provide the basis for the formulation of a set of land use controls by municipalities in order to perform their regulatory role in land use management.
- vi. **Coordination role:** Enable municipalities within the district to align their policies and practices to meet district goals, and to align public capital investment by provincial and national government departments with these goals.

**Diagram 31** illustrates the proposed structure and sequence of the main components representing the SDF of the GRDM. This SDF Conceptual Framework is strongly informed and aligned to the legal and policy directives emanating from legislation and multi-sectoral policies at national and provincial level. It is briefly summarised as follows:

- ❖ The **Spatial Vision** for the GRDM area is aligned to the five SPLUMA Principles and translated into a number of Outcomes to be achieved through strategic planning. (Outcomes Led Planning).
- ❖ The Spatial Vision is next translated into a more detailed **Spatial Concept** and a **Municipal Land Use Budget** quantifying the land area required to accommodate the projected future growth of the district area.
- ❖ Emanating from the Spatial Concept, a total of six main **Spatial Development Objectives** are formulated for the GRDM SDF. Each Spatial Development Objective comprises a number of Actions to be implemented, and which collectively represent the **Spatial Strategies** of the GRDM SDF. **Annexures D to G** comprise more detailed information/development guidelines supplementary to the Spatial Strategies.

**Diagram 31: GARDEN ROUTE DISTRICT SPATIAL DEVELOPMENT FRAMEWORK STRUCTURE**



- ❖ The detailed **Spatial Strategies** will spatially culminate into the Composite GRDM SDF comprising a 5- and 20-year development perspective.
- ❖ The **Implementation Framework** as illustrated on Diagram 30 firstly confirm SPLUMA alignment of the SDF. It then summarizes the sectoral implications of the GRDM SDF.
- ❖ The GRDM SDF Spatial Strategies will inform the GRDM Budgeting Process (**Strategy Led Budgeting**) which includes the GRDM Capital Investment Framework (Long-Term Financial Plan) as well as the shorter term (3-5 year) GRDM Capital Expenditure Framework.

#### 4.2 SPATIAL VISION AND DEVELOPMENT PRINCIPLES

The long-term vision for Garden Route District Municipality is to be:

*“a leading, enabling and inclusive district, characterised by equitable, sustainable development, high quality of life and equal opportunities for all”*

In line with the above Vision and the Development Principles for spatial planning as contained in the Spatial Planning and Land Use Management Act, the Garden Route District Spatial Development Framework seeks to achieve the following Outcomes in the District area (see **Diagram 32** below):

**Diagram 32: GRDM Outcomes: Directives towards a Spatial Vision**

SPATIAL DEVELOPMENT FRAMEWORK VISION	
<i>“Garden Route the <u>leading</u>, <u>enabling</u> and <u>inclusive</u> district, characterised by <u>equitable</u>, <u>sustainable development</u>, <u>high quality of life</u> and <u>equal opportunities</u> for all”</i>	
Outcome 1: Productive District	Outcome 2: Inclusive and Equitable
<b>SPLUMA: Spatial Efficiency Spatial Resilience</b>	<b>SPLUMA: Spatial Justice</b>
<ul style="list-style-type: none"> <li>• <b>Leading</b></li> <li>• <b>Enabling</b></li> <li>• Diverse Economy with Extended Value Chains</li> <li>• Well Maintained and Comprehensive Infrastructure and Movement Network</li> <li>• Adoptive Climate Change Measures</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Inclusive District</b></li> <li>• <b>Equitable</b></li> <li>• <b>Equal Opportunities</b></li> <li>• Access to Diverse Settlement and Housing Typology Options</li> <li>• Access to Land</li> <li>• Access to Community Facilities</li> <li>• Access to Economic Opportunities and Resources</li> </ul>
Outcome 3: Sustainable / Resilient	Outcome 4: Well Governed District
<b>SPLUMA: Spatial Sustainability / Spatial Resilience</b>	<b>SPLUMA: Good Administration</b>
<ul style="list-style-type: none"> <li>• <b>Sustainable Development</b></li> <li>• <b>High Quality of Life</b></li> <li>• Ecosystem Integrity</li> <li>• Climate Change Resilience</li> <li>• Economy Positioned for Growth</li> <li>• Sustainable Resource Utilisation</li> <li>• Adaptive Systems:                             <ul style="list-style-type: none"> <li>➢ Economic Challenges</li> <li>➢ Social Challenges</li> <li>➢ Environmental Challenges</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Enabling</b></li> <li>• <b>Inclusive District</b></li> <li>• Effective Decision Making</li> <li>• Stakeholder Involvement</li> <li>• Visionary Leadership</li> <li>• Multi Sectoral Planning</li> <li>• Delivery Capacity and Mechanisms</li> <li>• Institutional Alignment:                             <ul style="list-style-type: none"> <li>➢ Planning</li> <li>➢ Budgeting</li> <li>➢ Implementation</li> <li>➢ Management</li> </ul> </li> </ul>

Hence, the Spatial Development Framework for the Garden Route District seeks to:

- ❖ Fully utilize the environment within the district to promote economic growth and sustainability.
- ❖ Invest in the systematic and pragmatic role of engineering and movement infrastructure.
- ❖ Enhance the development potential of existing nodal points through proposals for developing industry specific economic clusters in line with the district space economy.
- ❖ Mitigate existing and potential future land use and environmental conflict(s) between human settlement expansion, agriculture and tourism.

### 4.3 SPATIAL CONCEPT

The Spatial Concept for Garden Route District Municipality is illustrated on **Figure 45**. The Spatial Concept is informed by the GRDM Land Use Budget and a number of Development Objectives for the district as discussed in the sections below.

#### 4.3.1 Garden Route Land Use Budget

##### POPULATION PROJECTIONS METHODOLOGY

The following factors were taken into consideration and serve as key departure points for population projections:

- ❖ The district indicated that the control total population provided by Census 2022 can be utilized.
- ❖ The 2024 Mid-year estimate population for the district was also accepted.
- ❖ The 2034 Trend Growth Assumption was also accepted by the district as well as Western Cape Province.

- ❖ GRDM population contribution to the province's incremental from 9% in 2011 to 11.3% in 2022 and 2024.
- ❖ The Western Cape Province indicated that a Census Linear Projection is utilized to calculate population growth.

Based on the above, two scenarios were formulated to calculate the population projections for the SDF. The main difference between the linear projection and the GRDM SDF projection is that the linear projection maintains a constant increment per annum, while the SDF proposes a declining increment per annum. The comparison between the two scenarios for the District and each Local Municipality is contained in **Annexure D**.

Note: George LM effectively had 4 scenarios: Linear, GRDM SDF, Lower Bound and Upper Bound. The GRDM SDF calculation provided a midway point between the bounds. The GRDM SDF calculation was selected as the preferred scenario for the population and household projections and formulation of the Land Use Budget.


**Table 46** and **Diagram 33** depicts the Census 2022 population, the current (2024) population and the projected population for 2034 and 2040. The district is projected to grow to over a million (1,042,799) by 2034 and 1,125,299 by 2040.


The 2024-2034 period has a projected increment of 189,724 people and the 2034-2040 period an increment of 82,500. The incremental population projection per annum for the 2024-2034 period is 18,972 people and the 2034-2040 has been adjusted downwards to 13,750 people per annum.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : CONCEPT



- |                        |                                    |                    |                        |
|------------------------|------------------------------------|--------------------|------------------------|
| District Municipality  | 1 <sup>st</sup> Order Node Coastal | National Roads     | Airfield/Landing Strip |
| Local Municipality     | 1 <sup>st</sup> Order Node Inland  | Proposed N2 Bypass | Harbour                |
| Towns and Settlements  | 2 <sup>nd</sup> Order Node Coastal | Main Roads         | Cultivated Land        |
| Mountain Range         | 2 <sup>nd</sup> Order Node Inland  | East - West Links  | Railway Line           |
| Protected Areas        | 3 <sup>rd</sup> Order Node Inland  | Coastal Links      | Railway Station        |
| Marine Protected Areas | Rural Service Node Coastal         | Airport            | Aerodrome              |
| Klein Karoo Landscape  | Rural Service Node Inland          |                    |                        |
| Garden Route Landscape |                                    |                    |                        |
| Dams/Rivers/Estuaries  |                                    |                    |                        |





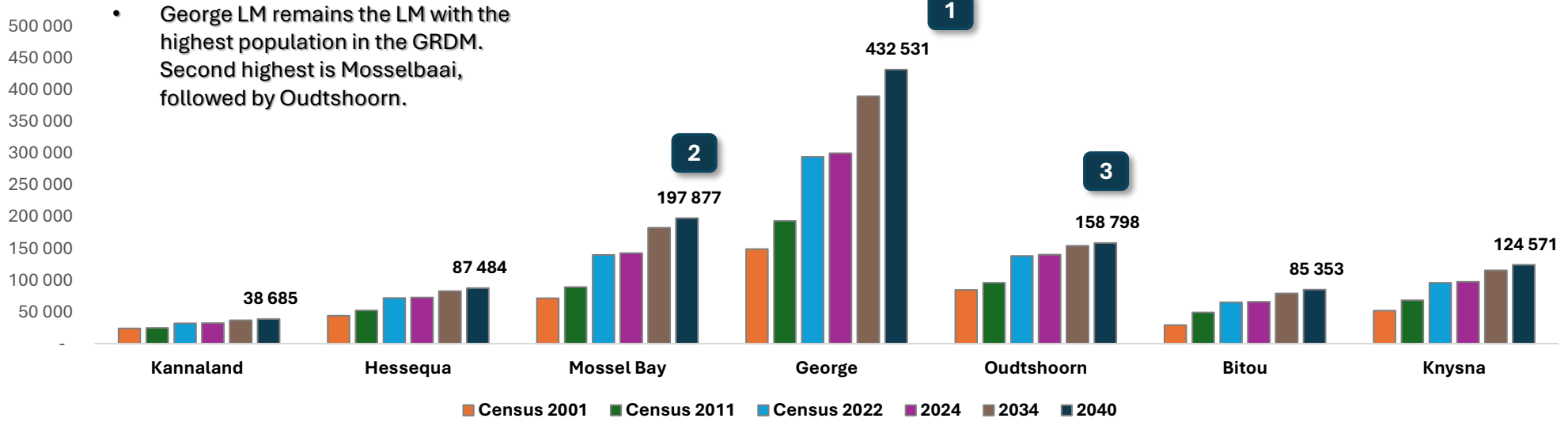
Garden Route  
DISTRICT MUNICIPALITY

SDF 2025 Figure 45

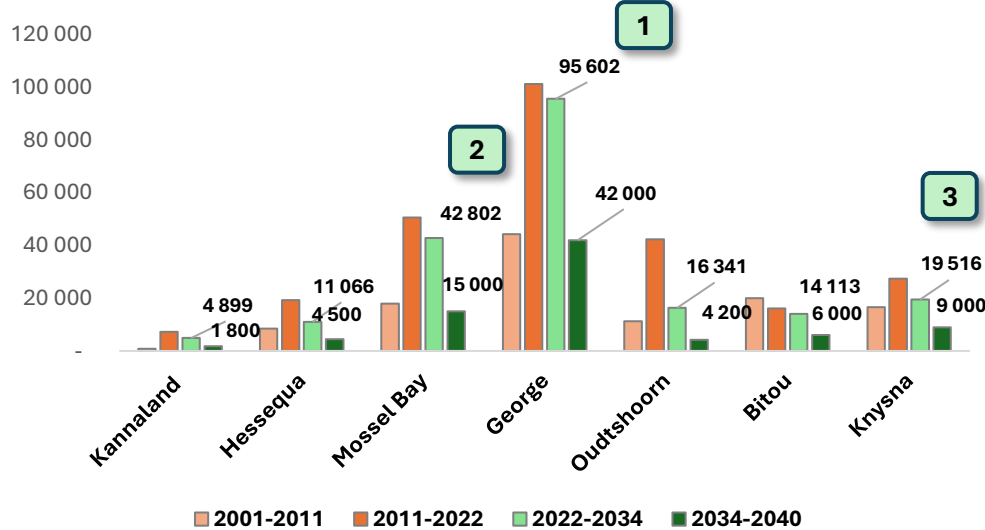
**Table 46: Garden Route District Municipality: Population Projection: 2022-2040**

	Population						Incremental Population					Incremental Population p.a.				Growth p.a.			
	Census 2001	Census 2011	Census 2022	2024	2034	2040	2001-2011	2011-2022	2022-2024	2024-2034	2034-2040	2001-2011	2011-2022	2024-2034	2034-2040	2001-2011	2011-2022	2024-2034	2034-2040
Kannaland	23,971	24,767	31,986	32,385	36,885	38,685	796	7,219	399	4,500	1,800	80	656	450	300	0.3%	2.4%	1.3%	0.8%
Hessequa	44,114	52,642	71,918	72,984	82,984	87,484	8,528	19,276	1,066	10,000	4,500	853	1,752	1,000	750	1.8%	2.9%	1.3%	0.9%
Mosel Bay	71,494	89,430	140,075	142,877	182,877	197,877	17,936	50,645	2,802	40,000	15,000	1,794	4,604	4,000	2,500	2.3%	4.2%	2.5%	1.3%
George	149,436	193,672	294,929	300,531	390,531	432,531	44,236	101,257	5,602	90,000	42,000	4,424	9,205	9,000	7,000	2.6%	3.9%	2.7%	1.7%
Oudtshoorn	84,692	95,933	138,257	140,598	154,598	158,798	11,241	42,324	2,341	14,000	4,200	1,124	3,848	1,400	700	1.3%	3.4%	1.0%	0.4%
Bitou	29,182	49,162	65,240	66,129	79,353	85,353	19,980	16,078	889	13,224	6,000	1,998	1,462	1,322	900	5.4%	2.6%	1.8%	1.2%
Knysna	52,035	68,659	96,055	97,571	115,571	124,571	16,624	27,396	1,516	18,000	9,000	1,662	2,491	1,800	1,500	2.8%	3.1%	1.7%	1.3%
<b>Total</b>	<b>454,924</b>	<b>574,265</b>	<b>838,460</b>	<b>853,075</b>	<b>1,042,799</b>	<b>1,125,299</b>	<b>119,341</b>	<b>264,195</b>	<b>14,615</b>	<b>189,724</b>	<b>82,500</b>	<b>11,934</b>	<b>24,018</b>	<b>18,972</b>	<b>13,750</b>	<b>2.4%</b>	<b>3.5%</b>	<b>2.0%</b>	<b>1.3%</b>

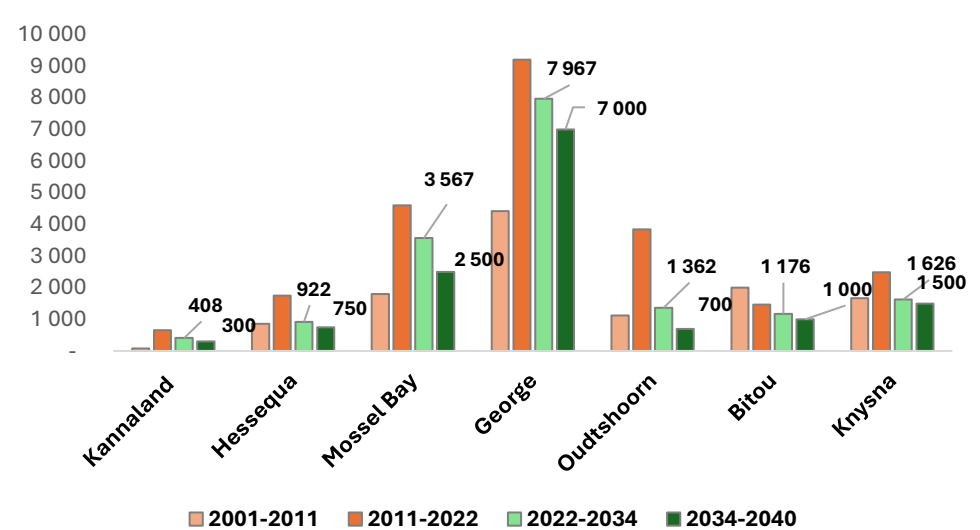
Population per LM



Incremental Population



Inc. Population p.a.



**Table 47** and **Diagram 34** outline the historic, current and future household projections for the District and Local Municipalities.

The following can be noted from Table 47:

- ❖ The projected dwelling unit increment for the 2024-2040 period is 106,354 dwelling units.
- ❖ George LM has the highest projected incremental household per annum (2,887) for the 2024-2034 period, followed by Mossel Bay (1,981).

**Table 48** outlines the household sizes from 2001-2040 and it can be noted that the household sizes are becoming smaller. Smaller household sizes lead to higher demand for houses for the same population compared to larger households.

**Table 49** illustrates the Land Use Budget for the existing (2024) GRDM population, as well as the additional land and community facilities required to serve the incremental population up to 2034 and 2040. The requirement for the provision of community facilities in the Land Use Budget is based on the CSIR Guidelines as illustrated in **Table 50**. The table outlines the required community facilities as well as their area requirements.

The following can be noted from Table 50:

- ❖ The District Municipal area will require 4,347 ha of land to accommodate the 2034 population projection. The land requirement includes land required to accommodate the various social and economic facilities.
- ❖ The 2034-2040 increment will require 2,012 ha of land to accommodate the 33,940 incremental population.
- ❖ The district may require 6,359 ha of land for the 2024-2040 period. Table 48 further outlines the total number of community facilities that will be required based on the population.
- ❖ Annexure D contains the land use budgets of the local municipalities for the population increment for the years 2034 and 2040.

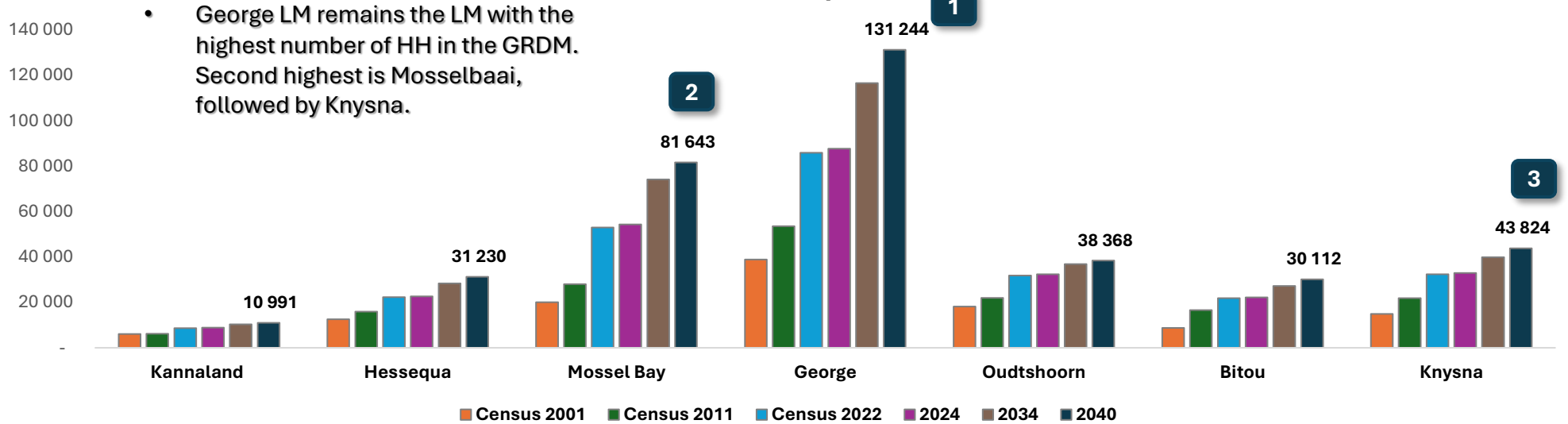
**Table 47: Garden Route District Municipality: Household Projections 2034- 2040**

	Households						Incremental Households					Incremental Households p.a.				Growth p.a.			
	Census 2001	Census 2011	Census 2022	2024	2034	2040	2001-2011	2011-2022	2022-2024	2024-2034	2034-2040	2001-2011	2011-2022	2024-2034	2034-2040	2001-2011	2011-2022	2024-2034	2034-2040
Kannaland	6,070	6,212	8,686	8,823	10,370	10,991	142	2,474	137	1,547	621	14	225	155	104	0.2%	3.1%	1.6%	1.0%
Hessequa	12,510	15,873	22,333	22,690	28,296	31,230	3,363	6,460	357	5,606	2,934	336	587	561	489	2.4%	3.2%	2.2%	1.7%
Mossel Bay	20,060	28,025	52,985	54,366	74,177	81,643	7,965	24,960	1,381	19,811	7,466	797	2,269	1,981	1,244	3.4%	6.0%	3.2%	1.6%
George	38,867	53,551	85,931	87,722	116,595	131,244	14,684	32,380	1,791	28,873	14,649	1,468	2,944	2,887	2,441	3.3%	4.4%	2.9%	2.0%
Oudtshoorn	18,124	21,910	31,795	32,342	36,885	38,368	3,786	9,885	547	4,543	1,483	379	899	454	247	1.9%	3.4%	1.3%	0.7%
Bitou	8,763	16,645	21,848	22,136	27,241	30,112	7,882	5,203	288	5,106	2,871	788	473	511	478	6.6%	2.5%	2.1%	1.7%
Knysna	14,913	21,893	32,398	32,979	39,908	43,824	6,980	10,505	581	6,929	3,917	698	955	693	653	3.9%	3.6%	1.9%	1.6%
<b>Total</b>	<b>119,307</b>	<b>164,109</b>	<b>255,976</b>	<b>261,058</b>	<b>333,472</b>	<b>367,413</b>	<b>44,802</b>	<b>91,867</b>	<b>5,082</b>	<b>72,414</b>	<b>33,940</b>	<b>4,480</b>	<b>8,352</b>	<b>7,241</b>	<b>5,657</b>	<b>3.2%</b>	<b>4.1%</b>	<b>2.5%</b>	<b>1.6%</b>

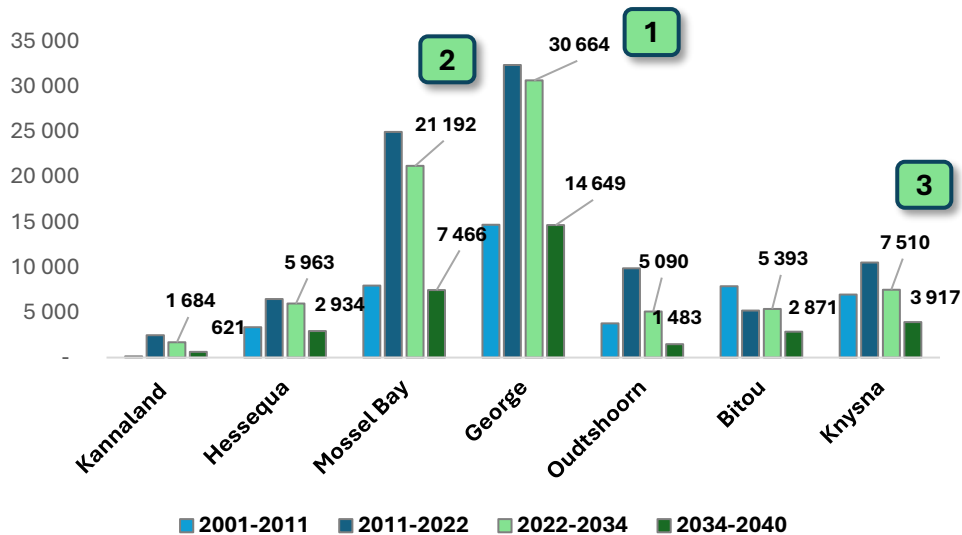
**Table 48: Garden Route District Municipality: Household Size 2001-2040**

	Census 2001	Census 2011	Census 2022	2024	2034	2040	2001-2011	2011-2022	2022-2024	2024-2034	2034-2040
Kannaland	3.9	4.0	3.7	3.7	3.6	3.5	5.6	2.9	2.9	2.9	2.9
Hessequa	3.5	3.3	3.2	3.2	2.9	2.8	2.5	3.0	3.0	1.8	1.5
Mossel Bay	3.6	3.2	2.6	2.6	2.5	2.4	2.3	2.0	2.0	2.0	2.0
George	3.8	3.6	3.4	3.4	3.3	3.3	3.0	3.1	3.1	3.1	2.9
Oudtshoorn	4.7	4.4	4.3	4.3	4.2	4.1	3.0	4.3	4.3	3.1	2.8
Bitou	3.3	3.0	3.0	3.0	2.9	2.8	2.5	3.1	3.1	2.6	2.1
Knysna	3.5	3.1	3.0	3.0	2.9	2.8	2.4	2.6	2.6	2.6	2.3
<b>Total Garden Route</b>	<b>3.8</b>	<b>3.5</b>	<b>3.3</b>	<b>3.3</b>	<b>3.1</b>	<b>3.1</b>	<b>2.7</b>	<b>2.9</b>	<b>2.9</b>	<b>2.9</b>	<b>2.9</b>

Households per LM



LM: Incremental Households



LM: Incremental Households p.a.

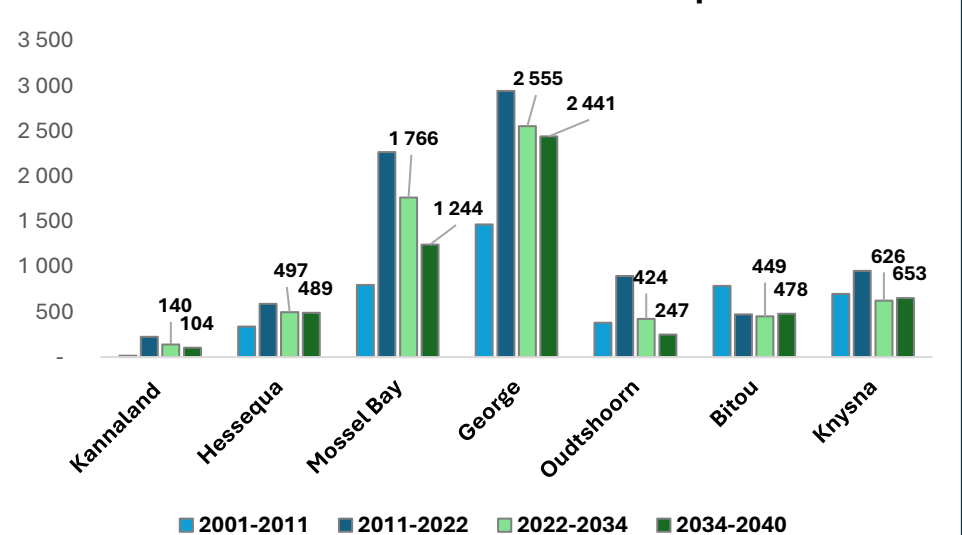


Table 49: GRDM: Community Facility Need: 2024, 2024-2034 and 2034-2040

Facilities	2024 Population						Increment: 2024-2034			Increment: 2034-2040			Total Increment 2024-2040			Total 2040			Community Facilities 2024-2040		
	Requirement			CF Provided	Shortfall	Requirement			Requirement			Requirement			Requirement			Surplus/Deficit			
	number	ha	%	number	number	number	ha	%	number	ha	%	number	ha	%	number	ha	%	number	ha	%	
<b>Number of Units</b>	261,058	10,769	63%			72,414	2,974	68%	33,940	1,387	69%	106,355	4,362	69%	367,413	15,130	65%			0%	
<b>Population</b>	853,075					189,724			82,500			272,224			1,125,299						
<b>Nett residential Density</b>	24					24			24			24			24						
<b>Business (m<sup>2</sup>)</b>	1,354,444	451	3%			301,146	100	2%	130,695	44	2%	431,842	144	2%	1,786,285	595	3%		0	0%	
<b>Offices (floor area in m<sup>2</sup>)</b>	135,444	45	0%			30,115	10	0%	13,070	4	0%	43,184	14	0%	178,629	60	0%		0	0%	
<b>Education</b>		680	4%				151	3%		66	3%		217	3%		897	4%		45	3%	
Small Crèche	355	7		-	(355)	79	1.6		34	1		113	2		469	9		(469)	9.38		
ECD Resource Hub and Care Centre	43	4		-	(43)	9	0.9		4	0		14	1		56	6		(56)	5.63		
Primary (including Grade R)	122	341		133	11	27	76		12	33		39	109		161	450		(28)	77.7		
Secondary (incl. Combined/Intermediat	68	328		80	12	15	73		7	32		22	105		90	432		(10)	-48		
<b>Health Services</b>		28	0%				6	0%		3	0%		9	0%		38	0%		-9	-1%	
Primary Health Clinic	36	7		27	(9)	8	2		3	1		11	2		47	9		(20)	-4		
Community Health Centre/Hospital	14	21		22	8	3.2	4.7		1.4	2.1		5	7		19	28		3	-4.9		
<b>Safety and Security</b>		18	0%				4	0%		2	0%		6	0%		24	0%		-1	0%	
Police	14	14		21	7	3	3		1	1		5	5		19	19		2	2		
Fire Station	14	4.3		8	(6)	3.2	0.9		1.4	0.4		5	1		19	6		(11)	-3.2		
<b>Social /Cultural/Civic</b>		719	4%				2	0%		1	0%		4	0%		723	3%		-91	-6%	
Local Library	43	2		14	(28.7)	9.5	0.5		4.1	0.2		14	1		56	3		(42)	2.1		
SASSA Paypoint/Home Affairs/Thusong	20	2		43	23	4.7	0.4		2.1	0.2		7	1		26	2		17	2		
Solid Waste Disposal Site	7	700		6	(1)	-	-		-	-		-	-		7	700		(1)	-100		
Recycling Depot	7	1		1	(6)	-	-		-	-		-	-		7	1		(6)	-1		
Municipal Office	7	4		18	11	-	-		-	-		-	-		7	4		11	6		
Magistrate's Court	7	4		9	2	-	-		-	-		-	-		7	4		2	1		
Communty Hall (large)	14	7		18	4	3.2	1.6		1.38	0.69		5	2		19	9		(1)	0		
<b>Sports and Recreation</b>		427	2%				95	2%		41	2%		136	2%		563	2%		1,191	80%	
Sports Facilities and Parks (ha)		256		1,754	1,498		56.9			24.8			82			338		1,416	1,416.1		
Regional Parks (ha)		171		-	(171)		37.9			16.5			54			225		(225)	(225.1)		
<b>Streets</b>		3,942	23%				1,003	23%		464	23%		1,467	23%		5,409	23%		363	24%	
<b>TOTAL</b>		17,080	100%				4,347	100%		2,012	100%		6,359	100%		23,439	100%		1,497	100%	
<b>Gross Density</b>	15					17			17			17			16						

Note: No info available for Small Crèche/ECD Resource Hub and Care Centre and Regional Parks.

Thusong Centre includes Home Affairs Office (Social Grants), Labour Office and functions as a community based "one stop" Development centre.

Future density based on existing distribution of erf size database. Compares well with proposed SDF density.

Standards based on CSIR Guidelines for Small-Medium Towns/Regional Service Centres.

Table 50: GRDM: Land Use Budget and Community Facility Needs: CSIR Standards

<b>CSIR GUIDELINES for Small-Medium Towns (60 000- 100 000 people)</b>			
<b>Facilities</b>	<b>AVERAGE THRESHHOLD</b>	<b>AREA PER FACILITY</b>	<b>PROVISION CRITERIA</b>
<b>Education</b>			
Small Crèche	1/2 400 population	200m <sup>2</sup>	Compulsary
ECD Resource Hub and Care Centre	1/20 000 population	1000m <sup>2</sup>	Compulsary
Primary (including Grade R)	1/7000 population	2.8ha	Compulsary
Secondary (incl. Combined/Intermediat	1/12 500 population	4.8 ha	Compulsary
<b>Health Services</b>			
Primary Health Clinic	1/24 000 population	2 000 m <sup>2</sup>	
Community Health Centre/Hospital	1/60 000 population	1.5ha	Compulsary
<b>Safety and Security</b>			
Police	1/60 000 population	1 000 m <sup>2</sup> to 1 ha	Compulsary
Fire Station	1/60 000 population	3 000 m <sup>2</sup>	Compulsary
<b>Social /Cultural/Civic</b>			
Local Library	1/20 000 population	500m <sup>2</sup>	Compulsary
SASSA Paypoint/Home Affairs/Thusong	1/40 000 population	935m <sup>2</sup> - 1ha for full range of facilities	Compulsary
Solid Waste Disposal Site	One per Municipality	100ha	Compulsary
Recycling Depot	One per Municipality	2 000 m <sup>2</sup> - 1ha for full range of facilities	
Municipal Office	One per Municipality	3 000m <sup>2</sup> to 1ha	Compulsary
Magistrate's Court	One per Municipality	Site size area specific	Compulsary
Communty Hall (large)	1/60 000 population	2 000 m <sup>2</sup> - 5000m <sup>2</sup>	Compulsary
<b>Sports and Recreation</b>			
Sports Facilities and Parks (ha)	0.5ha/1 000 population (60%)	5 000m <sup>2</sup>	Compulsary
Regional Parks (ha)	0.5ha/1 000 population (40%)	5 000m <sup>2</sup>	Compulsary

### 4.3.2 Garden Route SDF Development Objectives

The following six Development Objectives represent the points of departure to the Garden Route District Spatial Concept as depicted on Figure 45.

**Objective 1: Facilitate the protection, sustainable management, and restoration of the GRDM natural environmental resources and implement climate change adaptation measures.**

- ❖ The natural environment of the district is the economic base and supports various livelihoods and has the potential to improve the quality of life.
- ❖ The district's diverse landscape is characterized by the Garden Route and the Klein Karoo. The natural environment is threatened by various factors; hence, it is important to protect, enhance and develop the district characteristics and resources of Garden Route and Klein Karoo. This would require the containment of urban sprawl and efficient management of rural development in accordance with a coherent set of development guidelines.
- ❖ The natural habitat can further be protected and restored through the sustainable development of lifestyle and tourism offerings that do not compromise the natural and agricultural resource base.

Climate change adaptation and mitigation measures need to be implemented to ensure the sustainability and preservation of the natural environment. While climate change indeed has significant social and economic implications, it is addressed under Environmental Management in the SDF as its primary impacts and adaptation measures, such as ecosystem resilience, resource management, and disaster risk reduction, are intrinsically linked to the natural environment and spatial planning responses.

**Objective 2: Enhance spatial efficiency and support spatial targeting in the GRDM by defining a range of nodes around which to align growth, consolidate infrastructure investment and economic development.**

- ❖ Settlement development should be focused (spatial targeting) in growing/developing nodes while consolidation of certain services should be directed at smaller/lower order nodes. The growing/developing nodes should be developed to leverage economic potential.
- ❖ The lower order nodes should be consolidated to improve access to essential social facilities for surrounding rural communities. At present, services are often fragmented and located far from many households, leading to inefficiencies and limited accessibility. Strengthening these nodes as local service points will support more efficient public-sector investment, reduce travel distances, and create more sustainable centres that better meet community needs.
- ❖ The hierarchy of nodes should be utilized as a mechanism to guide investment and the provision of higher order economic and social facilities.
- ❖ Urban and Rural development boundaries should contain settlement sprawl and protect the area of high biodiversity and high potential agricultural land.

**Objective 3: Facilitate development of a comprehensive multi-model movement network and optimise equitable and inclusive regional accessibility.**

- ❖ The district is well connected through the N2, N9 and R62 and functionally forms part of the N2 corridor emanating from Richards Bay in KwaZulu-Natal and extends south towards Cape Town.
- ❖ The transport system offers opportunities to interact nationwide and the system is utilized to serve as major distributors of people, goods and services to the rest of the country.
- ❖ The George Airport in conjunction to the airstrips at Oudtshoorn and Mossel Bay as well as the Plettenberg Bay Airport (which is currently being revamped), offer a great opportunity towards economic development of the district in terms of tourism and possible logistics support.
- ❖ An integrated public transport network should ensure that all communities have access to a wide range of economic activity areas and community facilities via different modes of transport.
- ❖ Improved rural linkages (gravel roads) could support the agricultural sector and make more parts of the district accessible for tourists.
- ❖ Promote the strategic utilization and revitalization for rail infrastructure within the DM to support efficient goods movement, commuter mobility and long-distance regional travel, thereby strengthening economic linkages and reducing road-based congestion and emissions.
- ❖ Enhance non-motorised transport infrastructure, particularly along tourism routes and within key destinations to improve the DM's tourism offering.

**Objective 4: Facilitate the establishment of sustainable human settlements in all identified urban nodes and providing accessible social facilities for resilient and equitable development.**

- ❖ Development should be contained and optimized (higher density) to alleviate the pressure on the environmental features of the district (by actively avoiding further compromise of the natural environment and the ecosystems derived therefrom), which is part of the main economy. The existing resources (land) and infrastructure (engineering services) should be optimized within the existing towns and settlements.
- ❖ The district should promote higher density, compact land uses which will also enhance walkability within settlements.
- ❖ Human settlement development should be directed to strategically located priority development areas (PHSHDA and Restructuring Zones) which should contribute towards urban restructuring. The optimum utilization of Restructuring Zones can contribute to the upliftment of the poor and contribute to enhanced public transport.
- ❖ Human settlement development should further be directed to the main growth centres where bulk capacity (engineering services) and economic activities (employment) are available to ensure sustainable development.
- ❖ Available land should be optimally utilized with the development of a diverse range of housing typologies promoting integration of all income groups at low, medium and higher densities and offering a variety of tenure alternatives to all communities.
- ❖ The development of sustainable human settlements is directly linked to provision of community/ social facilities. The provision of community facilities should be rationalized and clustered at strategically located and accessible points and in proximity to public transport or along higher order routes.

**Objective 5: Align district infrastructure maintenance and construction programmes with spatial development directives.**

- ❖ Engineering services (bulk and reticulation) maintenance and expansion programmes need to be aligned to land use development programmes focussing on new developments (greenfields) and upgrading/ maintaining services in existing areas (brownfields), whilst avoiding degrading natural environments such as dunes, estuaries or indigenous forests.
- ❖ The GRDM should also incrementally promote Green Transitions in the provision of infrastructure, as well as the establishment of the Smart City Concept which focusses on utilising Information and Communication Technology (ICT) to advance economic development, safety and security, governance, environmental management, transport, etc.
- ❖ Incorporate long-term climate change projections and anticipated economic shifts, including increased distributed renewable energy systems, into district infrastructure planning and maintenance programmes to ensure resilient, adaptable and future-proof investment.

**Objective 6: To enhance the District's economic development by strengthening the tourism industry and expanding agriculture and other economic opportunities, while prioritising environmental sustainability and resource conservation.**

- ❖ The district's natural environment forms the foundation of its economy, with tourism emerging as the dominant and highest-performing sector by a significant margin. Agriculture, finance and business services also contribute to economic activity, although at substantially lower levels.

- ❖ Tourism and agriculture are natural resource-based activities; therefore, it is important to align programmes towards the future development of these sectors. Care should also be undertaken to protect these resources; like the position of high potential agricultural land; protection of the environment through relevant policies and legislation (Garden Route EMF, 2010).
- ❖ Areas of extensive agriculture are set aside with a focus on promoting agrarian transformation. The full value chains of the various agricultural commodities should also be exploited.
- ❖ Special mechanisms are to be put in place to provide opportunity for emerging entrepreneurs to do "incremental economic upscaling" to eventually become part of the mainstream economy of the District Municipality.
- ❖ Tertiary education and skills training should be aligned with the priority economic sectors within Garden Route in order to optimally utilize local opportunities in these sectors to the benefit of local residents.
- ❖ The full tourism value chain / offerings should be optimized to ensure continuous growth in the sector. The ease of accessing tourist activities (e.g. accommodation, activities, merchandise) should be streamlined to maintain the marketability of the district.

Each of these objectives represents a spatial element to the Garden Route District SDF and are discussed in greater detail under the Spatial Strategies in Section 4.3 below.

## 4.4 SPATIAL STRATEGIES

This section unpacks the **Spatial Strategies** to achieve each of the six overarching development objectives of the Garden Route District SDF by way of a number of actions per objective (refer to Diagram 30).

### 4.4.1 Natural Environment

The environment in the GRDM is the backbone of the economy and the well-being, and protection is a key requirement towards the long-term economic sustainability of the district. The natural environment consists of tourism potential, conservation preservation, agricultural resources and economic potential.

#### OBJECTIVE 1: ENVIRONMENT

**Objective 1: Facilitate the protection, sustainable management, and restoration of the GRDM natural environmental resources and implement climate change adaptation measures.**

#### **Action 1.1: Apply Land Use Guidelines to Protected Areas and Critical Biodiversity Areas to limit habitat loss.**

The lateral spread of low-density settlements is some of the predominant causes of habitat loss and biodiversity loss. Furthermore, climate change and related damages are also causes of habitat and biodiversity losses. The sensitive areas relating to the natural environment include the protected areas, critical biodiversity areas (Terrestrial, Forest, Aquatic) and conservation areas. The Klein Karoo and Garden Route offer unique attributes and resources to the region but should be viewed as complimentary to each other. Apart from general protection, the functional linkages of these features by way of ecological corridors to

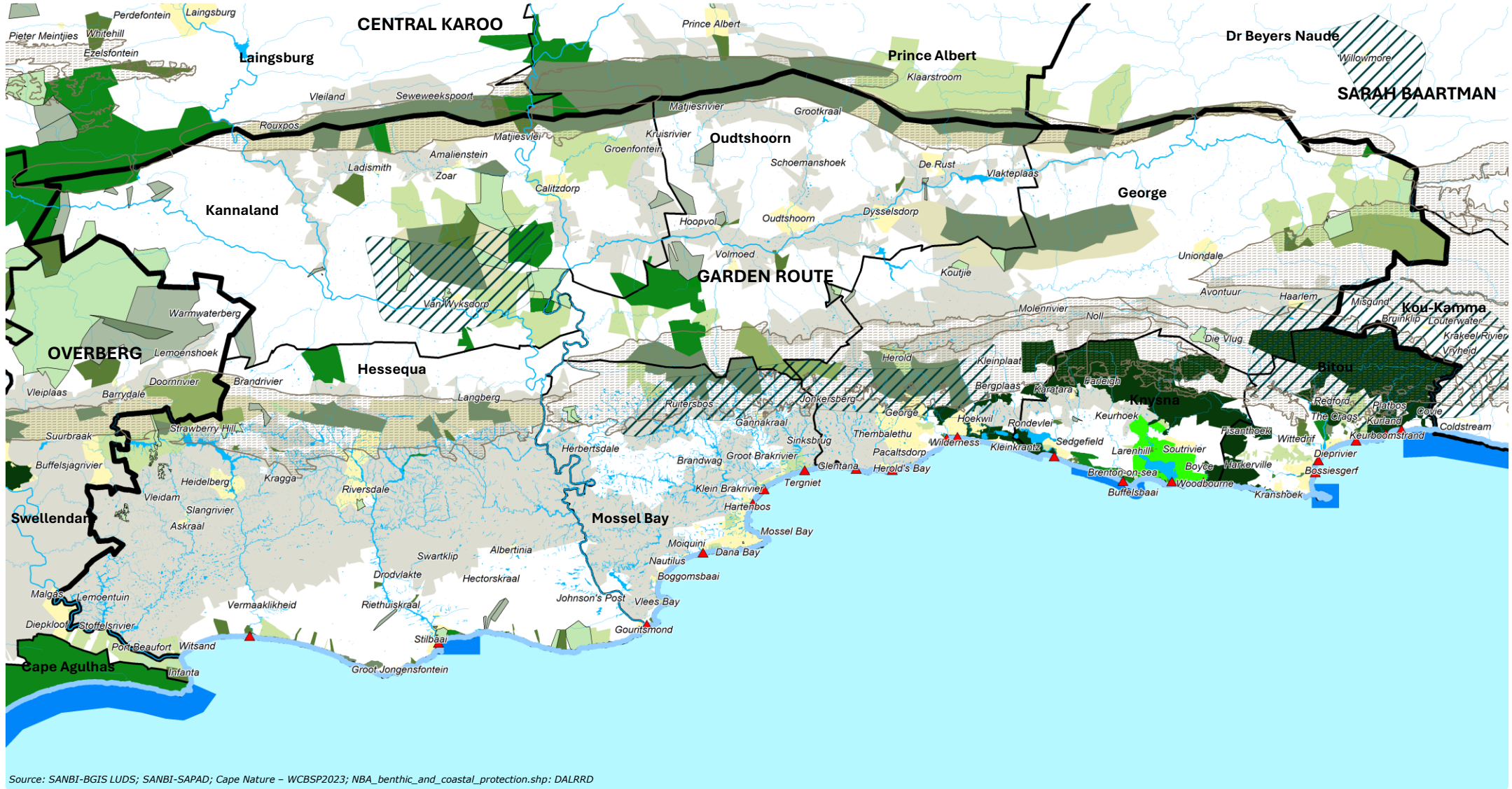
facilitate the movement of fauna and flora are of critical importance. These connected landscapes also play vital roles in sustaining ecosystem services that underpin both environmental resilience and economic activity, including ecological buffers, pest control, groundwater recharge, pollination, soil retention, carbon sequestration, and micro-climatic amelioration. Protecting and enhancing these systems ensures long-term ecological functioning and supports the district's tourism and agricultural sectors, as well as broader community well-being.

**Figure 46** illustrates the GRDM Protected areas while **Figure 47** depicts an extract from the WCBSP.

The areas are separated by the two east-west mountain ranges but are connected via rivers' drainage systems to create an extensive network of ecological corridors. The coastal line provides a continuous path along the coast connecting the various estuaries and marine protected areas.

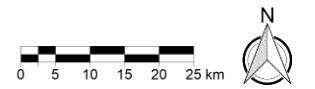
**Table 51** summarizes the land-use guidelines for the protected and CBA areas as contained in the WCBSP. The Garden Route EMF (2010) contains specific management guidelines for ecological sensitive areas. The EMF guidelines are contained in Annexure E and should collectively be utilized with the WCBSP Land Use Guidelines to protect and conserve important terrestrial, aquatic (rivers, wetlands and estuaries) and marine habitats. The guidelines contained in the EMF create a good foundation; however, the EMF needs to be updated to cover the full district. The management guidelines also need to be updated to align with the latest policies and legislation. The guidelines should also form part of the Local Municipality's SDF review process when land-use proposals are made.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : PROTECTED AREAS



Source: SANBI-BGIS LUDS; SANBI-SAPAD; Cape Nature - WCBS2023; NBA\_benthic\_and\_coastal\_protection.shp; DALRRD

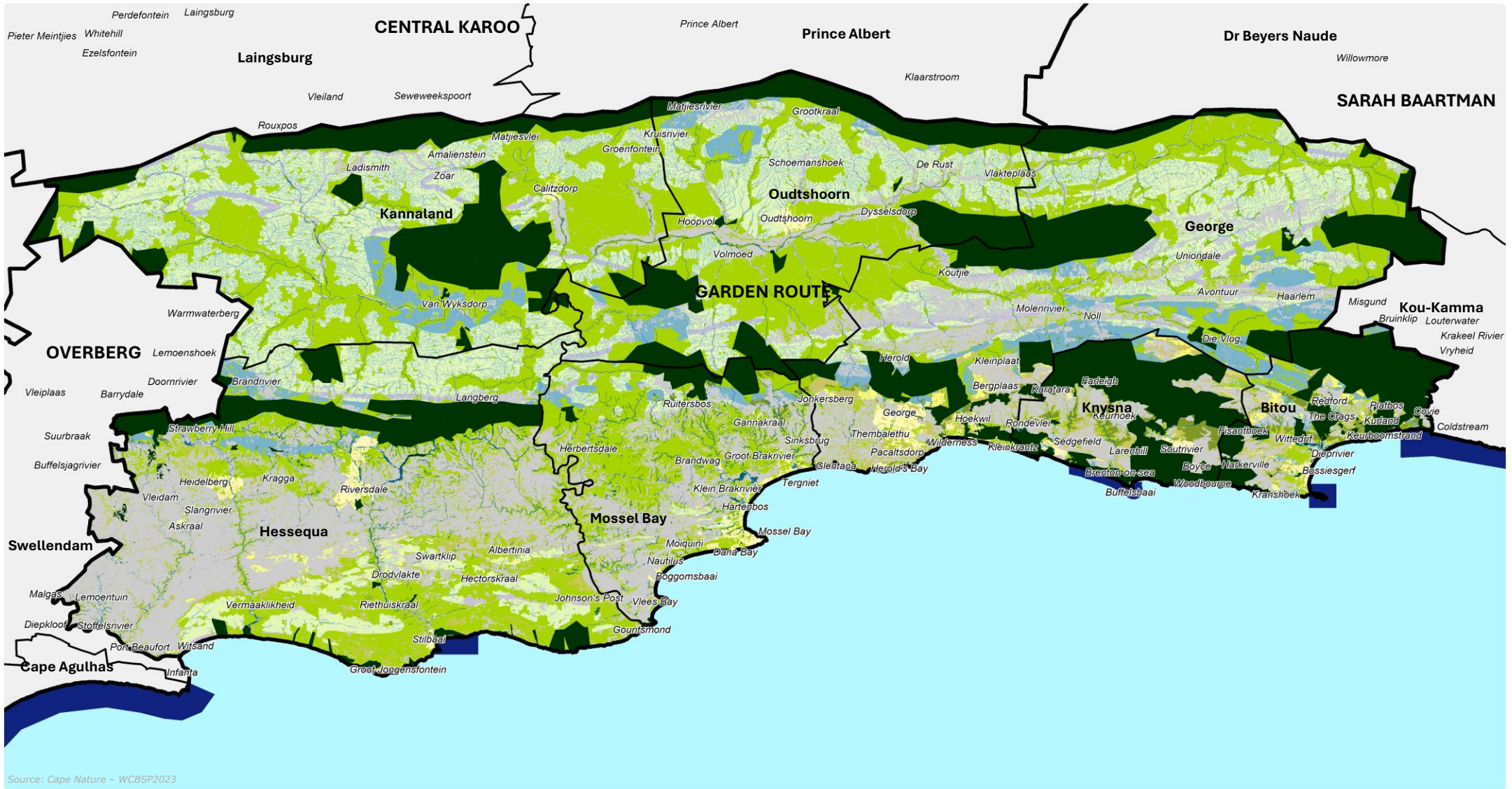
- |                             |   |                      |
|-----------------------------|---|----------------------|
| District Municipality       | Provincial Nature Reserve                   | Coastal Line         |
| Local Municipality          | Contract Nature Reserve                     | Dams/Rivers/Wetlands |
| Towns and Settlements       | National Park                               | Estuaries            |
| Mountain Range              | Protected Environment                       |                      |
| Mountain Catchment Area     | Wilderness Area                             |                      |
| Protected Agricultural Area | Biodiversity Agreement                      |                      |
| Conservancies               | National Ground Water Source Area (SWSA_gw) |                      |
| Nature Reserve              | Marine Protected Environment                |                      |
| Forest Nature Reserve       | Stewardship Sites                           |                      |



**Garden Route**  
DISTRICT MUNICIPALITY

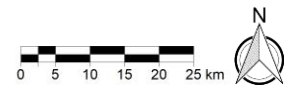
SDF 2025 **Figure 46**

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : BIODIVERSITY (WCBS, 2023)



Source: Cape Nature – WCBS2023

- |                             |                                    |
|-----------------------------|------------------------------------|
| District Municipality       | ESA 2: Restore from other land use |
| Local Municipality          | Other Natural Area                 |
| Towns and Settlements       | No Other Natural Remaining         |
| Protected Terrestrial Areas | CBA 1: Wetland                     |
| CBA 1: Terrestrial          | CBA 1: Estuary                     |
| CBA 2: Terrestrial          | CBA 2: Aquatic                     |
| CBA 1: Forest               | ESA 1: Aquatic                     |
| CBA 1: River                | Marine Protected Areas             |
| ESA 1: Terrestrial / CoCT   |                                    |



**Table 51: Land-use Guidelines for Biodiversity Priority Areas. *Spatial layers can be viewed in CapeFarmMapper and on SANBI BGIS.***

Map Category	Desired Management Objective	General Guidelines:	Specific Guidelines
<b>Protected Area</b>	Must be kept in a natural state, with a management plan focused on maintaining or improving the state of biodiversity. A benchmark for biodiversity.	<ul style="list-style-type: none"> <li>❖ All operational aspects of managing these areas must be subject to their main purpose, which is to protect and maintain biodiversity and ecological integrity and should be governed by a formally approved management plan including land-use activities that support the primary function of these areas as sites for biodiversity conservation.</li> <li>❖ The management plan must identify allowable activities, which should be consistent at least with the CBA 1 category; the location of these allowable activities should be captured in a zonation plan in the management plan.</li> <li>❖ Activities relating to the construction of roads, administrative or tourism infrastructure and services (such as water reticulation systems, power lines, etc.) that are required to support the primary function of the protected area and its allowable activities, are subject to NEMA authorisation and the protected area management plan.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Implementation of the Protected Management Plan.</li> </ul>
<b>Critical Biodiversity Area 1: Terrestrial &amp; Forest</b>	Maintain in a natural or near-natural state, with no further loss of habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land-uses are appropriate.	<ul style="list-style-type: none"> <li>❖ Biodiversity loss and lan-use change in verified CBAs should not be permitted. Unauthorised land-use change or degradation by neglect or ignorance must be monitored as a matter of priority.</li> <li>❖ Ideally, conservation management activities should be the primary land-use in all irreplaceable areas, or they should at least be managed in ways that have no negative impact on species, ecosystems, or ecosystem services.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Ideally, developments should be avoided in these areas. If they cannot be avoided, it must be shown that the mitigation hierarchy has been applied. If the impact cannot be avoided or reduced to a residual low significance, a biodiversity offset may be considered as a last resort.</li> <li>❖ The features behind a site being identified as a CBA must be fully investigated. Some areas may appear degraded but still be important for water or ecological connectivity for example.</li> </ul>

Map Category	Desired Management Objective	General Guidelines:	Specific Guidelines
		<ul style="list-style-type: none"> <li>❖ Conservation efforts should focus on conserving Species of Conservation Concern and populations of keystone species and species responsible for pollination and seed dispersal.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Relevant specialist studies must form part of a Basic Assessment or the Scoping and EIA process for all land-use applications in these areas, using the services of an experienced and locally knowledgeable biodiversity expert who is registered with the South African Council for Natural Scientific Professions (SACNASP).</li> <li>❖ Applications for land-use of any kind should be referred to the Land-use and Conservation Planning team at CapeNature for comment.</li> <li>❖ Degraded areas included in the land parcel, but not the land-use proposal, should be restored to natural ecosystem functioning where possible.</li> <li>❖ Alien clearing should be given high priority.</li> </ul>
<p><b>Critical Biodiversity Area 1: Aquatic</b></p>	<p>Maintain in a natural or near-natural state, with no further loss of natural habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity sensitive land-uses are appropriate.</p>	<ul style="list-style-type: none"> <li>❖ Freshwater CBAs should be maintained in good ecological condition, and those that are degraded should be rehabilitated to a good condition.</li> <li>❖ Land-use practices or activities that will lead to deterioration in the current condition of a freshwater CBA, or that will compromise rehabilitation, are not acceptable.</li> <li>❖ Any proposed land-use change must be subject to an EIA as it is likely to impact on the ecological drivers of the river or wetland ecosystem and potentially alter its functioning or lead to loss of species.</li> <li>❖ The hydrological regime and water quality of a river, wetland or estuary must be adequate to maintain the ecosystem in a desired or attainable condition.</li> <li>❖ Maintain the riparian vegetation and a buffer from other land-uses along watercourses and implement</li> </ul>	<ul style="list-style-type: none"> <li>❖ There is no flexibility in land-use options in this category.</li> <li>❖ Any activities that may impact on CBA rivers, wetlands, or estuaries, even upstream or in sub-catchments, need to be avoided, or impacts mitigated if they cannot be avoided.</li> <li>❖ If the current ecological condition is good (either natural and unmodified, or largely natural with only small change in habitats and biota), then this condition needs to be maintained.</li> <li>❖ If the current ecological condition is fair to poor (i.e. moderately to severely degraded with significant loss of natural habitat, biota and ecosystem functions), then this needs to be improved through rehabilitation measures. Any further loss of area or ecological condition must be avoided.</li> <li>❖ Allow for future rehabilitation or restoration.</li> </ul>

Map Category	Desired Management Objective	General Guidelines:	Specific Guidelines
		rehabilitation measures where there is erosion or other degradation present.	<ul style="list-style-type: none"> <li>❖ Specialist studies by a freshwater ecologist should be conducted if there is a watercourse that is likely to be affected.</li> </ul>
<b>Critical Biodiversity Area 2 (Degraded)</b>	Maintain in a functional, natural, or near-natural state, with no further loss of natural habitat. These areas should be rehabilitated.	<ul style="list-style-type: none"> <li>❖ Acceptable land-uses are those that are least harmful to biodiversity, such as conservation management, or extensive livestock or game farming. Large-scale cultivation, mining and urban or industrial development are not appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>❖ If small-scale land-use change is unavoidable, it must be located and designed to be as low impact and biodiversity sensitive as possible.</li> <li>❖ A specialist study must be part of the scoping and EIA process for all land-use applications in these areas, using the services of an experienced and locally knowledgeable biodiversity expert registered with SACNASP.</li> <li>❖ Should be targeted as high priority areas for rehabilitation and restoration.</li> </ul>

**Action 1.2: Review and Update the existing GRDM EMF (2010)**

The GRDM Environmental Management Framework (EMF), 2010, is outdated in the context of shifting environmental conditions, new legislative requirements, and recent climate-related risks. Updating the EMF is essential to ensure that environmental sensitivities, priority biodiversity areas, ecosystem service corridors, climate-risk zones, and cumulative development pressures are accurately reflected within the district's current spatial planning environment. An updated EMF will provide clearer, more defensible guidance for land use decision-making, particularly in environmentally sensitive areas where development pressure continues to increase.

It is crucial that the review ensures full alignment with the respective EMFs and environmental planning tools of all local municipalities within the district. This harmonisation is important to avoid conflicting spatial directives, ensure consistent thresholds of acceptable change, and support coherent environmental management across jurisdictional boundaries. A consolidated, up-to-date EMF will strengthen the basis for environmental authorisation processes, streamline development applications, and ensure that the District's spatial planning approach supports long-term ecological resilience and sustainable land use patterns.

**Action 1.3: Implement the Garden Route District Coastal Management Programme.**

The climate change impacts and risks have an impact on the sea levels and the coastline which is a key resource within the Garden Route. The action items contained in the Garden Route Coastal Management Programme should be implemented around the protection of coastal, marine and estuarine resources as well as essential dynamic coastal processes. The coastal management programme is aligned to the Western Cape Disaster Management Act. The

following implementation actions contained in the Programme have spatial implications and should be prioritized:

- ❖ Annual condition assessments monitoring infrastructure in the coastal zone should adopt appropriate asset management plans as per ISO55000;
- ❖ More adaptive coastal management lines, that change according to changes in the coastal profile and associated high and low water marks, should be considered;
- ❖ Ensuring the healthy functioning of coastal ecosystems by strengthening the natural defences that protect people and coastal systems, such as the protection of sand dunes, sea grass, estuaries and beaches are physical buffers;
- ❖ Ensuring that the extraction and use of natural resources does not compromise the sustainability of vital coastal ecosystems. Reducing or eliminating non-climate stresses and unfavourable trends helps to achieve functional ecosystems that are more resilient to climate change and variability;
- ❖ Ensuring that illegal sand and gravel mining in coastal riverbeds, estuaries and beaches is stopped;
- ❖ Reducing estuarine pollution and securing a safe breeding habitat for marine and estuarine species;
- ❖ Ensuring that the required estuarine freshwater inflows for estuaries are upheld in order to maintain the environmental flow requirements;
- ❖ That coastal development strictly complies with the defined coastal management lines as developed by DEA&DP for the Garden Route District;
- ❖ Implementing integrated disaster risk management and preparedness actions to reduce the risks to human health and safety as well as coastal ecosystem degradation from natural hazards such as storm surges, flooding, gale force wind, amongst others;

- ❖ Require all new coastal developments and changes to existing developments to incorporate mitigation of and/or adaptation to coastal climate change impacts as part of their approval process;
- ❖ Ensure that coastal defences to protect private property from the threat of coastal erosion is compliant with the relevant legislation;
- ❖ To not approve coastal defence structures if such structures will compound risk to the coastal environment or its residents into the future;
- ❖ Favour soft engineering approaches over hard engineering solutions as recommended by the Estuarine Management Framework and Implementation Strategy and Coastal Erosion Policy Document;
- ❖ Establishment of coastal hazard overlay zones and coastal management lines;
- ❖ Research best practice regarding responding to repeated coastal inundation in high-risk areas;
- ❖ Protecting and rehabilitating existing dune fields as coastal buffers / ecological infrastructure;
- ❖ Ensure Estuary Management Plans take cognizance of climate change;
- ❖ Undertaking a broadly consultative process with the public when deciding on coastal, marine or estuarine defence interventions, and;
- ❖ Support the Responsible Management Authorities (RMA) to establish and implement appropriate Mouth Management Plans.
- ❖ The municipalities in the district should further establish Municipal Coastal Committees (MCCs) to oversee coastal management within their areas of jurisdiction.

#### Action 1.4: Maintain and Periodically Review the Coastal Management Line

The predicted impacts of climate change and associated coastal risks require a proactive and evidence-based approach to decision-making along the district's coastline (GRD Coastal Management Programme). The Coastal Management Line serves as a long-term planning tool to guide sustainable coastal development and safeguard environmental, social and economic interests.

Rather than adjusting the CML in response to short-term fluctuations or episodic natural events, the line should be reviewed at appropriate intervals informed by robust scientific data, climate projections and coastal monitoring. This approach ensures stability and certainty for long-term planning, while still allowing for adaptive management as new information and modelling become available. The CML should extend continuously across the district, be incorporated into Local SDFs, and be applied consistently to support responsible coastal development.

The CML serves to:

- ❖ Protect coastal public property, private property and public safety;
- ❖ Determine features that should be protected under the coastal protection zone;
- ❖ Preserve the aesthetic values of the coastal zone;
- ❖ To contribute towards a proposed management scheme for the Garden Route District;
- ❖ To ensure connectivity along the coastline;
- ❖ To protect the aesthetic value;
- ❖ As a natural means of erosion protection;
- ❖ To serve as social buffers required along the coast, for example, allowance for public beach access through and along the coastal frontage, areas which have cultural significance and that will need to be preserved from development, or heritage resources and historically sensitive locations that require specific management;

- ❖ To allow for economic requirements for the coast, for example, allowance for new beach facilities that will need to be placed closer than normal development to serve the public. Economic demands often require a trade-off against environmental aspects at a particular site.

Coastal access points (Figure 19) should be reviewed periodically to balance development needs with environmental protection and public access.

The Garden Route District Municipal Coastal Committee (MCC) is responsible for coordinating coastal management. It is recommended that the MCC be adequately capacitated and ensure cooperation across all spheres of government, civil society, NGOs, conservation entities and other stakeholders to promote effective and integrated implementation.

#### Action 1.5: Implement Climate Change Adaptation and Mitigation Measures.

The Garden Route District is increasingly experiencing extreme weather conditions due to climate change which impacts the environment, tourism and agriculture. The following extreme weather events are applicable to Garden Route:

- ❖ Unpredictable and intense rainfall events;
- ❖ Periodic droughts, exacerbated by climate change and erratic rainfall patterns;
- ❖ Strong to gale-force winds, often combined with rough sea conditions;
- ❖ Increased frequency of heatwaves and dry conditions heighten the risk of wildfires.

The district is earmarked with high wind turbine potential due to the strong wind patterns.

In view of the above, **Table 52** shows the Climate Change **Mitigation Interventions** recommended in the GRDM area.

**Table 53** outlines the **Adaptation Responses** to the various sectors within GRDM as summarised from the Garden Route DM Change Adaptation Response Implementation Plan, 2024.

In supporting these climate change adaptation and mitigation measures, the Garden Route District aligns closely with the Western Cape's 110% Green initiative and broader green economy goals. By promoting low-carbon solutions such as renewable energy, biomass utilisation, and circular economy practices, the district can simultaneously enhance environmental resilience, stimulate green economic growth, and create sustainable employment opportunities. These interventions reinforce transversal coordination across sectors, leverage natural and technological resources, and encourage innovative partnerships with public, private, and community stakeholders. Implementing these green economy-aligned strategies ensures that climate action in the district not only addresses environmental risks but also contributes to inclusive spatial and economic transformation, positioning the Garden Route as a leader in sustainable development.

In addition to the above, the Climate Change Act, 2024 places specific obligations on local municipalities to address and respond to climate change. In this regard, the following actions are recommended:

- ❖ Embed a climate change response implementation plan as a component of the local SDF/IDP, with adaptation and mitigation measures, timelines, responsible entities, monitoring and review mechanisms.
- ❖ Ensure that all priority infrastructure, development corridors and land-use decisions within the local SDF explicitly factor in climate risk, resilience and adaptation, in line with Sections 15, 19 and 20 of the Climate Change Act 2024. This may should include:

- Identification of climate-risk zones (e.g. floodplains, fire-risk areas, coastal erosion zones).
- Corresponding spatial responses such as buffer zones, ecosystem restoration, low impact land-use controls, and resilient infrastructure planning.
- Integration of outcomes from the municipal Climate Change Needs and Response Assessment and Climate Change Response Implementation Plan required under Section 17 of the Climate Change Act, 2024.
- ❖ Include mechanisms for regular review and update (at least every five years) of the climate change response plan as required by the Act.
- ❖ Allocate monitoring, financing and reporting arrangements so that climate change responses are not only planned but implemented and assessed, as required by Section 18 of the Act.

#### Action 1.6: Enhance the role of Biomass in the GRDM

Opportunities exist in the GRDM to enhance the role of Biomass in biodiversity and climate change adaptation. Biomass utilisation represents a key opportunity for the Garden Route District Municipality to advance a low-carbon, circular and biodiversity-supportive development trajectory. The district contains extensive forestry plantations, sawmilling activities, agricultural areas, and alien invasive vegetation, all of which generate significant organic residue streams. When not managed effectively, these residues contribute to fire risk, biodiversity degradation, and landfill pressure. Converting suitable biomass into energy, compost, or bioproducts therefore provides a dual benefit: reducing environmental hazards and fostering productive, green-economy value chains.

Appropriately scaled biomass initiatives can support climate-change mitigation by displacing fossil-fuel energy sources, while simultaneously reinforcing resilience through enhanced waste-management and landscape restoration.

Importantly, within biodiversity priority areas, biomass utilisation should align with ecological management objectives rather than compete with natural systems. In this regard, programmes that convert cleared alien invasive biomass into energy or soil-enhancing products present particular alignment with regional conservation efforts, as they promote ecosystem recovery, reduce water consumption by invasive species, and support fire-risk reduction in the natural areas-urban interface.

The advancement of responsible biomass value chains in the DM can therefore strengthen the green economy, diversify rural livelihoods, and support the municipal Climate Change Response Framework. Focus should be placed on partnerships with conservation and forestry stakeholders, and compliance with environmental and air-quality regulations. In doing so, the Garden Route can position biomass as a complementary tool that reinforces ecosystem integrity, reduces climate risks, and enables sustainable economic development.

It is recommended that a **Biomass Audit** be conducted for the GRDM to map potential Biomass sources and to determine the extent of invasive alien vegetation and old forestry plantations.

The Biomass Audit may also be a useful tool for local municipalities to assist in implementing the GRDM Invasive Species Monitoring, Control and Eradication Plan, 2019 which emphasises the establishment of robust monitoring systems to track invasive species distribution, density, and ecological impact. Municipalities are required to develop species inventories, undertake regular site inspections, and maintain updated spatial datasets that map invasive species occurrences.

Table 52: Proposed Climate Change Mitigation Interventions for GRDM

SECTOR	PROPOSED MITIGATION INTERVENTIONS/ PROJECTS	DETAILS OF THE INTERVENTIONS
<b>Energy</b>	Renewable Energy	Build Wind Energy Parks that will feed electricity to the National Grid, use of Wind Energy in residential areas and industry
	Energy Efficiency (EE)	Refurbish buildings (Government buildings, hospitals, clinics and schools with EE equipment)
		Refurbish streetlights with LED lights
		Encourage EE by industry processes
<b>Human Settlements</b>	Insulate RDP Houses	To reduce heating and air conditioning needs for human comfort
	Renewable Energy	Install Solar Water Heaters or heat pumps in Residential areas (existing and new houses and RDP houses)
	Energy Efficiency	Refurbish residential areas with LED lighting
<b>Agriculture</b>	Smart Agriculture	Agricultural practices that reduce methane emissions
		Encourage organic farming (Introduce vermiculture – organic manure)
<b>Transport</b>	Public Transport – Bus Rapid Transport (BRT) system	Introduce efficient/ complementary bus-taxi system
	Introduce bicycle lanes	Encourage bicycle use
<b>Waste Management</b>	Waste to Energy	Convert Landfill gas to electricity
	Recycling	Use waste to generate biodiesel for bus fleet and Biogas (Biofuels)
		Reduction, Recycling, Reuse of waste material
		Separation at Source
Introduce Manufacturing Plant industries using Recycled materials to create jobs		
<b>Biodiversity</b>	Plant indigenous trees to act as carbon emissions sinks	Remove invasive alien plant species and plant indigenous plants
	Protect parks and open spaces to maintain their role as carbon sinks	
<b>Commercial and Industry</b>	Energy Efficiency	Encourage and incentivise EE initiatives by industries

Table 53: Sector Adaptation Responses

SECTOR	OBJECTIVE	ADAPTATION RESPONSE
Agriculture	Manage increasing risks to livestock	Commission research and improve understanding of climate change impacts livestock and land availability.
		Develop a framework that will assist and educate farmers with adjusting to reduced rainfall.
		Generate and share scientific, social and indigenous knowledge that will assist with adapting to the reduction in herbage yields.
		Improve collaboration and partnership on existing programs (e.g. LandCare Programme, EPWP and River Health Programmes).
		Strengthen management plans, to enable continuous monitoring of water and herbage availability for livestock.
		Investigate sustainability of dairy industry, as a high-water demand industry, in the district.
		Develop a map indicating the best areas to produce high water demand crops as well as areas where alternative crops should be considered.
Biodiversity and Environmental	Manage Increased impacts on threatened ecosystems	Increase investment in ecological infrastructure that translates into financial revenue for the district such as ecosystem services bonds and market options that reduce flood risk within the region
		Completion of Invasive Species Control Plan (NEMBA) for all state-owned properties in local municipalities and district municipalities.
		Research Programme investigating potential risks associated with loss of fynbos biome through involving local universities (NMMU) stakeholders, SANParks, CapeNature, etc., involving scenario planning of loss of species. 0-50 years.
	Manage increased impacts on environment due to land-use change	Develop program to diversify community livelihoods strategies to earn income from other activities such as ecotourism and other non-farming activities.
		Incentivize small scale farmers to practice sustainable and conservative agriculture.
		Incorporate sustainable land use management and planning into other sectors plans.
		Research and improve understanding of land use change in the municipality.
		Strengthen institutional capacity to deal with pressure on land use change
	Manage Loss of Priority Wetlands and River ecosystems	Adopt a local wetland protection by law that require vegetated buffers around all wetlands.
		Control invasive wetland plants.
		Encourage infrastructure and planning designs that minimize the number of wetland crossings.
		Establish volunteer wetland monitoring and adoption programs.
		Identify priority wetlands and River ecosystems to be conserved.
		Restrict discharges of untreated wastewater and stormwater into natural wetlands.
Wetland restoration/rehabilitation programmes/projects.		
Protect ecological infrastructure functioning/ecosystem services.		
		Revise Spatial Development Frameworks to consider areas vulnerable to climate change impacts.

SECTOR	OBJECTIVE	ADAPTATION RESPONSE
Coastal and Marine	Manage loss of land due to sea level rise	Comment on Environmental Authorisation Applications to control unsustainable/risk coastal development.
		Storm surge early warning and emergency breaching of estuaries guidelines.
		Implementation of Coastal Management Lines for Garden Route District.
		Education and awareness campaigns on the estuary management and mouth management plans of the Garden Route District.
	Manage increased damage to property from sea level rise	Protect biophysical barriers to coastal storm surges such as rehabilitation of dune systems and the establishment of coastal management zones that will restrict development within at risk areas.
		Incorporate climate-related disaster information into current property valuations and insurance schemes.
		Collaborative Coastal and Estuary Management Agreements.
		Community collaboration programmes.
		Protection of three primary dune systems in Garden Route District: Stilbaai, Wilderness and Sedgefield. To be implemented by local authority to restore the dune system by June 2020.
Disaster Management, Infrastructure, and Human Settlements	Manage increased impacts on traditional and informal dwellings	Commission a reliable early warning system (linked to radio stations, community leaders and social media) to alert communities and industries on the possible occurrences of storm events.
		Conduct a climate change risk assessment on informal dwellings.
		Conduct regular assessments of informal dwellings in order to identify priority areas for interventions to reduce climate change risk.
		In order to reduce flood and fire disaster risks, the placement of informal dwellings must receive special attention. Lessons learned must be incorporated into new housing projects.
		A district flood hazard master plan should be developed and included as part of the District SDF.
		Implement informal settlement upgrades.
	Update community emergency evacuation plans that will assist with responding to climate change related impacts/risks.	
	Manage potential increase migration to urban and peri-urban areas	Conduct public awareness on campaigns to save water by Disaster Management sector in collaboration with District Communications Department.
	Manage potential increased risk of wildfires	Develop Integrated Veldfire management Plan for the Garden Route District.
		Strengthening of existing initiatives such as Working on Fire and the GEF climate change and fire project.
		Fuel load management master plan.
		Buy-in from private landowners and farmers through the construction of firebreaks.
Improvement of fire safety through urban fringe management.		
	Fireproof alternative building/construction materials.	

SECTOR	OBJECTIVE	ADAPTATION RESPONSE
	<b>Implement Ecological Infrastructure (EI) Measures</b>	River Rehabilitation as an EI resilience measure can enhance bank stability and reduce erosion, helping to maintain stable channels during floods and minimise associated impacts.
<b>Water Resources</b>	<b>Manage decreased water quality in ecosystem</b>	Adopt and enforce simple, innovative, adaptive engineering approaches wastewater treatment initiatives that will ease the burden on natural water dilution as water quantities decline.
		Conduct a climate change impact assessment on health risks to aquatic systems.
		Create an awareness on the reuse of wastewater thus minimising negative impacts of wastewater on aquatic systems.
		Identify and implement wastewater monitoring initiatives that will indicate risks to aquatic systems.
		Protect and rehabilitate aquatic systems so that they can provide flow attenuation and ecosystem goods and services that are required to buffer increased pollution.
		Research and improve understanding of climate change impacts on water quality and availability.
		Strengthen wastewater treatment management plans, to enable the ability to respond to the declining water reserves.
		Investigate international best-practice as well as new technology, innovation and methodologies.
		Assessing wastewater plant infrastructure and condition/implement technology and infrastructure failure risk and upgrade plans.
		Implementation of alternative water resources.
		Water Resource Management Collaboration Initiatives and Partnerships.
<b>Air Quality</b>	<b>Increase in air pollution</b>	Set up air quality goals that are linked to climate change mitigation and which talks to all the applicable legislation.
		Maintaining the current Garden Route Air Quality emissions inventory and the NAEIS system.
		Maintaining and expanding the Garden Route monitoring network.
	<b>Increase in odour complaints</b>	Passive sampling programmes.
		Diesel vehicle emission testing programmes with the B-authorities.
	<b>Increase in brown haze</b>	Carrying out of regional dispersion modelling studies.
		Define a strategy to disseminate ambient air quality data to the general public through various media, e.g. newspapers, EDM's web site, etc.
		Investigate international best-practice as well as new technology, innovation and methodologies.
		Carry out Risk assessments.
		Link the Air Quality Climate change interventions and projects with the IDP in order to secure the necessary funding.

**Action 1.7: Mitigate Fire Risks and Impacts on Disaster Management.**

The SDF recognizes that veld fire is a natural ecological process that occurs in many parts of the region. However, if it is not managed or settlement patterns exacerbate the risk of veld fire, it places great risk to life and property in both rural and urban areas, at a significant economic and social cost.

GRDM has a direct disaster risk management mandate, but the implementation of mitigation measures is directly impacted by land use management by the B Municipalities of the District. Therefore, the Garden Route Municipality's Disaster Risk Management Department must be given an opportunity to provide input into development applications in interface areas where veldfire is a risk. A protocol between the Garden Route District and local municipalities must be developed to facilitate this.

The management of veld fire risk must be integrated into the Planning By-Laws and the urban edge management of the Municipalities.

High veld fire risk areas and asset protection zones – the zones between the built environment and the hazard area within which modifications are made to protect the built environment – should be identified and incorporated into municipal planning systems.

Eco-estates must be conditioned to ensure ecological fire regimes at the correct intervals. Landowners in fire-prone areas should be encouraged to join the Southern Cape Fire Protection Association. Vacant properties which are poorly managed and present fire risk should be identified, and measures must be put in place to enhance the management and mitigate against the fire risk of these properties. Fire safety education programmes should be rolled out in all the forest villages to teach the community about fire prevention and response, drawing lessons from the devastating 2017 Knysna wildfire. Management zones must be in line with guidelines found within the ecosystem guidelines for environments in the Western Cape (2016).

**Action 1.8: Protect and Integrate Strategic Water Source Areas.**

Strategic Water Source Areas (SWSAs) are critical for the provision of water for human consumption. The SWSAs as illustrated on **Figure 48** should be integrated into the planning of the various LMs. The delineation should be utilised to inform urban planning and also the management of the non-urban areas. Land uses that reduce stream flow or affect water quality, such as mining, timber plantations or overgrazing, should be avoided in SWSAs, wetlands in SWSAs should be rehabilitated, and invasive alien plants should be cleared. Doing so can ensure that SWSAs continue to deliver the maximum amount of clean water. In this way, securing SWSAs can also help people to adapt to the impacts of climate change, as droughts become more common.

**Action 1.9: Strengthen Institutional Coordination for Ecological Infrastructure Management**

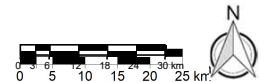
Establish a coordinated, district-wide approach to ecological infrastructure planning, monitoring, and implementation. This includes strengthening partnerships with existing multi-stakeholder platforms such as the Outeniqua-to-Tsitsikamma Water Source Partnership Working Group, the Garden Route Biosphere Reserve, Cape Nature, Local Municipalities, and other environmental authorities. The initiative will focus on improving information sharing, aligning mandates, leveraging technical expertise, and mobilising joint resources to support the implementation of programmes such as the Garden Route Wetland Strategy and other ecological infrastructure initiatives. A structured coordination mechanism and annual work programme should be formalised to ensure ongoing collaboration, progress tracking, and improved institutional capacity across the district.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : NATIONAL STRATEGIC WATER RESOURCE AREAS



Source: SANBI-BGIS LUDS; SANBI-SAPAD/SACAD; Cape Nature – WCBS2023

- District Municipality
- Local Municipality
- National Strategic Water Resource Area**
- Swartberg
- Langeberg
- Outeniqua
- Kouga
- Tsitsikamma
- Dams/Rivers/Wetlands
- National Ground Water Source Areas



### Action 1.10: Introduce Trade-Off Zones in Spatial Planning.

In GRDM, effective spatial planning is crucial to balancing diverse land uses while preserving natural resources and ensuring sustainable development

The District and Local Municipalities face complex challenges due to its rich biodiversity, critical water resources, valuable agricultural lands, and expanding human settlements.

Addressing these challenges requires a nuanced understanding of trade-offs and the implementation of strategic planning mechanisms. Trade-off zones are a key concept in this regard helping to prioritise, manage, and protect various land uses.

Trade-off zone exercises as contained in **Annexure G** should form part of the various planning processes, i.e., when new Local SDFs are reviewed, new development applications are submitted, etc.

#### 4.4.2 Built Environment

The objectives (and related actions) which have a spatial implication on the Built Environment of the GRDM, including Spatial Targeting, the Movement Network, Human Settlements, Infrastructure, and Economic Development are discussed in this section.

##### **OBJECTIVE 2: SPATIAL TARGETING**

**Objective 2: Enhance spatial efficiency and support spatial targeting in the GRDM by defining a range of nodes around which to align growth, consolidate infrastructure investment and economic development.**

##### **Spatial targeting towards promoting nodal development:**

The key to the success of nodal development is rooted in the principle of focused and deliberate government investment spending to ensure that certain priority areas develop to provide an extensive range of community facilities, and in the case of rural areas, becoming the spatial focal points of agriculturally driven LED interventions and land reform initiatives.

Another key benefit derived from spatial targeting is that it becomes more cost efficient to provide the full range of engineering services to these points (urban and rural) as these are utilized for a number of purposes including economic, social, as well as residential development. Thus, by being conducive to focused infrastructure spending, the collective benefits derived from investments made by various spheres of government far outweigh the individual contributions made. Furthermore, the development of urban and rural nodes requires inter-governmental co-operation, which is seen as critical to promoting sustainable and integrated development.

##### **Action 2.1: Prioritise development and investment in accordance with the GRDM nodal hierarchy.**

The sustainable allocation of resources requires a systematic approach to ensure that the allocation of resources can be matched with economic growth potential. In support of the systematic approach, it is important to define a strategic range and hierarchy of nodes in the district with the specific purpose to guide and direct public and private investment towards these areas (spatial targeting), and to optimize agglomeration benefits to be derived from such clustering of activities. Growth should be encouraged in town what have economic, spatial and social capacity to ensure fiscal sustainability.

The SDF proposed a hierarchy of nodes that builds on the 2017 SDF. **Figure 49** outlines the hierarchy of nodes for the district and is outlined below in **Table 54**.

**Table 54: GRDM: Hierarchy of Nodes**

HIERARCHY OF NODES	
<b>First Order Node: Coastal</b>	
<ul style="list-style-type: none"> <li>❖ George</li> <li>❖ Mossel Bay</li> </ul>	<ul style="list-style-type: none"> <li>❖ Plettenberg Bay</li> <li>❖ Knysna</li> </ul>
<b>First Order Node: Inland</b>	
<ul style="list-style-type: none"> <li>❖ Oudtshoorn</li> </ul>	<ul style="list-style-type: none"> <li>❖ Riversdale</li> </ul>
<b>Second Order Node: Coastal</b>	
<ul style="list-style-type: none"> <li>❖ Stilbaai</li> <li>❖ Gouritsmond</li> <li>❖ Bothastrand</li> <li>❖ Herolds Bay</li> </ul>	<ul style="list-style-type: none"> <li>❖ Sedgfield</li> <li>❖ Brenton on Sea</li> <li>❖ Kranshoek</li> </ul>
<b>Second Order Node: Inland</b>	
<ul style="list-style-type: none"> <li>❖ Heidelberg</li> <li>❖ Ladismith</li> </ul>	<ul style="list-style-type: none"> <li>❖ Uniondale</li> <li>❖ Kurland</li> </ul>

HIERARCHY OF NODES	
<b>Third Order Node: Coastal</b>	
❖ Keurboomstrand	❖ Natures Valley
<b>Third Order Node: Inland</b>	
❖ Albertinia	❖ Dysseldorp
❖ Herbertsdale	❖ De Rust
❖ Ruitersbos	❖ Haarlem
❖ Calitzdorp	
<b>Rural Service Node: Coastal</b>	
❖ Witsand	❖ Hartenbos
❖ Vlees Bay	❖ Klein Brakrivier
❖ Nautilus	❖ Tergniet
❖ Moquini	❖ Victoria Bay
❖ Dana Bay	❖ Kleinkrantz
<b>Rural Service Node: Inland</b>	
❖ Askraal	❖ Bergplaas
❖ Vermaaklikheid	❖ Noll
❖ Van Wyksdorp	❖ Karatara
❖ Zoar	❖ Farleigh
❖ Amalienstein	❖ Rheendal
❖ Hoopvol	❖ Avontuur
❖ Volmoed	❖ Kwanokhuthula
❖ Jonkersberg	❖ Bloukrans
❖ Vlakeplaas	

The First and Second Order Nodes are also important public transport destinations. The hierarchy of nodes also influences the district public transport network as it determines the major destinations to be served by such system and the movement desire lines linking these nodes to one another.

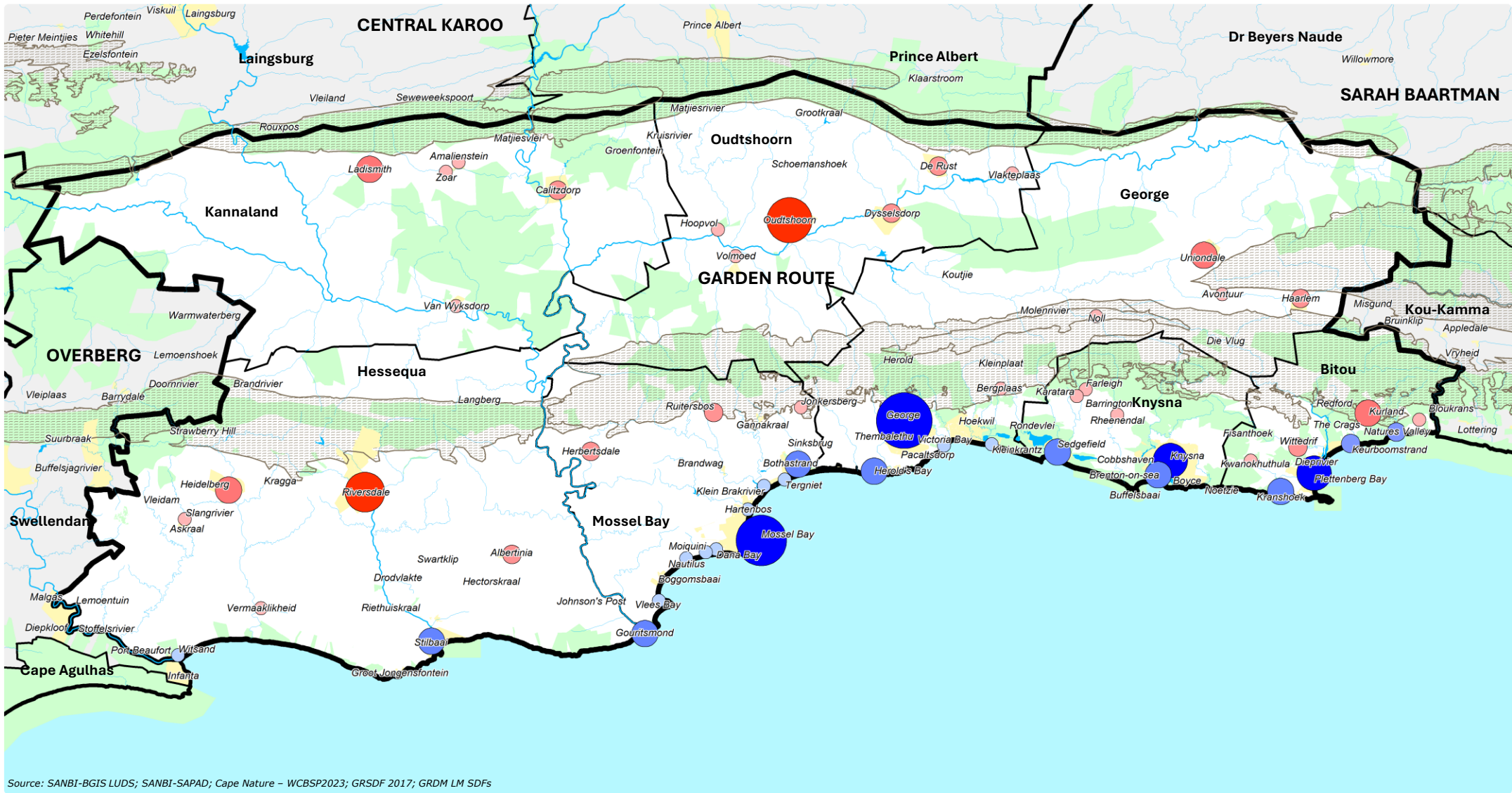
The principle of clustering investment at a number of optimally located points in the district is the most important message to convey from this objective.

The First Order Nodes should be strengthened and enhanced through integration, infill, densification and mixed-use development in well-located areas. The nodes are also well suited to accommodate the highest order community facilities and should be supplemented or upgraded to meet the demand.

The Second Order Nodes perform very important functions by virtue of strategic location aimed at stimulating local economic growth. The nodes should consist of the full complement of services with the aim of improving the living standards and facilitate social cohesion.

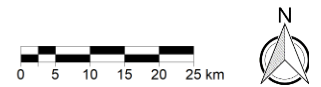
The Third Order Nodes and Rural Settlements need to perform the function of meeting the local convenience needs with basic social facilities. Limited development (low-cost housing) should be permitted in the smaller nodes to present long-term economic burdens on the respective local municipalities.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : NODAL STRUCTURE



Source: SANBI-BGIS LUDS; SANBI-SAPAD; Cape Nature – WCBS2023; GRSDF 2017; GRDM LM SDFs

- |                       |                                    |
|-----------------------|------------------------------------|
| District Municipality | 1 <sup>st</sup> Order Node Coastal |
| Local Municipality    | 1 <sup>st</sup> Order Node Inland  |
| Towns and Settlements | 2 <sup>nd</sup> Order Node Coastal |
| Mountain Range        | 2 <sup>nd</sup> Order Node Inland  |
| Protected Areas       | 3 <sup>rd</sup> Order Node Coastal |
| Dams/Rivers/Wetlands  | 3 <sup>rd</sup> Order Node Inland  |
|                       | Rural Service Node Coastal         |
|                       | Rural Service Node Inland          |



**Action 2.2: Actively promote and facilitate Urban Spatial Transformation**

Spatial Transformation in the urban environment should be actively promoted in the GRDM area in line with the following directives in this regard:

- ❖ Urban sprawl should be contained through growth management instruments like the urban development boundary.
- ❖ Incentives and regulations should support compact, mixed-use development within walking distance of public transport stops; and high-density, mixed-use developments along public transport corridors.
- ❖ New urban development and infrastructure investments should be focused on public transport corridors and around existing and emerging economic nodes, applying principles of transit-oriented development.
- ❖ Investment should be focussed on the public environment (roads, reserves, sidewalks, parks, public open space, etc.) and linked to improved social infrastructure (community facilities).
- ❖ Economic hubs supporting a variety of economic activities should be developed within historically black townships in order to integrate townships into the wider regional economy.
- ❖ Well-located informal settlements should be upgraded where they are currently located (in situ) with minimum disruption to existing communities.

**Shortened Land Use Development Procedures**

The district does not fulfil a land use planning function; however, the following areas in the respective municipalities can be considered and earmarked for shortened or fast-tracked land use application procedures:

**a) SEZ / Industrial Hubs:**

Projects that are located within SEZ/Industrial Hubs that qualify as catalytic, or high impact projects can be identified as projects to be prioritized for the acquisition of land use rights. The activities that can be put in place for the fast-tracking of the applications may consist of the following:

- ❖ Prioritise the administration of the applications; and
- ❖ Set up a catalytic project task team that consists of the key role players who need to comment on land use applications. Ensure comments are raised and addressed in a timeous manner.

**b) Informal Settlement Areas / New Human Settlement Areas:**

Informal Settlements that have been categorized as B1 in terms of the National Upgrade Support Programme (NUSP) are settlements that should be upgraded in-situ. Shortened land use applications procedures can be applied to settlements -that meet the criteria. The settlements can be declared as transitional settlements, while the detailed formalization processes are being undertaken.

Developments that are located in SDAs or PSHDAs can also be identified if they are deemed to be catalytic or high impact developments.

**Action 2.3: Promote and Facilitate Rural Spatial Transformation.**

The GRDM should ensure the development of vibrant, productive rural communities that create wealth and contribute to food security, based on the following principles:

- ❖ In remote rural areas with low densities and marginal economies, the focus should mainly be on the provision of basic services and improving connectivity.
- ❖ Rural areas that have an established or potential economic base and are well located in relation to urban markets and transport corridors should be prioritized for investment in more comprehensive economic infrastructure.
- ❖ Direct funding for services, infrastructure and settlement development into designated rural development hubs.
- ❖ Target infrastructure provision in rural areas and densification along rural mobility corridors or at nodes around strategic intersections.
- ❖ Emphasis should be placed on the developmental role of small towns in rural areas as service delivery and job creation centres.
- ❖ Strong spatial coordination and clustering of services, including health, education, transport, welfare and security should be facilitated at strategic locations in all rural areas (spatial targeting).
- ❖ Prioritised attention to connective infrastructure (e.g. Information and Communication Technology: internet, telephone, etc.) that strengthens the links between the urban and the rural areas.
- ❖ Land reform programmes should be spatially targeted in areas that are most viable in terms of agricultural potential and access to markets.

- ❖ Targeted investment in agrarian transformation (farming skills, infrastructure, etc.) to support increased food production which also builds local rural economies and job creation.
- ❖ Focus on the development of infrastructure for supporting non-farm activities such as tourism in areas with proven potential.

Spatial Transformation should be supported by strong policies, consistent implementation and political will over an extended period of time.

Spatial transformation will reduce travel time and costs between home and work; increase mobility for households to access better job and education opportunities; and reduce poverty and inequality – all the features associated with the Apartheid urban and rural landscape.

**OBJECTIVE 3: MOVEMENT NETWORK**

**Objective 3: Facilitate development of a comprehensive multi-modal movement network and optimise equitable and inclusive regional accessibility.**

**Action 3.1: Establish a Comprehensive Multi-Modal Movement Network serving the Urban and Rural Parts of the GRDM.**

The aim is to establish a comprehensive, multi modal movement network serving the urban and rural parts of the district, linking all the identified nodal areas to one another, and functionally linking the nodal areas to surrounding regions and major destinations as depicted on **Figure 50**.

This comprehensive movement network should seek to achieve the following objectives:

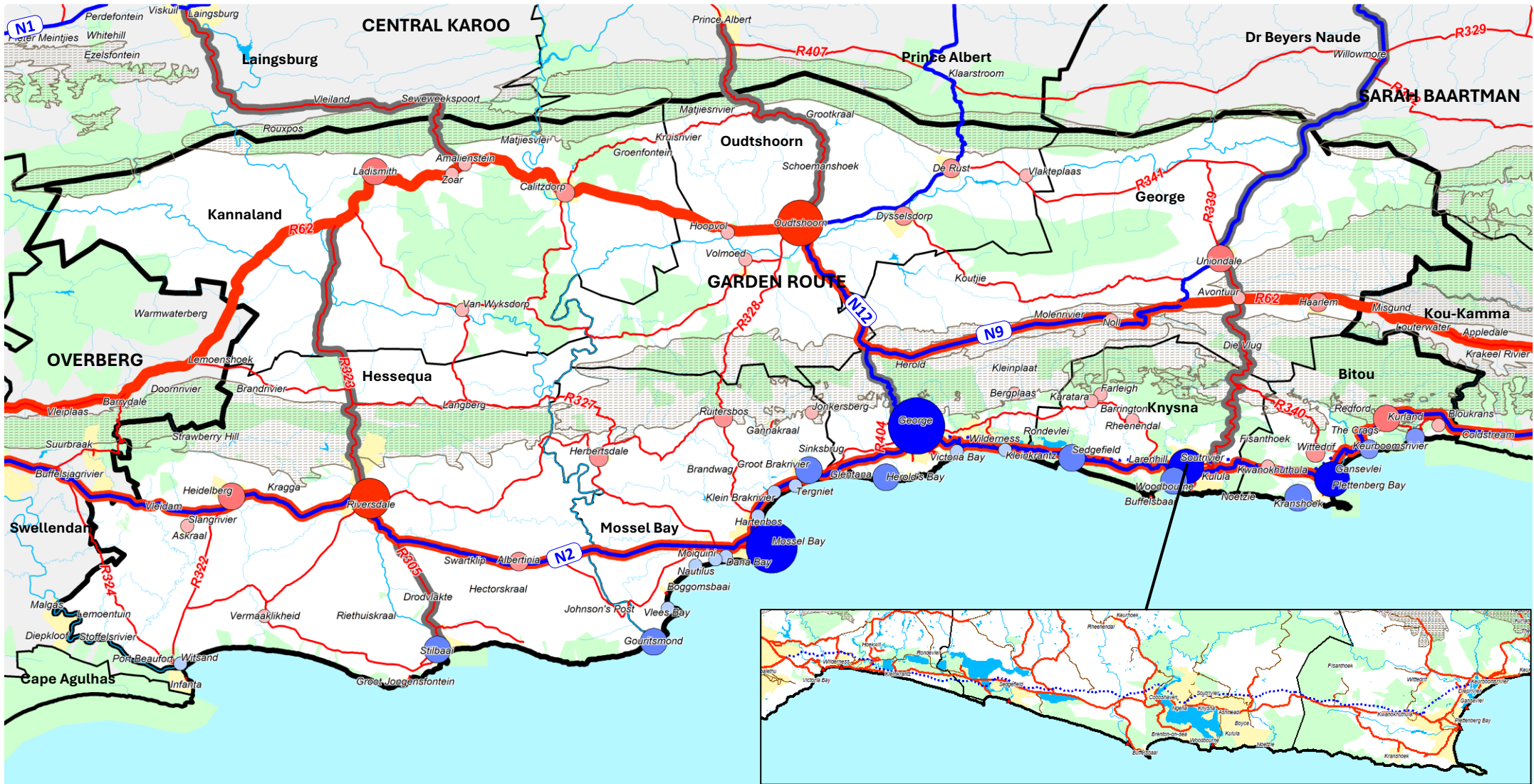
- ❖ To establish a safe and comprehensive road and rail network that will promote economic development in the district and enhance the accessibility of previously disadvantaged communities to essential facilities.
- ❖ To improve transportation links between First Order Nodes and Second/Third Order nodal points along corridors with an efficient movement system that will promote economic activity between the identified development clusters or nodal points.
- ❖ To attend to the upgrading and maintenance of roads and railway infrastructure in both rural and urban areas.
- ❖ To use the road based public transport system to act as a feeder service supplementing the proposed IPTN.

- ❖ To promote principles of non-motorised transport by prioritising pedestrian and cycling infrastructure along key desire lines, supported by measures to reclaim public space from vehicle dominance, such as street narrowing and improved pedestrian-friendly design to create safer and more accessible movement environments.
- ❖ To ensure the safe transport of all learners and to cater for “Special needs passengers” through universal access.
- ❖ To promote choice of transport mode by investigating the viability of subsidised bus-taxi services.

**Action 3.2: Review the impact of the Proposed N2 Bypass.**

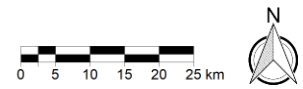
Figure 47 provides an insert of the proposed N2 realignment from Plettenberg Bay to George. The N2 not only serves as a major transport link within the district but also on a national level. The benefit (mobility) of the realignment needs to be weighed up against the cost of the proposed realignment. The environmental and social impact on possible landscape degradation also needs to form part of the review process, as does the option for moving freight to rail.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : MOVEMENT NETWORK - ROAD



Source: SANBI-BGIS LUDS; SANBI-SAPAD; Cape Nature – WCBSP2023; GRSDf 2017; GRDM LM SDFs

- |                       |                                    |                    |
|-----------------------|------------------------------------|--------------------|
| District Municipality | 1 <sup>st</sup> Order Node Coastal | National Roads     |
| Local Municipality    | 1 <sup>st</sup> Order Node Inland  | Proposed N2 Bypass |
| Towns and Settlements | 2 <sup>nd</sup> Order Node Coastal | Main Roads         |
| Mountain Range        | 2 <sup>nd</sup> Order Node Inland  | East – West Links  |
| Protected Areas       | 3 <sup>rd</sup> Order Node Coastal | Coastal Links      |
| Dams/Rivers/Wetlands  | 3 <sup>rd</sup> Order Node Inland  |                    |
|                       | Rural Service Node Coastal         |                    |
|                       | Rural Service Node Inland          |                    |



**Action 3.3: Revitalise Railway Infrastructure to stimulate economic develop.**

The freight rail network is non-operational; however, the rail can play a key role as an economic catalyst for the area.

The maintenance of the rail network should be prioritized to support the tourist related initiatives that add to the attractions offered in the district.

The Diaz Express<sup>(1)</sup> operates on the Transnet Line between Mossel Bay to Hartenbos (**Figure 51**). The Outeniqua (Choo-Tjoe Steam Train is an iconic attraction that is in the process of being repaired and to be put into operation.

**Action 3.4: Upgrade, maintain and capitalise on the economic opportunities posed by the national, provincial and district road network.**

Care should be taken that the entire road network is well maintained, while the priority regional and rural road network as illustrated on Figure 45 should be prioritised to be incrementally upgraded as and when funds are available. (This priority network links all identified nodes to one another). The following routes are notable in this regard:

- ❖ The N2 is a national route traversing through the district along the coast and links the various towns and allow for convenient access points to holiday destinations.
- ❖ The N12 is a strategic north-south route, linking the Klein Karoo with the Garden Route.
- ❖ The R62 is a strategic east-west link, traversing through the Klein Karoo and serves as a significant tourism route.
- ❖ The other significant routes consist of the following: R323, R325, R339.

**Action 3.5: Implement the various proposals of the ITP.**

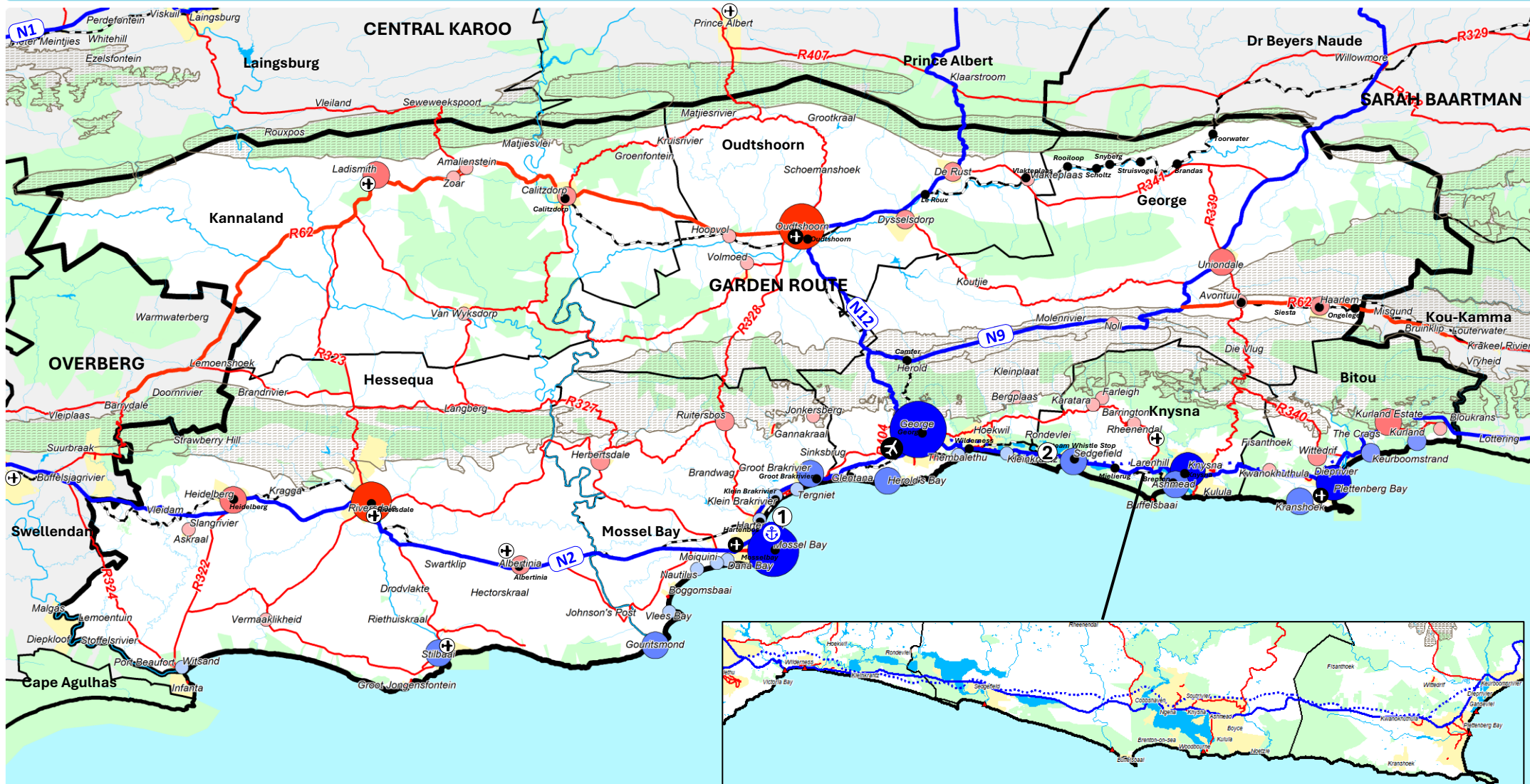
The Garden Route ITP was finalized in 2023, and the ITP contains various proposals for implementation. **Figure 52** illustrates the Public Transport Network for the district which mainly consists of local and regional taxi routes. George LM is the only LM that has an IPT with the George bus service. The maintenance of the roads is therefore a critical part for the successful implementation of the ITP.

**Action 3.6: Improve freight, tourism and emergency management connectivity.**

George is the primary commercial airport offering various flights to the main urban centres in South Africa. The airport provides a strategic link to the Garden Route. The airfields in Plettenberg Bay, Oudtshoorn, Mossel Bay offer expansion opportunities but should not compete with George Airport.

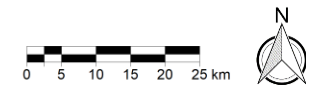
Oudtshoorn is envisaged to consolidate its role as a training airport.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : MOVEMENT NETWORK – RAIL/AIR/SEA



Source: SANBI-BGIS LUDS; SANBI-SAPAD; Cape Nature – WCBS2023; GRSD 2017; GRDM LM SDFs

- |                       |                                    |                        |
|-----------------------|------------------------------------|------------------------|
| District Municipality | 1 <sup>st</sup> Order Node Coastal | National Roads         |
| Local Municipality    | 1 <sup>st</sup> Order Node Inland  | Proposed N2 Bypass     |
| Towns and Settlements | 2 <sup>nd</sup> Order Node Coastal | Main Roads             |
| Mountain Range        | 2 <sup>nd</sup> Order Node Inland  | Railway Line           |
| Protected Areas       | 3 <sup>rd</sup> Order Node Coastal | Railway Station        |
| Dams/Rivers/Estuaries | 3 <sup>rd</sup> Order Node Inland  | Airport                |
|                       | Rural Service Node Coastal         | Aerodrome              |
|                       | Rural Service Node Inland          | Airfield/Landing Strip |
|                       |                                    | Harbour                |



**Garden Route**
  
 DISTRICT MUNICIPALITY

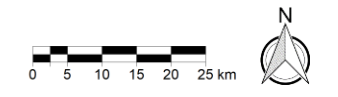
SDF 2025 Figure 51

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : MOVEMENT NETWORK – PUBLIC TRANSPORT



Source: SANBI-BGIS LUDS; SANBI-SAPAD; Cape Nature – WCBS2023; GRSDf 2017; GRDM LM SDFs; GRDM Integrated Transport Plan 2024-2029 (ITS Report Oct 2023); GRDM Human Settlement Sector Plan (2022)

- |                       |                                    |                        |                       |
|-----------------------|------------------------------------|------------------------|-----------------------|
| District Municipality | 1 <sup>st</sup> Order Node Inland  | National Roads         | Regional Taxi Routes  |
| Local Municipality    | 2 <sup>nd</sup> Order Node Coastal | Proposed N2 Bypass     | Local Taxi Routes     |
| Towns and Settlements | 2 <sup>nd</sup> Order Node Inland  | Main Roads             | Official Rank         |
| Mountain Range        | 3 <sup>rd</sup> Order Node Coastal | Railway Line           | Unofficial Rank       |
| Protected Areas       | 3 <sup>rd</sup> Order Node Inland  | Railway Station        | Passenger Rail Routes |
| Dams/Rivers/Estuaries | Rural Service Node Coastal         | Airport                |                       |
|                       | Rural Service Node Inland          | Aerodrome              |                       |
|                       |                                    | Airfield/Landing Strip |                       |
|                       |                                    | Harbour                |                       |



**OBJECTIVE 4: HUMAN SETTLEMENTS**

**Objective 4: Facilitate the establishment of sustainable human settlements in all identified urban nodes and providing accessible social facilities for resilient and equitable development.**

**Action 4.1: Actively promote development aligned to Smart Growth Principles in all towns and settlements (urban and rural).**

While the prevalence and popularity of private, gated residential estates is acknowledged, it is recognised that this development model can limit the application of compact, mixed-use, and well-connected spatial principles, particularly in terms of proximity to public transport, economic opportunities, and non-motorised transport infrastructure. Opportunities should therefore be prioritised in areas where such approaches are feasible.

The following Smart Growth Principles should accordingly be applied within appropriate areas within the Garden Route District Municipality:

- ❖ Provide for a mix of different kinds of land uses, e.g. residential, retail, business, and multi-purpose community facility clusters around modal transfer facilities.
- ❖ Create well-designed, compact neighbourhoods where the different activities are in close proximity to each other and to areas of economic opportunity.
- ❖ Provide a variety of transportation choices, including private, public and non-motorised transport opportunities (pedestrian movement and cycling) that are safe.
- ❖ Create a variety of housing opportunities, i.e. in terms of tenure, function, form and affordability.

- ❖ Encourage growth in existing communities through infrastructure upgrade, urban renewal, new amenities and densification.
- ❖ Preserve and restore open spaces, natural beauty, and environmentally sensitive areas for recreational purposes.
- ❖ Utilise smarter and cheaper infrastructure and green buildings and promote renewable and sustainable technologies.
- ❖ Foster a unique neighbourhood identity building on the unique and diverse characteristics of each community.
- ❖ Engage citizens to participate in community life and decision-making.
- ❖ Protect and enhance agricultural land (high potential agricultural land and subsistence farming) and secure these as a productive land base for food security, employment, etc.
- ❖ Promote climate resilient development in town and settlements by encouraging compact, resource-efficient urban growth that minimises environmental impact, supports adaptive infrastructure and strengthens the long-term resilience of communities to climate related risk.

**Action 4.2: Identify strategically located land as Priority Housing Development Areas.**

One of the main issues of habitat loss in the district is low density urban sprawl. Consequently, public transport is also negatively impacted by low density development. In combination with the above, each of the towns in the district still carry the spatial legacy of the Apartheid dispensation which separated communities socially and economically and resulted in a highly fragmented urban form.

In response to the above, local municipalities within the GRDM need to ensure that the spatial imbalances of the past are corrected, and that people are located

closer to places of work and economic opportunities, and that the urban fabric of the GRDM is consolidated over time.

It is thus essential that each of the towns and settlements within the district be developed in a manner aimed at consolidating the urban form, limiting further expansion by way of the introduction of an urban edge/urban development boundary.

Housing, and more specifically subsidised housing, is a very powerful instrument at the disposal of government to influence development patterns in and around towns, and to give effect to the spatial restructuring objectives of municipalities as contemplated in SPLUMA.

All the Municipal Spatial Development Frameworks in the GRDM support this principle, but it is important that development is in line with these guidelines. It is furthermore advised that land acquisition processes target land located within the respective Priority Human Settlement Housing Development Areas (PHSHDAs) and Strategic Development Areas (SDAs) identified in Municipal SDFs.

**Figure 53** illustrates the position of the various SDAs and PHSHDAs.

**Table 55** illustrates the approximate yield within the various Strategic Development Areas of the various Local Municipalities. The various SDAs (excluding Kannaland LM) have identified with approximately 9,341 ha which could yield approximately 210,124 units.

The total demand for the Garden Route District, which includes the Western Cape Waiting List and Projected Demand (2024-2040) is 178,357. **Figure 54** graphically illustrates the housing demand for the district, and it can be noted that George Municipality has the highest demand, followed by Mossel Bay LM. Based on the above, a surplus of 31,767 units may be created if all the various SDAs are developed. It should be noted that although there is a surplus of units/area shown on the Total GRDM, George and Bitou LMs might be in need of more developable land. Care should be taken to reserve sufficient land for the provision

of socio-economic facilities to ensure sustainable human settlements are developed.

In principle, all large-scale human settlement projects in the GRDM area should be located in the areas with the highest economic potential and availability of bulk services, low-cost housing/ subsidized housing should be discouraged in the nodes/settlements with limited economic potential and levels of socio-economic facilities.

It is noted that the area identified as a PHSHDA in George is located less than 3 km from George Airport and may be affected by aircraft noise. Special consideration should therefore be given to the suitability of these areas for residential development, given their proximity to the airport. To mitigate potential impacts, it is recommended that all proposed developments within a 15 km radius of major airports be submitted to Airports Company South Africa (ACSA) for evaluation in respect of possible noise impacts, safety concerns related to flight paths, and applicable height restrictions.

Furthermore, to promote sustainable and resilient settlement patterns, the SDF emphasises the importance of directing housing development toward appropriate, serviced, and accessible areas while avoiding ecologically sensitive land. This includes integrating environmental layers into municipal planning, using biodiversity priority areas as exclusion zones for new housing, and reinforcing compact growth around existing nodes. By safeguarding sensitive ecosystems and steering development toward lower-risk, higher-opportunity locations, the district can support housing delivery that is both socially responsive and environmentally responsible, ensuring that long-term ecological integrity is maintained alongside meeting current housing demand.

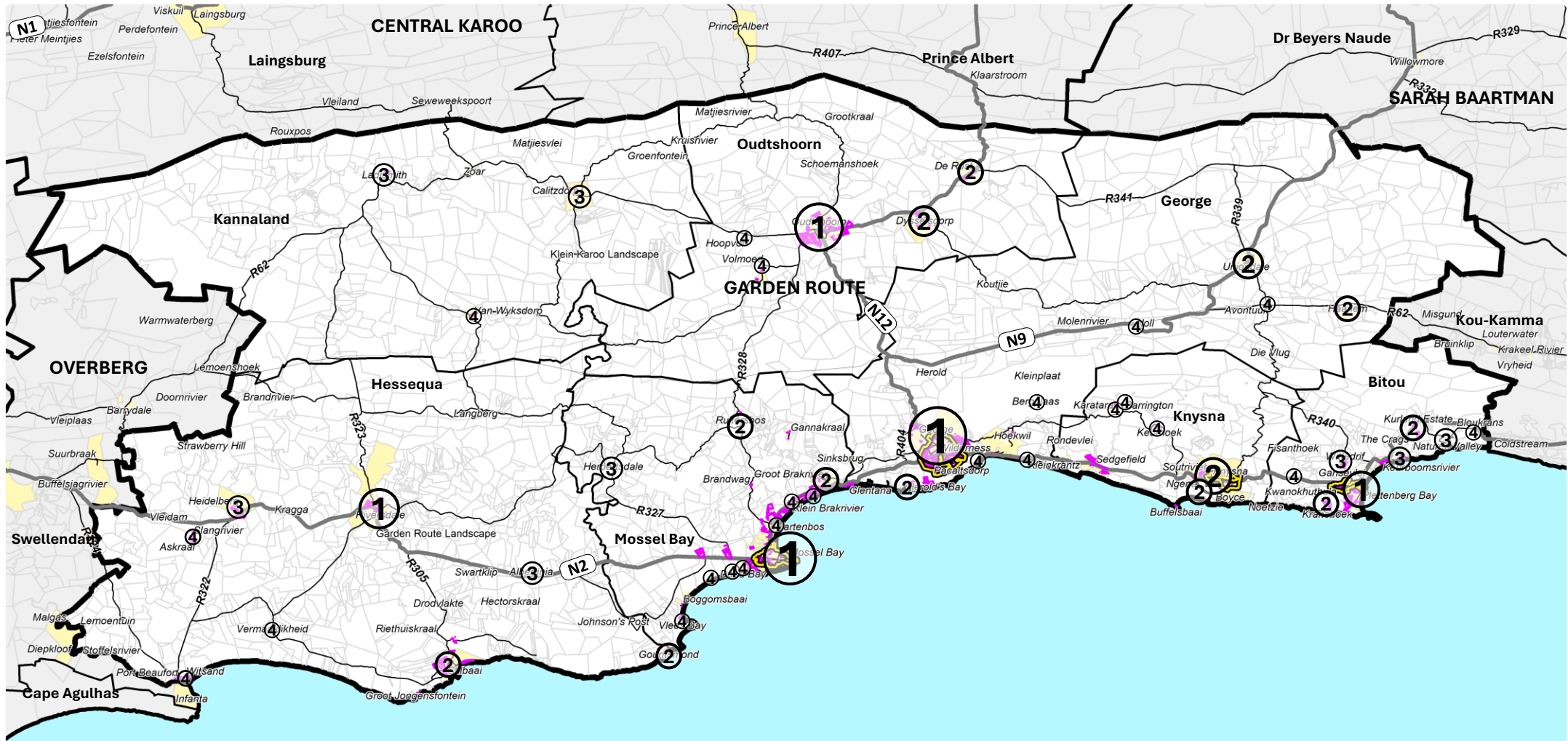
**Table 55: GRDM: SDF Residential Development Area (ha), and approximate Yield (units), compared with Demand**

Municipality	SDF Comparison						GRDM LUB					Notes
	SDF Proposals		Demand			Surplus/ Deficit	Gross SDA Density	GRDM LUB	GRDM LUB	Nett Residential Density	Gross Density (including Com. Fac. And Streets)	
	Proposed Strategic Development Area (SDA)Size (ha)	Approximate Residential Yield	WC: Waiting List DB Backlog (2025)	GRDM MSDF:Expected HH Growth (2024-2040)	Total Demand	Total	du/ha	Residential Area Needed to accommodate growth (2024- 2040)	Total Area Needed to accommodate growth (2024- 2040)	du/ha	du/ha	
Kannaland			3,591	2,169	5,760	- 5,760		93	137	23	16	No Comparison - SDF in Process
Hessequa	1,093	17,694	5,955	8,539	14,494	3,200	16	413	574	21	15	
Mossel Bay	2,765	39,674	10,955	27,278	38,233	1,441	14	1,242	1,755	22	16	
George	504	64,494	20,834	43,521	64,355	139	128	1,542	2,335	28	19	George SDF area exclude Community Facilities. Mixed Use / Densification areas could also be used to accommodate growth
Oudtshoorn	1,452	18,470	12,016	6,026	18,042	428	13	234	349	26	17	
Bitou	928	17,138	9,122	7,976	17,098	40	18	346	499	23	16	
Knysna	2,599	52,653	9,529	10,845	20,374	32,279	20	492	708	22	15	Not directly comparable: Knysna SDF included Housing Projects - but not in all instances indicated as SDA areas.
<b>Total Garden Route DM</b>	<b>9,341</b>	<b>210,124</b>	<b>72,002</b>	<b>106,355</b>	<b>178,357</b>	<b>31,767</b>	<b>22</b>	<b>4,362</b>	<b>6,357</b>	<b>24</b>	<b>17</b>	

Sources:

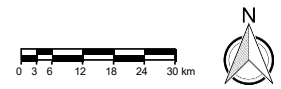
- Hessequa SDF phase-3-spatial-proposals-draft 2024-2025.
- Mossel Bay SDF SECTION B – SPATIAL DEVELOPMENT FRAMEWORK PROPOSALS MAY 2022
- George MSDF-2023-Final-Version-4-30052023 (V4 May 2023)
- Oudtshoorn SDF Final Report MAY 2022
- Bitou Spatial Development Framework, 2022
- Draft-Knysna-MSDF\_2025, Draft-Sedgefield-LSDf, 2024.
- GRDM MSDF (Plan Associates)

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : HUMAN SETTLEMENT



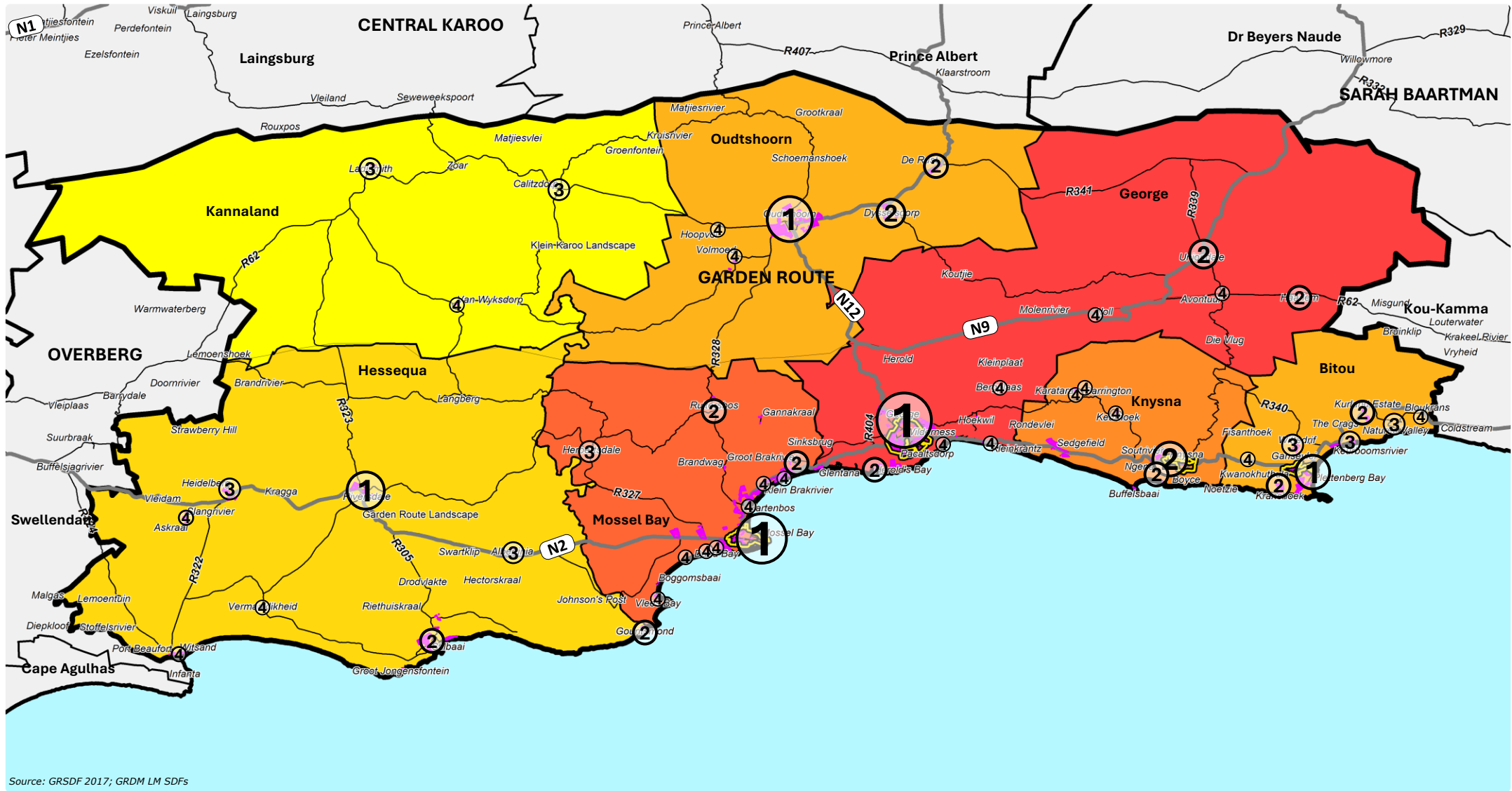
Source: GRSDf 2017; GRDM LM SDFs

- A District Municipality
- A Local Municipality
- Towns and Settlements
- National Roads
- Main Roads
- 1 1<sup>st</sup> Order Node
- 2 2<sup>nd</sup> Order Node
- 3 3<sup>rd</sup> Order Node
- 4 Rural Service Node
- PSHDA
- SDAs



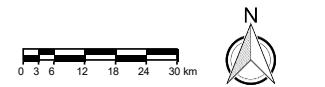
  
**Garden Route**  
 DISTRICT MUNICIPALITY  
 SDF 2025 Figure 53

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : HUMAN SETTLEMENT – HOUSING DEMAND



Source: GRSDf 2017; GRDM LM SDFs

- |                            |                       |
|----------------------------|-----------------------|
| District Municipality      | PSHDA                 |
| Local Municipality         | SDAs                  |
| Towns and Settlements      | <u>Housing Demand</u> |
| National Roads             | 0 – 10000 units       |
| Main Roads                 | 10000 – 15000         |
| 1 <sup>st</sup> Order Node | 15000 – 20000         |
| 2 <sup>nd</sup> Order Node | 20000 – 30000         |
| 3 <sup>rd</sup> Order Node | 30000 – 40000         |
| Rural Service Node         | 40000+                |



### Action 4.3: Promote the development of a diverse range of housing typologies offering multiple choices in terms of affordability, density and tenure options

It is important to facilitate the development of low, medium and high-density housing typologies (as graphically illustrated in **Diagram 35**) for low income, middle income and high-income communities throughout the district. Unfortunately, low density typologies dominate the urban landscape in the GRDM as is the case in all urban areas in South Africa.

In the case of low income, the subsidy scheme only makes provision for single residential full title BNG Units which normally result in densities around 20 units/ha which is very low.

The only subsidised medium to higher density typologies is Community Residential Units (CRU) and Social Housing, both of which only cater for the rental market. There are, however, several initiatives underway throughout South Africa to develop “RDP Flats” and/or medium density double storey row housing or semi-detached RDP units in order to increase density yields.

**Diagram 36** illustrates the comparison between high- to low-density housing and land optimization. The diagram provides a visual illustration of the typical building footprint and street cross sections.

The following housing programmes should be favoured in the Priority Housing Development Areas located in the urban and rural parts of the district respectively:

#### a) Urban Areas:

- ❖ **Land Acquisition** with a focus on acquiring land located within PSHDAs and Strategic Development Areas (SDAs);
- ❖ **Integrated Human Settlements/IRDP projects** on land suitable for mixed income development, including GAP market housing and rental stock;
- ❖ **Upgrading of Informal Settlements** in areas where the location of an existing informal settlement complies with the principles of spatial justice,

sustainability and efficiency and/or these settlements are located within the existing urban footprint or an identified PSHDAs and SDAs;

- ❖ **Social Housing and CRU** close to economic activity areas like Public Transport Corridors (Integration Zones); Township Hubs (in line with the Neighbourhood Development Partnership Grant (NDPG) and Central Business Districts, or in areas earmarked for urban renewal (Restructuring Zones), and
- ❖ **Inclusionary Housing projects** driven by the private sector and which comprise both bonded and subsidised housing, and which caters for full ownership and rental stock. In this regard it is proposed that the George, Mossel Bay, Knysna, Plettenberg Bay and Oudtshoorn Municipalities develop their own Inclusionary Housing Policies, based on the findings of the market studies done for these Municipalities (Refer to Section 3.6.4 of this document).

#### b) Rural Areas:

- ❖ **Rural Housing, Farm Worker Housing Assistance and Peoples Housing Programmes (PHP)** within the rural areas in the district with emphasis on areas around rural nodes in order to add to the “critical mass” required to sustain economic activity in these areas.

Precinct Plans for Rural Nodes should indicate Strategic Development Areas to accommodate orderly future human settlement development in these areas.

Precinct Plans can be developed to unpack and provide strategic direction.

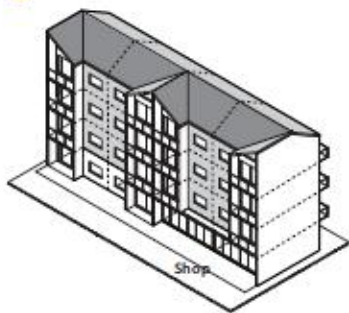
The various forest villages (**Figure 55**) can serve as a pilot to determine which forest village should be upgraded.

Diagram 35: Housing Typologies per Income Group



# Diagram 36: Housing Typology and Land Utilisation

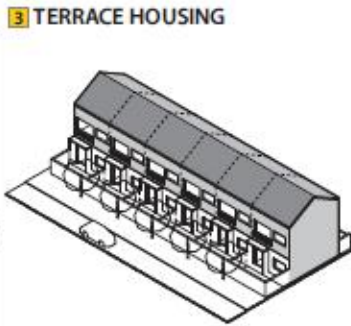
## BUILDING FORMS



Typically three or four stories tall, walk-up multi-family housing draws its name from its lack of elevator. It also relies on on-grade parking solutions.



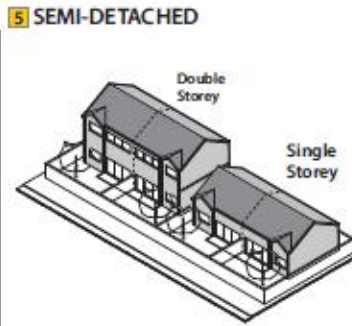
Cluster (or Clustering) is a site-planning technique that concentrates buildings and structures in specific areas on a lot, site, or parcel to allow the remaining land to be used for recreation, open space, or preservation of features or structures with environmental, historical, cultural, or other significance.



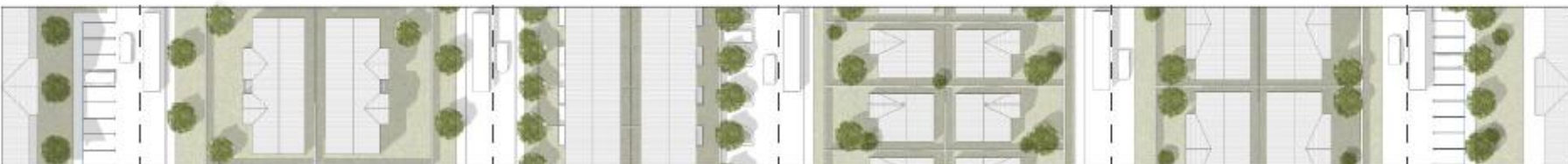
The terrace house is a dwelling that is joined to at least two other houses, usually of identical design, to form a row.



A row house is a type of townhouse that is created exclusively for a single family and has a shared wall with the other units. A row house has a fairly consistent architectural framework with an aesthetically beautiful design, however all of the units share a common facade.



A semi-detached house (often abbreviated to semi) is a single family duplex dwelling house that shares one common wall with the next house. The name distinguishes this style of house from detached houses, with no shared walls, and terraced houses, with a shared wall on both sides.

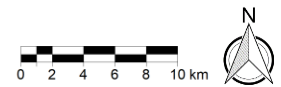


# GARDEN ROUTE DM SDF : FOREST VILLAGES



Source: WOF Forestry Support Program; Ex Plan, Google Earth 2025

- A District Municipality
- A Local Municipality
- Towns and Settlements
- National Roads
- Main Roads
- ★ Forest Villages



**Action 4.4: Consolidate community facilities at urban and rural nodal points to enhance “one-stop” access to such facilities for the community, and to contribute towards creating “critical mass” required to stimulate local economic development.**

The level of services (number of social facilities in relation to population) of social facilities is relatively high in the Garden Route District. The land reserved for social facilities is often underutilized which contributes to the sprawl of settlements.

In principle, the objective is to provide a full range of social services/ community facilities within a reasonable distance of all communities (urban and rural) in the district. These services need to be consolidated/ clustered together in precincts/ buildings (Thusong Centres) for maximum efficiency as there are spin-off benefits to be derived from such consolidation such as enhanced access to services; enhanced functionality of modal transfer facilities (bus/taxi ranks); increased economic potential (“critical mass”) in surrounding areas; and greater sense of “community identity” around such multi-functional areas.

Hence, it is proposed that a comprehensive range of social services/ community facilities be incrementally provided at all identified nodal points in the GRDM. The level of services provided needs to be in line with the proposed nodal hierarchy (i.e. higher order community facilities like hospitals, magistrates’ courts, tertiary education facilities, etc. located at the higher order nodes like: Mossel Bay, George, Plettenberg Bay, Riversdale, Oudtshoorn, Dysselford, De Rust, Uniondale, Haarlem.

Lower order facilities like primary schools, clinics, etc. should be provided more extensively in all third order/rural service nodes and neighbourhoods in the towns – preferably in close proximity to neighbourhood business nodes. In this manner, all communities in the district will be served with at least a basic range of social infrastructure.

In the rural nodes some of the facilities could even be in the form of mobile services: e.g. clinic, library, etc.

Furthermore, community facilities should be clustered together in an area or in a single building in order to provide a one-stop service – the so-called Thusong Center concept (see **Diagram 37**). Social Facility Departments will have different space requirements which may pose a challenge for the roll-out of Thusong Centres. However, it is proposed that the various community facilities still be clustered in the same vicinity/proximity.

Within settlements the following principles should guide the location of school sites:

- ❖ Situate school sites so that they are spatially connected with other public facilities and public transport within the area, even incorporating such facilities within one site or building (e.g. a municipal hall or library on the ground floor);
- ❖ Cluster schools into multi-use campuses in order to share the cost of amenities. By applying the principles of multi-functionality and clustering, several schools could share sports fields by combining their resources to create a functional, positive and active facility. Land that is not used for sports fields should be consolidated into high-density residential developments;
- ❖ Create a feasible management system for sharing facilities that are efficient and equitable;
- ❖ Integrate schools into the community. Key strategies include:
  - Removing barriers such as fences around schools and playing fields. Schools can be wrapped by infill housing and landscaping in order to reduce the maintenance cost of fences. This will aid in increasing surveillance or “eyes on the street” and as result, will improve safety on school sites.
  - Using trails, sidewalks, or bike paths to connect neighbourhoods to the school.

# MULTI-PURPOSE COMMUNITY CENTRE (MPCC) / THUSONG CENTRE CONCEPT

MPCC in Thekwane, Rustenburg, North West Province



Public-Private Partnership funded by Glencore Mine and Merafe Resources (R20-million)

Source: South African Business Website: <https://www.southafricanbusiness.co.za/08/2023/construction-and-engineering/r20-million-multi-purpose-community-centre-constructed-in-rustenburg/>

SASSA Grant Office



Multi-Purpose Courts



Home Affairs Office



Community Hall



Police Station



Clinic

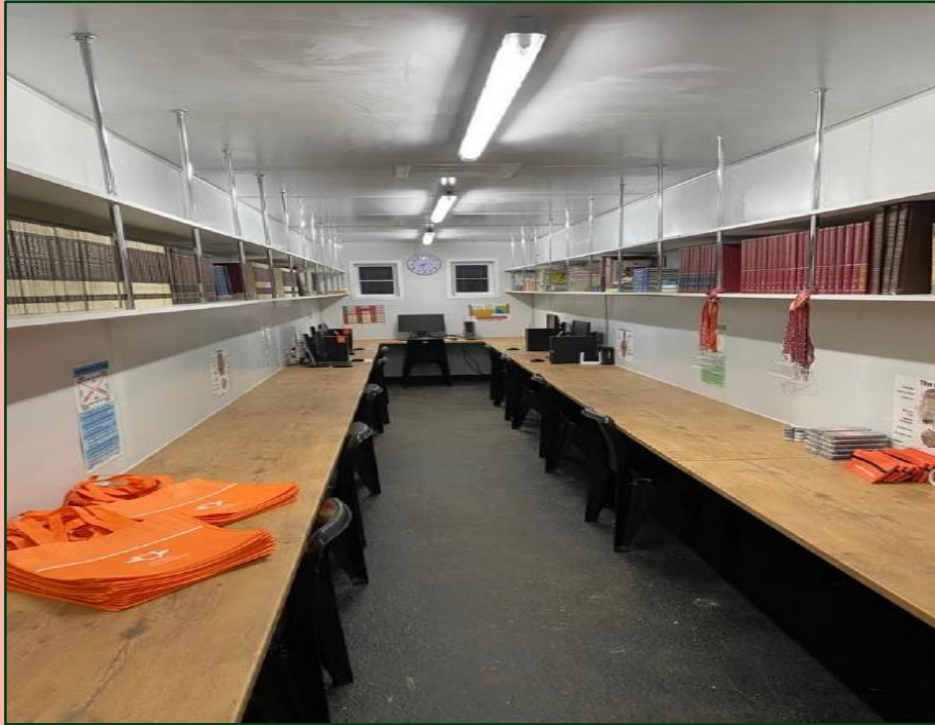


Peripheral mono-functional settlements cannot be sustained. Municipal development approvals should only be supported where compact, mixed use and integrated development are supported. Mobile, internet based, and period education systems and services should be delivered to settlements that are too small to require the provision of new school facilities.

Central wi-fi hotspots can be rolled out in the rural areas and at the various schools.

**Picture Page 1** illustrates the benefit of a central wi-fi hotspot where community members, including learners, can access the internet (School learners are able to do research and homework in the creche facility. The availability of connectivity can also be for the development of e-commerce at the economic sites) (*Gwakwani Project, Thohoyandou, Limpopo, University of Johannesburg*).

Library and Creche



Wi-Fi



*(University of Johannesburg,  
Department of Electrical and  
Electronic Engineering Services,  
Gwawkwani Project, February 2024)*

**OBJECTIVE 5: INFRASTRUCTURE**

**Objective 5: Align district infrastructure maintenance and construction programmes with spatial development directives.**

**Action 5.1: Align infrastructure planning, implementation and upgrading programmes with land use development programmes, while taking into consideration the environmental restrictions.**

Engineering services are a fundamental component in establishing sustainable human settlements and driving economic growth and job creation. Consequently, infrastructure investment within GRDM should be strategically directed toward supporting identified urban and rural nodes within the district.

More specifically, land-use proposals, PSHDAs, and SDAs within these nodes should guide the development of GRDM's future Capital Investment and Expenditure Framework for essential engineering services, such as water, sanitation, electricity, roads, and stormwater management.

The district must ensure adequate infrastructure capacity across all nodal points to foster local economic development and enhance service delivery. The key challenge lies in balancing improvements between emerging nodal areas and established urban centres. This should be achieved through an equitable Infrastructure Prioritisation Model for GRDM, based on the following principles:

- ❖ Address infrastructure backlogs by prioritizing large-scale improvements and incremental upgrades in areas with significant deficiencies, including historically underserved communities across GRDM.
- ❖ Direct funding toward engineering services in PSHDAs and SDAs, as these areas are central to upcoming housing projects in the district.

- ❖ Ensure ongoing maintenance and enhancement of engineering services in economic activity zones, including central business districts (CBDs) and industrial areas of towns.

GRDM, in collaboration with local municipalities, should continue efforts to expand formal water, sanitation, and electricity networks to provide universal access across urban and rural communities—ensuring services meet at least the Reconstruction and Development Programme (RDP) standards.

**Action 5.2: Promote the transition to “green technology/energy” and incrementally implement the Smart City Concept.**

In line with the Climate Change Mitigation Measures discussed under Action 1.4 in this report, the GRDM should focus on “green technology transitions” in order to ensure sustainable provision of engineering services over the short-, medium- and long-term. These Green Technology Transitions are summarised in the **Info Box** on the following page.

**Info Box: Green Engineering Services Transitions**

GRDM “Green” Engineering Services Transitions	
<b>Water:</b>	<ul style="list-style-type: none"> <li>❖ More stringent water conservation and demand-management initiatives;</li> <li>❖ Increase water-use efficiency and equitable distribution through appropriate regional distribution schemes and incentives;</li> <li>❖ Develop available groundwater resources;</li> <li>❖ Adopt the re-use of wastewater effluent as standard practice, and</li> <li>❖ Improve monitoring and reporting to ensure best practice and standards in water and wastewater management.</li> </ul>
<b>Energy:</b>	<ul style="list-style-type: none"> <li>❖ Promote and enable energy efficiency and demand side management;</li> <li>❖ Promote the development of renewable energy plants, and</li> <li>❖ Enhance universal access to clean, renewable energy services.</li> </ul>
<b>Transport:</b>	<ul style="list-style-type: none"> <li>❖ Invest in public transport and non-motorised transport (NMT), and</li> <li>❖ Promote and enable low carbon transportation and shift transport patterns to reduce reliance on liquid fuels.</li> </ul>
<b>Waste:</b>	<ul style="list-style-type: none"> <li>❖ Reduce waste volumes and increase recycling and re-use;</li> <li>❖ Introduce waste-to-energy initiatives in the longer term, and</li> <li>❖ Invest in clean technology and value adding to waste.</li> </ul>
<b>Information and Communication Technology:</b>	<ul style="list-style-type: none"> <li>❖ Establish a strong broadband and fibre infrastructure network to ensure efficient communications and internet services.</li> <li>❖ Expand ICT to all aspects of life in the district in line with the Smart City Concept as illustrated in Annexure G1.</li> </ul>

**Action 5.3: Prioritise Systems to Minimise Waste.**

The GRDM’s Waste Management Systems and Powers are set out in Section 84(1)(e) of the Municipal Systems Act. The GRDM is fulfilling its mandate with the construction of the Garden Route Regional Waste Management Facility.

As part of the Waste Management in GRDM the District and Local Municipalities should align to the following Waste Management Principles:

Waste Minimisation Principles
❖ <b>Level 1:</b> Reduce what you can. If you can’t reduce it then...
❖ <b>Level 2:</b> Re-use what you can. If you can’t re-use it then...
❖ <b>Level 3:</b> Recycle and compost what you can. What you can’t recycle is burned to...
❖ <b>Level 4:</b> Create energy for electricity. If it can’t create energy, then it is...
❖ <b>Level 5:</b> Disposed of in landfill. This is the LAST option.

To mitigate illegal dumping and manage organic waste effectively, the GRDM and LMs should establish community public offloading facilities. These facilities should be designed to support a separation-at-source model, ultimately reducing waste flows to landfill sites.

According to the National Environmental Management: Waste Act, community-level waste storage facilities should be strategically located to serve the population adequately. It is recommended that mini public offloading facilities be established with a capacity of 1,000 m<sup>3</sup> each, ensuring that no community needs to travel more than 5 kilometres to access these services.

In addition to local waste management facilities, the regionalisation of waste disposal in the GRDM requires consideration of transport linkages. Waste generated across the district is consolidated at the Garden Route Regional Waste Management Facility, making efficient and reliable transport routes critical for the timely and cost-effective movement of waste. Integrating the planning of regional waste disposal with road networks and vehicle logistics ensures that both

environmental and operational objectives are met, while minimising traffic impacts and emissions.

The Western Cape Organic Waste Diversion Plan has been taken into account in the formulation of this action. The plan requires municipalities to progressively divert organic waste away from landfill, achieving 50% diversion by 2022 and a complete ban by 2027, by promoting source separation, composting, and waste-to-resource initiatives. This Action therefore supports the provincial objective of minimising waste to landfill through integrated systems that encourage recycling, composting, and circular economy practices at both municipal and community levels.

#### **Action 5.4: Conduct a Coastal Infrastructure and Climate Risk Audit**

The GRDM should undertake a district-wide audit of coastal infrastructure to assess its condition, functionality, and exposure to coastal hazards. This audit should be spatially overlaid with coastal risk data available from the Department of Environmental Affairs and Development Planning (DEA&DP) to identify infrastructure most at risk from sea-level rise, storm surges, and shoreline erosion. The outcomes will support climate-resilient infrastructure planning, inform disaster risk management strategies, and guide future investment along the coastline.

#### **Action 5.5: Ensure Compliance With Coastal Discharge and Marine Disposal Regulations**

The GRDM contains extensive coastal assets that may be affected by wastewater discharges or offshore disposal activities associated with certain infrastructure and development projects. To ensure that infrastructure expansion aligns with responsible coastal management practices, all proposals with potential marine discharge or dumping components must comply with national permitting

requirements before implementation. This action strengthens environmental governance by creating a clear link between local planning processes and the regulatory functions of the Department of Forestry, Fisheries and the Environment (DFFE), ensuring that coastal water quality and ecosystem integrity are safeguarded.

Some actions in this regard may include:

- ❖ Require all coastal-related development applications to be screened to determine whether a Coastal Waters Discharge Permit (CWDP) or Dumping at Sea Permit may be triggered.
- ❖ Refer relevant applications to DFFE for confirmation of permit requirements prior to municipal decision-making.
- ❖ Incorporate national coastal permitting requirements into municipal development assessment procedures and pre-application consultations.
- ❖ Promote integrated coastal management by aligning local infrastructure planning with catchment management strategies, estuary management plans, and existing environmental authorisation processes.

#### **Action 5.6: Implement Integrated Water Resource Management and Sustainable Water Supply Measures.**

The GRDM faces growing pressure on its water resources due to population growth, economic development, and climate variability. To ensure long-term water security, the MSDF proposes a comprehensive approach to water demand management, protection, and rehabilitation of rivers, wetlands, catchments, and aquifers, aligned with the bulk water needs identified by local municipalities. This action promotes sustainable development by ensuring that new developments are phased in accordance with available water supply and by encouraging alternative water sources.

Some proposed actions in this regard include for the GRDM to:

- ❖ Develop and enforce water demand management strategies in partnership with local municipalities, including monitoring of consumption trends and the implementation of efficiency measures.
- ❖ Protect and rehabilitate rivers, wetlands, catchments, and aquifers through conservation initiatives, rehabilitation projects, and integrated catchment management plans.
- ❖ Promote sustainable urban water practices, such as rainwater harvesting, greywater reuse, and water-sensitive urban design in all new developments and retrofitting projects.
- ❖ Phase new developments in alignment with bulk water availability, ensuring that growth does not exceed sustainable supply capacity.
- ❖ Coordinate with district and local authorities to integrate water resource management into planning, infrastructure provisioning, and development approvals.
- ❖ Raise public awareness and incentivize water conservation among communities, businesses, and developers.

#### **OBJECTIVE 6: ECONOMIC DEVELOPMENT**

**Objective 6: To enhance the District's economic development by strengthening the tourism industry and expanding agriculture and other economic opportunities, while prioritising environmental sustainability and resource conservation.**

**Action 6.1: Consolidate and enhance the tourist characteristics of the district around the environment assets and anchors.**

The Garden Route District contains a number of tourist destinations and attractions ranging from the natural environment, adventure, eco-tourism and agri-tourism.

It is proposed that the marketing and coordination of tourism in the district should be GRDM under the brand Garden Route and Klein Karoo. The current attractions as illustrated on Figure 22 in this report should be maintained and enhanced. The following key attractions and “assets” of the district should be maintained to ensure the district remains a tourist destination for both local and international tourists:

- ❖ **Blue Flag Beach Programme** – blue flag status attracts eco-conscious tourists; supports coastal conservation and boasts local economics.
- ❖ **Adventure and Eco-Tourism Development** – activities like hiking, wild swimming, canoeing and bird watching (Aci-Tourism), diversify tourism offerings and appeal to niche markets.
- ❖ **Agri-Tourism and Linkages with Agriculture** – agri-tourism integrates agricultural activities (honeybush cultivation and ostrich farming) into tourist experiences. Agri-tourism strengthens rural economies; empowers emerging

farmers; and attracts tourists interested in sustainable and cultural experiences.

- ❖ **Infrastructure and Accessibility Improvements** – the District and Local Municipalities should continuously enhance tourist infrastructure (resorts, roads, infrastructure) to improve visitor experiences.

**Figure 56** in conjunction with Figure 24 illustrates the main tourist routes and destinations, with the Klein Karoo and Garden Route landscapes being the key resources.

#### **Action 6.2: Optimise agrarian transformation and grow inclusive agricultural economy.**

The primary and value adding component of the various agriculture products significantly contributed to the economy of the district. Protecting and promoting the agricultural economy is therefore a priority within the district. The preservation of agricultural land, especially high potential agricultural land should be a key consideration. The protected agricultural land as reflected on **Figure 57** should serve as a key strategic tool to guide development and to preserve high potential agricultural land. It should be incorporated in the various Local SDFs, and concerted effort should be made to prevent the further fragmentation. **Annexure H** outlines general agricultural guidelines which should be utilised for the preservation of protected agricultural land.

Figure 57 illustrates the main agricultural commodities, and it is proposed that the full value chain of the various commodities be fully explored. The required infrastructure (silos, packhouses, abattoirs, etc.) should be provided. Agri-processing should be focussed on the various nodes to benefit from the existing infrastructure.

The FPSU at Haarlem should continuously be supported by the Department of Land Reform and Rural Development through the department's mandate of agrarian transformation, land reform and rural development. Haarlem and any

other areas where land reform initiatives are underway need to be developed that it addresses all the elements highlighted in the Comprehensive Rural Development Model illustrated on **Diagram 38**.

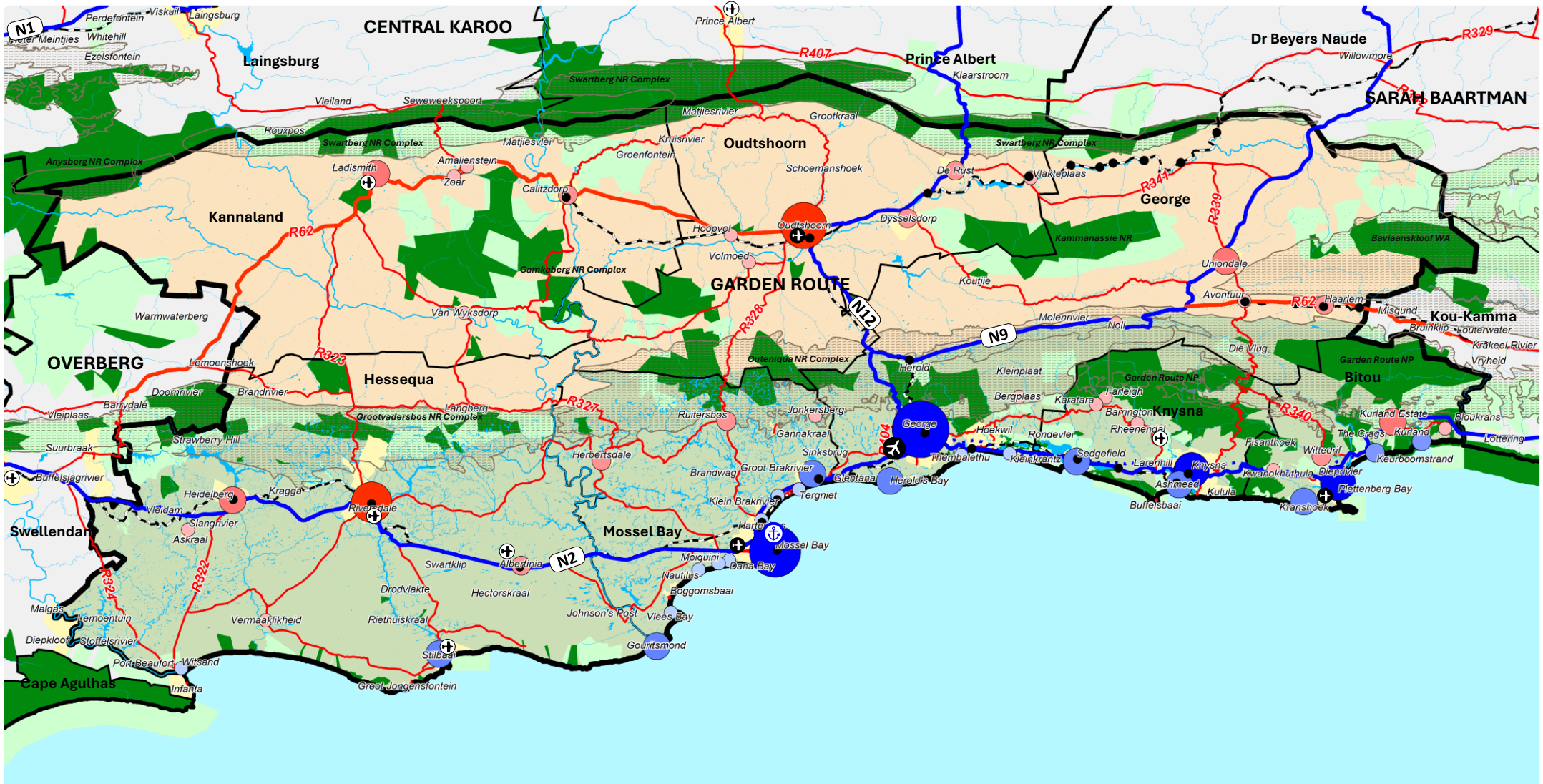
In cases where Land Reform initiatives are underway in such area, special attention also needs to be paid to the way in which beneficiaries are to be accommodated/ incorporated into the area. Beneficiaries may be individuals, e.g. emerging small scale commercial farmers having been allocated land to farm on, or it may be larger subsistence farming communities (forest villages) that need to be established in a sustainable manner (communal/individual) and with some form of tenure security (i.e. long-term permission to occupy from traditional leadership).

In the case of individual farmers, the Rural Development Precinct Plan needs to indicate how/ where these farmers will fit into the broader area and how their farming activities can/ should be aligned with surrounding, well established commercial farmers.

Sustainable human settlements in rural areas (in instances where it is not feasible to establish in urban areas) should be created around rural nodes as illustrated on **Diagram 39**. The provision of proper social infrastructure like housing and public amenities/ community facilities like schools, clinics, police stations, libraries etc. is paramount. These need to be clustered in line with the national Thusong Centre concept which could act as catalyst to local economic development. (Refer to Objective 4).

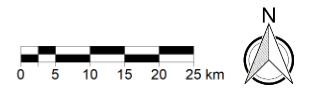
Engineering infrastructure is firstly required to meet the basic domestic needs of residents in the area. Secondly, engineering infrastructure should unlock the economic development potential of the rural area which is key to the long-term sustainability of the area.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : ECONOMIC DEVELOPMENT TOURISM



Source: SANBI-BGIS LUDS; SANBI-SAPAD; Cape Nature - WCBSP2023; NBA\_benthic\_and\_coastal\_protection.shp; DALRRD

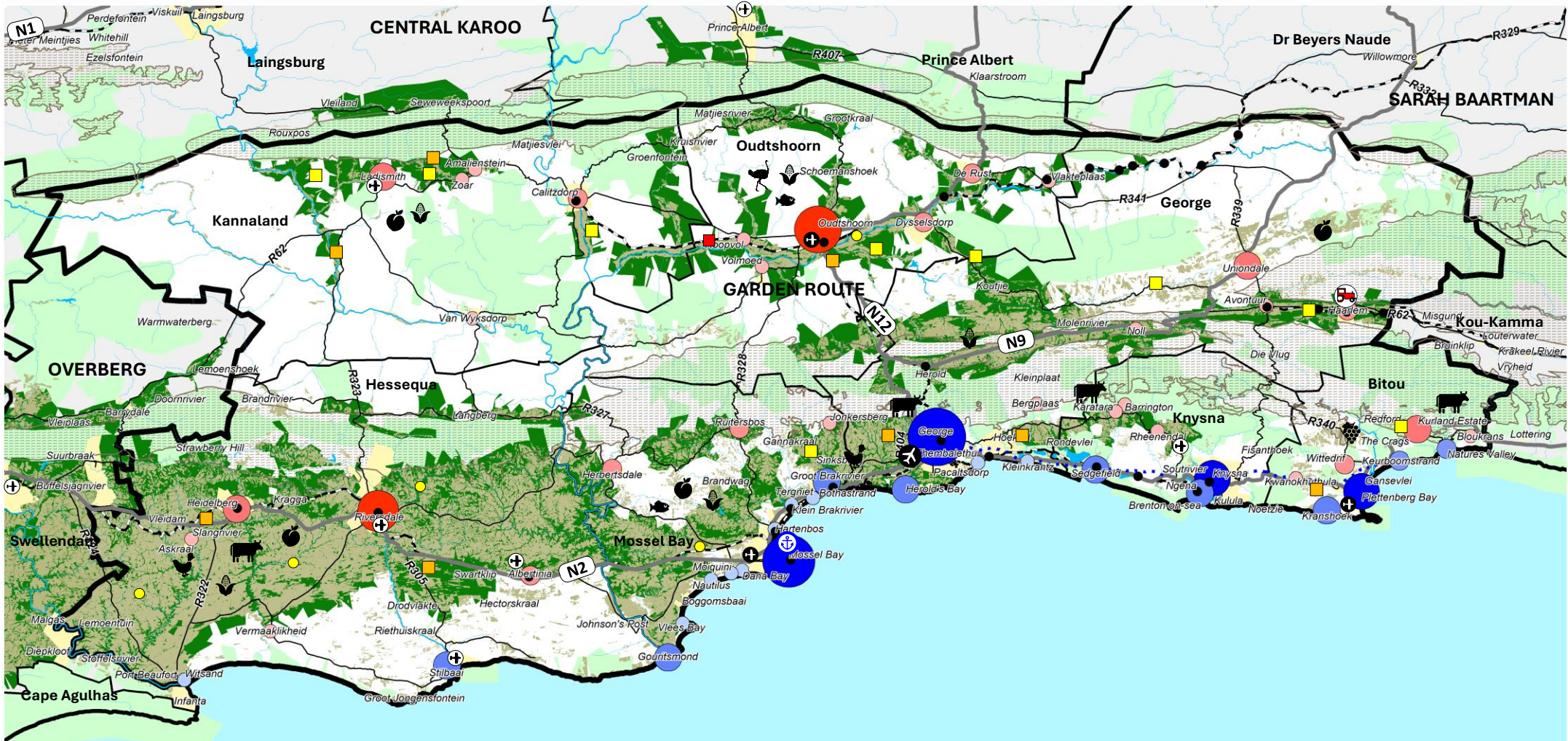
- |                       |                                    |                        |                                  |
|-----------------------|------------------------------------|------------------------|----------------------------------|
| District Municipality | 1 <sup>st</sup> Order Node Coastal | National Roads         | Tourism Routes                   |
| Local Municipality    | 1 <sup>st</sup> Order Node Inland  | Proposed N2 Bypass     | National Parks / Nature Reserves |
| Towns and Settlements | 2 <sup>nd</sup> Order Node Coastal | Main Roads             | Klein Karoo Landscape            |
| Mountain Range        | 2 <sup>nd</sup> Order Node Inland  | Railway Line           | Garden Route Landscape           |
| Protected Areas       | 3 <sup>rd</sup> Order Node Coastal | Railway Station        |                                  |
| Dams/Rivers/Estuaries | 3 <sup>rd</sup> Order Node Inland  | Airport                |                                  |
|                       | Rural Service Node Coastal         | Aerodrome              |                                  |
|                       | Rural Service Node Inland          | Airfield/Landing Strip |                                  |
|                       |                                    | Harbour                |                                  |



*Garden Route*  
DISTRICT MUNICIPALITY

SDF 2025 Figure 56

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : ECONOMIC DEVELOPMENT AGRICULTURE



Source: SANBI-BGIS LUDS; SANBI-SAPAD; Cape Nature - WCBSP2023; NBA\_benthic\_and\_coastal\_protection.shp; DALRRD

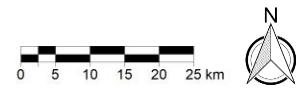
- A District Municipality
- A Local Municipality
- Towns and Settlements
- Mountain Range
- Protected Areas
- Dams/Rivers/Estuaries

- 1<sup>st</sup> Order Node Coastal
- 1<sup>st</sup> Order Node Inland
- 2<sup>nd</sup> Order Node Coastal
- 2<sup>nd</sup> Order Node Inland
- 3<sup>rd</sup> Order Node Coastal
- 3<sup>rd</sup> Order Node Inland
- Rural Service Node Coastal
- Rural Service Node Inland

- National Roads
- Proposed N2 Bypass
- Main Roads
- Railway Line
- + Railway Station
- + Airport
- + Aerodrome
- + Airfield/Landing Strip
- + Harbour

- Protected Agriculture
- Cultivated Land
- + FPSU
- Packhouse
- Agro Processing
- Agro Processing (Honeybush)
- Grain Storage
- Horticulture

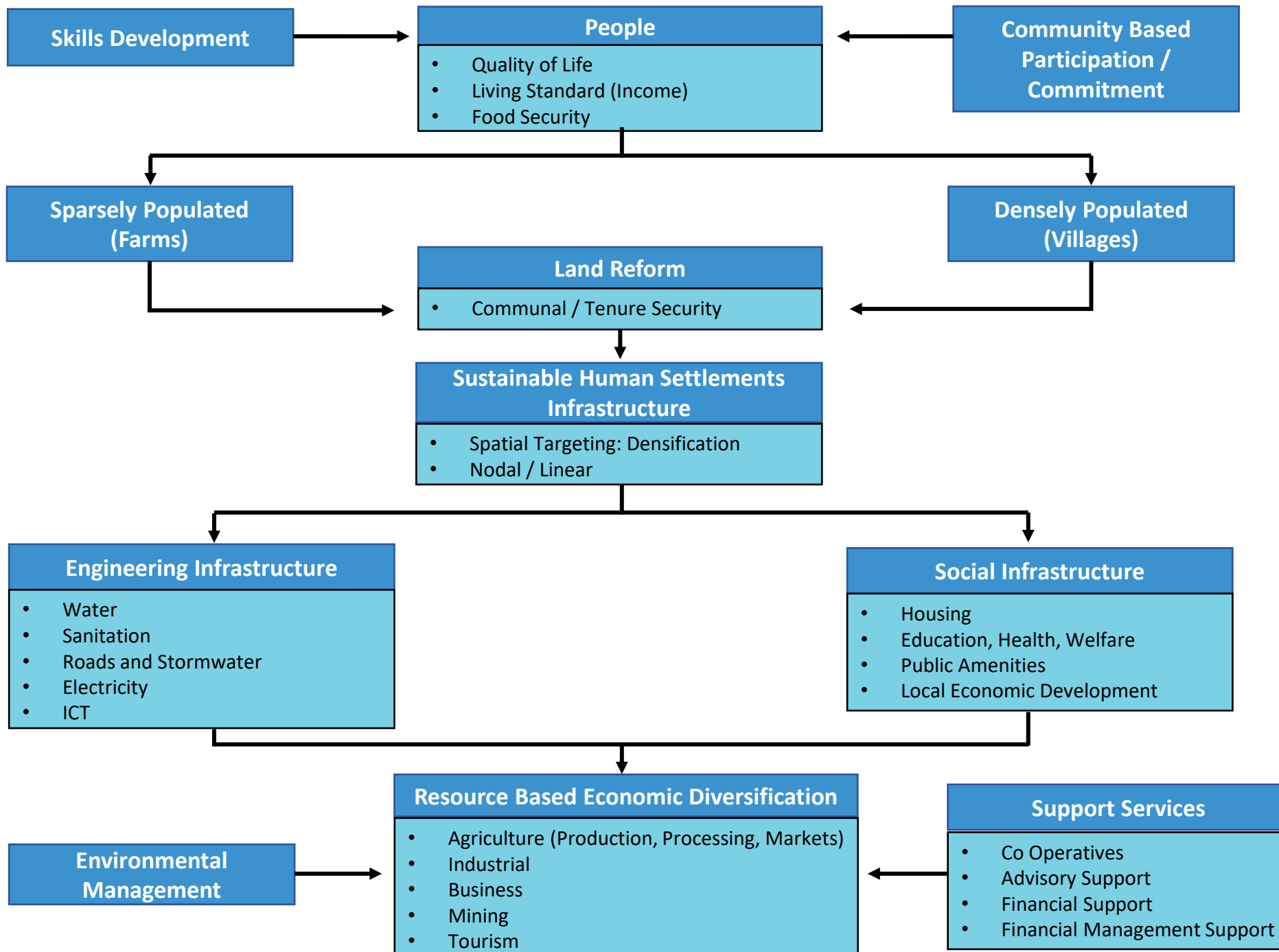
- 🍇 Viticulture
- 🌾 Grain/Hops etc.
- 🐔 Chickens
- 🐄 Dairy Farming
- 🐟 Aquaculture
- 🐪 Ostrich Farming



*Garden Route*  
DISTRICT MUNICIPALITY

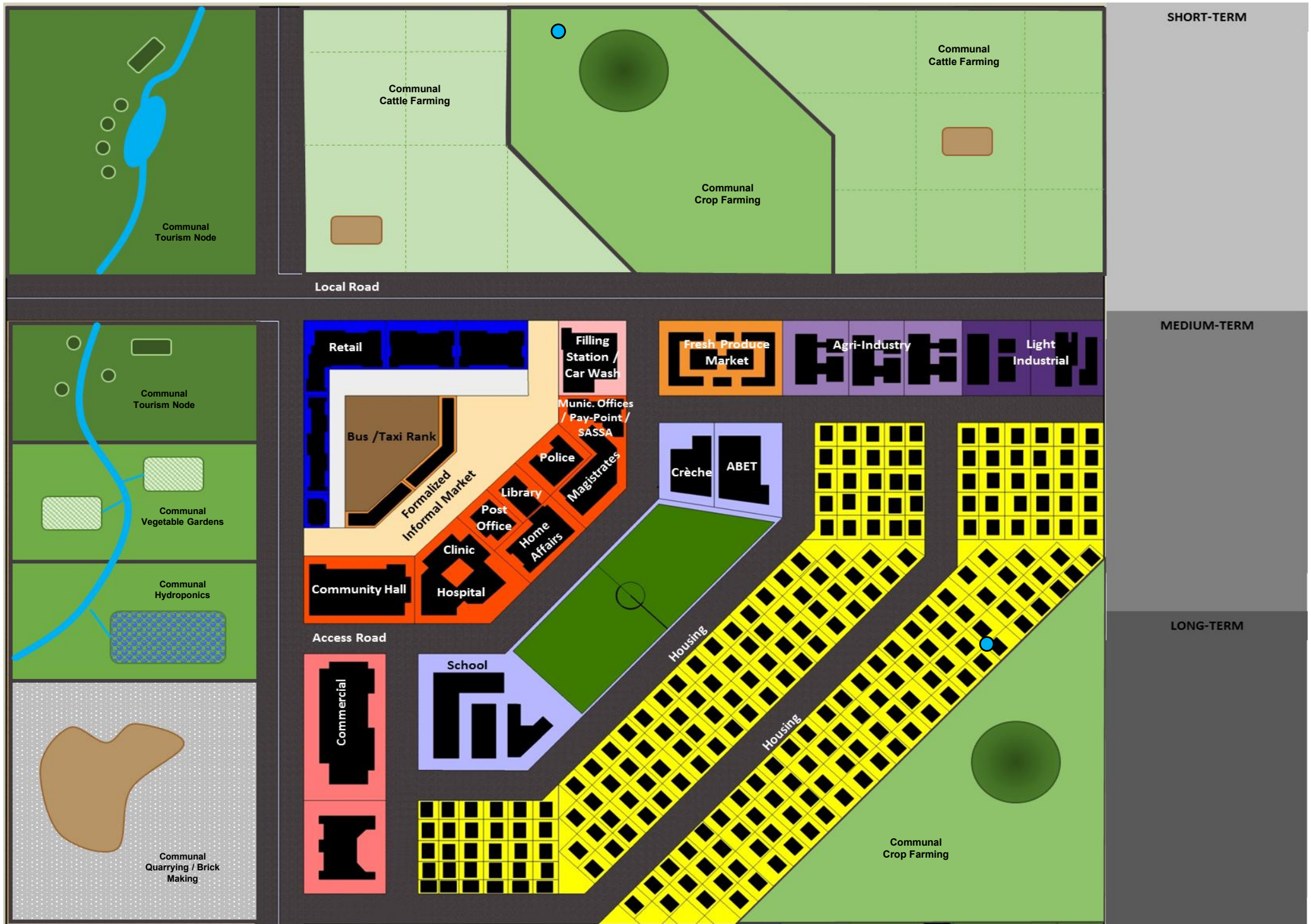
SDF 2025 Figure 57

Diagram 38: Sustainable Rural Development Components



INSTITUTIONAL SUPPORT : CO OPERATIVE GOVERNANCE

**Diagram 39: Rural Node Development Concept**



The next objective is to ensure that all economic potential related to agriculture, industry, forestry or tourism in the area is identified and a strategy be devised to optimise the benefits to be derived from these for the community. Amongst others, the strategy needs to address the following:

- ❖ Provision of sufficient economic infrastructure to facilitate production, storage, marketing and processing of commodities relevant to the area, and considering making use of existing industrial infrastructure for agro-industry purposes.
- ❖ Education and skills development, advisory support and mentorship, as well as financial management support to local stakeholders.
- ❖ Ensure that markets are locally available and accessible: Urban Rural Market Centres/ FPSUs, etc.

Apart from government involvement in the above three aspects, the private sector, including commercial farmers and/ or organised business (mining, forestry, industrial and tourism companies, etc.) could also play a significant support role to the emerging entrepreneurs.

Through successful implementation of the above approach a sustainable livelihood is ensured to all communities, and they become part of the mainstream rural and urban economy of the region.

### **Action 6.3: Facilitate Agrarian Transformation by supporting emerging farmers to become part of the mainstream economy through Emerging Farmer Upscaling Model.**

It is important that emerging farmers be supported in the Garden Route District as a means to contribute towards agrarian transformation, poverty alleviation, enhancing food security, and establishing sustainable livelihoods. This can be achieved by way of implementing a number of measures as defined in the Emerging Farmer Upscaling Model illustrated in **Annexure I2**.

- ❖ The aforementioned purpose can be achieved by means of the following projects:
  - ❖ Significantly increasing the yield per hectare (relative to extensive farming) and therefore providing more affordable food to the consumer.
  - ❖ Increasing land availability for agricultural purposes through partnerships with the current commercial farmers and land reform (where relevant).
  - ❖ Skills development in agriculture and farming practices.
  - ❖ Developing a partnership between established commercial farmers and the Agriculture FET College.
  - ❖ Encouraging the use of different crops and new planting, harvesting and processing techniques.
  - ❖ Land Reform Support to enhance access to the natural resources of the GRDM.
  - ❖ Supporting a variety of farming concepts including intensive commercial farming, small scale commercial farming, subsistence farming, aquaculture development, agri-villages, demonstration plots and agro processing industries.

**Action 6.4: Support Emerging farmers in Honeybush Production.**

Honeybush is primarily wild harvesters which contributes to a number of employment opportunities. Continuous support should be provided to the cultivation of honeybush to prevent the threatening of the biodiversity. The GRDM should continue with the support of an Agro-Processing Support project for harvested honeybush. Continuous support should be provided to farmers involved to address the following:

- ❖ **Capacity building and training** - to prevent over-harvesting and preservation;
- ❖ **Certification** – to assist small emerging farmers to become certified (organic) in order to access the market;
- ❖ **Land access** – provide access to land for cultivation (agrarian transformation).

Phases 2 and 3 of the Honeybush agro-processing facility at Oudtshoorn should be implemented. The initiative should be coupled with support to emerging farmers (Action 6.3). The initiative should also form part of the collective tourist attractions for the Greater Garden Route Area.

To maximise the impact and sustainability of the Honeybush agro-processing plant it is crucial to strengthen collaboration across all concerned departments and stakeholders. This includes not only the current partners, but also other relevant government departments, local communities, traditional leaders, academic institutions, and private sector actors involved. It is accordingly proposed that a Multi-Stakeholder Engagement Framework be prepared for the project to ensure inclusive planning, transparent decision-making and shared ownership by all stakeholders.

**Action 6.5: Implement programmes aimed at promoting economic upscaling of emerging entrepreneurs as part of the “Township Economy”.**

There is a wide variety of economic activities that can be pursued in a “Township Economy” as listed in **Annexure I3**. The GRDM should promote the establishment of as many as possible of these enterprises within the settlement areas in order to promote local economic development and job creation.

The GRDM LED Strategy should be designed around these potential activities – and further explore the viability of possible new emerging economies, which would best fit the GRDM.

Linked to the above, a variety of formalised informal trading structures should be encouraged at strategic locations within business areas and close to community facilities (Thusong Centres), public transport facilities and public open spaces within the GRDM.

Informal trading, skills training of informal traders, and proper management and regulation of designated informal trade areas should be dealt with as a consolidated SMME Support Programme in the GRDM and Local LMs.

**Action 6.6: Actively manage and maintain highest order business nodes (CBDs) in the district to accommodate retail, office and residential uses and timeously implement urban renewal programmes where necessary.**

Business activity (including the formal and informal sectors) should be actively promoted in all the identified urban and rural nodes in the GRDM as depicted on **Figure 58**.

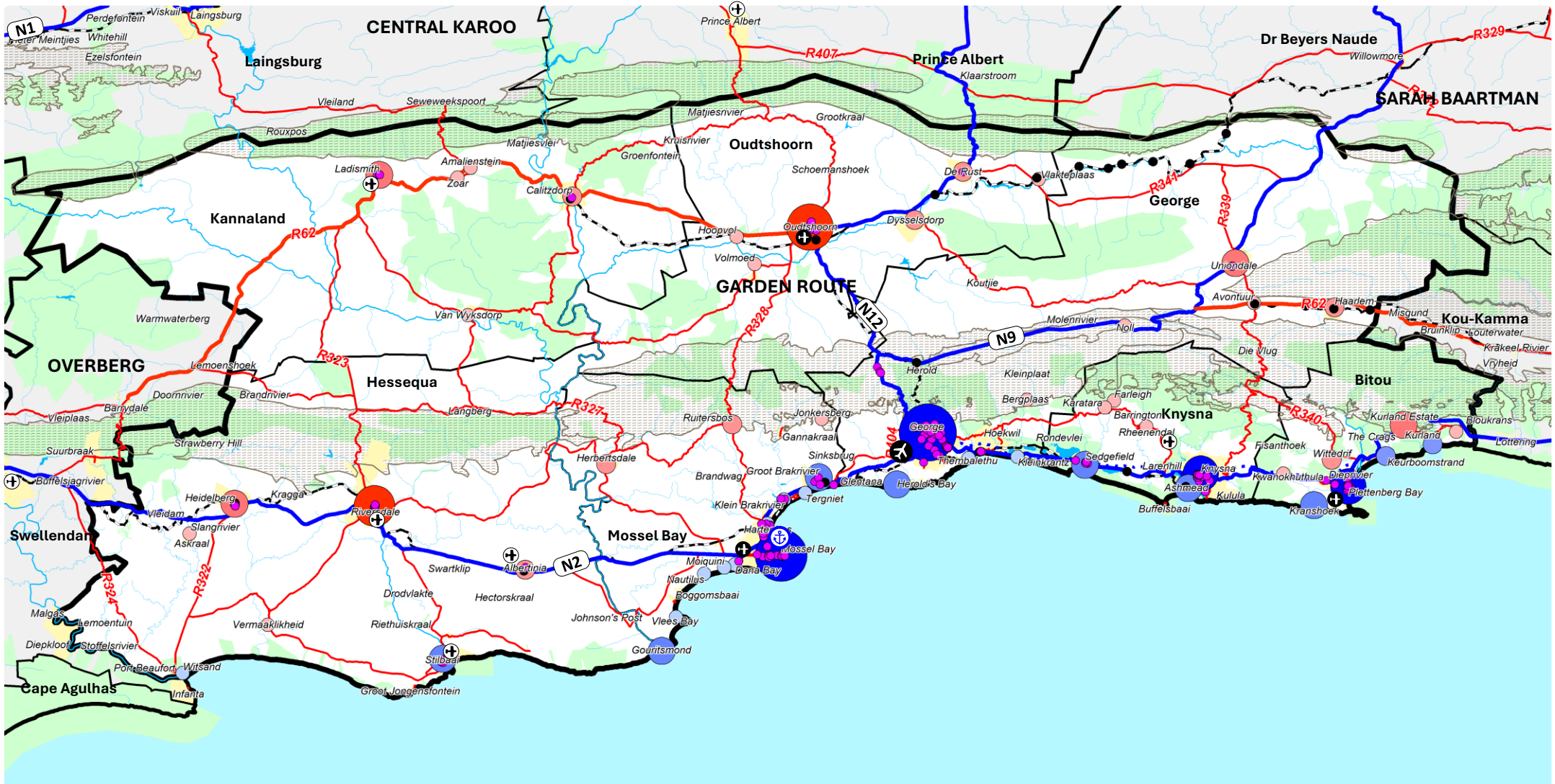
The Central Business Districts (CBDs) of all towns in the Garden Route District play an important role in serving the retail and office needs of communities but also represent significant opportunities for economic development and job creation to the informal sector.

Central Business Areas of towns should be treated as special precincts requiring dedicated management in order to prevent urban decay and/or the relocation of economic activities to decentralised business nodes. Decentralised nodes normally establish closer to the middle- and higher-income residential areas of towns at highly accessible locations which normally marginalise the disadvantaged communities of these towns even further.

When CBD areas in the GRDM show signs of urban decay and economic decline, special precinct plans (Urban Revitalisation/Urban Renewal Plans and Strategies) should be compiled. Such plans should be compiled in close liaison with local business in these areas as the success of such strategies/plans depends on public-private partnerships and cooperation.

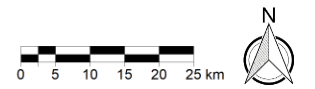
In the Third Order and Rural Service Nodes the GRDM should consolidate business activities around Thusong Centres (clusters of community facilities/services). The primary objective of this is to accommodate local economic development and further strengthen the economic viability of the identified nodal points by consolidating community facilities and social services at the same point.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : ECONOMIC DEVELOPMENT BUSINESS, INDUSTRIAL



Source: SANBI-BGIS LUDS; SANBI-SAPAD; Cape Nature - WCBSP2023; NBA\_benthic\_and\_coastal\_protection.shp; DALRRD

- |                       |                                    |                        |                                  |
|-----------------------|------------------------------------|------------------------|----------------------------------|
| District Municipality | 1 <sup>st</sup> Order Node Coastal | National Roads         | Economic Area (Shopping Centers) |
| Local Municipality    | 1 <sup>st</sup> Order Node Inland  | Proposed N2 Bypass     |                                  |
| Towns and Settlements | 2 <sup>nd</sup> Order Node Coastal | Main Roads             |                                  |
| Mountain Range        | 2 <sup>nd</sup> Order Node Inland  | Railway Line           |                                  |
| Protected Areas       | 3 <sup>rd</sup> Order Node Coastal | Railway Station        |                                  |
| Dams/Rivers/Estuaries | 3 <sup>rd</sup> Order Node Inland  | Airport                |                                  |
|                       | Rural Service Node Coastal         | Aerodrome              |                                  |
|                       | Rural Service Node Inland          | Airfield/Landing Strip |                                  |
|                       |                                    | Harbour                |                                  |



### Action 6.7: Utilise precision farming to minimise the impact of climate change on agriculture and to increase food production efficiency.

Against the backdrop of the limited water resources available in the region and in line with the “Smart Development” concept which aims to use ICT as a means to advance development, it is furthermore recommended that the GRDM promotes the introduction of Controlled Environment Farming/ Precision Farming in the urban and rural parts of the district.

This approach optimises the use of resources such as water, energy, and space, and could provide a means of income to a number of emerging/ small farmers in the rural areas and in townships. It also poses the opportunity to promote agri-tourism. (Refer to **Annexure I4** for more detail in this regard.)

Controlled Environment Agriculture is a technology-based approach toward food production including hydroponics, aquaculture, and aquaponics. The aim of CEA is to provide protection and maintain optimal growing conditions throughout the development of the crop which takes place within an enclosed growing structure such as a greenhouse or building. CEA optimises the use of resources such as water, energy, space, capital and labour (see **Info Box**).

#### INFO BOX: PRECISION FARMING TECHNIQUES

**Controlled Environment Agriculture** is a technology-based approach toward food production including hydroponics, aquaculture, and aquaponics. The aim of CEA is to provide protection and maintain optimal growing conditions throughout the development of the crop which takes place within an enclosed growing structure such as a greenhouse or building. CEA optimises the use of resources such as water, energy, space, capital and labour.

**Vertical Farming** is the practice of producing food in vertically stacked layers, such as in a skyscraper, used warehouse, or shipping container. The modern ideas of vertical farming use indoor farming techniques and controlled-environment agriculture (CEA) technology, where all environmental factors can be controlled. These facilities utilise artificial control of light, environmental control (humidity, temperature, gases ...) and fertigation. Some vertical farms use techniques similar to greenhouses, where natural sunlight can be augmented with artificial lighting and metal reflectors.

*“We believe strongly that vertical farming can be a driver for sustainability in cities, but it’s a young emerging industry with a very green face, focused on growing local, pesticide-free food, using less water, and creating potentially green jobs”. (Henry Gordon-Smith, vice chair of AVF).*

### **Action 6.8: Align tertiary education and skills development programmes to priority economic sectors.**

There is significant scope to enhance skills in a range of programmes (also refer to the list of possible economic activities as part of a Township Economy as depicted in Annexure I3). Care should be taken that local skills development centres are established in all the major nodes in the district and that the courses presented are aligned with the economic profile/resources (tourism/agriculture) available in the GRDM.

### **Action 6.9: Promote Technology Hubs and Digital Innovation for Economic and Spatial Transformation**

The GRDM should support the establishment and expansion of technology and innovation hubs to strengthen finance, business, and knowledge-intensive sectors. This action seeks to leverage digital infrastructure, skills development, and enterprise support to stimulate local economic growth, attract investment, and enhance employment opportunities, particularly in rural towns and underdeveloped nodes. By promoting digital innovation and clustering tech-oriented enterprises, the district can contribute to spatial transformation, encouraging compact and connected growth while reducing the urban-rural development gap. Some actions that would need to be taken include:

- ❖ Identify strategic locations within urban and rural nodes for tech hubs, co-working spaces, and digital incubators.
- ❖ Partner with provincial departments, universities, and private sector to provide technical, financial, and mentorship support for start-ups and SMEs.
- ❖ Facilitate high-speed internet and digital infrastructure deployment in targeted rural and semi-urban areas.

- ❖ Integrate tech hub development into municipal economic development and spatial planning strategies, aligning with the PSDF and Growth for Jobs Strategy priorities.
- ❖ Promote sector-specific clusters in finance, business services, and digital innovation to attract investment and encourage knowledge-sharing networks.

### **Action 6.10: Develop and Implement a District SMME Support and Development Framework**

Small, Medium and Micro Enterprises (SMMEs) play a central role in the GRDM economy, contributing to job creation, local innovation, and community-level economic resilience. However, many SMMEs face barriers such as limited access to finance, fragmented support services, regulatory constraints, and inadequate infrastructure. To strengthen the district's economic base, the GRDM should develop a comprehensive SMME Support and Development Framework that aligns municipal programmes, provincial initiatives, and private-sector opportunities. This framework should identify high-potential sectors, spatial clusters of economic activity, and locality-specific needs, while setting out targeted interventions to unlock entrepreneurship, improve market access, and support informal-to-formal business progression. By institutionalising a coordinated approach, the district can create an enabling environment that nurtures emerging enterprises and drives inclusive, sustainable economic growth.

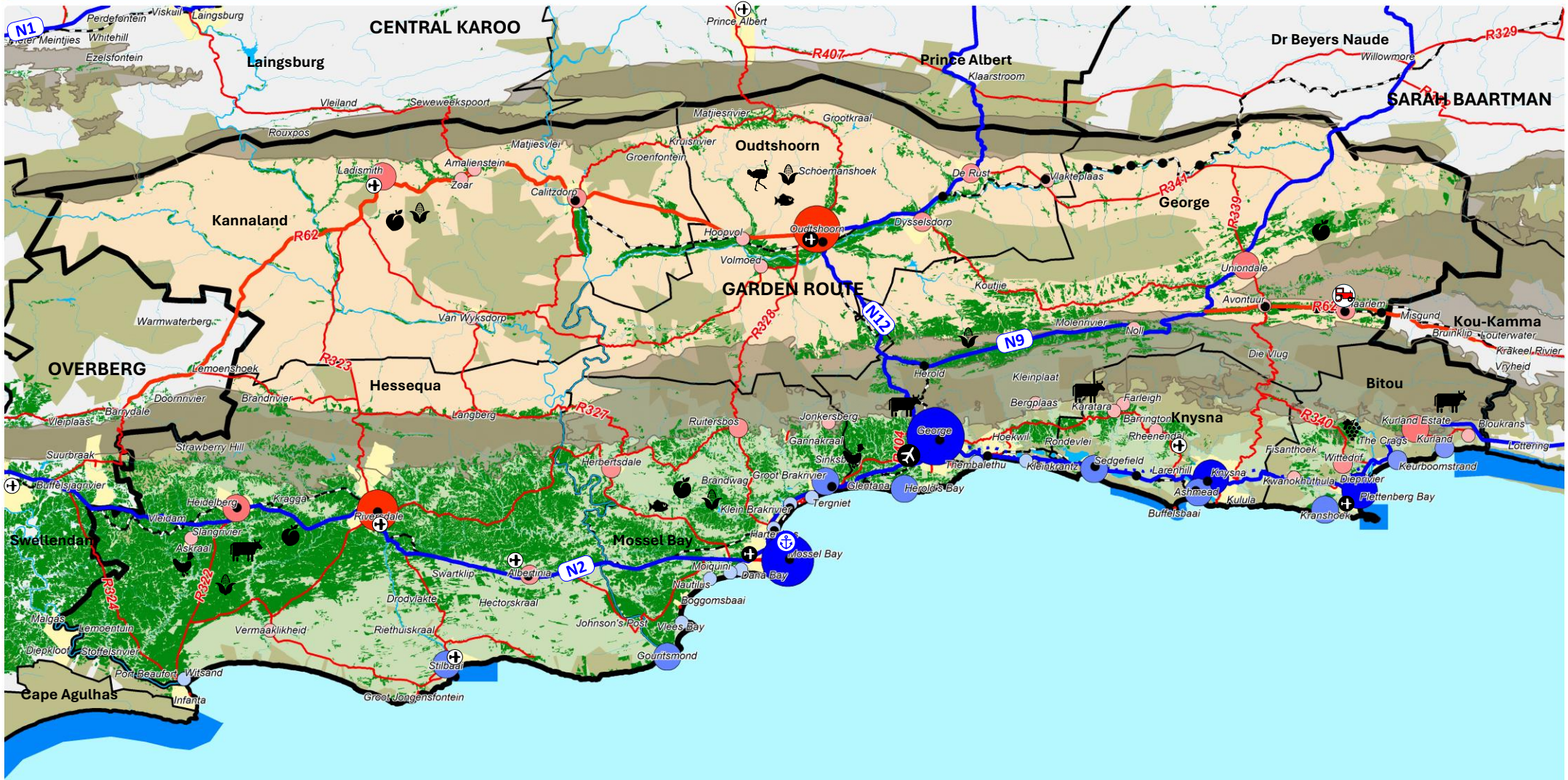
**Action 6.11: Commission a Comprehensive Heritage Study for all Municipalities within the GRDM**

The Garden Route District contains a diverse range of cultural, historical, architectural, and landscape heritage resources that contribute to local identity, tourism, and spatial character. However, many of these resources remain undocumented or insufficiently understood at a district scale, limiting the ability of municipalities to manage development in a way that safeguards heritage significance. A district-wide Heritage Study will provide an integrated spatial inventory of heritage assets, identify areas of high cultural landscape value, and establish grading or management guidelines that can be incorporated into municipal planning processes. This study will support more informed land-use decisions, ensure compliance with heritage legislation, and strengthen the role of heritage in shaping sustainable and place-sensitive development across the GRDM.

**4.4.3 Composite GRDM Spatial Development Framework**

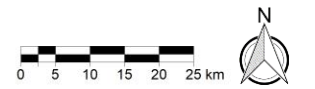
**Figure 59** represents the composite SDF for the Garden Route District Municipality, representing the spatial outcomes of the spatial strategies associated with each of the six development objectives of the GRDM SDF.

# GARDEN ROUTE DISTRICT MUNICIPALITY SDF : COMPOSITE SDF



Source: SANBI-BGIS LUDS; SANBI-SAPAD; Cape Nature - WCBSP2023; NBA\_benthic\_and\_coastal\_protection.shp; DALRRD

- |                        |                                    |                    |                                  |                 |
|------------------------|------------------------------------|--------------------|----------------------------------|-----------------|
| District Municipality  | 1 <sup>st</sup> Order Node Coastal | National Roads     | Airport                          | Cultivated Land |
| Local Municipality     | 1 <sup>st</sup> Order Node Inland  | Proposed N2 Bypass | Aerodrome                        | FPSU            |
| Towns and Settlements  | 2 <sup>nd</sup> Order Node Coastal | Main Roads         | Airfield/Landing Strip           | Viticulture     |
| Mountain Range         | 2 <sup>nd</sup> Order Node Inland  | East - West Links  | Harbour                          | Grain/Hops etc. |
| Protected Areas        | 3 <sup>rd</sup> Order Node Coastal | Coastal Links      | Economic Area (Shopping Centers) | Poultry         |
| Marine Protected Areas | 3 <sup>rd</sup> Order Node Inland  | Railway Line       |                                  | Dairy Farming   |
| Klein Karoo Landscape  | Rural Service Node Coastal         | Railway Station    |                                  | Aquaculture     |
| Garden Route Landscape | Rural Service Node Inland          |                    |                                  | Ostrich Farming |
| Dams/Rivers/Estuaries  |                                    |                    |                                  |                 |



## CHAPTER 5: IMPLEMENTATION FRAMEWORK



## 5.1 SECTORAL ALIGNMENT AND CAPITAL INVESTMENT FRAMEWORK

### 5.1.1 Capital Investment Framework: Priority Projects / Actions for Implementation

Following from the above, **Table 56** provides a list of priority projects to be initiated in the Garden Route District Municipality, based on the findings and spatial proposals contained in the GRDM SDF.

**Table 56: GRDM SDF Implementation Framework**

No.	PROJECT DESCRIPTION	RESPONSIBILITY/FUNDING SOURCE	ESTIMATED COST	PRIORITY		
				SHORT (1-2 YEARS)	MEDIUM (3-5 YEARS)	LONG (5+ YEARS)
<b>1: ENVIRONMENTAL MANAGEMENT</b>						
1.1	Apply land-use guidelines to protected areas and critical biodiversity areas to limit habitat loss.	GRDM Integrated Environmental Management, Local Municipalities Environmental Management and Planning Departments.	Operational	✓	✓	✓
1.2	Review and update the existing Garden Route DM Environmental Management Framework (EMF) 2010 and ensure alignment with the EMF's of the municipalities within the DM.	WCG DEA&DP, GRDM Integrated Environmental Management, Local Municipalities Environmental Management Departments.	R 800 000,00	✓		
1.3	Implement the Garden Route District Coastal Management Programme.	WCG Coastal Management Unit, GRDM Coastal Management and Environmental Management Departments, Local Municipalities Environmental Management and Planning Departments.	Operational	✓	✓	✓
1.4	Periodically review the coastal management lines.		Operational	✓	✓	✓
1.5	Implement climate change adaption and mitigation measures including:					
	<ul style="list-style-type: none"> <li>Energy: renewable energy (build wind energy parks) and energy efficiency measures</li> </ul>	WCG Department of Infrastructure & Provincial Energy Office, GRDM Environment & Climate Change Unit, Local Municipalities.	Operational	✓	✓	✓

No.	PROJECT DESCRIPTION	RESPONSIBILITY/FUNDING SOURCE	ESTIMATED COST	PRIORITY		
				SHORT (1-2 YEARS)	MEDIUM (3-5 YEARS)	LONG (5+ YEARS)
	(refurbish buildings, streetlights and encourage energy efficient new developments).					
	<ul style="list-style-type: none"> <li>Human Settlements: insulate RDP houses, renewable energy (solar heaters and geysers), energy efficiency (EE) (refurbish residential areas with LED lighting).</li> </ul>	WCG Department of Human Settlements(DHS), GRDM Human Settlements Directorate / Environmental & Climate Change Unit.				
	<ul style="list-style-type: none"> <li>Agriculture: implement Smart Agriculture practices that reduce methane emissions and encourage organic farming practices.</li> </ul>	DALRRD, WCG Department of Agriculture, Local Municipalities LED / Rural Development Departments.				
	<ul style="list-style-type: none"> <li>Transport: introduce efficient public transport routes with BRT, encourage bicycle use with designated bicycle lanes.</li> </ul>	GRDM Roads & Transport Planning / Mobility Directorate, Municipal Transport / Roads & Traffic Departments.				
	<ul style="list-style-type: none"> <li>Waste Management: introduce recycling indicatives within municipalities.</li> </ul>	WCG Department of Environmental Affairs & Development Planning (DEA&DP), GRDM Environmental Services / Waste Management Unit, Local Municipalities Waste Management / Solid Waste Services Departments.				
	<ul style="list-style-type: none"> <li>Biodiversity: plant indigenous trees, protect parks and open spaces.</li> </ul>	WCG DEA&DP, GRDM Environmental Management / Biodiversity & Climate Change Unit, Parks & Recreation / Environmental Management Units.				
	<ul style="list-style-type: none"> <li>Commercial and Industry: encourage and incentivise EE initiatives by industries.</li> </ul>	Western Cape Government — Green Economy & Energy Office / DEA&DP, GRDM Economic Development & Energy / Climate Change Directorate, Local Municipalities LED Units / Building Control / Infrastructure & Energy Services.				
1.6	Conduct a comprehensive Biomass Audit to clearly map the extent of invasive alien vegetation and old forestry plantations.	WCG Department of Environmental Affairs & Development Planning (DEA&DP), GRDM Integrated Environmental Management, Local Municipalities Environmental Management Departments.	R 600 000,00	✓		

No.	PROJECT DESCRIPTION	RESPONSIBILITY/FUNDING SOURCE	ESTIMATED COST	PRIORITY		
				SHORT (1-2 YEARS)	MEDIUM (3-5 YEARS)	LONG (5+ YEARS)
1.7	Mitigate fire risks and impact on disaster management through the establishment of a fire management agency and by implementing Veldfire Management Zones.	WCG Disaster Management & Fire Services / Environmental Affairs, GRDM Disaster Management & Fire Services Department, Local Municipalities Local Fire & Rescue Services.	Operational	✓	✓	✓
1.8	Protect and integrate Strategic Water Source Areas (SWSA's).	WCG DEA&DP, GRDM Environmental Management & Climate Change Unit / District Spatial Planning Unit, Local Municipalities Environmental & Planning / Water Services / Land Use Management.	Operational	✓	✓	✓
1.9	Strengthen Institutional Coordination for Ecological Coordination in the GRDM		Operational	✓	✓	✓
1.10	Introduce Strategic Trade-Off Zones in spatial planning.	WCG DEA&DP, GRDM Integrated Development Planning (IDP)/Spatial Planning Unit and Environmental Management Section, Local Municipalities Planning and Development Departments.	Operational	✓	✓	✓
1.11	Provide guidelines for Air Quality Management and Monitoring in Garden Route DM.	WCG DEA&DP, GRDM Air Quality Control Unit.	Operational	✓	✓	✓
<b>2: SPATIAL TARGETING</b>						
2.1	Prioritise development and investment inline with nodal hierarchy of GRDM SDF as follows:					
	<ul style="list-style-type: none"> <li>First Order: densification, infill development, mixed-use development in well located areas and highest order community facilities (Regional Hospitals, etc).</li> </ul>	WCG Departments (Transport & Public Works, Human Settlements, Health), GRDM Integrated Development Planning / Spatial Planning Units and Health Services, Local Municipalities Planning & Development Departments.	Operational	✓	✓	✓
	<ul style="list-style-type: none"> <li>Second Order: focus on providing a full complement of services to accommodate surrounding areas.</li> </ul>					
<ul style="list-style-type: none"> <li>Third Order: lower order community facilities and limited development to curb long-term economic burdens (engineering services, etc).</li> </ul>						
2.2	Promote and facilitate urban spatial transformation as follows:					
	<ul style="list-style-type: none"> <li>Contain urban sprawl with Urban Development Boundary.</li> </ul>		Operational	✓	✓	✓

No.	PROJECT DESCRIPTION	RESPONSIBILITY/FUNDING SOURCE	ESTIMATED COST	PRIORITY		
				SHORT (1-2 YEARS)	MEDIUM (3-5 YEARS)	LONG (5+ YEARS)
	<ul style="list-style-type: none"> <li>Support compact, mixed-use development within walking distance of public transport routes.</li> <li>New developments should be focused on public transport corridors and around existing economic nodes.</li> </ul>	GRDM Spatial Planning, Local Municipalities Planning & Development Departments (Land Use / Spatial Planning units).				
	<ul style="list-style-type: none"> <li>Investment should be focussed on the public environment (roads, reserves, sidewalks, parks, public open space, etc.) and linked to improved social infrastructure (community facilities).</li> </ul>	WCG Department of Transport and Public Works, GRDM Infrastructure / Engineering Services Departments and Social Development / Community Services Unit, Local Municipalities Planning and Development Departments and Engineering Departments.				
	<ul style="list-style-type: none"> <li>Economic hubs should be focussed in historically black townships.</li> </ul>	WCG Department of Economic Development and Tourism, GRDM Economic Development Unit, Local Municipalities LED Units and Planning and Development Departments.				
	<ul style="list-style-type: none"> <li>Existing informal settlements should be upgraded in-situ as far as possible.</li> </ul>	WCG DHS, GRDM Human Settlements / Housing Unit, Local Municipalities Planning and Development / Human Settlement Departments.				
2.3	Apply shortened land use procedures for developments within SEZ's	GRDM Economic Development Unit, Local Municipalities Planning and Development Departments.	Operational	✓	✓	✓
2.4	Build capacity within the District to enable active participation in approval of all planning applications and co-ordination of placement of social facilities.	GRDM Economic Development Unit, Local Municipalities Planning and Development Departments.	Operational	✓	✓	✓
2.5	Apply shortened land use procedures for human settlement developments categorised as B1 (NUSP) as well as human settlement projects within SDA's and PHDA's.	WCG DHS, GRDM Human Settlements / Housing Unit, Local Municipalities Planning and Development / Human Settlement Departments.	Operational	✓	✓	✓
2.6	Promote and facilitate rural spatial transformation as follows:					

No.	PROJECT DESCRIPTION	RESPONSIBILITY/FUNDING SOURCE	ESTIMATED COST	PRIORITY		
				SHORT (1-2 YEARS)	MEDIUM (3-5 YEARS)	LONG (5+ YEARS)
	<ul style="list-style-type: none"> <li>In remote areas - focus on provision of basic services and improving connectivity.</li> </ul>	WCG DHS, GRDM Infrastructure / Engineering Services Unit and Social / Community Services Unit, Local Municipalities Engineering Services Units and Planning & Development Departments.				
	<ul style="list-style-type: none"> <li>In rural areas with an established economic base and are well located - prioritise investment in economic infrastructure.</li> </ul>	WCG Economic Development and Tourism (DEDAT), GRDM Economic Development Unit, Local Municipalities Economic Development Units and Planning & Development Units.				
	<ul style="list-style-type: none"> <li>Direct funding for services, infrastructure and settlement development into designated development hubs.</li> </ul>	WCG Department of Transport and Public Works, GRDM Infrastructure / Engineering Services Departments and Social Development / Community Services Unit, Local Municipalities Planning and Development Departments and Engineering Departments.	Operational	✓	✓	✓
	<ul style="list-style-type: none"> <li>Cluster services including health, education, transport, welfare and security.</li> </ul>	WCG Department of Health (DoH) and Department of Education (DoE), GRDM Social Development / Community Services Unit, Local Municipalities Planning and Development Units and Community Service / Social Development Units.				
2.7	Prioritise connective infrastructure (e.g. Information and Communication Technology: internet, telephone, etc.).	GRDM Infrastructure / Engineering Services Unit, Local Municipalities Planning & Development Units and Engineering Services Departments.	Operational	✓	✓	✓
2.8	Municipalities need to develop or update their Densification Policies in line with the principles and strategies set out in the GRDM SDF.	Local Municipalities Planning and Development Departments.	Operational	✓	✓	✓
2.9	Target land reform programmes in most viable areas (high agricultural potential and access to markets).	DALRRD, WCG Department of Agriculture, Local Municipalities LED / Rural Development Departments.	Operational	✓	✓	✓

No.	PROJECT DESCRIPTION	RESPONSIBILITY/FUNDING SOURCE	ESTIMATED COST	PRIORITY		
				SHORT (1-2 YEARS)	MEDIUM (3-5 YEARS)	LONG (5+ YEARS)
2.10	Targeted investment in agrarian transformation (farming skills, infrastructure, etc.).		Operational	✓	✓	✓
2.11	Focus on the development of infrastructure for supporting non-farm activities such as tourism in areas with proven potential.	WCG Economic Development and Tourism (DEDAT), GRDM Economic Development Unit, Local Municipalities Economic Development Units and Planning & Development Units.	Operational	✓	✓	✓
<b>3: MOVEMENT NETWORK</b>						
3.1	Establish a safe and comprehensive road and rail network that promotes economic development and improves accessibility of previously disadvantaged communities to essential facilities.	Transnet, WCG Department of Transport and Public Works, GRDM Infrastructure / Engineering Services Departments, Local Municipalities Planning and Development Departments and Engineering Departments.	Operational	✓	✓	✓
3.2	Facilitate the opening of the Outeniqua Choo-Tjoe train which is underway.		Operational	✓	✓	✓
3.3	Revitalise the Diaz Express railway line between Mossel Bay and Hartenbos.		Operational	✓	✓	✓
3.4	Improve transport links between first order nodes and second/third-order nodal points along corridors to promote economic activity at nodal points.	WCG Department of Transport and Public Works, GRDM Infrastructure / Engineering Services Departments, Local Municipalities Planning and Development Departments and Engineering Departments.	Operational	✓	✓	✓
3.5	Upgrade and maintain roads and railway infrastructure in urban and rural areas.		Operational	✓	✓	✓
3.6	Prioritise the incremental upgrading of major routes including the N2, N12, R62, R323, R325 and R339.		Operational	✓	✓	✓
3.7	Encourage road based public transport system to act as a feeder service supplementing the proposed IPTN.		Operational	✓	✓	✓
3.8	Construct pedestrian and cycling lanes along priority pedestrian desire lines.		Operational	✓	✓	✓

No.	PROJECT DESCRIPTION	RESPONSIBILITY/FUNDING SOURCE	ESTIMATED COST	PRIORITY		
				SHORT (1-2 YEARS)	MEDIUM (3-5 YEARS)	LONG (5+ YEARS)
3.9	Prepare guidelines for managing regional routes in a small town urban environment in line with the concept of "Complete Streets".		Operational	✓	✓	✓
3.10	Ensure safe transport that caters to the needs of "special needs passengers" by upgrading public transport stops (ramps, tactile paving, priority seating) and implement training programmes for transport operator in assisting passengers with disabilities and mobility challenges.		Operational	✓	✓	✓
3.11	Investigate the viability of subsidised bus-taxi services.		Operational	✓	✓	✓
3.12	Review the impact of the proposed N2 bypass by considering the financial implications as well as possible landscape degradation.		Operational	✓	✓	✓
3.13	Implement the proposals of the Garden Route ITP.		Operational	✓	✓	✓
3.14	Improve freight, tourism and emergency management connection through:					
	<ul style="list-style-type: none"> <li>Upgrade key freight corridors to improve access to the N2 and inland logistics routes.</li> </ul>	WCG Department of Transport and Public Works, GRDM Infrastructure / Engineering Services Departments, Local Municipalities Planning and Development Departments and Engineering Departments.	Operational	✓	✓	✓
	<ul style="list-style-type: none"> <li>Establish designated truck lay-bys and loading zones along major freight routes.</li> </ul>					
	<ul style="list-style-type: none"> <li>Enhance signage and wayfinding along scenic tourist routes and coastal access roads.</li> </ul>					
	<ul style="list-style-type: none"> <li>Expand non-motorised transport routes connecting beachfronts, nature reserves and CBDs.</li> </ul>					
	<ul style="list-style-type: none"> <li>Upgrade strategic disaster evacuation routes and emergency access roads.</li> </ul>	WCG Disaster Management & Fire Services / Environmental Affairs, GRDM Disaster Management & Fire Services Department, Local Municipalities Local Fire & Rescue Services.				
<ul style="list-style-type: none"> <li>Establish shared emergency control and communication system across local municipalities.</li> </ul>						

No.	PROJECT DESCRIPTION	RESPONSIBILITY/FUNDING SOURCE	ESTIMATED COST	PRIORITY		
				SHORT (1-2 YEARS)	MEDIUM (3-5 YEARS)	LONG (5+ YEARS)
	<ul style="list-style-type: none"> <li>Improve firebreaks and access tracks in high-risk wildfire zones and mountain areas.</li> <li>Develop mobile emergency response units for rural and remote settlements.</li> </ul>					
<b>4: HUMAN SETTLEMENTS</b>						
4.1	Each municipality needs to identify Priority Housing Development Areas to consolidate the urban form, limiting further expansion by way of the introduction of an urban edge/urban development boundary.	WCG DHS, GRDM Human Settlements Unit, Local Municipalities Planning & Development and Housing / Human Settlement Units.	Operational	✓		
4.2	Land acquisition processes need to target land located within PSHSDAs and SDAs identified in Municipal Spatial Development Frameworks.		Operational	✓	✓	✓
4.3	Sufficient land should be reserved for the provision of socio-economic facilities to ensure sustainable human settlements are developed.	WCG Department of Health (DoH) and Department of Education (DoE), GRDM Social Development / Community Services Unit, Local Municipalities Planning and Development Units and Community Service / Social Development Units.	Operational	✓	✓	✓
4.4	Provide transitional relocation areas for displaced community members from areas affected by natural disasters.	WCG Disaster Management & Fire Services / Environmental Affairs, GRDM Disaster Management & Fire Services Department, Local Municipalities Local Fire & Rescue Services.	Operational	✓	✓	✓
4.5	Large-scale human settlement projects should be located in the areas with the highest economic potential and availability of bulk services.	WCG DHS, GRDM Human Settlements Unit, Local Municipalities Planning & Development and Housing / Human Settlement Units.	Operational	✓	✓	✓
4.6	Promote the development of RDP Flats and/or medium density double storey row housing or semi-detached RDP units in order to increase density yields for subsidised housing schemes.		Operational	✓	✓	✓

No.	PROJECT DESCRIPTION	RESPONSIBILITY/FUNDING SOURCE	ESTIMATED COST	PRIORITY		
				SHORT (1-2 YEARS)	MEDIUM (3-5 YEARS)	LONG (5+ YEARS)
4.7	Develop precinct plans for rural nodes to accommodate orderly future human settlement development.		R 800 000,00	✓		
4.8	Consolidate community facilities at urban and rural nodal points and incrementally provide community facilities at identified nodal points.	WCG Department of Health (DoH) and Department of Education (DoE), GRDM Social Development / Community Services Unit, Local Municipalities Planning and Development Units and Community Service / Social Development Units.	Operational	✓	✓	✓
4.9	Initiate the roll-out of central wi-fi hotspots in rural areas and at various schools.	WCG Department of Education and Department of Public Works, GRDM ICT / Infrastructure Unit, Local Municipalities Engineering / Municipal Services Unit and Community Services Unit.	Operational	✓	✓	
<b>5: INFRASTRUCTURE</b>						
5.1	Align infrastructure planning with land use development through an Infrastructure Prioritisation model for the Garden Route DM.	GRDM Infrastructure / Engineering Services Unit, Local Municipalities Planning & Development Units and Engineering Services.	Operational	✓	✓	✓
	Expand formal water, sanitation and electricity networks in urban and rural areas (meeting at least the RDP standards).		Operational	✓	✓	✓
5.2	Promote the transition to green technology/energy by updating development policies and engineering standards to require renewable-energy readiness, green building measures, fibre-ready networks and electric-vehicle charging infrastructure for new developments.		Operational	✓	✓	✓
5.3	Establish community waste offloading facilities to support a separation-at-source model, reducing waste flow to landfills.	GRDM Solid Waste / environmental Management Unit, Local Municipalities Environmental Management / Waste Services Unit.	Operational	✓	✓	✓
5.4	Conduct a Coastal Infrastructure and Climate Risk Audit	WCG DEA&DP, GRDM Infrastructure / Engineering Services Unit.	R 800 000,00	✓		

No.	PROJECT DESCRIPTION	RESPONSIBILITY/FUNDING SOURCE	ESTIMATED COST	PRIORITY		
				SHORT (1-2 YEARS)	MEDIUM (3-5 YEARS)	LONG (5+ YEARS)
5.5	Ensure compliance with Coastal Discharge and Marine Disposal Regulations	DFFE, GRDM Infrastructure / Engineering Services Unit, Local Municipalities Planning/ Land Use Units.	Operational	✓	✓	✓
5.6	Implement Integrated Water Resource Management Measures	WCG DEA&DP, GRDM Infrastructure / Engineering Services Unit.	Operational	✓	✓	✓
<b>6: ECONOMIC DEVELOPMENT</b>						
6.1	Consolidate and enhance tourist attractions of the DM including:		Operational	✓	✓	✓
	<ul style="list-style-type: none"> <li>Blue Flag Beach Programme status should be maintained and expanded further to other beaches in the DM.</li> </ul>	WCG Department Economic Development and Tourism. GRDM Economic Development / Tourism Unit, Local Municipalities Economic Development / LED / Tourism Units.				
	<ul style="list-style-type: none"> <li>Adventure and eco-tourism development.</li> </ul>					
	<ul style="list-style-type: none"> <li>Agri-tourism should be enhanced to strengthen rural economies.</li> <li>Continuously improve tourism infrastructure and accessibility.</li> </ul>					
6.2	Optimise agrarian transformation through the preservation and protection of high potential agricultural land.	WCG Department of Agriculture, GRDM Department of Agriculture / Rural Development and Spatial Planning Units, Local Municipalities Planning and Development Units.	Operational	✓	✓	✓
6.3	Explore the viability of a full value chain of agricultural products and provide required infrastructure (silos, packhouses, abattoirs, etc).	DALRRD, WCG Department of Agriculture, GRDM Department of Agriculture / Rural Development and Spatial Planning Units.	T.B.C	✓		
6.4	Continuously support and maintain the FPSU at Haarlem.	DALRRD, WCG Department of Agriculture.	Operational	✓	✓	✓
6.5	Develop a strategy to optimise the benefits of agricultural industry, forestry and tourism to surrounding communities.	DALRRD, WCG Department of Agriculture, GRDM Department of Agriculture / Rural Development and Spatial Planning Units.	T.B.C	✓		
6.6	Facilitate Emerging Farmer Upscaling Model to:		Operational	✓	✓	✓
	<ul style="list-style-type: none"> <li>Increase land availability for agricultural purposes through partnerships with current</li> </ul>	DALRRD, WCG Department of Agriculture, GRDM Department of Agriculture / Rural Development and Spatial Planning Units.				

No.	PROJECT DESCRIPTION	RESPONSIBILITY/FUNDING SOURCE	ESTIMATED COST	PRIORITY		
				SHORT (1-2 YEARS)	MEDIUM (3-5 YEARS)	LONG (5+ YEARS)
	commercial farmers and land reform (where relevant).					
	<ul style="list-style-type: none"> <li>• Skills development in agriculture and farming practices.</li> <li>• Developing a partnership between established commercial farmers and the Agriculture FET College.</li> <li>• Encouraging the use of different crops and new planting, harvesting and processing techniques.</li> <li>• Land Reform Support to enhance access to the natural resources of the GRDM.</li> <li>• Supporting a variety of farming concepts.</li> </ul>					
6.7	Support emerging farmers in Honeybush production through capacity building and training, certification and land access.	DALRRD, WCG Department of Agriculture, GRDM Department of Agriculture / Rural Development and Spatial Planning Units.	Operational	✓		
6.8	Implement Phase 2 and 3 of the Honeybush agro-processing facility at Oudtshoorn.	DALRRD, WCG Department of Agriculture, GRDM Department of Agriculture / Rural Development and Spatial Planning Units.	T.B.C	✓		
6.9	Encourage the establishment of a variety of "township economy" enterprises to promote local economic development and job creation.	WCG Department Economic Development and Tourism. GRDM Economic Development / Tourism Unit, Local Municipalities Economic Development / LED / Tourism Units.	Operational	✓	✓	✓
6.10	Develop formalised informal trading structures at strategic locations within the GRDM.	WCG Department Economic Development and Tourism. GRDM Economic Development / Tourism Unit, Local Municipalities Economic Development / LED / Tourism Units.	Operational	✓	✓	✓
6.11	Align tertiary education and skills development programmes to priority economic sectors.	WCG Department Economic Development and Tourism. GRDM Economic Development / Tourism Unit, Local Municipalities Economic Development / LED / Tourism Units.	Operational	✓	✓	✓

No.	PROJECT DESCRIPTION	RESPONSIBILITY/FUNDING SOURCE	ESTIMATED COST	PRIORITY		
				SHORT (1-2 YEARS)	MEDIUM (3-5 YEARS)	LONG (5+ YEARS)
6.12	Actively manage and maintain CBDs in the DM to accommodate retail, office and residential uses and timeously implement urban renewal programmes where necessary.	WCG Economic Development & Tourism, GRDM Economic development / LED Unit and Spatial Planning Unit, Local Municipalities Planning & Development Units and Economic Development Units.	Operational	✓	✓	✓
6.13	Promote the introduction of precision farming in the urban and rural parts of the district.	DALRRD, WCG Department of Agriculture, GRDM Department of Agriculture / Rural Development and Spatial Planning Units.	Operational	✓	✓	✓
6.14	Develop and Implement a District SMME Support and Development Framework	WCG Department Economic Development and Tourism. GRDM Economic Development / Tourism Unit, Local Municipalities Economic Development / LED / Tourism Units.	R 1 Mil	✓		
6.15	Commission a Comprehensive Heritage Study of all Local Municipalities in the DM	WCG Heritage, Local Municipalities	R 1,3 Mil	✓		

### 5.1.2 Sectoral Alignment and Implementation

**Diagram 40** illustrates the context of the GRDM SDF within the broader municipal institutional environment which is briefly summarised as follows:

- ❖ The GRDM has a set of legally mandated powers, duties and functions assigned to it in terms of the provisions of the Municipal Structures Act.
- ❖ The powers, duties and functions of the district municipality translate into a number of sectors departments / units like transport, environment, engineering services, economic development etc. Most of these sectors are guided by sector specific policies and legislation and are required to compile sector plans aligned to these. For example, and Integrated Transport Plan (ITP) is compiled in terms of the requirements of the National Land Transport Act and a Water Services Development Plan (WSDP) in terms of the Water Services Act.
- ❖ Sector Plans deal with the existing environment within the district and the planned/proposed future environment (3, 5, 10 years or longer into the future). In the existing environment the focus is on maintenance, renewal, upgrading and backlog eradication. The future environment deals with the expansion of the settlement areas which also provide opportunities for spatial restructuring and integration.
- ❖ It is essential that these sector plans are all based on a common Vision for the district area. Such Vision is normally based on/derived from the National Vision (NDP), a Provincial Vision and /or District/Municipal Vision documents.
- ❖ The GRDM SDF represents the Spatial Vision for the district area, and it serves to provide guidance in this regard to all the other sectors as well.
- ❖ When the SDF is compiled (during the Situational Analysis) it is informed by all the other sectors inputs e.g. the Environmental Management Plan may indicate all areas to be earmarked for protection (core, buffer etc.), the Water Services Development Plan may indicate the areas most suitable or

unsuitable to provide engineering services, and the Housing Plan may provide information on areas earmarked / acquired for future development.

- ❖ The SDF considers all these inputs, identify spatial contradictions and then formulates a consolidated spatial plan (based on growth projections) which earmarks specific areas in the district for different future land uses e.g. the future open space system; the priority housing development areas, economic activity areas, areas for future community facilities, consolidated movement network serving all these areas etc.
- ❖ When the sector plans are revised in future, these plans should be based on the SDF growth projections and be informed by the proposed location, extent and nature of land use proposed in the GRDM SDF. This process is referred to as sectoral alignment.
- ❖ There are also some cross-cutting themes that need to be addressed by all sectors within the GRDM. These include aspects such as job creation, promoting the green agenda, introduction of smart technology and overall sustainability enhancement.
- ❖ In this way it is ensured that all projects identified by the various sector plans are spatially aligned and that all infrastructure investment within the municipality is congruent with the broader development vision as captured in the GRDM SDF.
- ❖ Collective sectoral investment in the correct areas within the GRDM area over an extended period of time will inevitably result in enhanced spatial justice, efficiency, sustainability and resilience, and effectively represents good administration – the five principles of SPLUMA.

National Grants (MIG, USDG, HSDG, PTIG, NDPG) and Provincial Allocations

# GARDEN ROUTE DISTRICT MUNICIPALITY

Private Sector Contributions

## Powers, Duties and Functions

Policies and Legislation

- Land Use
- Environment
- Housing
- Social Facilities
- LED
- Transport
- Roads & Stormwater
- Water & Sanitation
- Electricity
- Waste
- Safety & Security

Sector Plans

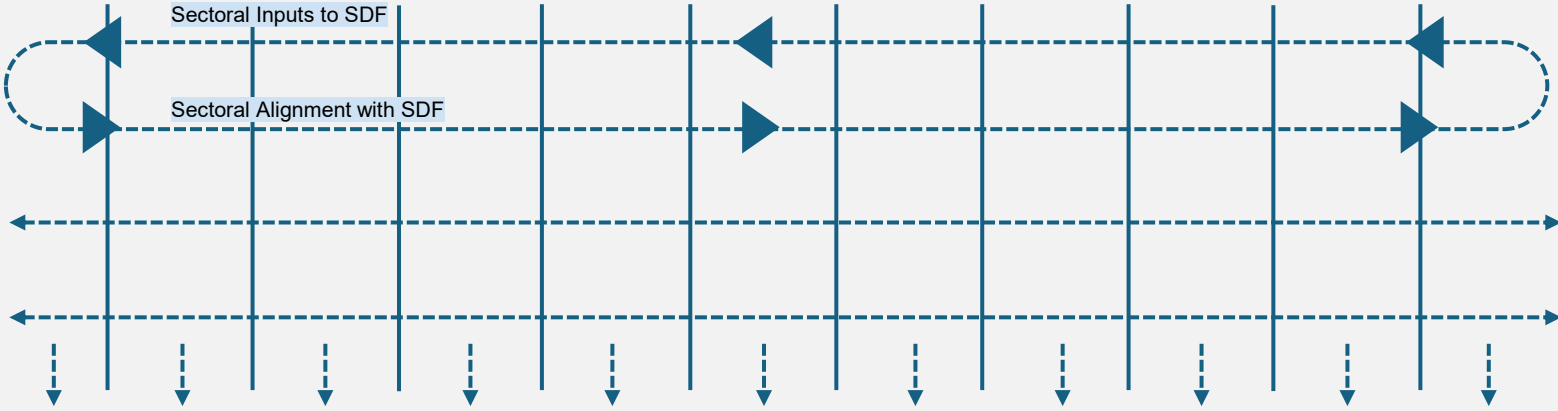
SDF	EMP	HSP	MP	LED	ITP	R&S MP	WSDP	EMP	WMP	DMP, etc.
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**Existing Environment**

Maintenance, Renewal, Upgrading and Backlog Eradication

**Future Environment**

Restructuring, Integration and Expansion



2025

IDP (Issues / Strategies / Projects) and MTEF (2025/2028)

Annual Budget

National / Provincial / Local

VISION 2040

**Sector Plan Alignment**

**SPLUMA**

- Spatial Justice
- Spatial Sustainability
- Efficiency
- Spatial Resilience
- Good Administration

**Cross Cutting Objectives**

- Job Creation
- Green Energy
- Smart Technology
- Sustainability

### 5.1.3 Implementation and Alignment with IDP

It is important to note that the GRDM SDF forms part of the Integrated Development Plan of the Municipality (in line with section 26 (e) of the Municipal Systems Act) and that it does not represent a parallel process thereto. The SDF related projects/initiatives which are deemed critical towards the future development of the district were identified and included in the Capital Investment Framework.

The next step would be for these projects to be incorporated into the GRDM IDP (Refer to **Diagram 41**). For example, the proposed environmental projects/actions emanating from the SDF should feed into the Objectives, Strategies and Projects under Environmental and Health Services in the municipal IDP from where the projects are incorporated into the budgeting process of the Municipality.

Many of the projects following from the SDF may already be listed in the IDP, but the SDF may serve to better illustrate the strategic significance and spatial logic of such.

In essence, the SDF incorporates, aligns, and integrates various sectoral spatial issues and highlight the functional relationship between these e.g. the importance of the construction of a certain section of road to unlock the development potential of a specific underdeveloped area.

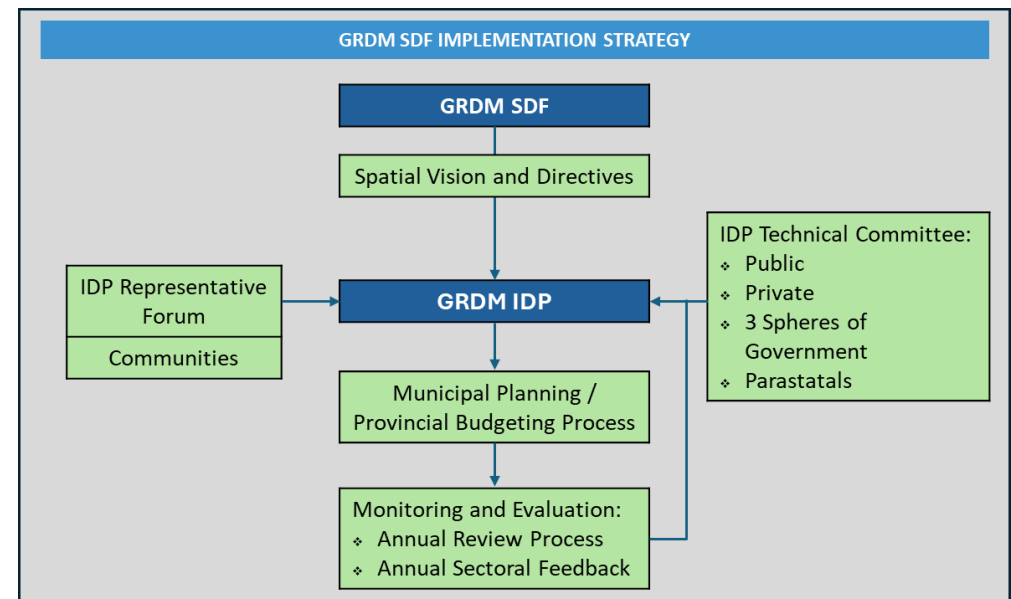
Another important aspect to consider is the fact that a SDF does not entail the compilation of a number of sectoral studies as part of the process. Instead, it rather focuses on capturing the findings and recommendations of various sectoral studies and superimposing these spatially over each other in order to identify contradictions and to assess the collective impact these may have on the area.

In this way the SDF provides a multi-sectoral, integrated perspective on future development in the GRDM. Having identified the important projects/initiatives

to be implemented following from the SDF, it is important for GRDM officials to continuously monitor whether these projects/initiatives are being incorporated into the relevant development Objectives, Strategies and Projects in the IDP of the District Municipality, and that these projects are appropriately prioritised in the budgeting process, from where implementation will follow.

This is a continuous process which should be followed as part of the annual IDP Review Process and should also be dealt with as part of the annual Performance Management Assessment.

**Diagram 41: GRDM SDF Implementation Strategy**



### 5.1.4 Monitoring Indicators

The indicators outlined below focus on measurable outputs and outcomes that can be monitored annually and incorporated into IDP performance reporting cycles. They are designed to be practical, easy to track, and aligned with the nature of each project, ensuring that the GRDM is equipped with a functional and results-oriented monitoring system.

**Table 57** summarises the various Monitoring Indicators that could be used, per objective to ensure easy alignment with the Implementation Framework.

**Table 57: GRDM Monitoring Indicators**

GRDM IMPLEMENTATION PLAN MONITORING INDICATORS	
Objective 1: Environmental Management	
Project / Action:	Monitoring Indicators:
1.1 Land-use Guidelines for Protected & CBA Areas	<ul style="list-style-type: none"> <li>❖ Number of land-use applications assessed against guidelines</li> <li>❖ % of new developments complying with guidelines</li> <li>❖ Change in CBA loss per year (ha/year)</li> </ul>
1.2 Review and Update EMF	<ul style="list-style-type: none"> <li>❖ Completion of EMF review (% progress)</li> <li>❖ Number of municipalities aligned to updated EMF</li> <li>❖ Adoption of the EMF by GRDM Council (Yes/No)</li> </ul>
1.3 Coastal Management Programme	<ul style="list-style-type: none"> <li>❖ % of CMP actions implemented</li> <li>❖ Number of upgraded coastal access points</li> <li>❖ Annual coastal monitoring reports completed</li> </ul>
1.4 Review of Coastal Management Lines	<ul style="list-style-type: none"> <li>❖ Frequency of reviews (years)</li> <li>❖ Updated coastal line maps produced (Yes/No)</li> </ul>
1.5 Climate Change Adaptation & Mitigation – Energy	<ul style="list-style-type: none"> <li>❖ Number of renewable energy installations approved</li> <li>❖ % of municipal buildings retrofitted</li> <li>❖ MW of renewable energy generated</li> </ul>

Climate Change: Human Settlements	<ul style="list-style-type: none"> <li>❖ Number of RDP houses insulated/retrofitted</li> <li>❖ % of new housing projects with solar geysers</li> <li>❖ Reduction in electricity consumption (kWh)</li> </ul>
Climate Change: Agriculture	<ul style="list-style-type: none"> <li>❖ Number of farms adopting Smart Agri practices</li> <li>❖ Hectares under organic farming</li> <li>❖ Reduction in agricultural methane emissions (est.)</li> </ul>
Climate Change: Transport	<ul style="list-style-type: none"> <li>❖ Km of BRT/priority routes established</li> <li>❖ Km of bicycle lanes installed</li> <li>❖ Increase in public transport ridership (%)</li> </ul>
Climate Change: Waste Management	<ul style="list-style-type: none"> <li>❖ Recycling rate (% diverted from landfill)</li> <li>❖ Number of new recycling initiatives launched</li> </ul>
Climate Change: Biodiversity	<ul style="list-style-type: none"> <li>❖ Number of indigenous trees planted</li> <li>❖ Hectares of parks/open space protected</li> </ul>
Climate Change: Industry	<ul style="list-style-type: none"> <li>❖ Number of industries adopting EE measures</li> <li>❖ kWh saved through EE initiatives</li> </ul>
1.6 Comprehensive Biomass Audit	<ul style="list-style-type: none"> <li>❖ % of district mapped for biomass</li> <li>❖ Volume (ha) of alien vegetation identified</li> <li>❖ Audit report completed and approved (Yes/No)</li> </ul>
1.7 Fire Management & Veldfire Zones	<ul style="list-style-type: none"> <li>❖ Establishment of agency (Yes/No)</li> <li>❖ Number of veldfire management zones demarcated</li> <li>❖ Reduction in wildfire incidents (%)</li> </ul>
1.8 Protect Strategic Water Source Areas	<ul style="list-style-type: none"> <li>❖ Hectares of SWSA under protection</li> <li>❖ Number of SWSA management agreements signed</li> </ul>
1.9 Air Quality Management & Monitoring	<ul style="list-style-type: none"> <li>❖ Number of air quality monitoring stations</li> <li>❖ Number of exceedances of national standards</li> <li>❖ Annual air quality report produced (Yes/No)</li> </ul>
1.10 Strategic Trade-Off Zones	<ul style="list-style-type: none"> <li>❖ STOZ guidelines developed (Yes/No)</li> <li>❖ Number of applications assessed using STOZ system</li> </ul>

Objective 2: Spatial Targeting	
Project / Action	Monitoring Indicators
2.1 Nodal Hierarchy Implementation	<ul style="list-style-type: none"> <li>❖ Number of developments in First/Second/Third-order nodes</li> <li>❖ % increase in density in First-order nodes</li> <li>❖ Number of mixed-use projects approved</li> </ul>
2.2 Urban Spatial Transformation – UDB	<ul style="list-style-type: none"> <li>❖ Number of deviations from UDB</li> <li>❖ % of development inside the UDB</li> </ul>
Compact Mixed-Use Development	<ul style="list-style-type: none"> <li>❖ Number of mixed-use developments approved</li> <li>❖ % of residents within 1 km of public transport</li> </ul>
Investment in Public Environment	<ul style="list-style-type: none"> <li>❖ Amount spent on public space upgrades</li> <li>❖ Number of upgraded sidewalks, parks, reserves</li> </ul>
Economic Hubs in Townships	<ul style="list-style-type: none"> <li>❖ Number of township economic projects initiated</li> <li>❖ Jobs created</li> </ul>
Informal Settlement Upgrading	<ul style="list-style-type: none"> <li>❖ Number of informal settlements upgraded</li> <li>❖ % households receiving basic services</li> </ul>
2.3 Shortened LUPA Procedures (SEZs)	<ul style="list-style-type: none"> <li>❖ Average processing time for SEZ applications</li> <li>❖ Number of SEZ applications approved</li> </ul>
2.4 District Planning Capacity	<ul style="list-style-type: none"> <li>❖ Number of staff trained</li> <li>❖ Number of applications reviewed by district</li> </ul>
2.5 Fast-tracking B1, SDA & PHDA Developments	<ul style="list-style-type: none"> <li>❖ Average approval time for applications</li> <li>❖ Number of projects processed through shortened procedures</li> </ul>
2.6 Rural Transformation: Remote Rural Areas	<ul style="list-style-type: none"> <li>❖ % households with access to basic services</li> </ul>
Economic Rural Areas	<ul style="list-style-type: none"> <li>❖ Investment amount in rural economic infrastructure</li> </ul>
Development Hubs	<ul style="list-style-type: none"> <li>❖ Number of rural development hubs established</li> </ul>
Service Clustering	<ul style="list-style-type: none"> <li>❖ Number of operational service clusters</li> </ul>
2.7 ICT Infrastructure	<ul style="list-style-type: none"> <li>❖ Number of ICT/fibre roll-outs</li> <li>❖ Broadband coverage (%)</li> </ul>

2.8 Municipal Densification Policies	<ul style="list-style-type: none"> <li>❖ Number of municipalities with updated policies</li> <li>❖ % increase in residential density</li> </ul>
2.9 Land Reform Targeting	<ul style="list-style-type: none"> <li>❖ Hectares redistributed</li> <li>❖ Number of beneficiaries supported</li> </ul>
2.10 Agrarian Transformation Support	<ul style="list-style-type: none"> <li>❖ Number of farmers supported</li> <li>❖ Hectares under high-value crops</li> </ul>
2.11 Non-Farm Economy Support	<ul style="list-style-type: none"> <li>❖ Number of tourism/non-farm enterprises developed</li> <li>❖ Jobs created</li> </ul>
Objective 3: Movement Network	
Project / Action	Monitoring Indicators
3.1 Safe Road & Rail Network	<ul style="list-style-type: none"> <li>❖ Km of roads upgrade</li> <li>❖ Increase in rail freight/passenger trips</li> <li>❖ Reduction in travel time</li> </ul>
3.2 Outeniqua Choo-Tjoe Reopening	<ul style="list-style-type: none"> <li>❖ Line status (open/closed)</li> <li>❖ Annual passengers</li> </ul>
3.3 Diaz Express Revitalisation	<ul style="list-style-type: none"> <li>❖ Completion status (%)</li> <li>❖ Passenger numbers</li> </ul>
3.4 Improved Transport Links	<ul style="list-style-type: none"> <li>❖ Number of new/upgraded links</li> <li>❖ Increase in local economic activity (%)</li> </ul>
3.5 Road & Rail Infrastructure Upgrades	<ul style="list-style-type: none"> <li>❖ Km of roads resurfaced</li> <li>❖ Number of rail improvements</li> </ul>
3.6 Upgrading Major Routes	<ul style="list-style-type: none"> <li>❖ % completion of upgrades</li> <li>❖ Reduction in maintenance backlog</li> </ul>
3.7 PT Feeder Systems	<ul style="list-style-type: none"> <li>❖ Number of feeder routes introduced</li> <li>❖ Public transport ridership increase</li> </ul>
3.8 Pedestrian & Cycling Lanes	<ul style="list-style-type: none"> <li>❖ Km of lanes built</li> <li>❖ Reduction in pedestrian crashes (%)</li> </ul>
3.9 Regional Routes Guidelines	<ul style="list-style-type: none"> <li>❖ Guidelines completed (Yes/No)</li> <li>❖ Number of municipalities applying guidelines</li> </ul>
3.10 Inclusive Transport	<ul style="list-style-type: none"> <li>❖ Number of accessible stops built</li> <li>❖ Number of operators trained</li> </ul>

3.11 Subsidised Bus-Taxi Services	<ul style="list-style-type: none"> <li>❖ Feasibility study completion</li> <li>❖ Pilot routes implemented</li> </ul>
3.12 N2 Bypass Review	<ul style="list-style-type: none"> <li>❖ Environmental/financial studies completed</li> </ul>
3.13 Implementation of ITP	<ul style="list-style-type: none"> <li>❖ % ITP actions achieved annually</li> </ul>
3.14 Freight, Tourism & Emergency Improvements	<ul style="list-style-type: none"> <li>❖ Number of freight corridors upgraded</li> <li>❖ Number of truck lay-bys built</li> <li>❖ Km of NMT routes expanded</li> <li>❖ Number of emergency access routes</li> <li>❖ Shared emergency system established (Yes/No)</li> </ul>
<b>Objective 4: Human Settlements</b>	
Project / Action	Monitoring Indicators
4.1 Priority Housing Development Areas	<ul style="list-style-type: none"> <li>❖ Number of PHSDAs identified</li> <li>❖ % of new housing within PHSDAs</li> </ul>
4.2 Land Acquisition	<ul style="list-style-type: none"> <li>❖ Hectares acquired</li> <li>❖ Number of projects enabled</li> </ul>
4.3 Socio-Economic Facility Provision	<ul style="list-style-type: none"> <li>❖ Number of new health/education/community facilities</li> <li>❖ % population within 5 km of facilities</li> </ul>
4.4 Transitional Relocation Areas	<ul style="list-style-type: none"> <li>❖ Number of sites prepared</li> <li>❖ Number of disaster-affected households assisted</li> </ul>
4.5 Locating Housing in High-Potential Areas	<ul style="list-style-type: none"> <li>❖ % projects in high-opportunity areas</li> <li>❖ Number of beneficiaries accessing opportunities</li> </ul>
4.6 Medium-Density Housing (RDP Flats)	<ul style="list-style-type: none"> <li>❖ Number of RDP/medium-density units built</li> <li>❖ Increase in density (%)</li> </ul>
4.7 Rural Precinct Plans	<ul style="list-style-type: none"> <li>❖ Number of plans completed</li> <li>❖ % alignment with SDF</li> </ul>
4.8 Consolidated Community Facilities	<ul style="list-style-type: none"> <li>❖ Number of nodes with consolidated facilities</li> <li>❖ Number of new clusters</li> </ul>
4.9 Wi-Fi Hotspots	<ul style="list-style-type: none"> <li>❖ Number of hotspots installed</li> </ul>

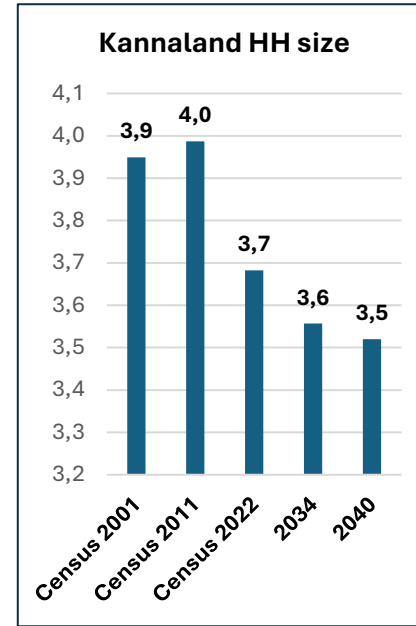
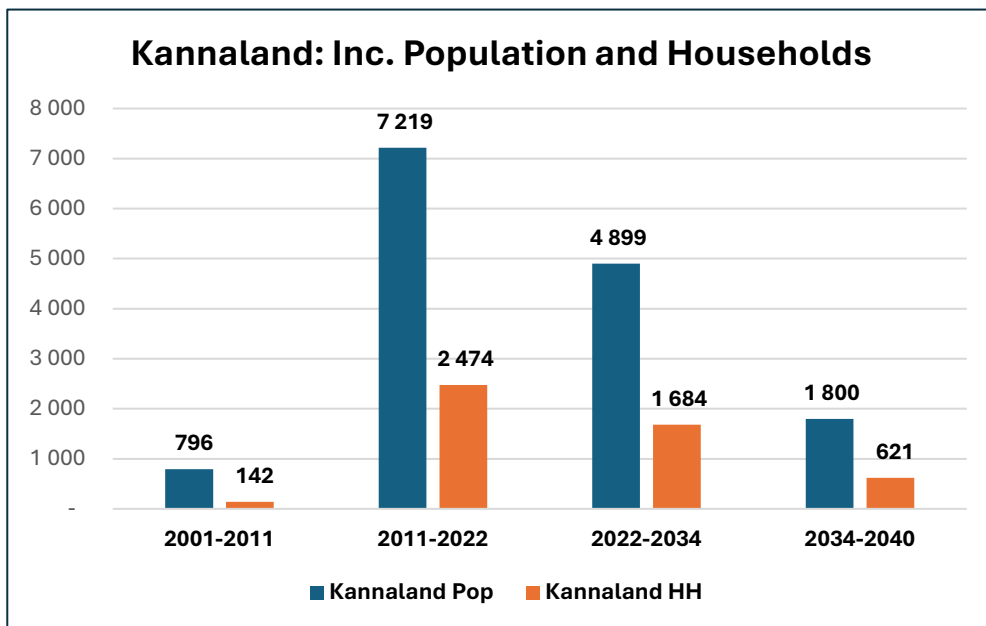
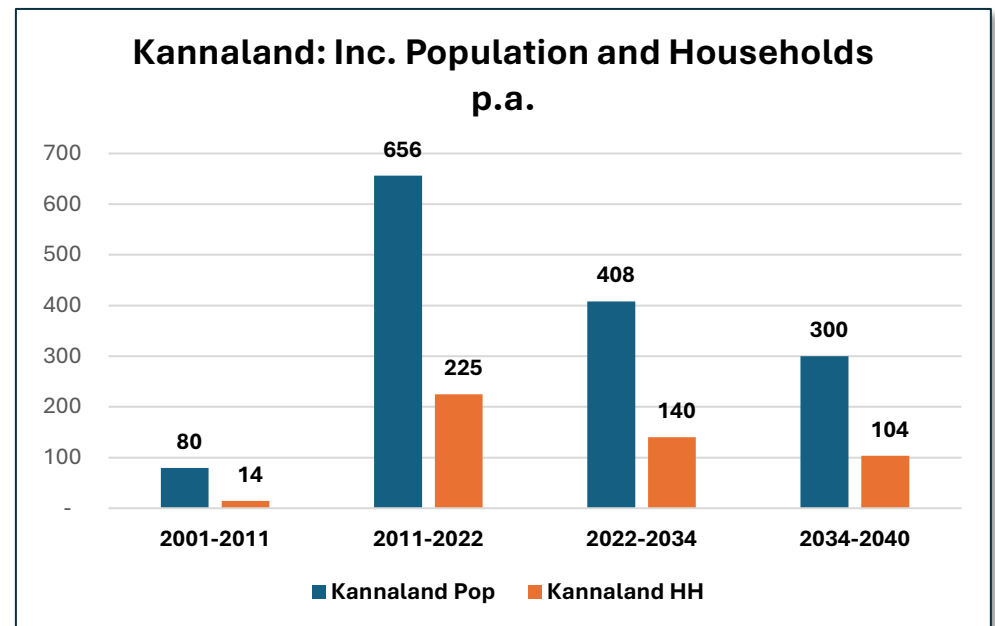
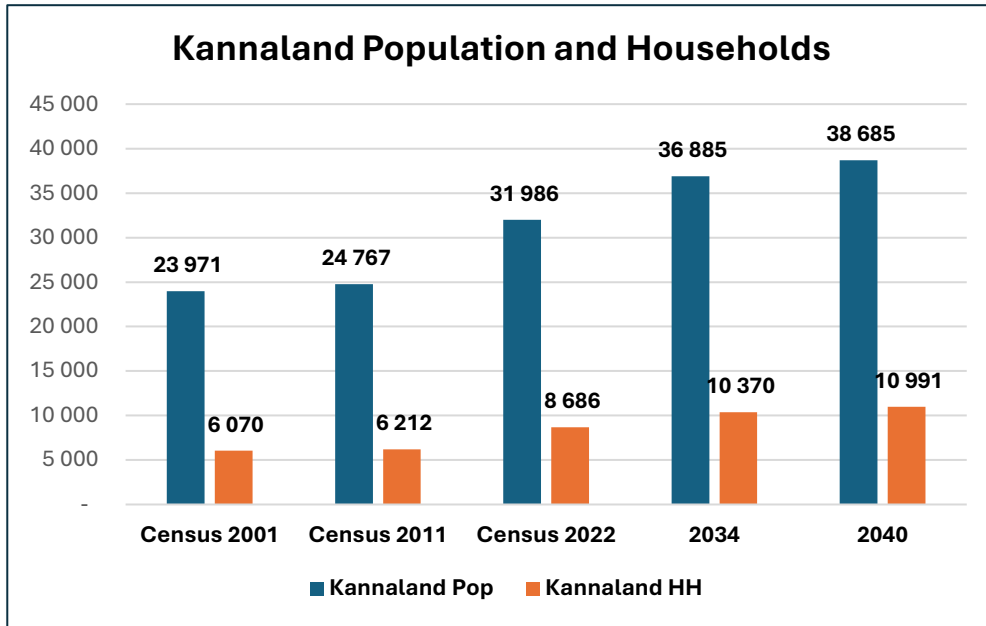
	<ul style="list-style-type: none"> <li>❖ Number of connected schools</li> </ul>
<b>Objective 5: Infrastructure</b>	
Project / Action	Monitoring Indicators
5.1 Infrastructure Prioritisation Model	<ul style="list-style-type: none"> <li>❖ Model completed (Yes/No)</li> <li>❖ % projects prioritised using model</li> </ul>
5.2 Water, Sanitation, Electricity Expansion	<ul style="list-style-type: none"> <li>❖ Number of households receiving new services</li> <li>❖ % service coverage</li> </ul>
5.3 Green Technology Transition	<ul style="list-style-type: none"> <li>❖ Number of developments adopting green standards</li> <li>❖ EV charging stations installed</li> <li>❖ % of fibre-ready new projects</li> </ul>
5.4 Waste Offloading Facilities	<ul style="list-style-type: none"> <li>❖ Number of facilities established</li> <li>❖ % waste diverted from landfill</li> </ul>
5.5 Coastal Infrastructure & Climate Risk Audit	<ul style="list-style-type: none"> <li>❖ Audit completed (Yes/No)</li> <li>❖ Number of at-risk assets identified</li> <li>❖ Number of adaptation measures implemented</li> </ul>
5.6 Implement Water Resource Management Measures	<ul style="list-style-type: none"> <li>❖ Number of rehabilitation and protection initiatives implemented for rivers, wetlands, catchments, and aquifers.</li> <li>❖ % new developments incorporating alternative water systems.</li> </ul>
<b>Objective 6: Economic Development</b>	
Project / Action	Monitoring Indicators
6.1 Tourism Enhancement	<ul style="list-style-type: none"> <li>❖ Number of Blue Flag beaches</li> <li>❖ Number of adventure/eco-tourism projects</li> <li>❖ Increase in tourism arrivals/spend (%)</li> <li>❖ Number of agri-tourism enterprises</li> </ul>
6.2 Protect High-Potential Agricultural Land	<ul style="list-style-type: none"> <li>❖ Hectares protected</li> <li>❖ Number of EIAs refused due to policy</li> </ul>
6.3 Agricultural Value Chain Viability	<ul style="list-style-type: none"> <li>❖ Viability study completed</li> <li>❖ Number of new infrastructure facilities</li> </ul>

6.4 FPSU Support (Haarlem)	<ul style="list-style-type: none"> <li>❖ Number of farmers served</li> <li>❖ Volume of produce processed</li> </ul>
6.5 Community Benefit Strategy	<ul style="list-style-type: none"> <li>❖ Strategy completed (Yes/No)</li> <li>❖ Number of community projects implemented</li> </ul>
6.6 Emerging Farmer Upscaling	<ul style="list-style-type: none"> <li>❖ Hectares accessed</li> <li>❖ Number of farmers trained</li> <li>❖ Number of partnerships</li> </ul>
6.7 Honeybush Support	<ul style="list-style-type: none"> <li>❖ Number of farmers trained</li> <li>❖ Certified producers</li> <li>❖ Hectares under cultivation</li> </ul>
6.8 Honeybush Processing Facility	<ul style="list-style-type: none"> <li>❖ Completion of Phase 2 &amp; 3</li> <li>❖ Annual processing capacity achieved</li> </ul>
6.9 Township Economy	<ul style="list-style-type: none"> <li>❖ Number of township enterprises supported</li> <li>❖ Jobs created</li> </ul>
6.10 Informal Trading Structures	<ul style="list-style-type: none"> <li>❖ Number of new structures</li> <li>❖ Number of traders accommodated</li> </ul>
6.11 Skills Development	<ul style="list-style-type: none"> <li>❖ Number of learners trained</li> <li>❖ Number of institutional partnerships</li> </ul>
6.12 CBD Management	<ul style="list-style-type: none"> <li>❖ Number of renewal projects</li> <li>❖ Decrease in vacancies (%)</li> </ul>
6.13 Precision Farming	<ul style="list-style-type: none"> <li>❖ Technologies adopted</li> <li>❖ Increase in yield per ha (%)</li> </ul>

# GARDEN ROUTE DISTRICT MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK

## ANNEXURE A: POPULATION AND HOUSEHOLD PROJECTS PER LOCAL MUNICIPALITY

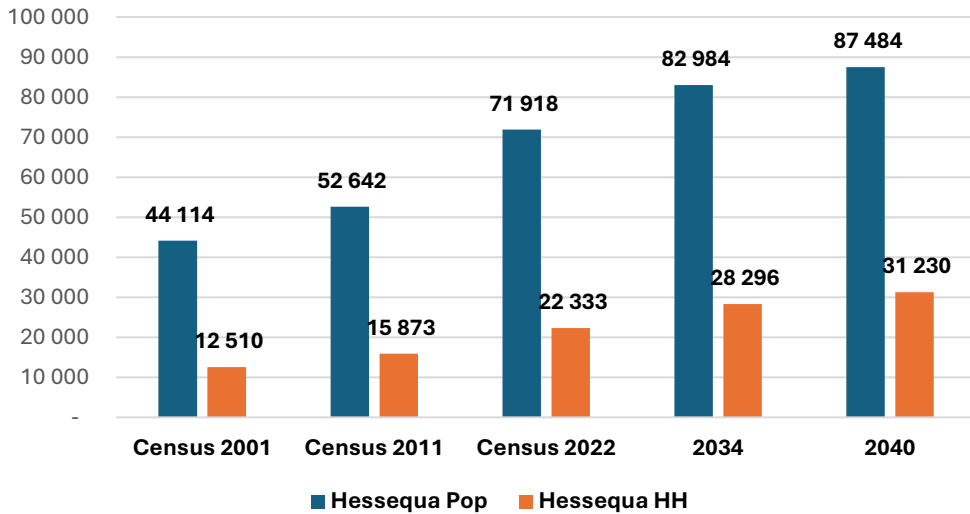




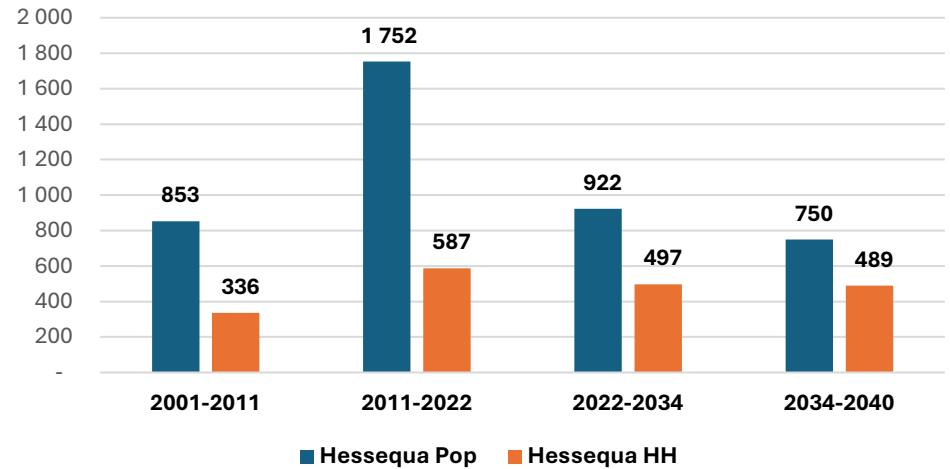
- Incremental population (2011-2022) only 408 people p.a.
- Low Increment expected up to 2034 and 2040.

Kannaland IDP (2022-2027) SDF predated Census 2022 results, continue to use 2014 MSDF. Funding required to review SDF.

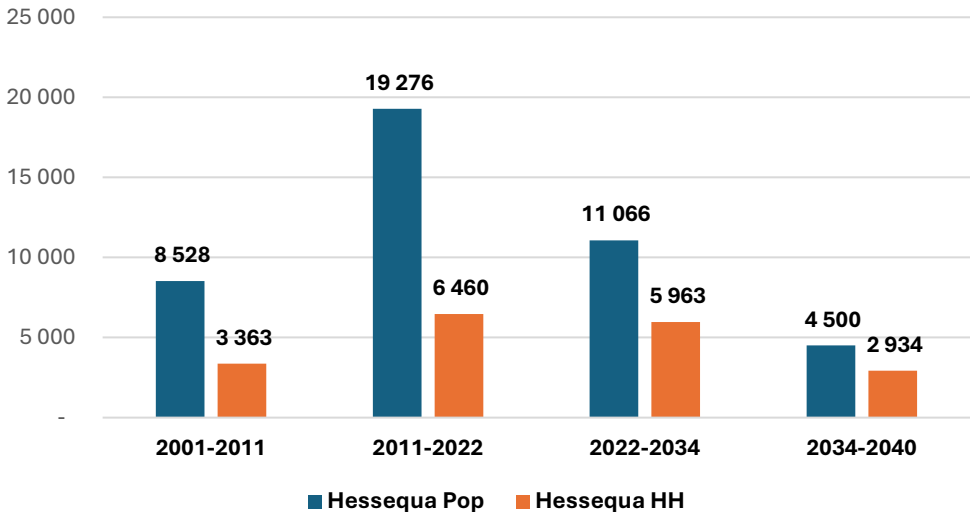
**Hessequa Population and Households**



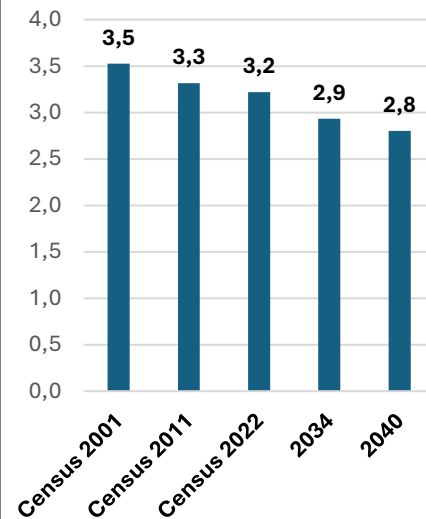
**Hessequa: Inc. Population and Households p.a.**



**Hessequa: Inc. Population and Households**

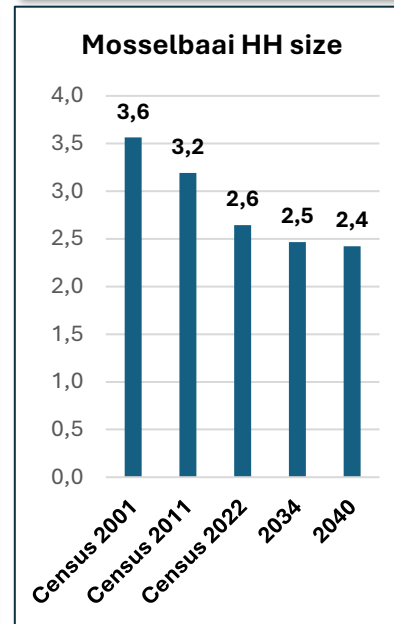
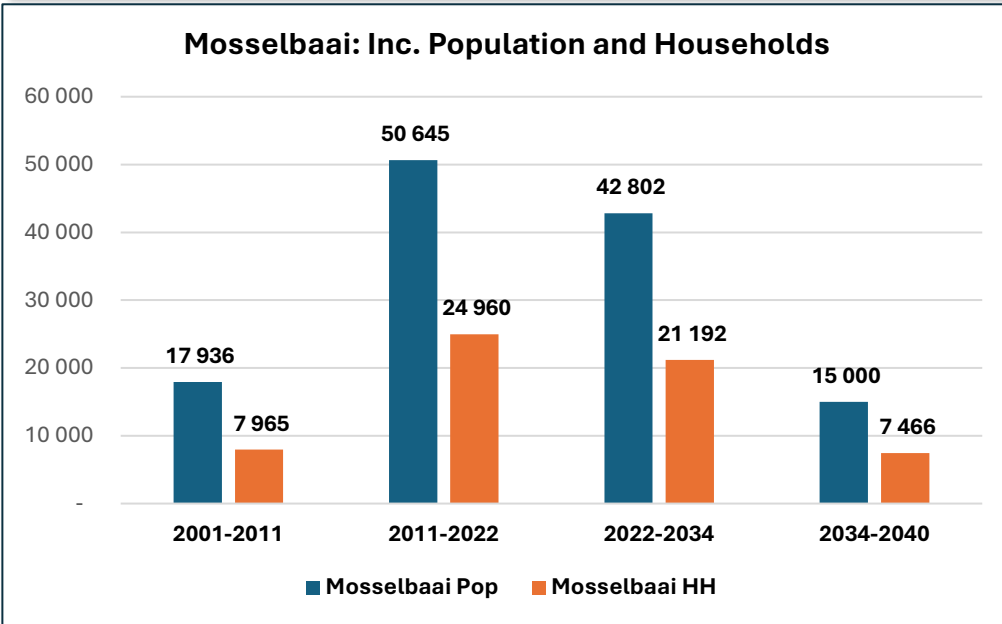
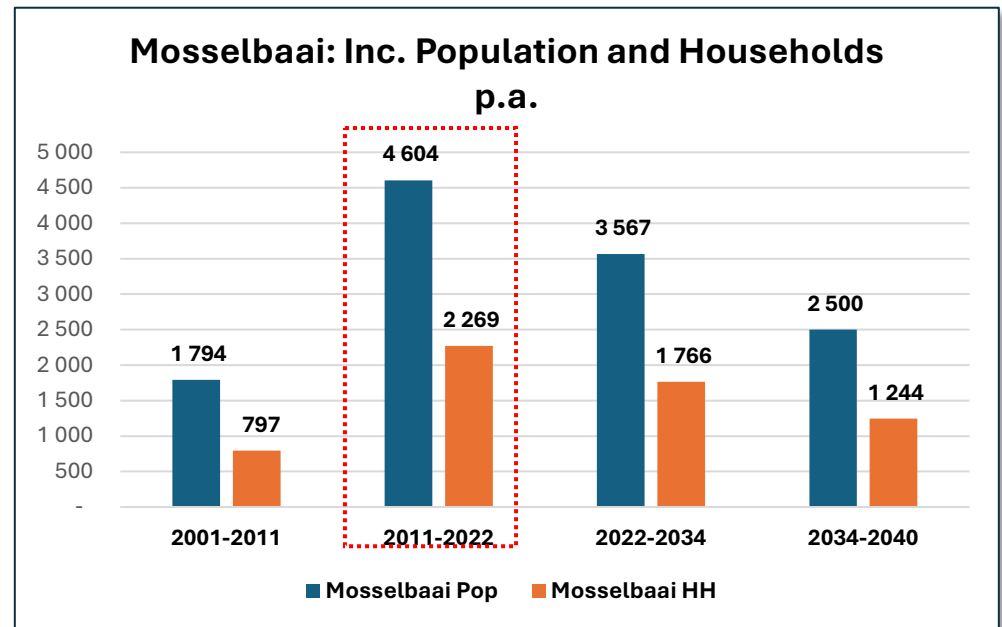
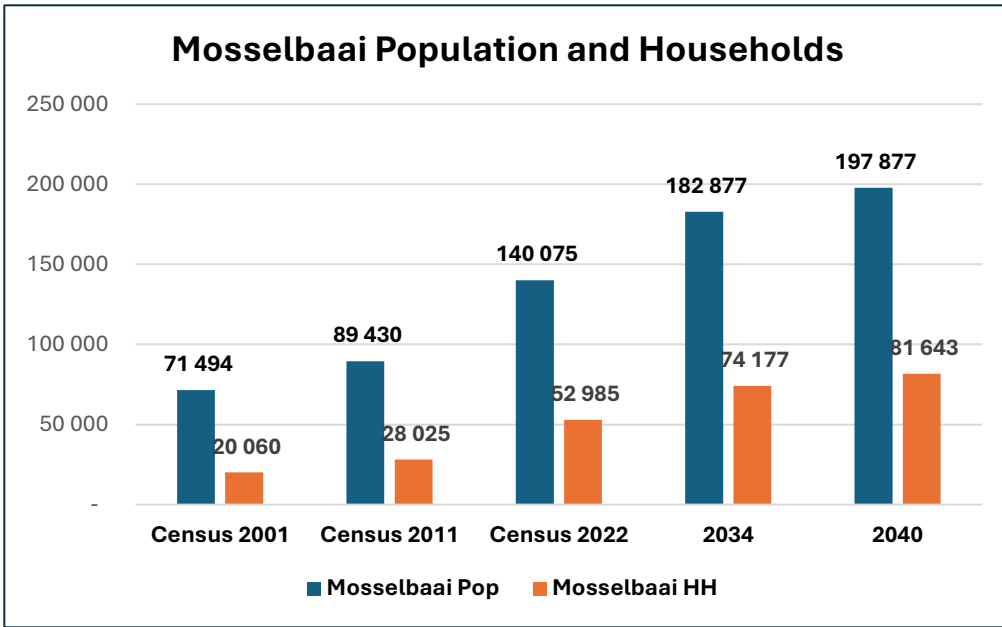


**Hessequa HH size**



- Hessequa SDF 2024/2025. SDF incorporated Census 2022 and included projections per town (2030, 2040).
- As part of this process a summary table per town was compiled and built into the population projection.
- Only 8 897 additional hh (2022-2040) included in this projection and not 12 219 as indicated by the SDF; HH size became very small, and Inc. close to 680 p.a., which seems high in comparison with population Inc.p.a.

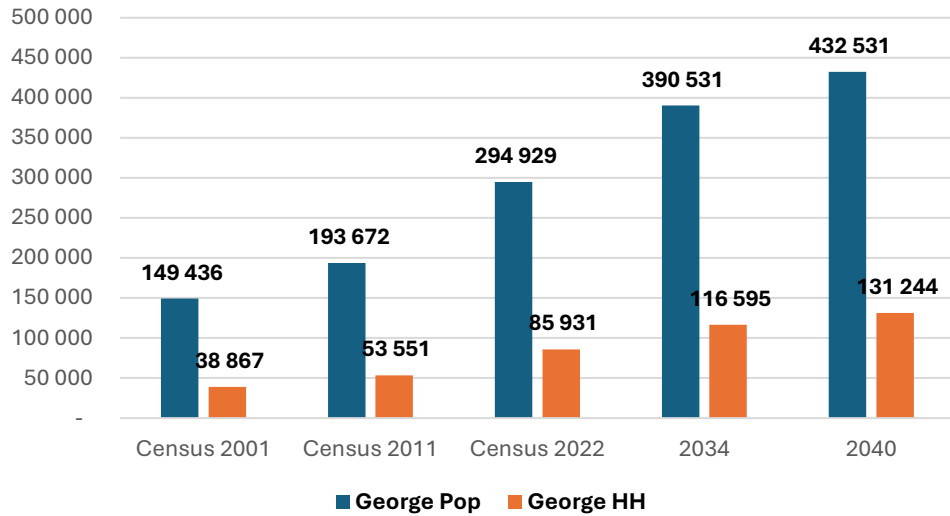
**Hessequa SDF 2024/2025.**



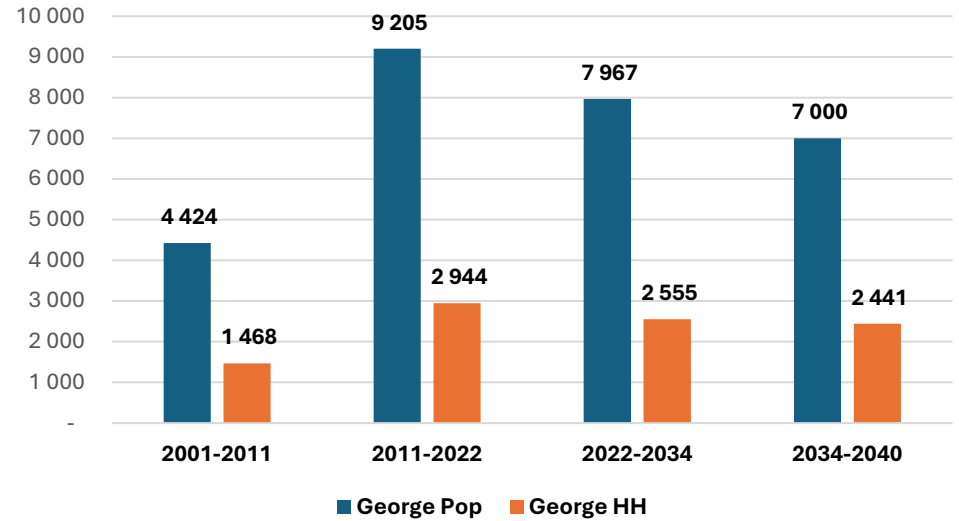
- Strong growth experienced between 2011 and 2022 propels Mosselbaai into 2<sup>nd</sup> highest population in GRDM.
- It is expected to continue in future.

**Mosselbaai SDF 2022, predates Census 2022; Population projection too low.**

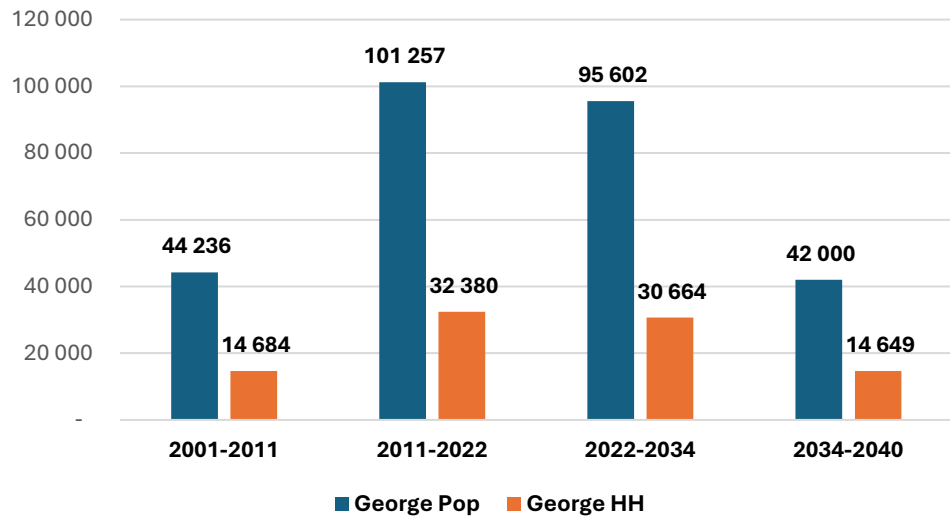
**George Population and Households**



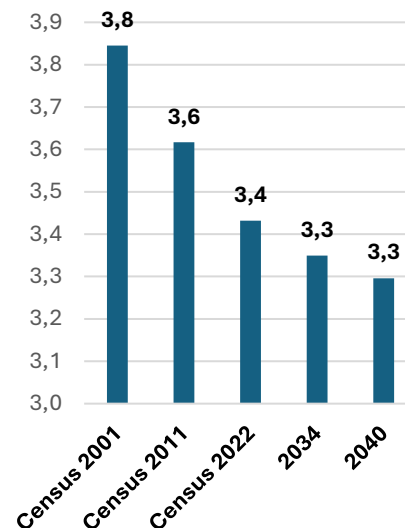
**George: Inc. Population and Households p.a.**



**George: Inc. Population and Households**

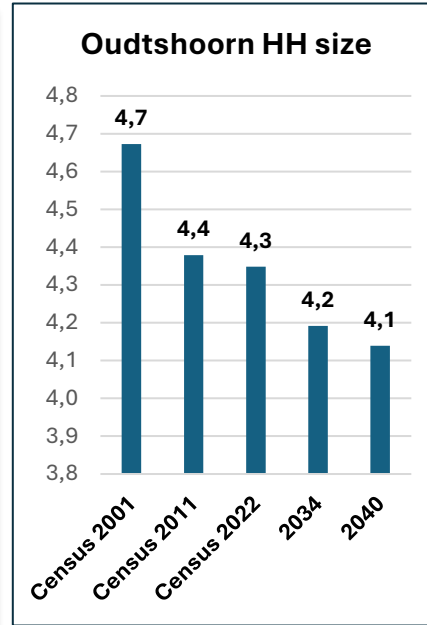
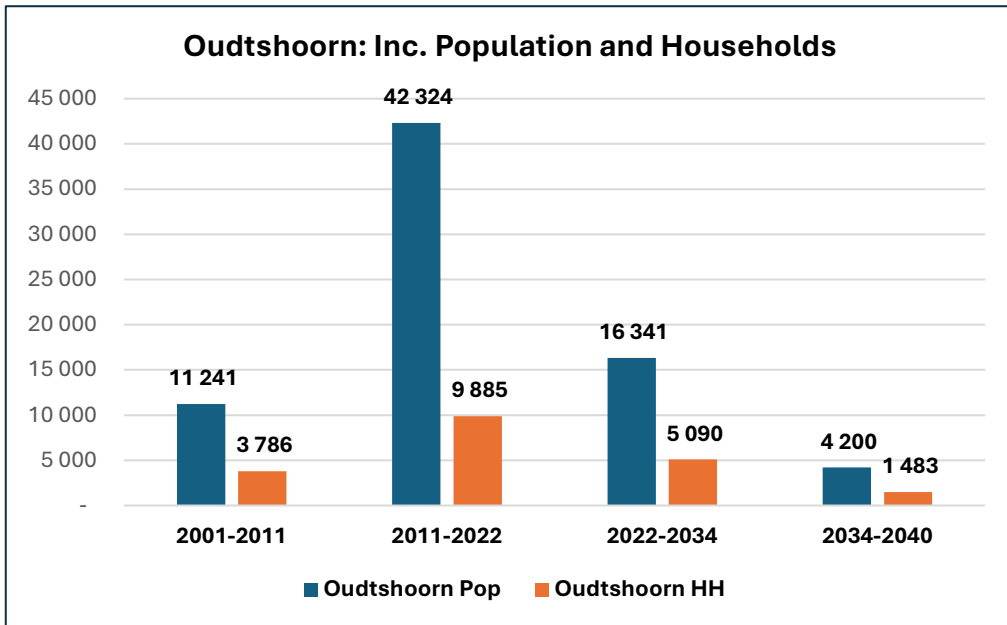
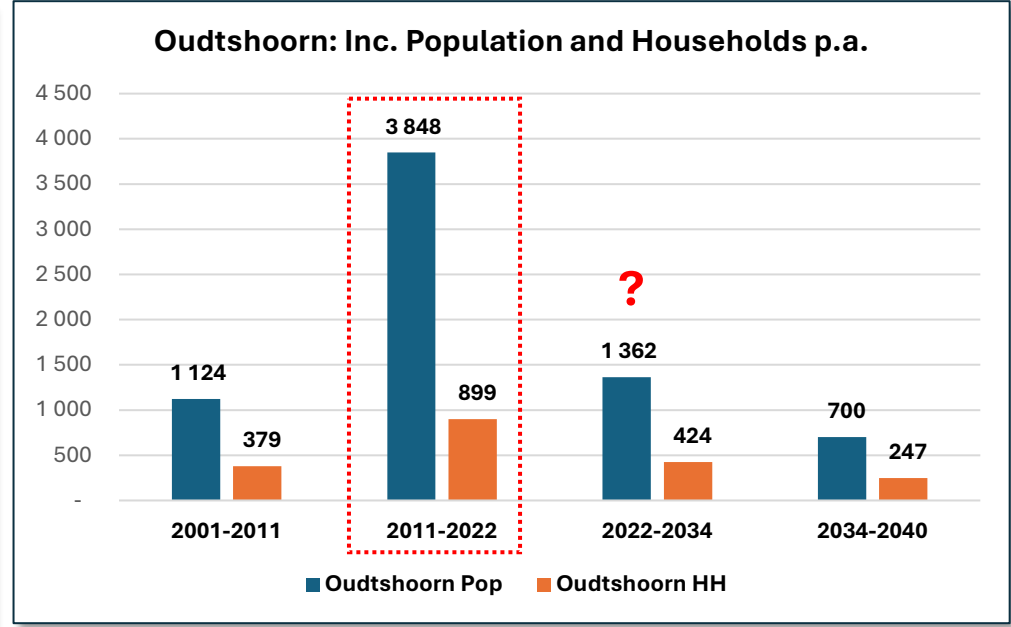
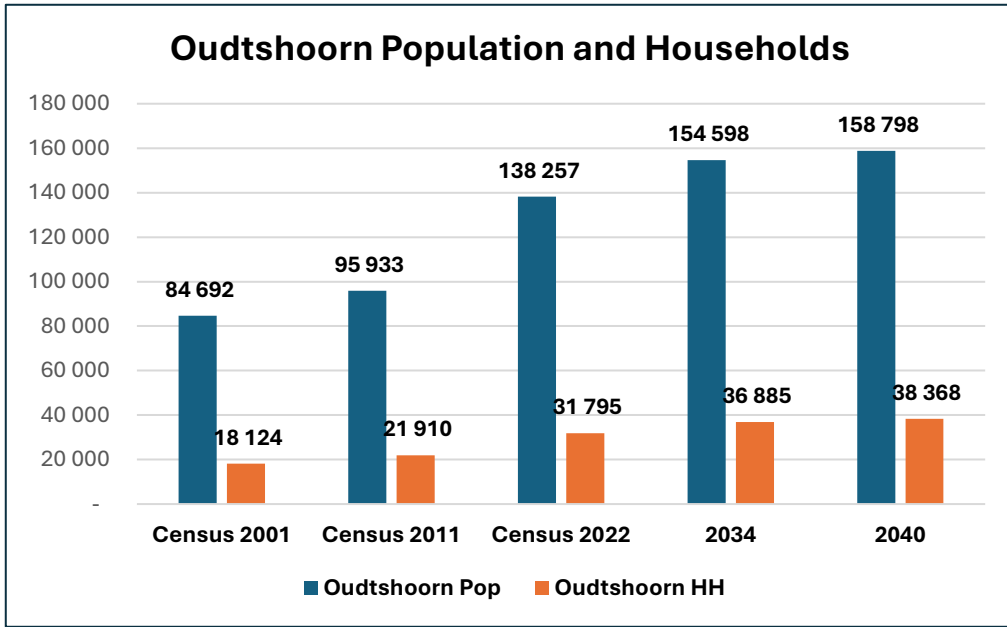


**George HH size**



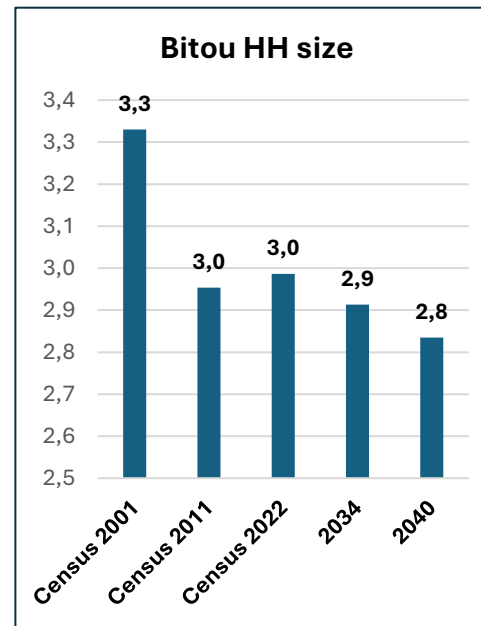
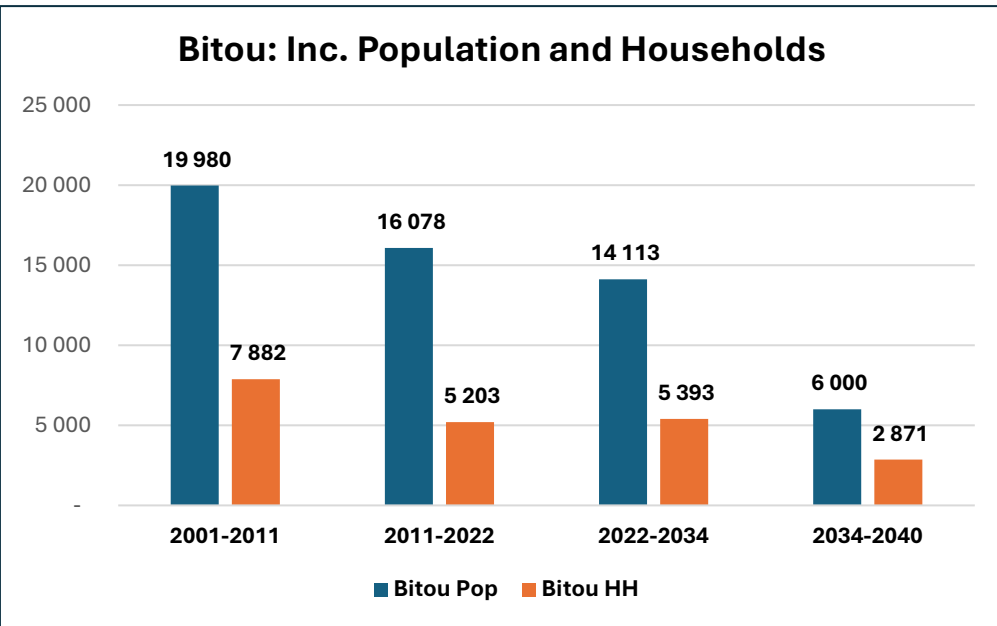
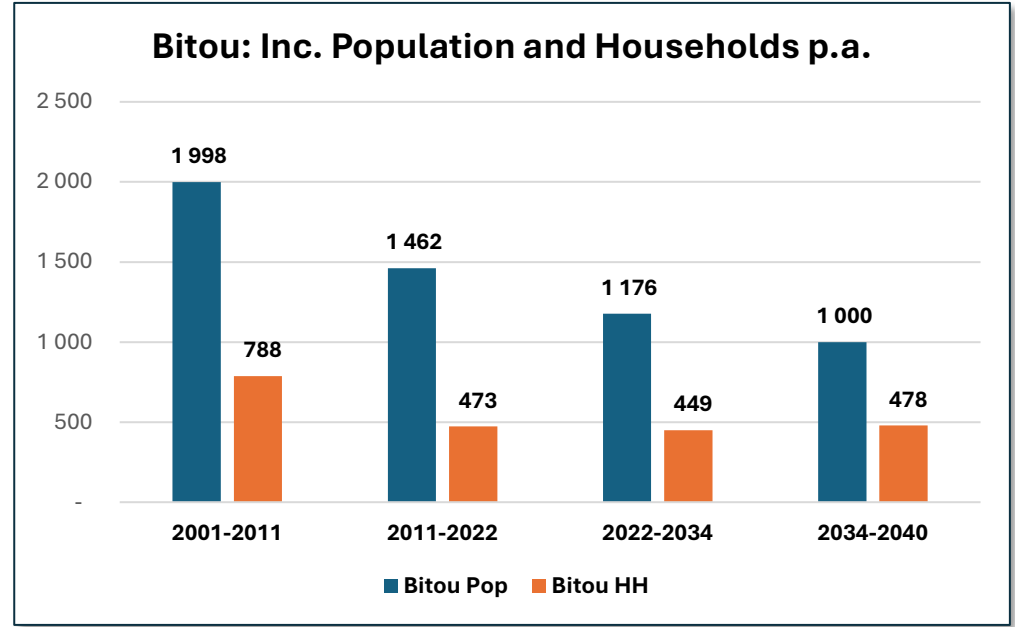
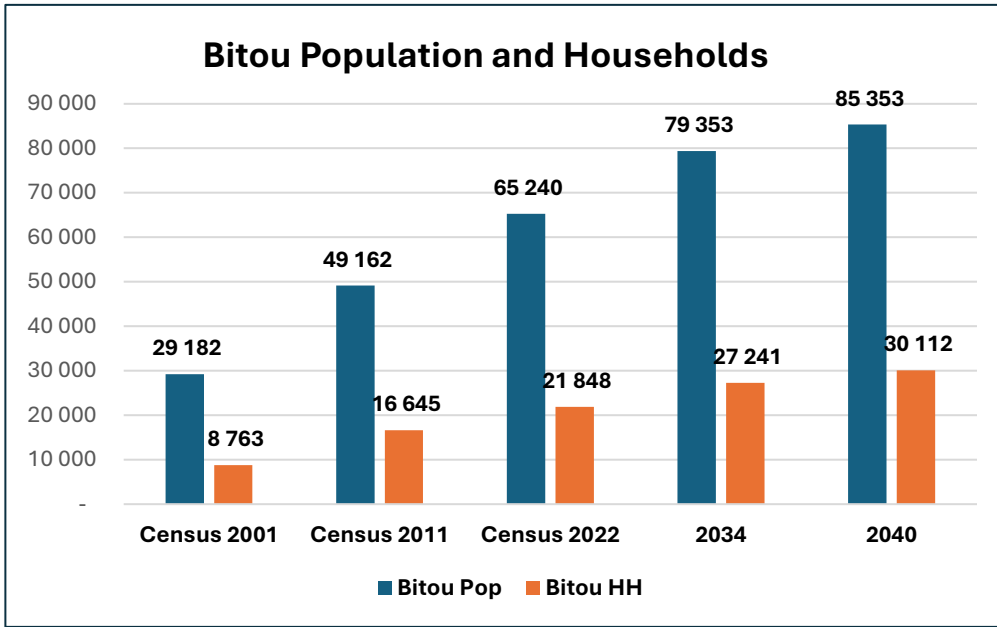
- Strong growth experienced between 2011 and 2022 representing the highest population in GRDM.
- It is expected to continue in future.

**George SDF 2022, predates Census 2023; Population projection too low.**



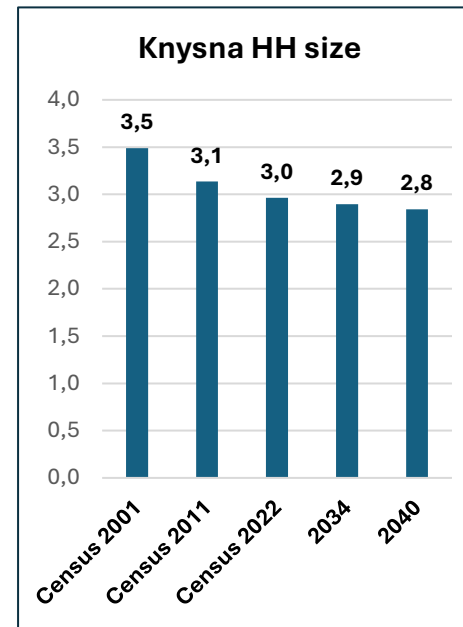
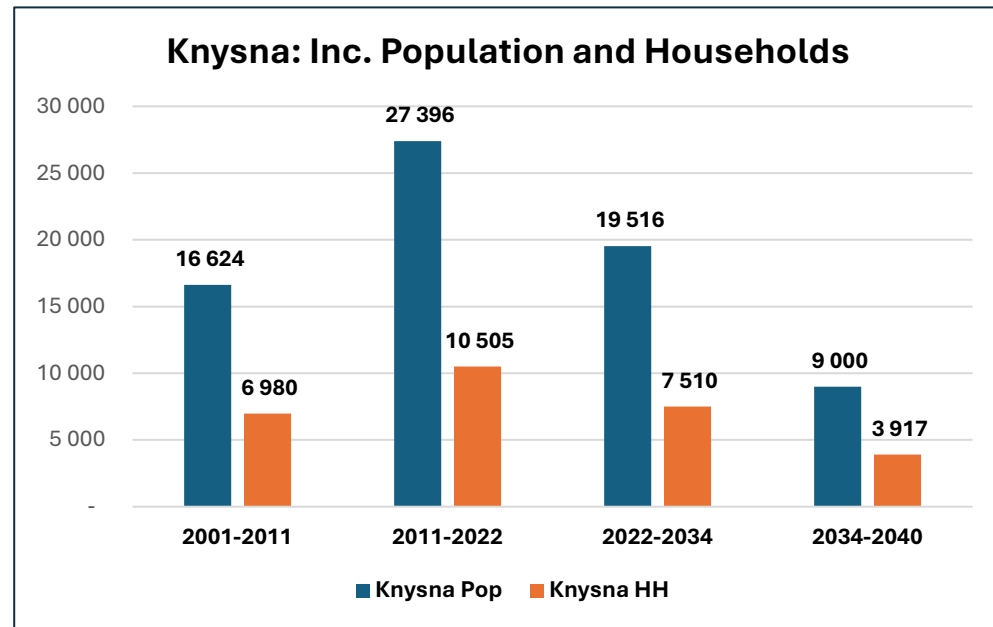
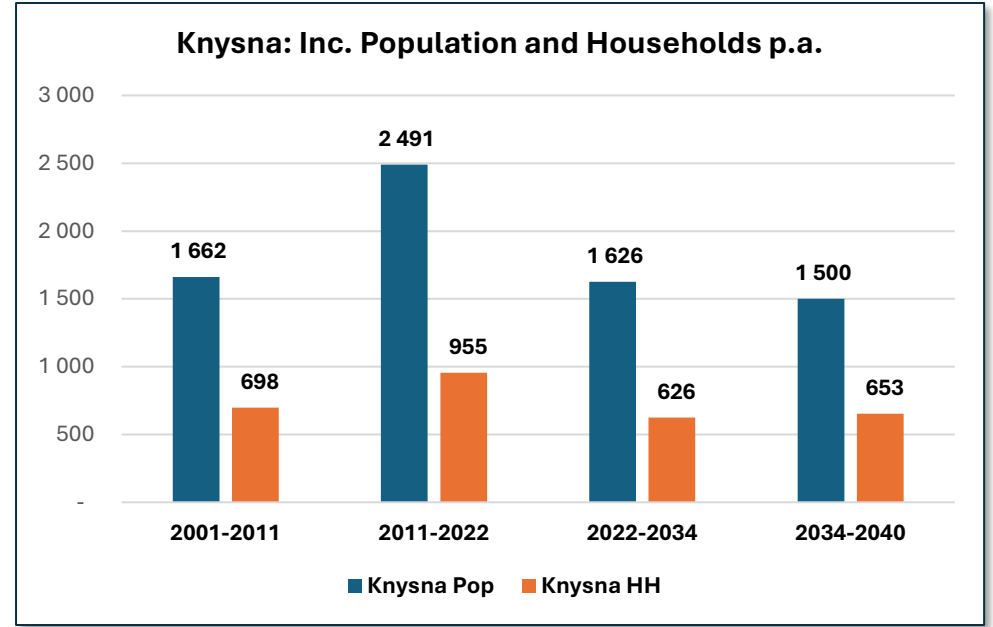
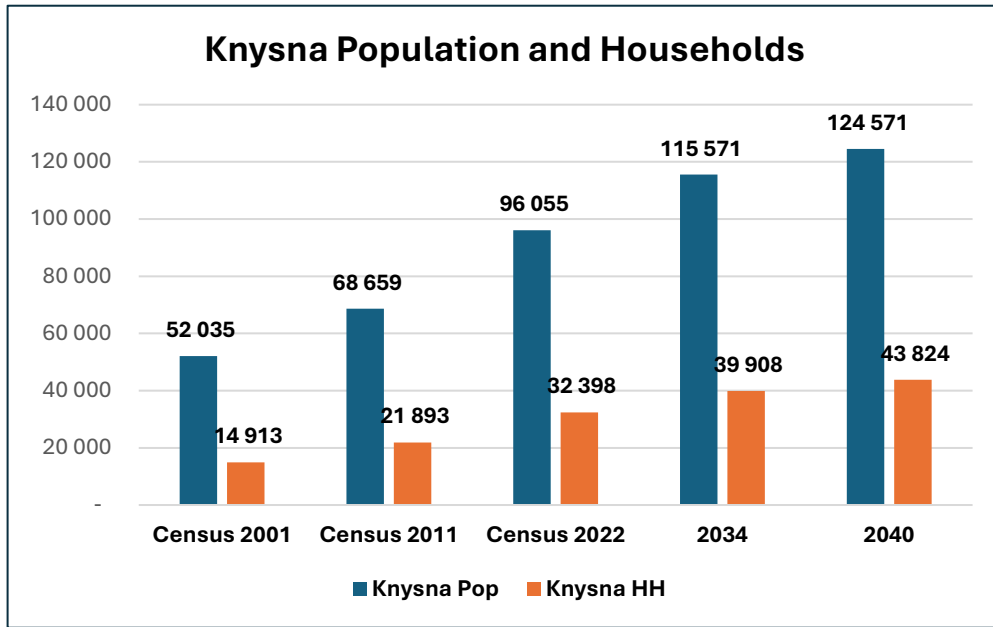
- Incremental population (2011-2022): 3 848 people p.a.
- However, according to SDF (2020) a **negative** population growth was expected up to 2030.
- Assumption: Relatively low Increment expected up to 2034 and 2040 ?

**Oudtshoorn SDF 2020, predates Census 2023; Population projection too low.**



- Total population (2040) higher than expected in SDF.
- Number of households in the same order as expected in SDF (2040).

**Bitou SDF 2020, predates Census 2022; Population projection too low.**



- 3<sup>rd</sup> highest growth experienced in Knysna (2011-2022)
- Expected to continue up to 2034 and 2040.

**Knysna SDF 2020, predates Census 2022; Population projection too low.**

# GARDEN ROUTE DISTRICT MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK

ANNEXURE B: GARDEN ROUTE DISTRICT MUNICIPALITY: POTENTIAL YIELD FOR EACH LM



## ANNEXUREB: GARDEN ROUTE DISTRICT MUNICIPALITY: POTENTIAL YIELD FOR EACH LM

**Table B1 : Bitou LM: Development Type, Area (ha), and approximate Yield (units)**

SDA	Township	Housing Typologies	Area (ha)	Planned Units (WCG Project Pipeline)	Potential Units (LUB)	Nett Density (du/ha)	Density Assumptions	Housing Project Notes (Chief Directorate: Human Settlement Planning, Dept. of Infrastructure, Western Cape Government, 2025)
1	Kwanokhuthula West	IRDP/UISP	42	1,082	2,782	140	IRDP/UISP: 70m <sup>2</sup> erf size (adjacent erf size)	Kwanokhuthula Phase 2 (441, IRDP), Kwanokhuthula High Density Phase 1 (641, IRDP)
2	Kwano City	IRDP/UISP, Social, Gap	26		125	132	Transitional Area in the south and part of Ladywood SDF (Area 9: 1,9ha SH: 132du/ha)	
3	Ebenhezer	IRDP, Social, Gap	83		2,600	50	IRDP/UISP: 70m <sup>2</sup> erf size, SH: 132du/h (Ladywood SDF ratio), Gap: 330m <sup>2</sup> erven (Ladywood SDF ratio)	
4	Ladywood SDF	Social, Gap, Bonded	151		2,858	20	Part of Ladywood SDF	
5							Part of Ladywood SDF	
6	Qolweni-Bossiesgif	UISP	18	521	1,450	200	UISP: 50m <sup>2</sup> erf size (adjacent erf size)	Qolweni / Bossiesgif Phase 2 (521)
7	Upper Piesang Valley Road	Bonded Low-Medium Density	39		550	20	500m <sup>2</sup> erf size	
8	Lower Piesang Valley Road	Bonded Low Density	19		260	20	500m <sup>2</sup> erf size	
9	Marine Drive West	Bonded Low-Medium Density	9		120	20	500m <sup>2</sup> erf size	
10	Shell Precinct	Social Housing	1		60	132	SH: 132du/h (Ladywood SDF ratio)	
11	Robberg Road South	Bonded Low-Medium Density	43		600	20	500m <sup>2</sup> erf size	
12	The Hilltop / Betty's Land	Eco-Estate (1-3 u/ha)	142		210	2	2du/ha	
13	Plett Botanical Esstate	Eco-Estate (1-3 u/ha)	136		208	2	2du/ha	
14	Kranshoek East	IRDP, Social	41	450	1,520	63	IRDP: 200m <sup>2</sup> erf size (adjacent erf size), SH: 132du/h (Ladywood SDF ratio)	Kranshoek (450) IRDP/ FLUSP (Western Cape Government, 2025)
15	Kranshoek North	Gap	31		630	30	Gap: 330m <sup>2</sup> erven (Ladywood SDF ratio)	
16	Kranshoek South	Bonded	15		200	20	500m <sup>2</sup> erf size (adjacent erf size)	
17	Witterdrift (Green Valley)	IRDP, Gap	31		840	43	IRDP: 150m <sup>2</sup> erf size, Gap: 330m <sup>2</sup> erven (Ladywood SDF ratio)	
18	Witterdrift North	Bonded	5		70	20	500m <sup>2</sup> erf size	
19	Witterdrift West	IRDP, Social, Gap, Bonded	8	325	325	67	IRDP: 150m <sup>2</sup> erf size, Bonded: 500m <sup>2</sup> erf size, SH: 132du/h (Ladywood SDF ratio), Gap: 330m <sup>2</sup> erven (Ladywood SDF ratio)	Green Valley Sportsfield (325) IRDP
20	Kurland	IRDP Social	1		30	50	IRDP: 200m <sup>2</sup> erf size (adjacent erf size), SH: 132du/h (Ladywood SDF ratio)	
21	Kurland South	IRDP, Social, Gap	35		960	43	IRDP: 200m <sup>2</sup> erf size (adjacent erf size), SH: 132du/h (Ladywood SDF ratio), Gap: 330m <sup>2</sup> erven (Ladywood SDF ratio)	
22	Kurland West	Bonded	7		90	20	500m <sup>2</sup> erf size	
23	Kurland Polo	Bonded	46		650	20	500m <sup>2</sup> erf size	
<b>Total Bitou LM</b>			<b>928</b>	<b>2,378</b>	<b>17,138</b>	<b>18</b>		
	WC: Waiting List DB Backlog (2025)				9,122			
	GRDM MSDF: Expected HH Growth (2024-2040)				7,976			
<b>Total Bitou LM Demand</b>					<b>17,098</b>			
<b>Total Bitou LM Surplus/Deficit</b>					<b>40</b>			

**Sources:**

Bitou Spatial Development Framework, 2022  
GRDM MSDF (PlanAssociates)

**Table B2: George LM: Development Type, Area (ha), and approximate Yield (units)**

Source: George MSDF 2023 (Version 4): Reconciling Household Demand with Potential Yield and Density												
Functional Area	Functional Area	Units					Hectare (excluding Social Facilities)			Density du/ha (excl. Social)		
		Additional Households	Housing Waiting List	Total Housing Demand	Potential Units	Surplus/Deficit	Additional Households	Housing Waiting List	Total Housing Demand	Additional Households	Housing Waiting List	Total Housing Demand
Number	Name	2020-2031	2022	2020-2031	2023 George MSDF	MSDF minus Demand	2020-2031	2022	2020-2031	2020-2031	2022	2020-2031
1.1	BLANCO	725	332	1,057	1,244	187	15.5	4.2	19.7	47	79	54
1.2	HEATHERLANDS	709	-	709	813	104	15.8	-	15.8	45		45
1.3	BO-DORP	1,696	88	1,784	1,220	- 564	38.4	1.1	39.5	44	80	45
1.4	GEORGE CBD	1,197	-	1,197	4,378	3,181	21.9	-	21.9	55		55
1.5	GEORGE INDUSTRIA	23	71	94	348	254	2.0	0.9	2.9	12	79	32
1.6	BALLOTSVIEW	1,584	2,971	4,555	295	- 4,260	31.1	37.1	68.2	51	80	67
1.7	PACALTSDORP	1,699	2,450	4,149	18,903	14,754	29.6	30.6	60.2	57	80	69
1.8	THEMBALETHU	4,764	11,431	16,195	11,586	- 4,609	51.3	142.9	194.2	93	80	83
1.9	KRAAIBOSCH EXPANSION AREA	-	-	-	12,275	12,275		-	-			
1.10	KRAAIBOSCH	599	-	599	5,844	5,245	0.6	-	0.6	998		998
1.11	ROSEMOOR	509	945	1,454	230	- 1,224	13.3	11.8	25.1	38	80	58
1.12	GWAING	59	-	59	267	208						
<b>Subtotal FA 1: George City Area</b>		<b>13,564</b>	<b>18,288</b>	<b>31,852</b>	<b>57,403</b>	<b>25,551</b>	<b>219.5</b>	<b>228.6</b>	<b>448.1</b>	<b>62</b>	<b>80</b>	<b>71</b>
2.1	UNIONDALE URBAN	364	934	1,298	2,525	1,227	4.6	0.3	4.9	79	3,113	265
2.2	UNIONDALE RURAL	322	-	322	-	- 322			-			
<b>Subtotal FA 2: Uniondale and Surrounds</b>		<b>686</b>	<b>934</b>	<b>1,620</b>	<b>2,525</b>	<b>905</b>	<b>4.6</b>	<b>0.3</b>	<b>4.9</b>	<b>149</b>	<b>3,113</b>	<b>331</b>
3.1	WILDERNESS/KLEINKRANTZ/TOUWSRANTEN/HOEKWIL	568	382	950	500	- 450	11.4	5.4	16.8	50	71	57
<b>Subtotal FA 3: Wilderness and Surrounds</b>		<b>568</b>	<b>382</b>	<b>950</b>	<b>500</b>	<b>- 450</b>	<b>11.4</b>	<b>5.4</b>	<b>16.8</b>	<b>50</b>	<b>71</b>	<b>57</b>
4.1	GEORGE RURAL	479	174	653	2,630	1,977	24.9	2.5	27.4	19	70	24
<b>Subtotal FA 4: George Rural</b>		<b>479</b>	<b>174</b>	<b>653</b>	<b>2,630</b>	<b>1,977</b>	<b>24.9</b>	<b>2.5</b>	<b>27.4</b>	<b>19</b>	<b>70</b>	<b>24</b>
5.1	HAARLEM URBAN	124	471	595	1,250	655	2.8	0.4	3.2	44	1,178	186
5.2	HAARLEM RURAL	434	-	434	-	- 434			-			
<b>Subtotal FA 5: Uniondale and Surrounds</b>		<b>558</b>	<b>471</b>	<b>1,029</b>	<b>1,250</b>	<b>221</b>	<b>2.8</b>	<b>0.4</b>	<b>3.2</b>	<b>199</b>	<b>1,178</b>	<b>322</b>
6.1	HAROLDS BAY/HEIGHTS/OU BAAI	138	-	138	186	48	4.0		4.0	35		35
<b>Subtotal FA 6: Harolds Bay and Surrounds</b>		<b>138</b>	<b>-</b>	<b>138</b>	<b>186</b>	<b>48</b>	<b>4.0</b>	<b>-</b>	<b>4.0</b>	<b>35</b>		<b>35</b>
<b>Total</b>		<b>15,993</b>	<b>20,249</b>	<b>36,242</b>	<b>64,494</b>	<b>28,252</b>	<b>267.2</b>	<b>237.2</b>	<b>504.4</b>	<b>60</b>	<b>85</b>	<b>72</b>
		Expected HH Growth (2024-2040)	WC: Waiting List DB Backlog (2025)	Total Housing Demand	Potential Units	Surplus/Deficit						
<b>Projection Scenarios</b>	Census Linear Projection	34,461	20,834	55,295	64,494	9,199						
	GRDM MSDF(PlanAssociates)	43,521	20,834	64,355	64,494	139						
	Lower Bound Growth rate of 1,3% p.a. (SEP 2023)	20,778	20,834	41,612	64,494	22,882						
	Upper Bound Growth rate of 3,6% p.a. (based on previous 10 year - Growth rate)	75,278	20,834	96,112	64,494	- 31,618						

**Sources**

George MSDF-2023-Final-Version-4-30052023 (V4 May 2023)  
GRDM MSDF (PlanAssociates)

**Table B3: Hessequa LM: Residential Development Type, Area (ha), and approximate Yield (units)**

Source: Hessequa SDF phase-3-spatial-proposals-draft 2024-2025.						
Nodal Hierarchy	Town	Map #	Proposed Density (SDF)	Area (m <sup>2</sup> )	Size (ha)	Approximate Residential Yield
1	Riversdale	LDH2	10	1,152,320	115.2	1,152
1	Riversdale	LDH4	10	464,259	46.4	464
1	Riversdale	MDH1	35	11,085	1.1	39
1	Riversdale	MDH1	35	45,853	4.6	160
1	Riversdale	MDH2	20	256,941	25.7	514
1	Riversdale	MDH3	20	9,087	0.9	18
1	Riversdale	MDH3	20	122,670	12.3	245
1	Riversdale	MDH4	20	31,660	3.2	63
1	Riversdale	MDH5	35	27,594	2.8	97
<b>Subtotal Riversdale</b>				<b>2,121,468</b>	<b>212</b>	<b>2,753</b>
2	Heidelberg	LDH1/LDH2	20	982,953	98.3	1,966
2	Heidelberg	MDH1	35	19,654	2.0	69
2	Heidelberg	MDH2	35	51,060	5.1	179
2	Heidelberg	MDH3	35	5,119	0.5	18
2	Heidelberg	MDH3	35	25,755	2.6	90
2	Heidelberg	MDH4	35	123,061	12.3	431
<b>Subtotal Heidelberg</b>				<b>1,207,602</b>	<b>121</b>	<b>2,752</b>
2	Albertinia	LDH1	20	229,086	22.9	458
2	Albertinia	LDH2	20	63,088	6.3	126
2	Albertinia	LDH3	20	113,658	11.4	227
2	Albertinia	MDH1	35	54,521	5.5	191
2	Albertinia	MDH2	35	160,589	16.1	562
2	Albertinia	MDH3	35	17,286	1.7	60
<b>Subtotal Albertinia</b>				<b>638,227</b>	<b>64</b>	<b>1,625</b>
2	Still Bay	LDH1	35	187,702	18.8	657
2	Still Bay	LDH2/LDH3/LDH4/MDH1/MDH2/MDH5	10	3,987,433	398.7	3,987
2	Still Bay	LDH4	10	291,847	29.2	292
2	Still Bay	LDH4	10	587,304	58.7	587
2	Still Bay	LSH4	10	40,600	4.1	41
2	Still Bay	MDH3	80	14,737	1.5	118
2	Still Bay	MDH6	35	95,167	9.5	333
2	Still Bay	No Number	35	16,109	1.6	56
<b>Subtotal Still Bay</b>				<b>5,220,901</b>	<b>522</b>	<b>6,072</b>
3	Melkhoutfontein	MDH1	35	44,462	4.4	156
3	Melkhoutfontein	MDH2	35	36,980	3.7	129
3	Melkhoutfontein	MDH3	35	200,752	20.1	703

**Table B3: Hessequa LM: Residential Development Type, Area (ha), and approximate Yield (units) (Continues)**

Source: Hessequa SDF phase-3-spatial-proposals-draft 2024-2025.						
Nodal Hierarchy	Town	Map #	Proposed Density (SDF)	Area (m <sup>2</sup> )	Size (ha)	Approximate Residential Yield
<b>Subtotal Melkhoutfontein</b>				<b>282,194</b>	<b>28</b>	<b>988</b>
3	Witsand	LDH1	10	116,296	11.6	116
3	Witsand	LDH1	10	23,233	2.3	23
3	Witsand	LDH1	10	38,513	3.9	39
3	Witsand	LDH2	15	151,222	15.1	227
3	Witsand	LDH3	10	13,788	1.4	14
3	Witsand	LDH4	15	17,494	1.7	26
3	Witsand	LDH4	15	25,788	2.6	39
3	Witsand	LDH5	15	69,291	6.9	104
3	Witsand	MDH1	20	31,260	3.1	63
<b>Subtotal Witsand</b>				<b>486,885</b>	<b>49</b>	<b>650</b>
3	Gouritzmond	LDH1	10	62,190	6.2	62
3	Gouritzmond	LDH2/MDH3	35	50,933	5.1	178
3	Gouritzmond	MDH1	35	17,426	1.7	61
3	Gouritzmond	MDH2	35	23,353	2.3	82
<b>Subtotal Gouritzmond</b>				<b>153,902</b>	<b>15</b>	<b>383</b>
3	Slangrivier	LDH1	20	43,480	4.3	87
3	Slangrivier	MDH1	35	102,905	10.3	360
3	Slangrivier	MDH2/MDH6	35	406,684	40.7	1,423
3	Slangrivier	MDH3	35	72,236	7.2	253
3	Slangrivier	MDH4	35	19,129	1.9	67
3	Slangrivier	MDH5	35	43,397	4.3	152
<b>Subtotal Slangrivier</b>				<b>687,831</b>	<b>69</b>	<b>2,342</b>
4	Jongensfontein	LDH1	10	129,474	12.9	129
<b>Subtotal Jongensfontein</b>				<b>129,474</b>	<b>13</b>	<b>129</b>
<b>Total</b>			<b>16</b>	<b>10,928,484</b>	<b>1092.8</b>	<b>17,694</b>
	WC: Waiting List DB Backlog (2025)					5,955
	GRDM MSDF:Expected HH Growth (2024-2040)					8,539
<b>Total Hessequa LM Demand</b>						<b>14,494</b>
<b>Total Hessequa LM Surplus/Deficit</b>						<b>3,200</b>

**Sources:**

Hessequa SDF phase-3-spatial-proposals-draft 2024-2025.

GRDM MSDF (PlanAssociates)

**LDH:** Low-Density Residential Development

**MDH:** Medium-Density Residential Development

**HDH:** High-Density Residential Development

**Additional potential can also be calculated on:**

-Densification Areas/Zones (DZ)

-Vacant Erven

-Municipal Owned Vacant Land

**Table B4 : Mossel Bay LM: Development Type, Area (ha), and approximate Yield (units)**

Source: Mossel Bay SDF SECTION B – SPATIAL DEVELOPMENT FRAMEWORK PROPOSALS MAY 2022									
Nodal Hierarchy	Name	Restructuring Zone	Housing Pipeline Site (HPS)	Housing Program			Size (ha)	Approximate Residential Yield (Units)	Gross Density (du/ha)
				SH	SH/FLISP/BNG	UISP			
1	Mossel Bay	13	6	520	1,450	5,037	501	21,062	42
Ind. node	Mossdustryia	-	-	-	-	-	404	-	-
2	Vleesbaai	-	-	-	-	-	33	340	10
2	Danabaai	-	-	-	-	-	179	1,600	9
2	Hartenbos/Voorbaai/Sonskyn	6	1	-	-	-	836	9,542	11
2	Hartenbos North	-	-	-	-	-	481	2,775	6
3	Midbrak	2	2	-	-	60	148	2,205	15
3	Groot Brak River	1	2	-	-	200	119	1,225	10
3	Glentana	1	-	-	-	-	42	505	12
3	Brandwag	1	-	-	-	100	9	250	27
3	Ruitersbos	-	1	-	-	60	4	70	18
3	Friemersheim	-	-	-	-	-	11	100	10
<b>Total Mossel Bay LM</b>		<b>24</b>	<b>12</b>	<b>520</b>	<b>1,450</b>	<b>5,457</b>	<b>2,765</b>	<b>39,674</b>	<b>14</b>
WC: Waiting List DB Backlog (2025)								10,955	
GRDM MSDF: Expected HH Growth (2024-2040)								27,278	
<b>Total Mossel Bay LM Demand</b>								<b>38,233</b>	
<b>Total Mossel Bay LM Surplus/Deficit</b>								<b>1,441</b>	

**Sources:**

Mossel Bay SDF SECTION B – SPATIAL DEVELOPMENT FRAMEWORK PROPOSALS MAY 2022

GRDM MSDF (PlanAssociates)

**Table B5: Oudtshoorn SDF 2022: Spatial Budget**

Source: Oudtshoorn SDF Final Report MAY 2022							
Development Priority	Settlement	Map #	Size (ha)	Proposed Density (du/ha)	Proposed land Use	Estimated No. of Units	Actual Density (du/ha)
High	Oudtshoorn	3	9	50	High Density Residential/SH	1,151	128
High	Oudtshoorn	17	2	50	High Density Residential/SH	242	121
High	Oudtshoorn	1	2	50	Medium to High Density Residential	168	84
High	Oudtshoorn	2	1	50	Medium to High Density Residential	242	242
High	Oudtshoorn	18	2	50	Residential	63	32
High	Oudtshoorn	20	22	50	Residential	630	29
High	Oudtshoorn	21	1	50	Residential	41	41
High	Oudtshoorn	22	352	25	Mixed Use: Industrial, Residential	315	1
<b>Subtotal High Priority: 5-10 years</b>			<b>391</b>			<b>2,852</b>	
Medium	Oudtshoorn	10	36	25	Medium Density Residential	875	24
Medium	Oudtshoorn	4	20	25	Residential	263	13
Medium	Oudtshoorn	7	30	50	Residential	693	23
Medium	Oudtshoorn	5	13	NA	Local Authority Facilities	-	-
Medium	Oudtshoorn	6	25	NA	New Cemetery	-	-
<b>Subtotal Medium Priority: 10-20 years</b>			<b>124</b>			<b>1,831</b>	
Low	Oudtshoorn	11a	21	25	Medium Density Residential	578	28
Low	Oudtshoorn	11b	10	25	Medium Density Residential	298	30
Low	Oudtshoorn	11c	4	25	Medium Density Residential	126	32
Low	Oudtshoorn	12a	24	25	Medium Density Residential	175	7
Low	Oudtshoorn	12b	52	25	Medium Density Residential	735	14
Low	Oudtshoorn	15	142	25	Medium Density Residential	2,205	16
Low	Oudtshoorn	14a	53	50	Residential	1,512	29
Low	Oudtshoorn	14b	33	50	Residential	882	27
Low	Oudtshoorn	11d	16	25	Retail, Commercial , Industrial	-	-
<b>Subtotal Low Priority: 20-30 years</b>			<b>355</b>			<b>6,511</b>	
Very Low	Oudtshoorn	8	27	25	Medium Density Residential	410	15
Very Low	Oudtshoorn	13	76	25	Medium Density Residential	1,762	23
Very Low	Oudtshoorn	16	74	25	Medium Density Residential	1,197	16
Very Low	Oudtshoorn	9	153	25	Residential	1,418	9
	Oudtshoorn	43	101				-
<b>Subtotal Very Low Priority: 30+ years</b>			<b>431</b>			<b>4,787</b>	
<b>Subtotal Oudtshoorn</b>			<b>1,301</b>			<b>15,981</b>	

**Table B5: Oudtshoorn SDF 2022: Spatial Budget (Continue)**

Source: Oudtshoorn SDF Final Report MAY 2022							
Development Priority	Settlement	Map #	Size (ha)	Proposed Density (du/ha)	Proposed land Use	Estimated No. of Units	Actual Density (du/ha)
	Dysseldorp	23	0	25	Residential	7	25
	Dysseldorp	24	0	25	Residential	7	25
	Dysseldorp	25	1	25	Residential	25	25
	Dysseldorp	26	1	25	Residential	25	25
	Dysseldorp	26	2	25	Residential	50	25
	Dysseldorp	27	1	25	Residential	25	25
	Dysseldorp	28	1	25	Residential	25	25
	Dysseldorp	30	5	25	Residential	125	25
	Dysseldorp	31	13	25	Residential	325	25
	Dysseldorp	32	7	25	Residential	175	25
	Dysseldorp	33	9	25	Residential	225	25
	Dysseldorp	A	28	25	Residential	700	25
	Dysseldorp	34	20		Industrial		-
	Dysseldorp	35	17		Business		-
<b>Subtotal Dysseldorp</b>			<b>106</b>			<b>1,714</b>	
	De Rust	36	1	25	Residential	25	25
	De Rust	37	9	25	Residential	225	25
	De Rust	38	2	25	Residential	50	25
	De Rust	40	1	25	Residential	25	25
	De Rust	41	1	25	Residential	25	25
	De Rust	41a	6	25	Residential	150	25
	De Rust	42	9	25	Residential	225	25
	De Rust	43	2	25	Residential	50	25
	De Rust	42	1		Business		-
	De Rust	38a	2		Business		-
	De Rust	39	11		Mixed Use		-
<b>Subtotal De Rust</b>			<b>45</b>			<b>775</b>	
<b>Total</b>			<b>1,452</b>			<b>18,470</b>	
WC: Waiting List DB Backlog (2025)						12,016	
GRDM MSDF: Expected HH Growth (2024-2040)						6,026	
<b>Total Oudtshoorn LM Demand</b>						<b>18,042</b>	
<b>Total Oudtshoorn LM Surplus/Deficit</b>						<b>428</b>	

**Sources:**

Oudtshoorn SDF Final Report MAY 2022  
GRDM MSDF (Plan Associates)

# GARDEN ROUTE DISTRICT MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK

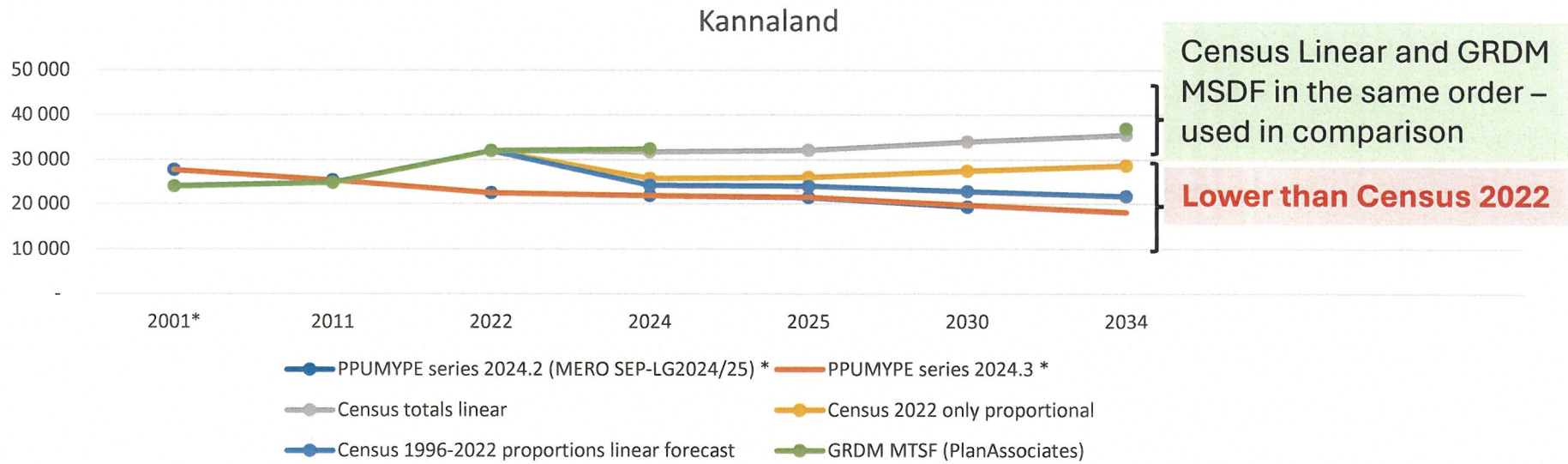
## ANNEXURE C: GARDEN ROUTE DISTRICT MUNICIPALITY: PROJECTIONS

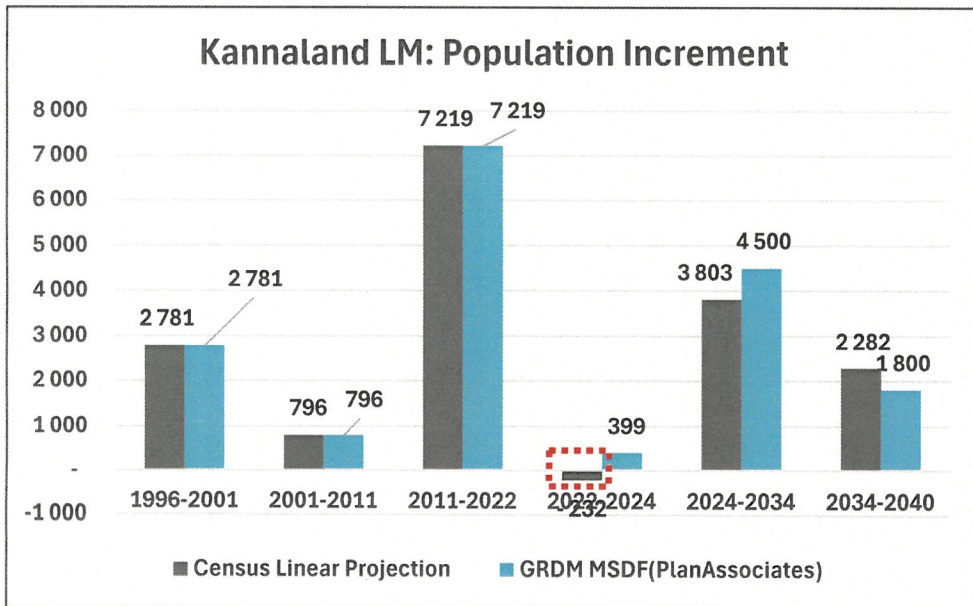
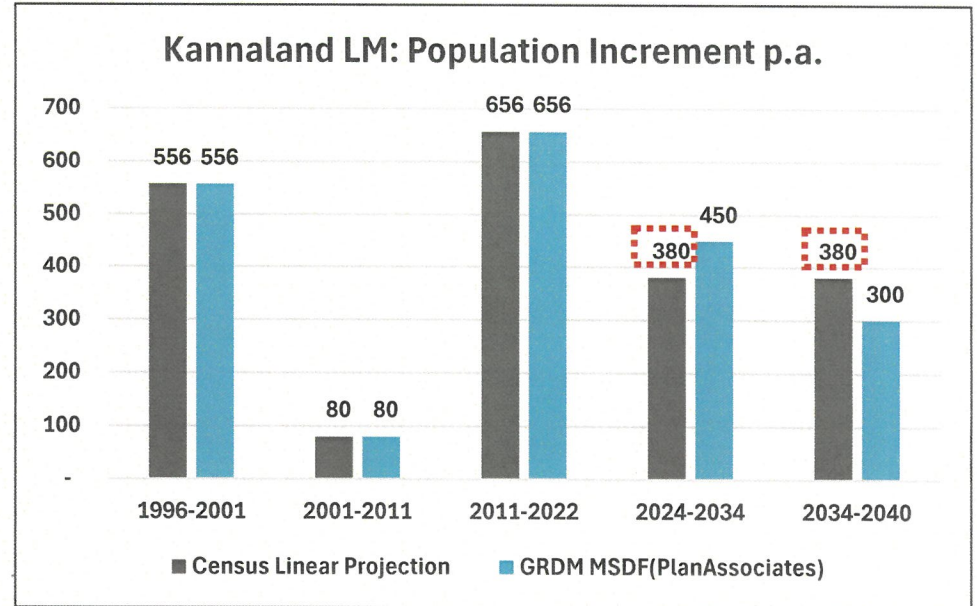
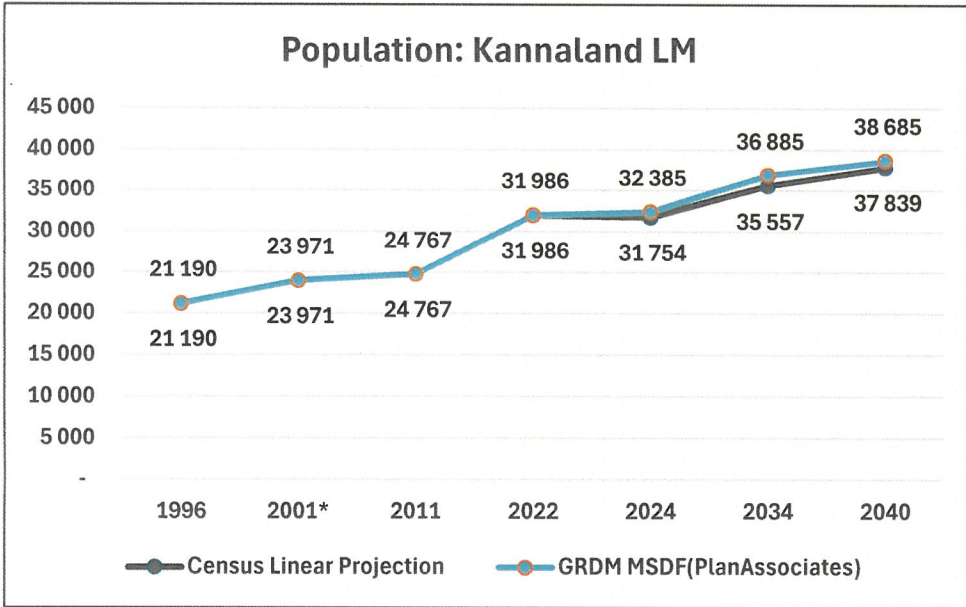


# COMPARISON OF VARIOUS PROJECTIONS (example Kannaland LM)

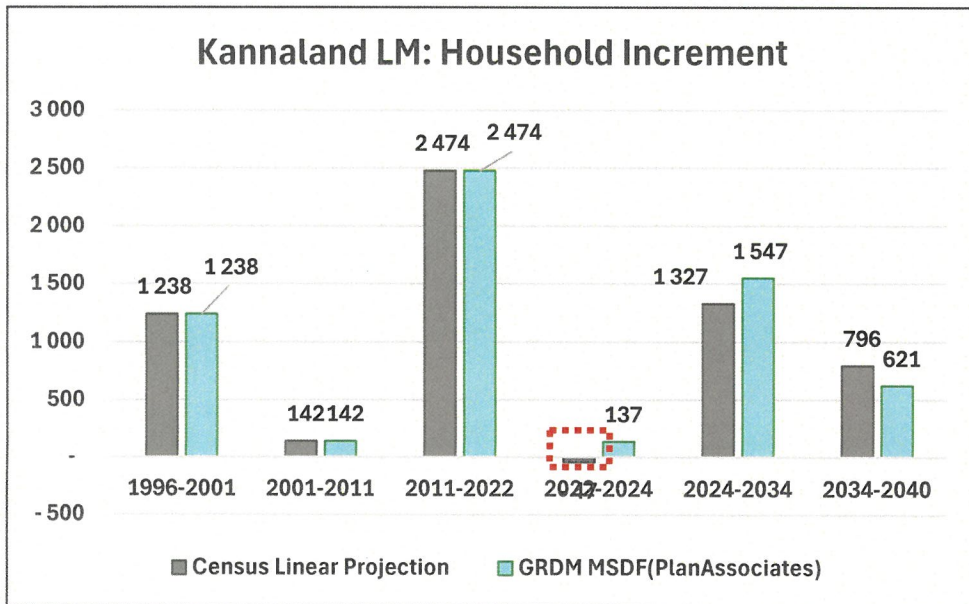
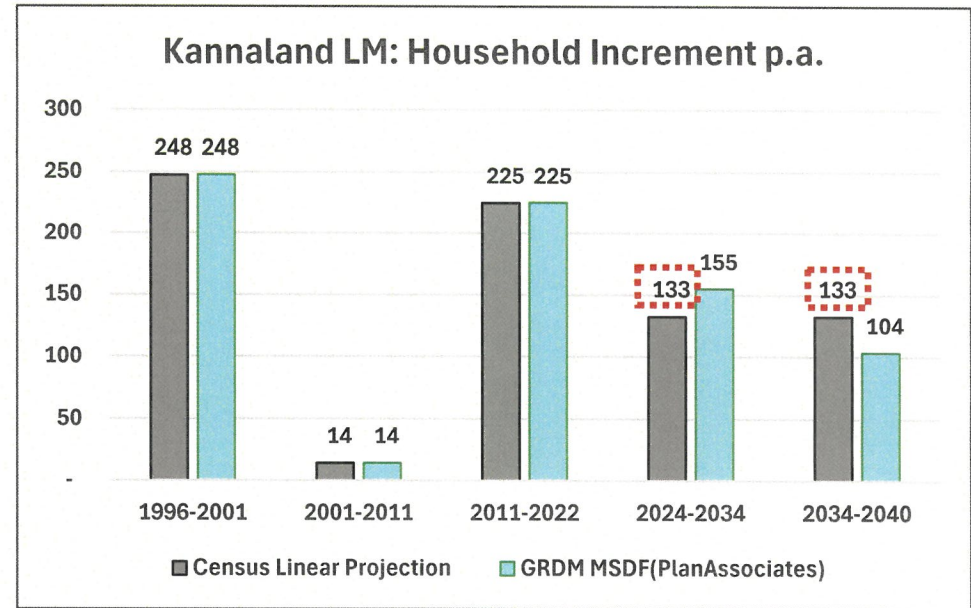
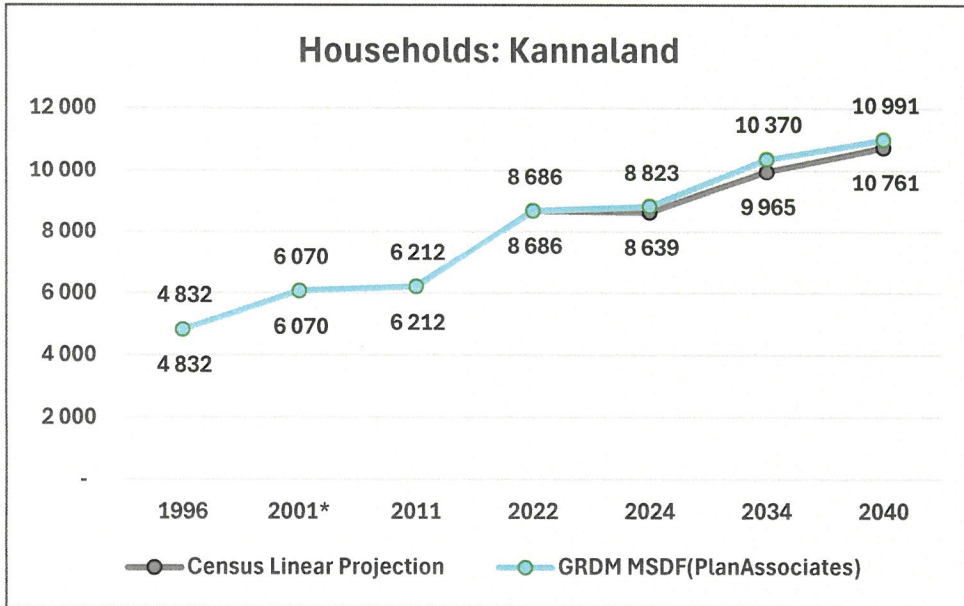
## District Garden Route:DC4 by LM

	1 996	2001*	2 011	2 022	2 024	2 025	2 030	2 034
WC041: Kannaland								
PPUMYPE series 2024.2 (MERO SEP-LG2024/25) *		27 697	25 323	22 479	21 852	21 456	19 335	
PPUMYPE series 2024.3 *		27 697	25 323	22 479	21 852	21 519	19 698	18 152
Census totals linear	21 190	23 971	24 767	31 986	31 754	32 134	34 036	35 557
Census 2022 only proportional	21 190	23 971	24 767	31 986	25 749	26 029	27 476	28 686
Census 1996-2022 proportions linear forecast	21 190	23 971	24 767	31 986	24 190	23 975	22 785	21 681
GRDM MTSF (PlanAssociates)	21 190	23 971	24 767	31 986	32 385			36 885

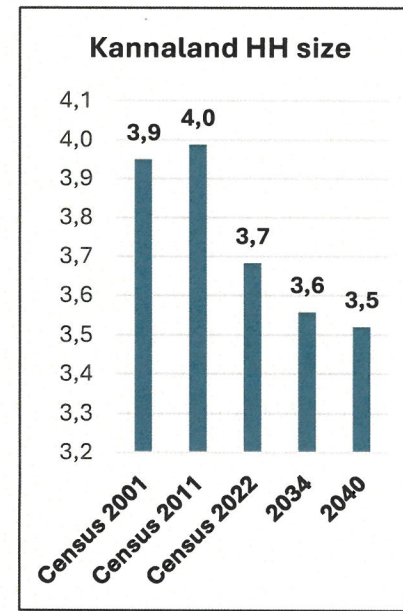
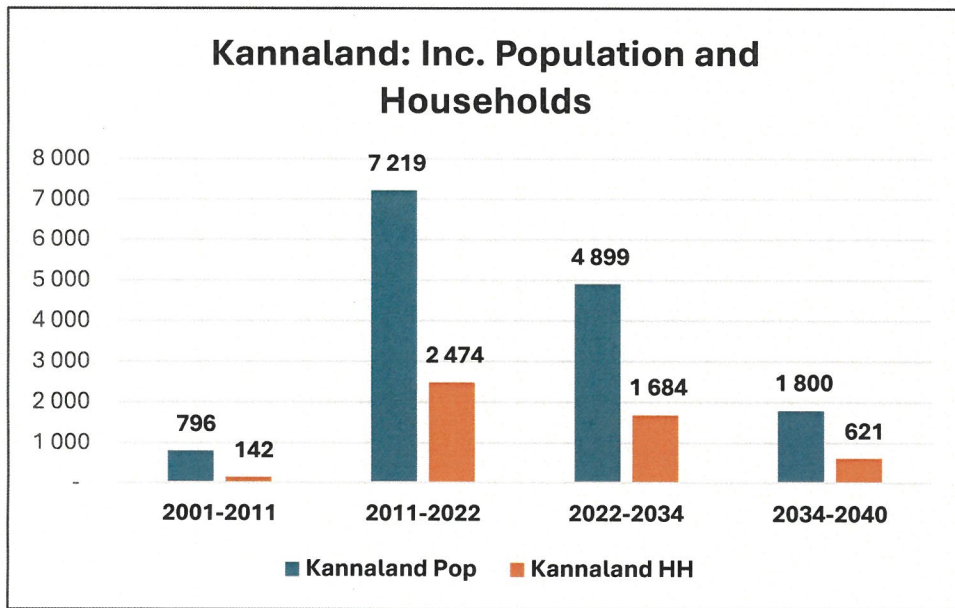
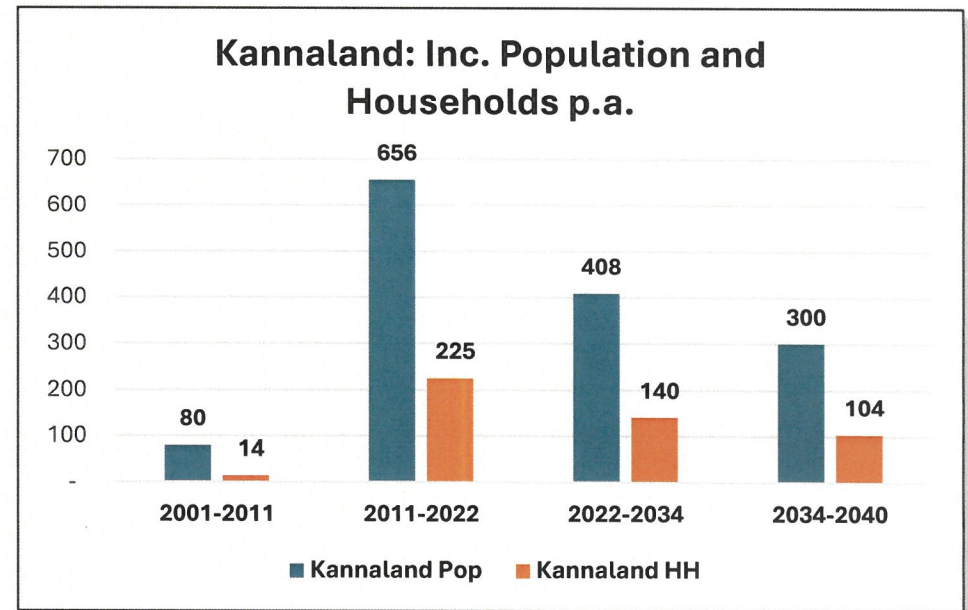
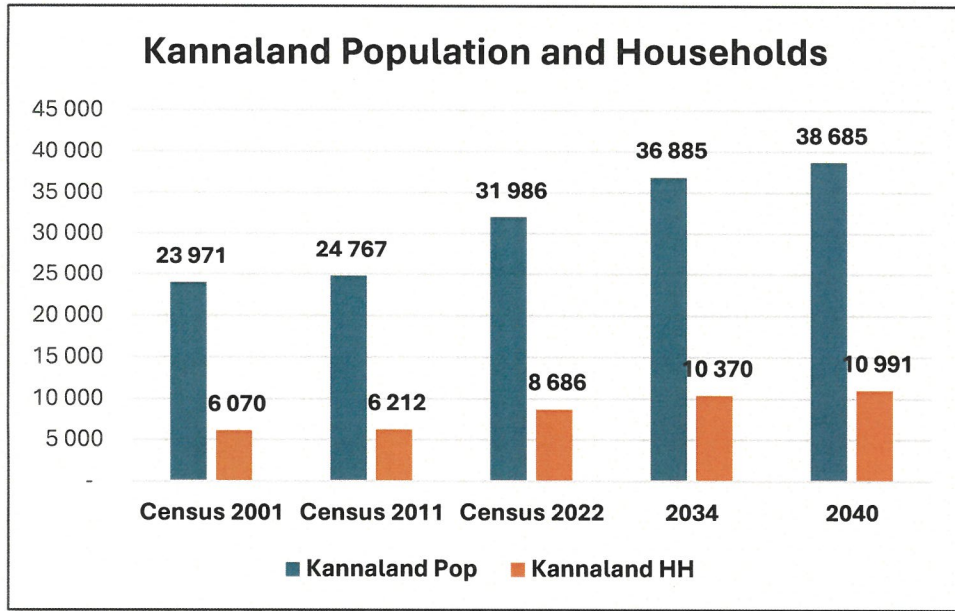




- Total Population compares well.
- Increment:
  - Linear: negative increment between 2022-2024
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.

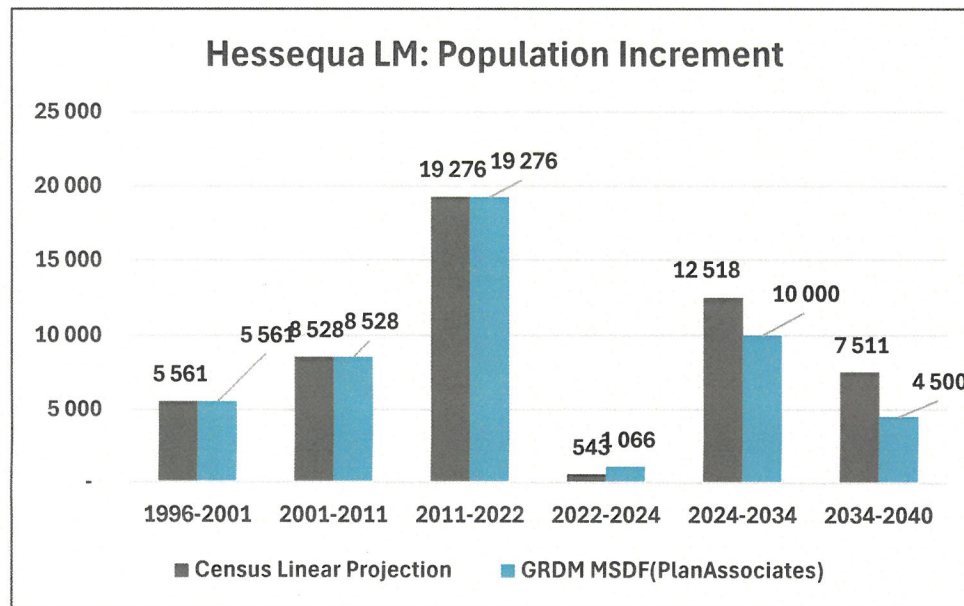
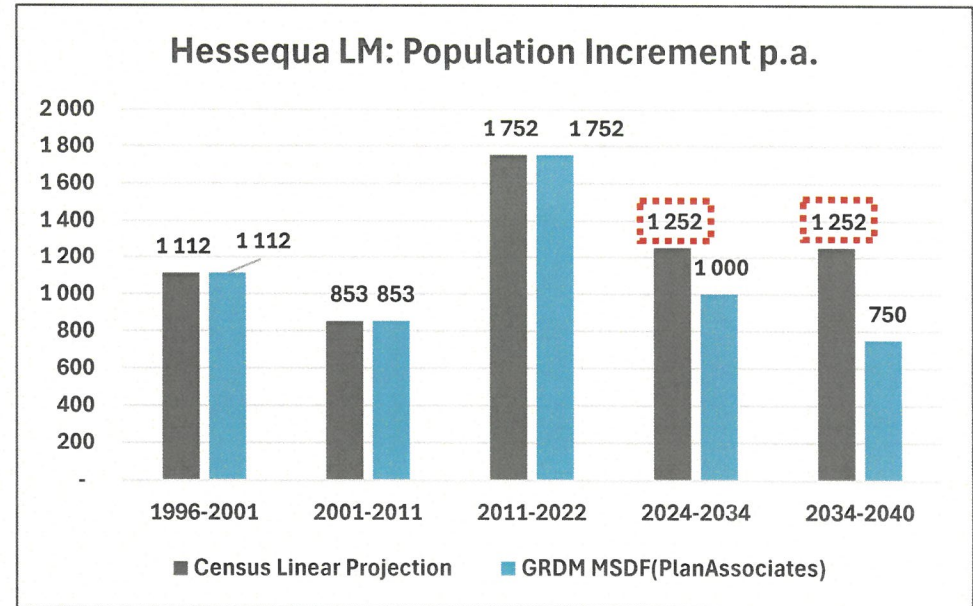
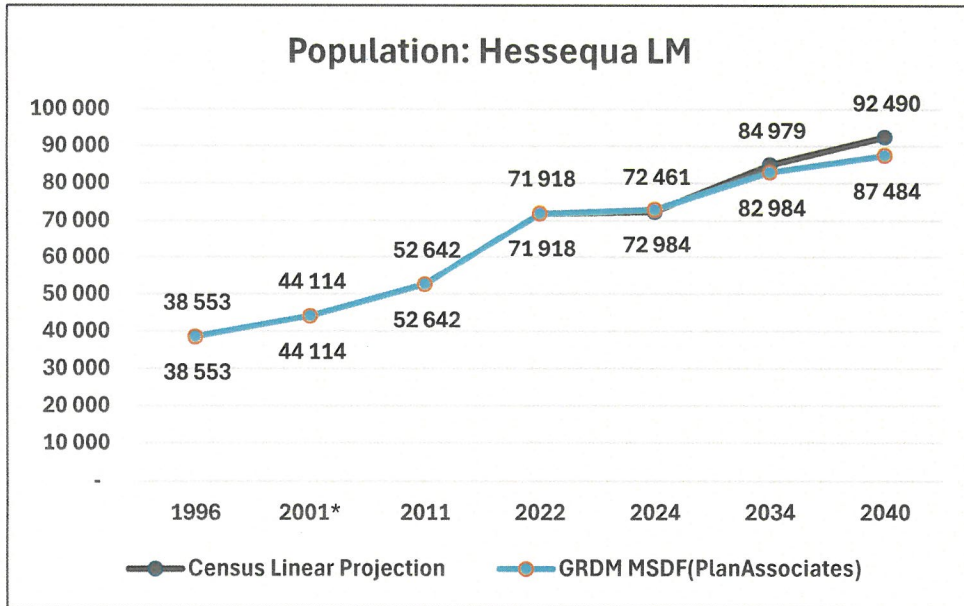


- Total Households compare well.
- Increment:
  - Linear: negative increment between 2022-2024
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.
- Declining HH size in both projections.

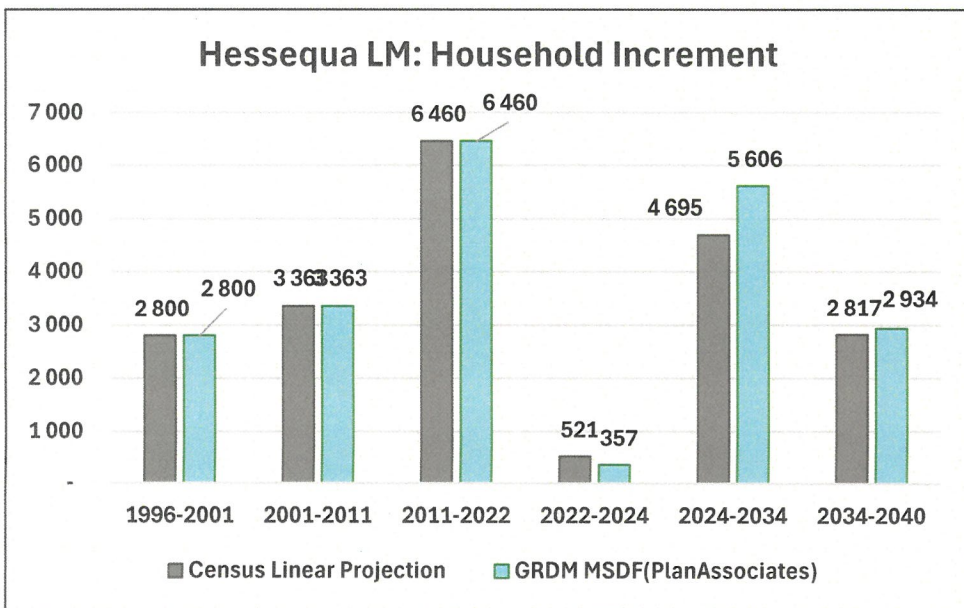
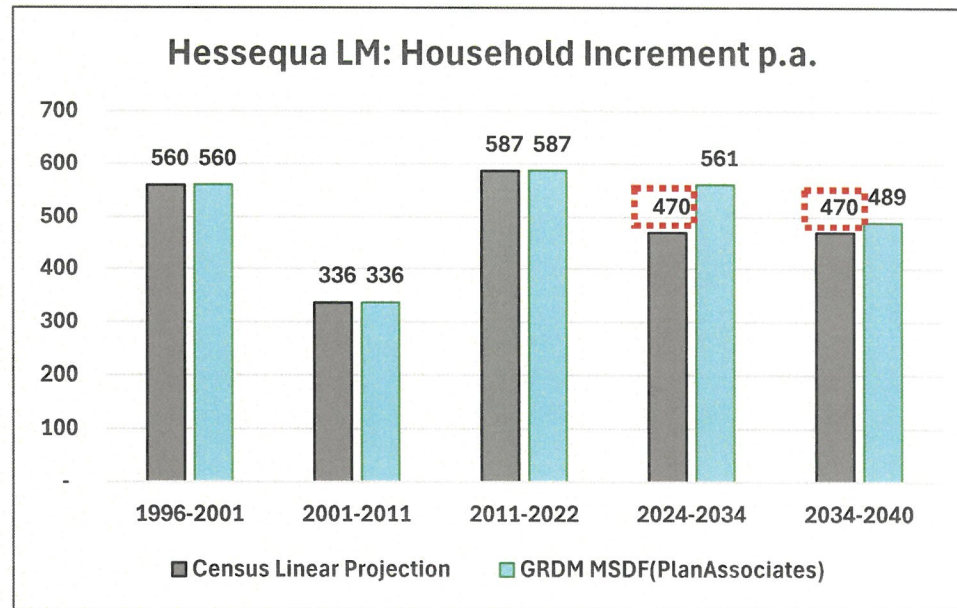
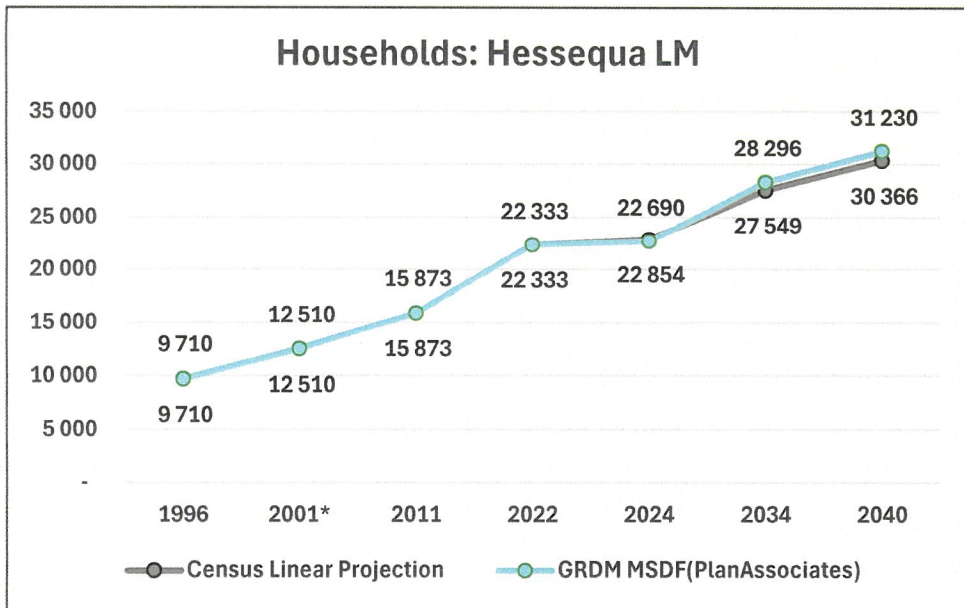


- Incremental population (2011-2022) only 408 people p.a.
- Low Increment expected up to 2034 and 2040.

Kannaland IDP (2022-2027) SDF predated Census 2022 results, continue to use 2014 MSDF. In process to review SDF.

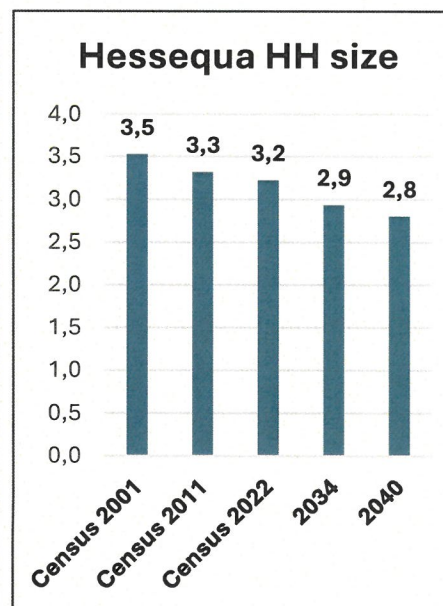
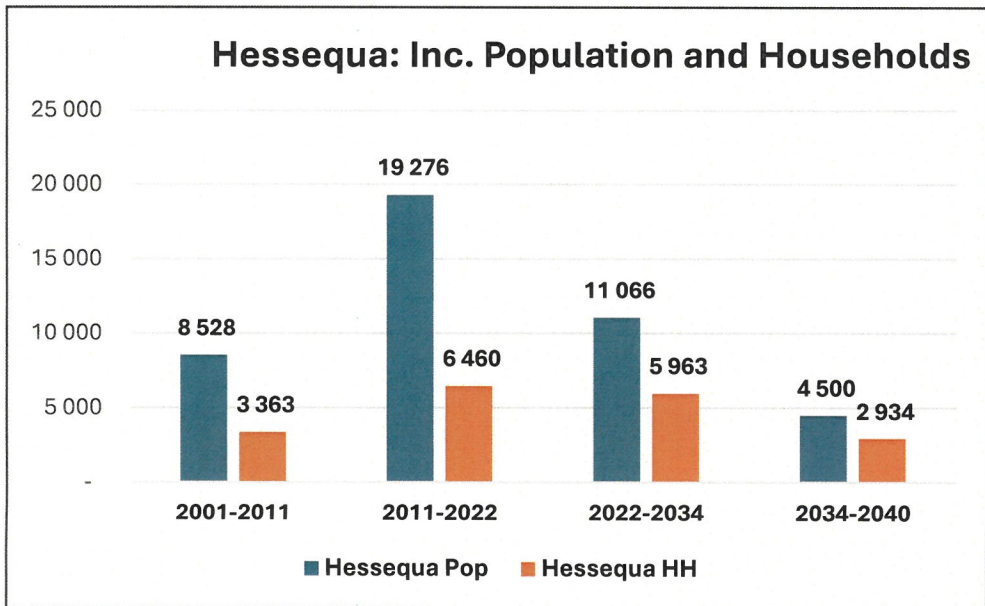
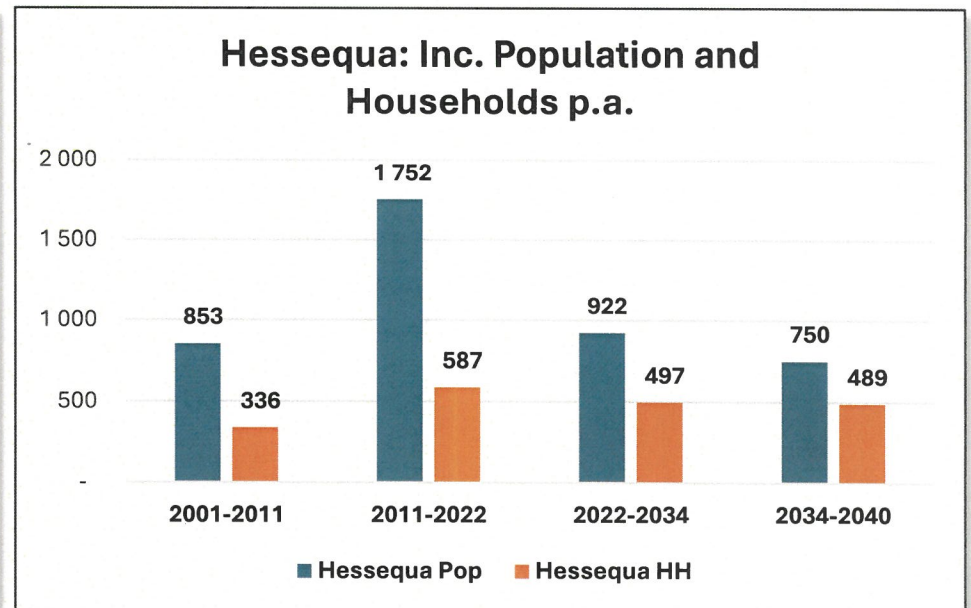
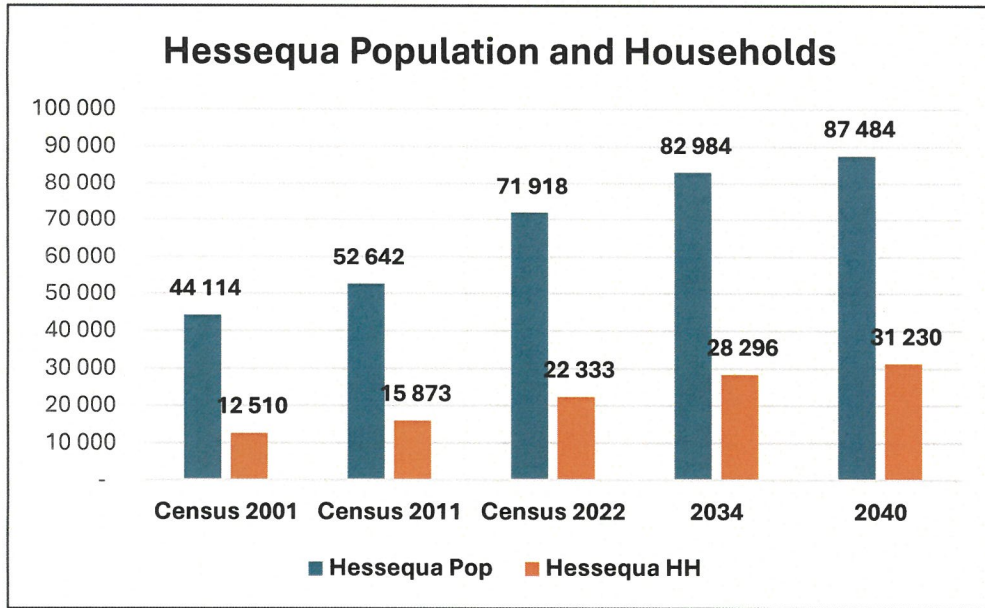


- Total Population: GRDM 5 000 people more than Linear – **used Hessequa SDF population projection (2040).**
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.



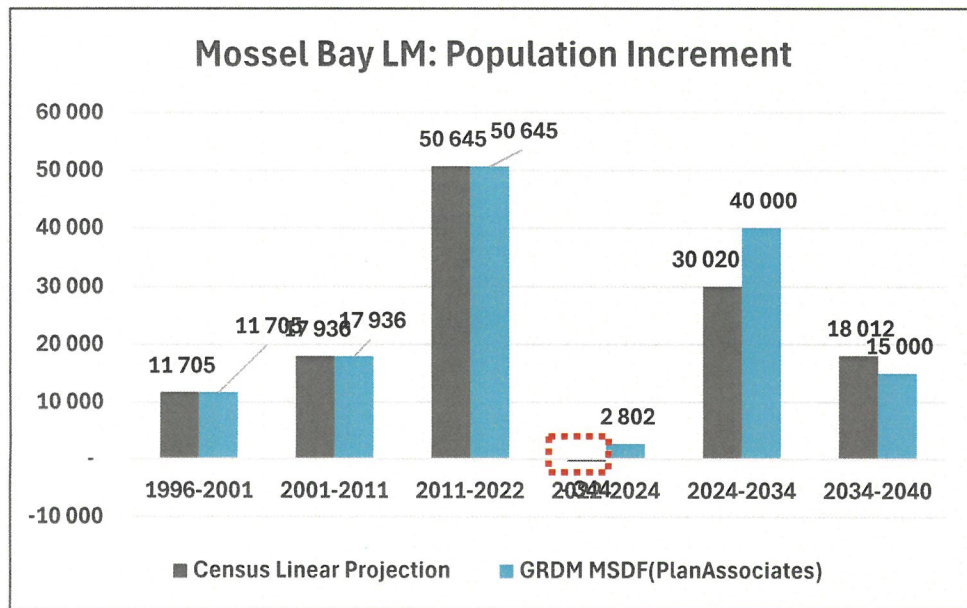
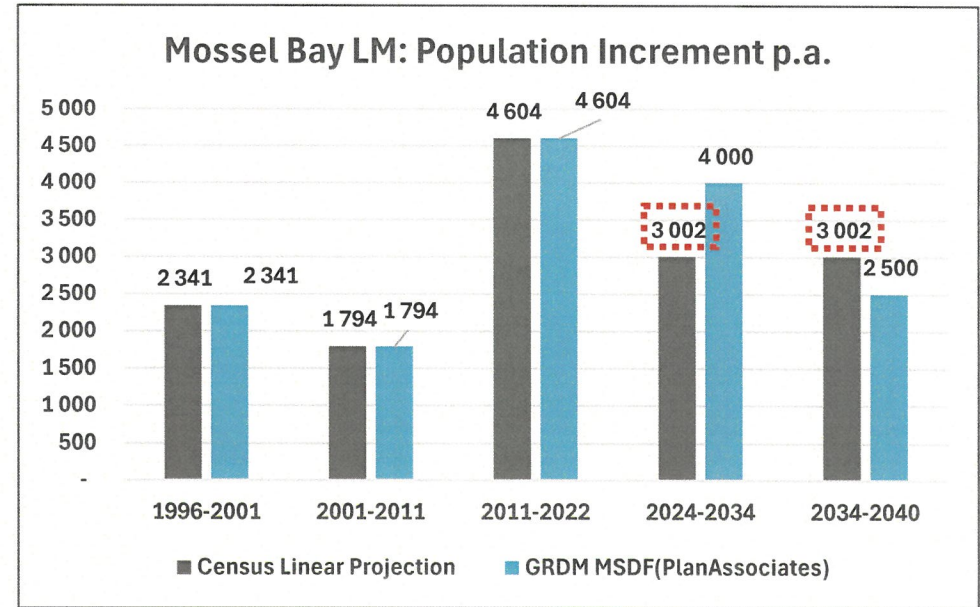
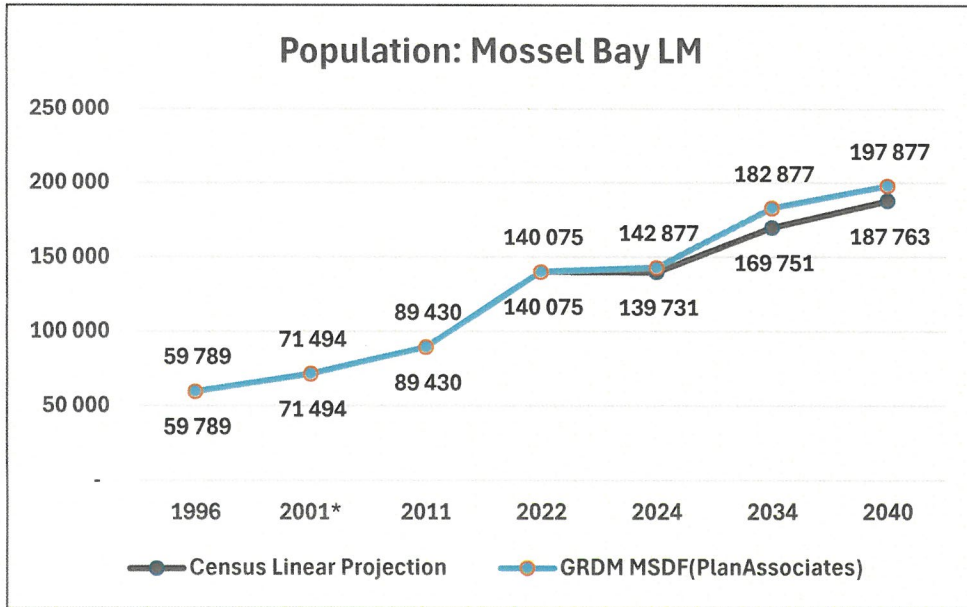
- Total Households compare well.
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.
- Declining HH size in both projections.

Note: Number of HH less than projected in SDF (2040) – hh size became too small.

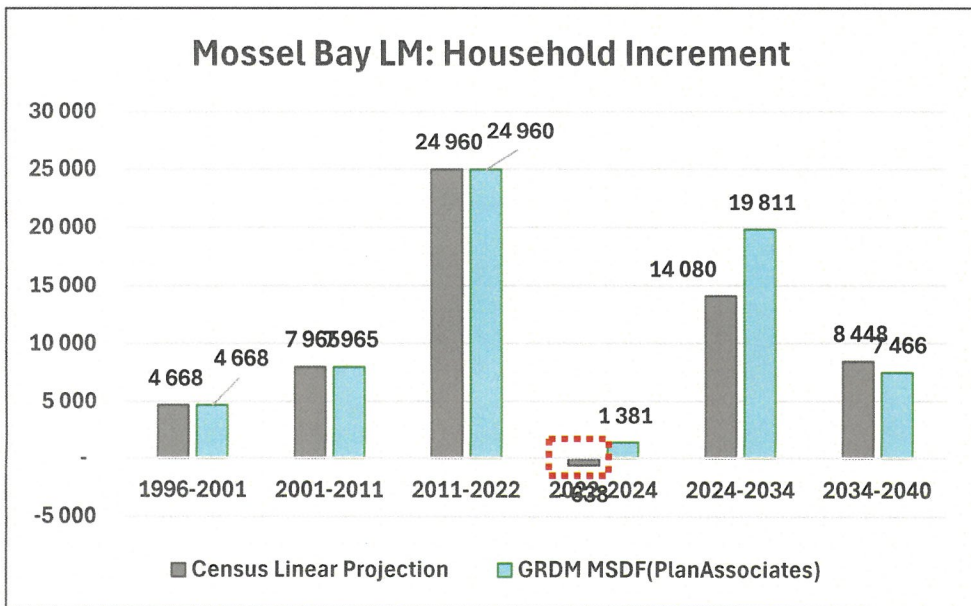
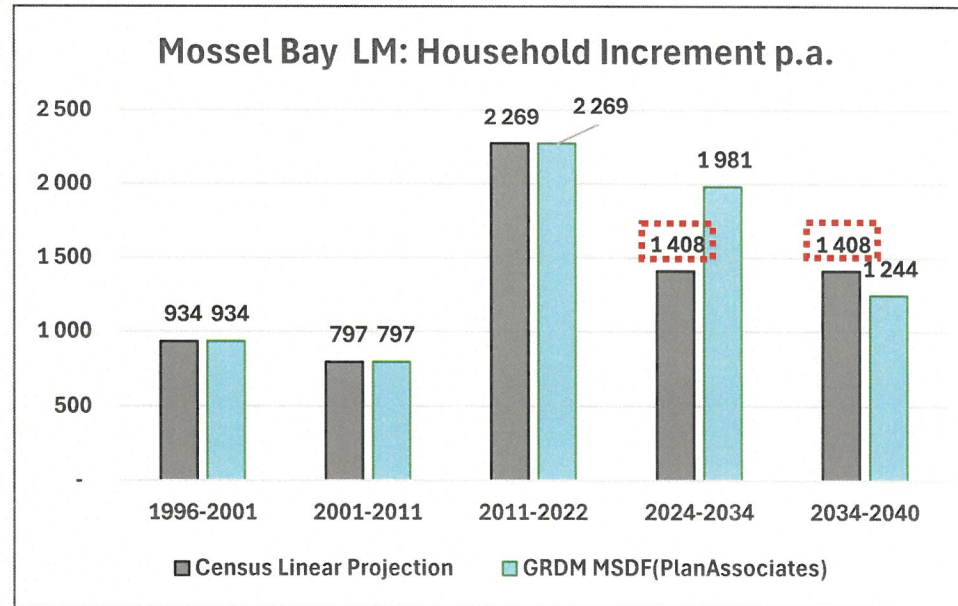
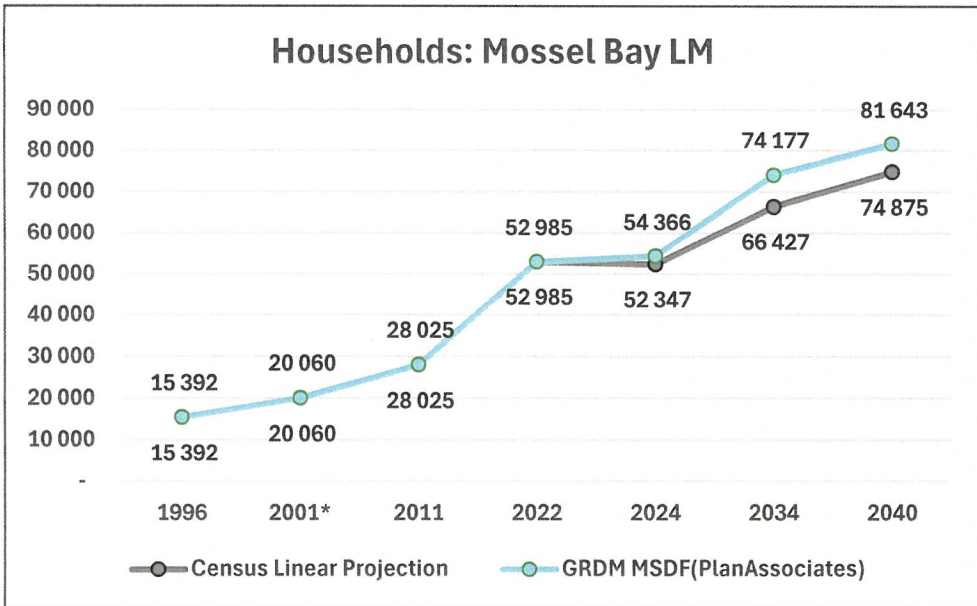


- Hessequa SDF 2024/2025. SDF incorporated Census 2022 and included projections per town (2030, 2040).
- As part of this process a summary table per town was compiled and built into the population projection.
- Only 8 897 additional hh (2022-2040) included in this projection and not 12 219 as indicated by the SDF; HH size became very small, and Inc. close to 680 p.a., which seems high in comparison with population Inc. p.a.

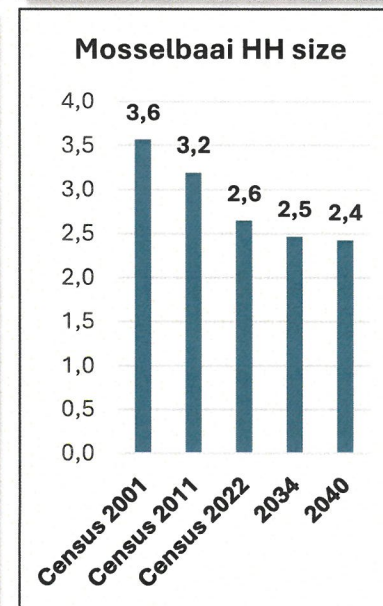
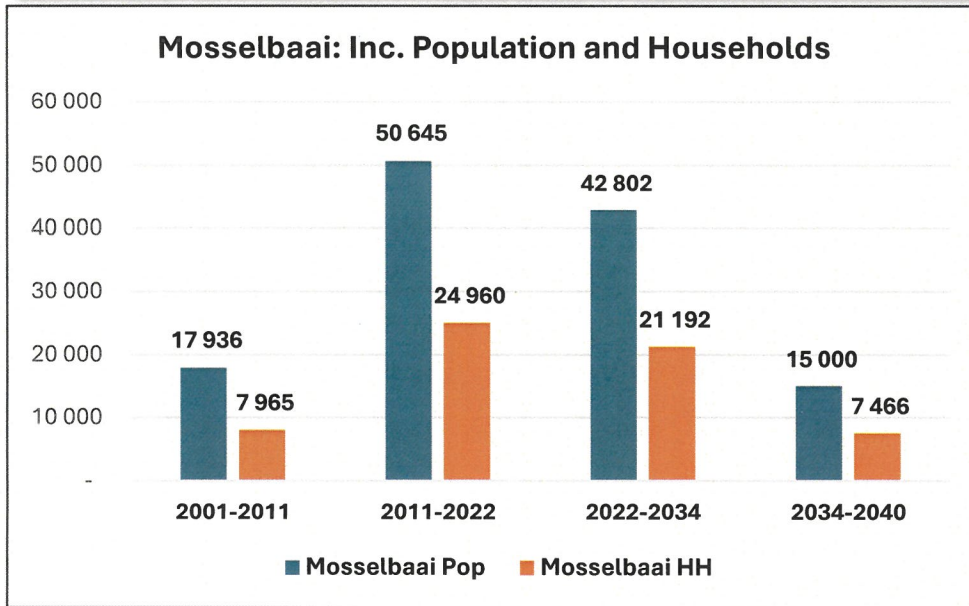
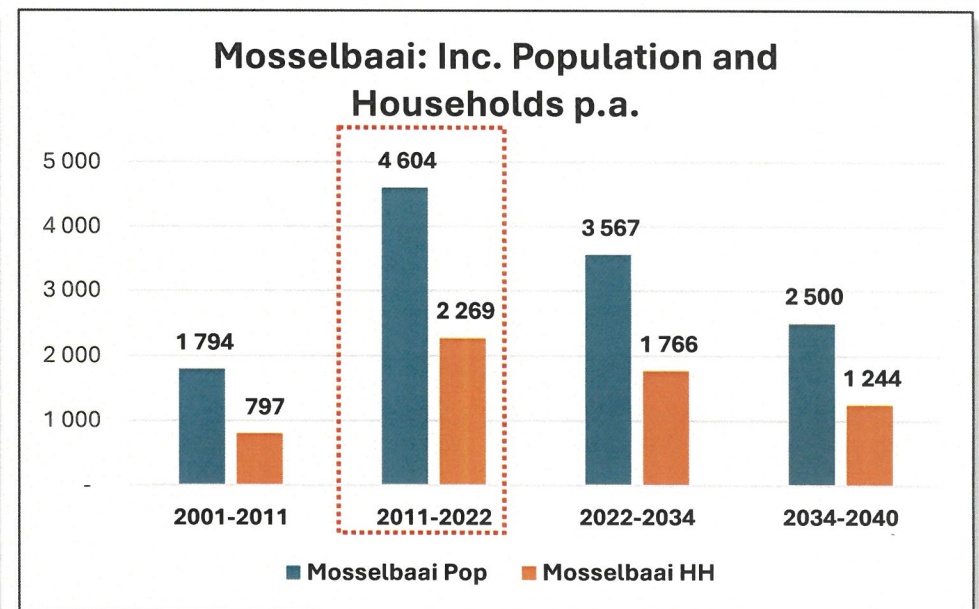
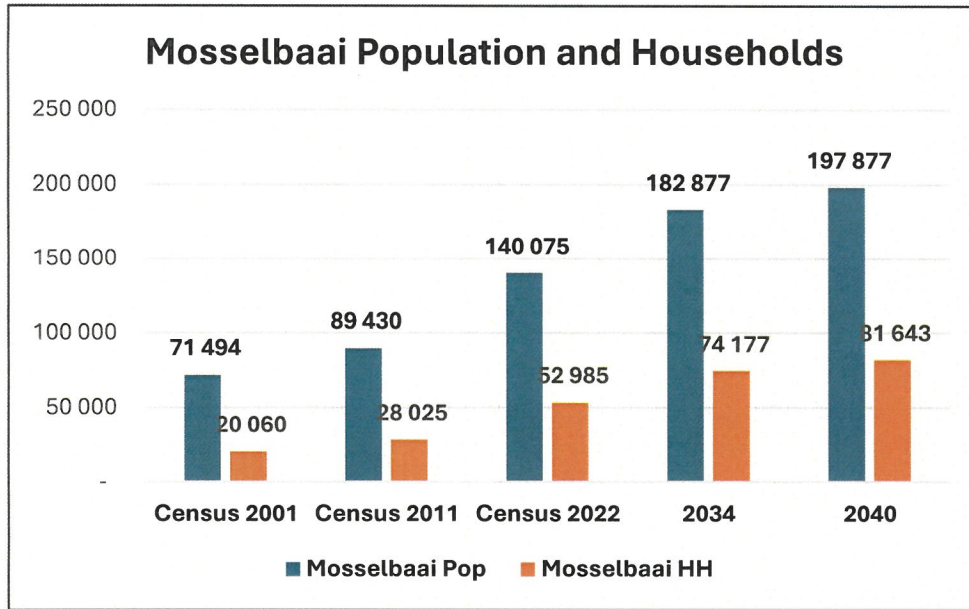
**Hessequa SDF 2024/2025.**



- Total Population: GRDM MSDF expected a higher (+10 000) population by 2040.
- Increment:
  - Linear: negative increment between 2022-2024
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.

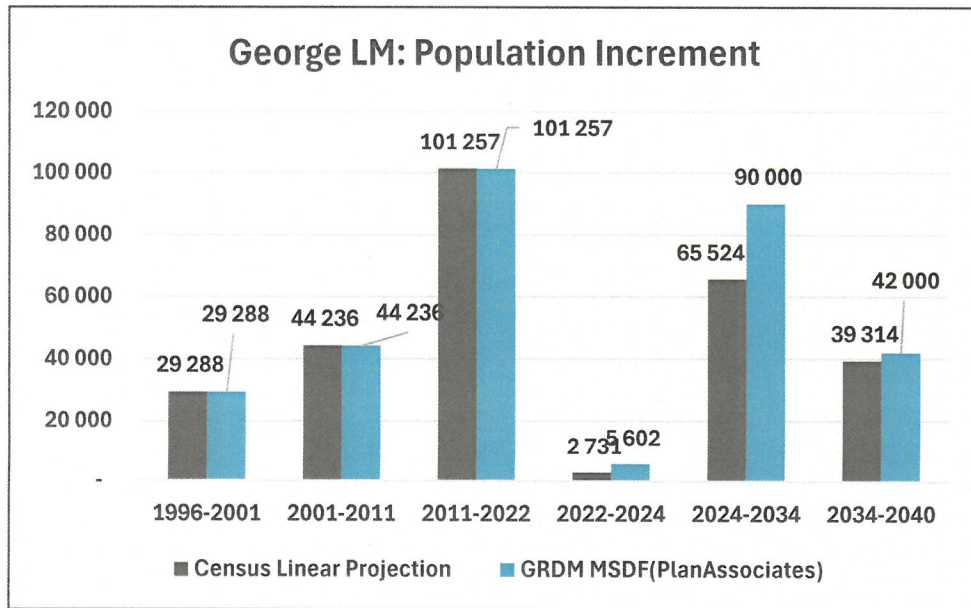
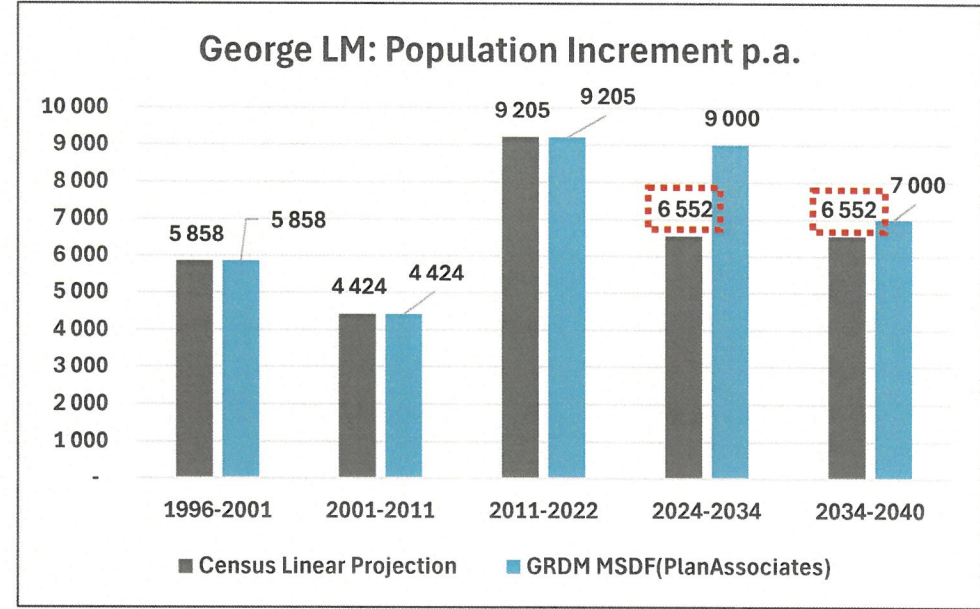
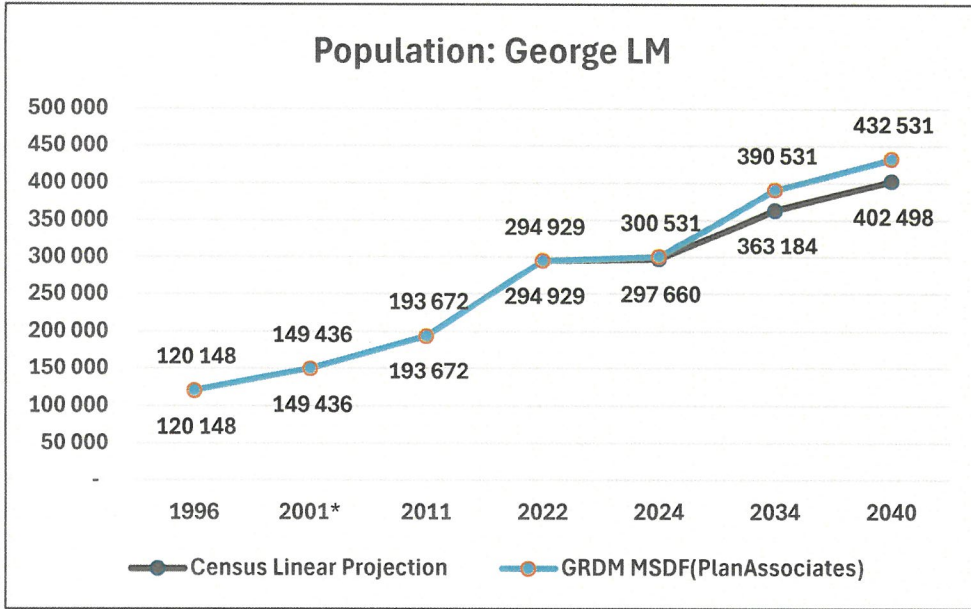


- Total Households: GRDM MSDF expected a higher number of households (+6 700) by 2040.
- Increment:
  - Linear: negative increment between 2022-2024
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.
- Declining HH size in both projections.

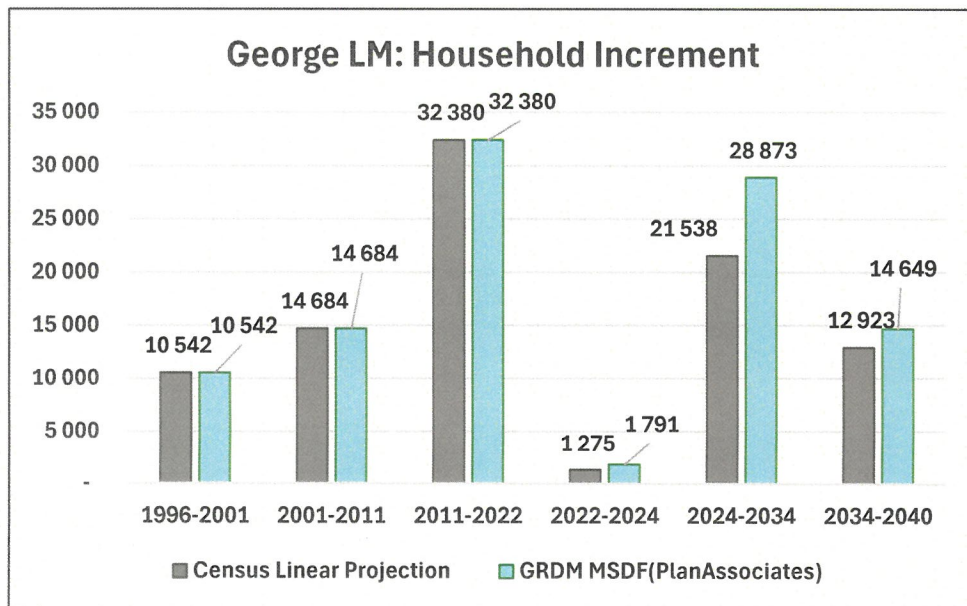
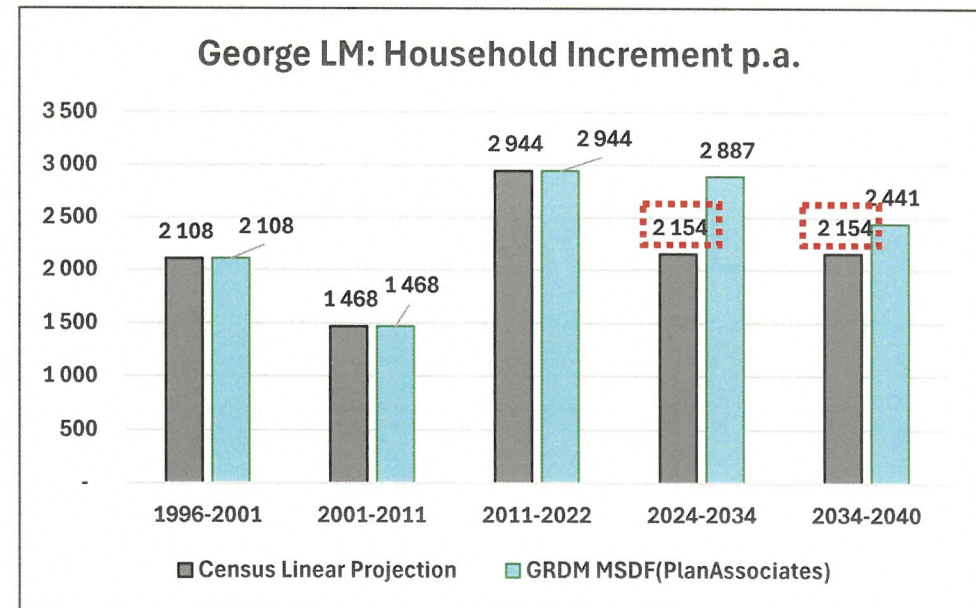
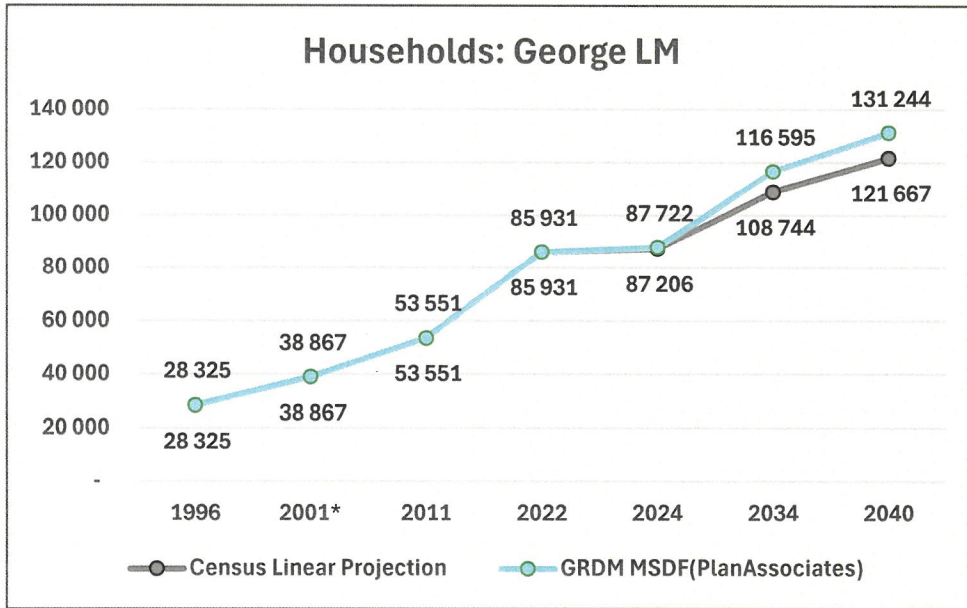


- Strong growth experienced between 2011 and 2022 propels Mosselbaai into 2<sup>nd</sup> highest population in GRDM.
- It is expected to continue in future.

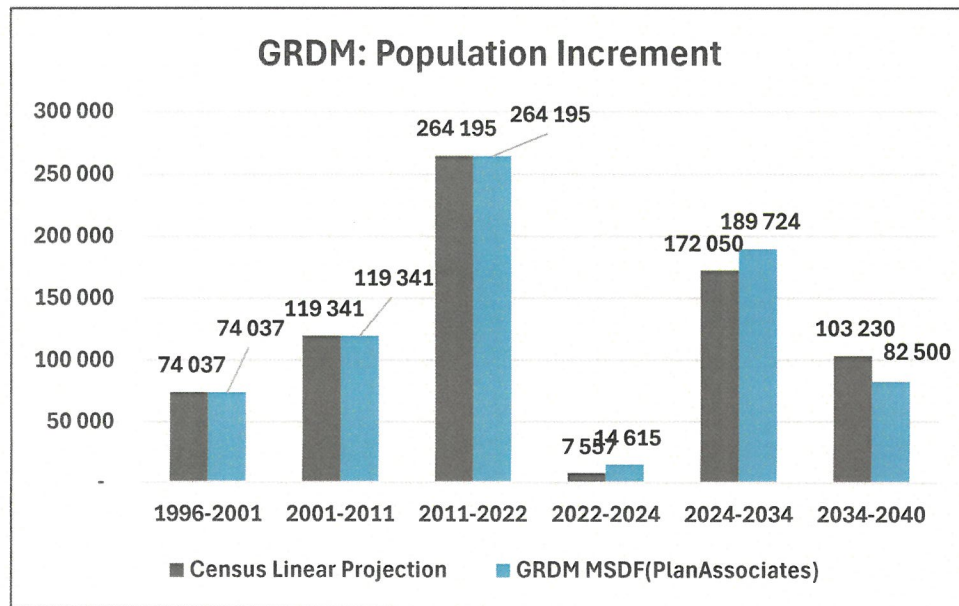
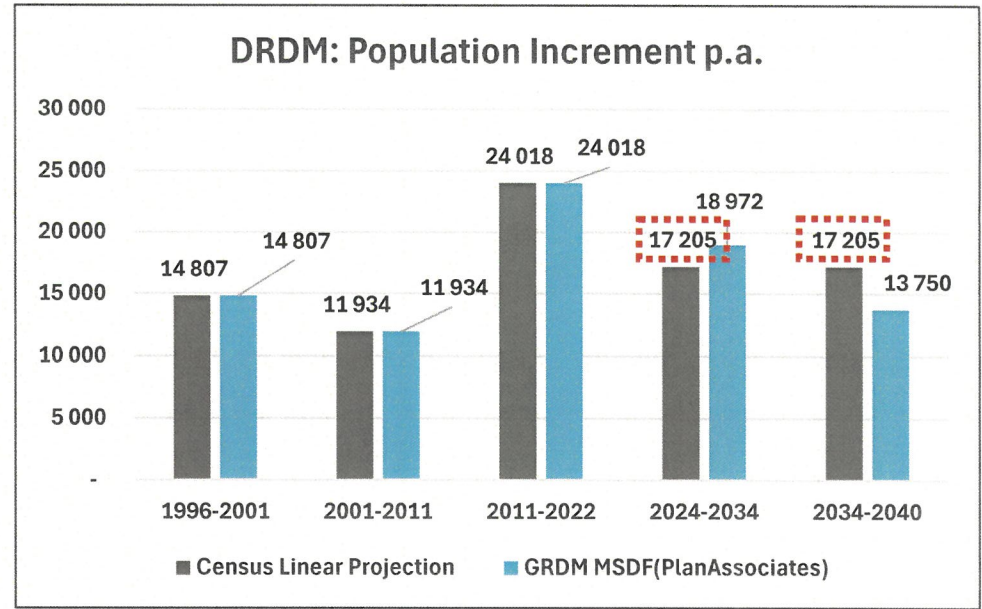
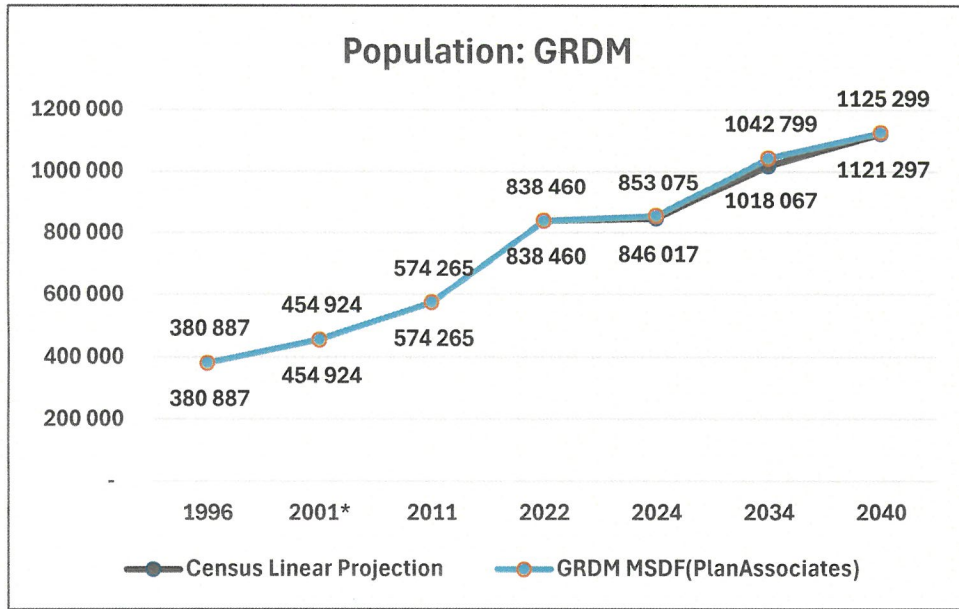
**Mosselbaai SDF 2022, predates Census 2022; Population projection too low.**



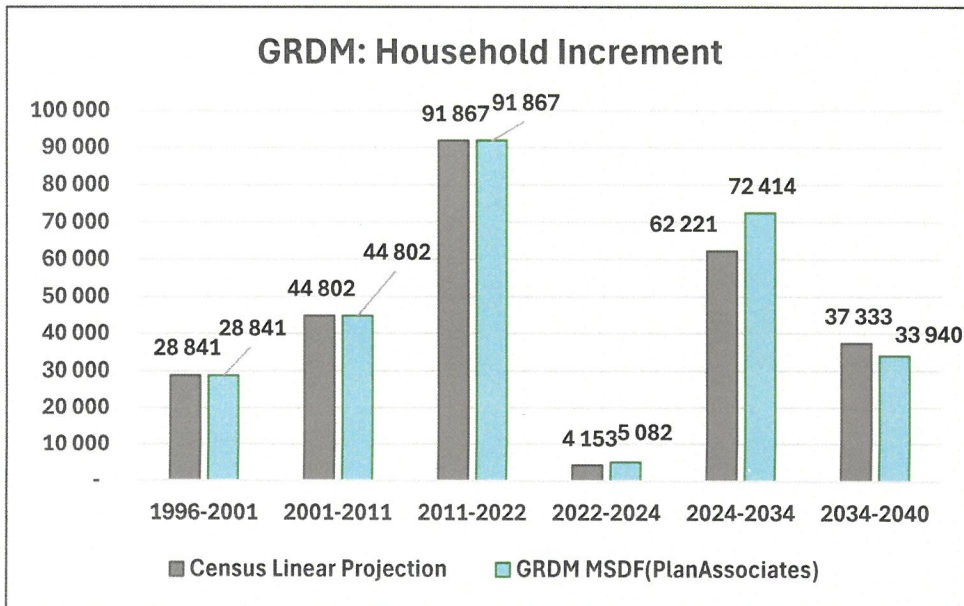
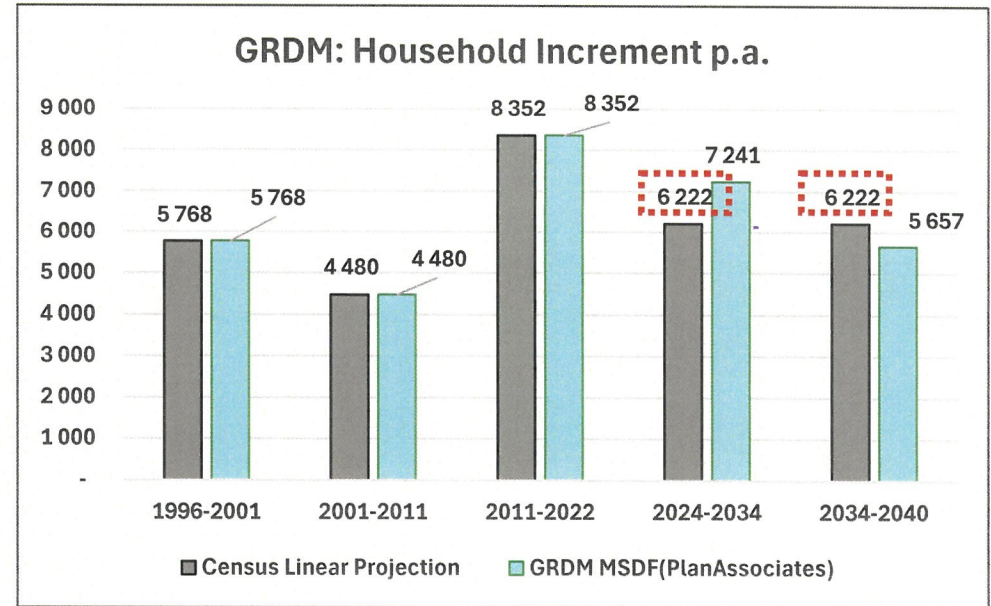
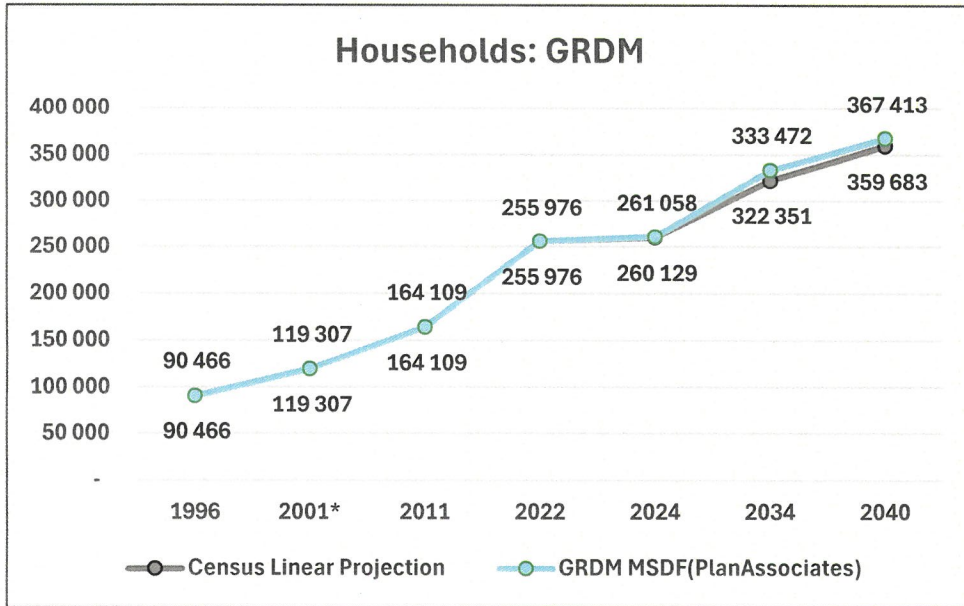
- Total Population: GRDM MSDF expected a higher (+30 000) population by 2040.
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.



- Total Households: GRDM MSDF expected a higher number of households (+9 500) by 2040.
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.
- Declining HH size in both projections.



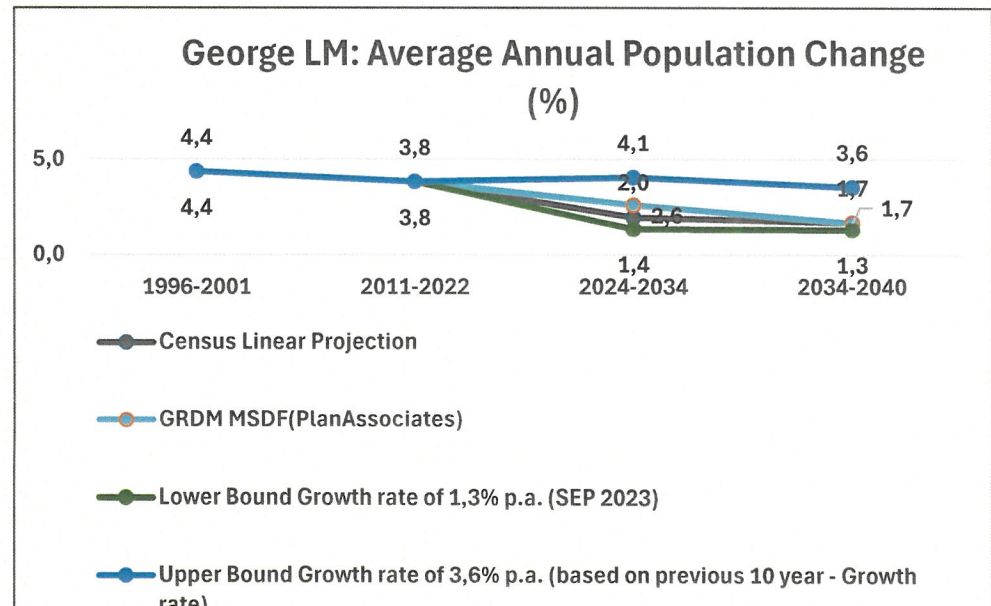
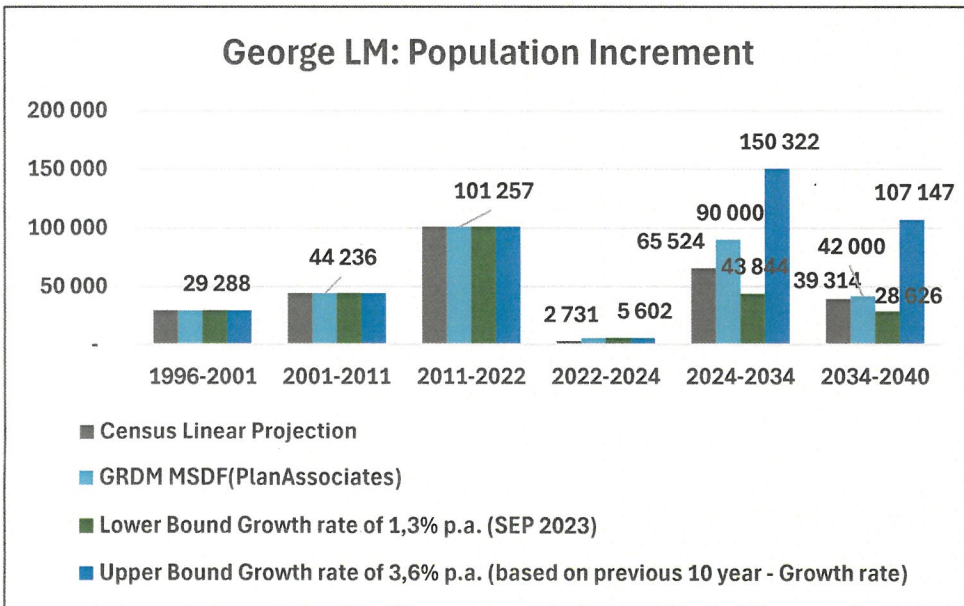
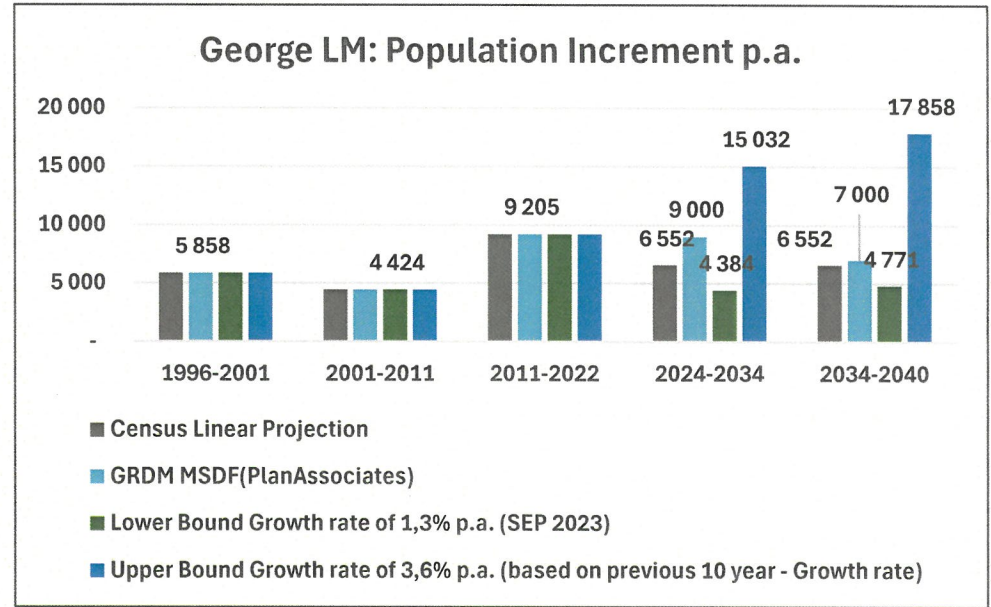
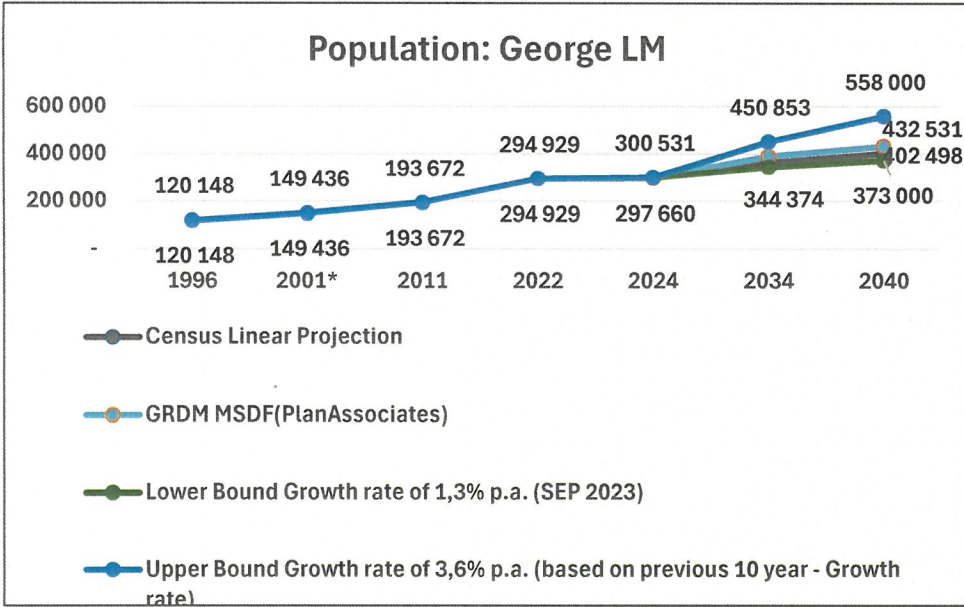
- Total Population compares well.
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.



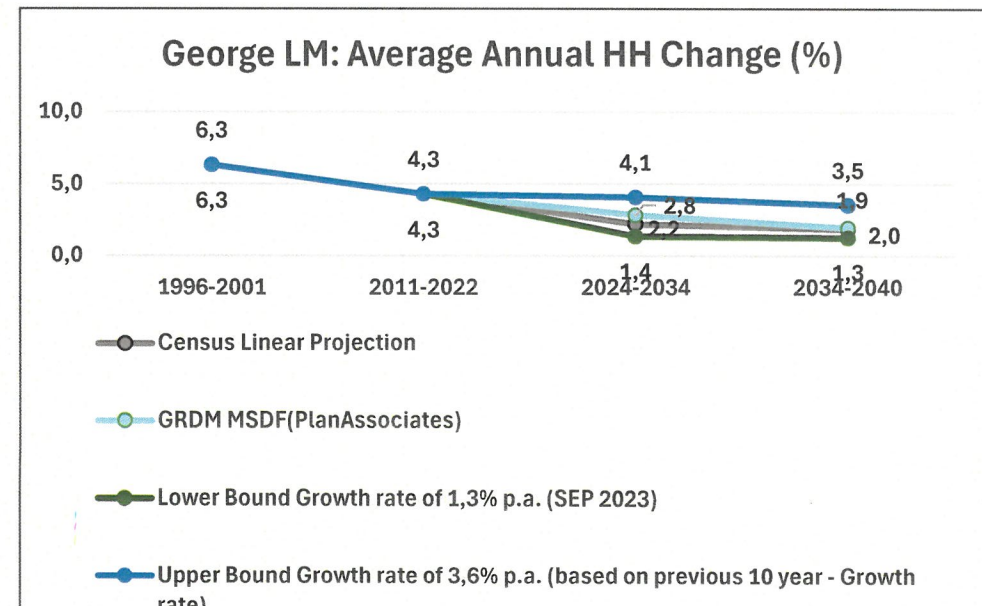
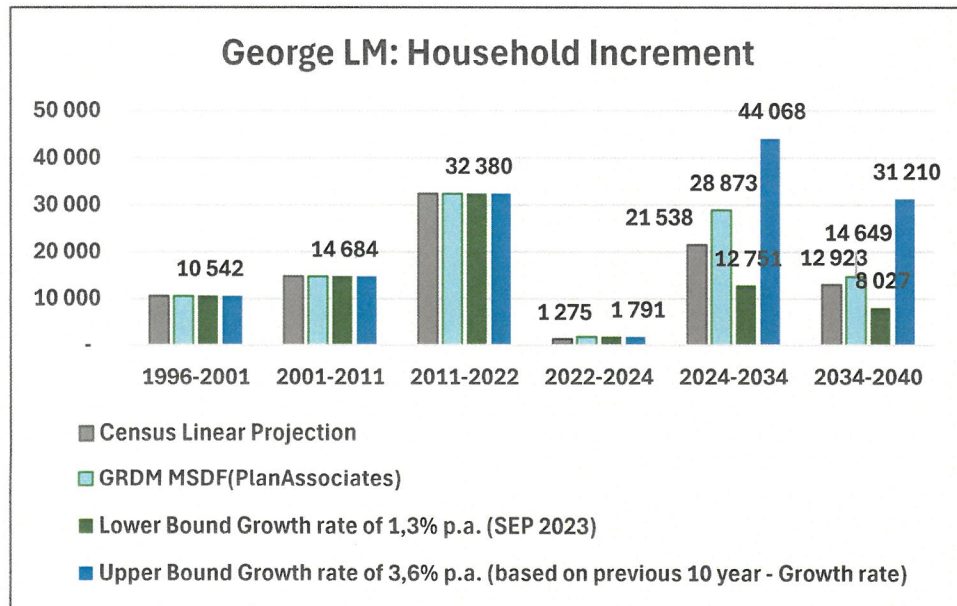
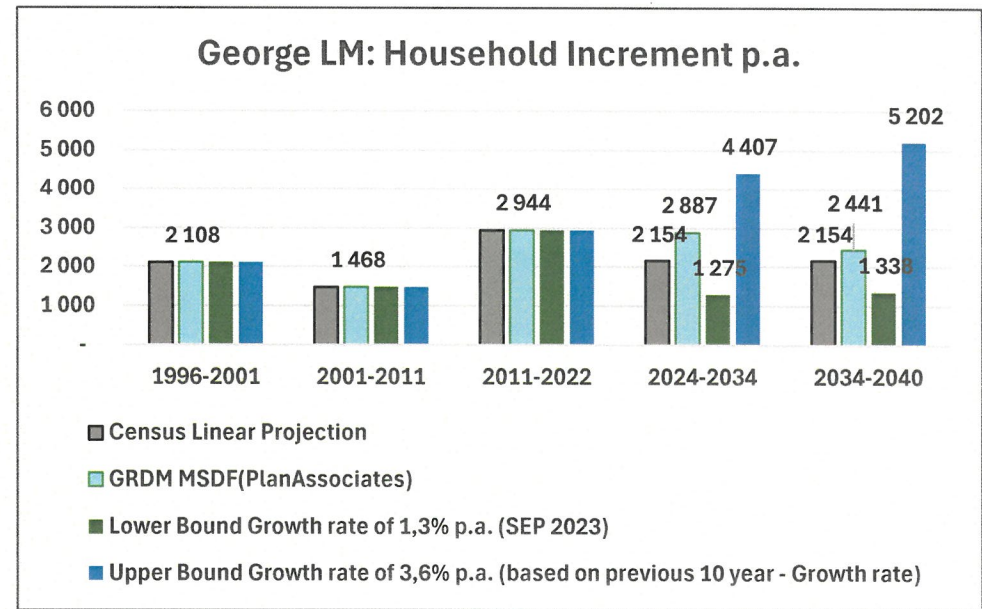
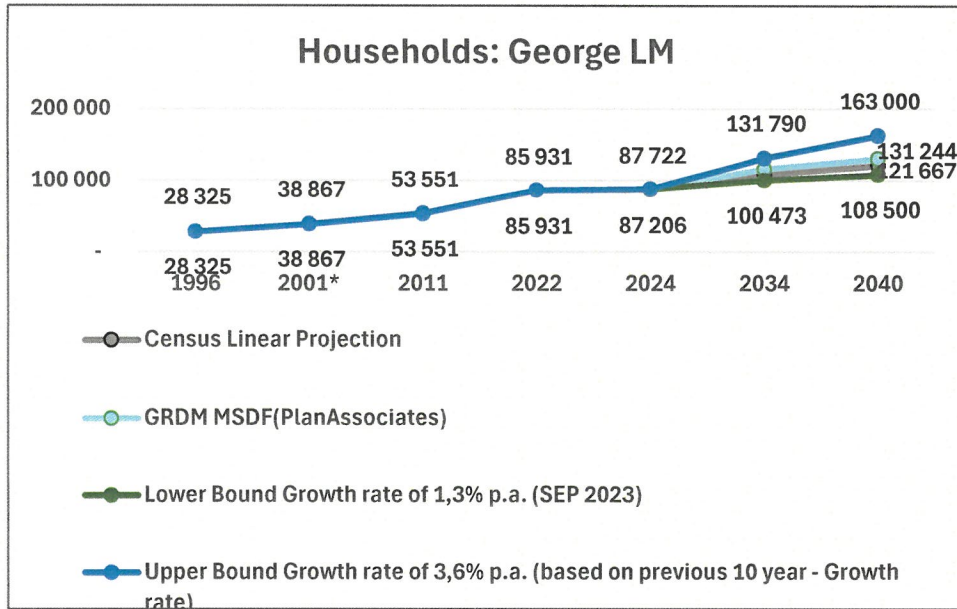
- Total households compare well.
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.

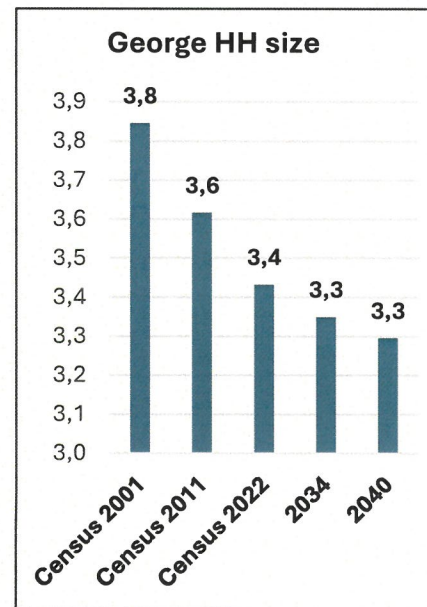
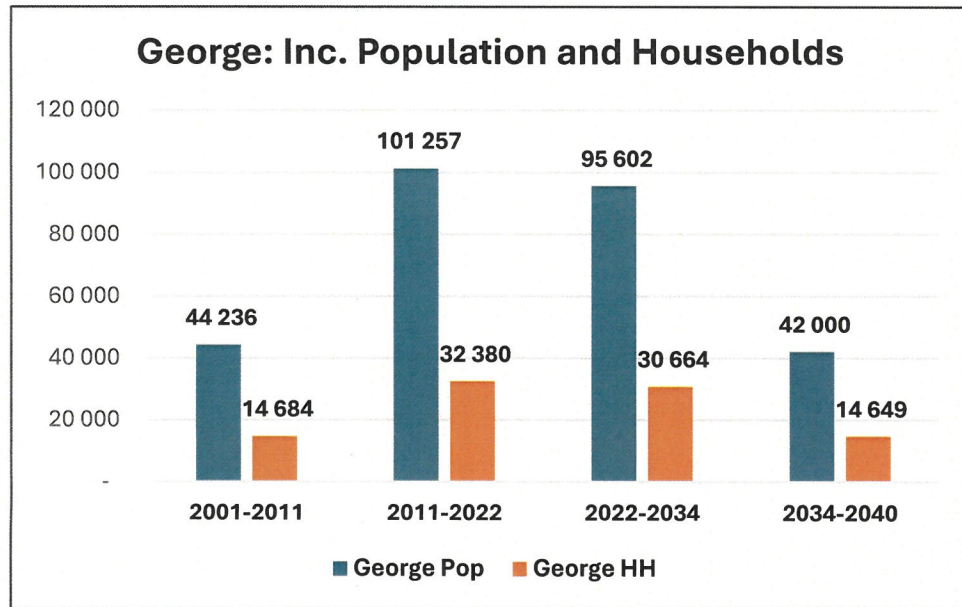
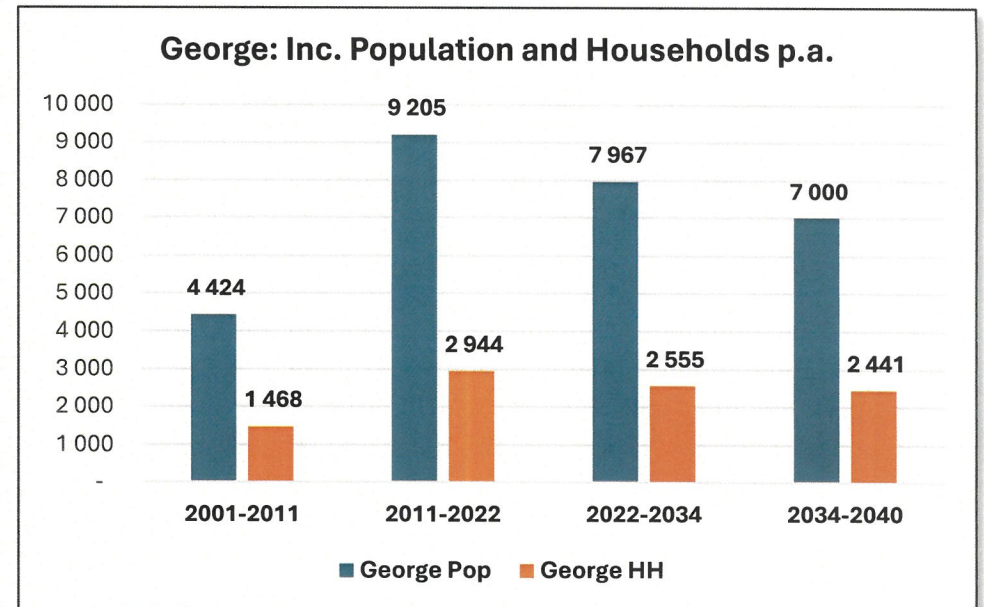
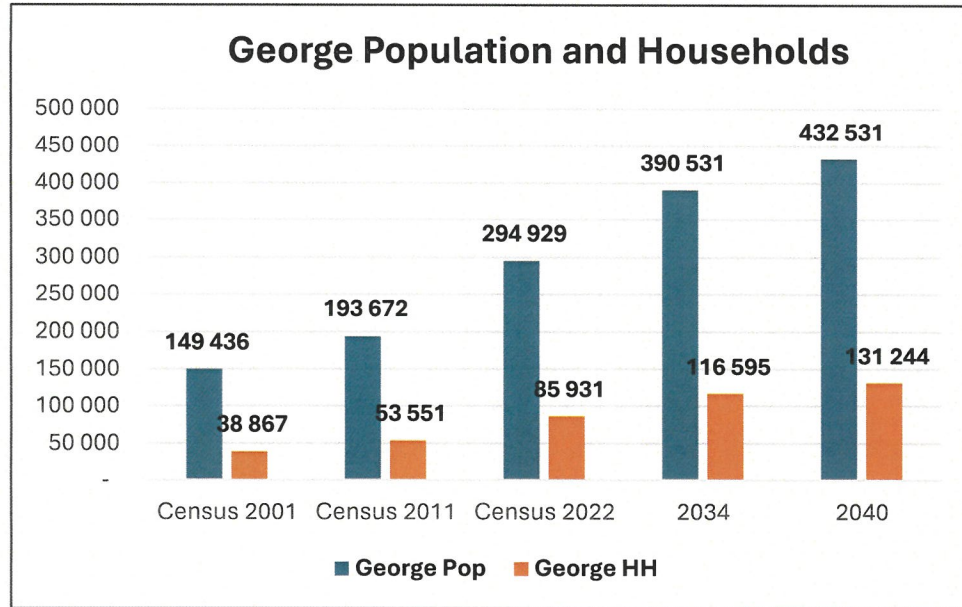
# GEORGE LM: POPULATION PROJECTIONS (including LM Projections)

Diagram XX



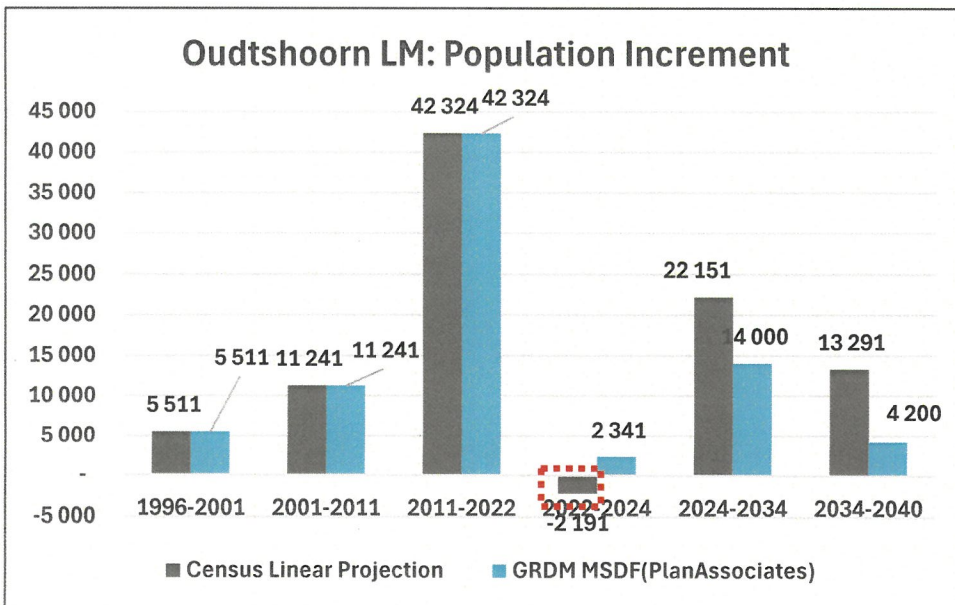
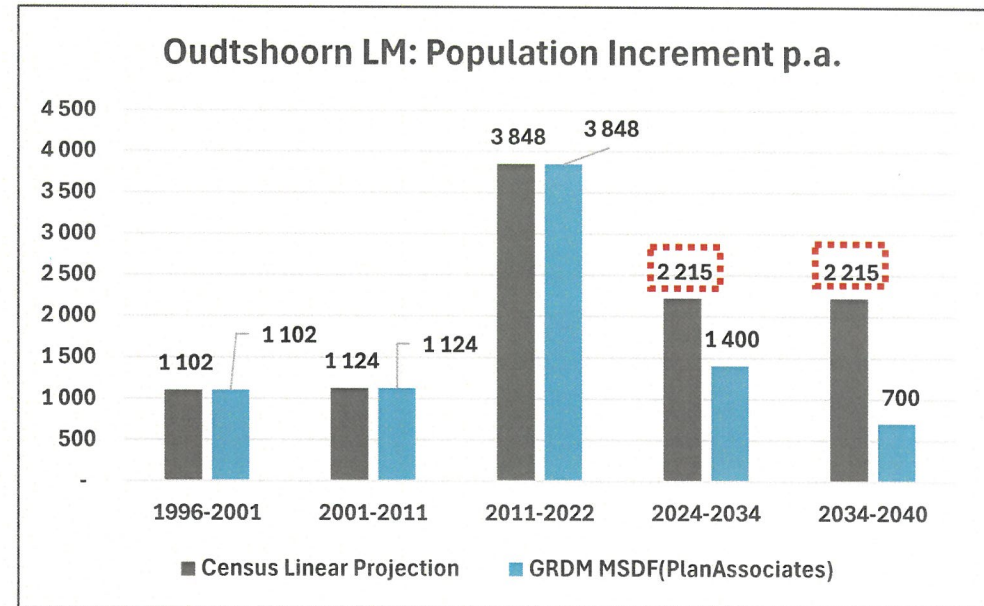
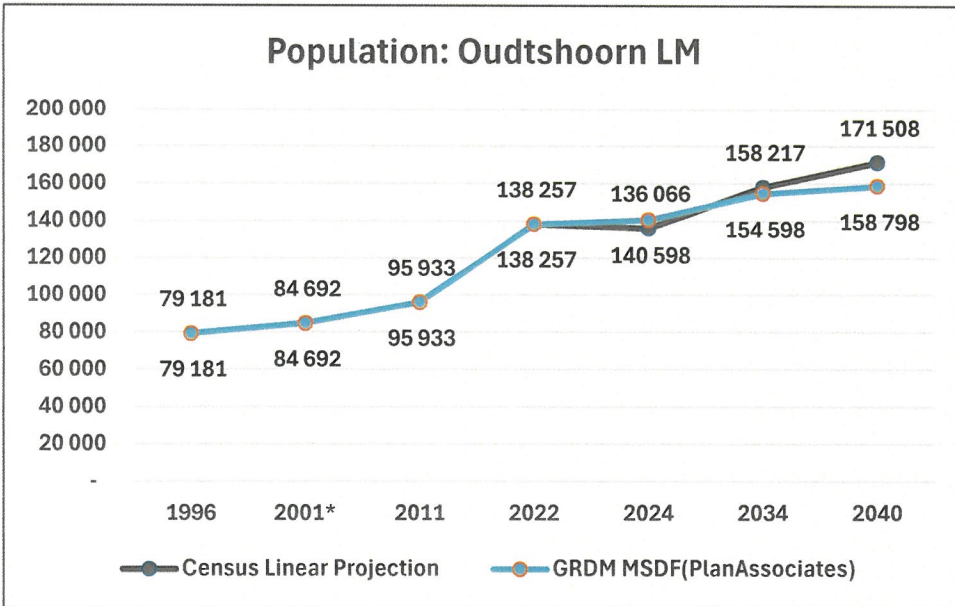
Source : Stats SA, Mid- Year Population Estimates, 2024, P0302, STATSSA, 2034 Population Estimate: PERO 2024, WC Government Comments, LM SDF's



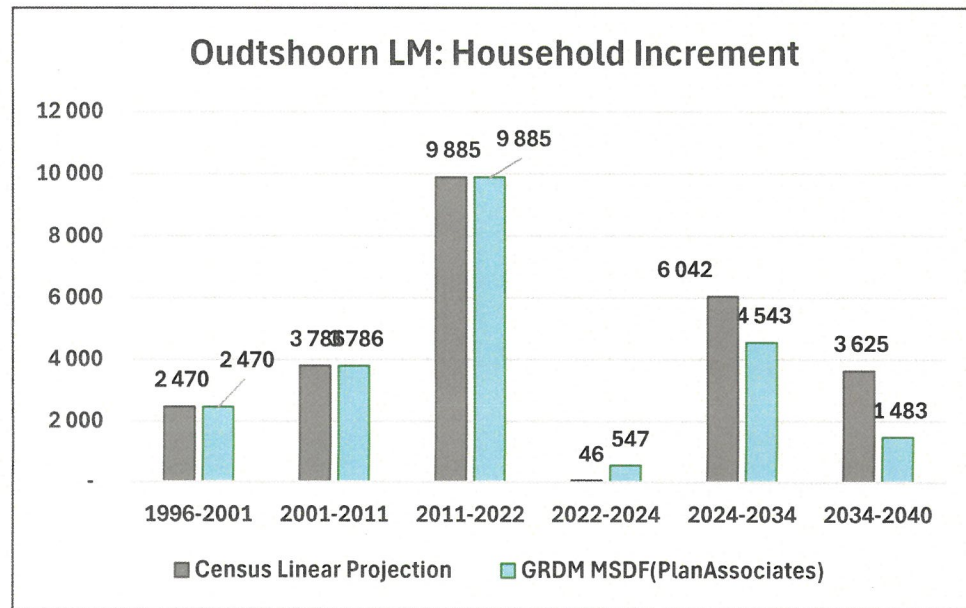
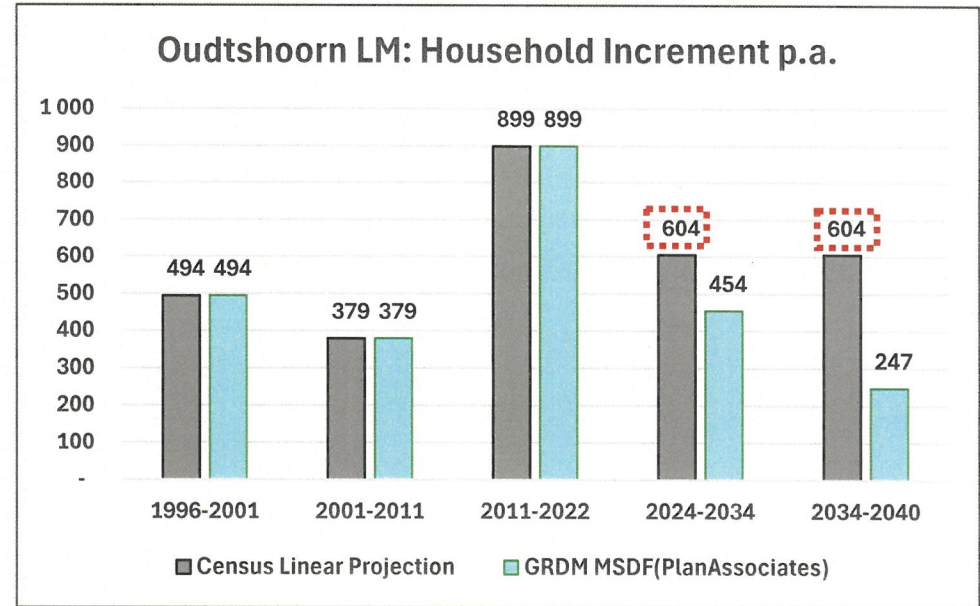
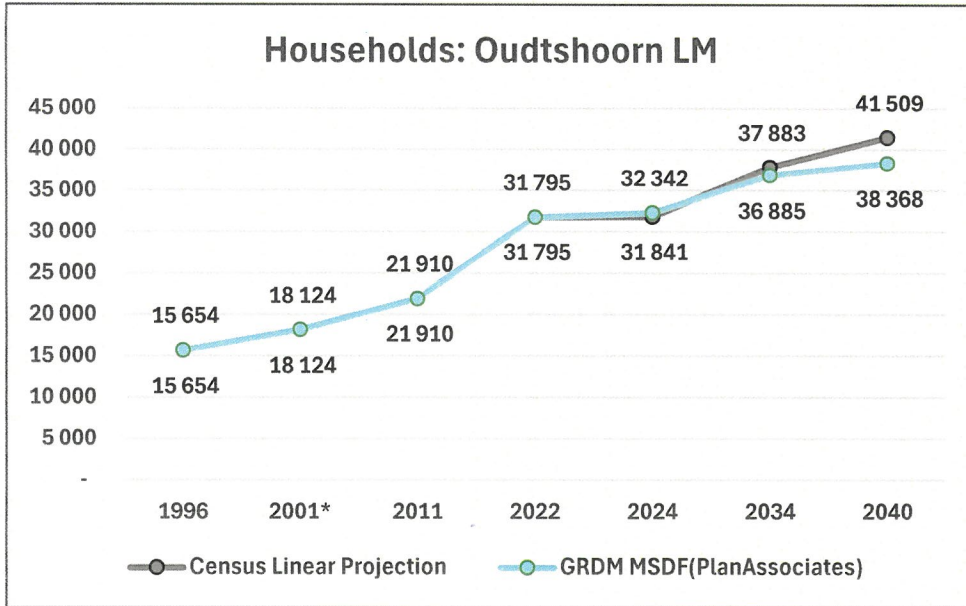


- Strong growth experienced between 2011 and 2022 representing the highest population in GRDM.
- It is expected to continue in future.

**George SDF 2022, predates Census 2023; Population projection too low.**

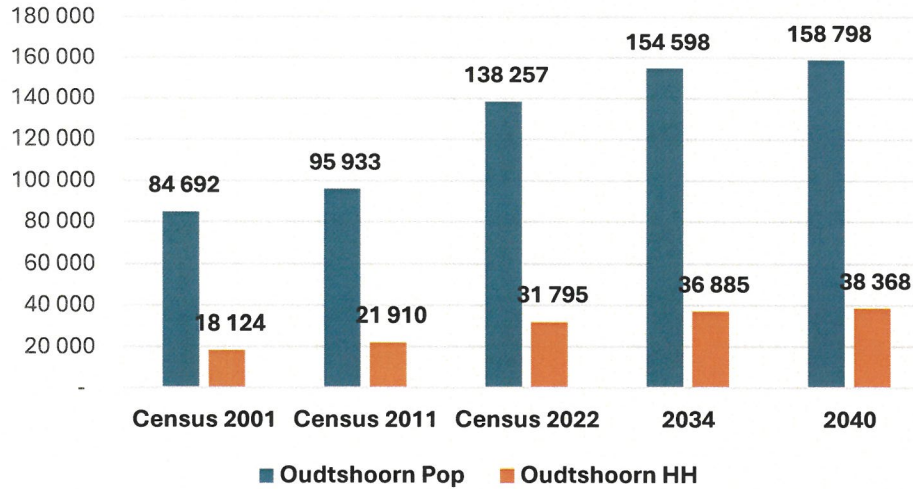


- Total Population: GRDM MSDF is lower than Linear Projection (-12 000) people by 2040. **Reason being the Oudtshoorn SDF 2020 projected a decline in population up to 2030.**
- Increment:
  - Linear: negative increment between 2022-2024
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.

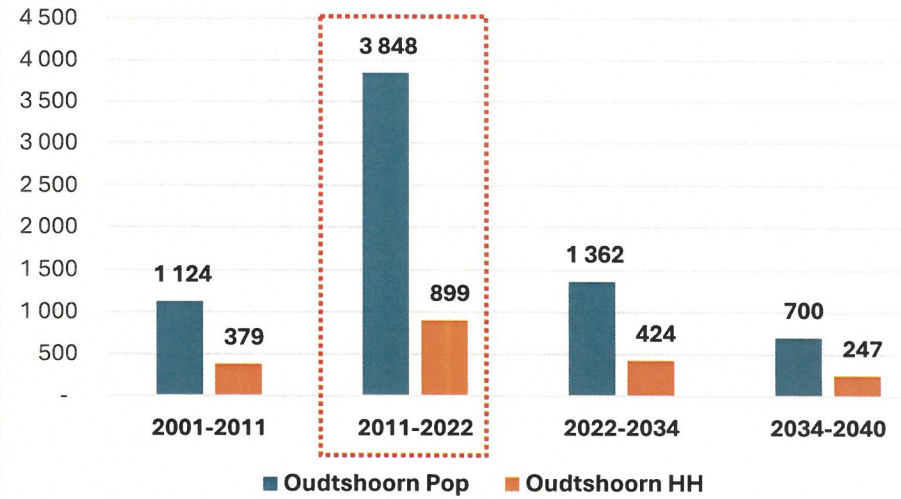


- Total Households: GRDM MSDF is lower than Linear Projection (-3 000) Households by 2040. Reason being the Oudtshoorn SDF 2020 projected a decline in Households up to 2030. Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.
- Declining HH size in both projections.

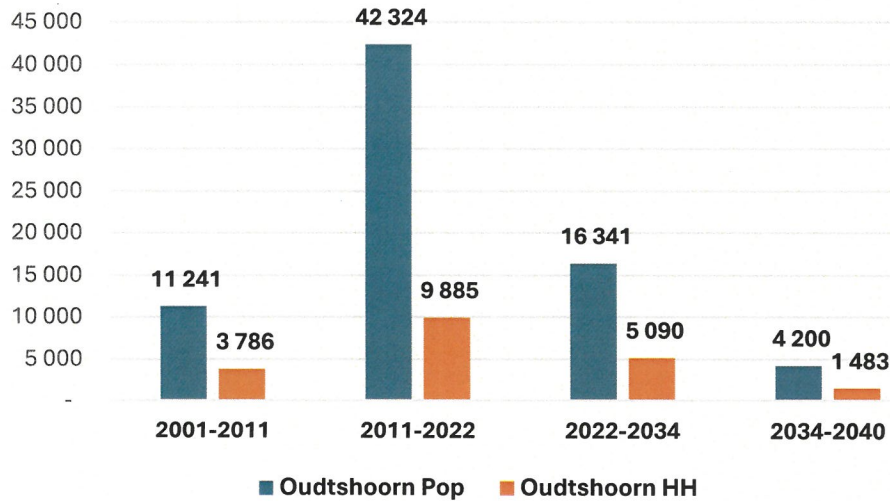
Oudtshoorn Population and Households



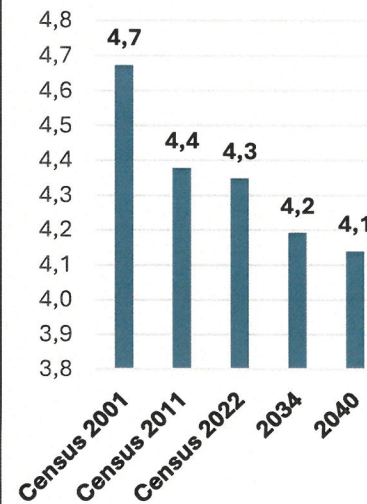
Oudtshoorn: Inc. Population and Households p.a.



Oudtshoorn: Inc. Population and Households

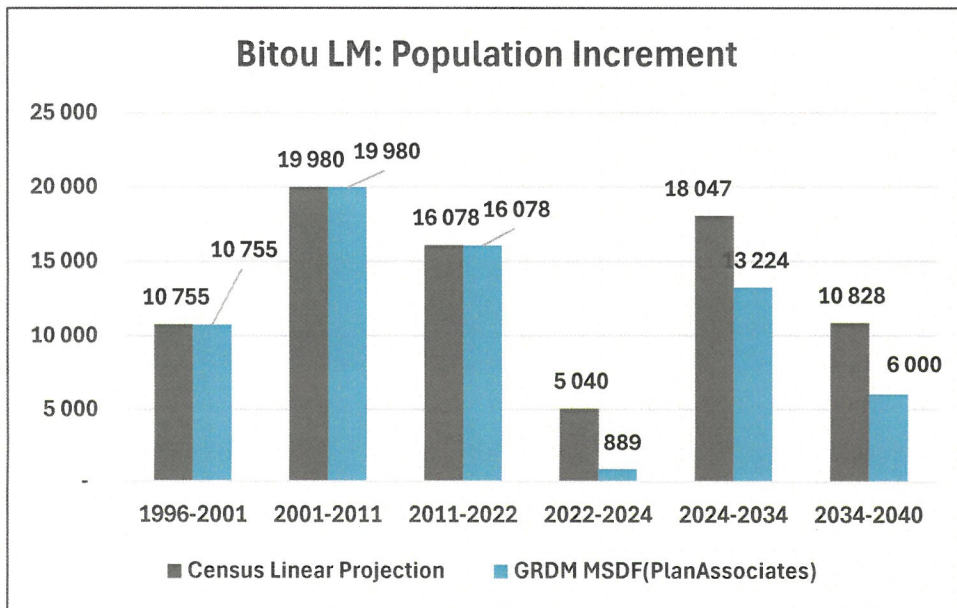
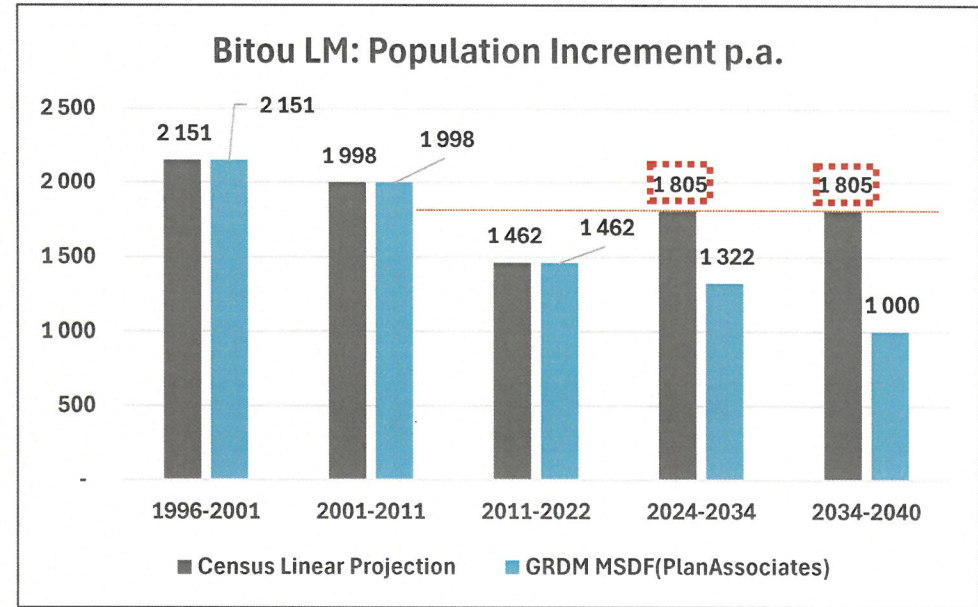
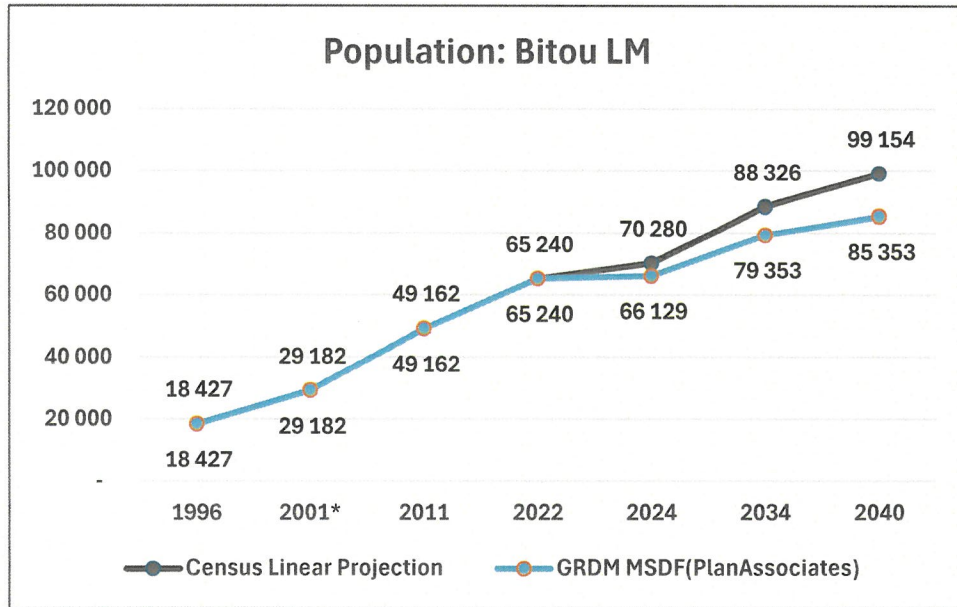


Oudtshoorn HH size

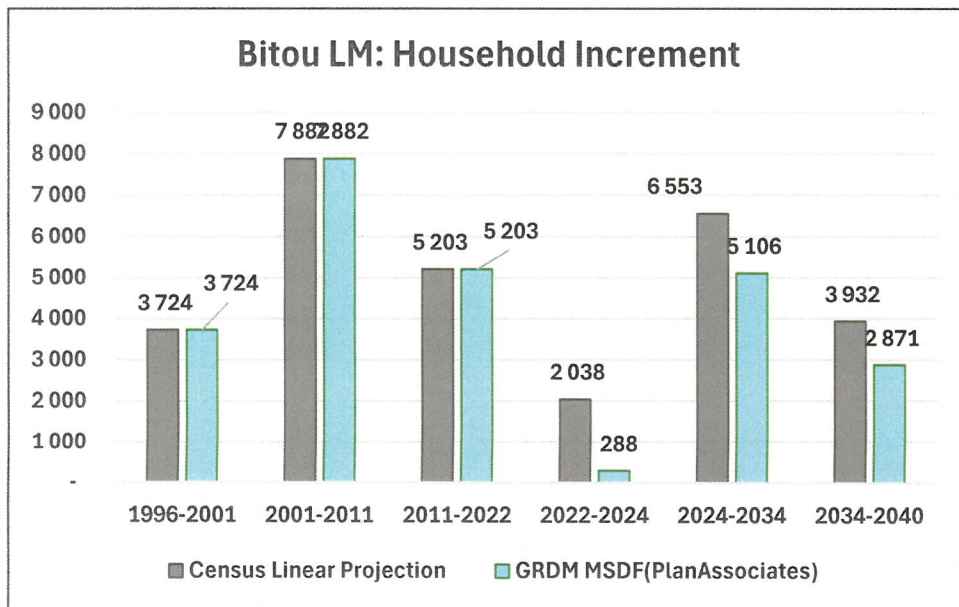
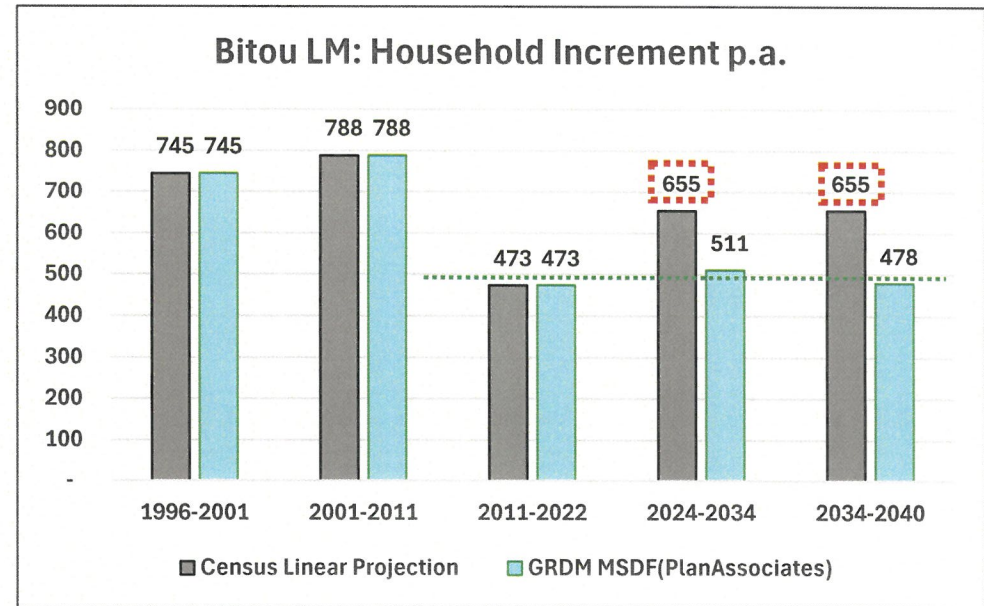
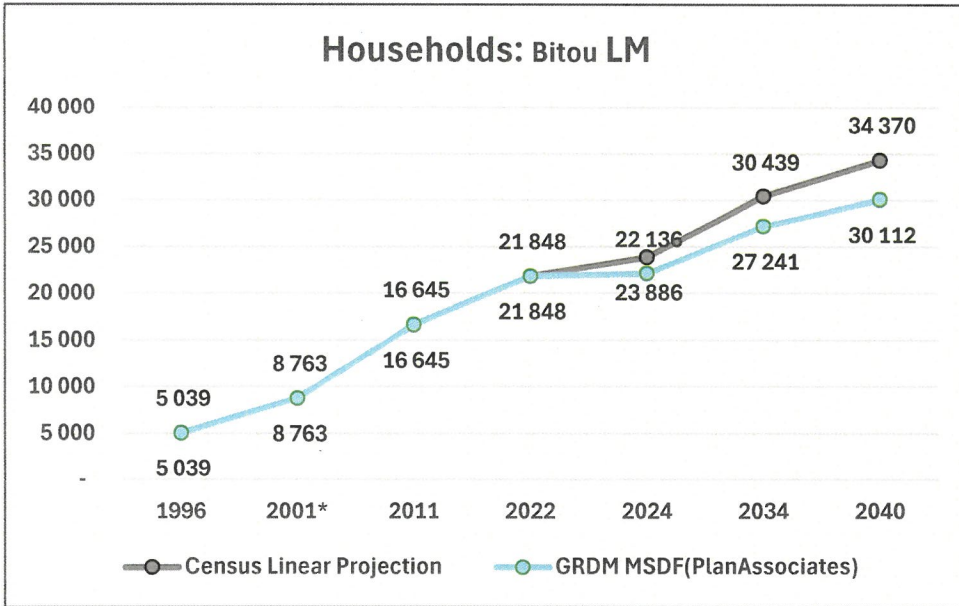


- Incremental population (2011-2022): 3 848 people p.a.
- However, according to SDF (2020) a **negative** population growth was expected up to 2030.
- Assumption: Relatively low Increment expected up to 2034 and 2040

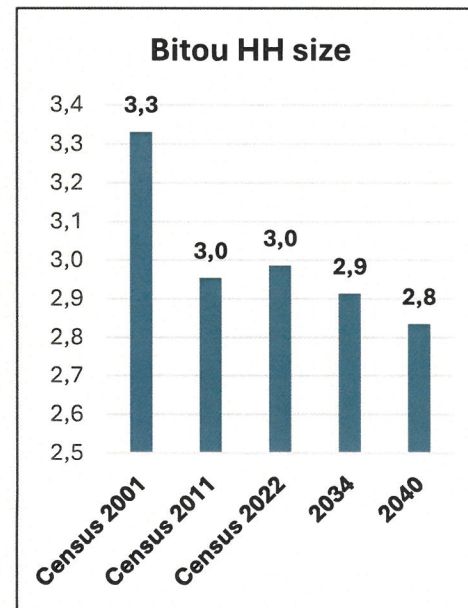
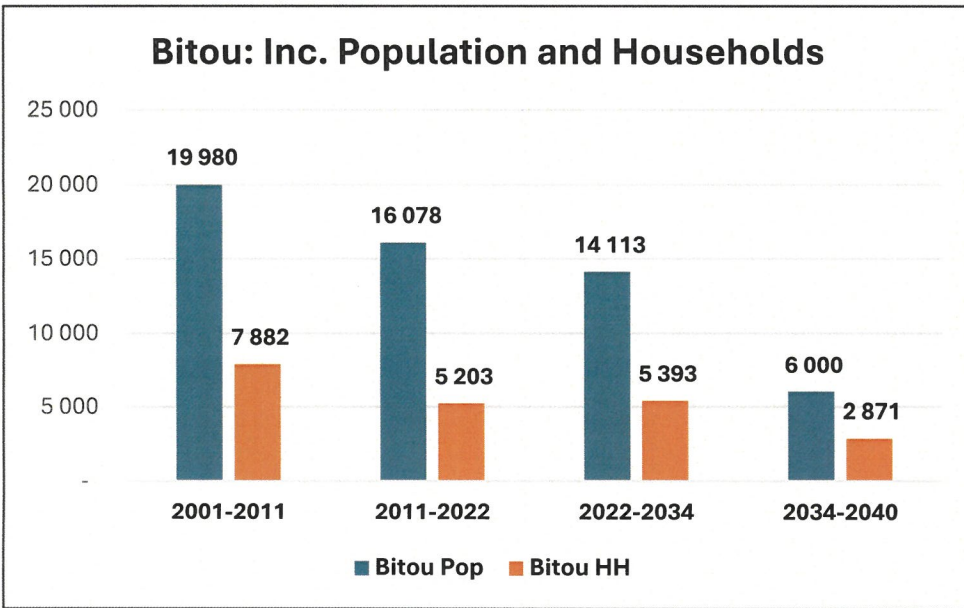
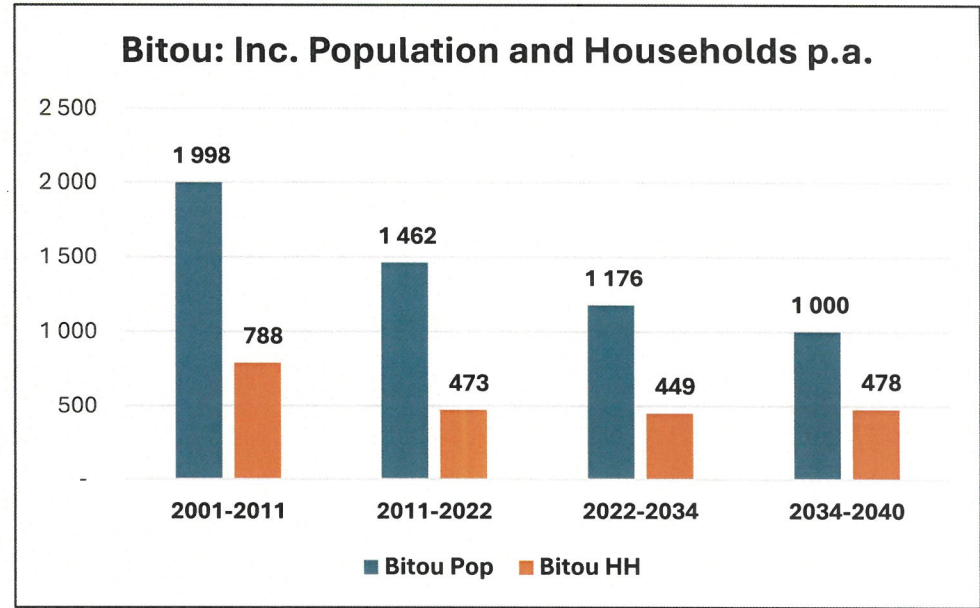
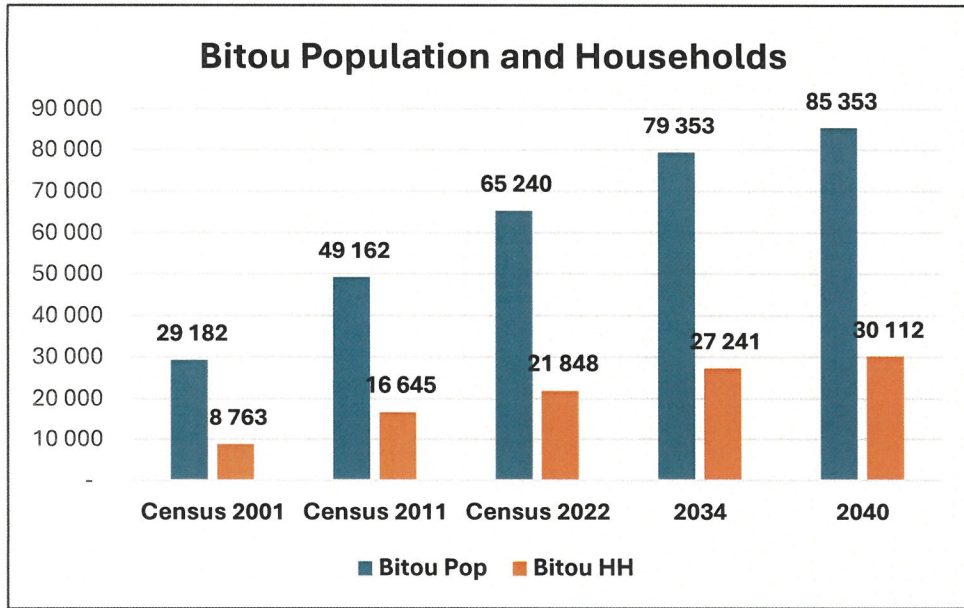
**Oudtshoorn SDF 2020, predates Census 2023; Population projection too low.**



- Total Population: GRDM MSDF is lower than Linear Projection (-13 800) people by 2040. Reason being the trend in average population increase p.a. (2011-2022) was used as indicator of future growth.
- Increment p.a.:
  - Linear: constant increment p.a. and **higher than previous 10-year period.**
  - GRDM MSDF propose a declining increment p.a.

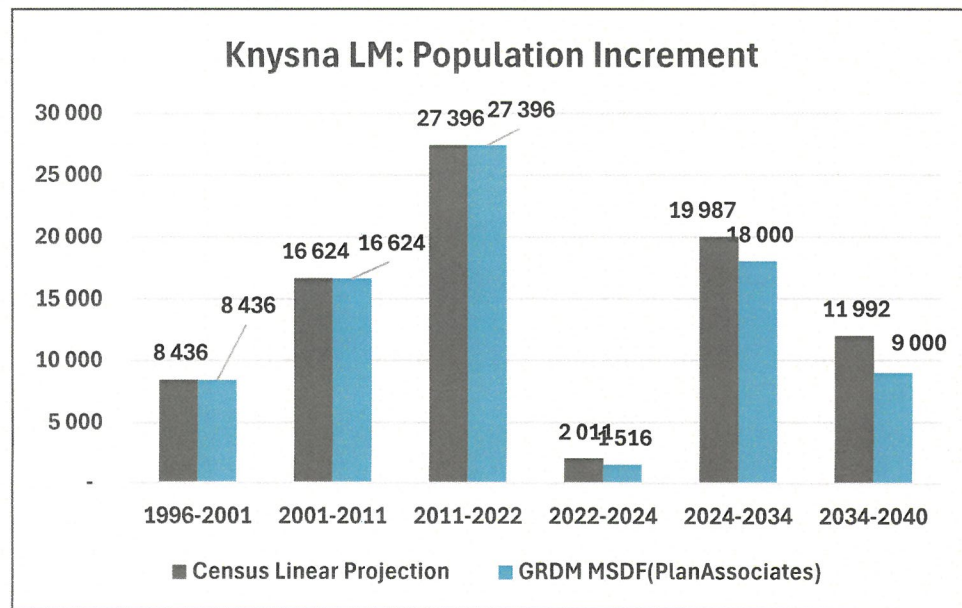
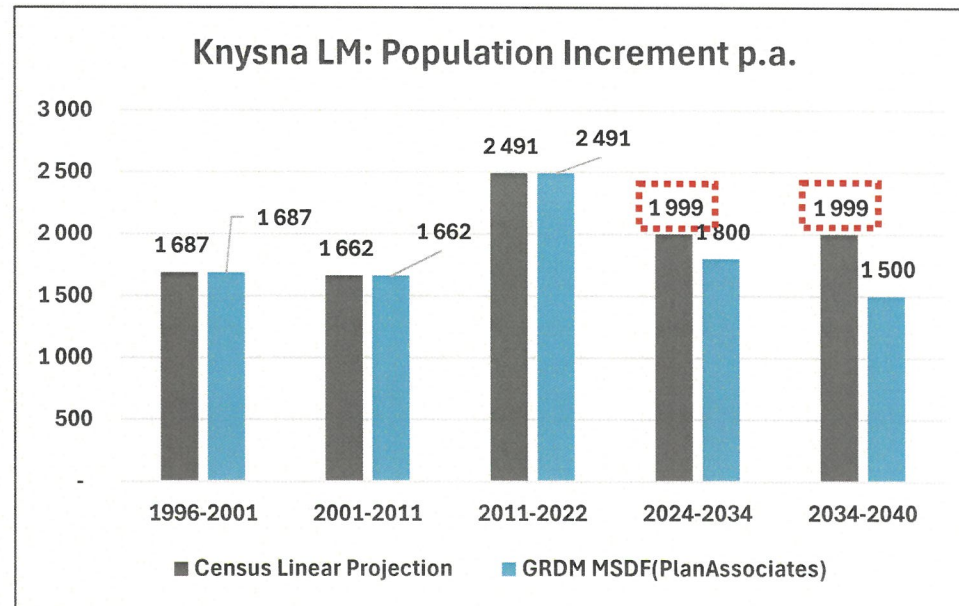
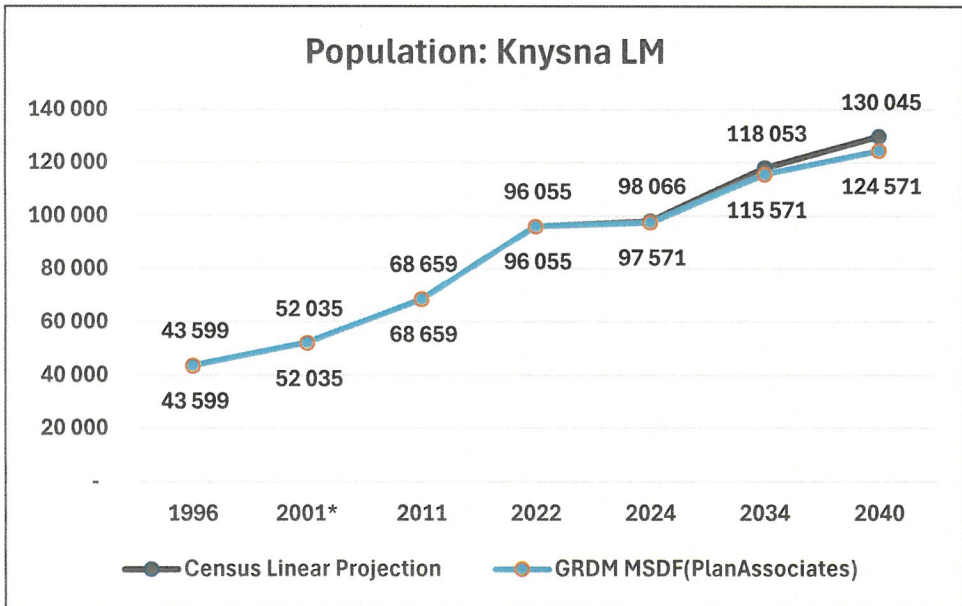


- Total Households: GRDM MSDF is lower than Linear Projection (-4 000) Households by 2040. Reason being the trend in average household increase p.a. (2011-2022) was used as indicator of future growth
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.
- Declining HH size in both projections.

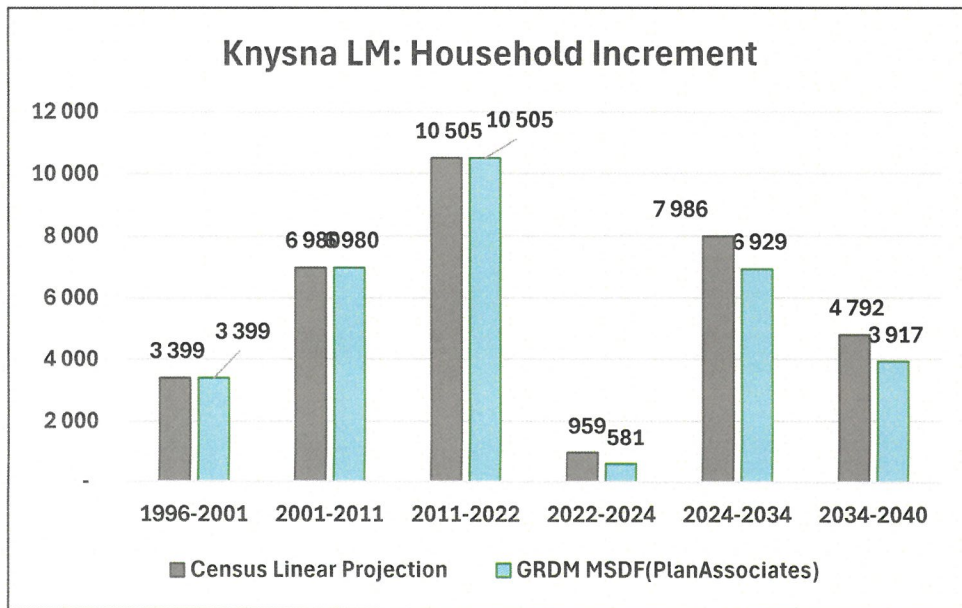
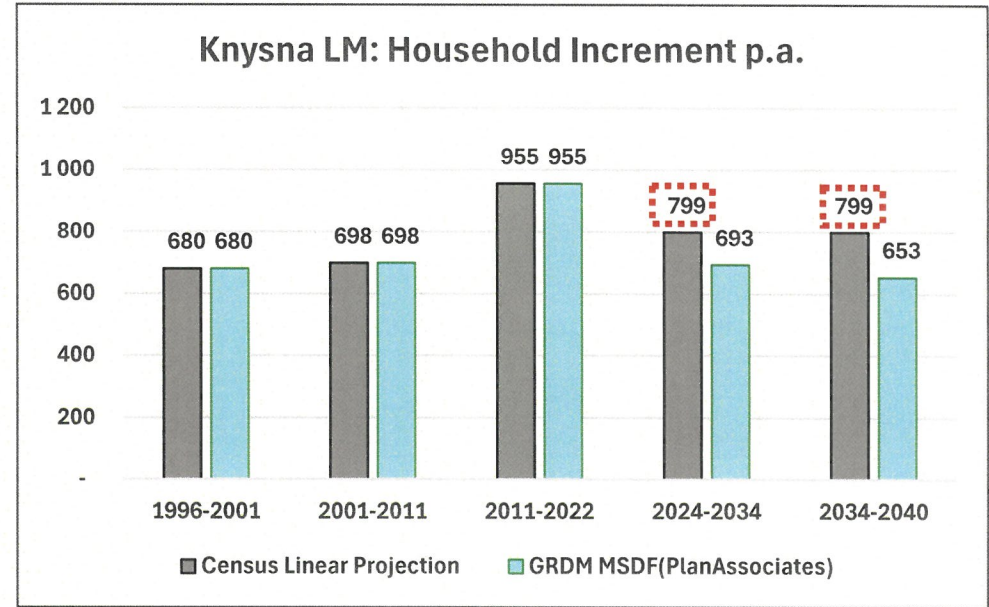
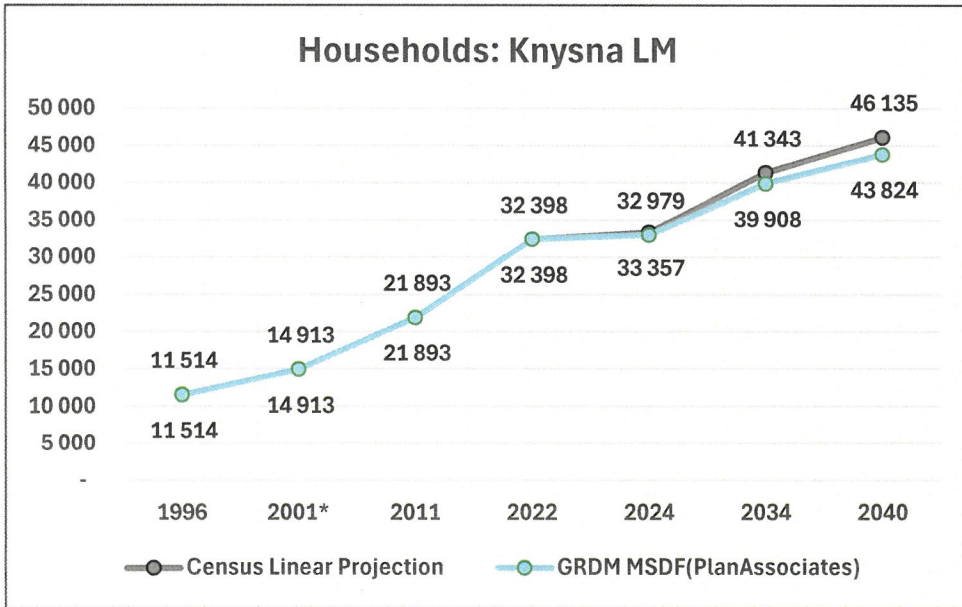


- Total population (2040) higher than expected in SDF.
- Number of households in the same order as expected in SDF (2040).

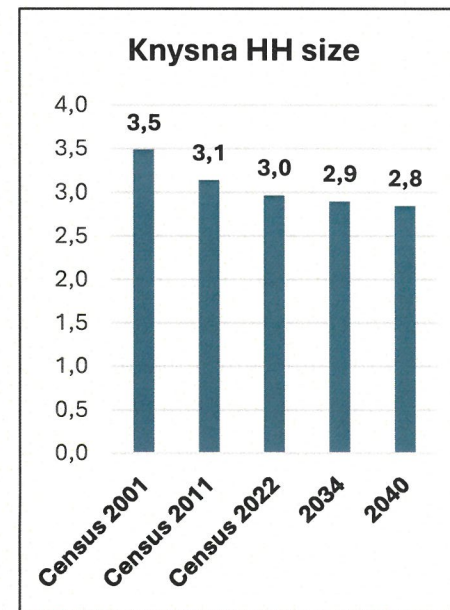
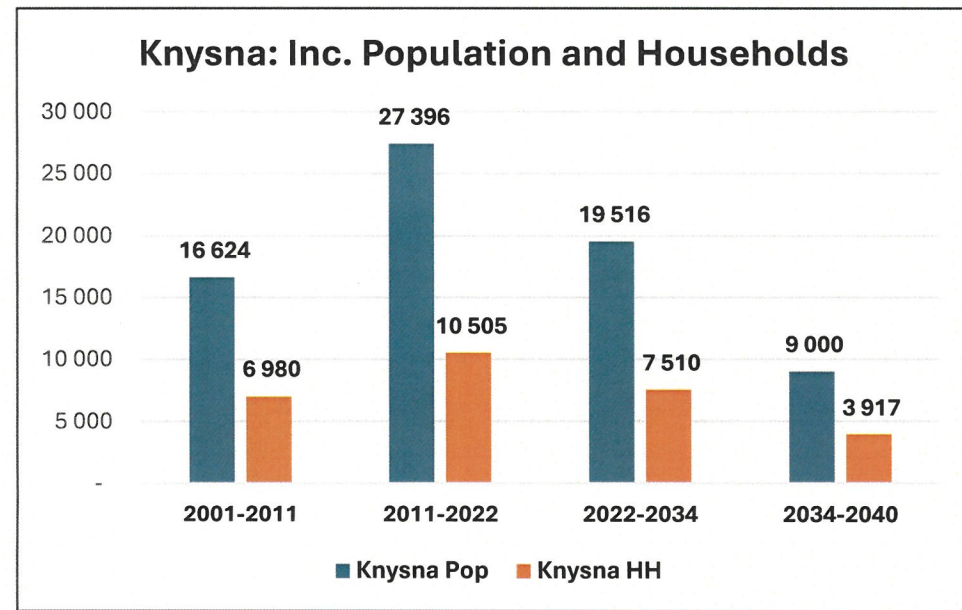
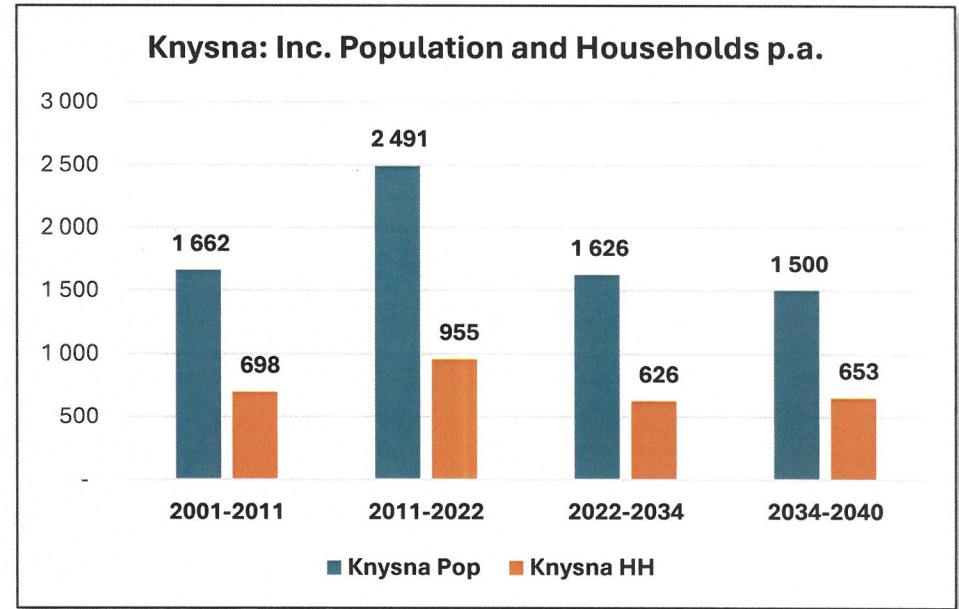
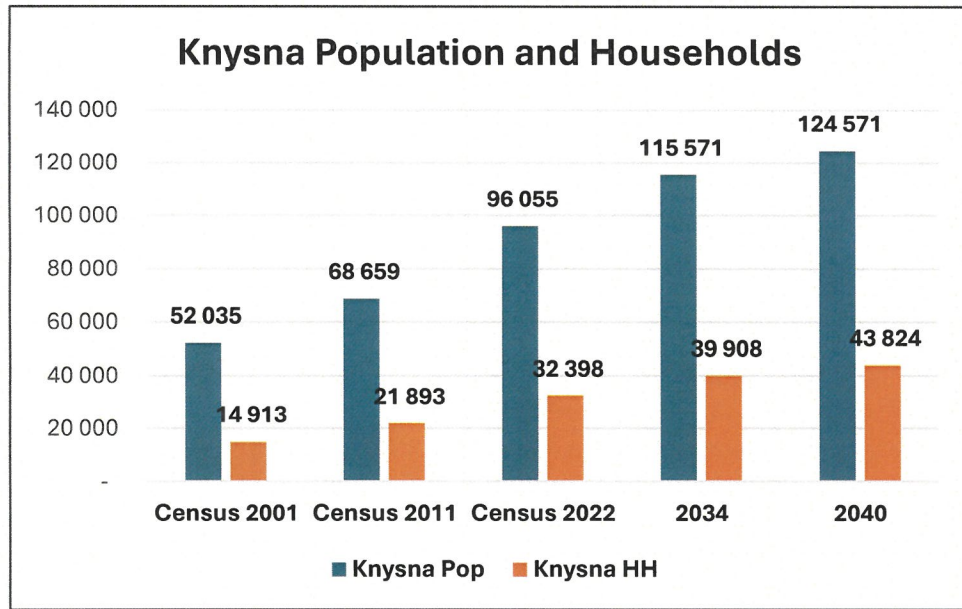
**Bitou SDF 2020, predates Census 2022; Population projection too low.**



- Total Population compares well.
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.



- Total Households compare well.
- Increment p.a.:
  - Linear: constant increment p.a.
  - GRDM MSDF propose a declining increment p.a.
- Declining HH size in both projections.



- 3<sup>rd</sup> highest growth experienced in Knysna (2011-2022)
- Expected to continue up to 2034 and 2040.

**Knysna SDF 2020, predates Census 2022; Population projection too low.**

# GARDEN ROUTE DM: POPULATION SUMMARY

Diagram XX

## Comparison Summary per LM Population

Local Municipality Projection		1996	2001*	2011	2022	2024	2034	2040	Difference (CL minus MSDF)	% Differ ence	Comments
Kannaland	Census Linear Projection	21 190	23 971	24 767	31 986	31 754	35 557	37 839	- 847	-2%	Small Difference
	GRDM MSDF	21 190	23 971	24 767	31 986	32 385	36 885	38 685			
Hessequa	Census Linear Projection	38 553	44 114	52 642	71 918	72 461	84 979	92 490	5 005	6%	Difference: GRDM MSDF used Hessequa SDF projection
	GRDM MSDF	38 553	44 114	52 642	71 918	72 984	82 984	87 484			
Mossel Bay	Census Linear Projection	59 789	71 494	89 430	140 075	139 731	169 751	187 763	- 10 114	-5%	Difference: Mossel Bay and George: GRDM MSDF assumed relative high growth p.a. with reference to 2011-2022 trend. LM's to confirm if inline with growth expected.
	GRDM MSDF	59 789	71 494	89 430	140 075	142 877	182 877	197 877			
George	Census Linear Projection	120 148	149 436	193 672	294 929	297 660	363 184	402 498	- 30 033	-7%	Difference: Mossel Bay and George: GRDM MSDF assumed relative high growth p.a. with reference to 2011-2022 trend. LM's to confirm if inline with growth expected.
	GRDM MSDF	120 148	149 436	193 672	294 929	300 531	390 531	432 531			
Oudtshoorn	Census Linear Projection	79 181	84 692	95 933	138 257	136 066	158 217	171 508	12 710	8%	Difference: GRDM MSDF used Oudtshoorn SDF projection as a guide, which indicated a decrease in future population. LM to confirm if inline with growth
	GRDM MSDF	79 181	84 692	95 933	138 257	140 598	154 598	158 798			
Bitou	Census Linear Projection	18 427	29 182	49 162	65 240	70 280	88 326	99 154	13 801	16%	Difference: GRDM MSDF assumed growth p.a. compatible to 2011-2022 trend. LM to confirm if inline with growth expected.
	GRDM MSDF	18 427	29 182	49 162	65 240	66 129	79 353	85 353			
Knysna	Census Linear Projection	43 599	52 035	68 659	96 055	98 066	118 053	130 045	5 475	4%	Relative Small Difference, but LM to confirm if inline with growth expected.
	GRDM MSDF	43 599	52 035	68 659	96 055	97 571	115 571	124 571			
TOTAL GRDM	Census Linear Projection	380 887	454 924	574 265	838 460	846 017	1 018 067	1 121 297	- 4 002	-0,4%	Small Difference on Total
	GRDM MSDF	380 887	454 924	574 265	838 460	853 075	1 042 799	1 125 299			

**Conclusion:** Total population (2040) in the same order, the difference can be found in the geographic distribution between LM's, where GRDM MSDF assumed that the LM's of George and Mossel Bay will experience higher growth than what was projected by the Census Linear Projection.

# GARDEN ROUTE DM: HOUSEHOLD SUMMARY

Diagram XX

## Comparison Summary per LM Households

Local Municipality	Projection	1996	2001*	2011	2022	2024	2034	2040	Difference (CL minus MSDF)	% Differ ence	Comments
Kannaland	Census Linear Projection	4 832	6 070	6 212	8 686	8 639	9 965	10 761	- 230	-2%	Small Difference
	GRDM MSDF	4 832	6 070	6 212	8 686	8 823	10 370	10 991			
Hessequa	Census Linear Projection	9 710	12 510	15 873	22 333	22 854	27 549	30 366	- 863	-3%	Difference: GRDM MSDF used Hessequa SDF projection
	GRDM MSDF	9 710	12 510	15 873	22 333	22 690	28 296	31 230			
Mossel Bay	Census Linear Projection	15 392	20 060	28 025	52 985	52 347	66 427	74 875	* 6 768	-8%	Difference: Mossel Bay and George: GRDM MSDF assumed relative high growth p.a. with reference to 2011-2022 trend. LM's to confirm if inline with growth expected.
	GRDM MSDF	15 392	20 060	28 025	52 985	54 366	74 177	81 643			
George	Census Linear Projection	28 325	38 867	53 551	85 931	87 206	108 744	121 667	- 9 577	-7%	Difference: Mossel Bay and George: GRDM MSDF assumed relative high growth p.a. with reference to 2011-2022 trend. LM's to confirm if inline with growth expected.
	GRDM MSDF	28 325	38 867	53 551	85 931	87 722	116 595	131 244			
Oudtshoorn	Census Linear Projection	15 654	18 124	21 910	31 795	31 841	37 883	41 509	3 141	8%	Difference: GRDM MSDF used Oudtshoorn SDF projection as a guide, which indicated a decrease in future households. LM to confirm if inline with growth
	GRDM MSDF	15 654	18 124	21 910	31 795	32 342	36 885	38 368			
Bitou	Census Linear Projection	5 039	8 763	16 645	21 848	23 886	30 439	34 370	4 258	14%	Difference: GRDM MSDF assumed growth p.a. compatible to 2011-2022 trend. LM to confirm if inline with growth expected.
	GRDM MSDF	5 039	8 763	16 645	21 848	22 136	27 241	30 112			
Knysna	Census Linear Projection	11 514	14 913	21 893	32 398	33 357	41 343	46 135	2 310	5%	Relative Small Difference, but LM to confirm if inline with growth expected.
	GRDM MSDF	11 514	14 913	21 893	32 398	32 979	39 908	43 824			
TOTAL GRDM	Census Linear Projection	90 466	119 307	164 109	255 976	260 129	322 351	359 683	- 7 729	-2,1%	Small Difference
	GRDM MSDF	90 466	119 307	164 109	255 976	261 058	333 472	367 413			

**Conclusion:** Total households (2040) in the same order, the difference can be found in the geographic distribution between LM's, where GRDM MSDF assumed that the LM's of George and Mossel Bay will experience higher growth than what was projected by the Census Linear Projection.

# GARDEN ROUTE DISTRICT MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK

## ANNEXURE D: LM LAND USE BUDGETS



**Table D1: Kannaland LM: Community Facility need: 2024, 2024-2034 and 2034-2040**

Facilities	2024 Population					Increment: 2024-2034			Increment: 2034-2040			Total Increment 2024-2040			Total 2040			Community Facilities 2024-2040
	Requirement			CF Provided	Shortfall	Requirement			Requirement			Requirement			Requirement			Surplus/Deficit
	number	ha	%	number	number	number	ha	%	number	ha	%	number	ha	%	number	ha	%	number
<b>Number of Units</b>	<b>8,823</b>	<b>378</b>	<b>54%</b>			<b>1,547</b>	<b>66</b>	<b>68%</b>	<b>621</b>	<b>27</b>	<b>68%</b>	<b>2,169</b>	<b>93</b>	<b>68%</b>	<b>10,991</b>	<b>471</b>	<b>56%</b>	
<b>Population</b>	<b>32,385</b>					<b>4,500</b>			<b>1,800</b>			<b>6,300</b>			<b>38,685</b>			
Nett residential Density	23					23			23			23			23			
<b>Business (m²)</b>	<b>51,440</b>	<b>17</b>	<b>2%</b>			<b>7,148</b>	<b>2</b>	<b>2%</b>	<b>2,859</b>	<b>1</b>	<b>2%</b>	<b>10,007</b>	<b>3</b>	<b>2%</b>	<b>61,447</b>	<b>20</b>	<b>2%</b>	
<b>Offices (floor area in m²)</b>	<b>5,144</b>	<b>2</b>	<b>0%</b>			<b>715</b>	<b>0</b>	<b>0%</b>	<b>286</b>	<b>0</b>	<b>0%</b>	<b>1,001</b>	<b>0</b>	<b>0%</b>	<b>6,145</b>	<b>2</b>	<b>0%</b>	
<b>Education</b>		<b>26</b>	<b>4%</b>				<b>4</b>	<b>4%</b>		<b>1</b>	<b>4%</b>		<b>5</b>	<b>4%</b>		<b>31</b>	<b>4%</b>	
Small Crèche	13	0			(13)	2	0.0		1	0		3	0		16	0		(16)
ECD Resource Hub and Care Centre	2	0			(2)	0	0.0		0	0		0	0		2	0		(2)
Primary (including Grade R)	5	13		8	3	1	2		0	1		1	3		6	15		2
Secondary (incl. Combined/Intermediate)	3	12		7	4	0	2		0	1		1	2		3	15		4
<b>Health Services</b>		<b>1</b>	<b>0%</b>			<b>0</b>	<b>0%</b>		<b>0</b>	<b>0%</b>		<b>0</b>	<b>0%</b>		<b>1</b>	<b>0%</b>		
Primary Health Clinic	1	0		3	2	0	0		0	0		0	0		2	0		1
Community Health Centre/Hospital	1	1		1	0	0.1	0.1		0.0	0.0		0	0		1	1		0
<b>Safety and Security</b>		<b>1</b>	<b>0%</b>			<b>0</b>	<b>0%</b>		<b>0</b>	<b>0%</b>		<b>0</b>	<b>0%</b>		<b>1</b>	<b>0%</b>		
Police	1	1		2	1	0	0		0	0		0	0		1	1		1
Fire Station	0.5	0.2		1	0	0.1	0.0		0.0	0.0		0	0		1	0		0
<b>Social /Cultural/Civic</b>		<b>102</b>	<b>14%</b>			<b>0</b>	<b>0%</b>		<b>0</b>	<b>0%</b>		<b>0</b>	<b>0%</b>		<b>102</b>	<b>12%</b>		
Local Library	2	0		-	(2)	0.2	0.0		0.1	0.0		0	0		2	0		(2)
SASSA Paypoint/Home Affairs/Thusong Ce	1	0		5	4	-			-			-	-		1	0		4
Solid Waste Disposal Site	1	100		-	(1)	-			-			-	-		1	100		(1)
Recycling Depot	1	0		-	(1)	-			-			-	-		1	0		(1)
Municipal Office	1	1		2	1	-			-			-	-		1	1		1
Magistrate's Court	1	1		1	-	-			-			-	-		1	1		-
Community Hall (large)	1	0		-	(1)	0.1	0.0		0.03	0.02		0	0		1	0		(1)
<b>Sports and Recreation</b>		<b>16</b>	<b>2%</b>			<b>2</b>	<b>2%</b>		<b>1</b>	<b>2%</b>		<b>3</b>	<b>2%</b>		<b>19</b>	<b>2%</b>		
Sports Facilities and Parks (ha)		10		39	30	1.4			0.5			2			12			28
Regional Parks (ha)		6			(6)	0.9			0.4			1			8			(8)
<b>Streets</b>		<b>163</b>	<b>23%</b>			<b>23</b>	<b>23%</b>		<b>9</b>	<b>23%</b>		<b>32</b>	<b>23%</b>		<b>194</b>	<b>23%</b>		
<b>TOTAL</b>		<b>705</b>	<b>100%</b>			<b>98</b>	<b>100%</b>		<b>39</b>	<b>100%</b>		<b>137</b>	<b>100%</b>		<b>841</b>	<b>100%</b>		
<b>Gross Density</b>	<b>13</b>					<b>16</b>			<b>16</b>			<b>16</b>			<b>13</b>			

Note: No info available for Small Crèche/ECD Resource Hub and Care Centre and Regional Parks.

Thusong Centre includes Home Affairs Office (Social Grants), Labour Office and functions as a community based "one stop" Development centre.

Future density based on existing distribution of erf size database. Compares well with proposed SDF density.

Standards based on CSIR Guidelines for Small-Medium Towns/Regional Service Centres.

**Table D2: Hessequa LM: Community Facility need: 2024, 2024-2034 and 2034-2040**

Facilities	2024 Population					Increment: 2024-2034			Increment: 2034-2040			Total Increment 2024-2040			Total 2040			Community Facilities 2024-2040
	Requirement			CF Provided	Shortfall	Requirement			Requirement			Requirement			Requirement			Surplus/Deficit
	number	ha	%	number	number	number	ha	%	number	ha	%	number	ha	%	number	ha	%	number
<b>Number of Units</b>	22,690	1,097	63%			5,606	271	72%	2,934	142	72%	8,539	413	72%	31,230	1,509	65%	
<b>Population</b>	72,984					10,000			4,500			14,500			87,484			
Nett residential Density	21					21			21			21			21			
<b>Business (m<sup>2</sup>)</b>	122,550	41	2%			16,791	6	1%	7,556	3	1%	24,347	8	1%	146,897	49	2%	
<b>Offices (floor area in m<sup>2</sup>)</b>	12,255	4	0%			1,679	1	0%	756	0	0%	2,435	1	0%	14,690	5	0%	
<b>Education</b>		58	3%				8	2%		4	2%		12	2%		70	3%	
Small Crèche	30	1			(30)	4	0.1		2	0		6	0		36	1		(36)
ECD Resource Hub and Care Centre	4	0			(4)	1	0.1		0	0		1	0		4	0		(4)
Primary (including Grade R)	10	29		12	2	1	4		1	2		2	6		12	35		(0)
Secondary (incl. Combined/Intermediat	6	28		12	6	1	4		0	2		1	6		7	34		5
<b>Health Services</b>		2	0%				0	0%		0	0%		0	0%		3	0%	
Primary Health Clinic	3	1		3	(0)	0	0		0	0		1	0		4	1		(1)
Community Health Centre/Hospital	1	2		3	2	0.2	0.3		0.1	0.1		0	0		1	2		2
<b>Safety and Security</b>		2	0%				0	0%		0	0%		0	0%		2	0%	
Police	1	1		4	3	0	0		0	0		0	0		1	1		3
Fire Station	1.2	0.4		-	(1)	0.2	0.1		0.1	0.0		0	0		1	0		(1)
<b>Social /Cultural/Civic</b>		102	6%				0	0%		0	0%		0	0%		102	4%	
Local Library	4	0		2	(1.6)	0.5	0.0		0.2	0.0		1	0		4	0		(2)
SASSA Paypoint/Home Affairs/Thusong	2	0		6	4	-	-		-	-		-	-		2	0		4
Solid Waste Disposal Site	1	100		4	3	-	-		-	-		-	-		1	100		3
Recycling Depot	1	0		-	(1)	-	-		-	-		-	-		1	0		(1)
Municipal Office	1	1		1	-	-	-		-	-		-	-		1	1		-
Magistrate's Court	1	1		2	1	-	-		-	-		-	-		1	1		1
Communy Hall (large)	1	1		2	1	0.2	0.1		0.08	0.04		0	0		1	1		1
<b>Sports and Recreation</b>		36	2%				5	1%		2	1%		7	1%		44	2%	
Sports Facilities and Parks (ha)		22		157	135		3.0			1.4			4			26		131
Regional Parks (ha)		15			(15)		2.0			0.9			3			17		(17)
<b>Streets</b>		403	23%				87	23%		45	23%		132	23%		535	23%	
<b>TOTAL</b>		1,745	100%				378	100%		196	100%		574	100%		2,319	100%	
<b>Gross Density</b>	13					15			15			15			13			

Note: No info available for Small Crèche/ECD Resource Hub and Care Centre and Regional Parks.

Thusong Centre includes Home Affairs Office (Social Grants), Labour Office and functions as a community based "one stop" Development centre.

Future density based on existing distribution of erf size database. Compares well with proposed SDF density.

Standards based on CSIR Guidelines for Small-Medium Towns/Regional Service Centres.

**Table D3: Mossel Bay LM: Community Facility need: 2024, 2024-2034 and 2034-2040**

	2024 Population					Increment: 2024-2034			Increment: 2034-2040			Total Increment 2024-2040			Total 2040			Community Facilities 2024-2040		
	Requirement	CF Provided	Shortfall	Requirement	Requirement	Requirement	Requirement	Requirement	Requirement	Requirement	Requirement	Requirement	Requirement	Requirement	Requirement	Requirement	Requirement	Requirement	Surplus/Deficit	
Facilities	number	ha	%	number	number	ha	%	number	ha	%	number	ha	%	number	ha	%	number	ha	%	number
<b>Number of Units</b>	54,366	2,476	67%		19,811	902	71%	7,466	340	71%	27,278	1,242	71%	81,643	3,718	68%				
<b>Population</b>	142,877				40,000			15,000			55,000			197,877						
Nett residential Density	22				22			22			22			22						
<b>Business (m<sup>2</sup>)</b>	234,684	78	2%		65,703	22	2%	24,638	8	2%	90,341	30	2%	325,025	108	2%				
<b>Offices (floor area in m<sup>2</sup>)</b>	23,468	8	0%		6,570	2	0%	2,464	1	0%	9,034	3	0%	32,503	11	0%				
<b>Education</b>		114	3%			32	3%		12	2%		44	2%		158	3%				
Small Crèche	60	1		(60)	17	0.3		6	0		23	0		82	2					(82)
ECD Resource Hub and Care Centre	7	1		(7)	2	0.2		1	0		3	0		10	1					(10)
Primary (including Grade R)	20	57		(20)	6	16		2	6		8	22		28	79					(8)
Secondary (incl. Combined/Intermediate)	11	55		(11)	3	15		1	6		4	21		16	76					(4)
<b>Health Services</b>		5	0%			1	0%		1	0%		2	0%		7	0%				
Primary Health Clinic	6	1		(6)	2	0		1	0		2	0		8	2					(1)
Community Health Centre/Hospital	2	4		(2)	0.7	1.0		0.3	0.4		1	1		3	5					(0)
<b>Safety and Security</b>		3	0%			1	0%		0	0%		1	0%		4	0%				
Police	2	2		(2)	1	1		0	0		1	1		3	3					1
Fire Station	2.4	0.7		(1)	0.7	0.2		0.3	0.1		1	0		3	1					(2)
<b>Social /Cultural/Civic</b>		103	3%			0	0%		0	0%		1	0%		104	2%				
Local Library	7	0		(7)	2.0	0.1		0.8	0.0		3	0		10	0					(6)
SASSA Paypoint/Home Affairs/Thusong Ce	4	0		(4)		-			-			-		4	0					8
Solid Waste Disposal Site	1	100		(1)		-			-			-		1	100					(1)
Recycling Depot	1	0		(1)		-			-			-		1	0					(1)
Municipal Office	1	1		(1)		-			-			-		1	1					2
Magistrate's Court	1	1		(1)		-			-			-		1	1					-
Communy Hall (large)	2	1		(2)	0.7	0.3		0.25	0.13		1	0		3	2					(0)
<b>Sports and Recreation</b>		71	2%			20	2%		8	2%		28	2%		99	2%				
Sports Facilities and Parks (ha)		43		(43)		12.0			4.5			17			59					395
Regional Parks (ha)		29		(29)		8.0			3.0			11			40					(40)
<b>Streets</b>		857	23%			294	23%		111	23%		405	23%		1,263	23%				
<b>TOTAL</b>		3,716	100%			1,275	100%		480	100%		1,755	100%		5,471	100%				
<b>Gross Density</b>	15				16			16			16			15						

Note: No info available for Small Crèche/ECD Resource Hub and Care Centre and Regional Parks.

Thusong Centre includes Home Affairs Office (Social Grants), Labour Office and functions as a community based "one stop" Development centre.

Future density based on existing distribution of erf size database. Compares well with proposed SDF density.

Standards based on CSIR Guidelines for Small-Medium Towns/Regional Service Centres.

**Table D4: George LM: Community Facility need: 2024, 2024-2034 and 2034-2040**

Facilities	2024 Population					Increment: 2024-2034			Increment: 2034-2040			Total Increment 2024-2040			Total 2040			Community Facilities 2024-2040
	Requirement			CF Provided	Shortfall	Requirement			Requirement			Requirement			Requirement			Surplus/Deficit
	number	ha	%	number	number	number	ha	%	number	ha	%	number	ha	%	number	ha	%	number
<b>Number of Units</b>	87,722	3,108	63%			28,873	1,023	66%	14,649	519	67%	43,521	1,542	66%	131,244	4,650	64%	
<b>Population</b>	300,531					90,000			42,000			132,000			432,531			
Nett residential Density	28					28			28			28			28			
<b>Business (m<sup>2</sup>)</b>	459,280	153	3%			137,541	46	3%	64,186	21	3%	201,726	67	3%	661,007	220	3%	
<b>Offices (floor area in m<sup>2</sup>)</b>	45,928	15	0%			13,754	5	0%	6,419	2	0%	20,173	7	0%	66,101	22	0%	
<b>Education</b>		240	5%				72	5%		33	4%		105	5%		345	5%	
Small Crèche	125	3			(125)	38	0.8		18	0		55	1		180	4		(180)
ECD Resource Hub and Care Centre	15	2			(15)	5	0.5		2	0		7	1		22	2		(22)
Primary (including Grade R)	43	120		40	(3)	13	36		6	17		19	53		62	173		(22)
Secondary (incl. Combined/Intermediat	24	115		23	(1)	7	35		3	16		11	51		35	166		(12)
<b>Health Services</b>		10	0%				3	0%		1	0%		4	0%		14	0%	
Primary Health Clinic	13	3		6	(7)	4	1		2	0		6	1		18	4		(12)
Community Health Centre/Hospital	5	8		5	(0)	1.5	2.3		0.7	1.1		2	3		7	11		(2)
<b>Safety and Security</b>		7	0%				2	0%		1	0%		3	0%		9	0%	
Police	5	5		5	(0)	2	2		1	1		2	2		7	7		(2)
Fire Station	5.0	1.5		2	(3)	1.5	0.5		0.7	0.2		2	1		7	2		(5)
<b>Social /Cultural/Civic</b>		105	2%				1	0%		0	0%		1	0%		107	1%	
Local Library	15	1		2	(13.0)	4.5	0.2		2.1	0.1		7	0		22	1		(20)
SASSA Paypoint/Home Affairs/Thusong	8	1		8	0	-	-		-	-		-	-		8	1		0
Solid Waste Disposal Site	1	100		2	1	-	-		-	-		-	-		1	100		1
Recycling Depot	1	0		1	-	-	-		-	-		-	-		1	0		-
Municipal Office	1	1		4	3	-	-		-	-		-	-		1	1		3
Magistrate's Court	1	1		2	1	-	-		-	-		-	-		1	1		1
Community Hall (large)	5	3		7	2	1.5	0.8		0.70	0.35		2	1		7	4		(0)
<b>Sports and Recreation</b>		150	3%				45	3%		21	3%		66	3%		216	3%	
Sports Facilities and Parks (ha)		90		598	508		27.0			12.6			40			130		469
Regional Parks (ha)		60			(60)		18.0			8.4			26			87		(87)
<b>Streets</b>		1,136	23%				359	23%		180	23%		539	23%		1,675	23%	
<b>TOTAL</b>		4,925	100%				1,555	100%		780	100%		2,335	100%		7,260	100%	
<b>Gross Density</b>	18					19			19			19			18			

Note: No info available for Small Crèche/ECD Resource Hub and Care Centre and Regional Parks.

Thusong Centre includes Home Affairs Office (Social Grants), Labour Office and functions as a community based "one stop" Development centre.

Future density based on existing distribution of erf size database. Proposed SDF density slightly higher.

Standards based on CSIR Guidelines for Small-Medium Towns/Regional Service Centres.

**Table D5: Oudtshoorn LM: Community Facility need: 2024, 2024-2034 and 2034-2040**

Facilities	2024 Population					Increment: 2024-2034			Increment: 2034-2040			Total Increment 2024-2040			Total 2040			Community Facilities 2024-2040
	Requirement			CF Provided	Shortfall	Requirement			Requirement			Requirement			Requirement			Surplus/Deficit
	number	ha	%	number	number	number	ha	%	number	ha	%	number	ha	%	number	ha	%	number
<b>Number of Units</b>	32,342	1,254	59%			4,543	176	67%	1,483	57	67%	6,026	234	67%	38,368	1,487	60%	
<b>Population</b>	140,598					14,000			4,200			18,200			158,798			
Nett residential Density	26					26			26			26			26			
<b>Business (m<sup>2</sup>)</b>	220,021	73	3%			21,909	7	3%	6,573	2	3%	28,481	9	3%	248,503	83	3%	
<b>Offices (floor area in m<sup>2</sup>)</b>	22,002	7	0%			2,191	1	0%	657	0	0%	2,848	1	0%	24,850	8	0%	
<b>Education</b>		112	5%				11	4%		3	4%		15	4%		127	5%	
Small Crèche	59	1			(59)	6	0.1		2	0		8	0		66	1		(66)
ECD Resource Hub and Care Centre	7	1			(7)	1	0.1		0	0		1	0		8	1		(8)
Primary (including Grade R)	20	56		27	7	2	6		1	2		3	7		23	64		4
Secondary (incl. Combined/Intermediat	11	54		10	(1)	1	5		0	2		1	7		13	61		(3)
<b>Health Services</b>		5	0%				0	0%		0	0%		1	0%		5	0%	
Primary Health Clinic	6	1		3	(3)	1	0		0	0		1	0		7	1		(4)
Community Health Centre/Hospital	2	4		5	3	0.2	0.4		0.1	0.1		0	0		3	4		2
<b>Safety and Security</b>		3	0%				0	0%		0	0%		0	0%		3	0%	
Police	2	2		3	1	0	0		0	0		0	0		3	3		0
Fire Station	2.3	0.7		1	(1)	0.2	0.1		0.1	0.0		0	0		3	1		(2)
<b>Social /Cultural/Civic</b>		103	5%				0	0%		0	0%		0	0%		103	4%	
Local Library	7	0		1	(6.0)	0.7	0.0		0.2	0.0		1	0		8	0		(7)
SASSA Paypoint/Home Affairs/Thusong	4	0		3	(1)	-	-		-	-		-	-		4	0		(1)
Solid Waste Disposal Site	1	100		-	(1)	-	-		-	-		-	-		1	100		(1)
Recycling Depot	1	0		-	(1)	-	-		-	-		-	-		1	0		(1)
Municipal Office	1	1		4	3	-	-		-	-		-	-		1	1		3
Magistrate's Court	1	1		1	-	-	-		-	-		-	-		1	1		-
Community Hall (large)	2	1		2	(0)	0.2	0.1		0.07	0.04		0	0		3	1		(1)
<b>Sports and Recreation</b>		70	3%				7	3%		2	2%		9	3%		79	3%	
Sports Facilities and Parks (ha)		42		85	43		4.2			1.3			5			48		38
Regional Parks (ha)		28			(28)		2.8			0.8			4			32		(32)
<b>Streets</b>		488	23%				61	23%		20	23%		81	23%		569	23%	
<b>TOTAL</b>		2,116	100%				264	100%		85	100%		349	100%		2,465	100%	
<b>Gross Density</b>	15					17			17			17			16			

Note: No info available for Small Crèche/ECD Resource Hub and Care Centre and Regional Parks.

Thusong Centre includes Home Affairs Office (Social Grants), Labour Office and functions as a community based "one stop" Development centre.

Future density based on existing distribution of erf size database. Compares well with proposed SDF density.

Standards based on CSIR Guidelines for Small-Medium Towns/Regional Service Centres.

**Table D6: Bitou LM: Community Facility need: 2024, 2024-2034 and 2034-2040**

Facilities	2024 Population					Increment: 2024-2034			Increment: 2034-2040			Total Increment 2024-2040			Total 2040			Community Facilities 2024-2040
	Requirement			CF Provided	Shortfall	Requirement			Requirement			Requirement			Requirement			Surplus/Deficit
	number	ha	%	number	number	number	ha	%	number	ha	%	number	ha	%	number	ha	%	number
<b>Number of Units</b>	22,136	960	62%			5,106	222	69%	2,871	125	70%	7,976	346	69%	30,112	1,306	64%	
<b>Population</b>	66,129					13,224			6,000			19,224			85,353			
Nett residential Density	23					23			23			23			23			
<b>Business (m<sup>2</sup>)</b>	105,283	35	2%			21,054	7	2%	9,552	3	2%	30,606	10	2%	135,889	45	2%	
<b>Offices (floor area in m<sup>2</sup>)</b>	10,528	4	0%			2,105	1	0%	955	0	0%	3,061	1	0%	13,589	5	0%	
<b>Education</b>		53	3%				11	3%		5	3%		15	3%		68	3%	
Small Crèche	28	1			(28)	6	0.1		3	0		8	0		36	1		(36)
ECD Resource Hub and Care Centre	3	0			(3)	1	0.1		0	0		1	0		4	0		(4)
Primary (including Grade R)	9	26		10	1	2	5		1	2		3	8		12	34		(2)
Secondary (incl. Combined/Intermediate)	5	25		5	(0)	1	5		0	2		2	7		7	33		(2)
<b>Health Services</b>		2	0%				0	0%		0	0%		1	0%		3	0%	
Primary Health Clinic	3	1		3	0	1	0		0	0		1	0		4	1		(1)
Community Health Centre/Hospital	1	2		2	1	0.2	0.3		0.1	0.2		0	0		1	2		1
<b>Safety and Security</b>		1	0%				0	0%		0	0%		0	0%		2	0%	
Police	1	1		2	1	0	0		0	0		0	0		1	1		1
Fire Station	1.1	0.3		2	1	0.2	0.1		0.1	0.0		0	0		1	0		1
<b>Social /Cultural/Civic</b>		102	7%				0	0%		0	0%		0	0%		102	5%	
Local Library	3	0		2	(1)	0.7	0.0		0.3	0.0		1	0		4	0		(2)
SASSA Paypoint/Home Affairs/Thusong Ce	2	0		5	3		-			-		-	-		2	0		3
Solid Waste Disposal Site	1	100		-	(1)		-			-		-	-		1	100		(1)
Recycling Depot	1	0		-	(1)		-			-		-	-		1	0		(1)
Municipal Office	1	1		1	-		-			-		-	-		1	1		-
Magistrate's Court	1	1		1	-		-			-		-	-		1	1		-
Communtiy Hall (large)	1	1		3	2	0.2	0.1		0.10	0.05		0	0		1	1		2
<b>Sports and Recreation</b>		33	2%				7	2%		3	2%		10	2%		43	2%	
Sports Facilities and Parks (ha)		20		226	206		4.0			1.8			6			26		200
Regional Parks (ha)		13			(13)		2.6			1.2			4			17		(17)
<b>Streets</b>		357	23%				74	23%		41	23%		115	23%		472	23%	
<b>TOTAL</b>		1,548	100%				321	100%		177	100%		499	100%		2,046	100%	
<b>Gross Density</b>	14					16			16			16			15			

Note: No info available for Small Crèche/ECD Resource Hub and Care Centre and Regional Parks.

Thusong Centre includes Home Affairs Office (Social Grants), Labour Office and functions as a community based "one stop" Development centre.

Future density based on existing distribution of erf size database. Compares well with proposed SDF density.

Standards based on CSIR Guidelines for Small-Medium Towns/Regional Service Centres.

**Table D7: Knysna LM: Community Facility need: 2024, 2024-2034 and 2034-2040**

Facilities	2024 Population					Increment: 2024-2034			Increment: 2034-2040			Total Increment 2024-2040			Total 2040			Community Facilities 2024-2040
	Requirement			CF Provided	Shortfall	Requirement			Requirement			Requirement			Requirement			Surplus/Deficit
	number	ha	%	number	number	number	ha	%	number	ha	%	number	ha	%	number	ha	%	number
<b>Number of Units</b>	32,979	1,496	64%			6,929	314	69%	3,917	178	70%	10,845	492	69%	43,824	1,988	66%	
<b>Population</b>	97,571					18,000			9,000			27,000			124,571			
Nett residential Density	22					22			22			22			22			
<b>Business (m<sup>2</sup>)</b>	157,277	52	2%			29,015	10	2%	14,507	5	2%	43,522	15	2%	200,800	67	2%	
<b>Offices (floor area in m<sup>2</sup>)</b>	15,728	5	0%			2,901	1	0%	1,451	0	0%	4,352	1	0%	20,080	7	0%	
<b>Education</b>		78	3%				14	3%		7	3%		22	3%		99	3%	
Small Crèche	41	1			(41)	8	0.2		4	0		11	0		52	1		(52)
ECD Resource Hub and Care Centre	5	0			(5)	1	0.1		0	0		1	0		6	1		(6)
Primary (including Grade R)	14	39		16	2	3	7		1	4		4	11		18	50		(2)
Secondary (incl. Combined/Intermediat	8	37		11	3	1	7		1	3		2	10		10	48		1
<b>Health Services</b>		3	0%				1	0%		0	0%		1	0%		4	0%	
Primary Health Clinic	4	1		2	(2)	1	0		0	0		1	0		5	1		(3)
Community Health Centre/Hospital	2	2		3	1	0.3	0.5		0.2	0.2		0	1		2	3		1
<b>Safety and Security</b>		2	0%				0	0%		0	0%		1	0%		3	0%	
Police	2	2		1	(1)	0	0		0	0		0	0		2	2		(1)
Fire Station	1.6	0.5		1	(1)	0.3	0.1		0.2	0.0		0	0		2	1		(1)
<b>Social /Cultural/Civic</b>		102	4%				0	0%		0	0%		0	0%		103	3%	
Local Library	5	0		3	(1.9)	0.9	0.0		0.5	0.0		1	0		6	0		(3)
SASSA Paypoint/Home Affairs/Thusong	2	0		4	2	-	-		-	-		-	-		2	0		2
Solid Waste Disposal Site	1	100		-	(1)	-	-		-	-		-	-		1	100		(1)
Recycling Depot	1	0		-	(1)	-	-		-	-		-	-		1	0		(1)
Municipal Office	1	1		3	2	-	-		-	-		-	-		1	1		2
Magistrate's Court	1	1		1	-	-	-		-	-		-	-		1	1		-
Community Hall (large)	2	1		1	(1)	0.3	0.2		0.15	0.08		0	0		2	1		(1)
<b>Sports and Recreation</b>		49	2%				9	2%		5	2%		14	2%		62	2%	
Sports Facilities and Parks (ha)		29		194	165		5.4			2.7			8			37		157
Regional Parks (ha)		20			(20)		3.6			1.8			5			25		(25)
<b>Streets</b>		536	23%				105	23%		59	23%		163	23%		700	23%	
<b>TOTAL</b>		2,325	100%				454	100%		254	100%		708	100%		3,033	100%	
<b>Gross Density</b>	14					15			15			15			14			

Note: No info available for Small Crèche/ECD Resource Hub and Care Centre and Regional Parks.

Thusong Centre includes Home Affairs Office (Social Grants), Labour Office and functions as a community based "one stop" Development centre.

Future density based on existing distribution of erf size database. Compares well with proposed SDF density.

Standards based on CSIR Guidelines for Small-Medium Towns/Regional Service Centres.

# GARDEN ROUTE DISTRICT MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK

## ANNEXURE E: MANAGEMENT GUIDELINES FOR ECOLOGICALLY SENSITIVE GEOGRAPHICAL AREAS



## **ANNEXURE E: MANAGEMENT GUIDELINES FOR ECOLOGICALLY SENSITIVE GEOGRAPHICAL AREAS**

The management guidelines below refer specifically to the Ecologically Sensitive Geographical Areas. The Guidelines were extracted from the Garden Route Environmental Management Framework.

The intention of the guideline is to provide specific guidance to development within the defined geographical area. In order for the guidelines to have any significance it is important to include an appropriate level of detail to ensure that specific sensitive features are protected and managed accordingly. The category comprising the Ecologically Sensitive Geographical Area include the following broad features:

1. Vegetation,
2. Lakes,
3. Estuaries and inlets,
4. Rivers, streams and watercourses (riparian habitats),
5. Wetlands, and
6. Coastlines and nearshore marine areas.

### **1. VEGETATION**

#### **1.1 Risks:**

Impacts from development on or near conservation areas are:

- Vegetation loss through clearing, weed and alien invasion and burning,

- Disturbance to ecological processes,
- Increased competition from introduced species causing loss of numbers and diversity.

## 1.2 Objectives:

- An adequate system of representative fauna and flora must be set aside for the conservation of flora, fauna and landscapes,
- Connectivity through ecological corridors,
- Achievement and setting / adhering to national biodiversity targets into the NEM:BA,
- Land uses adjacent to conservation areas should have minimal impact on the areas' conservation values,
- Protection of remnant vegetation types and protection of remnant pockets of vegetation which have been identified by the National Biodiversity Targets (10%) as being endangered – not adequately conserved ie. below 10% should be a priority,
- Establish agreements and conservation servitudes with private land owners in land worthy of inclusion into the conservation / protected areas requiring proper management to retain and conserve critically endangered vegetation types / communities / flora species and faunal species.
- Natural forest must not be destroyed save in exceptional circumstances.
- Forests must be developed and managed to conserve biodiversity and habitats, sustain potential yield of their benefits (economic and social) and to conserve natural resources.

- Endangered and critically endangered forest types will require that applicants and decision makers be held liable for their decisions that may impact forests.
- Potential impacts must be considered pro-actively before decisions are made.
- Maintaining natural forests and a good state and rehabilitation of degraded forests must be promoted.
- Appropriate levels of access and use of forests must be kept in carry capacity of forest and ensure their sustainability.
- Forests must not be regarded in isolation, forest must be protected along with surrounding veld types

**Table 1: Vegetation Type Management Provisions**

Feature: Vegetation and Floristic Biodiversity		
Objective	Management Guideline / Provision / Advice	Key Policy Reference
Vegetation conservation	<ul style="list-style-type: none"> <li>indigenous timber is Protected, Felling and harvesting are only allowed if the trees are expected to die within the next 10 years,</li> <li>Water and soil quality is degraded by timber harvesting, therefore remaining trees are protected, all indigenous vegetation is protected, however the following species have the highest priority:</li> <li>Outeniqua Yellow wood (<i>Podocarpus falcattus</i>)</li> <li>Real Yellowwood (<i>Podocarpus latifolius</i>)</li> <li>Milkwood (<i>Sideroxylon inerme</i>)</li> <li>Stinkwood (<i>Celtis africana</i>)</li> </ul>	SANP Knysna Forest brochure
Vegetation Conservation	<p>No new landuses that impact on forests will be considered in or around forest types, (including residential development, capital infrastructure projects, agriculture), except eco-tourism activities, with a sufficient buffer radius and restricted development footprint.</p> <p>Developments inside forest areas, below the status of endangered, development must be located in the least sensitive parts of the forest (disturbed area preferably).</p> <p>Land use or development must ensure that:</p> <ol style="list-style-type: none"> <li>Dynamic forest processes remain intact,</li> <li>Preventing disturbance to forest ecosystems, fauna and flora,</li> <li>Keep forest margins and surrounding mosaic of habitats in place as far as possible,</li> <li>Does not allow disturbance caused by poor land motivate to be sued as a motivating factor for land use change</li> </ol>	Policy Principles and Guidelines for Control of Development Affecting Natural Forest, 2009
Alien vegetation control	The widespread infestation by IAPs and all its related problems are increasingly acknowledged throughout South Africa. If not controlled, this infestation can result in the loss of much of the available water runoff in certain catchments.	DWAF -Outeniqua Coast Water
Vegetation type protection	Protection of remnant vegetation types and protection of remnant pockets of vegetation which have been identified by the National Biodiversity Targets (10%) as being endangered – not	

	<p>adequately conserved ie. below 10% should be a priority. These vegetation types include the following as priorities:</p> <ul style="list-style-type: none"> <li>• Garden Route Granitic Fynbos</li> <li>• Garden Route Shale Fynbos</li> <li>• North Outeniqua Sandstone Fynbos</li> <li>• Southern Cape Dune Fynbos</li> <li>• Knysna Sand Fynbos</li> </ul> <p>Rare species, including declared rare flora and fauna should be protected. There should be no further loss of indigenous vegetation from the above areas.</p> <p>Where development is proposed on land with remnant indigenous vegetation, the responsible authority should require a survey of the site for the presence of rare and priority conservation target species and vegetation types. This must take place very early in the planning phase. [ inside and outside of the urban edge]</p>	
North Outeniqua Sandstone Fynbos	Pines are the main invaders of the fynbos mountain ridges and upland catchments. The periodic fires enhance spreading rates and the effect of a dense invasion is the same as if the area was covered by commercial plantation (DWAF. 2007a)	DWAF -Outeniqua Coast Water
South Outeniqua Sandstone Fynbos	Alien plants and animals must be removed and prevented from spreading. Appropriate fire regimes must be maintained. Surface and underground hydrological systems and wetland habitats must be maintained. Small remnants of Alluvial Fynbos (<100 ha) are likely to suffer losses of pollinators, changes in fire frequency and edge effects that encourage invasion by alien plants. Red Data List species must be monitored, and significant, viable populations of such species should not be lost to any form of development. Biocontrol "reserves" (for controlling hakea and Acacia spp) must be maintained and monitored. Development of habitat of Critically Endangered or Endangered plant species must be avoided and discouraged.	EcoSystem Guidelines For EIA, WC
Southern Afrotemperate Forest	Typically, black wattle invades riparian zones and adjacent surrounds, while pines invade mostly the uplands and mountain slopes (N. Wessels, Cape Nature Conservation, pers. com.). On the other hand, there are plans for the decommissioning of major commercial afforestation, possibilities for cleaning up of areas infested with invasive alien plants (IAP) and potential for water conservation	DWAF Afforestation Report

	<p>and demand management (WC/DM) interventions.</p> <p>Least threatened. Target 34%. More than half these forests enjoy protection in the Garden Route National Park, and several nature reserves. Unknown portion has been transformed.</p>	
Southern Cape Dune Fynbos	<p>As a general rule, connectivity must be maintained and fragmentation of habitat actively avoided. This is particularly relevant in Dune Thicket and Dune Fynbos. Remnants can be very small and remain fairly viable, but unless they have good connectivity (within a few hundred metres) they will have far fewer mammals and birds. Birds are more affected by patch size than by patch isolation. Since many of the plants are resprouters they can persist for centuries without pollinators.</p> <p>Least threatened, target 36%. More than 16% statutorily conserved in the Goukamma (housing the most prominent examples) and the Garden Route National Park.</p>	Ecosystem Guidelines For EIA, WC
Southern Coastal Forest	<p>Least threatened. Target 40%. More than half of these dune forests are under statutory conservation and protection, especially along the dunes of the Eastern Cape. The Western Cape Milkwood forests are well preserved in Goukamma Nature Reserve and Wilderness National Park. About 6% transformed for cultivation and urbanisation. Most serious threat to these forests are coastal development and fires.</p>	Strelitzia 19
Southern Coastal Forest: Milkwood Forest	<p>Milkwood category is listed as endangered, thus development would indirectly cause:</p> <ul style="list-style-type: none"> <li>• Irreversible habitat loss,</li> <li>• Ecosystem degradation &amp; loss of integrity,</li> <li>• Associated threatened species loss.</li> </ul>	Policy Principles and Guidelines for Control of Development Affecting Natural Forest, 2009
Knysna Sand Fynbos	<p>The Fynbos Forum, together with the Conservation Unit of the Botanical Society of South Africa, is preparing Ecosystem-Specific Guidelines. These Guidelines give information on the main drivers, issues, threats to, and vulnerabilities of threatened ecosystems in the Western Cape. Guidance is also given on the 'bottom lines' or non-negotiables regarding the acceptability of impacts on these systems, and their likely reversibility.</p> <p>The spatial components of ecosystem processes, and recommended approaches to planning development within these ecosystems and habitats are also given. Critical issues for managing these ecosystems to ensure persistence are provided, and mitigation, compensation and/or offsets for impacts are discussed. The use of indicators is also covered.</p>	DEADP WC Biodiversity Guideline

	Endangered vegetation type – target 23% : patches statutorily conserved in the Garden Route National Park 3%, and approximately 2% in private reserves. Almost 70% transformed due to alien infestation and Knysna urban sprawl.	
Knysna Sand Fynbos	<p>Because Sand Fynbos and Limestone Fynbos are very prone to alien invasion, habitat fragmentation and disturbance of edges of patches must be avoided. In general, housing infrastructure is not compatible with conserving fynbos or any other fire-prone vegetation type. In order to allow burning, nodal or clustered development is preferable to a spreading, linear layout. To minimise the impacts of developments in fynbos, houses should be clustered within a fire-free zone and protected with an appropriate fire belt. Firebreaks must be cleared within the development footprint, not in adjacent veld. Building materials should be fire-resistant. Thatched roofs may therefore be inappropriate in developments adjacent to, or in, natural fynbos areas such as part of the Cape Peninsula or Overberg coast. By contrast, a thatched house in forest or thicket may be more compatible with conservation.</p> <p>All further development of wetlands (pans, vleis, marshes, riverine areas, drainage lines), seeps or peaty soils should be avoided and preferably stopped. Wetlands must be buffered and links maintained with conservation areas. Most community pat terns within Sand Fynbos and Limestone Fynbos are orientated parallel to the coast, with the exception of riparian communities. Spatial planning should ensure representation of sub-units perpendicular to riparian communities and, in non-riparian communities, perpendicular to the coast. The loss of Sand Fynbos must be mitigated with corridors perpendicular to the long axis of sand-filled depressions. Corridors in strip-ploughed Sand Fynbos should be at least 300 m wide. Most Fynbos types are slow growing and vulnerable to trampling. Remnant Fynbos within residential areas therefore should be safeguarded against physical disturbance.</p>	Ecosystem Guidelines For EIA, WC
Garden Route Shale Fynbos	Endangered vegetation type. Target 23%. Statutorily conserved in the Garden Route National Park 4%. More than half the area has been transformed for cultivation and pine plantations.	Strelitzia 19
Garden Route Granite Fynbos	Endangered vegetation type. Target 23%. Only 1% conserved in the Garden Route National Park. About 70% transformed for cultivation, pine plantations and urban development. Remnants are confined to isolated pockets on steep slopes.	Strelitzia 19
Corridor Conservation	No more transformation is desirable in areas with intact, high quality vegetation. Habitat conversion must be avoided and strongly discouraged in threatened vegetation types. Proposed transformation	Eco System Guidelines For EIA,

	should always be preceded by a botanical evaluation. Small remnants (~1 ha) can be very important for the conservation of individual species and achieving some pat tern targets. However, in order to be functionally viable, larger patches should be within 500 m of each other and connected by pollinator-friendly terrain. It is critical to maintain pollinator-plant associations and pollution by herbicides, fertilisers and insecticide spray must be minimised. Avoid perturbations (including grazing and all forms of physical transformation) to silcrete, ferricrete and quartz patches. Appropriate fire regimes must be maintained. Alien species should be eradicated.	WC (Adapted)
Alien vegetation control	Invasive Alien Plants (IAP) are wide spread throughout the study area, but the most severe infestation is evident in the catchments of the Klein Brak, Great Brak, Maalgate, Gwaing, Kaaimans and Wolwe rivers, which cover most of the Mossel Bay, George and Knysna municipal areas. The present impact on assured yield associated with IAPs in the study area is estimated at 5.0 million m <sup>3</sup> /a.	DWAF -Outeniqua Coast Water
Biodiversity Conservation	Development in areas where sensitive fauna or flora occurs such as Red Data plant or animal species will be strongly discouraged.	DEADP WC Mnt & Ridgeline Guideline

**Table 2: General Biodiversity Provisions**

<i>Feature: General Biodiversity Protection</i>		
Objective	Management Guideline / Provision / Advice	Key Policy Reference
Sensitive habitat protection	<p>CapeNature does not support activities that may negatively impact on the following habitats and their ecological functioning: Rivers, wetlands, groundwater-dependent communities and estuaries.</p> <ul style="list-style-type: none"> <li>• ii. Viable and/or connected Critically Endangered and Endangered ecosystems.</li> <li>• iii. Any area in low irreplaceable habitat that is important for biodiversity conservation, as identified by a systematic conservation plan.</li> <li>• iv. Any other special habitats that may contain a unique signature of species e.g. dolomite outcrops, quartz or ferricrete patches.</li> <li>• v. Any habitat that contains rare or threatened flora or fauna species.</li> <li>• vi. Natural habitat in an ecological corridor or along a vegetation boundary, including frontal dune systems).</li> <li>• vii. Formally declared Mountain Catchment Areas.</li> <li>• The Cape Floristic Region is largely a fire-dependent system, relying on natural fire regimes that must be maintained and managed in the landscape. The exclusion of fire from certain habitats will be considered unacceptable.</li> </ul>	Cape Nature EIA Procedures

Biodiversity protection	<ul style="list-style-type: none"> <li>• South Africa has ratified the Convention on Biological Diversity (CBD), which means that it has an international obligation to work towards conservation of its biodiversity. In terms of this Convention, conservation entails: <ul style="list-style-type: none"> <li>• The protection of species and ecosystems that warrant national protection;</li> <li>• Sustainable use of indigenous biological resources; and</li> <li>• The fair and equitable sharing of its benefits.</li> </ul> </li> </ul>	DEADP Biodiversity Guidelines
	<ul style="list-style-type: none"> <li>• The particular context of the EIA, nature of the proposed project and of the receiving environment will determine which – if any – of the following are relevant at an international level:</li> <li>• Convention on Biological Diversity;</li> <li>• The Ramsar Convention (on wetlands of international importance especially as waterfowl habitat);</li> <li>• The Bonn Convention (on conservation of migratory species of wild animals);</li> <li>• The World Heritage Convention;</li> <li>• The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).</li> </ul>	DEADP WC Biodiversity Guidelines
Biodiversity provisions in spatial planning	A number of SDFs have been completed in the province that specifically accommodates biodiversity, taking into account their ecosystem status and the need to conserve ecological and evolutionary processes ('ecological corridors'). The provisions of the WC SDF are included above and must be adhered to.	Western Cape Provincial Spatial Development Framework
CAPE Strategy	Provincial government is party to a national Memorandum of Understanding for the implementation of the Cape Action for People and the Environment (CAPE) strategy for the conservation of biodiversity within the Cape Floristic Region. The provisions of CAPE must be implemented and consulted in development application and development reviews.	
Local conservation initiatives	There are a number of local initiatives that include biodiversity conservation as an objective (e.g. Garden Route Initiative). The provisions of these initiatives must be implemented and consulted in development applications.	GRI

<p>Legislative Triggers for biodiversity protection</p>	<p>Triggers for involving biodiversity input: Legal triggers, including legal requirements of existing and future legislation;</p> <ol style="list-style-type: none"> <li>2) Lack of information about the receiving environment;</li> <li>3) The presence of important biodiversity pattern;</li> <li>4) The presence of important ecological processes;</li> <li>5) The presence of important ecosystem goods and services;</li> <li>6) The potential of the specific project to pose a threat to biodiversity;</li> <li>7) The potential of biodiversity and/or ecosystems to pose a threat to the proposed project; and</li> <li>8) The potential for making a significant contribution to biodiversity conservation objectives, given the particular context of the proposed project of ecosystems and the interaction of living and nonliving components within those systems.</li> </ol>	
<p>SANBI activity commenting procedures</p>	<p>SANBI shall no longer comment on applications for prospecting or mining rights under the Minerals and Petroleum Resources Development Act 28 of 2002. Please note that in line with the requirements of Section B of DEA&amp;DP's basic assessment questionnaire, we expect that planning and environmental assessment processes as a minimum pay close attention to avoiding irreversible impacts on biodiversity in:</p> <ul style="list-style-type: none"> <li>- Threatened ecosystems</li> <li>- Ecological corridors and vegetation boundaries; and</li> <li>- Special habitats such as quartz patches or seasonal wetlands</li> </ul>	<p>SANBI EAP Letter</p>
<p>Biodiversity protection for development assessments</p>	<p>SANBI strongly recommend that environmental assessment practitioners and biodiversity specialists routinely refer to the following resources:</p> <p>The SANBI Biodiversity GIS Unit website for conservation plans and the National Spatial Biodiversity Assessment <a href="http://bgis.sanbi.org/">http://bgis.sanbi.org/</a> or <a href="mailto:BGISHelp@sanbi.org">BGISHelp@sanbi.org</a></p> <ul style="list-style-type: none"> <li>- The Basic Terms of Reference for the Consideration of Biodiversity in Environmental Assessment (Appendix II of the Fynbos Forum Ecosystem guidelines for Environmental Assessment in the Western Cape) <a href="http://www.capenature.co.za/docs/409/Guidelines%20for%20Biodiversity%20Assessments%20(81kb).pdf">http://www.capenature.co.za/docs/409/Guidelines%20for%20Biodiversity%20Assessments%20(81kb).pdf</a>;-</li> </ul> <p>The Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape <a href="http://bgis.sanbi.org/wces/FF_Ecosystem_Guidelines.pdf">http://bgis.sanbi.org/wces/FF_Ecosystem_Guidelines.pdf</a></p> <ul style="list-style-type: none"> <li>- CapeNature's Commenting Role in EIAs and Development Applications (CapeNature, 17 August 2006) <a href="http://www.capenature.co.za/docs/408/Cape%20Nature%20Requirements%20(77kb).pdf">http://www.capenature.co.za/docs/408/Cape%20Nature%20Requirements%20(77kb).pdf</a>;</li> </ul>	<p>SANBI EAP Letter</p>

	<p>– Guideline for Involving Biodiversity Specialists in EIA Processes (DEA&amp;DP) <a href="http://www.capecgateway.gov.za/eng/yourgovernment/gsc/406/services/11537/10199#guidelines">http://www.capecgateway.gov.za/eng/yourgovernment/gsc/406/services/11537/10199#guidelines</a>; and 3 i.e. as defined by appropriate surrogates for 'biodiversity', such as mapped vegetation types, ecosystems or special habitats.</p> <p>– The Western Cape Provincial Spatial Development Framework (Department of Environmental Affairs and Development Planning) <a href="http://www.capecgateway.gov.za/eng/pubs/guides/W/120505">http://www.capecgateway.gov.za/eng/pubs/guides/W/120505</a> All</p>															
Biodiversity protection	<p>Conserve Biodiversity by:</p> <ul style="list-style-type: none"> <li>• working with production sectors,</li> <li>• strengthen bioregional sectors,</li> <li>• minimize loss of habitat in threatened eco-systems,</li> <li>• prevent and manage the spread of alien invasive species, and</li> <li>• expand formal protected areas to achieve biodiversity targets</li> </ul>	NSBA														
Red Data Faunal Species Protection	<p>The following Red Data Faunal species of special concern in the area must be protected. The integrity of their habitats and foraging ranges must be protected.</p> <table border="1"> <thead> <tr> <th>Species name</th> <th>Red data book status, habitat description and location in the Garden Route</th> </tr> </thead> <tbody> <tr> <td colspan="2">Plants: Of the many red data species, the following are Critically Endangered</td> </tr> <tr> <td><i>Disa newdigateae</i></td> <td>A Critically Endangered orchid which is thought to be endemic to Knysna Enon Fynbos in the Knysna municipal area only (even though this vegetation type also extends into the Bitou Municipality).</td> </tr> <tr> <td><i>Disa procera</i></td> <td>A Critically Endangered orchid which is locally endemic to Hoogekraal Sandplain Fynbos in the Knysna municipal area only (even though this vegetation type extends into all three municipalities).</td> </tr> <tr> <td><i>Gladiolus fourcadei</i></td> <td>A Critically Endangered plant located in Renosterveld (transitional Fynbos), extending from George to Humansdorp.</td> </tr> <tr> <td><i>Pentaschistis barbata orientalis</i></td> <td>A Critically Endangered grass species which is locally endemic to Hoogekraal Sandplain Fynbos in the Knysna municipal area only (even though this vegetation type extends into all three municipalities).</td> </tr> <tr> <td><i>Protea cynaroides subsp or</i></td> <td>A Critically Endangered protea variant that is extremely rare and which occurs in</td> </tr> </tbody> </table>	Species name	Red data book status, habitat description and location in the Garden Route	Plants: Of the many red data species, the following are Critically Endangered		<i>Disa newdigateae</i>	A Critically Endangered orchid which is thought to be endemic to Knysna Enon Fynbos in the Knysna municipal area only (even though this vegetation type also extends into the Bitou Municipality).	<i>Disa procera</i>	A Critically Endangered orchid which is locally endemic to Hoogekraal Sandplain Fynbos in the Knysna municipal area only (even though this vegetation type extends into all three municipalities).	<i>Gladiolus fourcadei</i>	A Critically Endangered plant located in Renosterveld (transitional Fynbos), extending from George to Humansdorp.	<i>Pentaschistis barbata orientalis</i>	A Critically Endangered grass species which is locally endemic to Hoogekraal Sandplain Fynbos in the Knysna municipal area only (even though this vegetation type extends into all three municipalities).	<i>Protea cynaroides subsp or</i>	A Critically Endangered protea variant that is extremely rare and which occurs in	iCAN Strategic Management Plan
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variety	both Hoogekraal Sandplain Fynbos (located in all three municipalities) and Roodefontein Grassy Fynbos (located in the Bitou Municipality), although the plant's range extends from George to Port Elizabeth.
Animals: The following animals have been sighted in various Special Habitats across the different municipalities	
Blue duiker ( <i>Philantombo monticola</i> )	Occurs in dense coastal bush, thicket and forest habitats. Its status is Vulnerable.
Grysbok ( <i>Raphicerus melanotis</i> )	This buck lives in thick scrub and bush, including fynbos, and is often found in close proximity to coastal towns. It is endemic to the Western Cape.
Honey badger or Ratel ( <i>Mellivora capensis</i> )	This animal is Near Threatened and protected in terms of the NEMBA. It is uncommon throughout its range, which includes a variety of habitats but excludes forest, moist mountain areas and desert.
Leopard ( <i>Panthera pardus</i> )	A large, wild cat that is tolerant of a wide range of habitats, usually with forest or broken rocky country. Its status is Vulnerable.
Birds	
African Marsh Harrier ( <i>Circus ranivorus</i> )	An indigenous species of high conservation value, it is protected by the NEMBA in terms of the Protected Species List. It inhabits marshland, flooded grassland and adjacent areas.
Blue Crane ( <i>Anthropoeddes paradisea</i> )	South Africa's national bird favours grasslands and other upland habitats. They will nest where shallow wetlands are available. Its status is Endangered.
Lesser Kestrel ( <i>Falco naumanni</i> )	Usually a colonial breeder, this kestrel is found in the vicinity of human settlements. It forages in grasslands, steppe-like habitats and non-intensive cultivated areas. Its status is Vulnerable.
Martial Eagle ( <i>Polematius bellicosus</i> )	The largest eagle in Africa prefers uninhabited stretches of thicket and open plains. Its status is Vulnerable.
Peregrine Falcon ( <i>Falco peregrinus</i> )	It lives mostly along mountain ranges, coastlines and river valleys. Its status is Vulnerable.
Amphibians	

Knysna Spiny Reed Frog ( <i>Afrixalus knysnae</i> )	An Endangered and endemic frog species that occurs in shallow wetlands densely vegetated, with foliage above the water level.
Reptiles	
Blue-spotted Girdled Lizard ( <i>Cordylus coeruleopunctatus</i> )	This lizard is endemic to the Garden Route, and is located in the George and Bitou municipalities.
Knysna Dwarf Chameleon ( <i>Bradypodion damaranum</i> )	The endemic Knysna Dwarf Chameleon is a forest reptile that occurs in the wet, coastal temperate forests of the Knysna area.
Insects - Butterflies	
Brenton Blue ( <i>Orachrysops niobe</i> )	A Critically Endangered butterfly found only at Brenton-on-Sea, Knysna, within the Brenton Blue Butterfly Reserve.
Brenton Copper ( <i>Aloeides thyra orientis</i> )	The Brenton Copper is a red listed butterfly which is found only on the Brenton peninsula. Its status is Vulnerable.
Brenton Opal ( <i>Chrysoritis thysbe mithras</i> )	The Brenton Opal Butterfly is found only on the Brenton peninsular and is red listed as Endangered.
Knysna Skolly ( <i>Thestor brachycerus</i> )	A Critically Endangered butterfly confined to the Eastern Knysna Heads.
Fish	
Cape Gallaxius ( <i>Galaxias zebratus</i> )	This fish is Near Threatened and endemic to South Africa, and occurs in a few George and Knysna municipal rivers.
Cape Kurper ( <i>Sandelia capensis</i> )	Near Threatened and endemic to South Africa, this fish occurs in several rivers from George to the Bitou Municipality.
Eastern Cape Redfin ( <i>Pseudobarbus afer</i> )	This forest fish species is found in a number of rivers in the Garden Route. Its status is Near Threatened and it is endemic to South Africa.
Knysna Seahorse ( <i>Hippocampus capensi</i> )	This seahorse has been recorded from the Knysna, Swartvlei, and Keurbooms Estuaries. Its status is Endangered.
Slender Redfin	An Endangered fish, endemic to South Africa, and located in few rivers, largely

	<i>(Pseudobarbus tenui)</i>	within the Bitou Municipality.	
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## 2. LKES, ESTUARIES AND WETLANDS

### 2.1 Risks

- Jetties
- Recreational use – boats etc
- Water abstraction
- Filling in ,
- Damming and draining,
- Impoundments and changes to natural flow,
- Dredging,
- Excavation and sand mining,
- Discharging and disposal of effluent,
- Alterations to water levels or drainage of water into and out of lake systems,
- Loss of important wetland and fringe vegetation,
- Changes to aquatic habitats due to inflow of stormwater and loss of deep rooted vegetation,
- Loss of water quality from pollutants exported from the development through ground or surface water,
- Loss of fringing vegetation,

- Significant change to the water balance,
- Export of nutrients to the lakes.

## 2.2 Objectives

- All aquatic systems and estuaries are important and have value,
- Estuaries should be kept ecologically sound, visibly healthy, and their environmental values maintained,
- Estuary catchment management objectives should be based upon best practice – minimising nutrient export into estuaries,
- An aquatic systems attributes is used to establish the value of the ecosystem and its ecological and hydrological functioning for natural and human purposes,
- Land reclamation should not be allowed,
- RAMSAR sites and bird breeding sites must be protected,
- Estuaries should be protected by an adequate dry land buffer from development,
- Dependent on above management parameters will differ according to the inherent value of each individual system,
- An aquatic systems attributes form the basis for its management, as well as the catchment,
- Wetland, including the lakes should be protected by an adequate dry land buffer from development,
- Adverse impacts on aquatic systems, particularly on water quality and water levels through land uses in the

catchment should be minimised and where possible avoided altogether,

- Development that retain wetland function within the development, or
  - Wetland with similar type is constructed or rehabilitated to fulfil equivalent functions.
- Management of the growing development pressure within the catchments of the various lakes from the following sources:
    - Water intensive land uses such as rural/residential and irrigated agriculture,
    - Land uses utilising large quantities of fertilisers and phosphates,
    - Increased tourism development pressure – development and use pressure.

**Table 3: Management Provisions for Lakes, Estuaries and Wetlands**

Feature: Lakes, Estuaries and Wetlands of the Garden Route		
Objective	Management Guideline / Provision / Advice	Key Policy Reference
Species Protection	<ul style="list-style-type: none"> <li>The Knysna Seahorse is endemic to South African estuaries, and is listed as the most threatened seahorse in the World.</li> <li>It functions as an indicator species in estuary environments.</li> <li>Pansy shell <i>Echinodiscus bisperforatus</i> is a nationally protected marine species.</li> </ul>	SANParks Knysna Seahorse Brochure / GRI SANParks Biodiversity Handbook
Sensitive habitat protection	<p>CapeNature does not support activities that may negatively impact on the following habitats and their ecological functioning:</p> <p>Rivers, wetlands, groundwater-dependent communities and estuaries.</p> <ul style="list-style-type: none"> <li>ii. Viable and/or connected Critically Endangered and Endangered ecosystems.</li> <li>iii. Any area in low irreplaceable habitat that is important for biodiversity conservation, as identified by a systematic conservation plan.</li> <li>iv. Any other special habitats that may contain a unique signature of species e.g. dolomite outcrops, quartz or ferricrete patches.</li> <li>v. Any habitat that contains rare or threatened flora or fauna species.</li> <li>vi. Natural habitat in an ecological corridor or along a vegetation boundary, including frontal dune systems).</li> <li>vii. Formally declared Mountain Catchment Areas.</li> </ul> <p>The Cape Floristic Region is largely a fire-dependent system, relying on natural fire regimes that must be maintained and managed in the landscape. The exclusion of fire from certain habitats will be considered unacceptable.</p>	Cape Nature EIA Procedures
Water resource threats and water use requirements	<p>Threats to Water resources (Outeniqua Coast water study)</p> <ul style="list-style-type: none"> <li>Planned major residential developments</li> <li>Data on planned major residential developments is not readily available.</li> <li>Since the Outeniqua Coast study, the area has experienced rapid growth during the last decade, it can be assumed that the past growth in water requirements related to major</li> </ul>	DWAF Water Report

	<p>residential developments are included in the population growth rates assumed for the long-term high growth as described above.</p> <ul style="list-style-type: none"> <li>Using these growth rates for future projections ( UWP/BKS Outeniqua Coast Water Situation Study: Urban &amp; Rural Water Requirements and Return Flows) will allow for potential developments of which no or little information is available at this stage.</li> <li>Although there is still a high demand for developments in the Outeniqua Coast study area it can be debated that future growth may decline. This possibility is proposed to be represented by the long-term low-growth scenario.</li> </ul>	
Estuary importance ranking	<p>Rank estuary in terms of their conservation importance :</p> <p>Biodiversity importance in South Africa</p> <ul style="list-style-type: none"> <li>Knysna Estuary Rank 1</li> <li>Swartvlei Rank 6</li> <li>Wilderness Rank 24</li> <li>Goukamma Rank 68</li> </ul>	State of Rivers Report
Wetland & aquatic conservation	<ul style="list-style-type: none"> <li>All wetlands have conservation significance, in terms of habitat type, and/or cumulative or singular functional value.</li> <li>Flow regimes must be able to maintain the wetland at its present extent and habitat quality, as well as downstream ecosystems.</li> <li>Water quality must be controlled to allow management of wetlands in relation to specific objectives, e.g. some wetlands may be deemed suitable for improving water quality; others would need protection from pollutants to maintain particular habitat quality.</li> <li>Hydrological connections between systems should be preserved.</li> <li>Existing ecosystem linkages/connectivity must be maintained at an appropriate scale.</li> <li>Buffers (i.e. building setbacks, preferably natural vegetation) should:- protect wetland systems from specific identified threats, as relevant to each system- provide sufficient space to allow for future rehabilitation and buffering of that ecosystem</li> <li>Protect the ecosystem health and integrity of receiving ecosystems.</li> </ul>	Ecosystem Guidelines For EIA, WC
Development guidelines for	<ul style="list-style-type: none"> <li>Wetlands should be delineated prior to planning for development.</li> <li>Wetland delineation and assessment should take place during the wet season; the level of</li> </ul>	

<p>wetlands</p>	<p>confidence attached to wetland identification and delineation in the dry season is very low for all wetlands other than permanent systems.</p> <ul style="list-style-type: none"> <li>• Allow adequate buffering of rivers and drainage lines. Ideally, buffer areas should first make allowance for future rehabilitation of the channel - e.g. regarding and reshaping of hardened river banks - and then impose development setbacks from the theoretical edge of the rehabilitated river bank. The City of Cape Town's Floodplain Management Guidelines 1 should be used as broad guidelines for minimum setback areas.</li> <li>• Additional evaluation of specific functional requirements of the buffer areas, on a site-specific basis, is needed (e.g. providing an appropriate buffer width for a system receiving treated effluent runoff, versus providing an adequate buffer against noise pollution or alien invasion).</li> <li>• Spatial depiction of existing or past linkages between wetlands, drainage channels and rivers/streams (these should be maintained or restored wherever possible) is required.</li> <li>• Small wetland fragments should be linked by areas of open space; existing drainage lines and corridors should be conserved; previously disturbed areas should be used, where ecologically appropriate, for performing "services" such as stormwater treatment, leaving less disturbed areas in a relatively unimpacted, more isolated condition.</li> <li>• Wetland services usually require a minimum size before they are effective. Note however that multiple small systems may never the less have an important cumulative effect.</li> <li>• Appropriate unhardened terrestrial open space areas should be used as buffers/interfaces between developments and wetlands, performing services such as initial filtration and sedimentation of runoff.</li> <li>• The land-use permitted in these areas should be in accordance with this function. The width of these buffer areas should be determined with regard to their required functions. Land-uses that potentially would add nutrients instead of performing a filtering function would be less appropriate, e.g. grazing of livestock, development of feedlots or equestrian areas.</li> <li>• A flow regime that is adequate to maintain the river at a desired and attainable Management Class.</li> <li>• Water quality that is adequate to maintain the river at a desired and attainable Management Class.</li> </ul>	
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	<ul style="list-style-type: none"> <li>• Buffers that:             <ul style="list-style-type: none"> <li>- are adequate to protect from the threats identified below, as relevant to each system,</li> <li>- allow for future rehabilitation, and</li> <li>- protect the habitat integrity of the receiving watercourse.</li> </ul> </li> <li>• Maintenance of existing ecosystem linkages/connectivity at an appropriate scale.</li> <li>• No new concrete canalization or piping of river channels.</li> </ul> <p>Maintain:</p> <ul style="list-style-type: none"> <li>• Flow regime, including seasonality, water quantity and links to the water table and groundwater system.</li> <li>• Water quality.</li> <li>• Bank slope and stability.</li> <li>• Maintenance of natural erosion and sedimentation processes.</li> <li>• Plant community structure and zonation.</li> <li>• Habitat availability and accessibility.</li> <li>• Instream biotope quality and availability.</li> <li>• Control over invasion by opportunistic weeds and other invasive plant species.</li> <li>• Control over invasion by introduced exotic fish and other alien fauna.</li> </ul>	
<p>Wetland &amp; water conservation</p>	<p>Promote river health by:</p> <ul style="list-style-type: none"> <li>• Good Land use management within catchments,</li> <li>• Integrate land and water management policies for impacted rivers, determine, implement and monitor ecological reserves,</li> <li>• Integrate river into bioregional plans and programmes,</li> <li>• Maintenance of genetic integrity.</li> <li>• A buffer that protects river habitat and functions from encroachment and degradation.</li> <li>• As a minimum, the Ecological Reserve should be maintained in terms of water quantity and quality.</li> <li>• Abstraction should be viewed as an issue covering both water quantity and water quality. Reserve Determinations should be dealt with cautiously due to the risk of methodological inaccuracy.</li> <li>• Maintenance of biological and hydrological linkages/connectivity in the catchment and in the broader system.</li> </ul>	<p>NSBA</p>

<p>Wetland &amp; river flow conservation</p>	<p>Crucial element to maintain are:</p> <ul style="list-style-type: none"> <li>• Flow regimes as close to natural as possible (seasonality and flood frequency).</li> <li>• Water quality (particularly quality of freshwater input s).</li> <li>• Mouth dynamics as close to natural as possible (opening and closure).</li> <li>• Estuarine water quality (nutrients and contaminant s).</li> <li>• Good catchment management (e.g. appropriate land use practices and alien clearing).</li> <li>• Sediment input (terrestrial and marine).</li> </ul>	
<p>Water quality and pollution sources</p>	<ul style="list-style-type: none"> <li>• Of concern, however, are the consistently high concentrations of phosphate and the increasing trend in concentrations for most of the variables, which indicate that most of the water bodies are affected by return flows.</li> <li>• Of concern however, are the consistently high concentrations of phosphate. This can lead to a high trophic state, and the associated problem of algal blooms or nuisance water plants, especially in standing or slow moving water bodies</li> </ul>	<p>DWAF -Outeniqua Coast Water</p>
<p>Estuary &amp; water conservation</p>	<p>Prevent:</p> <ul style="list-style-type: none"> <li>• Loss or alternation of natural estuary habitat,</li> <li>• Changes in the mouth dynamics, such as the manipulation of mouths to maintain constant water levels or prevent flooding of holiday homes,</li> <li>• Over-exploitation of estuarine resources such as fish,</li> <li>• Sedimentation of estuaries due to poor catchment or mouth management,</li> <li>• Recreational disturbance,</li> <li>• Pollution, eg. release of sewage into Knysna estuary,</li> <li>• Reductions in freshwater inputs due to upstream abstraction or afforestation,</li> <li>• Increase in freshwater input due to sewage or agricultural runoff,</li> <li>• Reduction in water quality due to poor catchment management.</li> </ul>	<p>NSBA</p>
<p>Estuary conservation</p>	<p>The primary threat to estuaries relates to changes in freshwater input and/or quality through an increase/decrease in mean annual runoff, change in seasonality of flows, change in flood frequency and/or magnitude and change in water quality.</p> <ul style="list-style-type: none"> <li>• Change in the freshwater input and/or quality has typically been linked to changes in catchments: Change in land use (agriculture, forestry, urbanisation etc).</li> </ul>	<p>Ecosystem Guidelines For EIA, WC</p>

	<ul style="list-style-type: none"> <li>• Poor land use practices (increased sediment input, nutrient enrichment, contaminant input). Water abstraction (altered flow regime).</li> <li>• Inter-basin transfers (altered flow regime).</li> <li>• Input of contaminants (sewage, stormwater, agricultural runoff, industrial waste water).</li> <li>• Infestation by alien vegetation (reduced freshwater input), climate change (altered freshwater inputs).</li> </ul> <p>Secondary threats to estuaries include:</p> <ul style="list-style-type: none"> <li>• Bank stabilisation.</li> <li>• Canalisation and other flood control measures.</li> <li>• Modification of mouth dynamics for maintenance of water level for recreation and other purposes. Encroachment by urban development and disturbance from human activities (e.g. power boating,</li> <li>• water skiing or swimming).</li> <li>• Exploitation of living resources (fish, invertebrates and estuarine vegetation).</li> </ul>	
<p>Land use change threats</p>	<p>Human disturbance of habitats and biota :</p> <p>The littoral of the Knysna River Basin has been extensively developed by urban conurbations since the early 1980s. Prior to this time, the town of Knysna was restricted very largely to the northern shore of the outer basin. Subsequently urban expansion has occurred along the eastern and western littoral of the middle basin and the eastern shoreline of the inner basin of the estuary. These have effectively reduced the high marsh by 60% (Maree 2000). Developments that impact directly upon the water surface are marinas and jetties. Three open jetty facilities and three enclosed marinas have been constructed since 1995.</p> <p>Non-consumptive use of the estuary is both recreational (sailing, canoeing and water skiing) and commercial, the later in the form of pleasure cruising ferries. The consumptive use involves subsistence and recreational fishing. Bait collection is continual, and largely but not entirely based upon the dominant mud prawn <i>Upogebia africana</i>. (Hodgson et al 2000) Sport fishing contest are frequently held and small groups of fishermen are advertising the use of boats and gear for visitors etc.</p>	<p>DWAF Estuary Report</p>

	<p>Of paramount importance to the continuing function of the Knysna estuary in each of its basins is the maintenance of clear water. The work of the Knysna Basin Project has shown that increasing exposure of the cover sands (Marker and Holmes 2002) that make up extensive areas of the Knysna River Basin results in high loadings of suspensoids into the estuary. The Salt River estuary along the northern shore of the middle basin just upstream of the rail bridge (Figure 2) is particularly important as a supplier of such sediments. On 26/10/97 after 63 mm of rain, the loading of this stream to the estuary was 814 tonne/day.</p>	
Protection of Cape Estuarine Salt Marshes	<ul style="list-style-type: none"> <li>• Salt marches are under extreme coastal development pressure</li> <li>• Siltation from soil erosion in river catchments threatens these systems</li> <li>• Salinity variations from freshwater inputs, such as flooding or irrigation, pollutants, such as heavy metals, sewage, effluent, oil, mechanical damage etc have a negative impact on salt marches,</li> <li>• The key to conserving these areas is to understand and protect their vulnerabilities, to ensure their suitability.</li> </ul>	SANP Salt Marshes of the Knysna Lagoon
WETLANDS		
	<ul style="list-style-type: none"> <li>• Wetlands should be identified and boundaries defined</li> <li>• Conservation status of aquatic systems must be determined</li> <li>• DWAF minimum buffers - 1:100 year floodline</li> </ul>	
	<p>The extent of wetland / lake and dryland buffer, as well as catchment should be defined :</p> <ul style="list-style-type: none"> <li>• All aquatic systems / water bodies are affected by nearby land uses, whether they are immediately adjacent o the waterbody, or some distance away, but within its catchment. Measures to protect the water quality of the waterbody from the impacts of surrounding activities are directly dependent on the maintenance of a dryland vegetation buffer.</li> </ul> <p>Vegetation buffers for all waterbodies have similar functions:</p> <ul style="list-style-type: none"> <li>• They separate water habitats from human activities on surrounding land;</li> </ul>	

	<ul style="list-style-type: none"> <li>• They provide complimentary habitats for wildlife using the waterbody,</li> <li>• They filter nutrients and sediments entering the waterbody.</li> </ul>	
	<p>Placement of control within the broader catchment must be considered. Certain land-uses can adversely effect ground and surface water, although impacts on water quality may take longer to become evident.</p> <p>While the application of generic buffer distances is not the preferred route for establishing waterbody buffers, it does provide a conservative starting point.</p>	
Vegetation buffer	<p><u>Vegetation Buffers</u></p> <p>Adjacent developments should be planned so that the waterbody and the dryland buffer are protected from the impacts of land use changes.</p> <p>Enforceable management controls are necessary where land remains in private ownership.</p>	
Catchment buffer	<p><u>Catchment Buffers</u></p> <p>Land uses with the potential to export contaminants, particularly nutrients, should be located away from waterbodies, or managed to retain nutrients on the site.</p> <p>Where intensive horticulture and agricultural practices take place, which are likely to export nutrients on soils with poor nutrient retention ability, they should not be placed or located less than 300 metres upstream from a wetland.</p>	
Minimum buffer	<p><u>Minimum buffer recommended</u></p> <p>50 meters or 1 metre higher than the furthest extent of the wetland vegetation, would be the minimum dryland buffer required.</p> <p>The entire buffer within the wetland must be protected.</p> <p>Where access is required for recreation an additional width of buffer should be provided.</p>	
Hydrological functioning	Retain and protect ecological and hydrological functioning of aquatic systems	

	<p><u>Hydrological Functioning</u></p> <ul style="list-style-type: none"> <li>• There should be no direct drainage or stormwater entering wetlands – separate detention basins should be built to receive stormwater directly,</li> <li>• Removal of vegetation within the buffer should not be allowed,</li> <li>• Local on-site disposal of stormwater should be maximised, at individual development and street / suburb level</li> </ul> <p>Where water levels are still unacceptable, maximum levels may be controlled through selective outlet drainage.</p>	
Water quality monitoring	<p>Monitor for the following:</p> <ul style="list-style-type: none"> <li>• pH,</li> <li>• Total N, P,</li> <li>• E.coli, etc</li> </ul>	
Development within a wetland	<p><u>Development within a wetland or Aquatic System</u></p> <ul style="list-style-type: none"> <li>• The wetland function is to be retained in the development,</li> <li>• The wetland is constructed or rehabilitated to fulfil equivalent hydrological and ecological functioning,</li> <li>• If decreased in size there should be an increase in the number of functions created.</li> </ul>	
LAKE SYSTEMS		
Horticultural developments	<ul style="list-style-type: none"> <li>• No agricultural and residential development of cover sands on overly steep slopes.</li> <li>• Minimum setbacks from lakes of 150m</li> <li>• No direct surface run-off from horticultural areas into the lakes.</li> </ul>	
Rural and Residential Development	<ul style="list-style-type: none"> <li>• All townplanning provisions to be applied with respect to minimum allowable subdivisions and densities.</li> <li>• Conventional septic tank systems should not be permitted. Alternative effluent systems</li> </ul>	

	<p>should be applied.</p> <ul style="list-style-type: none"> <li>• Intensive land uses requiring high water and fertiliser usage should not be permitted.</li> <li>• For erven and stands / plots identified as high / critical vegetation types and communities, clearing of vegetation should be restricted to the provision of services and building envelopes.</li> </ul>	
MANAGEMENT ADVICE FOR EFFLUENT DISPOSAL	Conventional Septic Tank Systems	
	<p>Septic tanks must be kept to a low density in environmentally sensitive areas defined as:</p> <ul style="list-style-type: none"> <li>• Capture zones for wetlands, watercourses and estuaries where there is a superficial aquifer discharging into the waterbody;</li> <li>• Recharge areas for aquifers and used for public water supply; and</li> <li>• Surface water catchments used for public water supply.</li> </ul>	
	<p>In the absence of specific locational information, capture zones are defined as :</p> <ul style="list-style-type: none"> <li>• 1km upstream from wetland and 250m downstream,</li> <li>• Within 500m of a permanent watercourse, 200m of a seasonal water course and 50m from an episodic water course,</li> <li>• 1 km from estuaries.</li> </ul>	
	<i>Constraints on Sandy Soil</i>	
	<p>The following environmental constraints should apply in environmentally sensitive areas:</p> <ul style="list-style-type: none"> <li>• Septic tanks should not be used on soils with low infiltration rates (high clay content);</li> </ul>	

### **3. RIVERS, STREAMS AND WATERCOURSES**

#### **3.1 Risks**

- Filling in ,
- Damming and draining,
- Impoundments and changes to natural flow,
- Excavation and sand mining,
- Discharging and disposal of effluent,
- Loss of important riparian and fringe vegetation,
- Loss of water quality from pollutants exported from developments through ground or surface water.

Impacts and risks on water quality:

Risks:

- Discharge of contaminants,
- Landfilling, excavation and mininig,
- Abstraction of groundwater,
- Filing of wetlands,
- Clearing, destruction and removal of indigenous vegetation,

- Run-off from agricultural practices and eutrophication,
- Run-off from urban development,
- Poorly maintained and managed waste water treatment works,
- High septic tank discharge.

### 3.2 Objectives

- Pollution, nutrient enrichment and degradation of water resources should be avoided,
- Water resources for public and ecological supply need protection,
- Ground and surface waters should be protected for public and private use,
- All aquatic systems are important and have value,
- Rivers are to be kept ecologically sound and visibly healthy,
- Avoid discharge of nutrients into watercourses,
- Avoid increased and unnecessary sedimentation and erosion into watercourses,
- Manage land-uses in the catchment to minimise negative affects in water quality.

**Table 4: Management Provisions for Rivers, Streams and Water Courses**

<i>Feature: Rivers, Streams and Water Courses</i>		
Objective	Management Guideline / Provision / Advice	Key Policy Reference
Sensitive habitat protection	<p>CapeNature does not support activities that may negatively impact on the following habitats and their ecological functioning:</p> <p>Rivers, wetlands, groundwater-dependent communities and estuaries.</p> <ul style="list-style-type: none"> <li>ii. Viable and/or connected Critically Endangered and Endangered ecosystems.</li> <li>iii. Any area in low irreplaceable habitat that is important for biodiversity conservation, as identified by a systematic conservation plan.</li> <li>iv. Any other special habitats that may contain a unique signature of species e.g. dolomite outcrops, quartz or ferricrete patches.</li> <li>v. Any habitat that contains rare or threatened flora or fauna species.</li> <li>vi. Natural habitat in an ecological corridor or along a vegetation boundary, including frontal dune systems).</li> <li>vii. Formally declared Mountain Catchment Areas.</li> </ul>	Cape Nature EIA Procedures
Water resource protection	<p>Water as a resource:</p> <ul style="list-style-type: none"> <li>● Catchments, rivers, dams etc for providing and managing water resources. Establish catchment management agencies (CMA) in terms of the National Water Act 36 of 1998.</li> <li>● Water services aims to ensure basic water supply &amp; sanitation for all South Africans: Water Services Act 108 of 1997.</li> </ul>	STEP Handbook
Water conservation and use	<p>Water is a limited resource in most of the Western Cape. Water requirements for development activities and the impact on broader water resources of the area (i.e. cumulative impacts) need to be rigorously assessed, especially in light of other developments taking place in an area. The impact of a proposed development on infrastructure such as wastewater treatment works etc also needs to be adequately addressed.</p>	Cape Nature EIA Procedures

<p>Water use and reserve</p>	<p>Water balance estimates produced at cursory level during the Internal Strategic Perspective (ISP) Study indicated that the study area is experiencing a shortfall in yield of 33 106 m<sup>3</sup>/a, which can be attributed to the substantial growth in water usage, as well as to the impact of the Reserve on yield estimates associated with the ecologically important coastal rivers.</p> <p>These Reserve estimates do not provide for the ecological water requirements for the estuaries, which could further increase the shortfall. Furthermore, a number of towns in the study area are experiencing serious periodic water shortages and water restrictions, mainly because of inadequate sources and insufficient capacity of their bulk supply infrastructure.</p>	<p>DWAF Agri Development Report</p>
<p>Ecological Importance and Sensitivity Class assessment</p>	<p>The ecological significance/conservation importance of the river systems falling within the study area are described by their Ecological Importance and Sensitivity Classes (EISC). The majority of river reaches within the study area exhibit a high EISC. These include some reaches of the Goukou River (quaternaries H90A to C) which exhibit a "high" EISC and those river reaches within the Coastal System (quaternaries K10A to E, K20A, K30A to D, K40A to E, K50A to B) which exhibit a "very high" EISC. Accordingly, for these latter river reaches, human manipulation of the system would require strong motivation. The other rivers or river reaches exhibit a "moderate" EISC.</p>	<p>DWAF -Outeniqua Coast Water Situation Study</p>
<p>River ecological status</p>	<ul style="list-style-type: none"> <li>• Lower Knysna River <ul style="list-style-type: none"> <li>○ Eco status: Good</li> <li>○ Desired state: Good</li> </ul> </li> <li>• Lower Karatara River: <ul style="list-style-type: none"> <li>○ Eco status: Good</li> <li>○ Desired State: Good</li> </ul> </li> <li>• Lower Hoekkraal River <ul style="list-style-type: none"> <li>○ Eco status: Good</li> <li>○ Desired State: Good</li> </ul> </li> <li>• Upper Hoekkraal River <ul style="list-style-type: none"> <li>○ Eco status: Natural</li> <li>○ Desired State: Natural</li> </ul> </li> <li>• Klein Wolve <ul style="list-style-type: none"> <li>○ Eco status: Poor</li> <li>○ Desired State: Fair</li> </ul> </li> <li>• Wolwe River</li> </ul>	<p>DWAF : State of Rivers Report</p>

	<ul style="list-style-type: none"> <li>○ Eco status: Good</li> <li>○ Desired State: Good</li> <li>• Lower Diep River             <ul style="list-style-type: none"> <li>○ Eco status: Good</li> <li>○ Desired State: Good</li> </ul> </li> <li>• Duiwe River             <ul style="list-style-type: none"> <li>○ Eco status: Good</li> <li>○ Desired State: Good</li> </ul> </li> <li>• Lower Touw River             <ul style="list-style-type: none"> <li>○ Eco status: Good</li> <li>○ Desired State: Good</li> </ul> </li> <li>• Upper Touw River             <ul style="list-style-type: none"> <li>○ Eco status: Good</li> <li>○ Desired State: Natural</li> </ul> </li> <li>• Hontini River             <ul style="list-style-type: none"> <li>○ Eco status: Good</li> <li>○ Desired State: Natural</li> </ul> </li> <li>• Gouna River             <ul style="list-style-type: none"> <li>○ Eco status: Good</li> <li>○ Desired State: Good</li> </ul> </li> </ul>	
<p>Guidelines for agricultural developments</p>	<ul style="list-style-type: none"> <li>• Investigate and ensure environmental flow releases from existing in-stream dams where possible,</li> <li>• Discourage groundwater abstraction from the riparian zone,</li> <li>• Encourage efficient water-use throughout the Water Management Area,</li> <li>• Reduce water loss from canals and improve irrigation methods</li> <li>• Encourage environmentally friendly farming practices and maintain a buffer area (10 -20m) along river banks,</li> <li>• Clear alien vegetation from riparian buffer areas and the surrounding catchment. Rehabilitate cleared area,</li> <li>• Stock dams with indigenous fish rather than alien fish,</li> </ul>	

	<ul style="list-style-type: none"> <li>● Control litter and dumping of solid waste near rivers,</li> <li>● Improve monitoring and management of stormwater and waste water runoff from developed areas.</li> </ul>	
River conservation index	<ul style="list-style-type: none"> <li>● Klein Wolwe River:             <ul style="list-style-type: none"> <li>○ Index of Habitat Integrity: Poor</li> <li>○ Geomorphology Index: Poor</li> <li>○ Riparian Vegetation Index: Poor</li> <li>○ Fish Index: Good</li> <li>○ South African Scoring system: Poor</li> <li>○ Water Quality : Fair</li> </ul> </li> <li>● Wolwe River             <ul style="list-style-type: none"> <li>○ Index of Habitat Integrity: Fair</li> <li>○ Geomorphology Index: Fair</li> <li>○ Riparian Vegetation Index: Poor</li> <li>○ Fish Index: Fair</li> <li>○ South African Scoring system: Fair</li> <li>○ Water Quality : Fair</li> </ul> </li> <li>● Lower Diep River             <ul style="list-style-type: none"> <li>○ Index of Habitat Integrity: Fair-Good</li> <li>○ Geomorphology Index: Fair</li> <li>○ Riparian Vegetation Index: Fair</li> <li>○ Fish Index: Poor</li> <li>○ South African Scoring system: Good</li> <li>○ Water Quality : Good</li> </ul> </li> <li>● Upper Keurbooms River             <ul style="list-style-type: none"> <li>○ Index of Habitat Integrity: Poor</li> <li>○ Geomorphology Index: Poor</li> <li>○ Riparian Vegetation Index: Poor</li> <li>○ Fish Index: Good</li> </ul> </li> </ul>	

	<ul style="list-style-type: none"> <li>○ South African Scoring system: Poor</li> <li>○ Water Quality : Fair</li> <li>● Middle Keurboom River             <ul style="list-style-type: none"> <li>○ Index of Habitat Integrity: Poor-Fair</li> <li>○ Geomorphology Index: Poor</li> <li>○ Riparian Vegetation Index: Fair</li> <li>○ Fish Index: Fair</li> <li>○ South African Scoring system: Fair</li> <li>○ Water Quality : Fair</li> </ul> </li> </ul>	
<p>River Conservation – Knysna Lagoon</p>	<ul style="list-style-type: none"> <li>● The Knysna River is the main fresh water supply for the Knysna Estuary and Town of Knysna, which draws its supplies from the Akkerkloof Dam,</li> <li>● According to CSIR, 1985, the Knysna Lagoon "is biologically the richest estuary in the Cape... and one of the largest", since it is a permanently open estuary with a low fresh water influent.</li> <li>● The stable salinity accounts for the remarkable species diversity, which is the highest of any South Africa estuary.</li> </ul> <p>Rapid development must not be allowed to affect the natural ecological processes that maintain the functioning of the lagoon, while the rural character and features which are so attractive should be maintained by careful monitoring.</p> <p>Bridges and crossings from Leisure Island, Rex Island and Thesen's Island impeded the flow of water and allows siltation to occur.</p> <ul style="list-style-type: none"> <li>● Silt is the main threat to the Knysna Lagoon.</li> <li>● Siltation is caused by monoculture crops on large pieces of land, when left bare are vulnerable to erosion.</li> <li>● Silt suffocates the flora and increases turbidity</li> </ul>	<p>SANP Knysna River brochure</p>
<p>Riparian Vegetation Conservation</p>	<p>Riparian vegetation performs the following important functions:</p> <ul style="list-style-type: none"> <li>● Binds river banks with their roots and prevents erosion,</li> </ul>	<p>State of Rivers Report</p>

	<ul style="list-style-type: none"> <li>• Traps sediment and pollutants and helps protect water quality,</li> <li>• Provides habitat and food for animal, fish and aquatic insects,</li> <li>• Reduces the effects of flood waters</li> <li>• Provides cover to rivers thus influencing water temperatures,</li> <li>• Slows run-off in the ground cover, increasing bank storage and absorption of water, particularly during flood conditions</li> <li>• Maintains elevated flows after flood flows have receded,</li> <li>• Contributes to species richness.</li> </ul>	
Surface Resource Conservation and Supply		
Water resource conservation measures	<p>Implementation of innovative and effective water conservation and demand management is crucial for reducing demand during the peak holiday season.</p> <p>A strategy needs to be put in place for municipalities to implement these measures. This could include placing restrictions on garden development, the type of lawn to be planted etc</p>	DWAF GW Report
WTW aspects	<p>The Knysna WTW is operating close to capacity. The Bigai Springs, which are utilized when the water demand exceeds the WTW capacity, have a very low yield.</p> <p>The Sedgefield WTW has inadequate capacity for the water requirements during peak demand periods. The WTW is situated on low lying land adjacent to the Karatara River, and is subject to periodical flooding, which results in the disruption of the supply of treated water. Karatara's current water supply system has no seasonal storage, and the assurance of supply is therefore entirely dependent on the availability of flows in the river.</p>	DWAF Supply Infrastructure
Water use permitting	<p>A permit is required from Water Affairs as per Section 21, National Water Act (Act No. 36 of 1998), which includes the following activities –</p> <p>(a) taking water from a water resource;</p> <p>(b) storing water;</p>	DEADP WC Hydrology Guideline

	<p>(c) impeding or diverting the flow of water in a watercourse;</p> <p>(d) engaging in a stream flow reduction activity contemplated in section 36;</p> <p>(e) engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1);</p> <p>(f) discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;</p> <p>(g) disposing of waste in a manner which may detrimentally impact on a water resource;</p> <p>(h) disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process;</p> <p>(i) altering the bed, banks, course or characteristics of a watercourse;</p> <p>(j) removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people; and</p> <p>(k) using water for recreational purposes</p>	
<p>Buffers and pollutant infiltration</p>	<p>There is insufficient separation between the base of the development and the water table to prevent pollutant entry to the groundwater resource or effect adequate effluent degradation. Guidelines and recommendations are available on safe separation distances between the water table and activities such as petrol stations (SABS, 1999), cemeteries (Fisher, 2001) and wasted disposal sites (DWAF, 1994).</p> <p>The character of the soil and rock material allows the rapid infiltration of polluted water. This is a function of the nature of the rock and soil material.</p>	
<p>Land use / Water Conservation</p>	<p>Golf course and leisure estate developments:</p> <ul style="list-style-type: none"> <li>• The Outeniqua Coast Study area has, for a number of years now, seen a notable increase in golf course and/or leisure estate developments.</li> <li>• An investigation into the water sources of the existing and planned golf course developments within the Knysna, Mossel Bay and George municipal areas revealed that the majority of golf courses make use of municipal water supply for the domestic component and have other resources for irrigation (i.e. small dams, treated municipal effluent or groundwater).</li> </ul>	<p>DWAF Water Report</p>

	Concerns associated with the environmental and socio-economic impacts of these developments have, however, been raised. One of these concerns is the water requirements of such developments. UWP/BKS Outeniqua Coast Water Situation Study: Urban & Rural Water Requirements and Return Flows 23 Following the above mentioned concerns the Provincial Government Western Cape has developed guidelines for the development of golf courses, polo fields and leisure estates in the Western Cape. These guidelines require that the water demands of these developments should be met from sources other than natural systems (i.e. rivers, streams, wetlands, groundwater) as a first option, particularly for irrigation purposes.	
	Afforestation and alien vegetation reduces the run-off from a catchment.	
<b>GROUNDWATER RESOURCES</b>		
Water Conservation	The Kaaimans Group aquifers, Cape Granite aquifers, Bokkeveld Group aquifers and Uitenhage Group aquifers are considered minor aquifers suitable for development at a local scale. In instances, poor quality limits the feasibility of using groundwater from these aquifers. If groundwater is to play a meaningful role in satisfying the water demand of the area, groundwater resources have to be properly developed and appropriately managed.	DWAF GW Report
	Groundwater is particularly susceptible to the cumulative effect of small impacts. Due regard must be given to this during the assessment, and should be thoroughly considered in a designated section of the specialist report:- <ul style="list-style-type: none"> <li>• Where effluent or chemicals with the potential to change groundwater quality is handled as part of the project, or discharged into the environment due to the project.</li> <li>• The volume of groundwater in storage or entering groundwater storage is changed beyond what is allowed by the DWAF General Authorisations.</li> <li>• The groundwater flow regime is changed.</li> <li>• Abstraction occurs from an aquifer that sustains or contributes to river baseflow or any other surface water feature where it is likely to contribute to ecosystem functioning. Under the National Water Act (Act No. 36 of 1998) a component of all significant water resources is set aside for use by ecosystems, and may not be impacted upon by abstraction.</li> <li>• Wetlands and sensitive ecological settings that are probably sustained by groundwater, and which would likely be affected by and influence by proposed developments need to</li> </ul>	DEADP WC Hydrology Guideline

	<p>be assessed. The area of influence of the development will vary, depending on the hydrogeological setting and the nature of the development. It is suggested that a radius of 1 kilometre be used as an initial guideline of whether such ecosystems occur near proposed developments. Groundwater discharge to groundwater dependent ecosystems may be protected as part of the ecological reserve.</p> <ul style="list-style-type: none"> <li>• Underlying aquifers in the study area can be recognised as particularly vulnerable to pollution. National scale maps that delineate the distribution of vulnerable aquifers are available (e.g. Lynch, et al., 1994; and Conrad &amp; van der Voort, 1998) and must be consulted before any development application is approved.. The classification of groundwater resource units (required by the NWA) will provide additional information on the vulnerability status of aquifers.</li> <li>• An assessment must be conducted where abstraction occurs from an aquifer where a reduction in pore space may occur in the aquifer or in an associated deposit, leading to consolidation of the deposit giving rise to ground subsidence. This is typical of thick silt and clay deposits.</li> <li>• Groundwater in the aquifer is to be managed to a 'good' or 'pristine' state. This will be defined by the National Classification system that is being developed by the Department of Water Affairs and Forestry (DWAF) and will be set by the Minister.</li> <li>• The development utilises or will occur where it may impact an aquifer that is known (or suspected) of have significant exploitation potential. Significance depends on factors such as water availability, water demand, and water quality.</li> <li>• The development utilises or will occur where it may impact an aquifer that is the only (i.e. sole source aquifer) or a significant water supply source (or may become a significant water supply source) for an area utilised by a nearby community. See Box 11 for a description of community vulnerability.</li> <li>• Groundwater abstraction could result in the ingress of poor quality water. This is most likely in coastal areas, where seawater intrusion may result, but could occur in any setting where the pumped aquifer is linked to a system with poor quality water.</li> <li>• Development will occur over an area where the release of toxic vapours (e.g. volatile organic compounds) from polluted groundwater is likely.</li> <li>• This type of pollution is usually associated with the release of petroleum products such as</li> </ul>	
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	<p>petrol and solvents used in dry cleaning and industrial processes.</p> <p>Issues that need to be addressed by Geohydrologist:</p> <ul style="list-style-type: none"> <li>• Shallow water table Rapid water infiltration and flow Groundwater abstraction within 1 km of development Wetland or groundwater dependent ecosystem occurs within 1 km of development Aquifer is particularly vulnerable to pollution.</li> <li>• Abstraction from an aquifer in Karstic terrain Aquifer occurs in material susceptible to consolidation or subsidence</li> <li>• Aquifer Classification requires management to a pristine level Aquifer has a high exploitation potential Development located near coast Groundwater is polluted with toxic vapour releasing substances Aquifer is the only significant water source</li> </ul>	
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## **4. COASTLINES AND NEARSHORE MARINE AREAS**

### **4.1 Risks**

All development activity impacting significantly on:

- Coastal recreational amenity,
- Loss of dune stabilisation vegetation through any mechanism, including peripheral impacts such as poor stormwater management,
- Direct drainage of stormwater or wastewater directly into marine waters,
- Any loss to biodiversity in the tidal zone, seagrass beds, reefs and tidal flats,
- Sensitive and significant coastal topographical features and landscapes,
- Visual and aesthetic qualities and 'sense of place' of coastal zone.

### **4.2 Objectives**

- Integrate conservation principles into planning processes for development,
- There should be no significant direct or indirect impact on biological sensitive and important communities and habitats,
- Due the dynamic nature of the coastline it requires specialised planning and management. All coastal developments must be compatible with the sensitivity of the area,
- Areas of topographical, biological, ecological, educational and recreational importance must be managed

sensitively and conserved,

- All coastal foreshore areas must be retained as public open space or conservation area,
- The coastline is visually sensitive and indiscriminate development which does not adhere to visual sensitivity development principles must be discouraged,
- No significant alteration of the coastal topography will be allowed,
- No informal development will be allowed along the coast,
- All forms of municipal infrastructure must be compatible with the receiving environment. No discharge of stormwater will be allowed directly onto seaward coastal dunes without significant abatement measures in place,
- Control any preparatory activities that is not controlled by other legislation, and which are likely to:
  - Adversely impact or interfere with the sensitive physical, biological or other elements of the coastal environment,
  - Decrease the aesthetic appeal of the coastline and its immediate hinterland.

**Table 5: Management Provisions for Coastlines and Nearshore Marine Areas**

<i>Feature: Coastal and Nearshore Marine Areas</i>		
Objective	Management Guideline / Provision / Advice	Key Policy Reference
Biodiversity Conservation	<ul style="list-style-type: none"> <li>Expand marine protected areas,</li> <li>Approach marine industries and commercial fisheries to conduct their activities sustainably,</li> <li>Conduct periodic auditing of fisheries catches .</li> </ul>	NSBA
Planning intervention	<ul style="list-style-type: none"> <li>Direct appropriate coastal development, and not necessarily prohibit development as such,</li> <li>Ensure the implementation of environmental control measures to mitigate damage during development,</li> <li>Ensure proper rehabilitation of disturbed areas after construction, and</li> <li>Prohibit any unacceptable impact in the coastal zone.</li> </ul>	Coastal Management Guidelines
Controlled Activities	<p>Ensure that effective management and control of detrimental activities takes place:</p> <ul style="list-style-type: none"> <li>Disturbance of coastal and stabilisation vegetation,</li> <li>Earthworks ,</li> <li>Dredging, and</li> <li>Dune stabilisation.</li> </ul>	
Sensitive Coastal Features	<p>Sensitive coastal features must be protected, such as:</p> <ul style="list-style-type: none"> <li>Beaches and dunes,</li> <li>Cliffs and steep slopes (geotechnically unstable or unsuitable areas),</li> <li>Estuaries and their banks,</li> <li>Rivers, flood plains and their banks, and</li> <li>Important vegetation communities.</li> </ul>	
General Coastal Area Management Guidelines	<p>Geological Formations</p> <ul style="list-style-type: none"> <li>Areas which are underlain by rock or hard pedocretes at shallow depth require further detailed assessment.</li> </ul>	Coastal Management Guidelines

	<p>Soils</p> <ul style="list-style-type: none"> <li>• Development on clay soils impacting on foundations and improper functioning of septic tanks needs to be assessed in development applications,</li> <li>• Development on sandy soils where soils are dispersive and on steep slopes should not be allowed. Comprehensive rehabilitation and mitigation should be undertaken to ensure that erosion is avoided during and after construction.</li> </ul>	
	<p>Water Table</p> <ul style="list-style-type: none"> <li>• Areas susceptible to seepage or to the development of a high (perched) water table within 1.5 m of the surface should be avoided.</li> </ul>	
	<p>Vegetation</p> <ul style="list-style-type: none"> <li>• Vegetation stabilising dunes preventing erosion should not be disturbed. Any disturbance must be kept to the minimum, especially on sea facing dune slopes.</li> <li>• Cleared and eroded areas, especially on steep sandy slopes must be rehabilitated with suitable plant material as a matter of urgency. Protection measures such as log terracing or similar techniques must be undertaken.</li> </ul>	
	<p>Invasive alien vegetation</p> <ul style="list-style-type: none"> <li>• The removal of alien vegetation is important, but control should be exercised in the manner in which it takes place,</li> <li>• Sensitive vegetation and protected species must be protected in the removal process,</li> <li>• A vegetation survey must precede any removal process,</li> <li>• Careful attention must be given to the removal of any vegetation on steep sandy slopes due to the significant erosion risk.</li> </ul>	
	<p>Buffer Strips</p> <ul style="list-style-type: none"> <li>• If a development / activity is to occur within a non-sensitive area that occurs adjacent to a sensitive area, a suitable buffer between the development and the sensitive area should be maintained.</li> </ul>	

	<p>Recreation carrying capacity</p> <ul style="list-style-type: none"> <li>• Where an increase in recreation is likely to provide increased access to a previously inaccessible features; provide facilities such as accommodation adjacent to any sensitive features (estuaries, rivers and beaches); the secondary impacts need to be assessed and considered,</li> <li>• The over utilisation of resources through increased use must similarly be considered.</li> </ul>	
	<p>High Water Mark (HWM)</p> <ul style="list-style-type: none"> <li>• Most areas below the high water mark of the ocean falls under the jurisdiction of the Sea Shore Act of 1935 (no. 21 of 1935). In terms of this act, permission must be obtained for any activity below the HWM.</li> <li>• In the few areas that are not under the jurisdiction of the Sea Shore Act, dredging of river beds and artificial breaching of estuaries must be subject to strict control and authorisation will be required either from the National or Provincial authorities.</li> <li>• Activities undertaken below the HWM for the construction of groynes, breakwaters, tidal pools, piers, jetties, sea walls and other structures, could interfere with natural longshore currents and the sedimentation movement within the littoral zone.</li> <li>• All activities will be subject to a comprehensive, detailed assessment process.</li> </ul>	
	<p>Dredging</p> <ul style="list-style-type: none"> <li>• May have a physical, chemical and biological impact on the aquatic environment. Any dredging, regardless of whether it is within the existing water body or outside can result in the destruction of habitats and organisms, alter natural water circulation patterns and stir up pollutants. A comprehensive assessment will be required before the activity may commence.</li> <li>• Artificial breaching interferes with the natural dynamics of an estuary and may negatively effect biodiversity. An assessment must be conducted before any artificial breaching may commence.</li> </ul>	

Beaches, dunes and rocky shores	<p>Littoral active zone</p> <ul style="list-style-type: none"> <li>The littoral zone is essentially dynamic and therefore incompatible with the erection of fixed structures.</li> <li>Structures within the littoral zone will be subject to a detailed impact assessment that must take the continuous erosion and accretion of the coast, as well as wave energy dissipation into consideration.</li> </ul>	Coastal Management Guidelines
	<p>Foredunes</p> <ul style="list-style-type: none"> <li>The importance and sensitivity of foredunes have been addressed in the baseline assessment.</li> </ul>	
	<ul style="list-style-type: none"> <li>The foredunes area should therefore be kept clear of any permanent structures or obstructions and disturbances must be kept to a minimum.</li> <li>Detailed studies regarding the coastal dynamics and sand movement will have to be undertaken to determine the impact and appropriate mitigation / rehabilitation measures.</li> </ul>	
	<p>Stability – Interruption of sand movement</p> <ul style="list-style-type: none"> <li>Disturbance to vegetation trapping sand (access paths, roads, trampling) resulting in sand being transported further inland onto roads and developments, or</li> <li>Interruption of sand movement by the erection of fixed structures resulting in either: <ul style="list-style-type: none"> <li>Sand build-up at the point of interruption causing increased pressure on dune vegetation and possible encroachment of dunes further inland, and</li> <li>A reduction in the littoral drift sand supply transported along the coast resulting in the erosion of sandy beaches causing changes from sandy to rocky shores, undermining of slopes and structures, extension of the littoral activity zone and change in the mouth dynamics of estuaries.</li> </ul> </li> </ul>	
	<p>Vegetation</p> <ul style="list-style-type: none"> <li>Damage to the natural foredune vegetation destroys habitats, and destabilises the foredune, which will then no longer be able to function as a protective buffer to its hinterland.</li> <li>Removal and artificial stabilisation removes and impedes sand supply to beaches, becoming susceptible to erosion by wave action.</li> </ul>	

	<p>Dune Stabilisation</p> <ul style="list-style-type: none"> <li>• It is strongly recommended that the re-establishment of protective foredune areas or the stabilisation of open sand areas should be based on detailed environmental impact assessment to ensure that:             <ul style="list-style-type: none"> <li>○ Stabilisation does not interfere in the dynamic processes,</li> <li>○ The appropriate methods and plant material are used to ensure the sustainability of the undertaking.</li> </ul> </li> </ul>	
	<p>Multiple fixed-dune system</p> <ul style="list-style-type: none"> <li>• All activities / developments should preferably be set back landwards from the youngest fixed dune trough. This limits activities to backdune areas where there is no danger of</li> </ul>	

	<p>destabilising the dunes.</p> <ul style="list-style-type: none"><li>• All activities related to major developments such as highways, railways, industry and high buildings should be located landward of the most landward dune trough.</li></ul>	
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## 5. CONSERVATION AND PROTECTED AREAS

### 5.1 Risks

- The potential for visual and light pollution,
- The potential for removal of significant tracts of natural vegetation'
- Control of septic tank densities etc...
- Loss of biodiversity'
- Encroachment of alien vegetation'
- Increase of edge effects on natural areas'
- Loss of important fringe vegetation and habitat'
- Loss of land use buffers adjacent to National Parks.

### 5.2 Objectives

- Maintain the integrity of the National park asset for current and future generations
  - Land uses adjacent to conservation areas should have minimal impact on the areas conservation values.
-

BUFFER AREAS AROUND NATIONAL PARKS – IF A DEVELOPMENT / ACTIVITY IS TO OCCUR WITHIN A NON-SENSITIVE AREA THAT OCCURS ADJACENT TO A SENSITIVE AREA, A SUITABLE BUFFER BETWEEN THE DEVELOPMENT AND THE SENSITIVE AREA SHOULD BE MAINTAINED.

Key Policy Advice Areas – AKA Proposals which impact on areas identified as having the highest conservation value by DEAT involve the management of the following issues: - MAYBE ACTIVITY LISTS...

Key policy documents ie Acts and Provincial policies and guidelines etc...

**Table 6: Management Provisions for the Protection of Protected Areas**

<i>Feature: Conservation / Protected Areas</i>		
Objective	Management Guideline / Provision / Advice	Key Policy Reference
Corridor Conservation	There are numerous protected natural areas managed by SANParks or by CapeNature, as well as UNESCO Biosphere Reserves in the Western Cape. There are also mega-corridor initiatives (e.g. Gouritz, Greater Cederberg);	DEADP WC Biodiversity Guideline

## 6. TOPOGRAPHICALLY SENSITIVE GEOGRAPHICAL AREAS

### 6.1 Risks

- Destruction of visual topographical quality,
- Erosion of steep slopes,
- Erosion and slumping of dunes,
- Development impact of sensitive topographical features and landscapes,
- Inappropriate large scale development,
- Excavation and sand mining,
- Loss of covering vegetation.

### 6.2 Objectives

- Maintain the integrity of the Garden Route Landscape,
- Limit all development on steep slopes,
- Prohibit development on foredunes,
- Enhance and protect the topographical landscape backdrop to the Garden Route,

- Manage development on steep slopes, discouraging development,
- Prohibit all development on steep slopes.

**Table 7: Management Provisions for the Topographically Sensitive Geographical Areas**

Feature: Topographically Sensitive Areas		
Objective	Management Guideline / Provision / Advice	Key Policy Reference
Steep slopes	<p>Erosion/soil /ridgeline conservation</p> <p>Development on steep slopes (i.e. steeper than 1:4) will be strongly discouraged as such areas are subject to erosion and instability. Slope steepness will be evaluated for the area of the site where development is being proposed and not for the site as a whole. As a general principle,</p> <ol style="list-style-type: none"> <li>Development should be located on lower-lying or gently sloping portions of a site.</li> <li>Development on the crest of a mountain, hill or ridge will be strongly discouraged.</li> <li>Development in an area, which has been declared a mountain catchment area in terms of the Mountain Catchment Areas Act, Act 63 of 1970 will be strongly discouraged</li> <li>Development in locations on mountains, hills or ridges that serve as a source of water (e.g. spring, seep, river or stream source) will be strongly discouraged</li> </ol>	DEADP WC Mnt & Ridgeline Guideline
Wave cut Rocky Platforms	In the West Coast and Namaqualand regions, avoid all rocky outcrops and coastal dunes (this has important implications for quarrying and mining). Ideally, natural corridors should be kept intact along north-south as well as coast-inland gradients.	Ecosystem Guidelines For EIA, WC
Soil / Dune conservation	<p>Dune system's risks and vulnerabilities.</p> <ul style="list-style-type: none"> <li>Stabilisation of naturally dynamic dune systems and sediment corridors due to infestation by rooikrans Acacia cyclops or for the purposes of property and other development has a significant impact on the integrity of coastal processes.</li> <li>Resort and housing developments on primary dune systems (including hummock, primary dunes dune slack and secondary dunes) are destroying highly sensitive dune systems in certain areas. Examples of this type of development pressure can be found at Wilderness, Keurboomstrand, Hartenbos, St Francis Bay, Dana Bay and Victoria Bay. Linked to development is the disturbance of natural dune vegetation cover due to trampling, driving or earth-moving operations. This result s in erosion and degradation of primary and foredunes, and mobilisation of driftsand. Infrastructure that impedes longshoredrif t and inshore sediment dynamics.</li> </ul>	

	<ul style="list-style-type: none"> <li>Altered erosion patterns can result from the hardening of adjacent shorelines (land reclamation) and the construction of breakwaters and groynes. There is an increasing risk of coastal erosion associated with rising sea levels (and particularly when there is a combination of spring high tides, storm surges and inadequate development setback lines and degraded primary / foredunes).</li> </ul>	
Soil / Dune conservation	<p>No-go activities for dune systems .</p> <ul style="list-style-type: none"> <li>No development should be allowed in sand movement corridors, frontal dunes or dynamic dune systems. Developments should be placed inland of secondary dunes.</li> <li>Mobile dunes must not be stabilised. Strict control should be maintained over the use of Off-road Vehicles (ORVs) on beaches. There must be a strictly enforced ban (that includes management vehicles) against driving in dune systems and above the high water mark on beaches.</li> <li>Access to the beach must be controlled via designated access points.</li> <li>Provision should be made for rehabilitation of mined-out areas when mining ceases, and of historically mined areas.</li> </ul>	
Soil / Dune conservation	<p>Development guidelines for Dune areas: Infrastructure must be positioned to avoid damage from coastal processes and, where possible, to avoid the need for physical defences against potential damage resulting from coastal processes.</p> <ul style="list-style-type: none"> <li>No permanent infrastructure should be installed on sandy beaches and in dynamic or mobile dune systems. Development setback lines must be rigorously applied, taking into account the need to protect development from coastal processes by: absorption of the impacts of severe storm sequences;</li> <li>allowing for shoreline movement;</li> <li>allowing for global sea level rise; allowing for the fluctuation of natural coastal processes;</li> <li>and any combination of the above.</li> <li>Development setbacks must also take into account biodiversity and ecosystem requirements (especially in Dune Thicket systems), landscape, seascape, visual amenity, indigenous and cultural heritage, public access, recreation, and safety to lives and property (consult the guideline on Dune Thicket and Dune Fynbos p.32).</li> </ul>	

	<ul style="list-style-type: none"> <li>• Avoid the removal and fragmentation of indigenous vegetation in the frontal dune area. Maintain a buffer of contiguous indigenous vegetation between the inland boundary of the youngest fixed dune trough and the seaward boundary of the development (the exact setback will depend on the biophysical characteristics and requirements of the area, and the type and scale of development) .</li> <li>• There must be rigorous adherence to the precautionary principle when constructing fixed infrastructure below the high water mark. Driving on sandy beaches above the high water mark or in dune systems must be prohibited.</li> <li>• The ban on driving should also be maintained at popular bathing beaches, on beaches that support important shorebird breeding, feeding or roosting sites, and in the coastal zone of coastal protected areas except on proclaimed roads.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Avoid developments that may impede seasonal cycles of sediment deposition (summer) and erosion (winter).</li> <li>• Maintain and restore, if invaded by rookrans, unimpeded sand mobility corridors (including headland bypass and climbing-falling dunes).</li> <li>• Indigenous vegetation structure and successional dynamics (including that of primary and foredunes, and in dune slacks) must be maintained.</li> <li>• A functional corridor of indigenous vegetation must be retained along the coast to link inland trending river systems.</li> <li>• This is crucial for the migration and dispersal of plants and fauna. Decomposition processes at the high water mark and on the back beach should be maintained by confining the removal of drift kelp and other organic material to popular bathing beaches.</li> <li>• Minimise disturbance of shore birds by people and dogs at important breeding, feeding and roosting sites.</li> </ul>	
Soil / Dune Conservation	<p>soil conservation work means any work which is constructed on land for-</p> <p>(a) the prevention of erosion or the conservation of land which is subject to erosion;</p> <p>(b) the conservation or improvement of the vegetation or the surface of the soil;</p> <p>(c) the drainage of superfluous surface or subterranean water;</p> <p>(d) the conservation or reclamation of any water source; or</p> <p>(e) the prevention of the silting of dams and the pollution of water,</p>	CARA, Act 43 of 1983

	<p>but not a work which is constructed on land in the course of prospecting or mining activities;</p> <p><b>Maintenance of soil conservation works and maintenance of certain states of affairs</b> (1)(a) A soil conservation work shall, except where otherwise provided in this Act or a scheme, be maintained by every land user of the land concerned and his successor in title at his own expense in a manner which, in the opinion of the executive officer, will ensure the continued efficiency thereof</p>	
High Mountains	<p>The key reasons for controlling development in these areas are:</p> <ul style="list-style-type: none"> <li>• Mountains, hills and ridges provide catchment areas for valuable surface water resources.</li> <li>• Mountains, hills and ridges are often characterized by unique and sensitive ecosystems.</li> <li>• Mountains, hills and ridges are of aesthetic/scenic value.</li> <li>• Remote mountainous areas provide a "wilderness" experience which is important for the well being of people. They may also be of religious, spiritual or cultural value to people.</li> </ul>	DEADP WC Mountain & Ridgeline Guideline
	<ul style="list-style-type: none"> <li>• These areas have a high scenic value and attract tourists and recreational users. This provides opportunities for passive and active recreational developments.</li> <li>• Rich mineral resources can occur in these areas and can be suitable for other economic activities such as forestry and agriculture.</li> <li>• These areas provide suitable locations for infrastructure developments such as dams, cable cars and communication towers.</li> <li>• Properties in these areas are generally of high value which makes them desirable for residential development.</li> </ul>	
	<ul style="list-style-type: none"> <li>• The Department's approach to controlling development on mountains, hills and ridges is underpinned by determining:                     <p>Which areas can development be considered or where should it be avoided?</p> </li> <li>• Where development can be considered, what type and form of development can be considered in the respective areas of a mountain, hill or ridge?</li> <li>• The determination of appropriate development on mountains, hills and ridges will be guided by:                     <ul style="list-style-type: none"> <li>• The demarcated urban edge (where this has been determined); or</li> <li>• The identification of a development line (where no urban edge has been determined); in</li> </ul> </li> </ul>	

	<p>combination with</p> <ul style="list-style-type: none"> <li>The environmental sensitivity (based on biophysical, cultural and social characteristics) of the mountain, hill or ridge.</li> </ul>	
	<p>The following environmental characteristics will serve as key indicators of environmental sensitivity by the Directorate</p> <p>a. Development on steep slopes (i.e. steeper than 1:4) will be strongly discouraged as such areas are subject to erosion and instability. Slope steepness will be evaluated for the area of the site where development is being proposed and not for the site as a whole. As a general principle, development should be located on lower-lying or gently sloping portions of a site.</p> <p>b. Development on the crest of a mountain, hill or ridge will be strongly discouraged.</p> <p>c. Development in an area, which has been declared a mountain catchment area in terms of the Mountain Catchment Areas Act, Act 63 of 1970 will be strongly discouraged.</p> <p>d. Development in locations on mountains, hills or ridges that serve as a source of water (e.g. spring, seep, river or stream source) will be strongly discouraged.</p> <p>e. Development in areas where sensitive fauna or flora occurs such as Red Data plant or animal species will be strongly discouraged.</p> <p>f. Development in areas that are of cultural importance will be strongly discouraged. This includes burial sites, sites used as places of worship, burial sites and archaeological sites.</p>	
Slope	<p>Steep Slopes</p> <ul style="list-style-type: none"> <li>Steep slope is a major factor in the correct siting of structure and roads. Steep slopes are problematic in being unstable and susceptible to erosion.</li> <li>Additional constraints occur with limited access, foundation and disposal of septic tank effluent. These limitations are costly to implement with a higher risk of failure, and increased disturbance of the development site.</li> <li>Development on steep and very steep slopes are not desirable or supported.</li> <li>Activities on slopes steeper than 1:4 or in any areas identified as geotechnically unsuitable or unstable must be avoided.</li> <li>Steep slopes are important, since even gentle gradients will require preparation by means</li> </ul>	Coastal Management Guidelines

	<p>of terracing, and the resultant earthworks may add significantly to the impact especially where slopes exceed 15%.</p> <ul style="list-style-type: none"> <li>• Developments on steep slopes are likely to result in excessive visual scarring due to the cut and fill slopes associated with the creation of building platforms, infrastructure and access requirements.</li> <li>• Where activities on steep or very steep slopes have been proved to be essential, extensive studies should be undertaken and strict conditions laid down regarding:             <ul style="list-style-type: none"> <li>○ Engineering requirements,</li> <li>○ Mitigating measures to minimise visual impact,</li> <li>○ Measure to rehabilitate exposed slopes,</li> <li>○ Control measures to minimise disturbance during construction,</li> <li>○ Limiting disturbance due to access,</li> <li>○ Stabilisation of areas after disturbance.</li> </ul> </li> <li>• Control should be exercised on activities related to developments adjacent to steep slopes to ensure that:             <ul style="list-style-type: none"> <li>○ A vegetated buffer strip is maintained at the toe and head of the slope. The width of the buffer strip will be determined by the extent of the slope, nature of the vegetation and the type of development,</li> <li>○ Measures are taken to address possible access requirements across the slope.</li> </ul> </li> </ul>	
	<p>Unstable natural slopes</p> <ul style="list-style-type: none"> <li>• Areas illustrating 'slide topography', and areas of cover sands on steep slopes manifest in the form of slumps, scars, hummocky ground below scarps, leaning trees or displaced fences will indicate the possibility of slope movement. This will severe situation will require a comprehensive environmental impact assessment.</li> <li>• Other risk areas include highly jointed rock slopes, high rainfall areas, areas subject to seismic activity where deep residual or transported soils of intermediate texture are found on moderate slopes.</li> </ul>	

## 7. VISUALLY SENSITIVE LANDSCAPE GEOGRAPHICAL AREAS

### 7.1 Risks

- Sprawling urbanisation,
- Uncontextualised inappropriate development within the urban edge of villages and hamlets,
- Large scale change of land use developments outside of the urban edge,
- Inappropriate placement of prominent development infrastructure (telecommunications towers and masts) on prominent and exposed topographical features,
- Inappropriate land use practices along prominent tourism routes, as well as adjacent to the national parks and provincial nature reserves.

### 7.2 Objectives

- Limit development densities,
- Adhere to rural development policies and guidelines,
- Protect the agricultural landscapes from large scale indiscriminate development,
- Retain the sense of place of villages and hamlets,
- Enforce building control and aesthetics in the study area, as well as in villages and hamlets,
- Protect the sense of place of the Garden Route,

- Protect and enhance the visual quality of prominent tourism routes, meanders and nodes,
- Protect the visual integrity of the South African National Park asset, as well as provincial nature reserves,
- Limit and prohibit development on prominent visually sensitive and exposed features (such as the Knysna Heads and coastal topography).

**Table 8: Management Provisions for the Visually Sensitive Landscape Geographical Areas**

<i>Feature: Visually Sensitive Areas</i>		
Objective	Management Guideline / Provision / Advice	Key Policy Reference
Legislative provisions	<p>Current South African environmental legislation governing the EIA process, which may include consideration of visual impacts if this is identified as a key issue of concern, is the National Environmental Management Act (NEMA) (Act No. 107 of 1998) and the EIA regulations in terms of the Environment Conservation Act (Act No. 73 of 1989).</p> <p>The regulations governing the EIA process are currently being revised and will be replaced by regulations promulgated in terms of the NEMA. The Protected Areas Act (NEMA) (Act 57 of 2003, Section 17) is also intended to protect natural landscapes.</p> <p>The National Heritage Resources Act (Act No. 25 of 1999) and the associated provincial regulations provides legislative protection for listed or proclaimed sites, such as urban conservation areas, nature reserves and proclaimed scenic routes. Visual pollution is controlled, to a limited extent, by the Advertising on Roads and Ribbons Act (Act No. 21 of 1940), which deals mainly with signage on public roads.</p> <p>Visual and aesthetic resources are also protected by local authorities, such as the City of Cape Town, where policies and by-laws relating to urban edge lines, scenic drives, special areas, signage, communication masts, etc. have been formulated.</p>	DEADP WC Visual Guideline
Impacting development activities	<p>High intensity type projects including large-scale infrastructure;</p> <ul style="list-style-type: none"> <li>• A change in land use from the prevailing use;</li> <li>• A use that is in conflict with an adopted plan or vision for the area;</li> <li>• A significant change to the fabric and character of the area;</li> <li>• A significant change to the townscape or streetscape;</li> <li>• Possible visual intrusion in the landscape;</li> <li>• Obstruction of views of others in the area.</li> </ul>	
Development categories for visual control	<p>Category 1 development: e.g. nature reserves, nature-related recreation, camping, picnicking, trails and minimal visitor facilities.</p> <p>Category 2 development: e.g. low-key recreation / resort / residential type development, small-scale agriculture / nurseries, narrow roads and small-scale infrastructure.</p>	

	<p>Category 3 development: e.g. low density resort / residential type development, golf or polo estates, low to medium-scale infrastructure.</p> <p>Category 4 development: e.g. medium density residential development, sports facilities, small-scale commercial facilities / office parks, one-stop petrol stations, light industry, medium-scale infrastructure.</p> <p>Category 5 development: e.g. high density township / residential development, retail and office complexes, industrial facilities, refineries, treatment plants, power stations, wind energy farms, power lines, freeways, toll roads, large scale infrastructure generally. Large-scale development of agricultural land and commercial tree plantations. Quarrying and mining activities with related processing plants.</p>	
<p>Protect areas with significant visual qualities</p>	<ul style="list-style-type: none"> <li>• Areas with protection status, such as national parks or nature reserves;</li> <li>• Areas with proclaimed heritage sites or scenic routes;</li> <li>• Areas with intact wilderness qualities, or pristine ecosystems;</li> <li>• Areas with intact or outstanding rural or townscape qualities;</li> <li>• Areas with a recognized special character or sense of place;</li> <li>• Areas lying outside a defined urban edge line;</li> <li>• Areas with sites of cultural or religious significance;</li> <li>• Areas of important tourism or recreation value;</li> <li>• Areas with important vistas or scenic corridors Areas with visually prominent ridgelines or skylines.</li> </ul>	<p>DEADP WC Visual Guideline</p>
<p>Areas of scenic beauty, scenic routes and special features</p>	<p>Proposed activities / developments within areas of outstanding natural beauty, scenic drives and panoramic views must be sensitive to the natural beauty. The layout, buildings, density, landscape treatment and infrastructure should:</p> <ul style="list-style-type: none"> <li>• Be visually unobtrusive,</li> <li>• Utilise materials and colours that originate from or blend into the surrounding landscape,</li> <li>• Be grouped in clusters with open spaces between clusters,</li> <li>• Not interfere with the skyline, landmarks, major views and vistas,</li> <li>• Respond to the historical, architectural and landscape style of surrounding layout and</li> </ul>	<p>Coastal Management Guidelines</p>

	<p>buildings,</p> <ul style="list-style-type: none"> <li>• Incorporate existing man-made or natural landmarks and movement patterns.</li> </ul>	
<p>Development within visually sensitive areas</p>	<ul style="list-style-type: none"> <li>• Any development within a visually sensitive area must be planned to ensure that earthworks do not have any detrimental impacts on wetlands and flood areas,</li> <li>• In road cuttings this will require the services of a competent professional to ensure structurally sound, aesthetically acceptable and environmentally sensitive landscaping. The landscaping should take factors such as vegetation, soil colour, recoverability, slope and elevation into account.</li> </ul>	<p>Coastal Management Guidelines</p>

# GARDEN ROUTE DISTRICT MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK

## ANNEXURE F: AGRICULTURAL LAND GUIDELINES



## ANNEXURE F: AGRICULTURAL LAND GUIDELINES

### AGRICULTURAL LAND PRESERVATION GUIDELINES

#### 1. DEMARCATION OF AGRICULTURAL LAND

- ❖ All agricultural land parcels subjected legally to the provisions of the Subdivision of Agricultural Land Act, 70 of 1970 (SALA) and as defined in the Act, irrespective of its agricultural potential or use, remains subjected to comments / approval from the Department of Agriculture (DoA) for subdivision, change of land use or any related matter as described under the Act.
- ❖ The same provisions stated above also prevail, irrespective as to the zoning placed on a land parcel by the municipality through its Land Use Scheme or Spatial Development Framework classification.
- ❖ Any formal change of land use on land subjected to the provisions of SALA needs to do in accordance with the jurisdiction of SALA.
- ❖ Only once a land parcel has been formally excluded from the provisions of SALA, by means of a gazette will such land parcel no longer be subjected to the provisions of SALA.
- ❖ It should further be noted that state land, including land that resorted as former homelands areas or tribal areas (where applicable) are currently not subjected to the provisions of SALA. DoA, under the provisions of SALA, is therefore not in the position to recommend land use zoning on such areas. However, the SALA Act is in the process of being replaced by the Preservation and Development of Agricultural Land Act, 39 of 2024 (PDALA) where in all land not within a formal town plan will resort under the provisions of PDALA – thus inclusive of state land / former homeland areas.
- ❖ In view of the above, it is requested that such land currently not resorting under SALA but having an agricultural potential to be used sustainably for long-term food security, be retained and protected for such use in support towards ensuring long-term national food security.
- ❖ In view of the above, the assessment conducted has been done within the requirements of both SALA and PDALA to ensure a seamless transition between the two acts for when PDALA will be formally implemented.

#### 2. PROTECTED AGRICULTURAL AREAS (PAAs)

- ❖ The delineated Protected Agricultural Areas (PAAs) - Cultivation has the aim to identify, delineate and protect agricultural land having a high agricultural potential for cultivation purposes.
- ❖ Provision has been made for two types of PAAs namely **Rainfed PAAs** - having a priority rating ranging from A, being the highest priority to F, being the lowest priority and **Irrigation PAAs** - having a priority rating ranging from A, being the highest priority to D, being the lowest priority.
- ❖ *Any agricultural land, as defined, and located outside of the delineated PAAs that are still subjected to the provisions SALA (& PDALA) will be evaluated on its own merits against its contribution to agricultural production within the larger agro-ecosystem.*

## GARDEN ROUTE DISTRICT SDF

- ❖ It should also be mentioned that the PAAs take cognisance of formal approved town planning ordinance areas – areas that are formally excluded from the provisions of SALA, prior to 1994 – as per the definition in the Act. Where possible the delineation of the PAAs aim to exclude such areas but in certain instances the complete town is engulfed by high potential agricultural land. In such instances the PAA's delineation overlaps the town area but the status of such urban area is acknowledged as not being subjected to the regulations of the PAA; the delineated Agro Ecosystems (AES) (seamless delineation) however includes in its delineation areas excluded from the provisions of SALA / PDALA, permanently transformed areas (e.g. mines) as well as the Environmental protected areas or other ecosystems.
- ❖ Where high potential agricultural land is located within state land areas (land belonging to the state / government) or areas that were formally regarded as homelands area, these areas were evaluated and where it was determined that such areas have a high agricultural potential for long-term sustainable food production, it was demarcated and delineated as a PAA.
- ❖ The delineation of the PAAs has been done per available cadastre boundaries. Where there were no cadastre boundaries available, other visible land use features such as rivers; roads etc. was used to assist with the delineation as far as possible, in relation to the agricultural potential of the area.
- ❖ From a Land Use Management Scheme perspective, it is recommended that all land parcels within a PAA be zoned as "Agriculture 1" (irrespective of the PAA's priority rating) and that the remaining agricultural land parcels outside of the PAAs be zoned "Agriculture 2".
- ❖ The above recommendation zonation may be adjusted in future when the proposed agricultural zoning classes (agricultural areas) have been finalised and gazetted under PDALA. In these classes provision has been made for 1) National Protected Agricultural Areas – similar to Agriculture 1 mentioned above; 2) Provincial Agricultural Areas; 3) Primarily Agriculture; 4) Secondary Agriculture.

### 3. GENERAL

- ❖ **From a Spatial Development Framework perspective, it is recommended that all PAAs be included within the SDF that is to guide the priority of the area concerned and preservation of these areas for agricultural production purposes.**
- ❖ In the assessment attention was given to the areas already excluded from the provisions of the Subdivision of Agricultural Land Act, 70 of 1970 (SALA / PDALA), with emphasis on Departmental data pertaining to the delineation of agricultural land as defined under SALA (former excluded town planning ordinance areas) as well as areas delineated according to former guide plans' classification classes.
- ❖ In terms of SALA, Agricultural Holdings have been excluded from the provision of the Act. However, a legal opinion in terms of Agricultural Holdings under the provisions of PDALA still need to be finalised as many Agricultural Holdings have significant agricultural potential and forms a buffer between non-agricultural land uses and agricultural production areas. Until the legal matter has been resolved in terms of Agricultural Holdings under PDALA, these areas are mapped and discussed separately and are regarded as subjected to the provisions of PDALA, unless, in these areas, a significant amount of land use changes to non-agricultural land uses have occurred, rendering such areas no longer suited for agricultural production.
- ❖ In addition to the mentioned, areas that have, according to Departmental records, not yet been excluded from the provisions of SALA but have no longer an agricultural potential have been flagged for exclusion.

# GARDEN ROUTE DISTRICT MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK

ANNEXURE G1: SMART CITY CONCEPT

ANNEXURE G2: EMERGING FARMER UPSCALING

ANNEXURE G3: INFORMAL TRADE / SERVICES INDUSTRY UPSCALING

ANNEXURE G4: PRECISION FARMING

**ANNEXURE G1: SMART CITY CONCEPT**

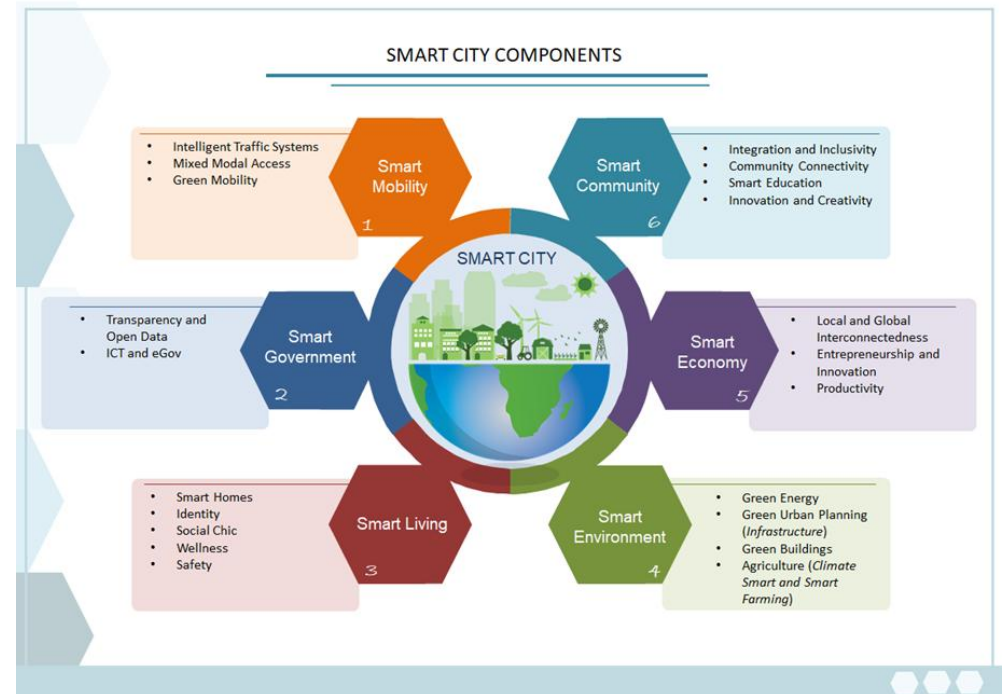
**What is a Smart City?**

A **Smart City** primarily uses **information and communication technologies (ICT)** to enhance quality, performance and interactivity of urban services, to reduce costs and resource consumption and to improve contact between citizens and government. It connects human capital, social capital and ICT infrastructure in order to address public issues, achieve a sustainable development and increase the quality of life of citizens.

Smart city applications are developed with the goal of improving the management of urban flows and allowing for real time responses to challenges. A smart city may therefore be more prepared to respond to challenges than one with a simple ‘transactional’ relationship with its citizens.

**Smart Mobility** aims to provide an on-demand mobility system that would allow customers to choose among motorised public and private transport modes and / or non-motorised transport modes to assemble the fastest or cheapest way of getting anywhere they need to go at any time. It includes new mobile technologies and intuitive apps which integrate public transportation, better infrastructure, and car sharing.

**Smart Government** entails the use of innovative policies, business models, and technology to address the financial, environmental, and service challenges facing public sector organizations. It relies on open and accessible consolidated information systems and communication networks from which the public becomes better informed about whether the government is performing and conforming to highest ethical standards.



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**Smart Communities** are strategic, purposeful, and resourceful. They are driven by long-term commitments to safeguard their natural resources and economic opportunities for future generations, and preserving the beauty, vitality, and equity of the region. These communities protect their ecological assets from destruction or degradation, promote renewable energy solutions, and practice sustainable development.

**Smart Living** is fuelled by the rise of devices and objects connected to the internet – wearables, home appliances, fashion accessories etc. Internet-connected appliances that communicate with one another, more efficient energy usage and cloud-enhanced home security are just some of the developments that consumers are starting to enjoy. Advances in technology, such as mobile and GPS-enabled devices, live data sensors, and big data, have created a foundation for governments to develop better services, foster accountability, and increase transparency. When disaster incidents strike, critical information exchange across departmental, municipal, and jurisdictional lines expedites communication to at-risk populations and hastens their evacuation from harm's way. It tracks disasters in real-time, locate medical resources, align logistics, coordinate response teams, and automatically publish updated maps that keep the media and public informed. Similarly, GIS highlight recurring crime hot spot locations, and help deploy critical resources to the right place at the right time. Real-time monitoring tools are used to regulate infrastructure and manage natural and manmade threats like vandalism/ theft.

A **Smart Environment** aims to provide more efficient urban structure, buildings and energy. A compact city characterised by medium and high-density mixed-use environments which are designed around efficient multi modal public transport systems. Careful building design to reduce heat loads, maximise natural light and promote the circulation of fresh air and installation of solar heaters and water harvesting infrastructure. Green energy generated from natural sources: solar power, wind power, hydropower, geothermal energy, biomass and biofuels. Monitoring and controlling operations of urban and rural infrastructures like bridges, railway tracks, on- and offshore- wind-farms and it can also be used for scheduling repair and maintenance activities.

**Smart Economies** are largely the result of the influence of ICT applications on all aspects of urban economy, which in turn changes the land-use system. Main Economic Sectors influenced by Smart Technology include:

- ❖ Banking and Finance
- ❖ Education and Research
- ❖ ICT, Mobile and Telecommunications
- ❖ Travel, Tourism and Transportation
- ❖ Healthcare and Social Welfare
- ❖ National Security and Defence
- ❖ Retail and Distribution
- ❖ Energy and Utilities

ANNEXURE G2: EMERGING FARMER UPSCALING

**Support Emerging Farmers to Become Part of the Mainstream Economy**

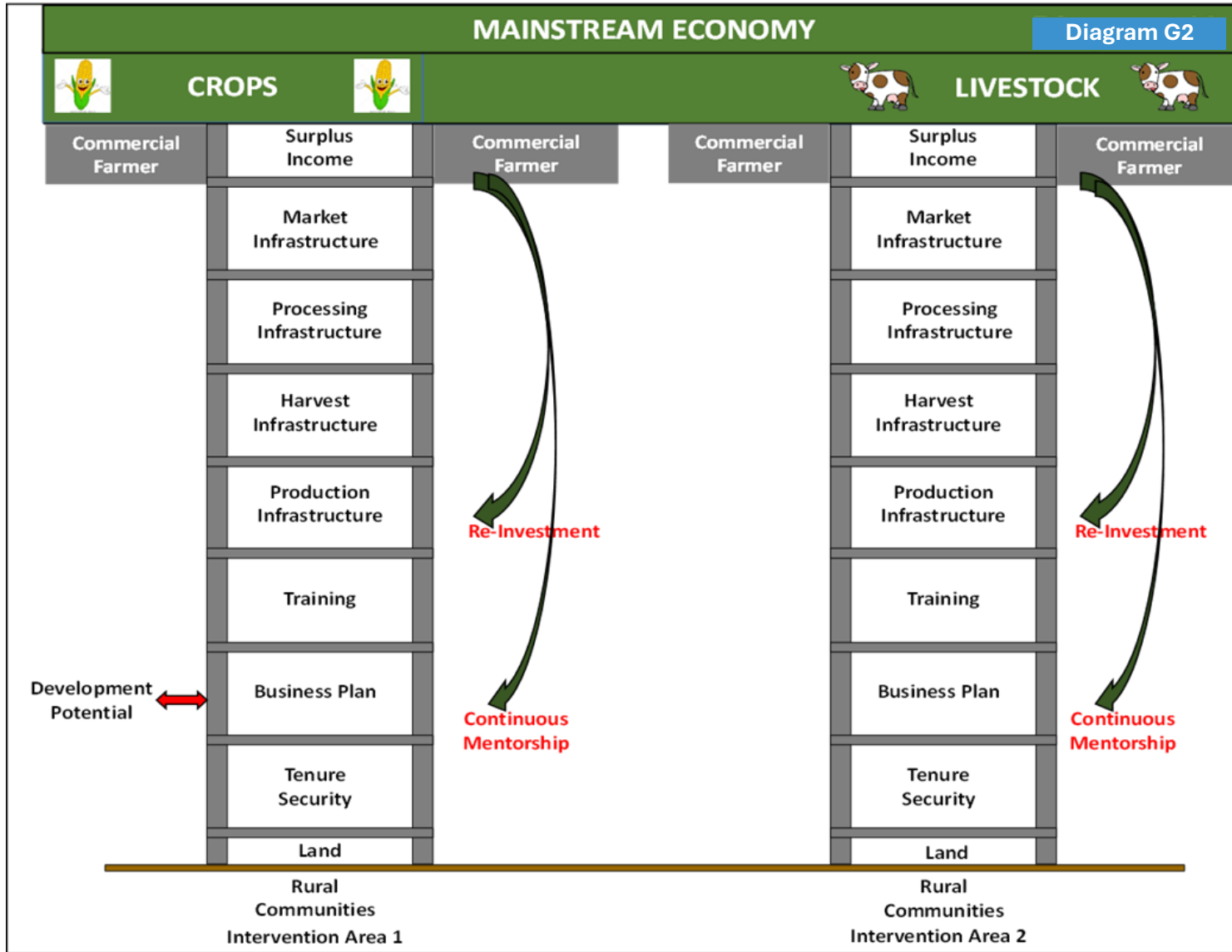
It is important that emerging farmers be supported in the Garden Route DM as a means to contribute towards poverty alleviation, enhancing food security, and establishing sustainable livelihoods. This can be achieved by way of implementing the following measures in identified Rural Intervention Areas (to be read in conjunction with **Diagram G2**):

- Increasing land availability and tenure security for agricultural purposes through prioritised processing of Land Claims/ Restitution processes in this area.
- Exploiting the opportunities offered by the potential of the agricultural land identified within the area (in conjunction with Department of Rural Development and Land Reform).
- Significantly increasing production per hectare beyond the subsistence farming yield.
- Providing training support to emerging and small-scale farmers and ensuring that appropriate skills development takes place in line with the most appropriate farming activities in the area.
- Encouraging the use of different crops and new planting, harvesting and processing techniques.
- Supporting a variety of farming concepts including intensive commercial farming, small scale commercial farming (vertical farming/

precision farming), subsistence farming, aquaculture development, and agro processing industries.

- Providing production and harvesting infrastructure in order to create production surplus in the area.
- Increasing job creation in the area through labour-intensive agricultural projects and extending the agriculture value chain by way of agro-industries and agro-tourism.
- Establishment of a fresh produce market which would support the globally growing demand for organic (chemical free) produce and 'farmer's markets', while supporting small-scale farmers by creating offset areas for both individually and communally harvested produce from surrounding areas.

The surplus income generated through the initiatives above would assist emerging farmers to become part of the mainstream economy as shown on Diagram G2.

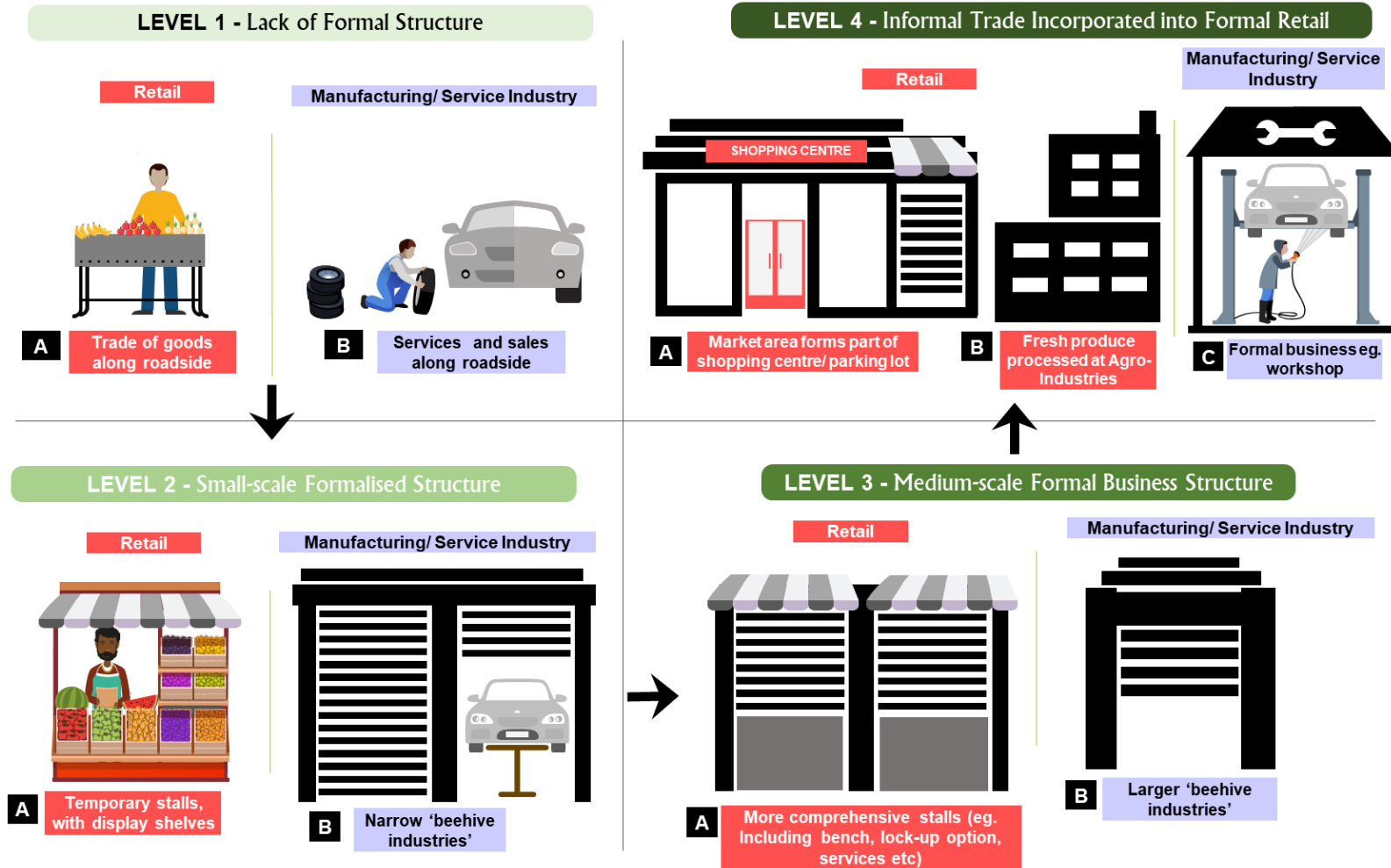


**ANNEXURE G3: INFORMAL TRADE / SERVICES INDUSTRY UPSCALING**

<p><b>ANNEXURE G3.1</b></p>	<p style="text-align: center;"><b><u>Informal Trade Empowerment and Upscaling</u></b></p> <p><b>Annexure G3.1</b> highlights the concept to upscale informal trading businesses, the stages to achieve upscaling are represented as <b>Level 1 – Level 4</b>. <b>Annexure G3.1 – Annexure G3.5</b> highlights examples of the various informal trade structures referred to the Informal Trade Upscaling concept on Annexure G3.1.</p>	<p>structures. Level 3a includes features such as lock-up roller doors for over-night storage, and may include water and sanitation services shared between traders, see examples on <b>Annexure G3.2</b>. This allows for more comprehensive retail activities including food preparations and/ or service industries such as internet cafes, kiosk, electronic repair services, motor repairs services and welding works, as reflected on <b>Annexure G3.3</b> and <b>Annexure G3.4</b>.</p>
<p><b>LEVEL 1</b></p>	<p>Informal trading business in a form of selling perishable or non-perishable goods, and informal motor repair businesses are being conducted without adequate formalised informal structures.</p>	<p><b>LEVEL 4</b></p> <p>Level 4 provides that informal traders be incorporated into the formal economy (as illustrated on <b>Annexure G3.5</b>) by way of providing permanent and formalised trading structures as part of a shopping centre or business incubation centre.</p>
<p><b>LEVEL 2</b></p>	<p>Formalised informal trading structures in this level are very basic. Level 2A structures are temporary and may be placed along pedestrian movement desire lines where space is limited, see examples on <b>Annexure G3.2</b>. Level 2B structures are more permanent in nature, and may be utilised by small emerging service industries.</p>	
<p><b>LEVEL 3</b></p>	<p>The structures at Level 3 are permanent and typically larger in size when compared with 'level 1' informal trading</p>	

DEVELOPMENT APPROACH TO INFORMAL TRADE

ANNEXURE G3.1



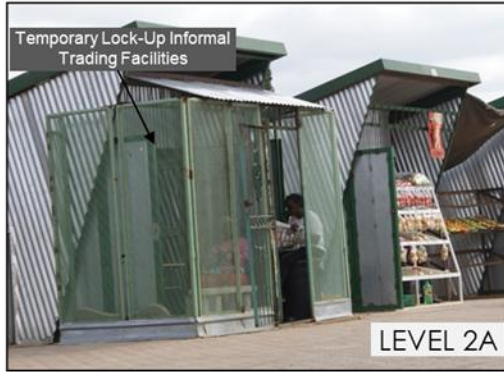
**TYPES OF FORMALISED INFORMAL TRADE STRUCTURES** **ANNEXURE G3.2**

**RETAIL – Temporary Formalised Informal Trading Structures**

**Pretoria - Hatfield**



**Johannesburg - Lesedi**



**SERVICE INDUSTRIES - Formalised Informal Trading Structures**



**RETAIL – Permanent Formalised Informal Trading Structures**

**Tshwane – Khutsong Station**



**Ogies – Nkangla DM**



**SERVICE INDUSTRIES - Formalised Informal Trading Structures**



LEVEL 2

LEVEL 3

Emerging Local Entrepreneurs - Shipping containers converted for Business

ANNEXURE G3.3

RETAIL – Temporary Formalised Informal Trading Structures



Local Barber



4Walls Business – Selling and Educating on Green Energy



LEVEL 3B

Local Businesses in Shipping Containers close to Taxi Rank



Spinach King Bakery and Gym in Khayelisha

LOCAL EMPOWERMENT INDUSTRIAL ZONE-  
BEEHIVE SERVICE INDUSTRY

Service Industry Units

ANNEXURE G3.4

SERVICE INDUSTRIES - Formalised Informal Trading Structures



LEVEL 3B



TYPES OF FORMALISED INFORMAL TRADE STRUCTURES

ANNEXURE G3.5

RETAIL - Formalised Informal Trading Structures

Cape Town - Nomzamo Business Area



Johannesburg - Lesedi



Ga- Nala – Ogies, Nkangala DM



LEVEL 4A

SERVICE INDUSTRIES - Formalised Informal Trading Structures

SMME INFRASTRUCTURE - Linear Beehive Buildings

LEVEL 4B



PROMINENT TOURISM DESTINATIONS DESIGNED FROM SHIPPING CONTAINERS

ANNEXURE G3.6



ANNEXURE G4: PRECISION FARMING

ANNEXURE G4: PRECISE FARMING

Annexure G4.1

Vertical Farming in Green Building



Horizontal Farming in Green Building



Vertical Farming in an Iron-Zinc Vertical Box



ANNEXURE G4: FARMING IN SHIPPING CONTAINERS Annexure G4.2

