



# Drakenstein Spatial Development Framework

A Spatial Vision 2015 - 2035  
ANNUAL REVIEW 2016/2017

## Contact

Planning and Economic Development  
Drakenstein Municipality  
Ashley Roelf



### email:

ashleyr@drakenstein.gov.za

### call:

021 807 4813

### visit:

Drakenstein Municipal Offices  
1 Market Street  
Paarl

## Professional Team

### GAPP (previously City Think Space)

barbara@ctn.gapp.net /  
abbi@ctn.gapp.net / lize@lizemalan.co.za /  
janine@ctn.gapp.net /  
naseema@ctn.gapp.net (admin)



### Heritage consultant

Sarah Winter  
sewinter@yebo.co.za

### Setplan WC

neville@setplan.com



### GIBB

kliebenberg@gibb.co.za



### Palmer Development Group

kim@pdg.co.za



### Chand

kim@chand.co.za



### 2017 Amendments:

URBAN DYNAMICS





# Glossary of Terms & Abbreviations

BAU - Business-As-Usual	DTPW - Provincial Department of Transport and Public Works (WCG)	Resources
BEPP - Built Environment Performance Plan	EDP – Economic Development Partnership	Act, 1999 (Act 25 of 1999)
BKB - Boeremakelaars (Koöperatief) Beperk	EIA – Environmental Impact Assessment	NMT – Non-Motorised Transport
CASIDRA - Cape Agency for Sustainable Integrated Development in Rural Areas	EMF - Environmental Management Framework	PERO - Provincial Economic Review And Outlook
CBA – Critical Biodiversity Area	EPWP - Extended Public Works Programme	PSDF – Provincial Spatial Development Framework
CBD – Central Business District	FA - Focus Area	POS – Public Open Space
CMR – Cape Metropolitan Region	GDP – Gross Domestic Product	PSO – Provincial Strategic Objective
CPUT - Cape Peninsula University of Technology	GPS - Growth Potential Study GVA – Gross Value Add	SANBI – South African National Biodiversity Institute
CRDP – Comprehensive Rural Development Programme	HA - Hectares	SANRAL – South African National Roads Agency Limited
CWD - Cape Winelands District	HOZ - Heritage Overlay Zone	SDF – Spatial Development Framework
CWDM - Cape Winelands District Municipality	HSP - Human Settlement Plan	SEA - Strategic Environmental Assessment
DBSA - Development Bank of Southern Africa	ICT – Information and Communication Technology	SEZ - Special Economic Zone
DCAS - Provincial Department of Cultural Affairs and Sport (WCG)	IDP – Integrated Development Plan	SIP – Strategic Infrastructure Plan
DEADP - Provincial Department of Environmental Affairs and Development Planning (WCG)	IDZ – Industrial Development Zone	SMMEs - Small Medium and Micro Enterprises
DEDAT - Provincial Department of Economic Development and Tourism (WCG)	IRT – Integrated Rapid Transport	SOE - State Owned Enterprises
DLG - Provincial Department of Local Government (WCG)	ITP – Integrated Transport Plan	SOER - State of the Environment Report
DLTA - Drakenstein Local Tourism Association	KPA - Key Performance Area	SPC – Spatial Planning Category
DM - Drakenstein Municipality	LED – Local Economic Development	SPLUMA – Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013)
DOA - Department of Agriculture	LUMS – Land Use Management System	TRANCRAA - Transformation of Certain Rural Areas Act, 1998 (Act 94 of 1998)
DOHS - Provincial Department of Human Settlements (WCG)	LUPA - Land Use Planning Act, 2014 (Act 3 of 2014)	UDZ - Urban Development Zone
DORA - Division of Revenue Act	MERO - Municipal Economic Review and Outlook	VPUU - Violence Prevention Through Urban Upgrading Programme
DRDLR - National Department of Rural Development and Land Reform	MSFM - Municipal Services Financial Model	WCG – Western Cape Government
	MTB - Mountain Bike Routes	WWTW - Wastewater Treatment Work
	NDP – National Development Plan	
	NHRA - National Heritage	

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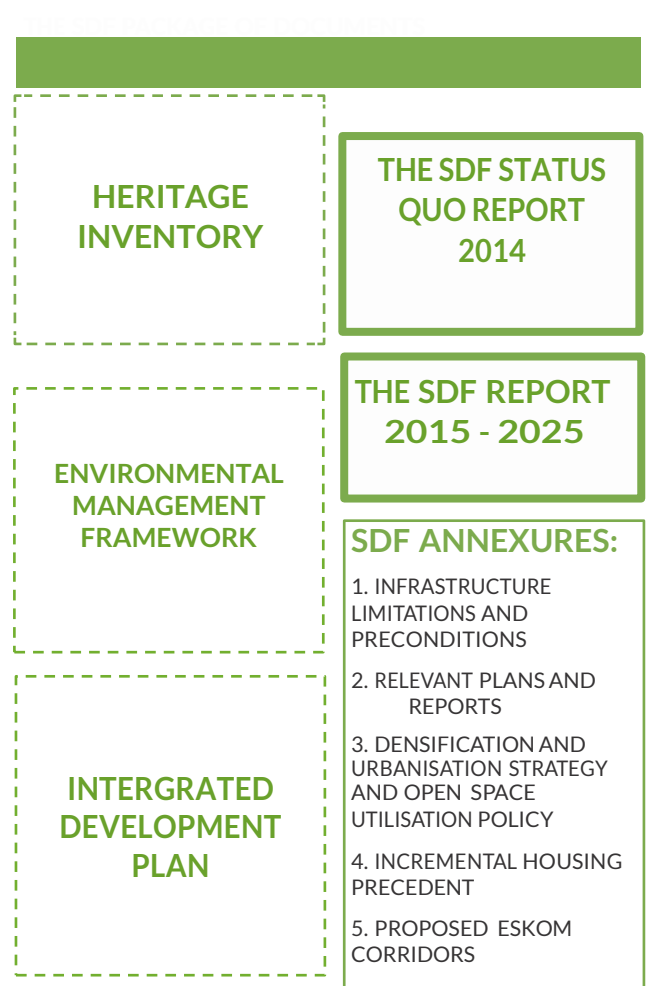
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# 1.

## Background and Purpose of the SDF





## 1.1. Purpose of this Report

The purpose of the SDF is to guide the future growth and development of the municipality based on an agreed vision and principles which are aimed at addressing problems and creating opportunities for sustainable socio-economic development.

An important aspect of brief for the SDF was the alignment with national and provincial policy, including the latest national Guidelines for the Development of Spatial Development Frameworks (produced by the Department of Rural Development and Land Reform in 2014) and the approved Municipal Integrated Development Plan (IDP) 2013 - 2018 for Drakenstein.

During the first phase of the project a Status Quo document was compiled which explored the issues to be addressed in the SDF. To ensure that the SDF proposals contained in this report remain accessible the SDF Status Quo Report is a stand-alone document. The Status Quo

report is informed directly by other key Municipal Documents such as the Environmental Management Framework, the IDP and the Heritage Survey.

This report presents the Spatial Development Framework proposals for the Drakenstein Municipality.

## 1.2. The Structure of this Report

The report comprises the following chapters:

1. Background and Purpose of the Report which outlines the purpose of the report, the SDF policy context and points of departure
2. The Spatial Principles and Themes chapter sets out the overarching spatial principles and approach, describes the spatial vision and outlines 6 guiding themes that expand on the vision. These themes relate directly to the main issues and opportunities identified in the

Status Quo Report. This chapter also highlights the land use implications for the SDF.

3. The Spatial Framework chapter translates the implications of the principles and themes for the SDF. It provides the overarching spatial concept for the SDF and illustrates how the concept supports the 5 themes at the scale of the entire municipality.
4. The approach to density and land demand is outlined in Chapter 4 together with the financial modelling of various land use scenarios.
5. The Focus Area Chapter introduces the elements of the focus area proposals, provides a concept plan for 13 focus areas, identifies land use interventions for strategic sites and highlights implementation priorities within each area.
6. The implementation framework which lists the priority projects and supporting policy statements to support the implementation of the SDF.

### THE 7 CHAPTERS OF THE SPATIAL DEVELOPMENT FRAMEWORK (THIS REPORT)

1. Background and Purpose	2. Alignment of The IDP and the SDF	3. Spatial Principles & Themes	4. Spatial Framework	5. Budget and Land Implications	6. Focus Area Proposals	7. Implementation Framework
PURPOSE & STRUCTURE	ALIGNMENT OF THE IDP & SDF	PRINCIPLES AND APPROACH	IMPLICATIONS OF SPATIAL PRINCIPLES	LAND AND DENSITIES	FOCUS AREA ELEMENTS	POLICIES
POLICY CONTEXT	PRIORITAZATION OF DEVELOPMENT PRIORITIES	SDF VISION AND THEMES	SPACIAL CONCEPT	MUNICIPAL SERVICES AND FINANCIAL MODEL	FOCUS AREAS: SPATIAL LAND USE IMPLICATIONS AND INFRASTRUCTURE PRE-CONDITIONS	GUIDELINES
POINTS OF DEPARTURE	RECOMMENDATION	LAND USE IMPLICATIONS	APPLICATIONS OF SDF THEMES			PRIORITY PROJECTS

## 1.3 Policy Context

The Drakenstein SDF is framed within a policy context which provides spatial direction and intent for the principles, approach and proposals of the SDF. The national, provincial and local policies and strategies that set the spatial planning agenda for the Drakenstein Municipality's area of jurisdiction are outlined below.

### 1.3.1. National Development Plan

The NDP's human settlement targets, as set out in Chapter 8 which focuses on transforming human settlements and the national space economy, include: more people living closer to their places of work; better quality public transport; and more jobs in proximity to townships. To achieve these targets it advocates strong measures to prevent further development of housing in marginal places, increased urban densities to support public transport, incentivising economic activity in and adjacent to townships; and engaging the private sector in the gap housing market.

### 1.3.2. SPLUMA & LUPA

The Spatial Planning and Land Use Management Act, 2013 (SPLUMA) and the Western Cape Land Use Planning Act, 2014 (LUPA) seeks to promote consistency and uniformity in procedures and decision-making. Other objectives include addressing historical spatial imbalances and the integration of the principles of sustainable development into land use and planning regulatory tools and legislative instruments.

### 1.3.3. WC PSDF

The 2014 PSDF promotes the targeting of leading towns within the Cape Functional Region, which includes Paarl, for strategic infrastructure interventions such as public transport and upgrading. The

PSDF also calls for the development of a regional spatial development framework for the area consisting

Of the Cape Functional Region, which includes the Drakenstein municipality. Defining Paarl and the Drakenstein region's economic role and function is thus crucial in relation to its position within the regional space-economy and the related backward-forward spatial, environmental and economic linkages.

### 1.3.4. Drakenstein Joint Planning Initiative

This project between Drakenstein Municipality (DM) and the Western Cape Provincial Government aims to identify Joint Priorities for the Drakenstein area, as well as attain complete agreement on the Joint Initiatives that will support those priorities. These three key priorities that have informed the SDF proposals are set out below:

#### Priority 1: Youth Unemployment

Youth unemployment to be addressed through youth upskilling.

#### Priority 2: Human Settlements

Addressing the dire immediate and long-term emergency housing and housing need through addressing spatial planning obstacles.

#### Priority 3: ICT and Economic Development

Economic development and unlocking key economic drivers.

## 1.4. Points of Departure

In addition to the policies noted in section 1.3 this SDF is based upon the following points of departure:

- The revision of the urban edge, approved by the Drakenstein Council as part of the 2010 SDF was not included in the scope of this SDF review. Only minor adjustments to align with approvals granted since 2010 were incorporated.
- At the same time, the assumption that all land within the urban edge is developable is questioned as a starting point to land use decisions, and accordingly this SDF has made recommendations for land within the urban edge to retain its rural character.
- Also limiting development of land within the urban edge is the availability of infrastructure capacity in the short to medium term. These limitations have been taken into account in the implementation framework of the SDF. Limitations in the capacity of the bulk infrastructure networks of the municipality will impact on the time frames for development of land parcels, identified as suitable for development. The SDF includes prioritisation of development options for the short, medium and long term, but ultimately the implementation of this plan is dependent on the municipal budget allocation.
- The findings of the EMF for the Drakenstein Municipality, and in particular the identification of critical biodiversity areas were adopted as a starting point. It is however noted that since the publication of the draft EMF some ground-truthing has been conducted and this information was used to refine proposals.
- The findings of the heritage survey for the municipal area (Drakenstein Heritage Survey Group, 2010), including the proposed heritage overlay zones were taken as a point of departure. However, supplementary research may be needed to identify heritage resources related to inter alia; 13 pre-colonial history and the struggle against apartheid. The municipality is in the process of compiling heritage related by-laws and character statements for these proposed Heritage Overlay Zones. The character statements will comprise a 'character- description', a list of 'character- forming elements' and a list of 'decision-making criteria' for all proposed development with these areas.

The land use management principles employed in the protection of the "Paarl Farms" Policy inform the reservation of peri-urban agricultural areas within and peripheral to the urban edge in order to

protect high value and unique agricultural land, ensure on-going agri-production and food security, protect

the heritage value of the working landscape, facilitate agrarian reform and address

food insecurity in urban communities.



PHOTOS: Drakenstein and surrounds (CTS, 2014)



# 2.

## ALIGNMENT OF THE INTEGRATED DEVELOPMENT PLAN (IDP) AND THE SPATIAL DEVELOPMENT FRAMEWORK (SDF)



## 2.1. Alignment of the IDP and the SDF

### 2.1.1. Introduction

Integrated Development Plan (IDP) is the overall strategic development plan for a municipality, prepared in terms of the Municipal System Act, Act 32 of 2000, which guide decision-making, budgeting and development in the municipality. The Spatial

Development Framework (SDF) presents the long term vision of the desired spatial form of the municipality. The SDF is thus a critical component to the IDP to direct municipal and private sector spending and investment by providing spatial proposals and strategies (thus the location and nature of development) which will support economic growth and integrated human settlements.

The IDP and SDF will now be interrogated in order to support the notion that the two strategic documents are aligned as required in terms of the Municipal

System Act, Act 32 of 2000, Spatial Planning and Land Use Management Act, Act 16 of 2013 and the Land Use Planning Act, Act 3 of 2014.

A comparison will now be made between the two documents in terms of the following:

- Vision
- Key Performance Areas and SDF Themes
- Maps
- Big Moves and SDF Implementation Matrix

### 2.1.2. Alignment between IDP vision and SDF vision

The following table presents the IDP Vision and the SDF Vision:

Table 1: IDP and SDF Vision

IDP Vision	SDF Vision
<p>"A City of Excellence"</p> <p>The long-term Strategic Plan (Vision 2032) is the strategy for Drakenstein Municipality to realise the vision of being a "City of Excellence" within the next fifteen years. Key facets of the Vision are economic dynamism, quality of life for all, a strong, well-governed brand and financial sustainability. Long-term strategies are required to develop, maintain and extend Drakenstein's national and international competitiveness.</p>	<p>The Drakenstein Municipality located at the heart of the Winelands and building on its assets – its dramatic scenic landscape, precious natural and cultural heritage, quality educational institutions and sporting facilities, thriving agricultural economy and unrivalled access to the regional access and logistics network – will be a City of Excellence for all its residents.</p>
Alignment of the IDP Vision and SDF Vision	
<p>Both Visions:</p> <ul style="list-style-type: none"> <li>• emphasize the movement to city status</li> <li>• highlight the importance to excel</li> <li>• emphasize a long term strategy for Drakenstein Municipality</li> <li>• build on the municipality's key assets, quality of life and economic sustainability</li> <li>• realise the municipality's competitiveness on a regional, national and international level</li> </ul>	

It can therefore be concluded that the two Visions are aligned, with the IDP providing a strategic vision and

the SDF providing the spatial strategy for the IDP vision.

### 2.1.3. Alignment of the IDP key performance areas and the SDF themes

Taking cognizance of the political, national, and provincial and district policies and plans, seven Key Performance Areas (KPA's) were identified in the IDP for Drakenstein Municipality. Within the SDF, six themes emerged based on a synthesis of the key opportunities

and challenges identified in the status quo analysis as well as the formulation of the SDF Vision.

The following table represents the alignment of the IDP KPA's and the SDF Themes.

As can be derived from the table, the SDF Themes makes cross-cutting references

to each of the IDP KPA's. It can therefore be concluded that the IDP KPA's and the SDF Themes are aligned, with the IDP providing the broad basis for performance within the municipality and the SDF Themes providing strategies (from a spatial point of view) to adhere thereto.



Table 2: SDF Themes

IDP KPA	SDF Themes					
	Environmental Management	Agriculture and Rural Development	Heritage and the Cultural Landscape	Connectivity and Green Logistics	Sport and Recreation	Settlements and Communities
<b>Governance and Stakeholder Participation:</b> To promote proper governance and public participation.	Promotes custodian/stewardship of natural assets. Develop environmental awareness and education.	Increase exposure of agricultural practices and products to the general public and increase food security and nutritional awareness.	Establish partnerships for integrated management of landscapes and scenic routes and areas of cultural significance which cut across municipal boundaries.	Expand recycling initiatives.	Establish agreements regarding the sharing of facilities to optimize use and cross-code training benefits.	Investigate private-public partnerships for key priority projects.
	A public participation process is followed for the SDF which strives to be in line with the IDP public participation process					
<b>Financial Sustainability:</b> To ensure the financial sustainability of the municipality in order and to adhere to statutory requirements.	Public-private partnerships for disaster management. Incentivise conservation of private land	Re-orientation of existing farming model to facilitate appropriate subdivision, diversification, and adaptive re-use of irrigated land, fast-tracked land reform and new local food chains between producers and consumers.	Acknowledge the potential for growing the contribution that these resources (heritage and cultural resources) make to the local economy.	Promote Drakenstein as a regional agri-processing hub through strengthening its position within the regional distribution network and unlocking key economic drivers.	Capitalize on established educational, sport and outdoor recreational facilities and opportunities to attract investment and spending. Investigate external funding options for facilities.	Promote urban renewal programmes in CBDs. Facilitate land ownership and security of tenure.
<b>Institutional Transformation:</b> To provide an effective and efficient workforce by aligning our institutional arrangements to our overall strategy in order to deliver quality services.	Invest in public-private partnerships.	Adopt new land use management scheme to manage agri-land diversification.	Adopt new land use management scheme and heritage overlay zone to address impact on sensitive landscapes.	New land use management system to cater for transport industries.	Land use management requirements for sport facilities to allow mixed use development and guidelines for student accommodation.	New models of housing delivery and security of tenure to promote densification, accommodate a variety of income groups and a range of land uses.
	Drakenstein Municipality has a dedicated Planning Department to deal with spatial planning and land use management					
<b>Physical Infrastructure and Energy Efficiency:</b> To ensure efficient infrastructure	Promote off-grid services in outer lying and environmentally sensitive areas. Improve basic services to	Promote off-grid agriculture infrastructure. Employ new technology e.g. hydroponic growing.	Promote off-grid services in outer-lying areas or environmentally sensitive areas.	Develop and implement sustainable energy plans. Understand infrastructure requirements	Understand and address student transport needs. Establish infrastructure	Upgrade network capacity to cope with densification. Ensure that long-term



and energy supply that will contribute to the improvement of quality of life for all citizens within Drakenstein. Services and Customer Care-to improve our public relations thereby pledging that our customers are serviced with dignity and care.	reduce disaster risk. Stricter management of resource utilization and consumption.			and locational preferences for industry and agri-processing and provide infrastructure requirements accordingly.	ral requirements of coordinated network of sporting facilities. Strategy for transport management of big events.	planned expansion of infrastructure networks will result in optimal use of land and smart growth patterns.
<b>Economic Growth and Development:</b> To facilitate sustainable economic empowerment for all communities within Drakenstein and enabling a viable and conducive economic environment through the development of related initiatives including job creation and skills development.	Eco-tourism encouraged. Employment through EPWP.	Agriculture as the economic base of the region. Agri-tourism and heritage assets to be promoted. Leverage rural and economic growth through road and rail infrastructure. Encourage food security.	Promote eco-tourism, agri-tourism and signage strategy for municipality.	Promote incentives to attract green economy and agri-processing projects and initiatives.	Investigate the sport/event s economy to understand the institutional, logistical and marketing requirements. Promote the Drakenstein region as an educational hub.	Optimise use of land in green- and brownfield developments.
<b>Health, Safety and Environment:</b> To contribute to the health and safety of communities in Drakenstein through the proactive identification, prevention, mitigation and management of health including environmental health, fire and disaster risks.	Protect Critical Biodiversity Areas. Roll-out of disaster management plans and map high vulnerability index and risk areas. Recognise the threat of climate change.	Establish sites for urban agriculture to promote household food security and improved nutrition. Employ appropriate technology to manage climate control.	Protect scenic routes, gateways, view sheds and sensitive interfaces between settlements and the natural and rural environment.	Protect sensitive interface between rural and urban landscapes from potentially insensitive uses and infrastructure .	Invest in the maintenance and upgrading of stadiums and sporting facilities. Protect public places used for sport and recreation.	Protect the particular sense of place of settlements and nodes.
<b>Social and Community Development:</b> To assist and facilitate with the development and empowerment of the poor and the most vulnerable. These include the	Identify and map high disaster risk areas.	Provide for farmworker and rural dweller settlement in the Human Settlement Plan. Innovative land reform/ownership options.	Celebrate gateways/scenic entry points to the municipality and its settlements.	Expand agri-processing activities in appropriate locations that relate to existing settlements.	Identification of strategic sites for the establishment of centralized community sport facilities and	Promote social development, community livelihoods and safety through the sustainable delivery of social facilities, public open spaces,

elderly, youth and disabled.					a regional sporting centre and conference facility.	recreational facilities and housing. Pursue social and physical integration of previously segregated areas.
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### 2.1.4. Alignment of the catalytic zones identified in the IDP and the focus areas identified in the SDF: maps

Vision 2032 makes provision for five catalytic zones within the Drakenstein Municipal Area, whilst the SDF developed 13 Focus Areas (with the rural areas dealt with at a broader level). It should be noted that the IDP Catalytic Zones refer to a spatial location on a broader scale, whilst the SDF Focus Areas provide detailed spatial information up to a cadastral level.

Catalytic Zones, as stated in the IDP, are intra-municipal zones of spatial and economic activity.

Catalytic Zones contain “Big Moves” which are initiatives that will, over the next fifteen years, dramatically alter and improve the space, economy and sustainability of Drakenstein. Catalytic Zones cut across wards and administrative boundaries of the towns in Drakenstein. Certain Catalytic Zones overlap - this is critical because it promotes and strengthens the integration between the different catalytic zones.

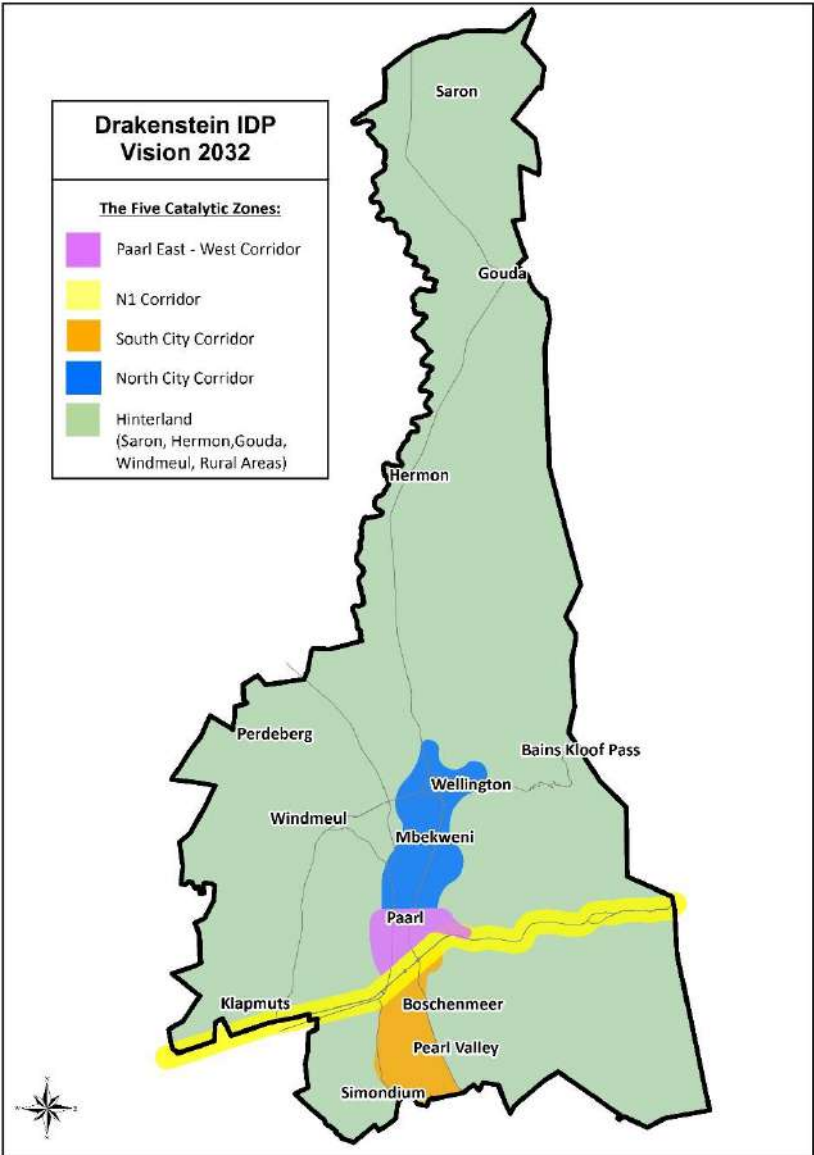


Figure 1: Drakenstein IDP Vision

The Spatial Development Framework equally, identifies 13 Focus Areas for the Drakenstein Municipal Area. Each Focus Area (FA) contains a spatial strategy consisting of a spatial concept plan, a land use implications plan and an implementation matrix for IDP prioritization. These focus areas

should not be seen in isolation, but should be considered in close relation to one another in order to ensure that the broader spatial concepts are achieved in a holistic and cohesive manner.

The SDF Focus Area Maps were superimposed on the IDP Catalytic

Zone Maps. As can be derived from the superimposed maps hereunder (after table below), both the IDP Catalytic Zones and the SDF Focus Areas provides spatial referencing for the entire Drakenstein Municipal Area. The linkage between the IDP and SDF is summarized as follows:

**Table 3: Linkages between the IDP Catalytic Zones and SDF Focus Areas**

Linkages between the IDP Catalytic Zones and SDF Focus Areas		
Catalytic Zones identified in IDP	Focus Areas identified in SDF	Superimposed Maps
<b>North City Corridor</b> (Paarl, Mbekweni, Wellington)	<b>FA1, FA2, FA3, FA4</b> (Paarl, Paarl East, Mbekweni, Wellington)	<b>Figure 1</b>
<b>Paarl East/West Integration Corridor</b> (corridor to the south a portion of Berg River Boulevard and Arboretum, Paarl CBD, Huguenot station pre & portions of Paarl East)	<b>FA1, FA2</b> (Paarl, Paarl East)	<b>Figure 2</b>
<b>South City Corridor</b> (south of N1 [mostly within the urban edge] & Simondium)	<b>FA5, FA6</b> (Paarl South, Simondium)	<b>Figure 3</b>
<b>N1 Corridor</b> (Klapmuts North, Ben Bernhard, De Poort, Paarl Hamlet [including the Paarl Mall precinct], Huguenot Tunnel)	<b>FA1, FA2, FA7, FA8</b> (Portions abutting N1, Ben Bernhard, Klapmuts North)	<b>Figure 4</b>
<b>Hinterland (and Hamlets)</b> (Windmeul, Hermon, Gouda Saron, Bainskloof Village, farms)	<b>FA9, FA10, FA11, FA12, FA13</b> (Windmeul, Hermon, Gouda Saron, Bainskloof Village and farms)	<b>Figure 5</b>



Figure 1.

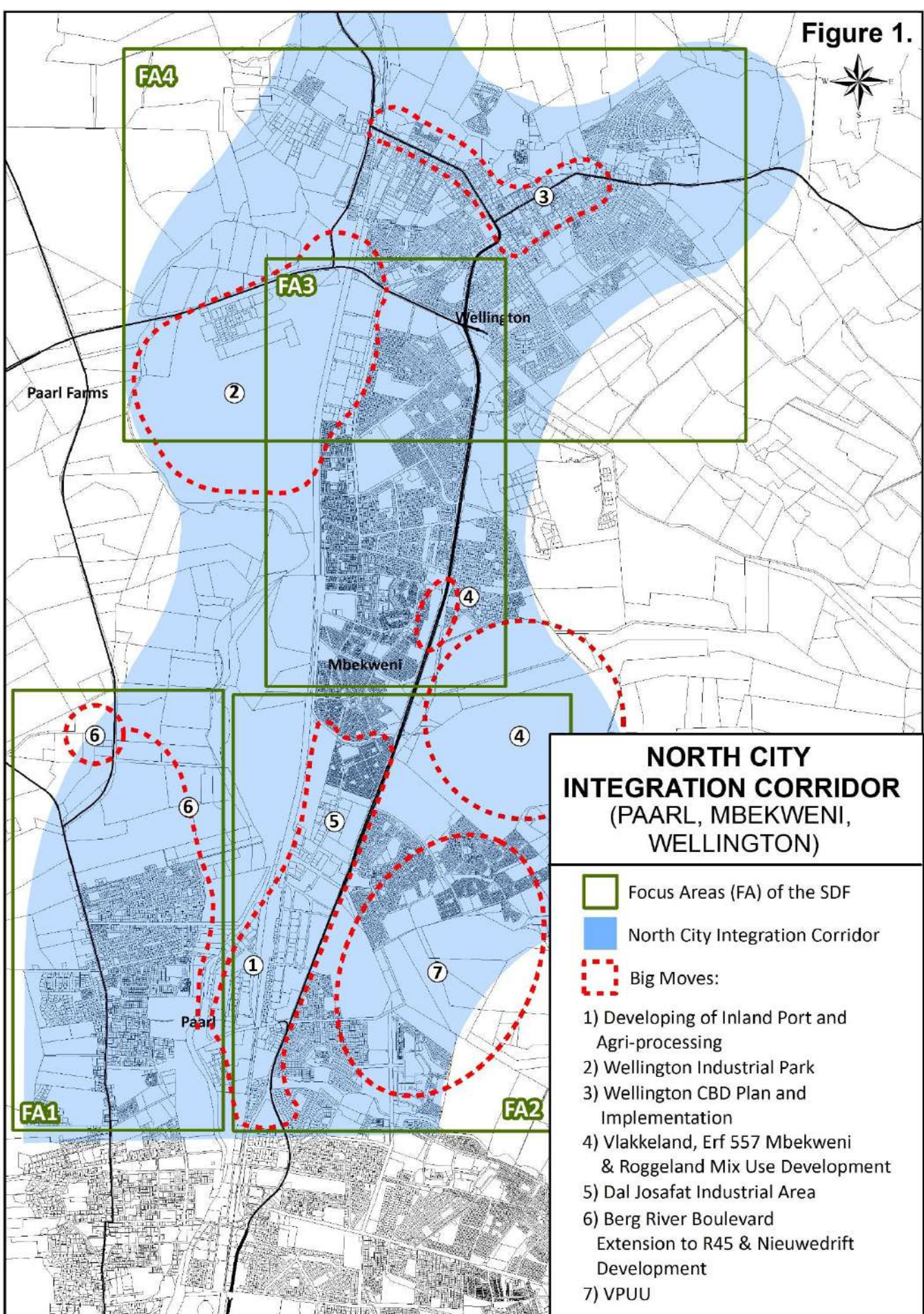


Figure 2: North City Integration Corridor



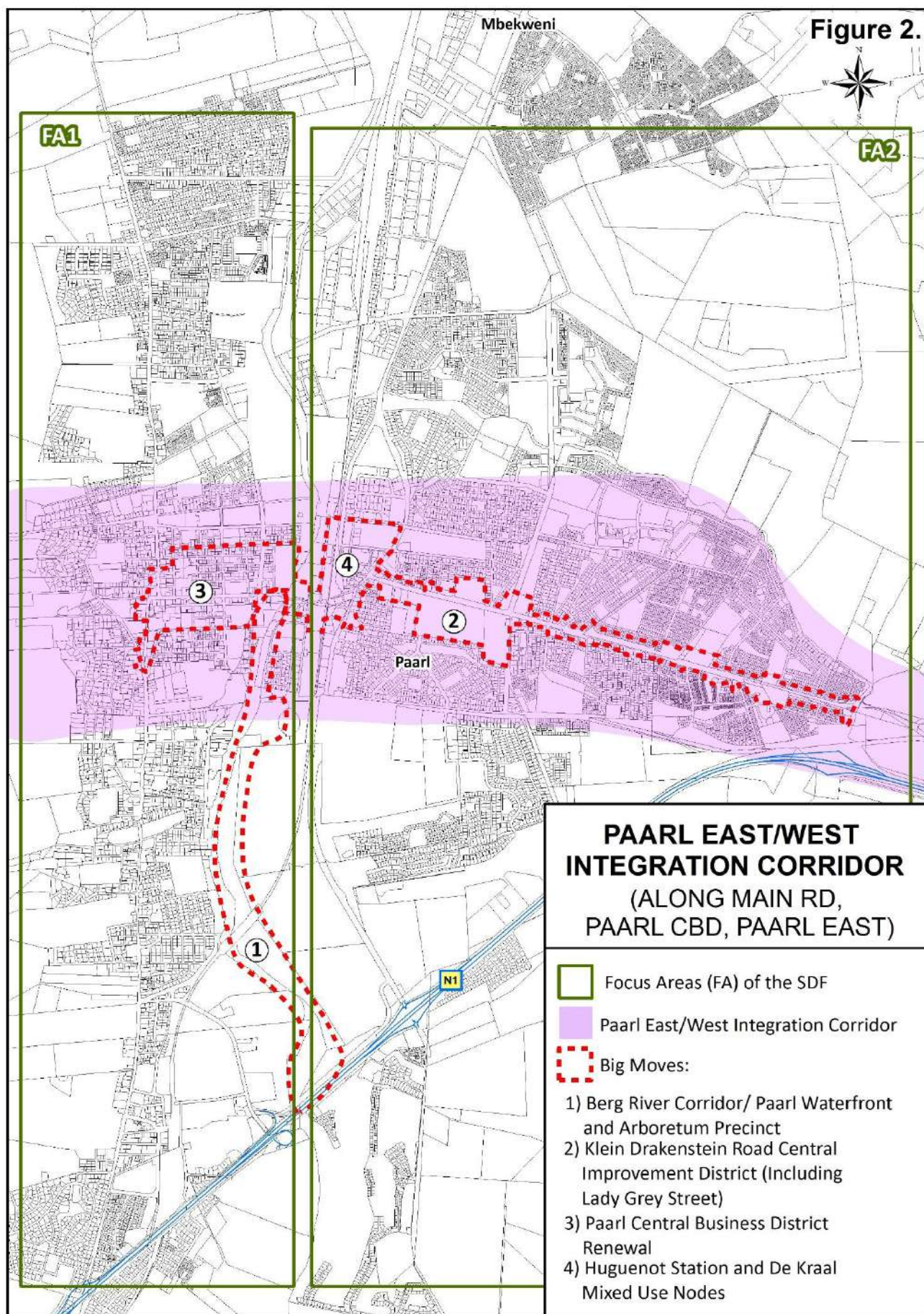


Figure 3: Paarl East/ West Integration Corridor



Figure 3.



FA5

### SOUTH CITY CORRIDOR (SOUTH OF THE N1, SIMONDIUM)

- Focus Areas (FA) of the SDF
- Urban Edge
- South City Corridor
- Municipal Boundary
- Big Moves:
  - 1) Bulk Infrastructure Investment
  - 2) Development between R301 and R45
  - 3) Linkage between Schuurmansfontein and Watergat Rd

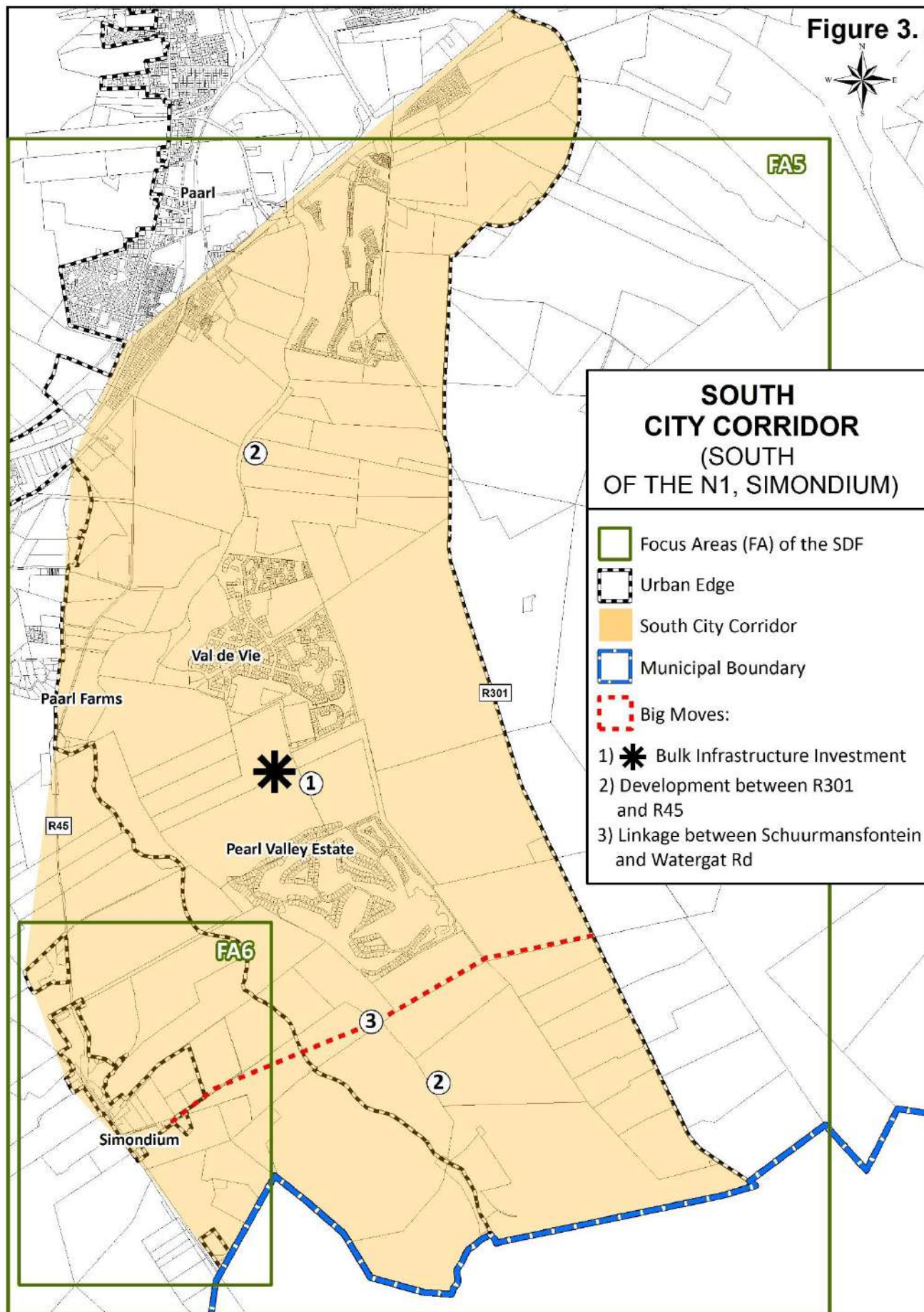


Figure 4: South City Corridor



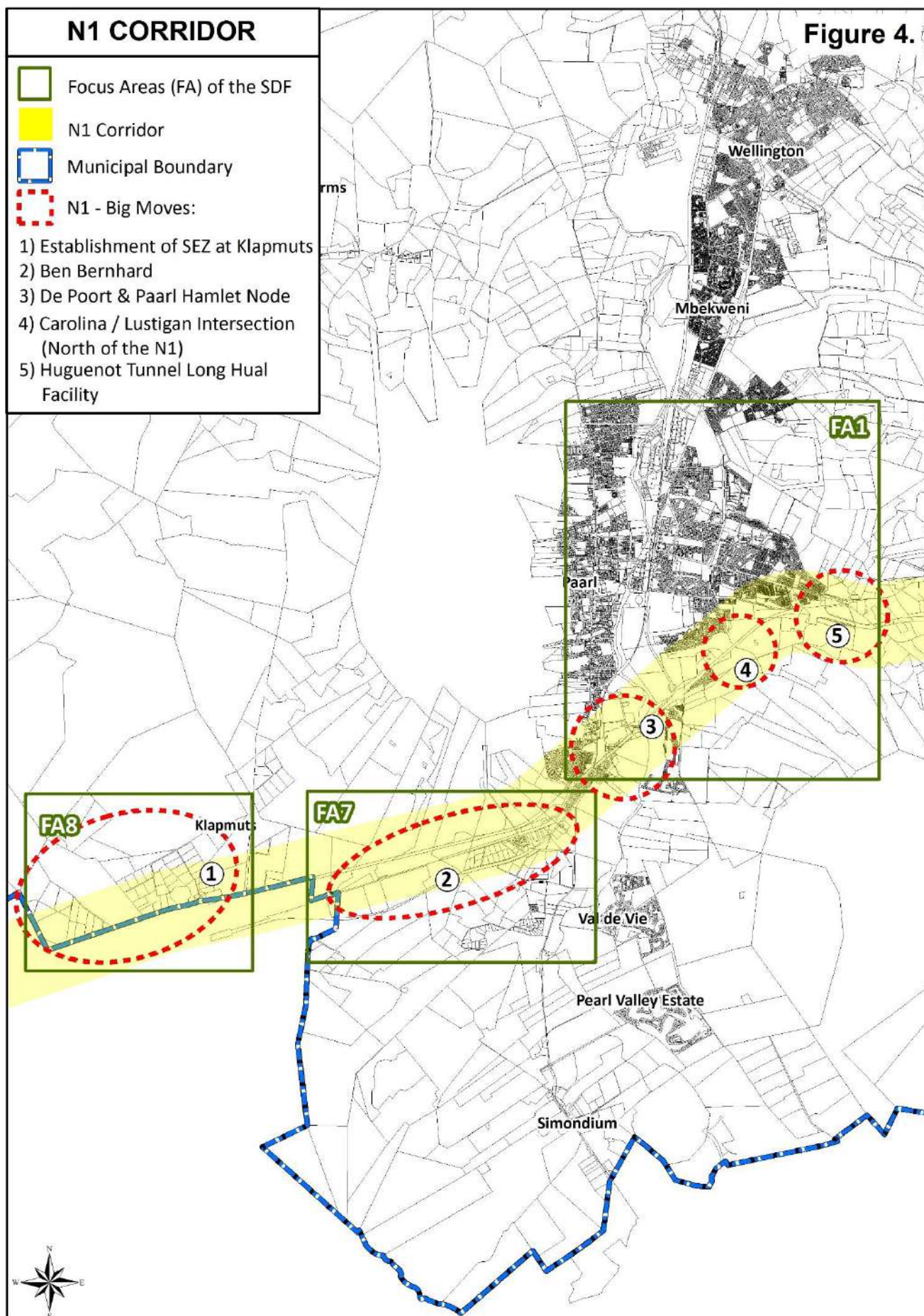


Figure 5: N1 Corridor

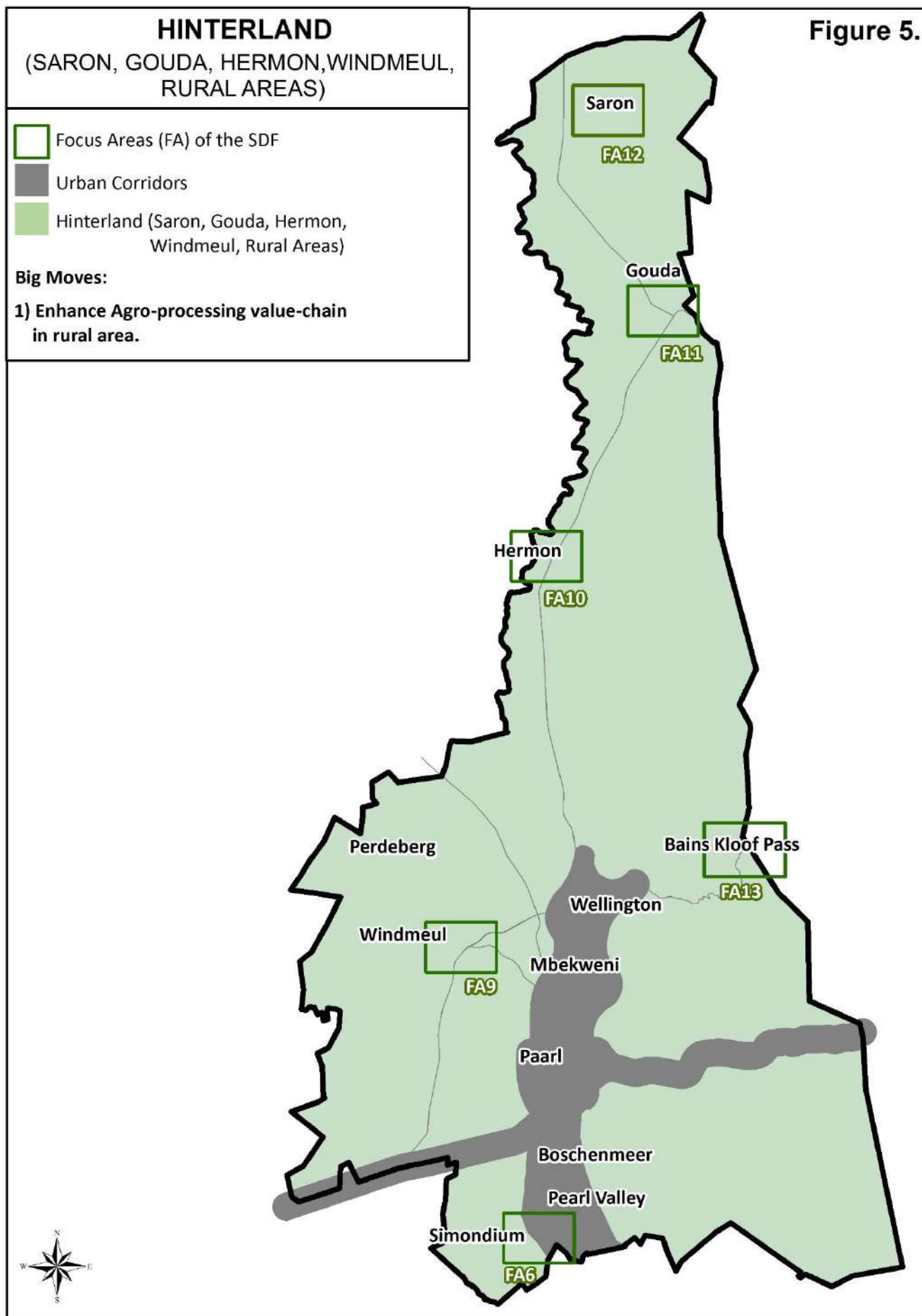


Figure 6: Hinterland

## 2.1.5. Alignment between the IDP big moves and the SDF implementation matrix

In order to ensure vertical and transversal alignment; to ensure adequate time and resource allocation; and to enable performance management, Vision 2032 identified an array of Big Moves. Big Moves are initiatives which will, over the next fifteen years dramatically alter and improve the space, economy and sustainability of Drakenstein. Big Moves were then broken down into Key Initiatives, Programs and Projects, also underpinned by

timeframes, budget and responsible department. These Big Moves have been located spatially within the five Catalytic Zones. All of the above are underpinned by series of transversal enablers, such as policies, procedures and by-laws – the governance, financial and institutional foundation of both Drakenstein, the Local Authority, and Drakenstein the City of Excellence.

The SDF also makes provision for an Implementation matrix for each Focus Area which describes the type of projects that need to be initiated in a specific area. The matrix provides a description of the project, indicating whether it should be prioritized as a short, medium or long term project, the implementing agents and possible funding sources. All of the above, are underpinned by

existing policies, strategies and plans that support the SDF proposals. Also, the municipality commissioned policy documents that will support the implementation of the SDF and recommendations are also made for additional policies required to implement the SDF proposals in order for Drakenstein to be “A City of Excellence”.

There is an alignment between the IDP Big Moves and the SDF Implementation Matrix as well as an alignment of the spatial location of the IDP Catalytic Zones and the SDF Focus Areas. The below table provides a snapshot correlation of the highlighted development priorities of the Drakenstein Municipality as identified in both the IDP and SDF.

Table 4: Alignment between IDP big moves and the SDF implementation

IDP BIG MOVES	Referenced in Catalytic Zone Map	Referenced in Focus Area Map	SDF IMPLEMENTATION MATRIX
List of Big Moves for North City Corridor	Yes	Yes	List of high priority IDP status implementation projects for Focus Area: FA1, FA2, FA3, FA4
Developing an Inland Port and Agri-processing	Nr1	FA2.8	Dal Josafat Station Precinct development proposed
Development of the Wellington Industrial Park	Nr2	FA4.6	Wellington Industrial Park Development Plan proposed (add to high priorities)
Implementation of the Wellington CBD Plan and Implementation	Nr3	FA4.2	Wellington CBD Urban Design Framework proposed and completed
Development of the Vlakkeland, Erf 557 Mbekweni and Roggeland (SAHRA acquisition of land for Integrated Mix Use development)	Nr4	FA3.1	Roggeland Precinct Plan proposed
Upgrade and development of the Dal Josafat Industrial Area	Nr5	FA2.4 & FA2.8	Upgrade of industrial area to occur along station precincts Incentivise existing industrial strip west of Jan van Riebeeck Drive (spatial proposal only)



Development of the Berg River Boulevard Extension to R45 and Nieuwedrift Development	Nr6	FA1.5	Nieuwedrift development framework proposed Berg River Boulevard extension proposed (connectivity indicated in SDF spatial concept plan only)
Planning and Implementation of the Violence Prevention through Urban Upgrade program	Nr7	FA2.6	VPUU Priority Projects Roll-out proposed
List of Big Moves Paarl East/West Integration Corridor	Yes	Yes	List of high priority IDP status implementation projects for Focus Area: FA1, FA2
Development of the Berg River corridor/ Paarl Waterfront and Arboretum Precinct	Nr1	FA1.4	Paarl Waterfront and Arboretum Precinct Plan proposed
Urban upgrade of Klein Drakenstein Road Central Improvement District (Including Lady Grey Street )	Nr2	FA2.1	Klein Drakenstein Road Central Improvement District Plan proposed
Paarl Central Business District Renewal	Nr3	FA1.3	Paarl CBD (and Main Road) Urban Design Framework proposed
Upgrade and Development of the Huguenot Station and De Kraal Mixed Use Nodes	Nr4	FA2.4	Huguenot Station Precinct Plan (inclusive of De Kraal) proposed
List of Big Moves for South City Corridor	Yes	Yes	List of high priority IDP status implementation projects for Focus Area: FA5, FA6
<ul style="list-style-type: none"> <li>Creation of a new city corridor between R301 and R45</li> </ul>	Nr2	FA5.3	Infill development proposed, thus mixed land uses catering for a variety of income groups
<ul style="list-style-type: none"> <li>Creation of the Watergat/Schuurmansfontein Integration Route</li> </ul>	Nr3	FA5.2	Paarl South New Public Road link proposed
<ul style="list-style-type: none"> <li>Investment in South City Corridor Bulk Infrastructure</li> </ul>	Nr1	FA5.5	New services and upgrading of services paramount to support new growth and densification
List of Big Moves for N1 Corridor	Yes	Yes	List of high priority IDP status implementation projects for Focus Area: FA8, FA7, FA1 (abutting north of N1), FA2 (abutting north of N1)
Implement a Special Economic Zone at Klappmuts	Nr1	FA8.1	Klappmuts to be promoted as Special Economic Zone
Development of the Huguenot Tunnel Long Haul facility	Nr4	FA2.7	Logistics node and gateway proposed at Huguenot Tunnel

Promotion of a Special Economic Zone at Ben Bernhard	Nr2	FA7.1	Ben Bernhard area indicated as an area to attract investment (logistics, industrial, business hub)
Development of De Poort and Paarl Hamlet node	Nr3	FA1.1	Urban renewal, mixed land use with De Poort as industrial heritage centre and gateway
Development around the Carolina / Lustigan Intersection (North of the N1)	Nr5	spatial proposal in FA2	Promote infill development along portions of N1 (not a high priority in SDF as land use approvals have already been granted for many private development in the area)
List of Big Moves for Hinterland (Hinterland & Hamlets)	Yes	Yes	List of high priority IDP status implementation projects for Focus Area: FA9, FA10, FA11, FA12, FA13
Agri-Processing value chain in the area- This Big Move will focus on enhancing the existing Agri-Processing sector in the region through the development of a Business Retention and Expansion Strategy linked to the sector. The focus will be on both upstream and downstream linkages of this sector.	Nr1	FA11.1 & FA12.1	Gouda transport logistics hub proposed Saron Heritage Core Precinct Plan Agriculture, agri-processing, tourism, operating as local service centre are core drivers for all rural areas

## 2.1.6. Conclusion

The comparison on linkages between the IDP and SDF has been dealt with and it is considered the opinion of Drakenstein Municipality that the two documents are aligned.

The IDP vision provides the strategic direction of the municipality and the SDF provides the desired spatial form of the municipality. Both documents;

- Emphasize the movement to city status;
- highlights the importance to excel;
- emphasizes a long term strategy for Drakenstein Municipality;
- build on the municipality's key assets, quality of life and economic sustainability; and

- realise the municipality's competitiveness on a regional, national and international level.

A table was generated to analyze whether the SDF Themes makes cross-cutting references to each of the KPA's as identified in the IDP. It can now be concluded that the IDP KPA's and the SDF Themes are aligned, with the IDP providing the broad basis for performance within the municipality and the SDF Themes providing strategies (from a spatial point of view) to adhere thereto.

The IDP Catalytic Zones refer to a spatial location on a broader scale, whilst the SDF Focus Areas (FAs) provide detailed spatial information up to a cadastral level. The SDF Focus Area

Maps were superimposed on the IDP Catalytic Zone Maps. There is thus a spatial referencing confirming that the IDP Catalytic Zones and the SDF Focus Areas are aligned.

The Catalytic Zones identify "Big Moves" (thus interventions for spatial integration and economic growth) and the SDF Implementation Matrix identifies key priorities which will impact the spatial structure of the municipal area (with economic and social benefits) for each Focus Area. A table was then generated which provides evidence that there is a high correlation between the development priorities identified in both the IDP and SDF.

## 2.2. Prioritization of development priorities from a spatial planning point of view

In the absence of a Prioritization Model for the Drakenstein Municipality, a spatial recommendation will be made to influence the prioritization of IDP Big Moves. The IDP Big Moves were categorized as new priorities, infill priorities and upgrade priorities for each Catalytic Zone. These terms are defined below:

New Priorities refer to greenfield developments within the Drakenstein Municipal Area that will serve as catalyst to unlock various other opportunities. These priorities will increase the municipality's investment attractiveness and boost our economic competitiveness with huge economic and social benefits for our people.

Infill Priorities can be regarded as development of vacant and/or under-utilized land and/or connecting infrastructure which will contribute towards integrating communities by providing a range of land uses, support the principle of densification and promote the efficient use of resources and infrastructure.

These priorities have the highest potential to adhere to the principles of spatial justice, spatial sustainability, spatial efficiency and spatial resilience as contained in the Spatial Planning and Land Use Management Act, Act 16 of 2013. Upgrade Priorities refer to existing infrastructure, buildings, areas (i.e. existing built up areas) that should be upgraded, improved and revitalized together with landscaping and creative urban designing to create a vibrant community, as all amenities will be in close proximity.

**The table below provides the categorization (as New, Infill or Upgrade Priorities) of all Big Moves for each Catalytic Zone:**

Table 5: Categorization of all Big Moves for each Catalytic Zone

Catalytic Zone	Type of priority	SDF recommendation as per IDP Big Move
North City Corridor	New	1. Developing an Inland Port and Agri-processing
	Infill	1. Development of the Vlakkeland, Erf 557 Mbekweni and Roggeland 2. Development of the Wellington Industrial Park 3. Development of the Berg River Boulevard Extension to R45 and Nieuwedrift Development
	Upgrade	1. Implementation of the Wellington CBD Plan and 2. Planning and Implementation of the Violence Prevention through Urban Upgrade program 3. Upgrade and development of the Dal Josafat Industrial Area
Paarl East/West Integration Corridor	New	This is an existing urban area
	Infill	1. Development of the Huguenot Station and De Kraal Mixed Use Nodes 2. Development of the Berg River corridor/ Paarl Waterfront and Arboretum Precinct
	Upgrade	1. Paarl Central Business District & Klein Drakenstein Road Renewal
South City Corridor	New	1. Investment in South City Corridor Bulk Infrastructure
	Infill	1. Creation of a new city corridor between R301 and R45, thus a new integrated human settlement 2. Creation of the Watergat/Schuurmansfontein Integration Route
	Upgrade	1. Investment in South City Corridor Bulk Infrastructure (specifically the upgrading of R301)
N1 Corridor	New	1. Implement a Special Economic Zone at Klappmuts 2. Development of the Huguenot Tunnel Long Haul facility
	Infill	1. Promotion of a Special Economic Zone at Ben Bernhard 2. Development of Carolina / Lustigan Intersection (North of the N1)
	Upgrade	1. Development of De Poort and Paarl Hamlet node

Hinterland	New	1. Gouda transport logistics hub
	Infill	1. Agriculture, agri-processing, tourism, operating as local service centre are core drivers
	Upgrade	1. Agriculture, agri-processing, tourism, operating as local service centre are core drivers

## 2.3. Recommendation:

The prioritization of development priorities for Drakenstein Municipality is challenging and therefore a recommendation will be made for certain priorities to receive preference (see table below). The argument is based on the premise that the preferred priorities, from a spatial planning

point of view, will have the greatest social and economic impact for Drakenstein Municipality.

These priorities support spatial principles such as spatial integration, densification, and optimal use of resources, economic investment and creation of employment opportunities thereby leading to a financially sustainable and integrated

Municipal Area - thus realizing Drakenstein Municipality's vision of a "City of Excellence".

The table below summarizes the proposed prioritization of "Big Moves" from spatial planning point of view for the next 15 year period:

Table 6: Proposed Prioritization of “Big Moves” from Spatial Planning point of view

<b>Priority Level</b>	<b><u>New Priorities</u></b>	<b><u>Infill Priorities</u></b>	<b><u>Upgrade Priorities</u></b>	
1	Investment in South City Corridor Bulk Infrastructure	Vlakkeland, Erf 557 and Roggeland	Paarl Central Business District Renewal	
2	Implement a Special Economic Zone at Klapmuts	Wellington Industrial Park	Wellington CBD Plan and Implementation	
3		Huguenot Station and De Kraal mixed use nodes		
4		Creation of the Watergat/Schuurmansfontein Integration Route		

Investment in the South City Corridor Bulk Infrastructure will serve as catalyst for further investment in the new area. These public investments should include the provision of bulk infrastructure, upgrading of the R301 and ensuring a public integration route, namely the Watergat/Schuurmansfontein Integration Route (past Madiba House). The public investment should be geared towards the creation of an integrated human settlement – a live-work-play environment.

The Klapmuts area should be prioritized as a new regional economic node, with the main purpose to attract investment for Drakenstein Municipality based on its accessibility and unrivalled logistical network. A Spatial framework should be prioritized (with the assistance of Stellenbosch Municipality) together with a bulk infrastructure masterplan for the area.

The SDF promotes the North City Corridor as the area with the highest social and economic benefits for its

residents based on the area's appetite for mixed use development, densification, integration, use of different modes of transport and existence of employment opportunities. Therefore, the development of Vlakkeland, Erf 557 and Roggeland should be promoted, as these will support the spatial principles of the Spatial Planning and Land Use Management Act.

The extension of the existing Wellington Industrial Park provides investment opportunities for national and international markets with subsequent employment opportunities being created for the residents of Drakenstein Municipality. The location of this industrial park on the R44, provides unrivalled access to Swartland Municipality, with linkages to the N7 connecting with the Saldanha Bay Municipality. The economic benefits for this industrial park with the Saldanha Bay Industrial Development Zone should be investigated as the existence of the connecting N7 and rail linkages presents opportunities which should work to the benefit of both municipalities.

The upgrade of the Huguenot Station area, the optimal utilization of vacant municipal land and the development of the De Kraal site provides the ideal opportunity to Council to integrate the east and west communities of Paarl. The area forms part of a draft local spatial development framework and it was gazetted as a Restructuring Zone. This area should be a key focus to unlock the potential it holds for serving cohesion of the broader community.

A new way of thinking is required to transform the Paarl CBD and the Wellington CBD into vibrant city centres. These areas have the potential to serve as catalyst for unlocking live-work-play opportunities. High density residential development should be encouraged together with commercial and social facilities with the added advantage of facilities being within walking distance. Both areas form part of a local spatial development framework/urban design framework and are gazetted as Restructuring Zones and thus the foundation to support and foster innovation is set.



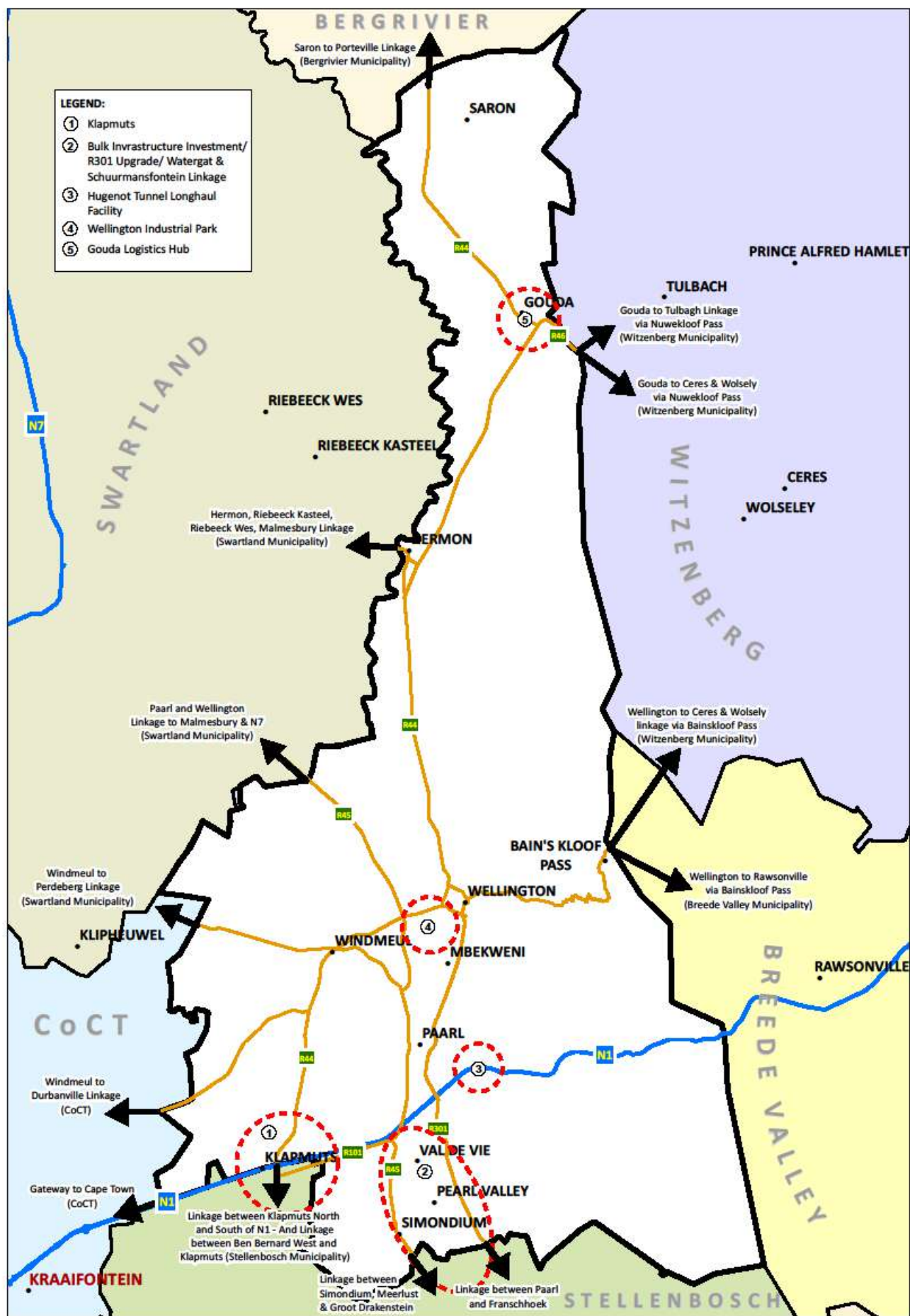


Figure 7: Linkages with Neighboring Municipalities

### 2.3.1. A Catalytic Zone: North City Integration Corridor as per the IDP and its relation to the SDF

The Corridor includes the urban areas of Paarl, Mbekweni and Wellington (including the Wellington Industrial Park Precinct and the Berg River Boulevard extension to the R45 and Nieuwedrift). The Corridor overlaps with the N1 Corridor and the Paarl East/West Integration Corridor. The SDF promotes this corridor as the area with the highest social and economic benefits for its residents based on the area's appetite for mixed use development, densification, different modes of transport and creating employment opportunities.

- **SDF Spatial Strategy – Wellington Industrial Park as link to N1 (City of Cape Town, east into greater South Africa), Swartland Municipality and Saldanha Municipality (see reference 4 on above map)**

The extension of the existing Wellington Industrial Park provides investment opportunities for national and international markets with subsequent employment opportunities being created for the residents of Drakenstein Municipality. The location of this industrial park on the R44, provides unrivalled access to Swartland Municipality, with linkages to the N7 connecting with the Saldanha Bay Municipality. The economic benefits for this industrial park with the Saldanha Bay Industrial Development Zone should be investigated as the existence of the connecting N7 and rail linkages presents opportunities which should work to the benefit of both municipalities.

### 2.3.2. B Catalytic Zone: South City Corridor as per the IDP and its relation to the SDF

The South City Corridor is situated to the south of the N1 – thus generally bounded by the N1, R301, south of the Drakenstein Prison (municipal boundary with Stellenbosch Municipality) and the R45. This area is gaining popularity due to its strategic location within the Drakenstein Municipal boundaries and its accessibility to the City of Cape Town, Stellenbosch Municipality (Franschhoek, Pniel & Stellenbosch) and northern parts of South Africa. A new public integration route (Watergat/Schuurmansfontein Roads) is proposed in the SDF to spatially link communities to the east and west of the Berg River.

- **SDF Spatial Strategy - Simondium as link to Stellenbosch Municipality (see reference 2 on above map)**

The Watergat/Schuurmansfontein Integration Route as indicated in the SDF and prioritized in the IDP proposes a spatial link to connect communities to the east (Simondium) and west (along the R301) of the Berg River. This public route will also provide a further additional link to the Stellenbosch Municipal Area. The subsequent provision of bulk services in the area will also unlock development opportunities in the Simondium area, which could link up/connect with the Groot Drakenstein and Meerlust housing project located within the Stellenbosch Municipal Area. Again, an opportunity can be created to address the dire need for farmworker housing in an integrated manner in the Simondium/Groot Drakenstein Area should transport linkages and bulk services be prioritized by both municipalities. Working together on this common goal can result in benefits for both municipalities with greater motivation for MIG funding, housing subsidies and other funding options. It is also noteworthy that Drakenstein Municipality supplies and are responsible for providing electricity (including the related infrastructure) to areas located within the Stellenbosch Municipal Area.

- **SDF Spatial Strategy – R301 as link to Stellenbosch Municipality (see reference 2 on above map)**

Upgrading of the R301 is considered a priority in the IDP as this will stimulate further development in the area. The SDF proposes that mixed land uses should be encouraged along this route. The R301 is also the main route in Drakenstein Municipality providing access to Mandela House and it links up with Franschhoek being a main tourist destination within the Stellenbosch Municipal Area. Greater tourism linkages should be investigated in order to attract tourists from the Franschhoek area to the scenic and rich history of Drakenstein Municipality.

### 2.3.3. C Catalytic Zone: N1 Corridor as per the IDP and its relation to the SDF

The N1 Corridor stretches from Klapmuts in the west to the Hugenote Tunnel toll plaza in the east. The corridor straddles the N1 and includes areas such as Klapmuts, Ben Bernhard, the De Poort and Paarl Hamlet and the Hugenote Tunnel toll plaza.

The SDF emphasises the role of the N1 as a connecting and main movement and logistics corridor within the Drakenstein Municipality and beyond. The N1 Corridor provides direct movement between this municipality and the City of Cape Town to the west and unrivalled movement to the west, thereby accessing Breede Valley Municipality and the greater Western Cape and broader South Africa.

- **SDF Spatial Strategy - Klapmuts as nodal link to City of Cape Town and neighbouring municipalities (See reference 1 on above map)**

On the N1 Corridor, the Klapmuts Area is considered a new regional economic node within the Greater Cape Metro Regional Spatial Implementation Framework. Klapmuts, north of the N1, and situated within the Drakenstein Municipal area, is earmarked as a Special Economic Zone thereby opening up major economic opportunities for Drakenstein Municipality. The Klapmuts area, located south of the N1, lies within the Stellenbosch Municipal Area, where major housing opportunities are currently being provided along

together with socio-economic opportunities. Drakenstein Municipality should therefore capitalize on providing investment opportunities to the north of the N1 in order to grow this new node into a viable economic space. The Klapmuts area can serve as the “Connecting Gateway” with our neighbouring municipalities, namely City of Cape Town, Stellenbosch Municipality (via R44 to the south) and Swartland Municipality (via R44 to the north) and Breede Valley Municipality and/or any South African area situated along the N1 (via N1 to the east).

Drakenstein Municipality should therefore strive to market Klapmuts as:

1. An attractive decentralized economic node with quality services and good accessibility for businesses wishing to locate outside of the City of Cape Town due to pressures such as traffic congestion, high property rates etc.; and
2. An attractive economic hub for goods and services from other neighbouring municipalities due its unrivalled regional access and logistics network.

This economic node will achieve even greater traction and momentum should Drakenstein and Stellenbosch Municipalities have a mutual understanding and commitment to attract businesses and employment opportunities to the Klapmuts area to benefit both municipalities and its communities to achieve its development objectives. Addressing the Klapmuts development issue clearly requires a collaborative sub-regional spatial development framework between the Stellenbosch and Drakenstein Municipalities in order to avoid unsustainable ‘twin developments’.

- **SDF Spatial Strategy – Huguenot Tunnel as a link to Breede Valley Municipality, Western Cape & southern Africa (see reference 3 on above map)**

A logistics hub and tourism gateway is proposed at the Huguenot Tunnel (i.e. Toll gate plaza) as this is the entry point to the Winelands area and City of Cape Town and/or exit to several other national destinations. Drakenstein Municipality could capitalize on this longhaul transport facility by creating an enabling environment for tourism opportunities and creating logistics opportunities. These opportunities should be exploited to create employment opportunities for the residents of Drakenstein Municipality.

#### 2.3.4.D Catalytic Zone: Hinterland as per the IDP and its relation to the SDF

Drakenstein’s Hinterland (& Hamlets) constitutes Windmeul, Hermon, Bainskloof Village, Gouda, Saron, farms and natural areas. The SDF promotes agriculture, agri-processing, tourism, operating as local service centres as core economic drivers for the rural areas.

- **SDF Spatial Strategy – Accessible routes as link to the City of Cape Town, Swartland Municipality and Berg River Municipality (see routes on above map)**

Windmeul is strategically located at the intersection of the R44 and MR281 (eventually becoming Paarl Main Road). This hamlet should harness its strategic location and scenic quality to establish Windmeul as a centre for outdoor adventure sports to attract residents from City of Cape Town (Durbanville is closest town) and Swartland Municipality. The Perdeberg Nature Reserve falls partially within the Drakenstein Municipal Areas and partially (larger area) within the Swartland Municipal Area.

Hermon, situated at the intersection of the R44 and R46, should capitalize on its linkage with Riebeeck Kasteel & Riebeeck Wes in the Swartland Municipal Area to create tourism opportunities.

The Berg River is a blue lung that, forms the boundary to the north of Wellington, between Drakenstein Municipal Area and the Swartland Municipal Area. The fact that these two municipalities ‘share’ the Berg River means that the river serves the purpose of ‘connecting’ the 2 Local Authorities. To the north of the northern boundary of the Drakenstein Municipal Area, the Berg River forms the boundary between the Swartland Municipal Area, and the Berg River Municipal Area.

Opportunities for recreational activities, festivals, sporting activities should be investigated along the Berg River. Tourism should be a main focus with coordination between Drakenstein, Swartland and Berg River Municipalities for major events spanning over all three Local Authority Areas.

The R44 also running parallel to the Berg River also ‘connects’ rural hamlets such as Gouda and Saron with Porterville which is located within the Berg River Municipal Area to the north.

- **SDF Spatial Strategy – Gouda as nodal link to Witzenberg Municipality (see reference 5 on above map)**

Gouda is strategically located at the intersection of the R46 to Tulbagh (via the Nuwekloof Pass) and the R44 to Saron and Porterville. This strategic location should be capitalized on through pursuing a freight logistics hub with weighbridge, service station and truckstop as indicated in the SDF. With an Agri-Park being proposed for Ceres in the Witzenberg Municipality by the Department of Rural Development and Land Reform, this logistics hub could serve as a major economic injection for the Gouda area.

#### **Conclusion**

Drakenstein Municipality should capitalize on the above linkages with surrounding municipalities in order to strengthen its role as a leading secondary city in the Western Cape.



# 3.

## Spatial Principles and SDF Themes





## 3.1. Principles and Approach

In order to ensure consistency and a clear spatial logic, the development of spatial /planning proposals in the SDF are based on a set of generic spatial considerations. These are:

1. The central spatial **principles** that have informed the framework proposals for each focus area
2. An expansion of the principles and their **implications for the approaches** to the SDF Proposals
3. A common **set of elements** making up the spatial frameworks (i.e. the components of the framework)
4. The interpretation of the **land use implications** for the focus area frameworks.

This section sets out these four generic considerations.

CONTINUITY | RESPOND | PROTECT  
| ENHANCE | CONNECT | DENSIFY |  
INTEGRATE | CLUSTER | INFILL |

A set of interrelated spatial development principles have been identified to guide the formulation of the focus area proposals and the future development of the Drakenstein Municipality. These ten principles are set out on the pages that follow:

### 1. CONTINUITY OF GREEN:

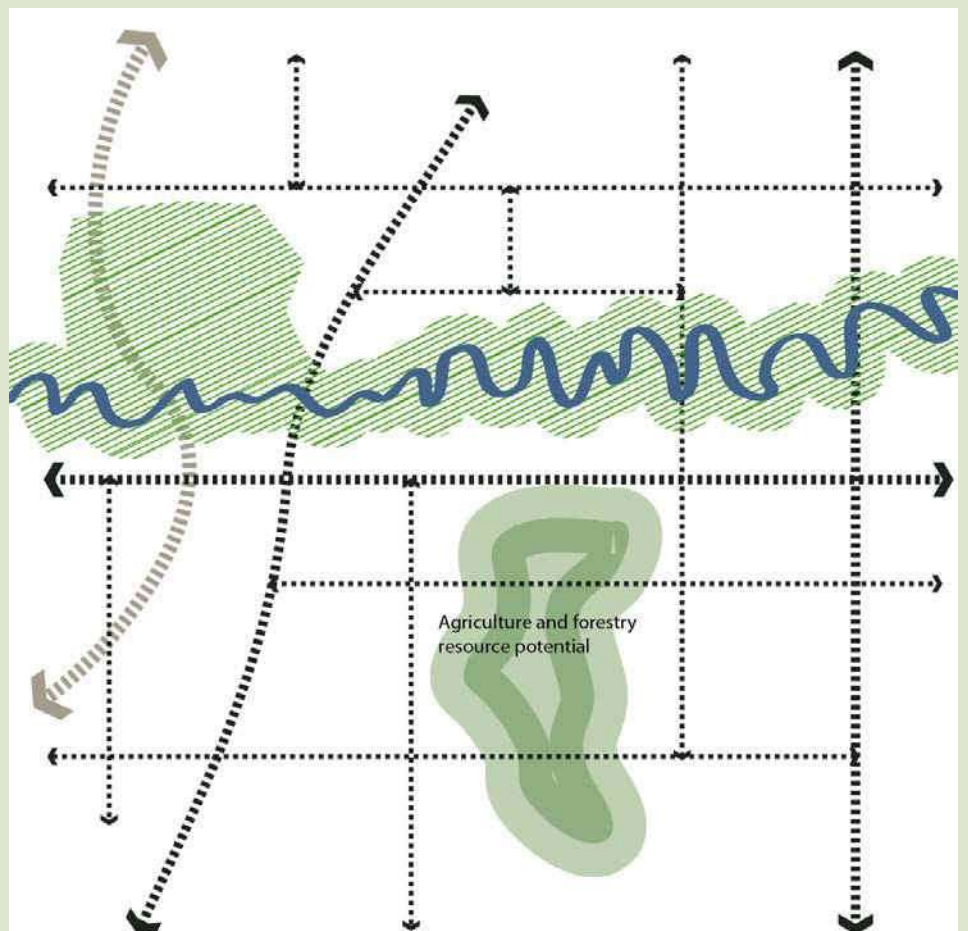
Ensure the continuity and connection of core biodiversity areas, river systems and landscape elements to establish connected green networks.



Photo 1. The Arboretum in Paarl - connecting river corridors, conservation and recreational open space



Photo 2. Paarl Mountain - conservation through eco-tourism, responding to the landscape and protecting view sheds



- 2. ESTABLISH WELL-DEFINED AND DESIGNED DEVELOPMENT - OPEN SPACE INTERFACES:** Ensure that the interface between green space and development is well designed so that open space is overlooked and not edged by “backs” and blank edges.



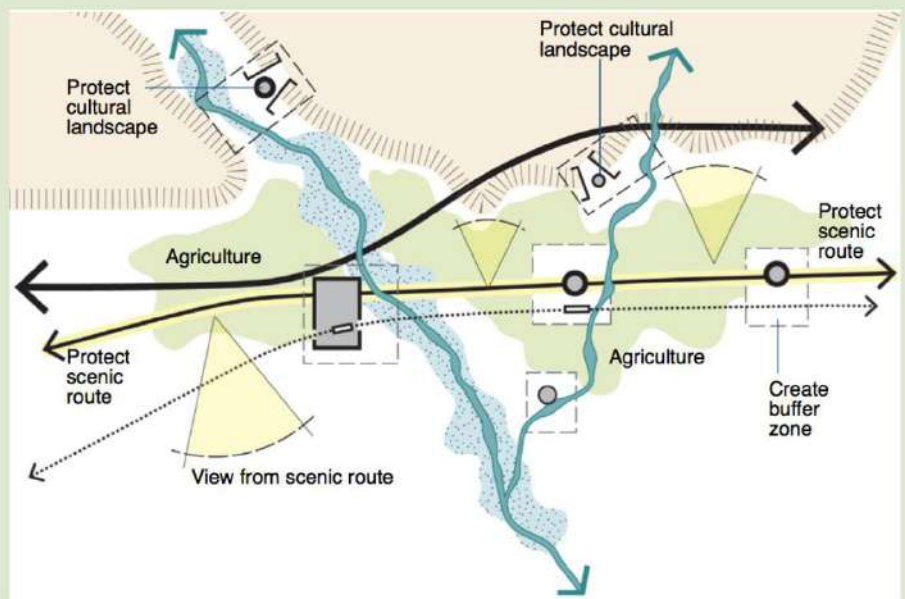
Photo 3. Respecting the historic character of settlements and acknowledging the importance of heritage resources - Wellington



- 3. PROTECT AND ENHANCE RURAL CHARACTER:** Ensure that all interventions in rural areas are of an appropriate scale and nature to support rural livelihoods, whilst at that same time protecting the sense of place and the agricultural resource base.



Photo 4. Appropriate urban renewal and re-use of historic buildings at Paarl Station



- 4. ENABLE STRATEGIC DENSIFICATION:** Densify residential development and cluster activities in these areas for efficient use of infrastructure and available land.
- 5. ENABLE AND PROMOTE MIXED USE:** Promote a mix of uses around nodes and along corridors within the accessibility grid.

The above two principles set up an environment in which public transport becomes viable.

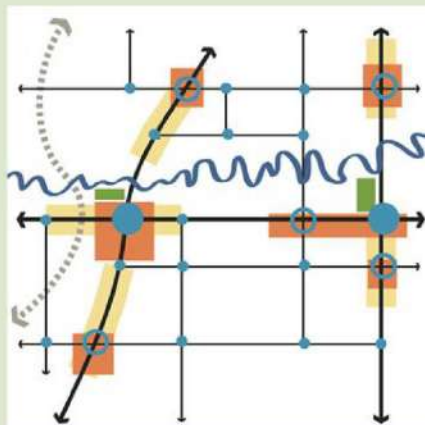


Photo 5. Densification - integrated housing project with public space and landscaping

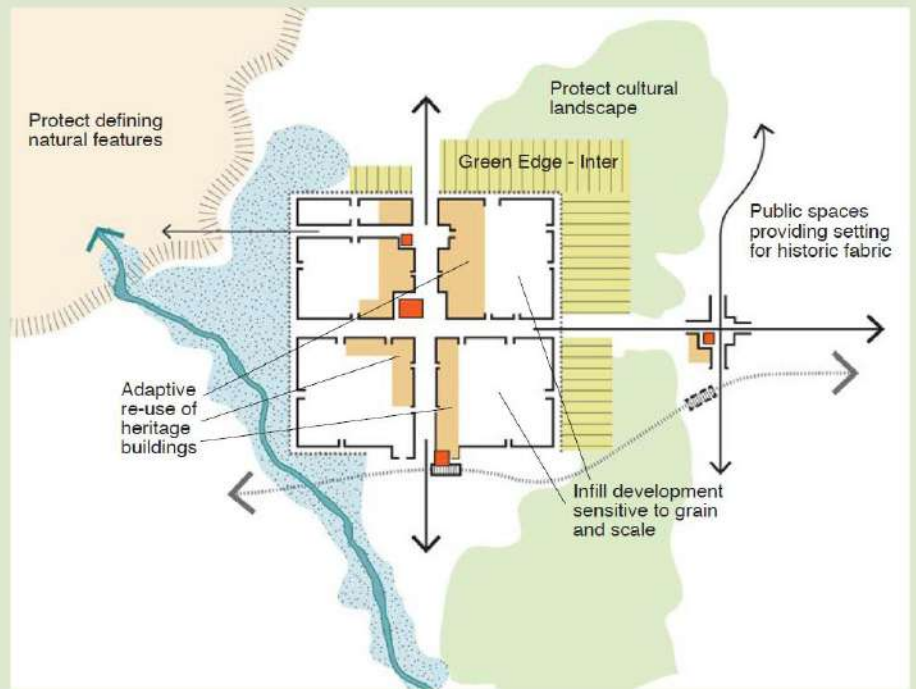


## 6. PROTECT AND ENHANCE HERITAGE RESOURCES:

Acknowledge the importance of heritage resources and carefully manage impacts at all scales of planning and development, from the broader Drakenstein municipal landscape and its settlement pattern to individual buildings.



Photo 6. Appropriate rural diversification through country markets - Laborie Lazy Days Market



## 7. ENSURE CONNECTIVITY BETWEEN SETTLEMENTS AND A HIERARCHY OF NODES AND CONNECTIVITY WITHIN SETTLEMENTS:

Connect nodes and communities via safe and attractive public transport and pedestrian friendly routes and activity corridors within a hierarchical accessibility grid.

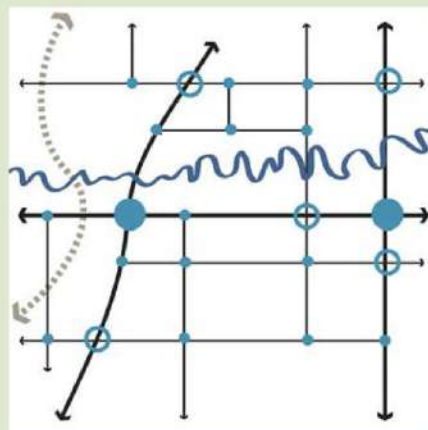


Photo 7. Urban renewal and densification along public transport route - before and after

## 8. PROMOTE SPATIAL INTEGRATION:

Facilitate integration through well-located new development and infill, reducing barriers between communities and enabling more efficient access to facilities and opportunities.

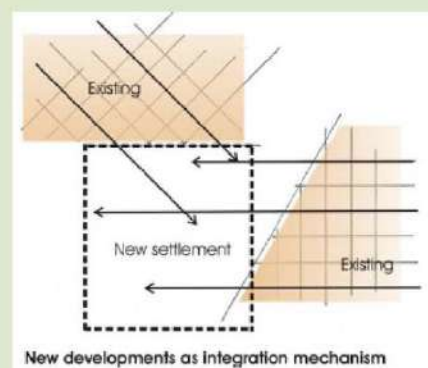
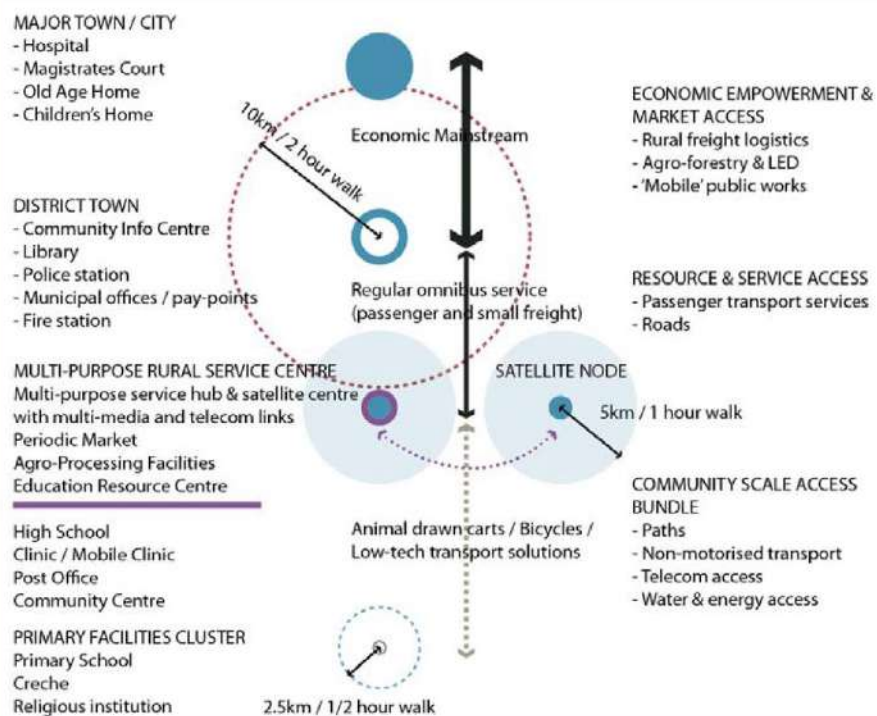
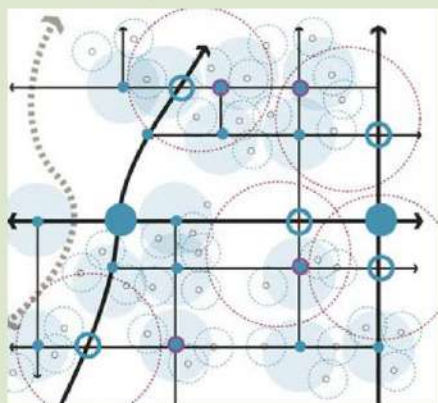


Photo 8. Strategic infill development on underutilised vacant land (CNdV, 2006)

- 9. ESTABLISH AN ACCESSIBLE HIERARCHY OF PUBLIC FACILITIES:** Locate new facilities and resources so that they relate to the accessibility grid; high order regional facilities should be within easy reach of the primary public transport and street network.



- 10. CLUSTER SOCIAL FACILITIES:** Cluster social facilities and activities within nodes to optimise accessibility and convenience while also improving security and maintenance.



Photo 9. Community facility cluster at Brown's farm hall along Ingulube Drive



## 3.2. SDF Vision

Based on the policy informants and directives, a vision for Drakenstein has been developed – conceptually illustrated in Figure 8. The vision emphasises the strategic location of Drakenstein in terms of logistical connections between Cape Town and its hinterland along the N1 corridor as well as agricultural and ecological landscape corridors and the role that Drakenstein plays in protecting and capitalising on the opportunities these provide.

**"The Drakenstein Municipality located at the heart of the Winelands, and building on its assets - its dramatic scenic landscape, precious natural and cultural heritage, quality educational institutions and sporting facilities, thriving agricultural economy and unrivalled access to the regional access and logistics networks - will be a place of excellence for all its residents"**

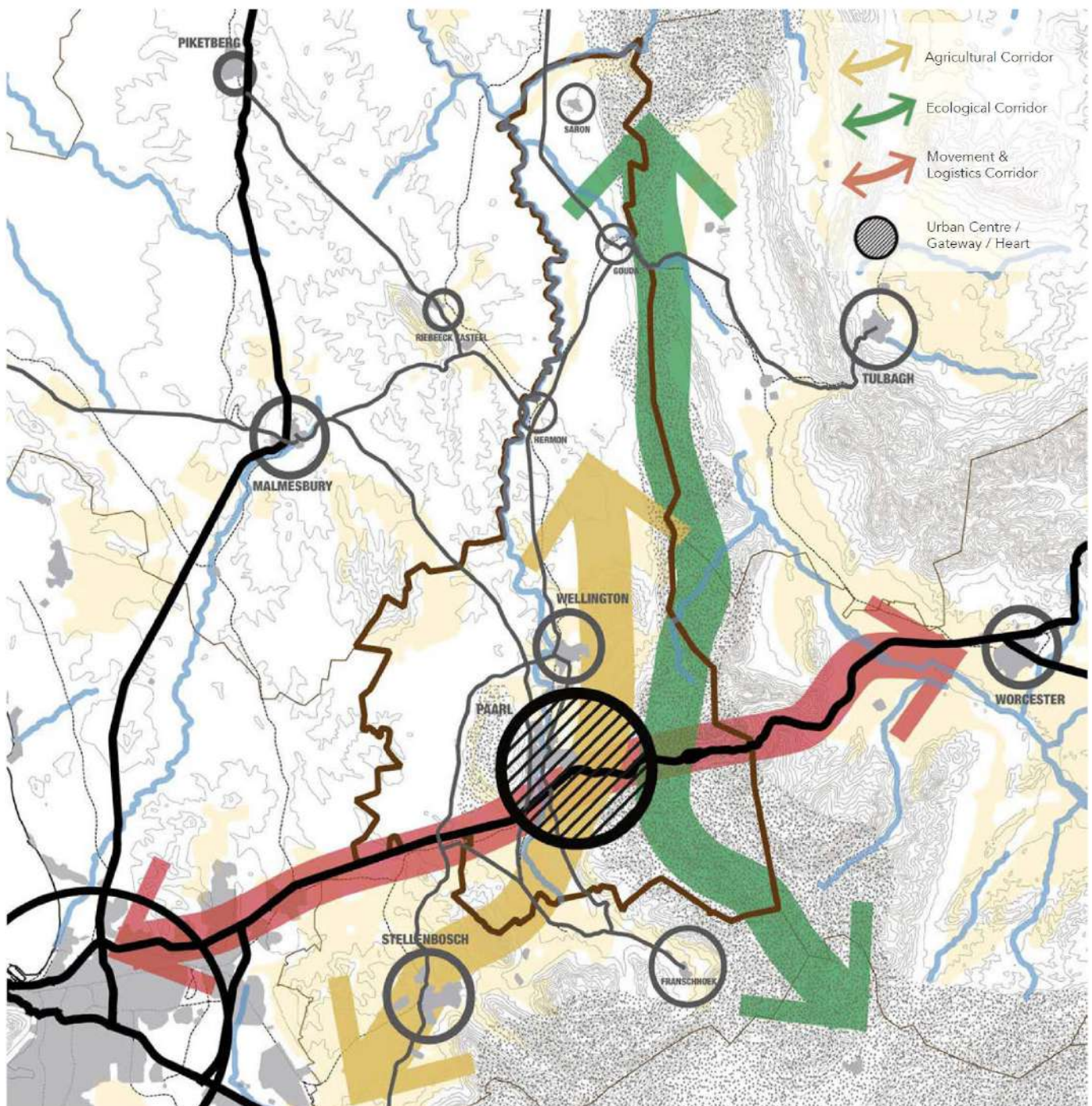


Figure 8: Conceptual illustration of the spatial vision for Drakenstein



## 3.3. The 6 SDF Themes

### 3.3.1. Overview of the Themes

Six themes have emerged based on a synthesis of the key opportunities and challenges identified in the status quo analysis as well as the formulation of the vision for Drakenstein. These six themes provide a conceptual framework around which the more detailed SDF proposals have been developed.

The central rationale for each of these themes is described below in Figure 9.

### 3.3.2. Cross Cutting Themes

Cross cutting through the six themes are the core elements of economy, infrastructure and tourism. These drive the spatial logic for the SDF as a whole and are applicable to aspects of all 6 themes.

### 3.3.3. Spatial Interpretation of the 6 Themes

This section provides a spatial interpretation of each theme. Associated with each concept diagram is a description of what needs to be protected, what needs to change and what new development is envisaged in alignment with achieving the vision for each theme.



Figure 9: The SDF Themes



### 3.4. Land Use Management Implications

This section sets out the land use management implications for each of the elements that combine to constitute the spatial development framework for each area.

#### 3.4.1 Retained Rural Areas

Retained rural areas coincide with the EMF's Keep assets intact and Be careful Zones, thus no large scale development can be considered in these areas, only low key development aimed at supporting the primary purpose of the area. Land use management aspects to be addressed in the LUMS include: forms of allowable development (e.g. can any form of housing be accommodated in wilderness areas and what would be appropriate secondary uses on agricultural land); the nature and scale of such development, the servicing of development, and the management of visual impacts, impacts on the sense of place and heritage resources.

#### 3.4.2 Protected Green Core and Green Gateways

The areas that combine to form the protected green core, should be protected from inappropriate urban development. Only low key interventions aimed at providing appropriate public facilities (possibly through a long term lease to private sector operators) and security measures should be allowed. Planning for such interventions should

as a minimum include urban design and landscaping plans and in some instances the inputs of environmental specialists may be required to deal with issues such as floodplain management and impacts on heritage resources. In addition, the interface with surrounding private land holdings may need to be addressed, possibly through an overlay zone that will address aspects such as fencing and physical access.

#### 3.4.3 Peri-Urban Farming

Small scale peri-urban farming as envisaged in the SDF is fairly new spatial concept in the Western Cape and the management of this land use will require careful consideration. It is suggested that a policy be formulated which concludes with specific land use management proposals to be taken up in the LUMS. Land use management issues that will have to be addressed include: plot sizes; the nature of agriculture practices including tunnel farming and livestock farming (it would for instance not be desirable to accommodate certain types of livestock farming adjacent to residential areas); the scale and placement of structures that may be allowed, managing the visual impact of smaller land parcels, and the potential for secondary uses such as farmstalls. Research shows that peri-urban farming and allotment gardens can have significant social and cultural inclusion benefits to planning. Urban farming plots can 1) make the place visible and meaningful to a variety of people, 2) extend the place over the surrounding neighborhoods by animating social interaction and restoring historical meanings and shared identity, and 3) link the site ecologically to a regional species pool with rare plant species dependent upon historical layers of human settlement. These features

of urban diversity are frequently disregarded by local administrative bodies, as they lie beyond the formal categories in planning. However, they are crucial for understanding the social and cultural dynamics of urban ecosystem services. (Jokinen, Viljanen & Willman, 2011)

#### 3.4.4 Agrarian Settlement Development

The envisaged residential zone is not explicitly addressed in existing zoning schemes and it may be necessary to introduce a new zoning category to accommodate this typology of residential development so as to ensure that such development is sufficiently controlled. This residential typology should not encourage residential estate developments in rural areas or outside the urban edge, but rather should provide an environment for suitably located sustainable low impact urban developments. Open spaces have become critical in planning of compact cities, and agrarian settlement development should provide the means for an appropriate response to natural green spaces, landscape and scenic character, and heritage areas. This land-use management allocation must provide direction for an appropriate development of sensitive rural and wilderness areas within the urban edge and must not allow for the sprawling development of rural land into urban. Issues that would have to be addressed include servicing of such developments and the compulsory implementation green technologies as far as possible, secondary uses, the visual impact of developments and impacts on heritage resources.





### 3.4.5. Urban Infill

Urban infill is largely focused in on achieving higher densities in urban settlements and providing a greater variety of housing options so as to speed up the delivery process and create more sustainable settlements. To accommodate these new typologies the land use management system would have to consider the introduction of new zoning categories (e.g. for incremental housing) and the amendment of development rules (e.g. reduced setbacks, or a larger variety of uses as primary right).

### 3.4.6. Industrial Core

Industrial development and in particular agri-processing is regarded as key driver of the local economy. It is thus suggested that the land use management system review the current land use management rules for industry so as to ensure that new trends in manufacturing can be accommodated, in particular the need for smaller premises.

### 3.4.7. Densification Zone

To achieve densification in the identified areas, it is suggested that overlay zones be introduced which address the specific circumstance of the each of these areas. Aspects

to be included in the overlay zones include the type of densification that will be appropriate, the additional use rights that should be allocated, the development rules for such additional rights and the management of the impacts on traffic, heritage resources and sense of place.

### 3.4.8. Nodes and Community Spines

The establishment or reinforcing of nodes and community spines often require additional/alternative development rights. This can be achieved through overlay zones that specify the development rules attached to such additional rights, e.g. build-to lines. In addition, private sector investment should be supported through interventions in the public realm, which would typically require an urban design plan that addresses hard and soft landscaping, street furniture, street cross-sections, parking and accommodation of public transport. A further critical component for the establishment of community nodes is the clustered provision of new public facilities such as schools, clinics, community halls at nodes (indicated with a ★ on land use interventions maps for each focus area).

### 3.4.9. Gateways

The Celebration of Gateways Report (draft 2014) includes proposals for the identified gateways. Interventions for these public land parcels are largely focused on physical upgrades, as opposed to land use management interventions.

### 3.4.10. Scenic Routes

Land use management for scenic routes should be aimed at retaining the sense of place and important vistas from these routes. The focus is thus largely on managing development adjacent to these routes. It is suggested that this managed through the introduction of an overlay zone in the LUMS. Aspects to be addressed in such a zone, include the extent of the zone, the nature, scale and placement of development, landscaping and lighting, services and additional studies to inform development proposals such as visual impact studies.

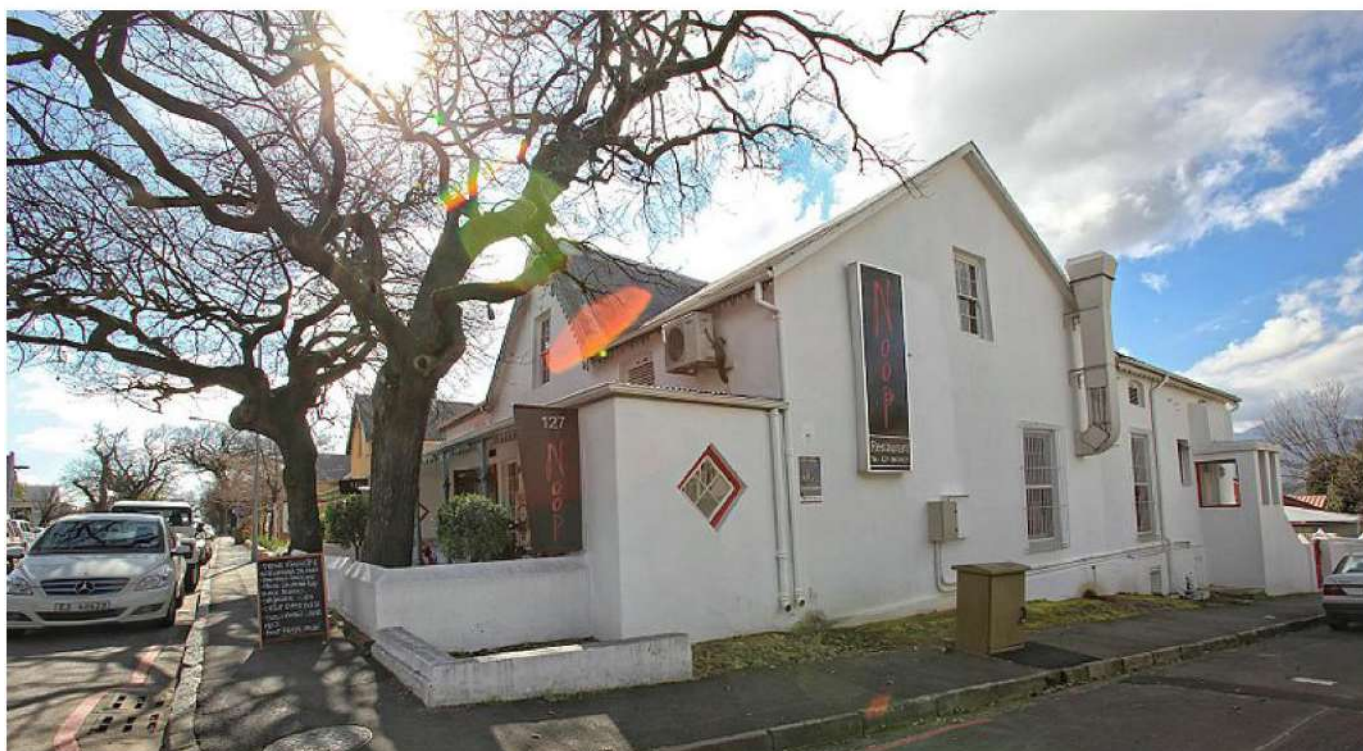


PHOTO: Paarl, Main street, "103-107 Main Street, Paarl - 001" by Leo za1 - Own work. Licensed under CC BY-SA 3.0 via Wikimedia Commons (2014)



# 4.

## Spatial Development Framework Principles and Approach



## 4.1. Implications of the Spatial Principles

In order to achieve the vision for the Drakenstein Municipality new approaches to development are required. Some of these approaches are already underway within the municipality and the SDF therefore reinforces these. Others are new approaches that need to be unpacked and illustrated.

The following section provides an expansion of the 10 principles in 3.1 and their implications for the approach to the SDF proposals. These shifts in approach have been developed in relation to the 6 SDF themes as well as their relationship with the 10 spatial principles, as illustrated in the table below.

Table 8: Matrix of alignment between the 6 SDF themes, the 10 spatial principles and the new approaches to development

10 SDF Principles	2015 SDF Themes					
	1. Environmental Management	2. Agriculture, Agrarian Reform & Rural Development	3. Heritage & The Cultural Landscape	4. Connectivity & Green Logistics	5. Sport & Education	6. Settlement & Communities
<b>1: Continuity of green</b>	Integrate environmental management					
<b>2: Establish well-defined development - open space interfaces</b>		Accommodate agrarian reform in peri-urban areas	Ensure appropriate rural place-making	Support and promote green development standards		Concentrate human settlement in urban centres
<b>3: Protect and enhance rural character</b>		Accommodate agrarian reform in peri-urban areas	Ensure appropriate rural place-making			
<b>4: Protect and enhance heritage resources</b>			Ensure appropriate rural place-making			Emphasise the importance of design of housing typologies
<b>5: Ensure connectivity between a hierarchy of nodes</b>				Integrate employment opportunities		Concentrate human settlement in urban centres
<b>6: Enable strategic densification</b>				Support and promote green development standards		Provide serviced plots to facilitate incremental housing
<b>7: Enable and promote mixed use</b>				Integrate employment opportunities	Cluster and share multipurpose sport facilities	
<b>8: Promote spatial integration</b>				Integrate employment opportunities	Cluster and share multipurpose sport facilities	Concentrate human settlement in urban centres
<b>9: Establish an accessible hierarchy of public facilities</b>				Create vibrant activity streets		
<b>10: Cluster social facilities</b>					Cluster and share multipurpose sport facilities	Cluster community and social facilities



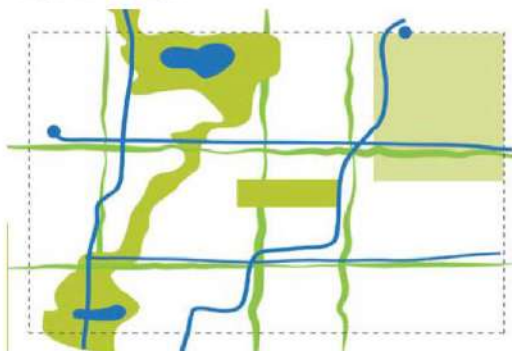
## Integrate environmental management

**Objectives:**

- To ensure integrated management and prioritisation of Drakenstein's natural and man-made cultural landscape resources;
- To facilitate disaster risk management in alignment with biodiversity management programmes; and
- To align investment and resources for coordinated environmental management projects

**FROM:**

Poor environmental management and planning, need for strategic mitigation and resilience to environmental disasters. Flooding of the Berg River, Paarl (above left), Natural wetlands used as dumping grounds (above right)

**TOWARDS:**

Continuity and preservation of natural corridors and systems. Strategic planning for environmental management and climate mitigation and resilience.

**Principles:**

- Integration;
- Enhance and respect nature;
- Encourage a shift from carbon dependent development;
- Promote sustainable transport;
- Create an adaptive and resilient environment; and
- Work with, not against nature

**Implications:**

- Coordination of internal municipal departments responsible for environmental management;
- Facilitation of public private partnerships for stewardship and custodianship programmes;
- Identification of priority areas for disaster risk management

## Accommodate agrarian reform in peri-urban areas

**Objectives:**

A new model for accommodating land reform in peri-urban areas through the use of small-scale farming allotments, based on the delineation of intensified agricultural activity (allotments) around existing urban centres to provide small farming plots with shared infrastructure and facilities with good access to existing public facilities for the whole household. Different typologies can be developed to support this concept.

- Facilitate more sustainable land reform process;
- Facilitate land reform in areas closer to urban centres;
- Establishing an "agricultural edge" to contain urban expansion into the productive rural landscape;
- Support local food chains; and
- Provide opportunities for increased food security and economic development for rural dwellers.

**FROM:**

Fragmentation and Housing developments and estates creeping into agricultural and wilderness landscapes.

**TOWARDS:**

Interlinked corridors and agricultural super-blocks. Agricultural and urban farming and green systems, becoming an integral part of the urban system

**Principles:**

- Productivity;
- Food security and designing with nature; and
- Contain urban expansion.

**Implications:**

- Subdivision/use of agricultural land suitable for peri-urban agrarian reform subject to further investigation;
- Development of typologies for housing options;
- Shared infrastructure facilities; and
- CASIDRA facilitation programme.

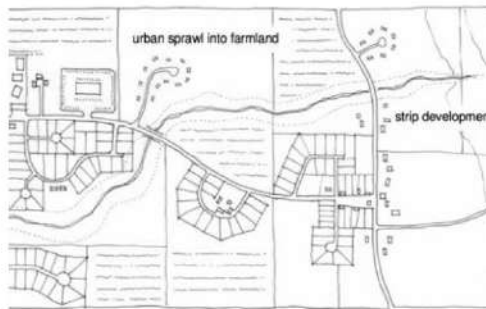
## Ensure appropriate rural place-making

The rethinking of the rural spatial structure through developing a new logic for appropriate development in the rural landscape - based on the concept of interlinked rural corridors that are reinforced through contained pockets of rural activity that is set back from the road and does not impact on the visual character and scenic qualities of the landscape. Lack of desirability for eco-estates / high income estates on farms outside the urban edge.

### Objectives:

- To maintain the dominance of wilderness
- To protect the working agricultural landscape
- To protect the rural landscape as a scenic asset with an important cultural sense of place role

### FROM:



Inappropriate urban growth pattern of suburban sprawl into greenfield sites.

### TOWARDS:



Recognition of the transition for urban to rural landscapes, with an appropriate urban pattern that responds to urban limits

### Principles:

- Enhance the natural environment and landscape
- Respect and enhance heritage and rural landscape
- Rural place-making.

### Implications:

- Coordination of internal municipal departments responsible for rural management
- Facilitation of public private partnerships for stewardship and custodianship programmes

## Integrate employment opportunities

### Objectives:

- To create local job opportunities in an integrated manner
- To ensure for sustainable livelihoods for all communities
- To attract business investment
- To preserve and build on existing economic base

### FROM:



Lack of job opportunities close to place of residence, lack of economic base in small local communities.

### TOWARDS:



Plan for and facilitation of integrated development that encourages job opportunities in an integrated manner.

### Principles:

- Integration and connection
- Waste = Value / Potential resource
- Resilience and productivity
- Respect and enhance nature

### Implications:

- Business incentives
- Partnerships



## Create vibrant activity streets

### Objectives:

- More liveable neighbourhoods and communities
- More sustainable employment opportunities
- Rejuvenation of settlements

### FROM:



### TOWARDS:



### Principles:

- Vitality and activity
- Safety and security
- Diversity and flexibility
- Integrated and connected economy
- Mix of land uses

### Implications:

- Facilitate mixed use developments in strategic locations with good pedestrian access
- Accommodate informal trading
- Encourage on-street activity

## Support and promote green development standards

### Objectives:

- Reducing reliance on costly municipal services networks
- Promoting off-grid development and making use of renewable energy
- Facilitation and promotion of transport modal shifts to non-motorised transport options
- Improving the provision of and access to public transportation
- Job opportunities
- Recycling and converting waste into something productive

### FROM:



### TOWARDS:



### Principles:

- Resilience
- Design with nature
- Sustainability
- Integration and connection
- Opportunity and choice
- Shift in transport modes - promote NMT

### Implications:

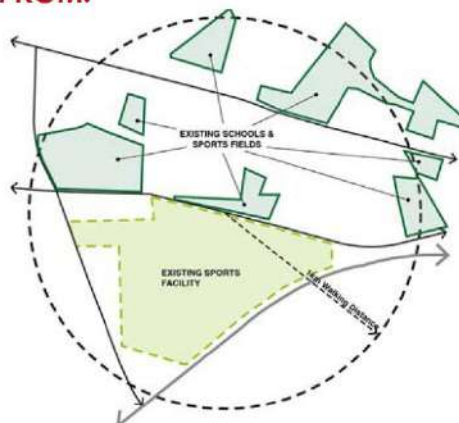
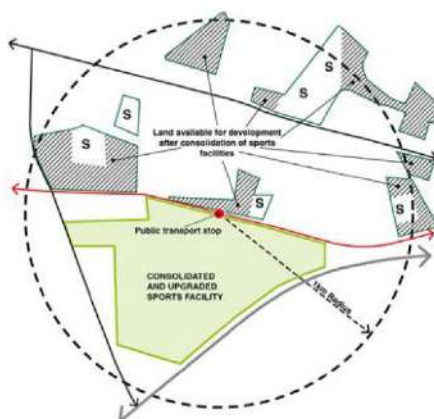
- Improved development/building standards
- Improved production and processing
- Employment opportunities
- Reducing excess waste



## Cluster and share multipurpose sport facilities

**Objectives:**

- Clustering and sharing of sporting facilities to optimise accessibility and community participation
- Capitalise on existing vacant land around schools to create sporting precincts associated with education

**FROM:****TOWARDS:****Principles:**

- Vitality and activity
- Clustering and consolidation
- Diversity and flexibility

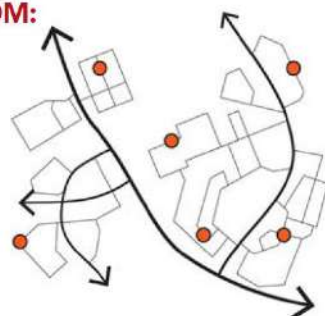
**Implications:**

- Focused spending
- Reinforcing and upgrading existing facilities
- Concentration of financing to maintain and fund high quality sports facility as opposed to spreading out of finances over many poor quality facilities

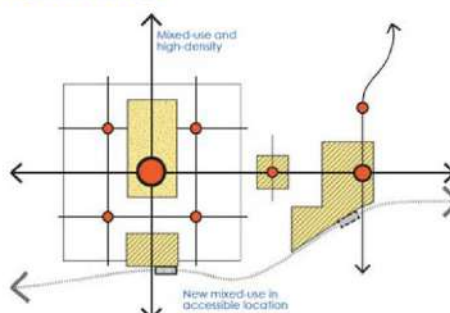
## Clustering public facilities

**Objectives:**

- More liveable neighbourhoods and communities
- Optimise strategic locations
- Provide public access to all facilities

**FROM:**

Scattered facilities and convoluted street system where facilities are dispersed with vast distances between and difficult to access

**TOWARDS:**

Sharing and clustering of facilities generates a more viable and vibrant urban environment.

**Principles:**

- Accessibility
- Integration and inclusion
- Mixed-use
- Flexibility and diversity
- Vitality and activity

**Implications:**

- Facilitate mixed-use developments in strategic locations with good pedestrian access
- Clustering of public facilities in strategic accessible location - No more duplication of facilities
- Focus of funding to create positive public environment

## WHAT

## WHY

## HOW

### Concentrate human settlement in urban centres

Shift in focus with regard to housing delivery in rural settlements. The traveling cost implications and lack of employment opportunities in the outlying rural settlements do not provide for sustainable livelihoods. Future housing delivery must be prioritised and concentrated in the existing urban centres. Focussed social development and investment within rural settlements to encourage community development and sustainable livelihoods opportunities within existing settlements.

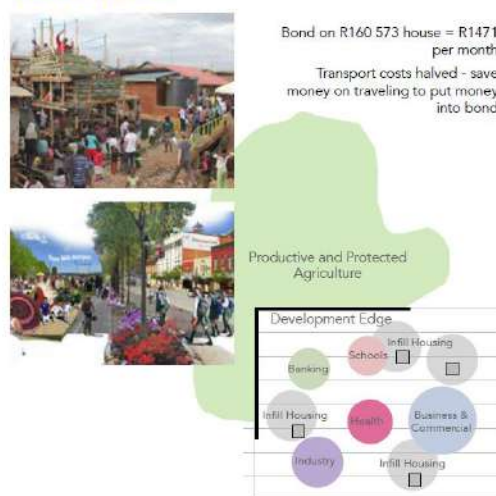
#### Objectives:

- More sustainable rural communities
- Sustainable and accessible employment opportunities
- Integration and concentration of community facilities, employment and residential opportunities

#### FROM:



#### TOWARDS:



#### Principles:

- Intensity and overlap
- Opportunity and choice
- Accessibility
- Public space and place making
- Vitality and activity

#### Implications:

- No more major housing (housing projects) in rural settlement. Housing provision should be focussed where job opportunities lie - focus on urban infill.
- Lack of desirability for eco-estates / high income estates on farms outside urban edge.
- Protection of productive agricultural land
- Mixed-use and integrated settlements

### Sustainable housing developments - design and typologies

Focus on the importance of good design of housing for low income communities. Housing design should always include safe public spaces with adequate landscaping and positive street interfaces. The use of green technologies and off-grid facilities must also be incorporated. Row housing and medium density townhouses are the preferred models with mixed-use development located in strategic locations that includes apartments and office

#### Objectives:

- Safer communities
- More efficient use of land
- Investment in the public realm

#### FROM:



#### TOWARDS:



#### Principles:

- Sense of place
- Public space and place making
- Safety and security
- Adaptability and flexibility
- Dignity

#### Implications:

- Urban design and landscaping required for new housing developments
- Settlement instead of dormitory housing
- Dignified environments with a strong sense of place
- Active environment providing choice and opportunity



## Provide serviced plots to facilitate incremental housing

Implement a "sites and services" approach to housing delivery - either on ownership or land lease tenure (model to link user group's ability to pay with land prices and the costs of rudimentary and upgradable infrastructure) through allowing access to a plot and the essential infrastructure. Providing a plot within a pre-designed layout plan within which different plot sizes and shapes are laid out in a logical structure. Providing a basic party wall or structural foundations as well as on-site material to allow for flexible typologies within an overarching grid. (See Annexure 3 for precedent case studies)

### Objectives:

- Flexible housing typology
- Ownership and tenure
- Personalization of property
- More efficient use of land
- Fast track of housing delivery

### FROM:



### TOWARDS:



### Principles:

- Opportunity, and choice
- Public space and place making
- Sense of place and dignity
- Safety and security
- Adaptability and flexibility

### Implications:

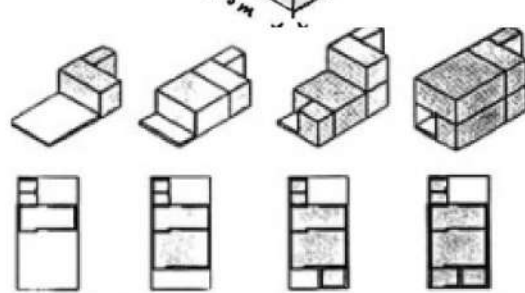
- Rethinking of housing delivery models
- Public-private partnerships

(SEE ANNEXURE 4 FOR INTERNATIONAL CASE STUDIES TYPOLOGY MODEL EXAMPLES FROM CCT)

### MODELS:

**UTILITY WALL:** A "utility" wall is built on the plot which contains the connections for water, drainage, sewerage and electricity - beneficiaries to build house around wall.

Plot area:  $\pm 100\text{m}^2$



**LATRINE:** Provide a basic latrine (bathroom and/or toilet) in each plot.

**ROOF FRAME:** Provide shell house / core house that can be extended or reconfigured.





## 4.2. Key Concepts and Interventions for Drakenstein

### 4.2.1 The Spatial Concept

The key spatial elements highlighted in the 6 themes are distilled into a high level spatial concept for the Drakenstein Municipality. This interprets the spatial vision for the municipality within its context. The concept, depicted in Figure 10 comprises six key strategies for the future spatial development of the municipal area.

These strategies are described below and where they have geographic reference, this is highlighted in the concept diagram.

### 4.2.2 Key Interventions

A number of strategic “game changers” are contained within the spatial concept. These represent a significant shift from the 2010 SDF.

These strategic proposals are:

- A focus on mixed use infill development (targeted approach);
- Enabling a wide range of housing opportunities;
- Promotion of education and sport through the provision and upgrading of strategic facilities;
- The integration of residential developments into a more mixed

use neighbourhood in Paarl South;

- The establishment of new road linkages between Paarl East and Paarl West;
- The development of a green industry incubator park at Klapmuts;
- The consolidation and expansion of the Wellington Industrial Park including a waste to energy, green industry park; and
- The development of a logistics hub in Ben Bernhard.

These are illustrated and described in more detail in the Focus Area Frameworks provided in Chapter 5.

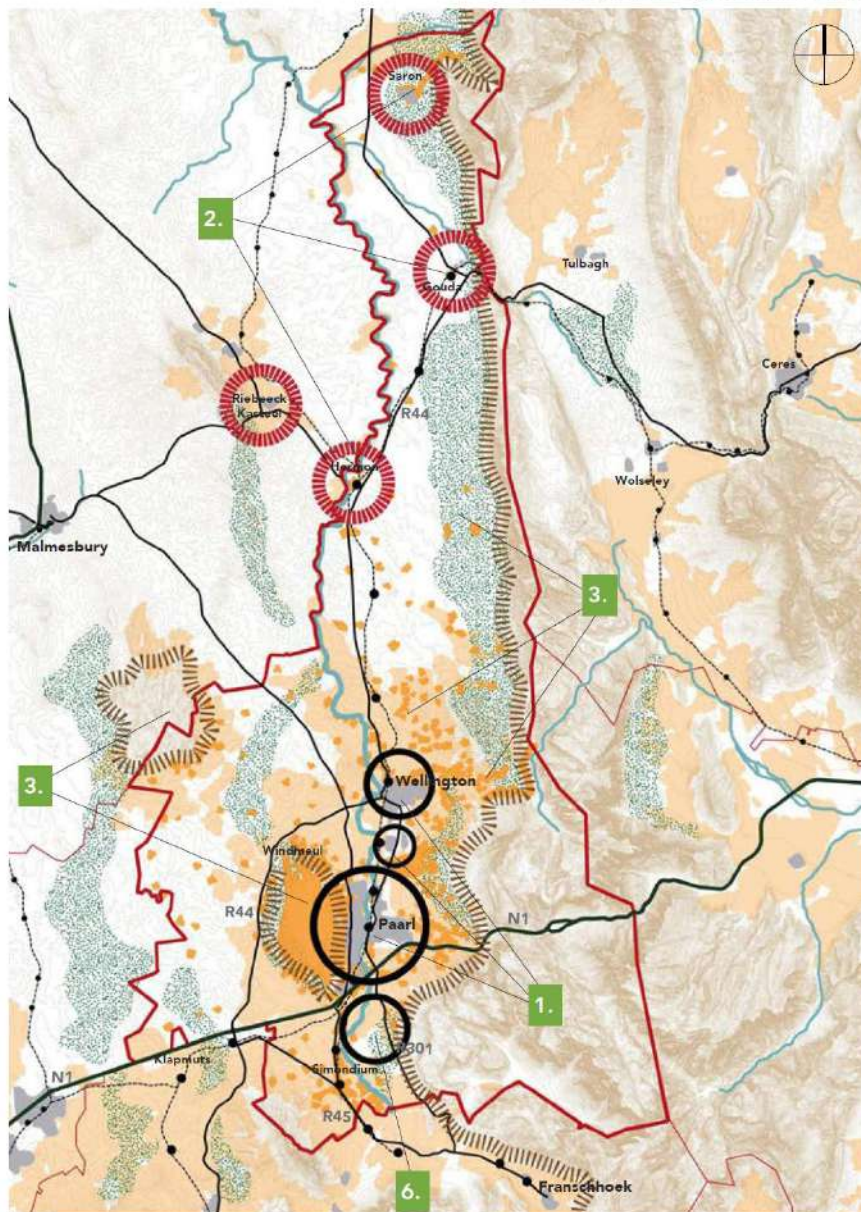


Figure 10: Municipal scale spatial concept diagram: key strategies

### 6 Key Strategies:

1. Focus growth in areas of socio-economic opportunities where multiplier effects already exist, i.e. the large urban settlement of Paarl/Mbekweni/Wellington.
2. Minimise spatial growth in the smaller settlements where economic opportunities are limited.
3. Protect the natural and agricultural resources base of the municipality as the basis of the local economy.
4. At the same time allow for opportunities to broaden participation in key sectors such as agriculture and agri-processing through small scale peri-urban farming and expansion of industrial opportunities.
5. Protect and enhance the scenic and heritage assets of the municipality by limiting the expansion of the footprint of historic settlements – i.e. focus on infill development.
6. Plan for future growth in the area to the south of the N1 in a holistic manner to ensure the establishment of an integrated settlement with a variety of opportunities – i.e. ensure that returns on infrastructure investment are maximised.



### 4.2.3. Overarching Informants: Climate Change

The potential long-term impacts of climate change comprise a key overarching informant to this SDF. It recognized the need to act on and enable the reduction in Greenhouse Gas (GHG) emissions and adapt to global climate change.

The risk of increased intensity of extreme weather events, such as flooding, changes in weather patterns and the potential impacts on agriculture crop futures places additional risk to human lives and health. These events are likely to impact on the tourism, infrastructure and insurance sectors of the economy in the Drakenstein Municipality into the future.

The six themes of the SDF are in line with the National Climate Change Response Policy, and are informed by a two-pronged approach to addressing climate change:

- **Mitigation:** Contribute to national and global efforts to significantly reduce GHG emissions and build a sustainable low carbon economy, which simultaneously addresses the need for economic growth, job creation and improving socio-economic conditions; and
- **Adaptation:** Reduce climate vulnerability and develop the adaptive capacity of the Western Cape's economy, its people, its ecosystems and its critical infrastructure in a manner that simultaneously addresses the province's socio-economic and environmental goals.

The SDF proposals are framed to encourage a low carbon development trajectory, increased climate resilience and the enhancement of ecosystems and the services they provide. These are viewed as key to economic resilience and sustainable jobs in the long term.

The SDF proposals have been set out in an integrated and cross-sectoral manner to support improved coordination between government departments, all three spheres of government, civil society, business and industry, academia and research institutions.

**"In contributing to global and national efforts to mitigate climate change and build resilience, the WCG proposes leading a collective strategic approach for the Western Cape and its people, which will reduce our carbon contribution and dependency, whilst enabling locally effective adaptation action to address the impacts of unavoidable climate change occurring now, and in future. (Western Cape Climate Change Response strategy, 2014)"**

The SDF proposals are compiled to enable the following climate resilient objectives:

Energy efficiency and demand-side management;

- Renewable energy;
- Critical infrastructure, Human Settlements and Integrated Waste Management;
- Sustainable Transport;
- Water Security and Efficiency;
- Biodiversity and Ecosystem Goods and Services;
- Food Security; and
- Healthy Communities.

The themes and objectives of this document aim to achieve the following adaptation to climate change outcomes:

- Well-managed natural systems that reduce climate vulnerability and improve resilience to climate change impacts;
- Significantly increased climate resilience and coping capacity within communities which reduces climate-related vulnerabilities; and
- An actively adaptive and climate change resilient economy which unlocks new markets and economic growth opportunities arising out of climate change.

Over and above the strategies contained within this document, it is proposed that prioritisation be given to departmental partnership in developing strategic policies and

action plans that aim to mitigate to climate change impacts through:

- Setting performance benchmarks;
- Identifying desired sectoral mitigation contributions;
- Developing and implementing sustainable energy plans; and
- Unlocking market opportunities and developing and implementing innovative economic instruments to achieve GHG emission reductions.



#### 4.2.4. SDF Themes at a Municipal Scale

### THEME 1. ENVIRONMENTAL MANAGEMENT

Recognising and strengthening the role of natural assets in ecosystem functioning, ecosystem goods and services, the local and regional economy and the livelihood of Drakenstein's residents.

Managing and reducing natural and man-made disaster risks.

#### STRATEGY STATEMENTS

##### What needs to be protected?

1. Critical Biodiversity Area's (CBA's), vulnerable terrestrial and freshwater ecosystems.
2. Connectivity of natural habitats within and between threatened ecosystems.
3. Ecosystem functioning, ecosystem goods and services and climate change resilient areas.
4. Natural assets and resources (including biodiversity, topography, soils and water resources).
5. Custodianship/stewardship of natural assets.

##### What needs to change?

1. Address threats to ecosystems and on-going depletion of natural resources due to poor maintenance (i.e. alien infestation, illegal/ unsustainable land use and over allocation).
2. Strengthen connectivity of natural habitat between ecosystems (biodiversity/riverine corridors).
3. Improve ecosystem functioning to address loss of climate change resilient areas.
4. Recognise the threat climate change poses to ecosystem functioning and that poor socio-economic conditions and lack of settlement services provision exacerbate disaster risk.

##### What new development is required?

1. Roll-out existing and expanded programmes (e.g. Stewardship and Public Works) to secure, protect and manage endangered and vulnerable ecosystems (protection of CBA's).
2. Encourage catchment management, alien vegetation clearing and riverine and wetland management.
3. Develop capacity for environmental awareness and education, underpinned by eco-tourism.
4. Roll-out disaster management plans and map high vulnerability index and risk areas.
5. Put in place stricter management of resource utilisation and consumption.

#### MUNICIPAL SCALE STRATEGY MAP

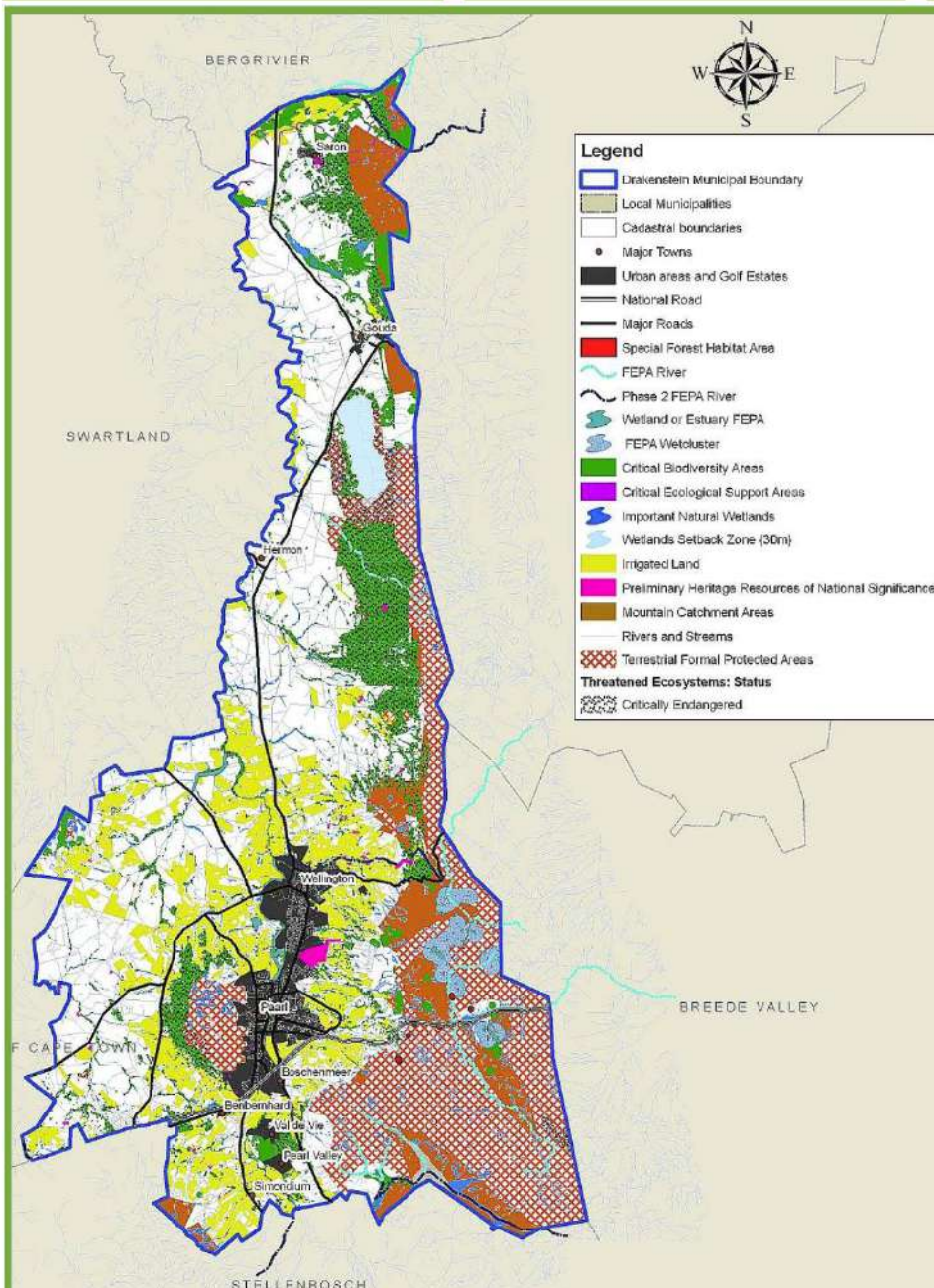


Figure 11: Theme 1 Municipal Scale Concept (EMF, 2012)

#### LAND USE

- Employ protection zones in terms of EMF (2012);
- Eco-tourism guidelines in terms of WC PSDF (2009);
- Fix and manage floodlines and enforce DWA land use prescriptions; and
- Identify and map high disaster risk areas.

#### INFRASTRUCTURE

- Promote "off-grid" services in outer-lying or environmentally sensitive areas (renewable energy/roof rainwater harvesting);
- Disaster management guidelines for major infrastructure installations; and
- Improve basic services to reduce disaster risk.

#### TRANSPORT

- Employ minimal transport infrastructure in sensitive areas;
- Provide access to high disaster risk areas (evacuation, fire fighting, search and rescue); and
- Guidelines for managing impact of transport upgrades or new infrastructure in sensitive areas.

#### ECONOMY

- Incentivise conservation of private land;
- Establish fynbos nurseries;
- Employment through EPWP: Working for Water/Fire/Wetlands programmes; and
- Public – private partnerships for disaster management.

#### HERITAGE

- Promote natural asset custodianship; and
- Guidelines for securing and managing heritage assets in disaster risk prone areas.

#### IMPLICATIONS



## THEME 2. AGRICULTURE AND RURAL DEVELOPMENT

Promoting the Drakenstein region as the primary agricultural production centre of the Western Cape.

Capitalising on existing agricultural activities to strengthen the agricultural economy while promoting agrarian reform and rural development and ensuring household and regional food security.

### STRATEGY STATEMENTS

#### What needs to be protected?

1. Agriculture as the economic base of the region.
2. Agricultural resources including the irrigation footprint, high value and unique agricultural land and high potential soils whether irrigated or not.
3. Irrigation water supply security and quality.
4. Food security and sovereignty.
5. Agricultural processing, marketing and supply chain.
6. Agricultural working landscape and heritage (e.g. farmsteads and werfs).

#### What needs to change?

1. More innovative land reform/ownership and agricultural production models required to fast-track agrarian reform in order to efficiently utilise state land and "non-feasible" small farms especially in peri-urban areas.
2. Increase exposure of agricultural practices and products to general public and increase food security and nutritional awareness.
3. Revitalise rural economy to address rural poverty and vulnerability through broadening access to and participation in agricultural activity.

#### What new development is required?

1. Re-orientation of existing farming model, especially in peri-urban areas to facilitate appropriate subdivision, diversification, adaptive re-use of irrigated land, fast-tracked land reform and new local food chains between producers and consumers.
2. Establish sites for urban agriculture (home, school and community gardens) to promote household food security and improved nutrition.
3. Establish a unique local food culture through street vending (stalls), farmer's markets, farm-gate sales, slow-food markets and box delivery schemes.

### MUNICIPAL SCALE STRATEGY MAP

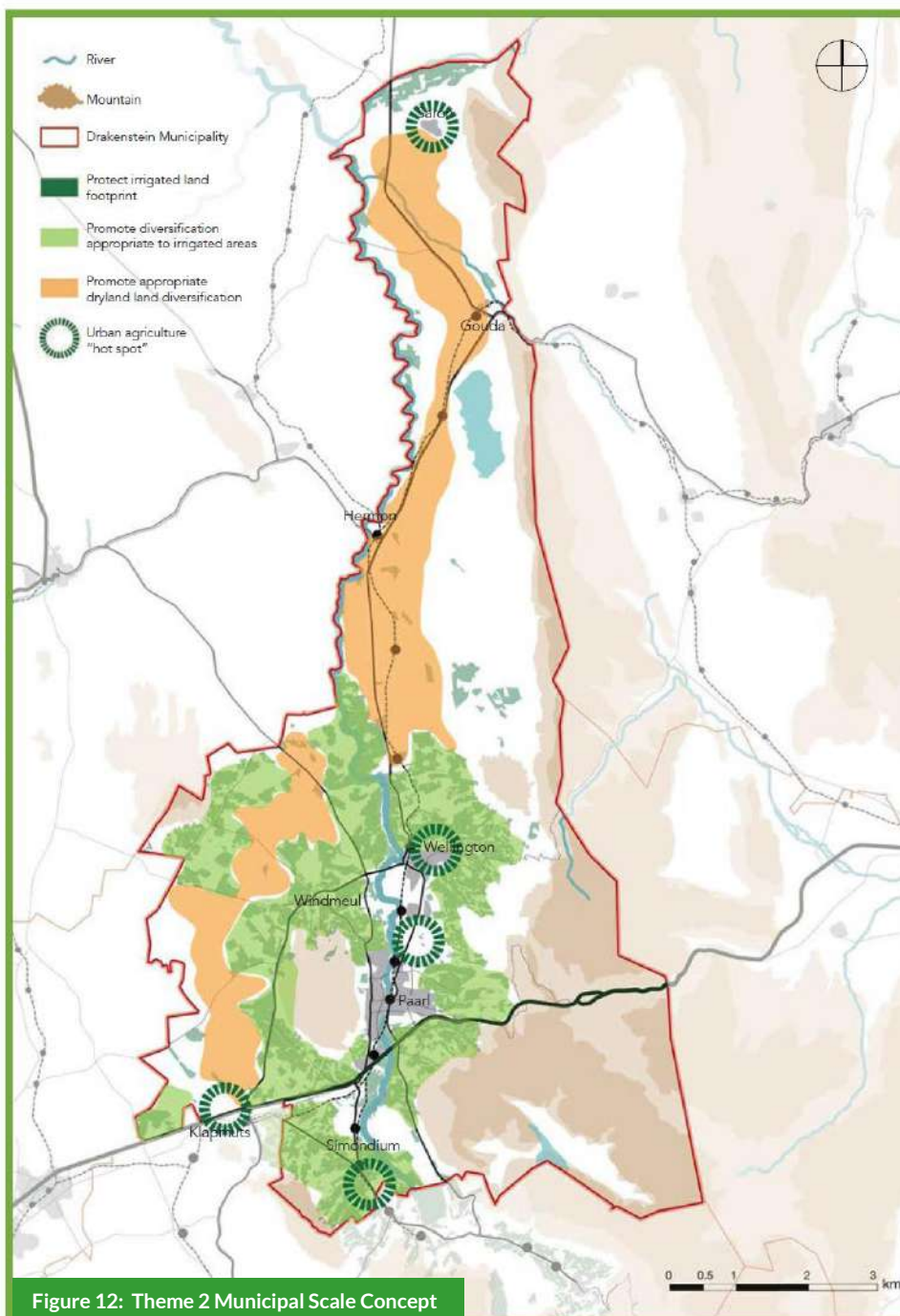


Figure 12: Theme 2 Municipal Scale Concept

#### LAND USE

- WC Policy for the establishment of agricultural holdings (land use) in the urban fringe;
- WC PSDF Rural Planning and Management Guidelines to manage agri-land diversification;
- Agricultural allotments (play as an urban-rural interface; and
- Provide for farmworker and rural dweller settlement in the HSP.

#### INFRASTRUCTURE

- Promote off-grid / "green" agricultural infrastructure and production techniques;
- Optimise the provision of services and infrastructure requirements for community and school gardens and farms; and
- Employ appropriate technology to facilitate soil-less cultivation (e.g. hydroponic growing) and climate control (tunnel cultivation).

#### TRANSPORT

- Leverage rural economic growth through road and rail infrastructure;
- Investigate options for improving rural public transport (e.g. Rural Transport Development projects of the Drakenstein Development Agency).

#### ECONOMY

- Agri-tourism development and marketing strategy;
- Promote agri-hospitality industry (farmstays/culinary schools) and on-farm processing and farm gate sales to achieve product value-adding; and
- Promote appropriate cultivation techniques (e.g. raised-bed, vertical cultivation) to optimise confined growing areas.

#### HERITAGE

- Manage impact of additional uses and diversification on working landscapes;
- Explore "architectural tourism" (e.g. farmsteads, churches) in agricultural and rural areas; and
- Align agricultural densification and heritage.

### IMPLICATIONS



## THEME 3. HERITAGE AND THE CULTURAL LANDSCAPE

Recognising and protecting the scenic and rural landscape of the Drakenstein region and the historical fabric of the urban and rural settlements.

At the same time acknowledging the potential for growing the contribution that these resources make to the local economy.

### STRATEGY STATEMENTS

#### What needs to be protected?

1. Critical biodiversity areas, corridors and ecosystem services.
2. Topography and the unique structural landscape features and landmarks such as the mountain ranges and the riverine corridor.
3. Scenic routes, gateways/entry points/viewsheds and sensitive interfaces between settlements and the natural rural environment.
4. The working rural landscape, historic farms and agricultural infrastructure.
5. Historic settlements and their setting within the cultural landscape.

#### What needs to change?

1. Address the loss or depletion of natural resources through inappropriate landscape transformation and agricultural expansion.
2. Strengthen regional connections between biodiversity corridors, the river system and protected areas.
3. Improve roadside signage in visually sensitive areas and gateways.
4. Promote the agricultural landscape as a tourism attraction through appropriate diversification.
5. Acknowledge the cultural significance of historic settlements for tourism and social benefits.

#### What new development is required?

1. Set out policies to ensure that urban expansion is contained and impacts on the cultural landscape and setting of towns is controlled/mitigated.
2. Establish river catchment management programmes and stewardship programmes.
3. Celebrate gateways/scenic entry points to the municipality and its settlements.
4. Facilitate eco-tourism and agri-tourism opportunities.
5. Demarcate heritage precincts and ensure for appropriate development and regeneration to attract tourism opportunities.

### MUNICIPAL SCALE STRATEGY MAP

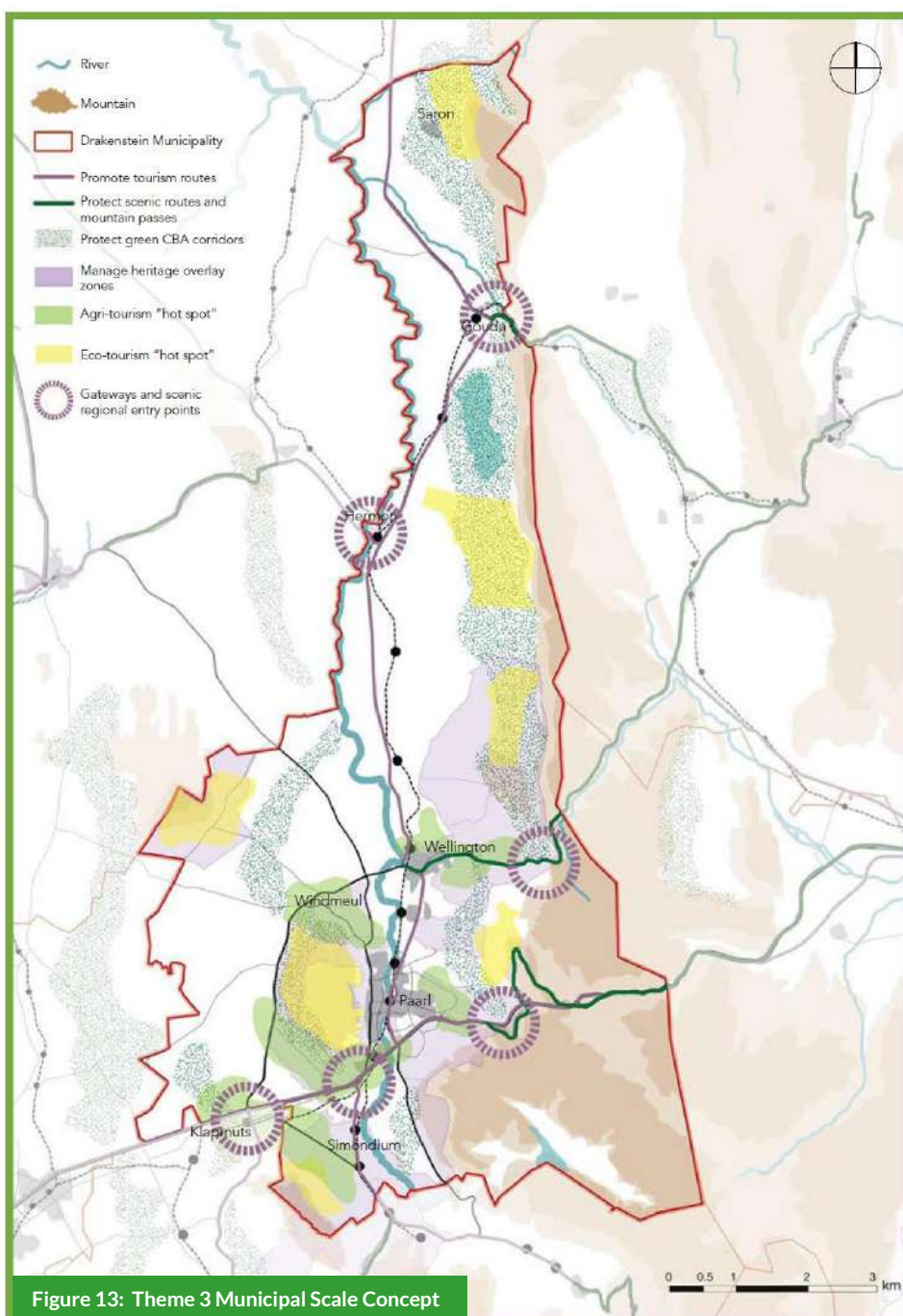


Figure 13: Theme 3 Municipal Scale Concept

#### LAND USE

- Guidelines for agricultural diversification;
- Guidelines for scenic routes and gateways;
- Land use incentives for rural land use to consolidate fragmented habitats; and
- Eco- and Agri-tourism guidelines.

#### INFRASTRUCTURE

- Promote "off-grid" services in outlying or environmentally sensitive areas;
- Restrict infrastructure to low visual impact or disturbed footprint areas; and
- Eco-tourism infrastructure guidelines (non-consumptive, low impact, use of sustainable local materials etc.)

#### TRANSPORT

- Land Use Management System (LUMS) and Heritage Overlay Zones (HOZ) to address impact of transport upgrade and new infrastructure on sensitive landscapes and tourism resources, particularly scenic routes and rural landscapes.

#### ECONOMY

- Eco-tourism marketing strategy;
- Agri-tourism marketing strategy; and
- Signage strategy for the municipal area.

#### HERITAGE

- Implement the formal protection of landscapes, settlements and scenic routes of cultural significance through their designation as Heritage Overlay Zones; and
- Establish partnerships for integrated management of landscapes and scenic routes which cut across municipal boundaries.

### IMPLICATIONS



## THEME 4. CONNECTIVITY AND GREEN LOGISTICS

Promoting Drakenstein as a regional agri-processing hub through strengthening its position within the regional distribution network and unlocking key economic drivers.

Minimising the ecological impacts of logistics through intermodal freight and transport systems and green economy initiatives while strengthening local economic supply chains.

### STRATEGY STATEMENTS

#### What needs to be protected?

1. Ecosystem services.
2. Productive agricultural land.
3. Sensitive interface between rural and urban landscapes from potentially insensitive uses and infrastructure.
4. Existing economic footprint, industrial areas and agglomerations of industry.
5. Local and regional supply chains.

#### What needs to change?

1. Expand existing waste treatment activities such as waste to energy projects and recycling initiatives.
2. Expand agri-processing activities in appropriate and centralised locations that relate to existing settlements and areas of concentrated agricultural production.
3. Establish a local and regional system of the forward and reverse flows of products and provide information and services between the point of origin and the point of consumption.

#### What new development is required?

1. Facilitate new opportunities for smaller scaled industries within existing industrial areas.
2. Encourage new waste to energy projects which deal with agricultural by-products and make use of the benefaction of the products from these waste streams.
3. Promote the green economy through new renewable energy initiatives, "green" building standards and other sustainability incentives.
4. Facilitate route and load optimisation in freight sector.

### MUNICIPAL SCALE STRATEGY MAP

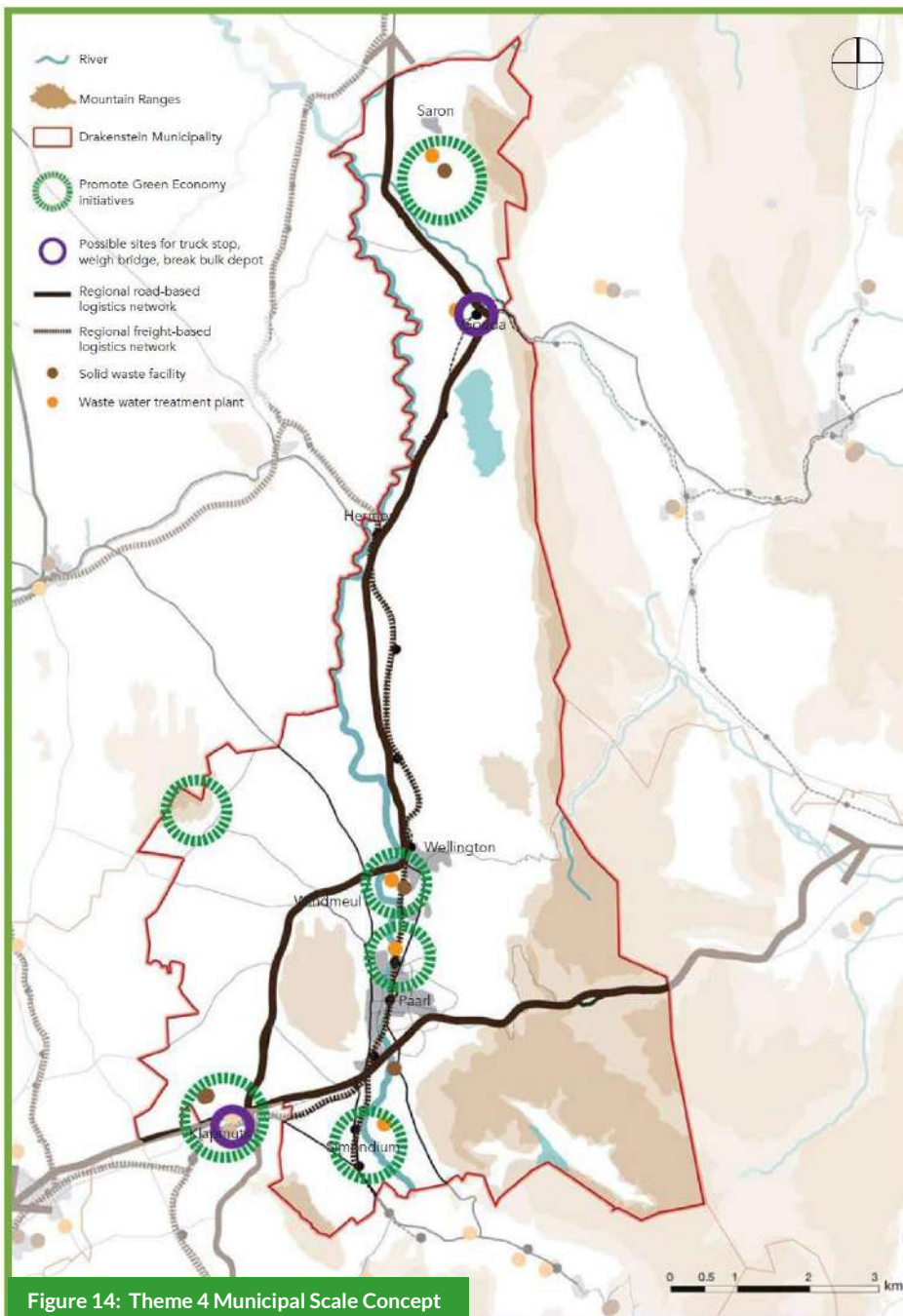


Figure 14: Theme 4 Municipal Scale Concept

### IMPLICATIONS

#### LAND USE

- LUMS to provide for "green" industries and "green" agri-processing
- LUMS for transport industry (e.g. where can it be accommodated)

#### INFRASTRUCTURE

- Understand infrastructure requirements and locational preferences for industry and agri-processing and provide infrastructure requirements accordingly
- Investigate a strategy for greening transport and agriculture industry,
- Employ climate change risk reduction infrastructure; through green engineering.
- Develop and implement sustainable energy plans.

#### TRANSPORT

- Spatial provision for transport/logistics industry
- Provide/plan for transport industry's infrastructure requirements (e.g. weighbridges & truck stops)

#### ECONOMY

- Formulate and promote incentives that will attract green economy and agri-processing projects and initiatives.

#### HERITAGE

- Guidelines for accommodating various forms of agri-processing in heritage sensitive areas, landscapes as part of HOZ implementation project

## THEME 5. SPORT AND EDUCATION

Promoting the Drakenstein region as an educational hub.

Capitalising on established educational, sport and outdoor recreational facilities and opportunities to attract investment and spending and to improve the wellbeing of the local community.

### STRATEGY STATEMENTS

#### What needs to be protected?

1. Historical educational institutions.
2. Sporting facilities and events.
3. Public places, including nature areas, used for sports and recreation.

#### What needs to change?

1. The maintenance and upgrading of stadiums and sporting facilities.
2. The marketing of local schools and educational opportunities.
3. The expansion of higher-level educational facilities.
4. Consolidation of isolated/single use sporting facilities & integration into a well-developed network of programmes and facilities.
5. Capitalising on education and training opportunities presented through the agricultural economy and the implications for foreign investment and rural livelihood development.

#### What new development is required?

1. Strengthened linkages between education and tourism-related activities through initiatives such as eco-tourism and agri-tourism activities and the training of local communities to participate.
2. Urban design and landscaping interventions for sporting precincts.
3. The identification of strategic sites for the establishment of centralised community sport facilities and a regional sporting centre and conference facility.
4. Opportunities for new student housing in a controlled manner that promotes densification.

### MUNICIPAL SCALE STRATEGY MAP

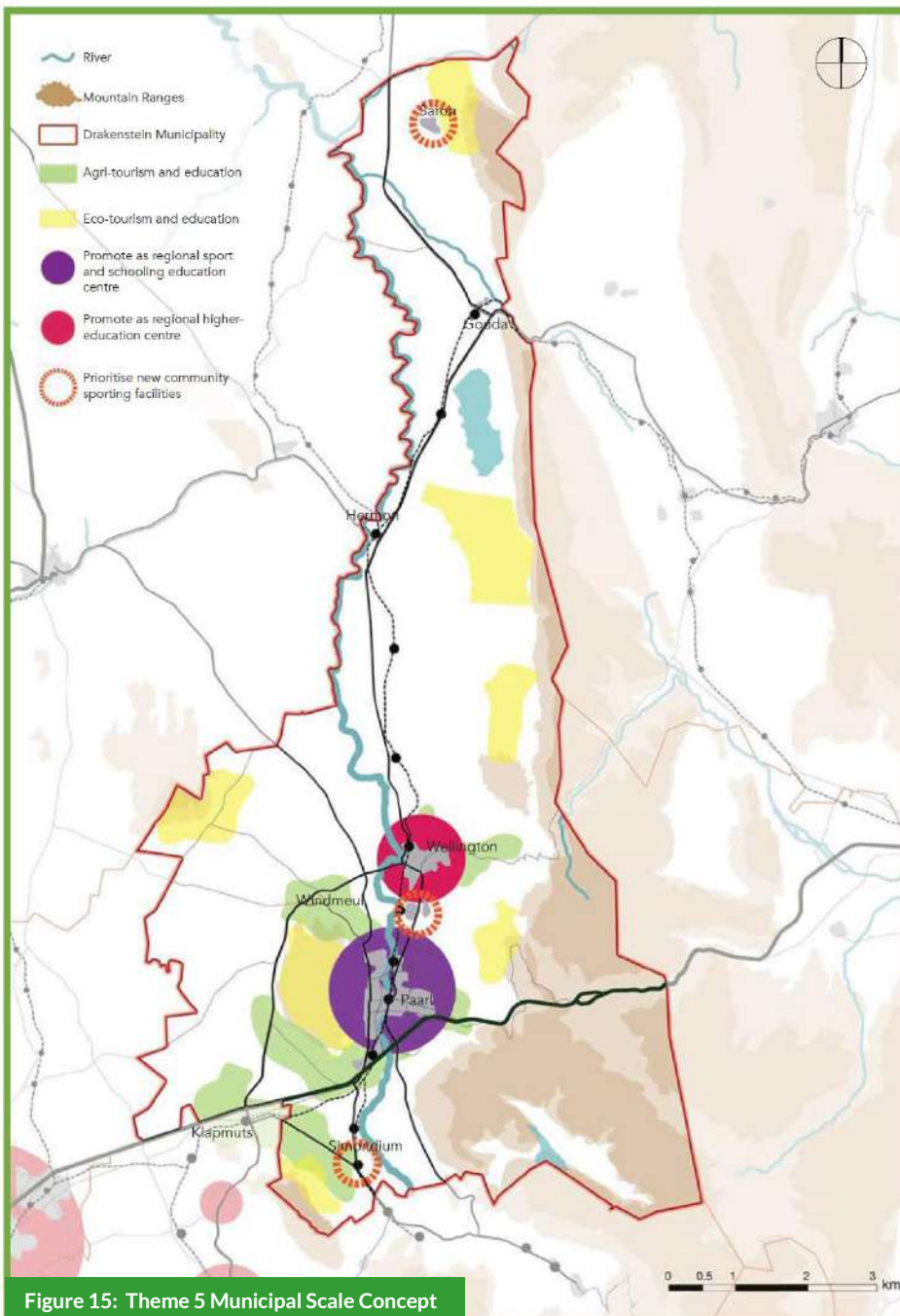


Figure 15: Theme 5 Municipal Scale Concept

#### LAND USE

- Land use management requirements for sport facilities to allow for mixed-used development ; and
- Guidelines and land use management planning for student accommodation.

#### INFRASTRUCTURE

- Establish infrastructural requirements of coordinated network of sporting facilities; and
- Establish agreements regarding the sharing of facilities to optimise use and cross-code training benefits.

#### TRANSPORT

- Understand and address student transport needs; and
- Strategy for transport management of big events.

#### ECONOMY

- Investigate the sports/events economy to understand the institutional, logistical and marketing requirements;
- Investigate external funding options for facilities; and
- Actively seek to attract more educational institutions – e.g. related to agri-processing.

#### HERITAGE

- Promote educational and sporting facilities and activities that build on the cultural identity of Drakenstein as a sporting and educational hub that contributes to the sustainable use of historical institutions.

### IMPLICATIONS



## THEME 6. SETTLEMENT AND COMMUNITIES

Facilitating smart growth of Drakenstein's settlements in accordance with their role and potential.

Promoting social development, community livelihoods and safety through the sustainable delivery of social facilities, public open space, recreational activities and housing.

### STRATEGY STATEMENTS

#### What needs to be protected?

1. The scenic quality of the settings of settlements, including aspects such as mountain backdrops, agricultural landscapes and riverine corridors.
2. The particular sense of place of settlements and nodes.
3. Significant townscapes and public places, including river frontages.
4. Urban cultural landmarks.
5. Traditional CBD areas from decentralised commercial development.

#### What needs to change?

1. Upgrade of the public realm of township areas to improve quality of life.
2. Urban renewal programmes in the CBDs of growth nodes and urban regeneration of culturally and historically significant precincts and neighbourhoods.
3. New models of housing delivery and security of tenure to promote densification and accommodate a variety of income groups and a spectrum of land uses.
4. Roll-out agrarian reform and rural livelihood programmes together with existing socio-economic and LED programmes.

#### What new development is required?

1. Plan for new transport infrastructure to support smart growth and improved access to socio-economic opportunities.
2. Pursue social and physical integration of previously segregated areas through linkages and the development of social facilities, housing and economic opportunities in strategic locations.
3. Facilitate land ownership and tenure security for farm workers and rural dwellers in "agri-suburbs" within existing settlements through the housing subsidy programme.

### MUNICIPAL SCALE STRATEGY MAP

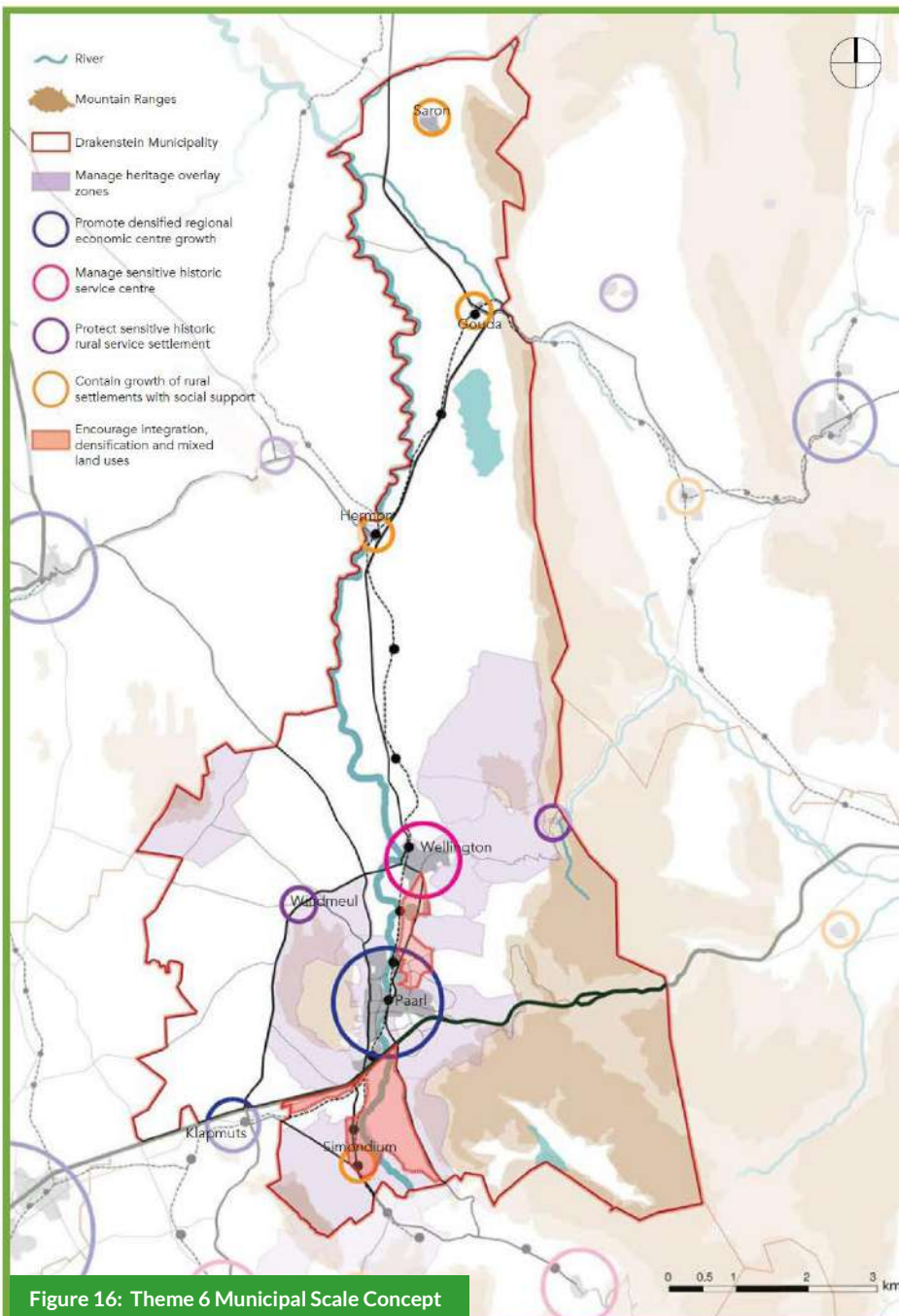


Figure 16: Theme 6 Municipal Scale Concept

#### LAND USE

- Identify overlay zones for urban renewal areas with incentives/programmes/support for investment;
- LUMS to accommodate new housing strategies (e.g. incremental housing); and
- Ensure optimal use of land in green and brownfields development.

#### INFRASTRUCTURE

- Upgrade network capacity to cope with densification;
- Ensure that long-term planned expansion of infrastructure networks will result in optimal use of land and smart growth patterns.

#### TRANSPORT

- Carefully consider the impact of new road links on land use management and demand; and
- Ensure that long-term transport planning supports smart growth.

#### ECONOMY

- Pursue/investigate private public partnerships for key priority projects such as the upgrade of the Paarl Arboretum or mixed housing developments.

#### HERITAGE

- Implement Heritage Overlay Zones and guidelines for settlements/areas of heritage value; and
- Expand existing heritage inventory to include heritage places associated with more recent social history such as Drakenstein's role in political action and the struggle, as well as its pre-colonial history.

### IMPLICATIONS



# 5.

## Land and Budget Considerations





## 5.1. Land Demand and Supply

SPLUMA requires that the future demand for housing and related infrastructure requirements is addressed in an SDF.

The spatial proposals outlined in the following chapter have taken into account the demand for land in terms of short term (5 year period) and long term (15-20 year) spatial planning horizons, confirmed the land available to accommodate growth and make recommendations on the density of development within these areas. These land areas and typologies are set out in the focus area plans above.

The first part of this section provides:

- an overview of the sources and agreed population projections used to inform the SDF,
- the current demand for housing,
- the current rates of housing delivery,
- land available to accommodate demand (across all income categories) and the densities at which this development should take place.

The implementation of development in these areas must however be phased in relation to available budget and infrastructure. To establish the financial implications for the Drakenstein Municipality a Municipal Services Financial Model (MSFM) has been developed to test the implications of a range of development scenarios. This is outlined in section 4.2.

In parallel to the SDF, an Infrastructure Masterplan is being prepared. This will take into account the SDF proposals but will also influence the phasing and location of development implementation.

### 5.1.1. Population growth projections

The demand for land for housing has been estimated based on the current demand (i.e. backlog) together with the demand that will be generated through population growth. The assumptions regarding growth projections have been outlined below.

Establishing realistic growth projections for the Drakenstein Municipality has proven a challenge as various sources have suggested a wide range of figures as follows:

- The historic growth rate for the municipal area between 2001 and 2011 based on the National Census information is calculated at 2.65% per annum – well above the national average of 1.55% and significantly higher than the average growth rate between 1996 and 2001 of 0.85% per annum.
- The Western Cape Provincial Department of Social Services recently commissioned a study on population growth projections for the Western Cape as a basis for their future planning. This study suggests a much lower growth rate of 0.86% per annum up to 2040 (PWC and Department Social Development, 2014)

The MSFM will inform the SDF through establishing the impact of certain growth scenarios on municipal finances. It is thus imperative that this model is based on a realistic understanding of the current and future population growth and demand for housing and services.

In order to arrive such a realistic understanding, population figures

are compared with the number of municipal account holders for services such as electricity. The concept of consumer unit is used to determine demand. A consumer unit is the unit provided with services by the municipality. In urban areas this is typically a plot, while in rural areas it may be a group of closely associated dwellings. In both cases, the consumer unit is the unit which is provided with a tap, toilet or electricity supply point. Thus the number of households in a municipality may differ from the number of consumer units for several reasons (most notably the prevalence of backyard shacks and over-crowding, which result in consumer units that comprise several households), as is the case in the Drakenstein Municipality.

Officials at DM have indicated that there is complete coverage of water and electricity services in the **urban formal areas** of the municipality. This would suggest that each consumer unit should be an account holder. However, the numbers of water and electricity residential account holders are significantly lower than the number of consumer units indicated by Census 2011.

Table 9: Differing data on number of urban formal residential consumer units

Source	Number of urban formal residential consumer units
Census 2011 urban formal consumer units	43 649
Residential water account holders	34 005
Residential electricity account holders	40 362

Ultimately the population, household and consumer units for the base year (2015) were estimated based on a Census 2011 data and the municipal billing database information (see table 4).

Following on the establishment of the baseline data, a growth rate of 0.96% was determined for projecting demand. This figure is based on the growth rate that would have resulted

if the number of urban formal CUs increased from the Census 2001 number to the 2014 electricity account holder numbers.

The model uses different growth rates in different settlement types and for different income groups. A lower growth rate is assumed in higher income groups, and zero growth is assumed in rural areas. The growth rates in lower income urban areas are

then adjusted to achieve the overall growth rate (see table 5).

In order for this information to be useful for spatial planning, household numbers per income category was established as indicated in table 6. This differentiation will help to establish the need for different types of subsidised housing and housing delivered by the private sector.

**Table 10: Distribution of population, households and consumer units (CU) between settlement types**

Settlement Type	Households	Consumer Units	Comments
Urban formal	45 027	40 362	CUs estimated based on residential electricity account holders in March 2014. Households are taken as the number of CUs plus 4 770 households living in backyard situations (ex Census 2011)
Urban informal	3 416	3 416	Based on the number of informal dwellings in Census 2011
Rural informal	7 623	7 623	Based on Census 2011
<b>TOTAL</b>	<b>56 066</b>	<b>51 401</b>	

**Table 11: Household growth rates assumed in the 'status quo' model run**

Household Income Type	Average hh growth per annum
Urban high income	0.5%
Urban low income	1.81%
Rural high income	0%
Rural low income	0%
<b>TOTAL DM</b>	<b>0.96%</b>

**Table 12: Household projections per income category**

	R0 - R3500	R3501 - R7000	R7001 - R15 000	R15 001 - R51 200	More than R51 200	TOTAL
2015	26 198	9 860	7 599	10 271	2 136	<b>56 064</b>
2020	26 995	10 047	7 354	11 935	2 482	<b>58 812</b>
2035	28 419	10 636	6 731	19 458	4 046	<b>69 290</b>
Total additional hh from 2020 - 2035						<b>10 478</b>
Persons per hh (assumption)	4	4	2	3	2	



### 5.1.2. Current Demand for Housing

The SDF will in particular deal with the provision of housing or opportunities for housing, rather than focussing on the backlogs in service provision, as the provision of housing opportunities will also deal with service backlogs.

The existing demand for housing is based on the official Drakenstein Municipal Housing Waiting List. A common misunderstanding about this waiting list arises as the total number of applicants added to list since its inception (probably in the early 1980s) is reflected on the list as the total number of people in need of housing – currently standing as 40 728, without considering the number of people who have already received housing or have fallen off the list for another reason. People who are no longer on the waiting list is indicated as cancellations and this amounts to

18 649. The more realistic figure of the actual number of people in need of housing is thus 22 079, which is more in line with the PGWC estimate of approximately 19 000. The distribution between settlements is set out below, based on information provided by municipality – note that not all settlements are presented and that the demand for rural households have been allocated to the nearest settlement as it is the policy promoted by this SDF that rural dwellers should be accommodated at existing nodes where there is access to social and municipal services, and economic opportunities.

With regard to the demand for housing for people living in rural areas, it is often speculated that this demand is underestimated as rural dwellers in need of housing (e.g. in overcrowded situations) have historically not been registered on the waiting list as they were receiving housing from farm owners. However there is no empirical research that could provide an indication of

how the current figure should be adjusted. The housing department of the municipality estimates that the current figure represents only 25% of the actual demand, in the light for instance of the high eviction rate and number of pending eviction cases in the area. I.e. the figure of 3 283 in total should thus be 13 132 (this is more than half of the current waiting list), but the waiting list does not provide information on cancellations per area and thus it is unclear how accurate the base figure of 3 283 is. For the purposes of this SDF, the demand for housing from rural dwellers is estimated to be double the figure of the waiting list.

In total by 2035 provision for housing opportunities should be made as shown in table 8 below.

Of this demand, some will be provided by the market and some will need either a full or partial subsidy from government. The demand figures thus have been refined and shown in table 9 below.

Table 13: Current housing backlog per settlement

Settlement	BNG - fully subsidised housing	GAPP - partially subsidised housing
Saron	803	27
Gouda	1440	251
Wellington	3302	880
Mbekweni	2269	547
Paarl	8539	2670
Simondium	1274	77

Table 14: Additional housing opportunities required by 2035

Population growth (Table 5)	13 226
Existing backlog (Table 6)	22 079
Estimated unrecorded demand of rural dwellers	3 283
<b>TOTAL</b>	<b>38 588</b>

Table 15: Additional housing opportunities required by 2035 per housing type

BNG Housing	Gap Housing	Market Driven Housing
23 131	4 360	11 097

### 5.1.3. Demand per Settlement

The demand as set out above also has to be spatialised, i.e. estimated per area/settlement in Drakenstein. Whereas there is information on the demand in certain settlements, based on the housing waiting list, i.e. subsidised housing, there is no accurate way to predict market demand per settlement. The demand has been spatialised based on the assumption that very limited if any population growth will take place in the smaller settlements such as Gouda, Saron, Hermon and Windmeul, with the bulk of the growth in the urban conglomeration of Paarl, Wellington and Mbekweni. This is also in line with planning policy that specifies that housing should be provided where there are economic opportunities and infrastructure. It is thus suggested that in the smaller settlements at most the current backlog is provided, and no new people are put on waiting lists for these settlements.

### 5.1.4. Current rate of Housing Delivery in Drakenstein

In order to inform the planning for future housing/housing opportunities delivery, it is useful to understand the current pace of delivery. The Drakenstein Municipalities records indicate that they have delivered the subsidised housing as reflected in table 10 below.

This means that they have delivered on average 574 units per year. At this rate it would take the municipality approximately 47 years to deliver the number of additional subsidised units required by 2035. Given the recent cuts in the budget allocation from the PGWC (by almost 50%) it seems unlikely that the municipality could realistically meet the demand employing the current mechanisms and it would seem more realistic that the municipality adopts a policy of providing serviced plots. This would probably be politically unpalatable,

but may become acceptable if it results in more people being helped and this becoming evident to communities. In addition it must be recognised that people currently on the waiting list, are at present housed somewhere, either in informal settlements, backyard shacks or in overcrowded conditions in formal structures. In addition it is proposed that municipality should assist people in formalising backyard shacks to an acceptable standard of living. This will result in the form of densification that would over the long run result in better functioning urban areas. This will require an understanding of the extent and location of existing backyard shacks, the services capacity in those areas and the land use management, legal and financial implications of such a programme.

Table 16: Historical housing delivery in Drakenstein

Period	No of units
1998 - 2003	4081
2004 - 2014	5103
<b>TOTAL</b>	<b>9184</b>



### 5.1.5. Developable Land Areas and Densities

The Drakenstein Municipality has already undertaken a comprehensive study of land available for housing delivery (Element and Macroplan, 2010) which identified 1755ha of land that can be developed for residential purposes.

As part of the SDF planning process, these sites were reviewed. Areas already developed or approved for development and areas that do not support the SDF spatial objectives were eliminated from the database of available land.

Sites that are regarded most suitable for housing development as well as mixed use developments (which will preferably include a portion of residential) have been identified and mapped as part of the focus area proposals. The "Land Use Implications for Key Sites" for each Focus Area indicate the desired location and typology of development appropriate for each parcel.

These sites make up a total developable land area of 1586ha. At an average gross density of 25du/ha these sites can accommodate the predicted future demand for an additional 38 588 households.

From a land perspective only, the spatial proposals demonstrate that there is sufficient infill land within the existing settlement footprint to meet the demand for growth up to 2035 without any densification.

The distribution of the land area proposed for housing and mixed use development between the various settlements in the municipality is set out below in table 11.

However, the capital and long term operating costs of implementing new development need to be considered in determining whether all of these sites should be developed and how they should be prioritised.

This is explored further in the MSFM section in 4.2.

Table 17: Extent of land suitable for housing development in urban areas

Settlement	Developable Land for Residential (ha)
Saron	10,38
Gouda	8,79
Hermon	5,6
Wellington	134,89
Mbekweni	217,41
Windmeul	24,1
Paarl	391,14
Paarl South	657,08
Simondium	29,39
Klapmuts	10,96
Ben Bernhard	96,4
<b>TOTAL</b>	<b>1586,14</b>

Table 18: Calculating the average density

Land Available for Residential Opportunities	1586,14
Additional housing opportunities required by 2035	38 588
<b>AVERAGE DENSITY ACHIEVED</b>	<b>≈ 25du/ha</b>

## 5.2. Growth Scenarios Explored

### 5.2.1. Introduction

A Municipal Services Financial Model (MSFM) was run for Drakenstein Municipality as part of the preparation of the Spatial Development Framework in order to quantify the impact that different spatial decisions make on the need for capital expenditure in the municipality, the extent to which there is sufficient finance available to cover this expenditure, and the impact that the capital expenditure is likely to have on the operating budget.

The MSFM is a modelling tool that assists municipalities to plan infrastructure investment. It was originally developed for the Development Bank of Southern Africa (DBSA) and the then Department of Provincial and Local Government (now the Department of Cooperative Governance and Traditional Affairs). The MSFM is a well-accepted tool and has been applied in over 30 South African municipalities to date.

### 5.2.2. Densification and Transit Oriented Development

International best practice shows that a target gross density of 75du/ha is optimal to support efficient public transport, more affordable infrastructure maintenance costs and promote liveable cities.

The current gross density of the settlements in the Drakenstein Municipality is 8.66du/ha (2006 DM Densification Study). This low density cannot sustain cost effective infrastructure or public transport services and therefore suggests the need for substantial densification in well-located areas. These are defined as areas that are close to employment, public transport routes and social facilities.

The Focus Area Plans identify areas for densification in well-located areas to support transit oriented development in alignment with higher density mixed use developments. Such densification could include formalising backyard dwellings, redevelopment of existing buildings and residential conversions and subdivisions. The motivation for this is to decrease the impacts of new growth on the long term operating costs for the municipality by containing the extent of infrastructure and transport networks. Equally important is the role that this spatial containment can play in reducing the loss of agricultural land, cultural landscapes and ecosystems.

A total area of 414ha has been identified for densification in well-located nodes. In order to compare the impact that densification will have on the loss of valuable greenfield sites three scenarios have been developed.

1. The first scenario assumes that no densification will take place. Therefore the total amount of 1586ha of identified urban infill sites will have to be developed to accommodate future growth and existing backlogs at an average density of 25du/ha.

2. The second scenario takes a conservative approach to densification where only 50% of the 414ha of land identified for densification is developed at an increased density of 40du/ha. This scenario does not allow for backyard formalisation but can accommodate 5175 households in the densification areas, saving almost 250ha of greenfield land.
3. The third scenario proposes that 60% of the land within densification zones are densified and that an additional 50ha of informal areas are formalised through backyard formalisation (predominantly in Mbekweni and Paarl East). This will lead to the accommodation of 17904 households within the existing urban footprint (close to the total need on the waiting list), therefore saving almost 760ha of vacant greenfield land that would have been required for development. This does not only provide additional recreational opportunities and spaces for public open space but also has major implications for urban restructuring and integration.

(It is important to note that the bulk of the identified densification zones are in private ownership so the achievement of increased densities would need to be facilitated through the zoning scheme or incentives)

Table 19: MSFM Scenarios Specifications

Scenario	Average HH growth per annum	Average economic growth per annum	Spatial form for growth
Business as Usual	0.96%	2.0%	Sprawled
High HH growth	<b>2.65%</b>	2.0%	Sprawled
Low economic growth	0.96%	<b>1.0%</b>	Sprawled
SDF	0.96%	2.0%	<b>Compact</b>



### 5.2.3. Business as Usual Model Run

A 'Business As Usual' (BAU) model run was prepared assuming that development continues to take place in a sprawled manner, and that average household growth is 0.96% and economic growth 2.0% per annum on average over the next 10 years.

#### Capital expenditure of about R480 million per annum is required

The BAU run found that capital expenditure of R4.8 billion would be required over 10 years to eliminate backlogs, allow for growth and renew the existing infrastructure base. This is, on average, R480 million per annum; significantly higher than current capital budgets of about R250 million per annum.

#### There is a R2 billion funding gap

Drakenstein can access about R2.8 billion in capital finance over the next 10 years from grants and subsidies, development charges, and municipal own sources. This leaves a funding gap of about R2 billion.

Two points are worth noting here.

The first is that in all of the almost 40 times that the MSFM has been run, no municipality has been found able to finance the full capital expenditure

required. So Drakenstein is in good company in showing a funding gap.

The second is that the affordable capital programme in the BAU run (about R280 million per annum) is well aligned with current capital budgets.

#### Half of the need is for renewal of existing infrastructure

About 50% of the need (R2.4 billion over 10 years) is for the renewal of the existing infrastructure base. The estimated Current Replacement Cost of infrastructure owned by Drakenstein is almost R6 billion.

A further R2.2 billion over 10 years (47%) is needed to expand infrastructure in order to allow for growth, while the remaining R0.2 billion (3%) is needed to provide infrastructure to those who do not have access (eradicate backlogs).

#### Most of the need is for infrastructure that is not used by the poor

While R1.6 billion investment is required in infrastructure for the poor, the majority (R3.2 billion or 66%) is required for infrastructure used by non-poor households and businesses.

### 5.2.4. Specification of Scenarios

A model is most useful when it is used to compare scenarios, rather than a single static case. Three scenarios were developed. Two of these looked

at alternative growth assumptions, while the third looked at urban form.

The specification for each of these scenarios is detailed in the table below.

### 5.2.6. Scenario Results

A capital funding gap remains under all three scenarios, but it is marginally smaller under the SDF scenario.

Higher household growth leads to a higher need for capital expenditure, and a larger funding gap. This is because household growth was assumed to take place largely in low income households who cannot afford to pay for the full cost of infrastructure provided to them. The need for infrastructure rises, and the municipality's ability to finance that infrastructure does not rise sufficiently to accommodate this.

Lower economic growth reduces the need for infrastructure somewhat, but increases the size of the funding gap. This is because of the interplay between household and economic growth: under this scenario, economic growth is not sufficient to support household growth and so the income distribution worsens over time. As in the higher household growth scenario (although to a lesser extent) the result is relatively high numbers of low income households using infrastructure but unable to afford to pay the full cost of that infrastructure.

A more compact spatial form results in cost savings on infrastructure.

Table 20: MSFM Scenarios Specifications

Scenario	Total capital expenditure required (2015 Rmillion)	% change from BAU	Capital funding gap (2015 Rmillion)	Funding gap % of total expenditure
Business as Usual	4 828		2 078	43%
High HH growth	<b>6 092</b>	26%	3 445	57%
Low economic growth	4 806	<b>0%</b>	2 464	51%
SDF	4 658	-3%	<b>2 023</b>	<b>43%</b>

The benefit is only felt on new infrastructure (not on the renewal of existing infrastructure) and so is relatively small over the 10 year model run. More compact urban form will continue to deliver these cost benefits over the very long term.

### 5.2.6. MSFM Summary

Like almost all South African municipalities, Drakenstein LM cannot raise enough finance to provide the infrastructure that is required to eradicate backlogs, allow for growth and renew the existing infrastructure base. The size of the funding gap that will be faced will depend on how growth takes place: what will household and economic growth rates be, and will economic growth be sufficiently high to accommodate household growth? The need for infrastructure spending can be reduced somewhat by adopting a more compact urban form.

A municipality faced with an infrastructure need in excess of what can be financed must prioritise infrastructure investment carefully in order to balance expenditure on the various infrastructure services, as well as expenditure on new infrastructure versus the renewal of existing infrastructure, and expenditure on poor households versus on non-poor households and businesses. Drakenstein LM has a prioritisation model in place that assists in this process.

## 5.3. Implications

While a number of non-negotiables have been identified in the SDF, the spatial proposals also present options for the form and location of development to accommodate new growth. However strategic choices need to be made in determining priorities between these options in the implementation of the framework.

These choices must be informed by the implications for municipal infrastructure and finance and can only be fully assessed once the Infrastructure Masterplan has been completed. The outcomes of this parallel process will be captured in a subsequent draft of this framework.

These choices must also be informed by the municipality's mandate on housing delivery models of which densification is an important consideration. The implications of densification for more sustainable patterns of development as well as socio-economic integration and infrastructure savings is discussed in section 4.4 and illustrated in table 15.



Table 21: Total greenfield land / urban infill sites saved per densification scenario

Densification Scenarios	LOW (0% Densified)	MEDIUM (50% Densified)	HIGH (60% Densified)
Target density	25	40	75
Baseline current average density (estimate)	15	15	15
Additional density	10	25	60
Hectares land densified (% of 414ha)	0	207	248,4
Hectares land utilised for backyard formalisation	0	0	50
Households accommodated in densification areas	0	5175	17904
Households to be accommodated in urban infill / greenfield sites	38588	33413	20684
Greenfield land required for urban infill to achieve target density (25du/ha)	1586,14	1336,52	827,36
<b>TOTAL GREENFIELD LAND SAVED</b>	<b>0</b>	<b>249,62</b>	<b>758,78</b>

# 6.

## The Focus Area Spatial Frameworks





This chapter sets out the spatial framework for the future growth of Drakenstein. The proposals and strategies contained within the framework aim to achieve the desired spatial form while ensuring alignment with the spatial development principles and SDF themes.

### The 13 Focus Areas

A spatial framework has been developed for all urban areas within the Drakenstein Municipal area. The rural areas are dealt with at a broader municipal scale within the Environmental Management SDF Theme (Theme 1) where reference is made to the 2012 Environmental Management Framework for more detail.

The 13 identified Focus Areas (FAs) are listed below and spatialised in Figure 10.

**FA1: Paarl**

**FA2: Paarl East**

**FA3: Mbekweni**

**FA4: Wellington**

**FA5: Paarl South**

**FA6: Simondium**

**FA7: Ben Bernhard**

**FA8: Klapmuts North**

**FA9: Windmeul**

**FA10: Hermon**

**FA11: Gouda**

**FA12: Saron**

**FA13: Bainskloof Village**

It is important to note that the 13 FAs must not be seen in isolation. The implementation of the proposals and strategies for each FA must be considered in close relation to one another in order to ensure that the broader spatial concepts are achieved in a holistic and cohesive manner.

### Structure per Focus Area Framework

The spatial strategy for each FA follows a similar structure and is presented as follows:

1. A **spatial concept plan** that illustrates the conceptual approach to the FA in a diagrammatic manner (the elements of the spatial concept plan are defined in section 3.4). The conceptual approach reflects the relevance of each of the 6 themes, whereafter the key spatial concepts and interventions are highlighted. Land use proposals should be evaluated against the spatial concept plan for consistency with the development principles of the SDF.
2. A proposed **land use implications** plan which illustrates in more detail the preferred land use implications of the spatial concept in a cadastral format. The land use implications reflected on these plans only refer to key strategic sites within the FA that will give guidance to the LUMS and update of the zoning scheme.
3. Priority projects and Infrastructure limitations / pre-conditions plan for each FA.
4. An **implementation matrix** that identifies the key projects and implementation mechanisms required and unpacked in terms of the associated timeframes, role players and IDP project prioritisation.

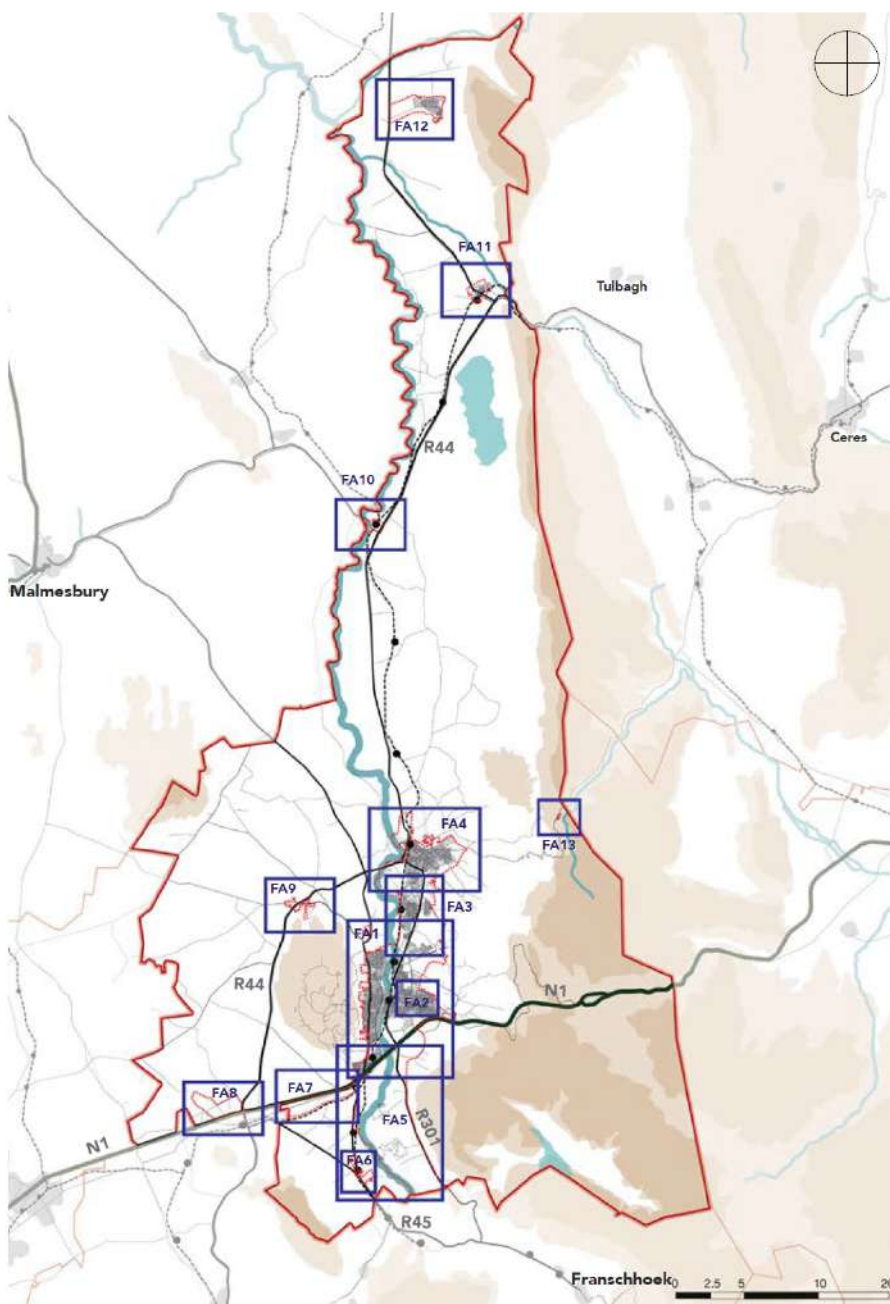


Figure 17: Locating the 13 Focus Areas



## 6.1. Defining the Framework Elements

Similar elements are used in the mapping of the conceptual approach for each focus area. These elements reflect on the overarching principles set out in 2.2 as well as the key aspects of the 6 SDF themes – e.g. protecting agricultural land as per Theme 2. An explanation of each element as well as their graphic representation is provided below.

### Retained Rural Areas

Retained rural areas include undeveloped (wilderness), rural and agricultural areas that must be retained, protected and/or improved (e.g. alien clearing). The protection of these areas is critical to ensure that the ecosystems which support life in the Drakenstein valley function optimally and that agriculture as the basis of the local economy retains its viability. Lack of desirability for the development of residential estates in rural areas outside the urban edge.

Retained rural areas are, in some cases, identified within the urban edge. In this case development pressures can be expected, and development can be allowed. However, development guidelines should be agreed upon upfront for these areas of significant rural character and landscape value, particularly where these fall within areas of high botanical, heritage, cultural and scenic value within the urban edge.

#### DEVELOPMENT GUIDELINES:

- Appropriate treatment of interfaces, heights, form of development and intensity - reinforce rural landscape and activity character and reflect compact unobtrusive nodes, conforming to local vernacular in terms of scale, form and design;
- Development to comprise natural/scenic/cultural compactible land uses informed by transformation thresholds, including:

- Low density housing development.
- Resort and holiday accommodation.
- Tourism and recreation facilities.
- Limited development footprints of low density housing and facilities;
- Maintaining the dominance of the natural and agricultural landscapes;
- Create a dominant ecological conservation and preservation area as a major component of undisturbed landscape to form part of the critical biodiversity areas (CBA's).
- Create strategic ecological corridors through the site to strengthen the linkages between critical biodiversity areas (CBA's).
- Introduce a gradient of landscape uses that filters from conservation areas (biodiversity and/or heritage) through to the community gardens that act as a functional buffer between the conservation area and development, protecting conservation worthy places and heritage areas (e.g. farmsteads);
- The settings of special cultural features are to be protected by providing them with 'breathing space' and leaving public views uncluttered.
- Traditional patterns of plantings are to be protected by ensuring that existing tree alignments and copses are not destroyed but are reinforced or replaced enhancing traditional patterns with suitable species.
- Avoid infrastructure projects which create visual and physical barrier, ensure sensitive siting of infrastructure, especially renewable energy installations (e.g. solar);
- Maintaining dominant landscape features and their continuity (e.g. ridge, valleys).
- Avoid wall and land-locked effect by maintaining visual permeability to surrounding rural landscapes;
- Provide view corridors and pedestrian / open space linkages;
- Low impact /green technologies implemented where-ever possible;
- Integrate settlement patterns with the existing water system through the use of green infrastructure and sustainable urban drainage systems.
- May require EIA, VIA or HIA.

### Green Core

The green core comprises; green spaces including vacant plots, public and private open space and green corridors in urban areas that connect retained rural areas and are thus envisioned to form ecological corridors and at the same time provide recreation areas and potential opportunities for urban agriculture.

### Peri-Urban Farming

These are agricultural areas situated on the urban fringe, which could be suitable for small scale farming, and/or land reform projects depending on the specific circumstances.

### Urban Infill

A key strategy of this SDF is infill development of strategic sites in urban areas. These sites have been identified based on the 2010 development potential study.

Seven generic development typologies have been developed aimed at achieving the desired urban form and character for each focus area, based on the spatial concept. Of these seven, six are focused on different models of infill housing only, whilst the seventh typology suggests a mix of land uses – in particular business, housing and community facilities.

A matrix of these typologies (see following page) sets out the description and associated representative colour for each typology. The preferred gross and net density range for each typology are stipulated and the desired urban form is illustrated through the use of local examples and other best practice precedent. For each typology the



relevant target income group is also identified. These income groups have been categorised based on the current national subsidy programmes relevant to housing delivery in order to inform possible sources of funding for the implementation of residential development.

Typologies have been carefully considered based on infrastructure capacity and community development and certain sites will contain more than one preferred option. It is important to note that a typology does not confine a site to only one option of urban form. It is suggested that the typology above or below the preferred typology indicated in the matrix, could also be implemented, so as to ensure that suitable densities are achieved.

The colour indicated on the land use implications map for each FA is an indication of the preferred predominant typology for the development of that site and that at least 50% of the site should be covered with this typology. The rest of the site can then consist of either the typology above or below, or the same typology as the dominant one obviously. If the developer would like to have the typology below or above as the dominant typology (i.e. 50% or more) then it will be allowed based upon a motivation or negotiation with municipal officials

A land use map has been prepared for each focus area on which the typologies have been identified for specific vacant or developable sites.

### Agrarian Settlement Development

Agrarian settlement development refers to limited opportunities for low-density off-grid / sensitive residential development within the urban edge. The development in these site should reinforce rural landscape and activity character and reflect compact unobtrusive nodes, conforming to local vernacular in terms of scale, form and design. The nature of the development within these sites should follow the development guidelines outlined in the above-mentioned "Retain Rural Areas"

### Industrial Core

Industrial core refers to existing and proposed new industrial areas.

### Density Zone

Densification zones are residential areas within existing settlements where residential densification should be accommodated and promoted through appropriate mechanisms such as redevelopment, infill, subdivision, second dwellings, sectional title, greenfield or brownfield development.

### Node

Nodes are strategically located areas on high-usage routes where a high concentration of activities and mix of land uses (commercial and public/community facilities) should be encouraged, appropriate to the character of the area and its role in the spatial structure.

### Gateway

As identified in the Celebration Gateways report (2014), these indicate entrance points to urban settlements which required urban design interventions (signage and landscaping) to enhance the sense of place.

### Green Gateway

Green gateways are strategic access points that must provide public access to the green core system/network.

### New Road

New road links have been identified that will complete and support an efficient urban structure and facilitate integration between previously segregated areas.

### Community Spine

Community spines refer to routes that form activity spines along which a mix of high density urban uses should be encouraged and allowed and public transport should be routed.

### Mobility Route

Mobility routes refer to roads that function as primary mobility routes into settlements as well as between neighbourhoods.

### Scenic Route

Scenic routes refer to routes that provide vistas over scenic landscapes and the experience of a sense of place.

### Heritage Resources

The intention of the Heritage Core Designation is to protect the agricultural setting of Paarl in its historic cultivated landscape and to protect the built environment Heritage Resources while allowing for appropriate adaptive reuse of historic buildings/sites within limits. Principles for the control and guidance of development within a Heritage Overlay Zone should be included in the LUMS.

Development within a Heritage Core area will require detailed precinct plan and urban design guidelines for the upgrading and maintenance of built Heritage Resources.

Any place in South Africa which is of environmental or cultural interest is worthy of being designated a heritage area. The Drakenstein Municipality may designate any area or land to be a heritage area on the grounds of its environmental or cultural interest or the presence of heritage resources, provided that it consults the provincial heritage resources authority and any affected community and any owners of property in the area.

A local authority must provide for the protection of a heritage area through the provisions of its own planning scheme or through the provisions of by-laws under the National Heritage Resources Act. The consent of the local authority is required for any alteration or development affecting a heritage area.



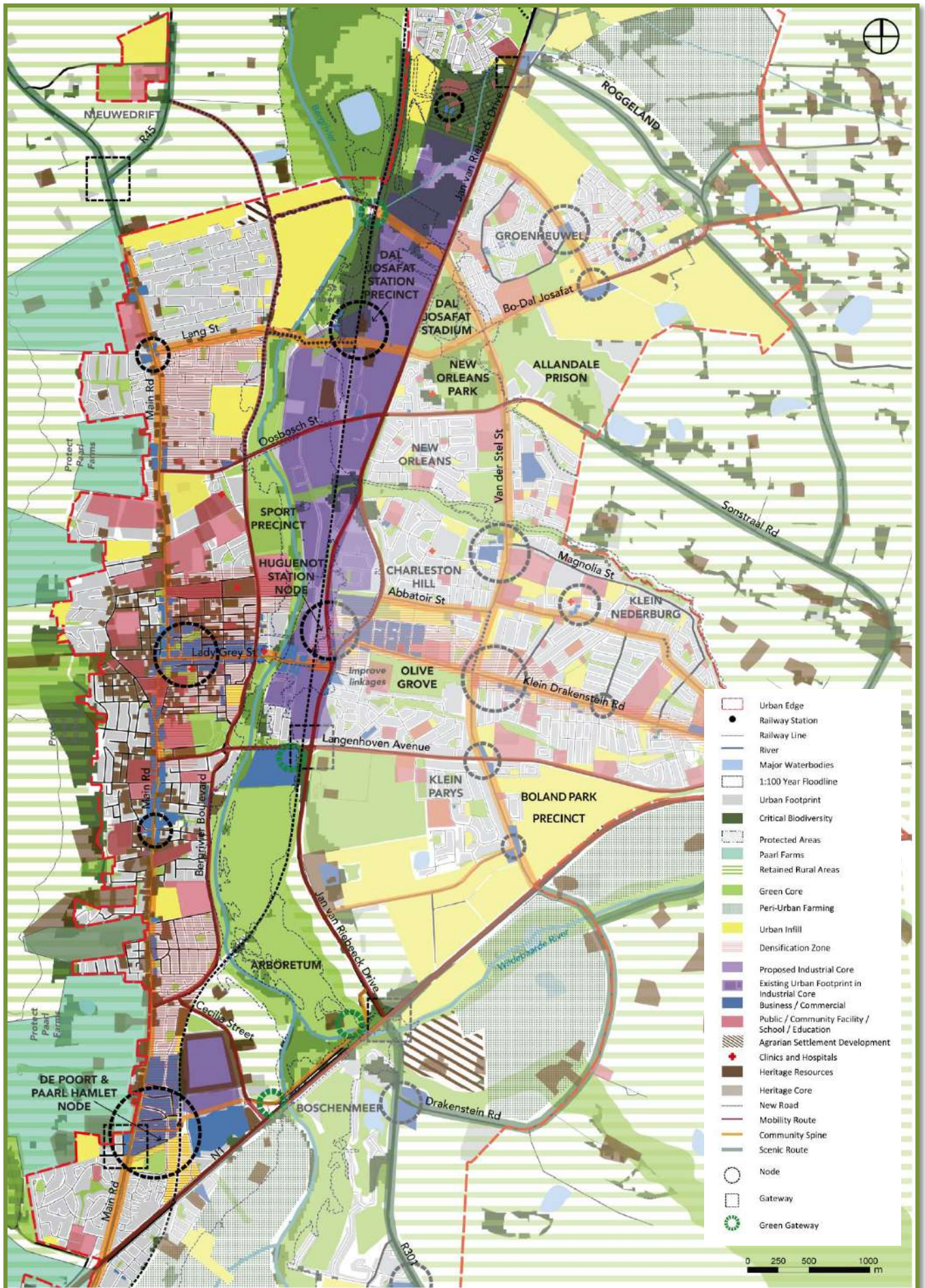
Table 22: The typology matrix

NO.	DESCRIPTION	DENSITY	DESIRED URBAN FORM	TARGETED INCOME GROUP				
				R0 - R2500	R2501 - R7000	R7001 - R15000	R15001 - R512000	More than R51200
1. APARTMENT	<ul style="list-style-type: none"> <li>2- 4 storey apartment building</li> <li>Designed to allow pedestrians to be served without entering the building (no elevator)</li> <li>Internal courtyards</li> </ul>	<b>NETT:</b> 80 - 100 du/ha  <b>GROSS:</b> 45 du/ha						
2. ROW HOUSING	<ul style="list-style-type: none"> <li>1 - 2 storey row houses or duplexes</li> <li>Attached buildings</li> <li>Shared narrow frontages unto street</li> </ul>	<b>NETT:</b> 80 du/ha  <b>GROSS:</b> 35 du/ha						
3. SEMI DETACHED HOUSING	<ul style="list-style-type: none"> <li>1 storey housing</li> <li>Semi-detached buildings</li> <li>Shared narrow to medium frontages unto street</li> <li>Communal courtyards / backyards</li> </ul>	<b>NETT:</b> 30 - 50 du/ha  <b>GROSS:</b> 25 - 35 du/ha						
4. SEMI DETACHED TOWNHOUSE	<ul style="list-style-type: none"> <li>1 - 2 storey townhouse or duplex</li> <li>Semi-detached buildings</li> <li>Shared medium frontages unto street with private backyards</li> </ul>	<b>NETT:</b> 30 - 50 du/ha  <b>GROSS:</b> 25 - 35 du/ha						
5. SINGLE RESIDENTIAL	<ul style="list-style-type: none"> <li>1 - 2 storey detached single residential</li> <li>Medium to wide frontage unto street with private backyard</li> </ul>	<b>NETT:</b> 20 - 30 du/ha  <b>GROSS:</b> 10 - 20 du/ha						
6. SERVICED PLOT	<ul style="list-style-type: none"> <li>Serviced plots</li> <li>Incremental housing - extendable or adaptable units</li> <li>Flexible layout</li> <li>In-situ upgrading</li> <li>Various typologies</li> <li>Multi family units</li> </ul>	<b>NETT:</b> 50 - 70 du/ha  <b>GROSS:</b> 25 - 35 du/ha						
7. MIXED USE	<ul style="list-style-type: none"> <li>1 - 6 storey buildings</li> <li>Range of uses</li> <li>Commercial on ground level</li> <li>Office space and mix of residential units above</li> <li>On-street frontage</li> <li>Public transport facilities</li> <li>Scale and nature of uses to be appropriate for context</li> </ul>	<b>NETT:</b> 60 - 80 du/ha  <b>GROSS:</b> 45 du/ha						



# FA1 PAARL

## SPATIAL CONCEPT





## 6.2. Focus Area 1: Paarl

Paarl is the economic hub of the Drakenstein Municipality and the focus of interventions should be on increasing the efficiency of the urban structure, so as to create further socio-economic opportunities. These interventions include densification and infill development of strategic areas and land parcels, the strengthening of links between Paarl East and West (in particular the connection between Lady Grey and Klein Drakenstein Road), and support for and investment in urban renewal in key nodes, such as the area around Huguenot Station, the Paarl CBD and Paarl Station.

In addition Paarl has a number of strategic assets that could attract more visitors to the town and benefit the resident community such as the public land along the Berg River (including the Arboretum) and Paarl Mountain. These require an appropriate scale of intervention that will enhance the assets, without detracting from the unique sense of place.

The heritage assets of the town have been well-documented and the appropriate level of protection will be key to retaining the overall sense of place of the town, which makes it attractive for investment in the first place.

Further opportunities include enhancement of its sports infrastructure and agri-processing industries – so as to establish the town as the leading sports and food production centre in the Western Cape.

### Theme 1: Environmental Management

- 1.1. Rehabilitate and protect riverine corridors (Berg River and tributaries) and protect critical biodiversity areas and wetlands and manage floodplains.
- 1.2. Celebrate natural features / resources (Paarl mountain, Arboretum).
- 1.3. Facilitate stewardships to conserve CBAs such as lower slopes of Paarl mountain.

### Theme 2: Agriculture, Land Reform and Rural Development

- 2.1. Delineate 'agricultural edge' inclusive of Paarl Farms, high value and unique agricultural land (existing irrigated footprint) and areas suitable for small-scale production and agrarian reform (ie: allotments) – between Paarl and Windmeul - to protect agricultural land.
- 2.2. Promote urban agriculture and small-scale farming opportunities and agrarian reform and facilitate local produce markets and informal trading spaces to promote 'garden / farm to plate' marketing channels.
- 2.3. Improve management of stormwater and WWTW disposal to protect agricultural water resources.

### Theme 3: Heritage And The Cultural Landscape

- 3.1. Protect the agricultural setting of Paarl in its historic cultivated landscape and protect the built environment heritage resources while allowing for appropriate adaptive reuse of historic buildings/sites within limits.
- 3.2. Facilitate interventions for Paarl Station Area, Paarl Main Road, De Poort, Arboretum, Paarl Waterfront Site to attract tourism investment and celebrate heritage value.
- 3.3. Promote niche market tourism such as food production/agri-processing.

### Theme 4: Connectivity and Green Logistics

- 4.1. Capitalise on the critical mass of existing transport enterprises and provide supporting infrastructure.
- 4.2. Explore renewable energy business opportunities and incentivise green industry and businesses in existing industrial areas.
- 4.3. Focus on the development of Paarl Station and Dal Josafat Station as strategic economic and transport hubs.
- 4.4. Initiate and fast-track the completion of road connections to unlock development.
- 4.5. Align strategic and appropriate densification at significant nodes and along activity routes with TOD conditions.

### Theme 5: Sport and Education

- 5.1. Capitalise on the well established educational facilities and educational history of Paarl.
- 5.2. Upgrade the public realm and training facilities at sport precincts such as Zanddrif to attract training and events - Approval of new sport facilities conditional on public access.
- 5.3. Promote sport facilities along Jan van Riebeeck Drive.

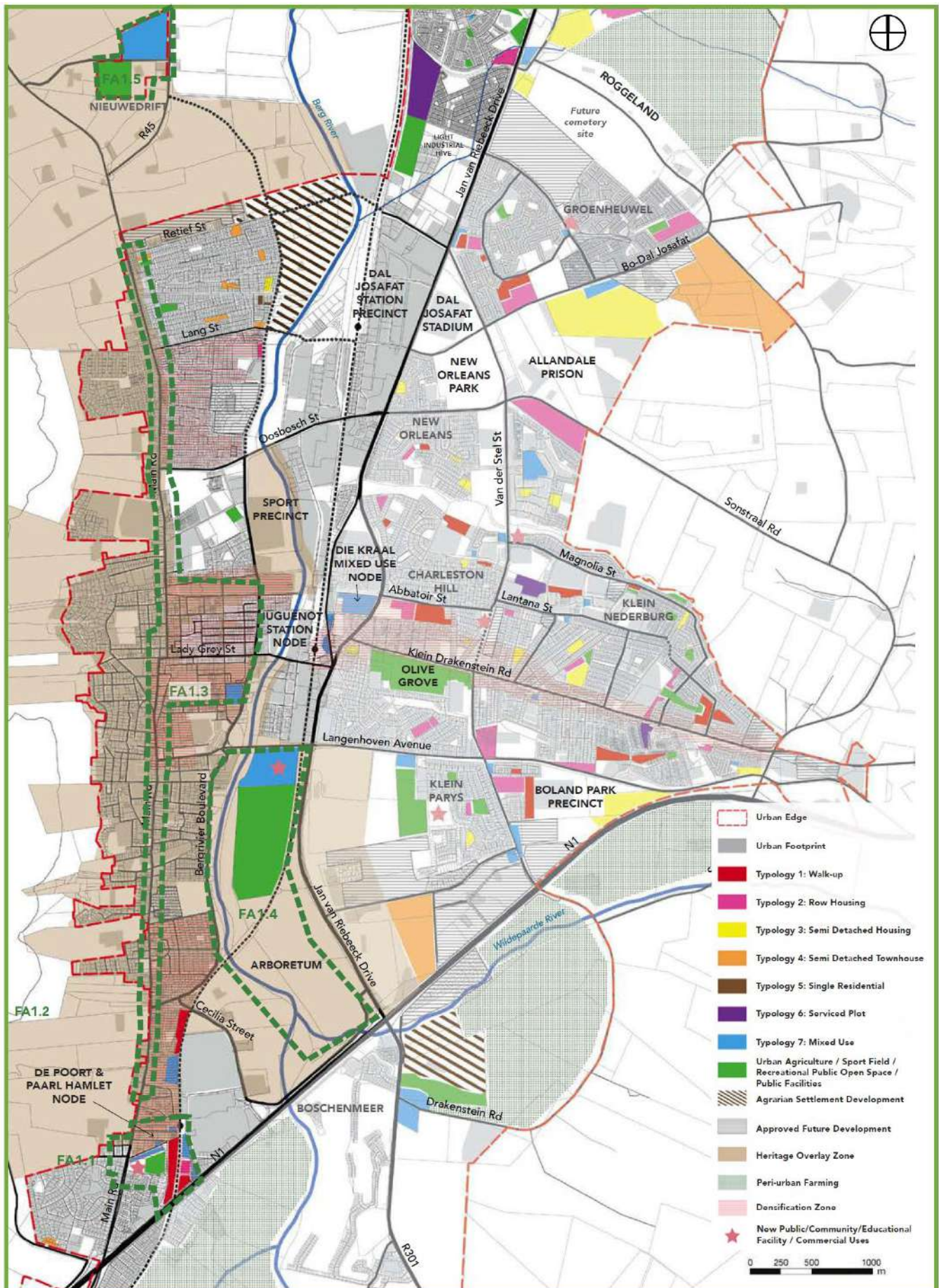
### Theme 6: Settlement and Communities

- 6.1. Promote infill in appropriate locations and densification in area north and south of CBD, Vrykyk, Northern Paarl residential area and area around Paarl Station.
- 6.2. Provide social facilities in alignment with public transport facilities and facilitate on-street activity through well-located mixed use areas to create vibrant / complete neighbourhoods.
- 6.3. Initiate and facilitate urban renewal programmes for strategic precincts (eg. Huguenot Station, Lady Grey, CBD, De Poort, Paarl Hamlet).



# FA1 PAARL

## PROPOSED LAND USE IMPLICATIONS FOR KEY SITES





KEY CONCEPTS AND INTERVENTIONS	CHECK BOX
1. Focus of investment to improve efficiency of urban structure and increase socio-economic opportunities	
2. Contain footprint of urban area – focus on infill and densification	
3. Integration between Paarl East and West – Lady Grey & Klein Drakenstein Road	
4. Ensure access to network of green areas	

PARALLEL POLICIES, PLANS AND PRECONDITIONS	SOURCE / CONTACT	RELEVANT FA PLANS	ANNEXURE
1. Implementation of Paarl's Hamlet master plan (2008)	tcn	FA1.1; FA1.2	2.1
2. Implementation of Taal Monument gateway urban design proposal as per Celebrations of Gateways Report (2014)	Urban Concepts	FA1.1; FA1.2	2.2
3. River Environmental Management Plan for the Berg River and major tributaries (2009)	Freshwater Consulting Group / Ninham Shand	FA1.3; FA1.4	
4. Paarl Arboretum Management Framework (2009)	Geostratics	FA1.4	
5. Densification and Urbanisation Strategy and Open Space Utilisation Policy (2006) - Case Study of open space between Kerk and Pieter Wium Streets	CnDV	FA1.1; FA1.3; FA1.4;	3.1
6. Revision and implementation of Improvement of Central Business District Master Plan (2010)	RAI	FA1.3; FA1.4;	2.3
7. Completion of new road linkages and new main substations and the upgrading of water and sewer networks currently under stress - to support new growth and densification in identified areas	DM	ALL	2.4
8. Nieuwe Drift: Alternative Development Options for Farm 486	DM/ GAPP	FA 1.5	

\* Typologies have been carefully considered based on infrastructure capacity and community development. Certain sites may contain more than one preferred option. The typology indicated in the Land use implications map (left) does not confine a site to only one option of urban form, the typology indicated is an indication of the preferred predominant typology for the development of that site and that at least 50% of the site should be covered with this typology. It is suggested that the typology above or below the preferred typology indicated in the matrix (refer Table 22) , could also be implemented. so as to ensure that suitable densities are achieved.



Table 23: Implementation Matrix for FA1

PROJECT NO. & TITLE	DESCRIPTION	TIMEFRAME AND PRECONDITIONS	IMPLEMENTING AGENTS	POSSIBLE FUNDING SOURCES
<b>FA1.1 De Poort &amp; Paarl Hamlet Precinct Plan</b>	Urban renewal refurbishment and re-establishment of a mixed use commercial area in Southern Paarl. De Poort as a primary public gateway space and industrial heritage centre. Possible location for long distance transport drop-off node.	Long Term (5 - 10 years)  Bulk services upgrades required (water and sewerage, none planned for 0-5 years.	Drakenstein Municipality  De Poort Board of Directors (Task Team)  Drakenstein Local Tourism Association (DLTA)	WC DEDAT / DCAS  Cape Routes Unlimited  De Poort Industrial Centre  Drakenstein Heritage Foundation
<b>FA1.2 Paarl Mountain Facilities Upgrade</b>	Upgrading of recreational facilities - walkways, cycling tracks and hiking routes with signage and seating. Establishment of a management team for security and maintenance.	Short Term (2 - 4 years)	Drakenstein Municipality  DLTA	Stewardship Programme for local residents or private business owners  MTB Race sponsors
<b>FA1.3 Paarl CBD and Main Road Urban Design Framework</b>	Revision of strategy for renewal and upgrading of building facades and streetscapes in Paarl CBD area and along Main Road. Focus on parking, heritage and appropriate land uses (especially along Main Road). Identification of suitable site for Taxi Rank in CBD.	Medium Term (4 - 8 years)	Drakenstein Municipality  Paarl CBD Partnership	Private Developers  Business Owners
<b>FA1.4 Paarl Waterfront and Arboretum Precinct Plan</b>	Precinct plan and implementation strategy for land along southern banks of Berg River including Arboretum and Waterfront site and other vacant land portions to create linkages and pedestrian routes. Safe walkways, seating, landscaping, clear points of access to river and improvement of maintenance and management. Low key commercial activities focused on supporting recreation uses.	Short to Medium Term (3 - 7 years)	Drakenstein Municipality  DLTA	WC DEDAT  Private Sector Partnership
<b>FA1.5 Nieuwedrift Development Framework</b>	Development framework recommendations for the optimal future use of the public land at Nieuwedrift.	Long Term (5 - 15 years)  No water and sewerage planned for 0-5 years.	Drakenstein Municipality  Land owners	MIG and DORA

## Electricity Networks

The existing Paarl electricity networks do not have spare capacity to support additional new development. The following new main substations must be built to create capacity on the bulk network:

- 132/66/11kV N1 main substation with 2 x 20 MVA transformers for future development areas in De Zoete Inval, Boschenmeer, Klein Parys and Groenheuvel.
- 66/11kV Hamlet main substation with 2 x 20 MVA transformers at Paarl Mall for future development areas in Vrykyk, Green Pastures, Southern Paarl and Courtrai.

- 66/11kV Dalweiding substation with 2 x 40 MVA transformers for the future development areas of Paarl Central and Groenvlei.

New 11 kV cable networks need to be established out of the new main substations which will include the construction of a number of new 11 kV substations.

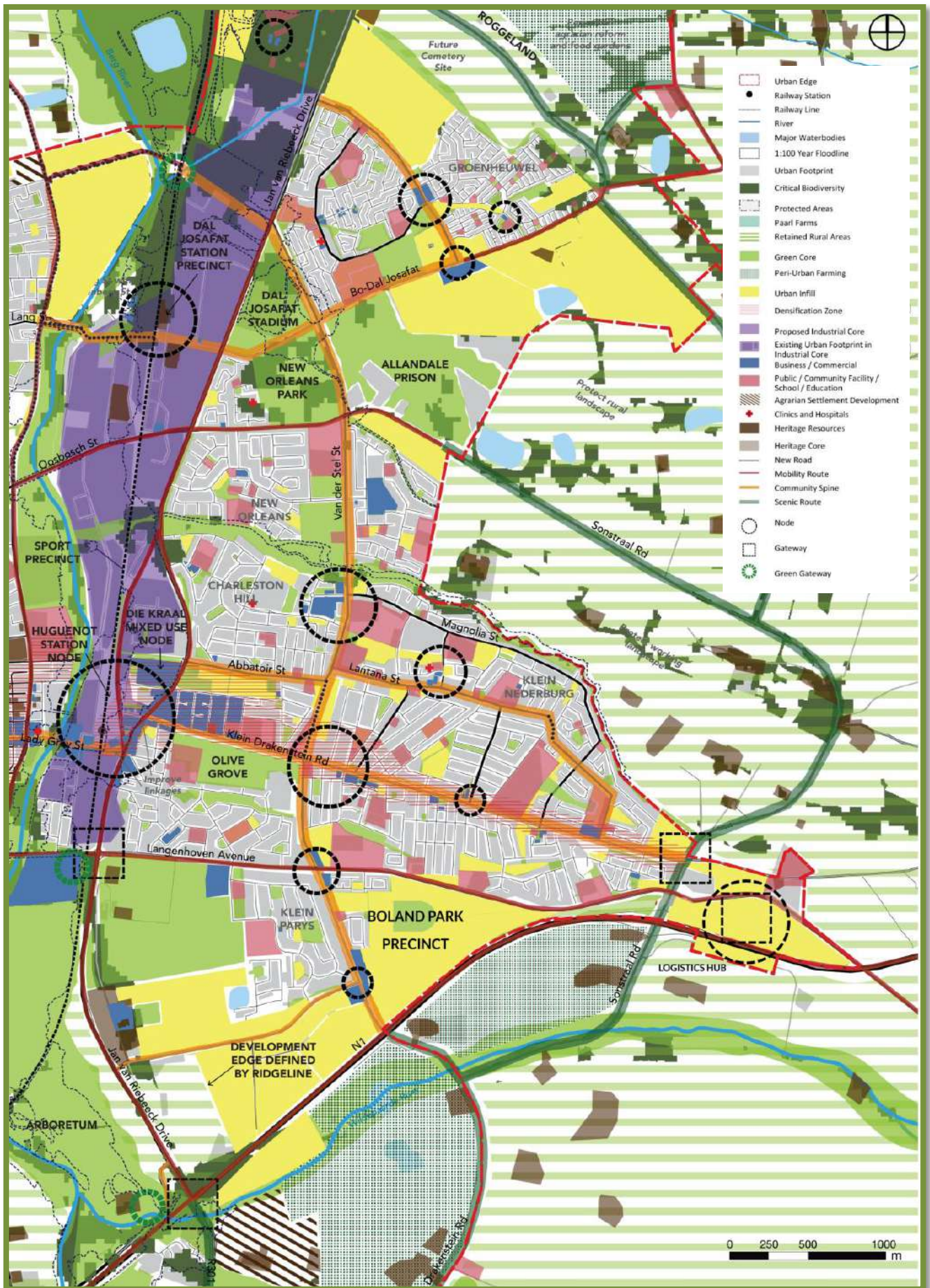
A new 11 kV substation must be constructed in Denneburg area to cope with load growth.

Upgrade of existing 11kV substations and cables.



# FA 2 PAARL EAST

## SPATIAL CONCEPT





## 6.3. Focus Area 2: Paarl East

Paarl East accommodates a significant portion of the Drakenstein population. This area still suffers from the low level of investment during the apartheid era, as is evident in dysfunctional public housing schemes. A key legacy of apartheid to be addressed is the physical barriers between Paarl East and Paarl West where there are historically more socio-economic opportunities. Interventions in this area should thus focus on creating opportunities for investment and improving the public realm and living conditions of residents. Key projects would include completing and/or improving east-west and north-south road linkages, upgrading public facilities such as Boland Park and the Dal Josafat Stadium and providing incentives/opportunities for the establishment of vibrant activity corridors along important routes such as Klein Drakenstein Road.

### Theme 1: Environmental Management

- 1.1. Rehabilitate and protect riverine corridors (Berg River, Palmiet River and tributaries) and protect critical biodiversity areas and wetlands and manage floodplains.
- 1.2. Ecosystem management, catchment management, pollution control and riparian zone management programmes.
- 1.3. Improve waste management through community-based recycling projects.

### Theme 2: Agriculture, Land Reform and Rural Development

- 2.1. Protect core agricultural areas through an 'agricultural edge' high value and unique agricultural land (existing irrigated footprint) and areas suitable for small-scale production and agrarian reform (ie: allotments) in Dal Josafat area.
- 2.2. Promote urban agriculture and small-scale farming opportunities and agrarian reform and facilitate local produce markets and informal trading spaces to promote 'garden / farm to plate' marketing channels.
- 2.3. Improve management of stormwater and WWTW disposal to protect agricultural water resources.

### Theme 3: Heritage And The Cultural Landscape

- 3.1. Protect and celebrate the unique scenic and cultural assets of the community such as the Costa's olive grove.

### Theme 4: Connectivity and Green Logistics

- 4.1. Incentivise and promote mixed-use development along Klein Drakenstein Road to create opportunities for investment in establishing a primary activity street.
- 4.2. Incentivise existing industrial strip west of Jan van Riebeeck Drive.
- 4.3. Create linkages between Boland Park and Waterfront Site

### Theme 5: Sport and Education

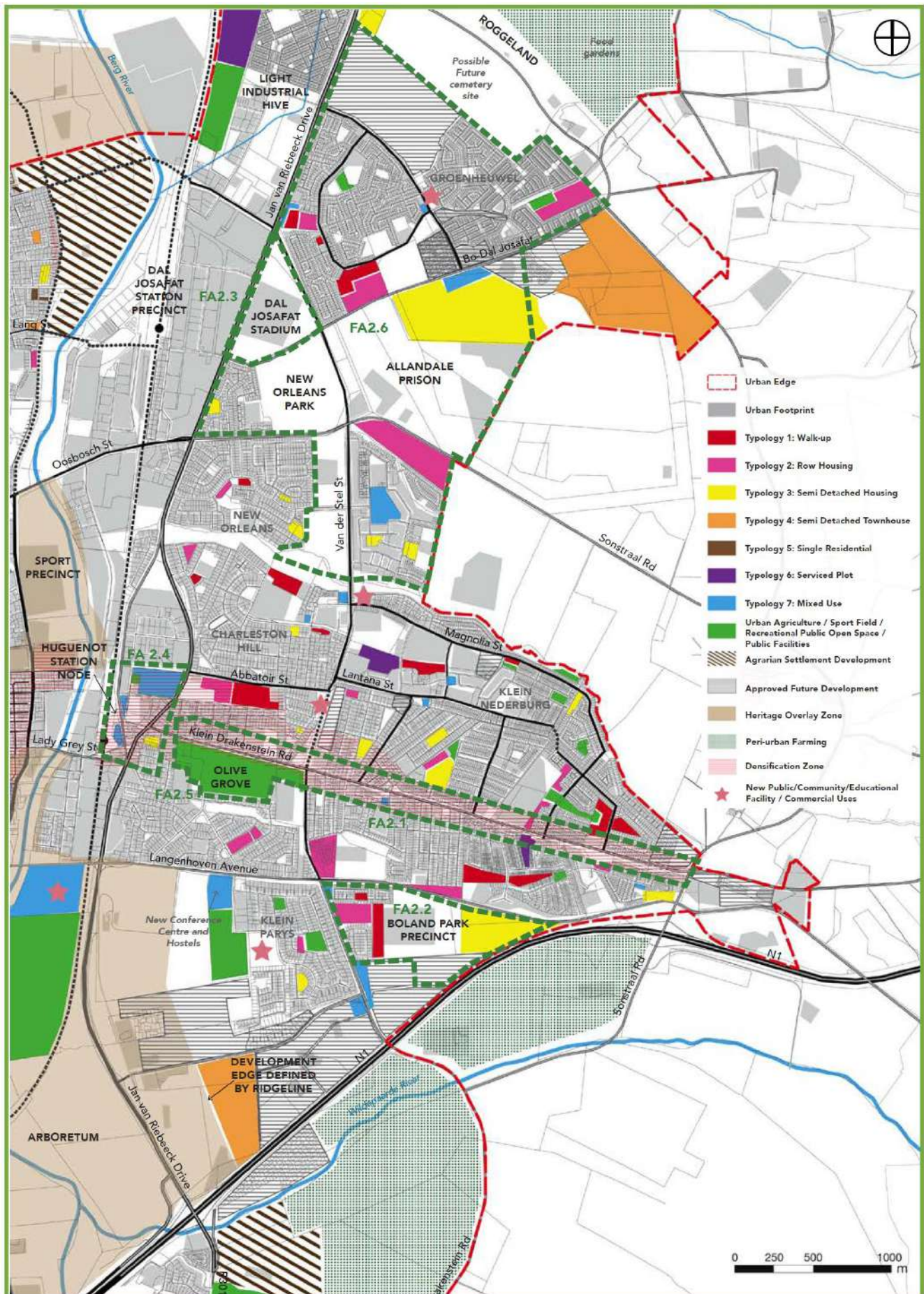
- 5.1. Attract business and local spending through investment in sports facilities and stadiums (Dal Josafat and Boland Park) to attract sporting events and opportunities for training while providing access to the local community for social development.
- 5.2. Attract investment and opportunities, and promote the development planning for Huguenot Station and Die Kraal mixed use node and community facilities upgrade.

### Theme 6: Settlement and Communities

- 6.1. Promote infill in appropriate locations and densification along Klein Drakenstein Road. Water and sewerage upgrades will be required, none planned for 0-5 years.
- 6.2. Improve access and connection between Paarl East and Paarl Central through investment in reconfiguration of Klein Drakenstein Road and Lady Grey Road and upgrading of Huguenot Station.
- 6.3. Adopt an incremental approach to informal settlement upgrading through providing serviced sites and the formalisation of backyard shacks.
- 6.4. Prioritise and expand Violence Prevention through Urban Upgrading Programme (VPUU) project roll-out.
- 6.5. Invest in the public realm and degraded building facades.

# FA 2 PAARL EAST

## PROPOSED LAND USE IMPLICATIONS FOR KEY SITES





KEY CONCEPTS AND INTERVENTIONS	CHECK BOX
1. Completion of road connections	
2. Densification and infill along Klein Drakenstein to create vibrant activity street	
3. Opportunities for small scale farming to north	
4. Investment in sports facilities such as Dal Josafat Stadium and Boland Park	
5. Efforts directed to key areas: CBD renewal, Huguenot and Paarl Station, Berg River frontage, sports and recreation facilities, agri-processing and food industry	
6. Opportunities for mixed -use node and community facilities at Die Kraal	
7. Initiate planning for historic Costa's olive grove	

PARALLEL POLICIES, PLANS AND PRECONDITIONS	SOURCE / CONTACT	RELEVANT FA PLANS	ANNEXURE
1. Completion of Van der Stel Street towards Klein Drakenstein	DM	FA2.1; FA2.5; FA2.6	
2. Completion of new main substations and the upgrading of water and sewer networks currently under stress - to support new growth and densification in identified areas	DM	ALL	
3. VPUU Project Coordination	DM / VPUU	FA2.6	2.5

\* Typologies have been carefully considered based on infrastructure capacity and community development. Certain sites may contain more than one preferred option. The typology indicated in the Land use implications map (left) does not confine a site to only one option of urban form, the typology indicated is an indication of the preferred predominant typology for the development of that site and that at least 50% of the site should be covered with this typology. It is suggested that the typology above or below the preferred typology indicated in the matrix (refer Table 22), could also be implemented, so as to ensure that suitable densities are achieved.

Figure 24: Implementation Matrix for FA2

PROJECT NO. & TITLE	DESCRIPTION	TIMEFRAME AND PRECONDITIONS	IMPLEMENTING AGENTS	POSSIBLE FUNDING SOURCES
<b>FA2.1 Klein Drakenstein Road Central Improvement District Plan</b>	Urban design and land use guidelines to transform Klein Drakenstein Road into high density activity street with safe NMT routes and quality public spaces.	Medium Term (5 - 7 years)  Services upgrades required (water and sewerage) around Paarl Station, none planned for 0-5 years.	Drakenstein Municipality	Private Developers Business Owners
<b>FA2.2 Boland Park Precinct Plan</b>	To provide a development framework and precinct plan to establish Boland Park as primary sport precinct for Paarl East community and to facilitate large events and mixed use activity. Include planning for Langenhoven Avenue road reserve.	Short Term (2 - 4 years)  Bulk services available	Drakenstein Municipality	Hope Academy Drakenstein  Beyond Sport / Barclays Spaces for Sports
<b>FA2.3 Dal Josafat Stadium Precinct Plan</b>	Upgrading and refurbishment of stadium facilities with improved access and management. Urban design guidelines for landscaping and paving.	Medium Term (4 - 8 years)	Drakenstein Municipality	Hope Academy Drakenstein  Beyond Sport / Barclays Spaces for Sports
<b>FA2.4 Huguenot Station Precinct Plan</b>	Urban design strategy for improved landscaping and public space. Incentives for commercial activity including redevelopment of Die Kraal site and link with BAT development. Road reconfiguration for improved linkage between Klein Drakenstein and Lady Grey Road.	Short Term (2 - 5 years)	Drakenstein Municipality  Paarl CBD Partnership  DLTA	Private Developers Business Owners PRASA
<b>FA2.5 Olive Grove Community Project</b>	Capitalising on the historic value of the Costa's olive grove to attract tourists and local communities through community garden programme and local produce market. Investigate possible development of learning centre, coffee shop, conference centre.	Short Term (2 - 5 years)	Drakenstein Municipality  Land Owner (Costa Farming Trust)	Private Developers Business Owners  Local Drakenstein Heritage Foundation Paarl 300
<b>FA2.6 VPUU Priority Projects Roll-Out</b>	Implementation of the Priority Projects (Thusong Centre, Freedom Park Groenheuwel Library etc.) and the expansion of VPUU to other neighbourhoods.	Medium to Long Term (on-going) (5 - 10 years)  Bulk water and sewer upgrades required for Groenheuwel infill (Swawelstert Rd) property and proposed Allandale prison. No funds available for 0-5 years.  Bulk sewer upgrades required for Chicago infill (Nederburg property) No funds available for 0-5 years	Drakenstein Municipality  VPUU	Private Developers NGO's  VPUU Partners (Sustainable Urban Neighbourhood Development)

## Electricity Networks

The existing Paarl electricity networks do not have spare capacity to support additional new development, refer to electricity network constraints outline under FA1.



# FA 3 MBEKWENI

## SPATIAL CONCEPT





## 6.4. Focus Area 2: Mbekweni

Mbekweni and Langabuya were established as townships after WWII to provide housing to black migrant workers. Apartheid policies dictated the form of housing, e.g. hostels for single men and site and services as emergency housing at Langabuya (Lodge, 1984). The legacy of this lack of investment in services and the public realm is still evident today.

Key interventions for creating a more efficient urban structure for Mbekweni that will result in more socio-economic opportunities for its residents include improving linkages to surrounding areas of employment (in particular Wellington industrial area), investment in the public realm, the creation of socio-economic nodes where the community can access a range of socio-economic services, including sports facilities, infill housing projects with appropriate housing typologies and support for urban agricultural projects.

### Theme 1: Environmental Management

- 1.1. Rehabilitate and protect riverine corridors (Berg River and tributaries) and protect critical biodiversity areas and wetlands and manage floodplains.
- 1.2. Ecosystem management, catchment management, pollution control and riparian zone management programmes.
- 1.3. Improve waste management through community-based recycling projects.

### Theme 2: Agriculture, Land Reform and Rural Development

- 2.1. Accommodate household gardens, school gardens and community gardens through Parks department projects coordinated with housing projects.
- 2.2. Promote urban agriculture and small-scale farming opportunities and facilitate local produce markets and informal trading spaces to promote 'garden / farm to plate' marketing channels.

### Theme 3: Heritage And The Cultural Landscape

- 3.1. Acknowledge and celebrate Mbekweni's local heritage resources through updating the inventory of heritage resources to ensure that Mbekweni resources are adequately recorded and protected.
- 3.2. Encourage tourism initiatives based on township experience through supporting homestays / tourism facilities (restaurants) / tours / events.

### Theme 4: Connectivity and Green Logistics

- 4.1. Strengthen and create new linkages with industrial nodes through safe connection across railway line to Wellington Industrial Park.
- 4.2. Provide facilities for skills training.

### Theme 5: Sport and Education

- 5.1. Maintain and upgrade existing sport facilities (such as Weltevrede sportsgrounds) and ensure equitable access to sport facilities.
- 5.2. Encourage the productive use of underutilised sport grounds.
- 5.3. Develop and encourage mixed use educational facilities (school hall used as community centre / training facility - Ikhwezi example).
- 5.4. Make provision for cycling tracks in all urban upgrade projects.

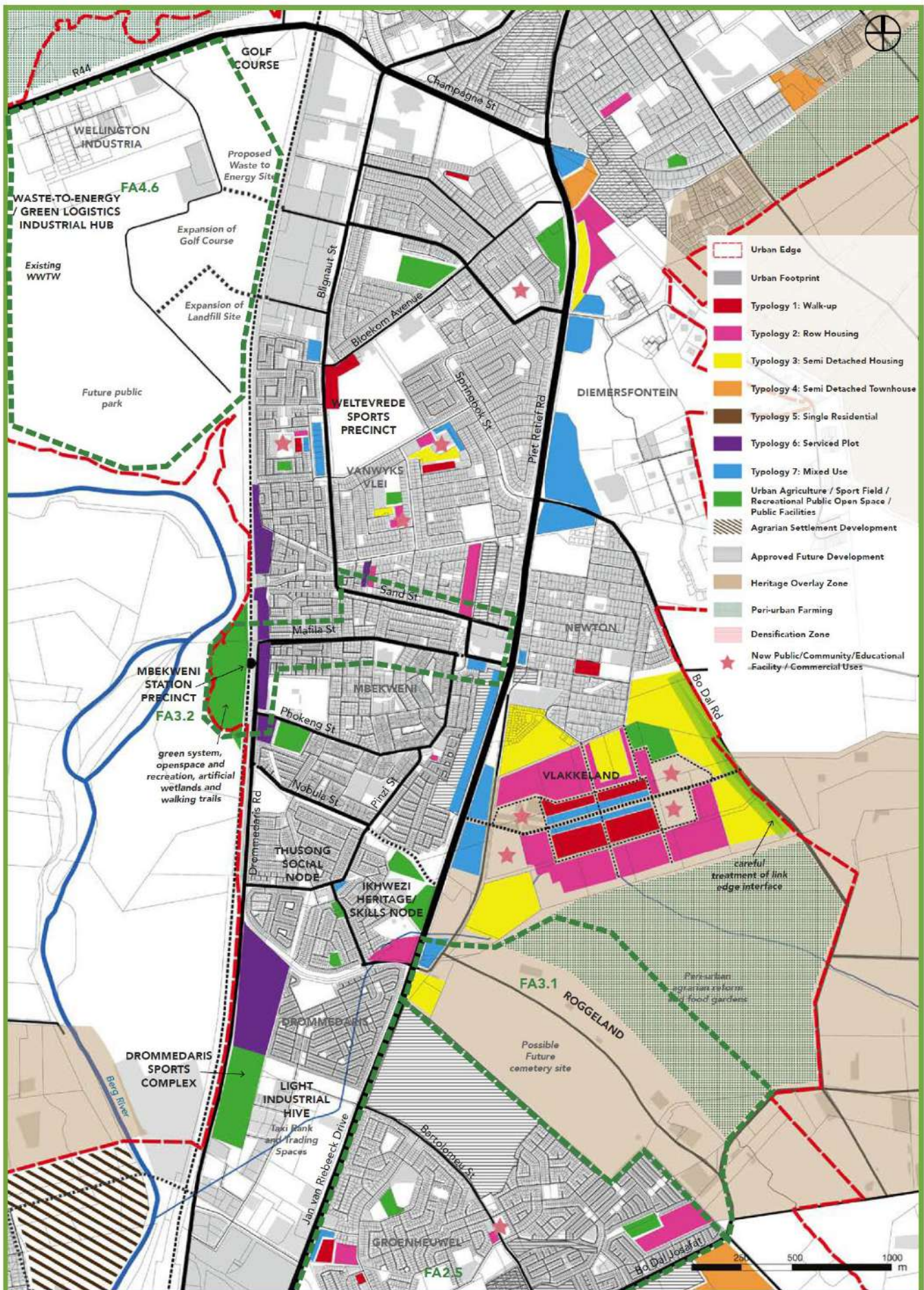
### Theme 6: Settlement and Communities

- 6.1. Adopt an incremental approach to informal settlement upgrading through providing serviced sites and the formalisation of backyard shacks.
- 6.2. Identify a site for taxi holding bays.
- 6.3. Provide infrastructure for cultural and religious practices and identify site for initiation ceremonies.
- 6.4. Prioritise sidewalk / NMT provision along major routes.
- 6.5. Apply Mbekweni sustainable housing project outcomes to future housing sites.
- 6.6. Facilitate on-street activity through well-located mixed use areas to create more vibrant / complete neighbourhoods.



# FA 3 MBEKWENI

## PROPOSED LAND USE IMPLICATIONS FOR KEY SITES





KEY CONCEPTS AND INTERVENTIONS	CHECK BOX
1. Interventions in urban structure – creation of activity streets and nodes with improved public realm	
2. Opportunities for urban agriculture and community gardens	
3. Infill housing projects with appropriate housing typologies, including serviced sites	
4. Improved connections to surrounding employment areas in particular Wellington Industrial Area	

PARALLEL POLICIES, PLANS AND PRECONDITIONS	SOURCE / CONTACT	RELEVANT FA PLANS	ANNEXURE
1. Agreement with SAHRA to plan for and access state-owned land (Roggeland)	DM / SAHRA	FA3.1	
2. Reconfiguration of Vlakkeland layout so that Main Street connects to Bo-Dal Road and street network and typologies optimise access and public interface	DM	FA3.1; FA3.4; FA3.5	2.6
3. Implementation / Precinct Plans for nodes identified in Draft Mbekweni and Van Wyksvlei Land Utilisation Plan (Thusong Social Node, Entertainment Node, Commercial Node, Sports Welfare Node etc.)	DM	FA3.2; FA3.3; FA3.4; FA3.5	2.7
4. Completion of new main substations and the upgrading of water and sewer networks currently under stress - to support new growth and densification in identified areas	DM	ALL	

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Table 25: Implementation Matrix for FA3

PROJECT NO. & TITLE	DESCRIPTION	TIMEFRAME AND PRECONDITIONS	IMPLEMENTING AGENTS	POSSIBLE FUNDING SOURCES
<b>FA3.1 Roggeland Precinct Plan</b>	Precinct plan for the optimal use of the Roggeland heritage area. Consider Oranjezicht urban farm model - community development through urban gardens and local produce market. Investigate the use of land south of Roggeland buildings for cemetery - to create buffer between heritage sites and possible urban encroachment.	Short to Medium Term (3 - 6 years)	Drakenstein Municipality SAHRA Heritage Western Cape	WC DEDAT / DCAS Heritage Organisations Tree planting initiative organisations (Greenpop/Reliance/ Trees and Food for Africa)
<b>FA3.2 Mbekweni Station Precinct Plan and Community Park</b>	Plan for improvements and upgrading of station buildings and public space. Establish community park on western side of railway line for local access to river and recreation.	Short Term (2 - 4 years)	Drakenstein Municipality	Private Developers Local Business Owners
<b>FA3.3 NMT and Public Space Upgrade Plan</b>	Urban design plan for improvements to the public realm - especially along prioritised routes and in public spaces. Plan for ensuring pedestrian prioritisation and safer sidewalks, cycle routes and public access. Include landscaping and tree planting initiatives.	Short to Long Term (on-going) (2 - 10 years)	Drakenstein Municipality	WC DTPW Drakenstein Municipality Private Developers Local Business Owners Tree planting initiative organisations (Greenpop/Reliance)
<b>FA3.4 Road network Plan</b>	Reconfiguration of primary access and movement routes to establish more legible urban structure and to facilitate public transport. Extension of Mafila Street to Wamkelekile Street, Nobula Street to Jan van Riebeeck.	Short to Long Term (on-going) (2 - 10 years)	Drakenstein Municipality	WC DTPW

## Electricity Networks

The existing Paarl electricity networks do not have spare capacity to support additional new developments.

- Eddison 11 kV substation
- Greenfields 11 KV substation
- Vlakkeland 11 kV substation.

To create capacity on the bulk network the existing 66/11kV Dalweiding main substation on the corner of Jan van Riebeeck Drive and Van der Stel Street must be upgraded to support future development areas in Mbekweni and Dal Josafat.

New 11 kV cable networks also need to be established to supply the new 11 kV substations

Upgrade of existing 11kV networks must also be done to accommodate the expansion of the new developments.

The following new 11 kV substations must be built to create capacity on the 11 kV networks:

# FA 4 WELLINGTON

## SPATIAL CONCEPT





## 6.5. Focus Area 4: Wellington

Wellington is experiencing some pressure for development due to its excellent location on the R44 and the growth of its educational facilities. Key assets of this town include its historic buildings, settlement pattern, educational facilities, and its setting in an exceptional scenic rural landscape. Key concepts for the sustainable and efficient growth of the town include containing the urban footprint (and stopping encroachment into areas such the Bovlei and Blouvlei), densification in certain areas, infill development and investment in its public realm, particularly the CBD. In addition there are opportunities for the expansion of industrial development to the west of the town, as well as small scale farming in the urban periphery, e.g. the Lady Loch area.

Major services upgrades, especially water required for the whole of Wellington. Upgrading is part of the 0-5 year capital budget plan.

### Theme 1: Environmental Management

- 1.1. Rehabilitate and protect riverine corridors (Krom, Spruit en Leeuwen)
- 1.2. Facilitate stewardships to protect critical biodiversity areas and wetlands outside of protected areas (northern slopes of Groenberg).
- 1.3. Improve waste management through community-based recycling projects.

### Theme 2: Agriculture, Land Reform and Rural Development

- 2.1. Accommodate household gardens, school gardens and community gardens within urban areas to address food insecurity.
- 2.2. Facilitate local produce markets and informal trading spaces to promote 'garden / farm to plate' marketing channels.
- 2.3. Protect core agricultural areas through an 'agricultural edge' - areas suitable for small-scale production through allotments – extending between the R44 and Lady Loch.

### Theme 3: Heritage And The Cultural Landscape

- 3.1. Protect the distinctive/defining surrounding cultural landscapes.
- 3.2. Celebrate the Perdeskoe as a recreational asset.
- 3.3. Initiate precinct plans for cultural landscapes under major threat on Wellington urban edge, i.e. Bovlei and Blouvlei areas.
- 3.4. Promote existing cultural festivals and promote niche market tourism such as local food production/agri-processing.

### Theme 4: Connectivity and Green Logistics

- 4.1. Capitalise on the critical mass of existing transport enterprises and provide supporting infrastructure for logistics and transport.
- 4.2. Explore renewable energy business opportunities and waste to energy community projects and training.
- 4.3. Promote and expand on existing Wellington Industrial area.

### Theme 5: Sport and Education

- 5.1. Capitalise on the well established higher-educational facilities and educational history.
- 5.2. Promote Wellington as a higher education hub - CPUT/Hugenote Kollege.
- 5.3. Attract investment to Boland Sport Stadium.

### Theme 6: Settlement and Communities

- 6.1. Accommodate the informal economy.
- 6.2. Coordinate student housing with CPUT master plan for Wellington.
- 6.3. Promote densification, infill and the formalisation of backyarders in appropriate locations and investigate commercial and residential densification in Wellington North.



## PROPOSED LAND USE IMPLICATIONS FOR KEY SITES





KEY CONCEPTS AND INTERVENTIONS	CHECK BOX
1. Unique sense of place and setting to be retained – contain urban footprint, allow for small scale farming on periphery	
2. Infill development and densification	
3. Recognise key contribution of CPUT – student housing	
4. Urban design interventions for CBD	
5. Expansion of industrial opportunities	

PARALLEL POLICIES, PLANS AND PRECONDITIONS	SOURCE / CONTACT	RELEVANT FA PLANS	ANNEXURE
1. Implementation of proposed Heritage Overlay Zones and associated land use management guidelines	DM	FA4.1; FA4.2; FA4.3; FA4.4; FA4.5	
2. Compilation of heritage by-laws (for incorporation into zoning scheme) for the protection and management of heritage resources	DM	FA4.2; FA4.4	
3. Wellington CBD Urban Design Framework to align with broader SDF spatial concepts	DM / Appointed Service Provider	FA4.2; FA4.4; FA4.5	
4. Wellington CBD Urban Design Framework to align with CPUT Master Plan for Wellington Campus	CPUT	FA4.2; FA4.4; FA4.5	2.8
5. Implementation of key findings from Strategic Environmental Assessment for Wellington Industrial Area (2014)	Worley Parsons RSA / Tony Barbour	FA4.6	2.9
6. Upgrading of water and sewer networks currently under stress - to support new growth and densification in identified areas	DM	ALL	

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Table 26: Implementation Matrix for FA4

PROJECT NO. & TITLE	DESCRIPTION	TIMEFRAME AND PRECONDITIONS	IMPLEMENTING AGENTS	POSSIBLE FUNDING SOURCES
<b>FA4.1 Perdeskoen NMT &amp; MTB Plan</b>	Walkways and cycle tracks for pedestrians and recreational purposes. Promoting the unique scenic quality of the area as a destination for MTB and hiking.	Short to Medium Term (2 - 5 years)	Drakenstein Municipality  Local community and land owners	WC DEDAT / DCAS
<b>FA4.2 Wellington CBD Urban Design Framework</b>	Urban renewal and upgrading of building facades. Investment in sidewalks and streetscapes. Parklets and on-street activity incentives.	Medium to Long Term (5 - 10 years)	Drakenstein Municipality	Private Developers  Local Business Owners  CPUT  Hugenote College
<b>FA4.3 Boland Stadium Precinct Plan</b>	Upgrading and refurbishment of facilities. Development of training and conference facilities to attract investment and users.	Short to Medium Term (2 - 6 years)	Drakenstein Municipality  Boland Park Club	Private Developer/s  Boland Rugby
<b>FA4.4 Heritage Management Plan</b>	Adoption of municipal guidelines for Wellington heritage areas and surrounding cultural landscapes, the Wellington Special Area, and Grade II and III heritage resources so as to be place and resource specific to the area. Coordinated with HOZ management project.	Short Term (2 - 4 years)	Drakenstein Municipality  Heritage Western Cape	Heritage Organisations  Heritage Western Cape (HWC)
<b>FA4.5 Urban River Plan</b>	Plan for improved management and landscaping of riverine corridors to improve scenic quality and public access. Incentives to private owners interfacing with river for investment.	Short to Medium Term (2 - 6 years)	Drakenstein Municipality  WC DEDAT  Local community and land owners	Cape Nature  Working for Water  Local Business Owners  CPUT
<b>FA4.6 Wellington Industrial Park Development Plan</b>	Development of an Industrial Development Zone focusing on light green industry. Public Urban Park in southern corner to conserve biodiversity.	Medium to Long Term (on-going) 5- 10 years  Bulk water upgrade required, not on 0-5 year capital plan	Drakenstein Municipality  Private Developer/s	Local Business Owners

## Electricity Networks

At present the existing Wellington bulk network has sufficient capacity to support additional development.

In future, when demand dictates, a second 66 kV Eskom infeed will need to be established.

The following new 11 kV substations must be built to create capacity on the 11 kV networks:

- Pentz Street area
- Berg-en-Dal area

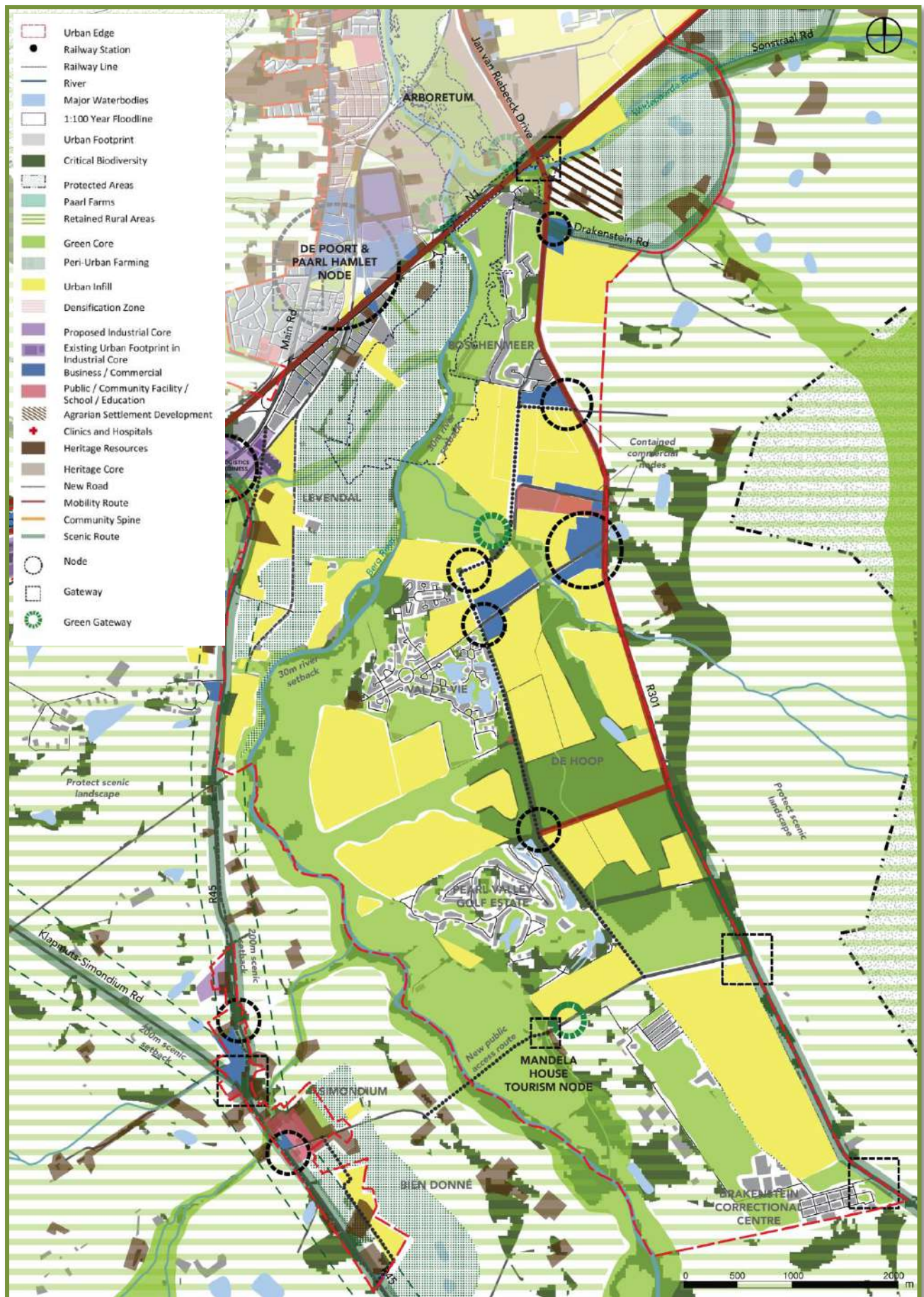
- Blouvillei ares
- CPUT area

New 11 kV cable networks also need to be established to supply the new 11 kV substations.



# FA 5 PAARL SOUTH

## SPATIAL CONCEPT





## 6.6. Focus Area 5: Paarl South

Paarl South refers to the area south of N1 and to the east of the Berg River. This area is currently under considerable pressure for development, most notably for low density upmarket gated-community type residential development. Whereas further development in this area is regarded as appropriate given the critical mass of development in this area, the nature of such development will require careful consideration so as to ensure an appropriate return on investment (bulk services) for the municipality and the creation of an efficient urban structure. This would imply the creation of a variety of development opportunities, including small commercial nodes, different housing typologies and community facilities in a well-connected area, which should include a connection to the R44.

Major services (water and sewerage reticulation systems and bulk services including pump stations and reservoir capacity required for entire area.

### Theme 1: Environmental Management

- 1.1. Protect critical biodiversity areas, especially on pediment slopes of Wemmershoek Mountain and Simonsberg.
- 1.2. Restrict up-slope development of Wemmershoek Mountain and Simonsberg.
- 1.3. Fix 1:50 and 1:100 yr floodlines to Berg River.

### Theme 2: Agriculture, Land Reform and Rural Development

- 2.1. Protect core agricultural areas through an 'agricultural edge' - areas suitable for small-scale production through allotments abutting riparian zone of Berg River.
- 2.2. Extend river setback to retain an agricultural buffer along the Berg River (30m as per 2010 SDF).

### Theme 3: Heritage And The Cultural Landscape

- 3.1. Protect the setting of built heritage resources such as the Mandela prison house and historical homesteads in the landscape.
- 3.2. Retain the rural nature of the area through no development on eastern side of R301 to protect mountain viewsheds and rural landscape.
- 3.3. Protect setting of Mandela House while at the same time attracting visitors through tourism-orientated activities.

### Theme 4: Connectivity and Green Logistics

- 4.1. Only allow for convenience nodes at strategic intersections. Nodes may not spread to the east of R301 beyond the urban edge.
- 4.2. Design of convenience nodes must ensure positive response to street (not shopping centre type development).
- 4.3. Larger scale office/commercial to be accommodated in Ben Bernhard or business park area around Paarl Mall.

### Theme 5: Sport and Education

- 5.1. Allow for safe cycling and running tracks as part of new road links.
- 5.2. Promote adventure sport such as trail running, horse riding and MTB routes.
- 5.3. Promote inclusive educational facilities for surrounding communities.

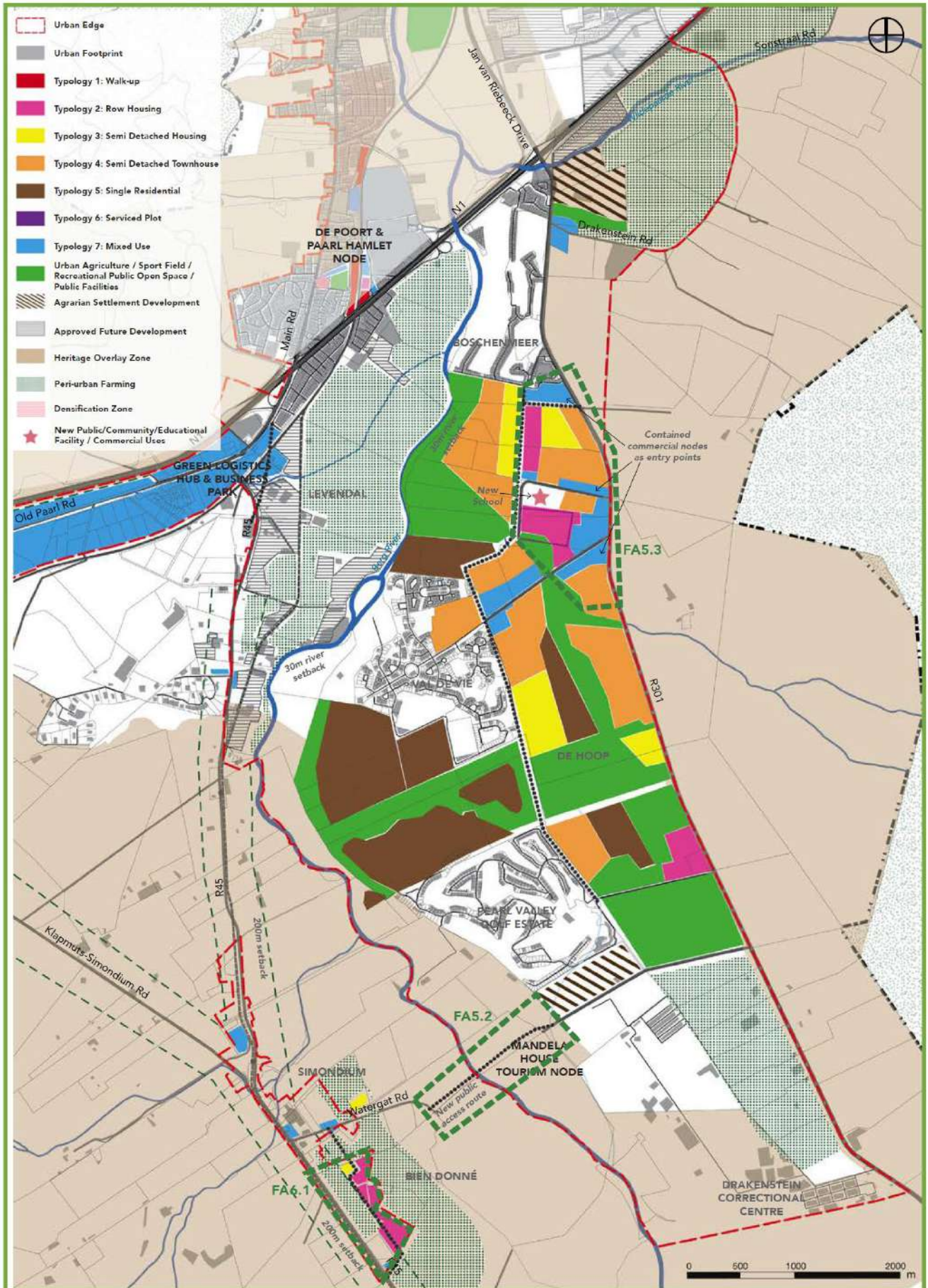
### Theme 6: Settlement and Communities

- 6.1. Ensure that a mix of typologies is introduced in new residential development so as to increase the gross density in the area and create a balanced community - new development must cater for a range of income groups and typologies.
- 6.2. Facilitate a new public access road between R301 and R45 and new internal road linkages to improve current accessibility and internal movement system.
- 6.3. Design of connecting route between R301 and R44 to be informed by rural landscape character (precedent example - R310 that runs through Dwars River Valley)



# FA 5 PAARL SOUTH

## PROPOSED LAND USE IMPLICATIONS FOR KEY SITES





KEY CONCEPTS AND INTERVENTIONS	CHECK BOX
1. Plan for integrated development of land available for development	
2. Ensure that residential development is linked and includes variety of housing options	
3. Allow for small commercial/community nodes at key intersections – based on Boschendal model	
4. Allow opportunities for agrarian reform and small-scale farming	
5. Set development back from Berg River (30m) and its tributaries – establish a green network	
6. Establish optimal public connection between R301 and R44	

PARALLEL POLICIES, PLANS AND PRECONDITIONS	SOURCE / CONTACT	RELEVANT FA PLANS	ANNEXURE
1. Implementation of proposed Heritage Overlay Zones and associated land use management guidelines	DM	ALL	
2. Compilation of heritage by-laws (for incorporation into zoning scheme) for the protection and management of heritage resources	DM	ALL	
3. All new development proposals to align with broader SDF spatial concepts (ensure for internal access route and public realm prioritisation)	DM	ALL	
4. Maintain rural character through 200m Set-back from R45 as per Heritage Indicators and Directives for Proposed Boschendal Village Report (2014) and no development allowed on slopes on eastern side of R301	Baumann, Winter, Dewar or Louw	ALL	2.10
5. Development of three new substations and upgrading of water and sewer networks currently under stress - to support new growth and densification in identified areas	DM	ALL	

\* Typologies have been carefully considered based on infrastructure capacity and community development. Certain sites may contain more than one preferred option. The typology indicated in the Land use implications map (left) does not confine a site to only one option of urban form, the typology indicated is an indication of the preferred predominant typology for the development of that site and that at least 50% of the site should be covered with this typology. It is suggested that the typology above or below the preferred typology indicated in the matrix (refer Table 22) , could also be implemented, so as to ensure that suitable densities are achieved.



Table 27: Implementation Matrix for FA5

PROJECT NO. & TITLE	DESCRIPTION	TIMEFRAME AND PRECONDITIONS	IMPLEMENTING AGENTS	POSSIBLE FUNDING SOURCES
<b>FA5.1 Floodline Study</b>	Investigation to determine appropriate floodlines along Berg River corridor to ensure that future development responds to river sensitivities.	Short to Medium Term (2 - 4 years)	Drakenstein Municipality Private land owners	WC DTPW
<b>FA5.2 New Public Road Link</b>	Investigation into optimal link between R301 and R44 to facilitate public through-fare for improved internal and regional access. To remain public at all costs with minimal visual impact on landscape.  Detailed study will be required - EIA and HIA process to manage impacts, buffer around Mandela House	Medium Term (5 - 8 years)	Drakenstein Municipality	WC DTPW
<b>FA5.3 Commercial Nodes Development Framework</b>	Layout, interface and design guidelines for development of commercial nodes at the identified strategic intersections. Maintain public interface with minor roads.	Medium Term to Long Term (5 - 10 years)  Major services (water and sewerage reticulations and bulks services including pump stations and reservoir capacity) required	Drakenstein Municipality	Private Developer/s
<b>FA5.4 Peri-urban Intensive Allotment Community Projects</b>	Investigate the establishment of small-scale farming projects in identified areas for land reform and community development purposes and to support local produce food chain and markets.	Short to Long Term (on-going) (2 - 20 years)	Drakenstein Municipality Cape Winelands Municipality	WC Department of Agriculture CASIDRA Private Land Owners

## Electricity Networks

The existing Paarl electricity networks do not have spare capacity to support additional new development.

The following new main substations must be built to create capacity on the bulk network:

- 132/66/11kV N1 main substation with 2 x 20 MVA transformers for future development areas in De Zoete Inval, Boschenmeer, Klein Parys and Groenheuwel.
- 66/11kV Hamlet main substation with 2 x 20 MVA transformers at Paarl Mall for future development areas in Vrykyk, Green Pastures, Southern Paarl and Courtrai.

- 132/11kV Kliprug main substation.

New 11 kV cable networks need to be established out of the new main substations which will include the construction of a number of new 11 kV substations.

Additional 11 kV feeders must also be taken out of existing Dwarsrivier S/S.

## SPATIAL CONCEPT





## 6.7. Focus Area 6: Simondium

Changes in agricultural practices in the Simondium area has lead to inter alia a significant need for farmworker housing the area and pressure for non-agricultural uses on agricultural land. There is some scope for small scale urban development along the R44, to cater for farm worker housing need and create some economic-opportunities, provided that the form and location of development is carefully considered. In this regard it is suggested that the Boschendal model that calls for setting back urban development from scenic routes, with a wide buffer of cultivated land, and allowing for the establishment of contained nodes to only one side of major routes (i.e. the R44) be implemented.

### Theme 1: Environmental Management

- 1.1. Protect critical biodiversity areas and wetlands especially the endangered ecosystems between Simondium and area west of the R301.
- 1.2. Manage stormwater runoff into Werda and Keurbosrivier.
- 1.3. Improve waste management through community-based recycling facilities.

### Theme 2: Agriculture, Land Reform and Rural Development

- 2.1. Promote and facilitate opportunities for agri-allotments and agrarian reform on land in close proximity to settlement.
- 2.2. Protect irrigated agricultural footprint
- 2.3. Accommodate farm-workers in housing projects together with household, school and community gardens to address food insecurity.

### Theme 3: Heritage And The Cultural Landscape

- 3.1. Protect the rural sense of place, the historical patterns of agricultural settlement in the landscape and the setting of built heritage resources (farm werfs/country chapels).
- 3.2. Apply the Boschendal "Rural Corridor and Agricultural Superblock Concept" where settlement nodes are established in relation to higher order movement routes and embedded within agriculture, i.e. one-sided and set back to allow for continuities of green.
- 3.3. Protect heritage resources such as Het Sticht, Ebenhauser church, cemetery, Bien Donné, Watergat.

### Theme 4: Connectivity and Green Logistics

- 4.1. Incentivise green industry / business in existing industrial areas.
- 4.2. Investigate municipal recycling depot at Simondium for waste from Paarl South.

### Theme 5: Sport and Education

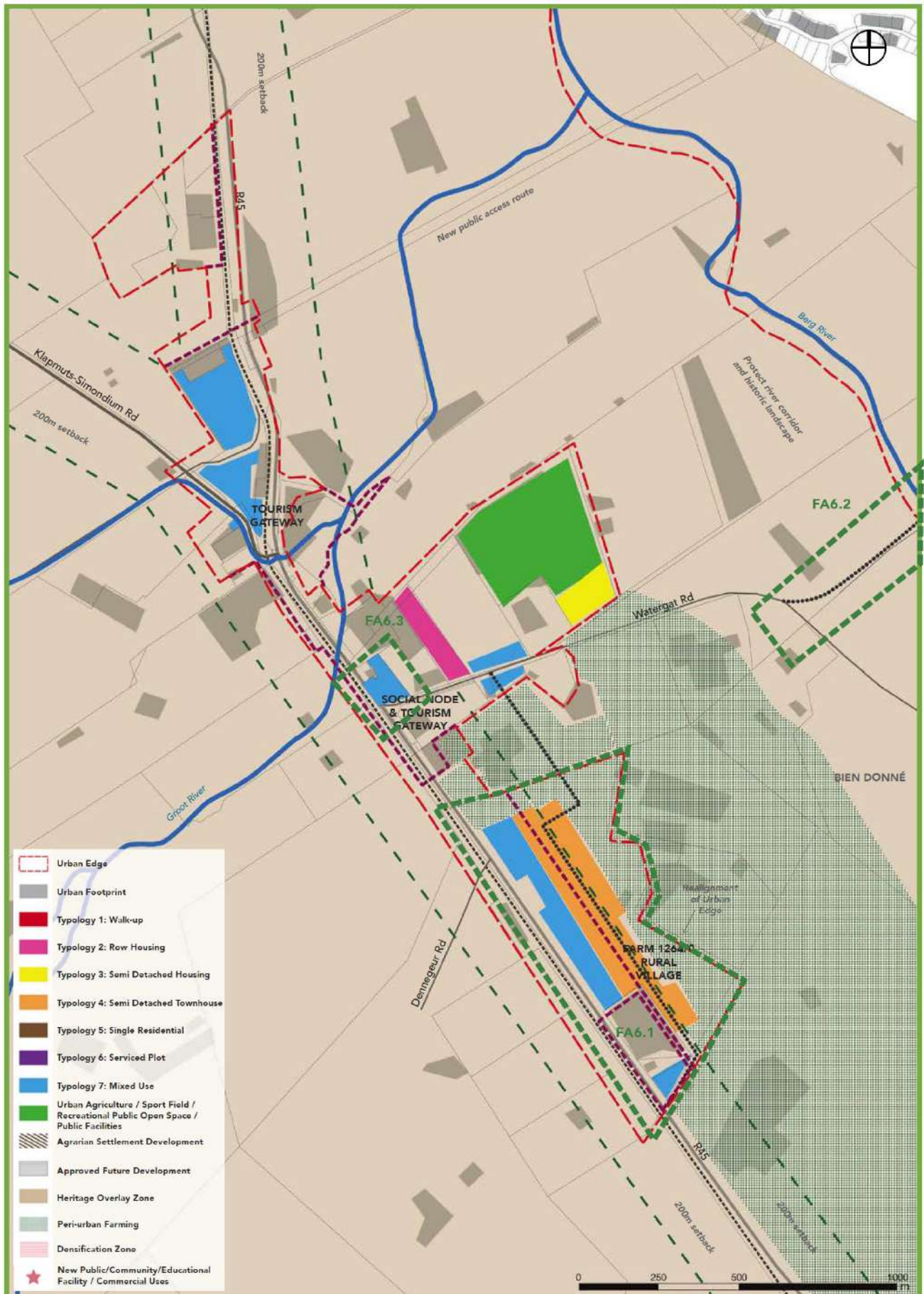
- 5.1. Facilitate an agriculture orientated skills development centre.
- 5.2. Ensure that community sports facilities are included in new subsidised housing projects.
- 5.3. Ensure that new road links include cycling/pedestrian lanes.

### Theme 6: Settlement and Communities

- 6.1. Ensure that residential development on Farm 1264/0 maintains a rural village character that is not intrusive on the scenic landscape. Initiate a detailed urban design plan with heritage input to implement Boschendal approach of agricultural setback. Ensure for a range of well-designed housing typologies.
- 6.2. Ensure that a range of community facilities are available within walking distance for bulk of the local population. Identify possible site for community hall.

# FA 6 SIMONDIUM

## PROPOSED LAND USE IMPLICATIONS FOR KEY SITES





KEY CONCEPTS AND INTERVENTIONS	CHECK BOX
1. Contain development to areas identified in Precinct Plan	
2. Area to form part of larger integrated plan for development to south of the N1	
3. Apply Boschendal model of nodal development to one side of road	
4. Allow opportunities for agrarian reform and small-scale farming linked to farm worker housing opportunities	
5. Set development back from Berg River (30m)	

PARALLEL POLICIES, PLANS AND PRECONDITIONS	SOURCE / CONTACT	RELEVANT FA PLANS	ANNEXURE
1. Implementation of proposed Heritage Overlay Zones and associated land use management guidelines	DM	FA6.1	
2. Adjustment of Simondium Precinct Plan proposals to avoid development along R45	DM / CnDV	FA6.1	2.11
3. Maintain rural character through 200m Set-back from R45 as per Heritage Indicators and Directives for Proposed Boschendal Village Report (2014) and no development allowed on slopes on eastern side of R301	Baumann, Winter, Dewar or Louw	FA6.1; FA6.2; FA5.2	2.10
4. Discussions with Stellenbosch Municipality, Meerlust and Boschendal to ensure for alignment of future infrastructure and land use planning			
5. Upgrading of water and sewer networks currently under stress - to support new growth and industrial activities in identified areas	DM	ALL	

\* Typologies have been carefully considered based on infrastructure capacity and community development. Certain sites may contain more than one preferred option. The typology indicated in the Land use implications map (left) does not confine a site to only one option of urban form, the typology indicated is an indication of the preferred predominant typology for the development of that site and that at least 50% of the site should be covered with this typology. It is suggested that the typology above or below the preferred typology indicated in the matrix (refer Table 22), could also be implemented, so as to ensure that suitable densities are achieved.

Table 28: Implementation Matrix for FA6

PROJECT NO. & TITLE	DESCRIPTION	TIMEFRAME AND PRECONDITIONS	IMPLEMENTING AGENTS	POSSIBLE FUNDING SOURCES
<b>FA6.1 New Rural Village Precinct Plan</b>	Detailed urban design, housing typology design and erf layout for new municipal housing project planned on portion of Farm 1264/0, Paarl. Ensure that village atmosphere is created through incorporating mix of uses and typologies. Maintain rural character through well-designed housing typologies. Delineate portions along R45 for land reform opportunities and small-scale intensive farming within 200m buffer to create set-back from road and minimise visual impact on scenic landscape.	Short to Medium Term (to be finalised before final plans for housing component are submitted) (2 - 4 years)  Major services (water and sewerage reticulations and bulks services including pump stations and reservoir capacity) required	Drakenstein Municipality	WC DEDAT / Department of Agriculture
<b>FA6.2 New Public Road Link</b>	Investigation into optimal link between R301 and R44 to facilitate public through-fare for improved internal and regional access. To remain public at all costs with minimal visual impact on landscape. If optimal connection is identified to connect into Simondium area careful consideration of heritage resources and scenic landscape must be prioritised.  Detailed study will be required - EIA and HIA process to manage impacts, buffer around Mandela House	Medium Term (5 - 8 years)  Services upgrades will be required for new road, not planned for 0-5 years.	Drakenstein Municipality	WC DTPW
<b>FA6.3 Social Node and Tourism Gateway</b>	Capitalise on existing retail activity through upgrading and landscaping of gateway space. Provide pedestrian routes and destinations for local community and tourists. Provide for current need for library and minor community hall in Social Node.	Medium Term to Long Term (5 - 10 years)  Major services (water and sewerage reticulations and bulks services including pump stations and reservoir capacity) required.  No sewer services available, plan for 5-10 years.	Drakenstein Municipality  Private Land Owners  Local Businesses	Private Land Owners  Local Businesses

## Electricity Networks

No upgrades are required to support development in the Simondium area.



# FA7 BEN BERNHARD

## SPATIAL CONCEPT



## 6.8. Focus Area 7: Ben Bernhard

The Ben Bernhard industrial area at the southern end of Paarl has recently experienced some pressure for intensified industrial development. There is considerable scope for further expansion of industrial uses within the existing footprint, but new development beyond this footprint (i.e. to the west of the Simonsvlei Winery) would require a substantial investment in services infrastructure and is thus not recommended for the foreseeable future. This Focus area is recommended for mixed use, appropriate uses for this area include green industry, agri-processing, office parks and transport related uses. As this area is located at sensitive interface between the urban and agricultural landscape, particularly to the north of the N1, views from the N1 would require careful consideration where new / future long term development is proposed. Only allow for incremental development from eastern edge to align with existing infrastructure capacity and to concentrate activity at hub entrance.

Major services (water and sewerage reticulations and bulks services including pump stations and reservoir capacity) required for the entire area.

### Theme 1: Environmental Management

- 1.1. The existing natural systems on the site such as wetlands and CBA corridors must inform development to avoid flood risk of lower-lying areas.
- 1.2. Encourage non-pollutive activities given the impact on upper reaches of catchment of the Van Wyksrivier.
- 1.3. Manage future environmental impact on surrounding areas such as emissions, flooding, noise pollution etc.

### Theme 2: Agriculture, Land Reform and Rural Development

- 2.1. Protect existing productive agricultural activities.
- 2.2. Encourage agri-processing activities, especially for small-scale enterprises.

### Theme 3: Heritage And The Cultural Landscape

- 3.1. Set development back from the N1 viewshed and ensure appropriate scale of development and landscaping to minimise visual impact - limit development between R101 and N1.
- 3.2. Protect rural nature of surrounding landscape for its importance for tourism and venue attractions.

### Theme 4: Connectivity and Green Logistics

- 4.1. Promote consolidated and intensified commercial and light industrial development (logistics hub) at gateway entrance in alignment with railway.
- 4.2. Promote green industry and transport related enterprises.

### Theme 5: Sport and Education

- 5.1. Provide creche facilities for employees in the area
- 5.2. In-service training
- 5.3. Development of this area, could unblock opportunities for service training internships

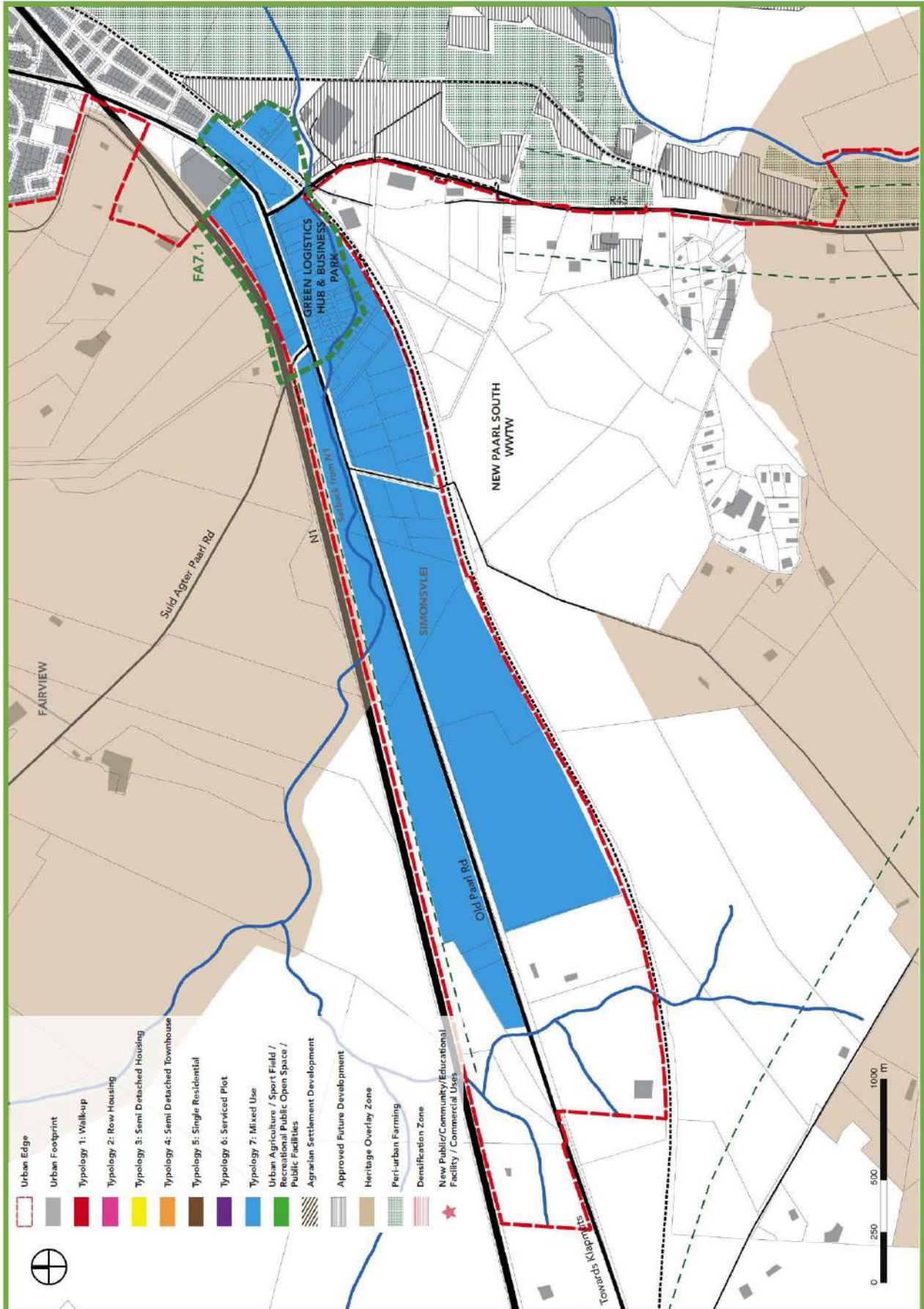
### Theme 6: Settlement and Communities

- 6.1. Minimal / no residential development allowed due to surrounding industrial uses and the associated costly impacts on housing design as well as the lack of services.
- 6.2. Phased approach to development - allowing for low impact mixed use activities along Old Paarl Road with visual buffer between development and N1.



# FA 7 BEN BERNHARD

## PROPOSED LAND USE IMPLICATIONS FOR KEY SITES



KEY CONCEPTS AND INTERVENTIONS	CHECK BOX
1. Lack of services prohibits significant westward expansion of industrial uses in medium term	
2. Allow for intensification of service industry type uses in existing footprint (also transport related)	
3. Well-located for green industry and freight logistics facilities	
4. Allow for phased mixed use development along Old Paarl Rd while mitigating impacts on views from the N1	

PARALLEL POLICIES, PLANS AND PRECONDITIONS	SOURCE / CONTACT	RELEVANT FA PLANS	ANNEXURE
1. Provide green building standard guidelines for new industrial development and encourage off-grid facilities through incentives (Green Building Manual of Drakenstein Municipality 2010)	DM	FA7.1	
2. Existing Suidend main substation must be upgraded to create capacity on bulk network	DM	ALL	
3. Consider high costs of noise and air pollution mitigation measures for any development other than industrial along R101	DM	ALL	
4. Only allow for very sensitive development that is not visible from N1 in area between R101 and N1 to protect valuable scenic viewshed from N1 corridor	DM	ALL	
5. Upgrading of water and sewer networks currently under stress - to support new growth and industrial activities in identified areas	DM	ALL	

\* Typologies have been carefully considered based on infrastructure capacity and community development. Certain sites may contain more than one preferred option. The typology indicated in the Land use implications map (left) does not confine a site to only one option of urban form, the typology indicated is an indication of the preferred predominant typology for the development of that site and that at least 50% of the site should be covered with this typology. It is suggested that the typology above or below the preferred typology indicated in the matrix (refer Table 22) i, could also be implemented, so as to ensure that suitable densities are achieved.



Table 29: Implementation Matrix for FA7

PROJECT NO. & TITLE	DESCRIPTION	TIMEFRAME AND PRECONDITIONS	IMPLEMENTING AGENTS	POSSIBLE FUNDING SOURCES
<b>FA7.1 Green Logistics Hub and Business Park</b>	Attract investment through facilitating a green logistics hub and business park that supports logistics, light industry and business activities. Incremental development from Main Rd / R45 / Old Paarl Road to the east.	Short to Long Term (on-going) (2 - 20 years)  Major service upgrades required (water and sewerage reticulation systems and bulk services, including pump stations and reservoir capacity) High cost of services.	Drakenstein Municipality	Private Developer/s  Local Business Owners  WCG DEDAT / DEADP

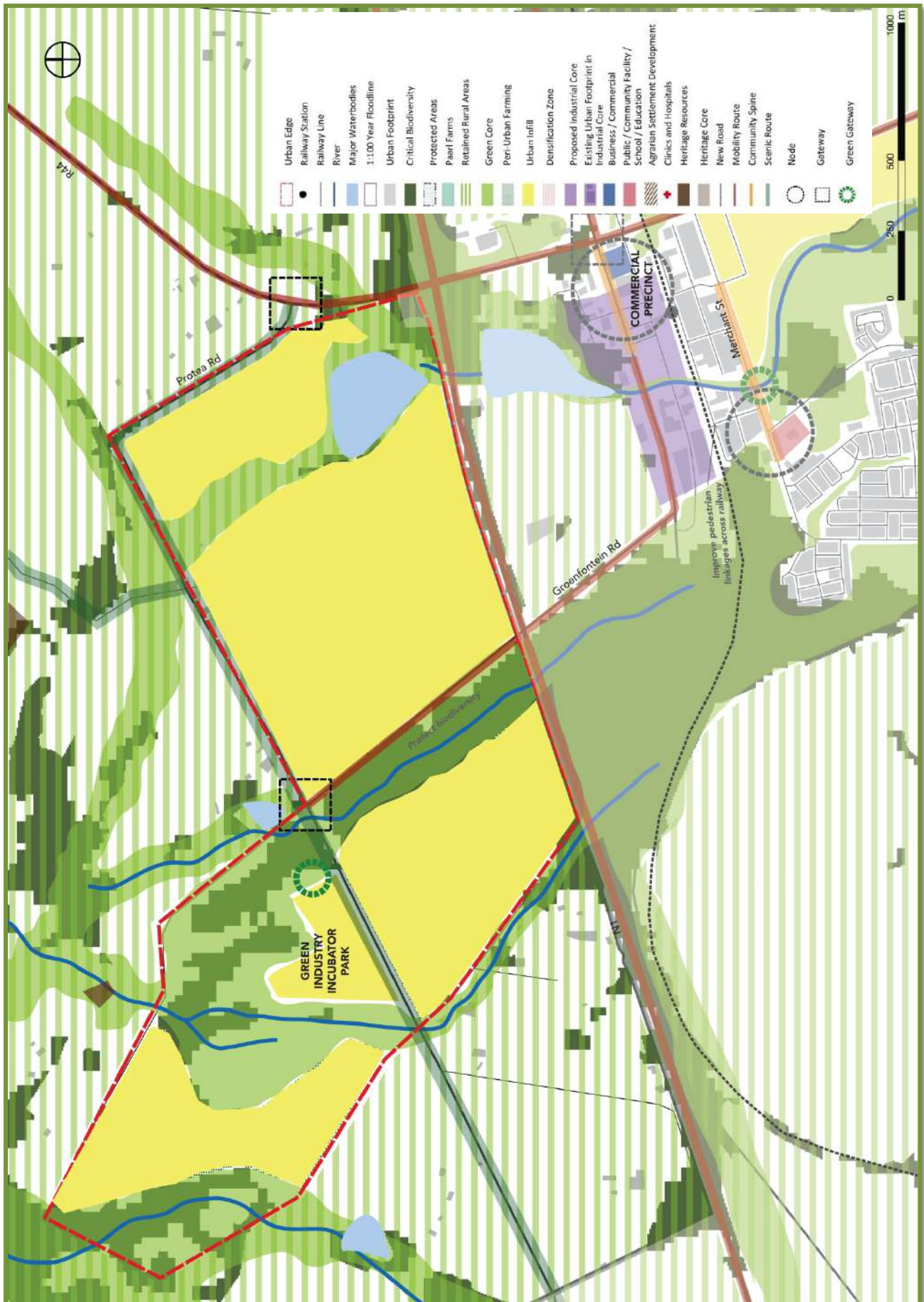
## Electricity Networks

To create capacity on the bulk network the existing Suidend main substation must be upgraded.

New 11 kV cable networks also need to be established to supply the Simonsvlei development area.

# FA 8 KLAPMUTS

## SPATIAL CONCEPT





## 6.9. Focus Area 8: Klapmuts North

The portion of Klapmuts to the north of the N1 that falls within the Drakenstein Municipal area, consists mainly of small farms and small holdings, as well as a large parcel of undeveloped land that belongs to the municipality. The area is currently not serviced by the municipal bulk services networks and any new development or densification would require a substantial investment from the municipality. Such investment should be considered in the light of the growing urban node that is developing to the south of the N1, where significant housing opportunities are currently being created along with socio-economic opportunities. Focus investment and development on Green Industry Incubator Park and maintain surrounding Klapmuts area within Urban Edge as is.

It is thus suggested that the Klapmuts north of the N1 should retain its rural character for the foreseeable future and that the municipal land could be leased for farming/green industry opportunities until such time as development becomes appropriate.

### Theme 1: Environmental Management

- 1.1. Reinforce rural and environmental integrity of Groenvlei Annex through a land use management plan.
- 1.2. Develop and facilitate river management plans for Klapmuts River and Van Wyksrivier to reduce pollution given headwaters of catchment.

### Theme 2: Agriculture, Land Reform and Rural Development

- 2.1. Promote agri-diversification and intensification (hospitality, horticulture, agri-processing) to reinforce economic viability of smallholdings and farms.
- 2.2. Explore opportunity for allotments and agrarian reform through renting out portions of Erf 736, Klapmuts, for grazing.
- 2.3. Restrict industrial activities to existing Boeremakelaars (Koöperatief) Beperk (BKB) site.

### Theme 3: Heritage And The Cultural Landscape

- 3.1. Retain rural character and sense of place.
- 3.2. Promote eco-tourism orientated activities and tourism facilities such as venues or MTB routes etc.

### Theme 4: Connectivity and Green Logistics

- 4.1. Pursue green off-grid incubator business park development on developable portion of Erf 736, Klapmuts, to include conference and/or tertiary educational facilities.
- 4.2. Investigate possibility of Special Economic Zone (SEZ) focused on green industry.

### Theme 5: Sport and Education

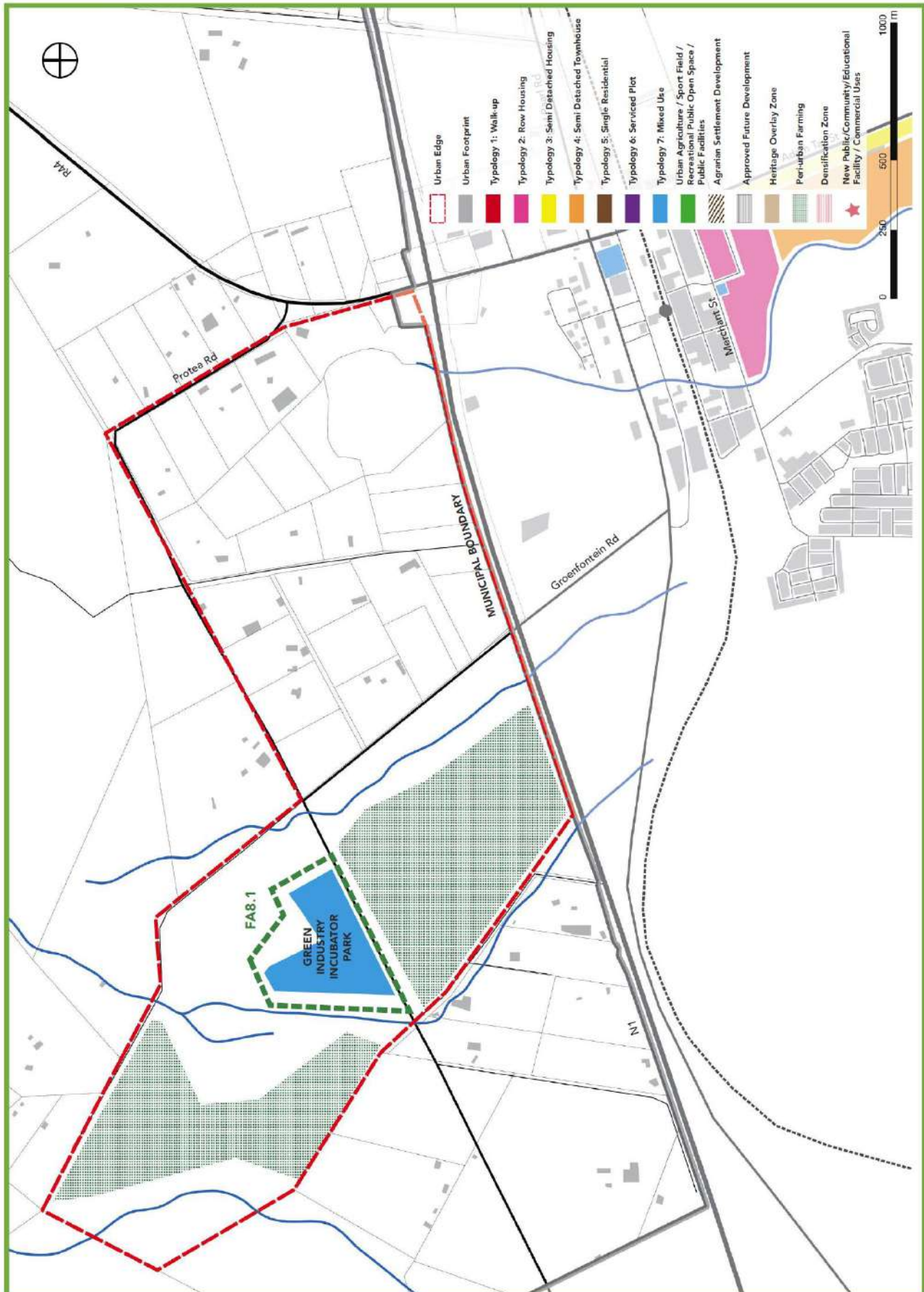
- 5.1. Promote adventure sports.
- 5.2. Align with theme 4 to pursue "green" educational opportunities.

### Theme 6: Settlement and Communities

- 6.1. Do not allow new residential development or the expansion of urban footprint of small holding area.

# FA 8 KLAPMUTS NORTH

## PROPOSED LAND USE IMPLICATIONS FOR KEY SITES





KEY CONCEPTS AND INTERVENTIONS	CHECK BOX
1. Lack of services prohibits significant intensification of Drakenstein portion of Klappmuts	
2. Municipal land suitable for off-grid development such as Green Industry Incubator Park – seek attraction from educational institute for “green” campus component	
3. In meantime use municipal land for agriculture and/or green industry	

PARALLEL POLICIES, PLANS AND PRECONDITIONS	SOURCE / CONTACT	RELEVANT FA PLANS	ANNEXURE
1. Discussions with Stellenbosch Municipality to ensure for alignment of infrastructure and land use planning and management	DM	ALL	
2. Discussions with tertiary institutions and other possible interested parties for possible off-grid education facility development	DM	ALL	
3. Discussions with WCG GreenCape sector development agency and Department of Trade and Industry to apply for the designation of site as green technology SEZ - similar to Atlantis model - pre-approved environmental authorisations, tax incentives etc.	SEZ Act 16 of 2014 DTI WCG GreenCape	ALL	
4. Ensure that development is not visible from N1 to protect scenic viewshed	DM	ALL	
5. Ensure that development is off-grid to avoid costly construction of new reservoir and extension of other infrastructure services	GLS	ALL	

\* Typologies have been carefully considered based on infrastructure capacity and community development. Certain sites may contain more than one preferred option. The typology indicated in the Land use implications map (left) does not confine a site to only one option of urban form, the typology indicated is an indication of the preferred predominant typology for the development of that site and that at least 50% of the site should be covered with this typology. It is suggested that the typology above or below the preferred typology indicated in the matrix (refer Table 22)), could also be implemented, so as to ensure that suitable densities are achieved.

Table 30: Implementation Matrix for FA8

PROJECT NO. & TITLE	DESCRIPTION	TIMEFRAME AND PRECONDITIONS	IMPLEMENTING AGENTS	POSSIBLE FUNDING SOURCES
<b>FA8.1 Green Industry Incubator Park</b>	Investigate green industry incubator park including possible development of off-grid conference facility and/or business school on developable portion of Erf 736, Klappmuts. Investigation into possible bio-engineering technopark and satellite educational facility. Investigation into possible designation of site as a green technology Special Economic Zone (SEZ).	Short to Medium Term (0 - 20 years)  All services still to be provided for the proposed development. Major services (water and sewerage reticulation systems and bulk services, including pump stations and reservoir capacity) upgrades required. Expected that a WWTW will be required.	Drakenstein Municipality  Private Developer/s	University of Stellenbosch  WC Provincial Green Cape Initiative  Private Developer/s
<b>FA8.2 Agrarian Reform Programme</b>	Facilitate grazing opportunities for small-scale farmers on identified vacant portions of Erf 736, Klappmuts, for land reform and community development purposes and to support local produce food chain and markets. Rent out land to farmers.	Short to Long Term (on-going) (2 - 20 years)	Drakenstein Municipality  Cape Winelands Municipality	WC Department of Agriculture  CASIDRA  Private Land Owners  Local community / farm workers

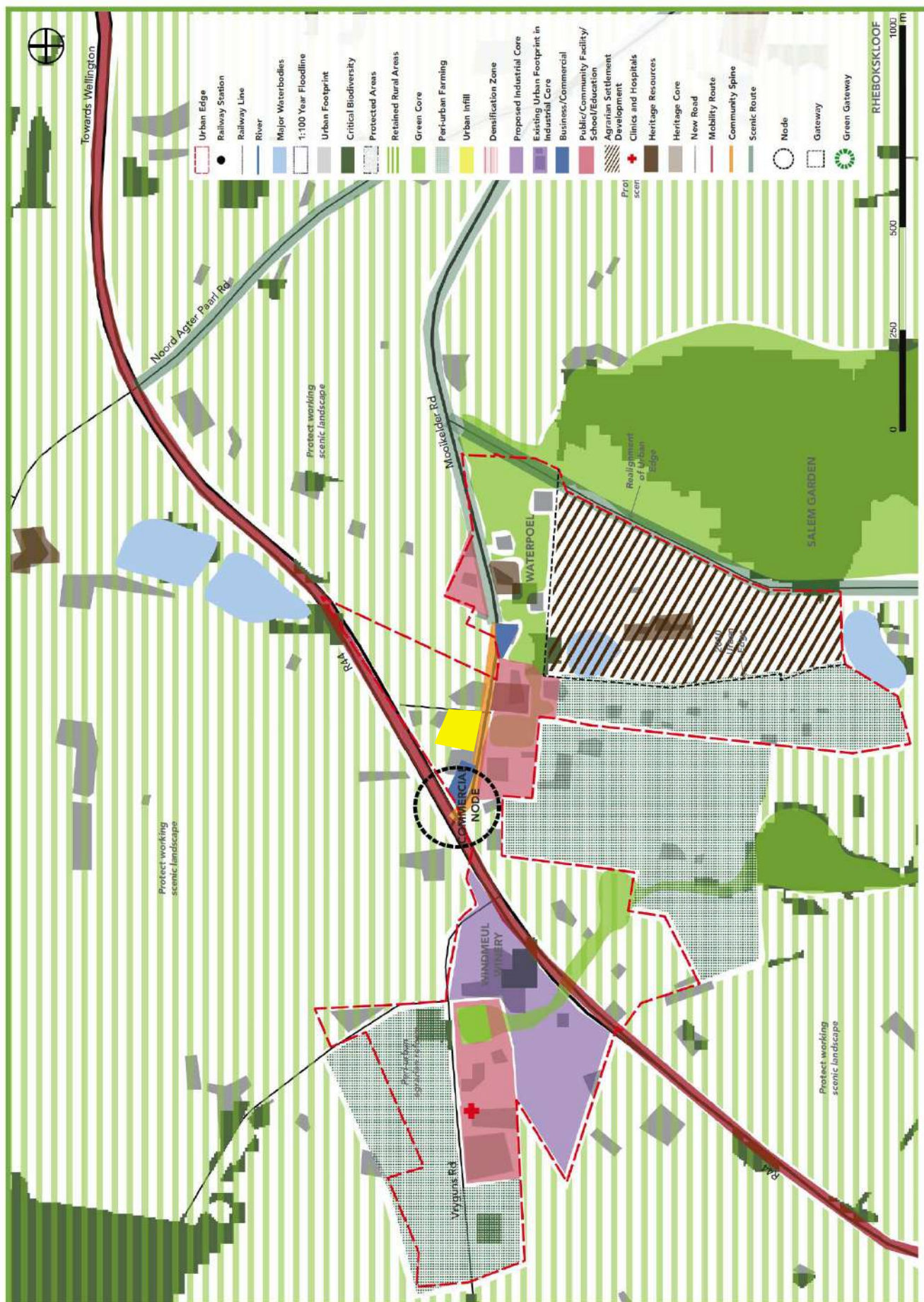
## Electricity Networks

This area is serviced by Eskom.



# FA9 WINDMEUL

## SPATIAL CONCEPT



## 6.10. Focus Area 9: Windmeul

Windmeul is a small hamlet strategically located at the intersection of the R44 and MR 281, which eventually becomes Paarl Main Road. The settlement serves as a service centre for the surrounding intensive farming area, where the produce is mainly wine and table grapes. Although the pressure for residential estate development has eased off, it is likely to resurface should the property market regain its buoyancy, due its location on the R44 and its scenic setting. In addition the need for subsidised housing for farmworkers and rural dwellers from the surrounding area has been identified in the original 2001 SDF for Windmeul, which is likely to have increased as no subsidised housing projects have been undertaken in this settlement since 2001. A major constraint to development at this node is the lack of bulk water supply and sewerage services. Off-grid rural lifestyle development should be considered so as to add to the critical mass of the village and support local services and businesses.

### Theme 1: Environmental Management

- 1.1. Protect critical biodiversity areas, especially in up-slope and valley areas.
- 1.2. Improve waste management through community-based waste recycling projects.

### Theme 2: Agriculture, Land Reform and Rural Development

- 2.1. Protect irrigated agriculture footprint.
- 2.2. Explore opportunities for allotments and agrarian reform in vicinity of the settlement as well as opportunities for farm-worker housing given the location within intensive agricultural areas.
- 2.3. Improve the management of stormwater and WWTW run-off given pollution threat to groundwater reserves.

### Theme 3: Heritage And The Cultural Landscape

- 3.1. Protect the built environment heritage resources and local sense of place.
- 3.2. Divert heavy vehicles away from MR 281 through appropriate traffic calming measures.
- 3.3. Capitalise on the strategic location of the settlement on the slopes of Paarl Mountain and facilitate opportunities for eco-tourism.
- 3.4. Support local tourism initiatives and promote niche market tourism such as food production, agri-processing and local produce markets

### Theme 4: Connectivity and Green Logistics

- 4.1. Small scale convenience businesses and service station should be attracted to support local community needs.
- 4.2. Promote appropriate agri-processing allowed at Windmeul and on the surrounding farms.

### Theme 5: Sport and Education

- 5.1. Secondary school to be accommodated at Windmeul Primary School.
- 5.2. Ensure that learners have access to sports facilities.
- 5.3. Create facilities such as mountain bike/trail running routes through farms and Paarl Mountain to establish Windmeul as a centre for outdoor adventure sports.

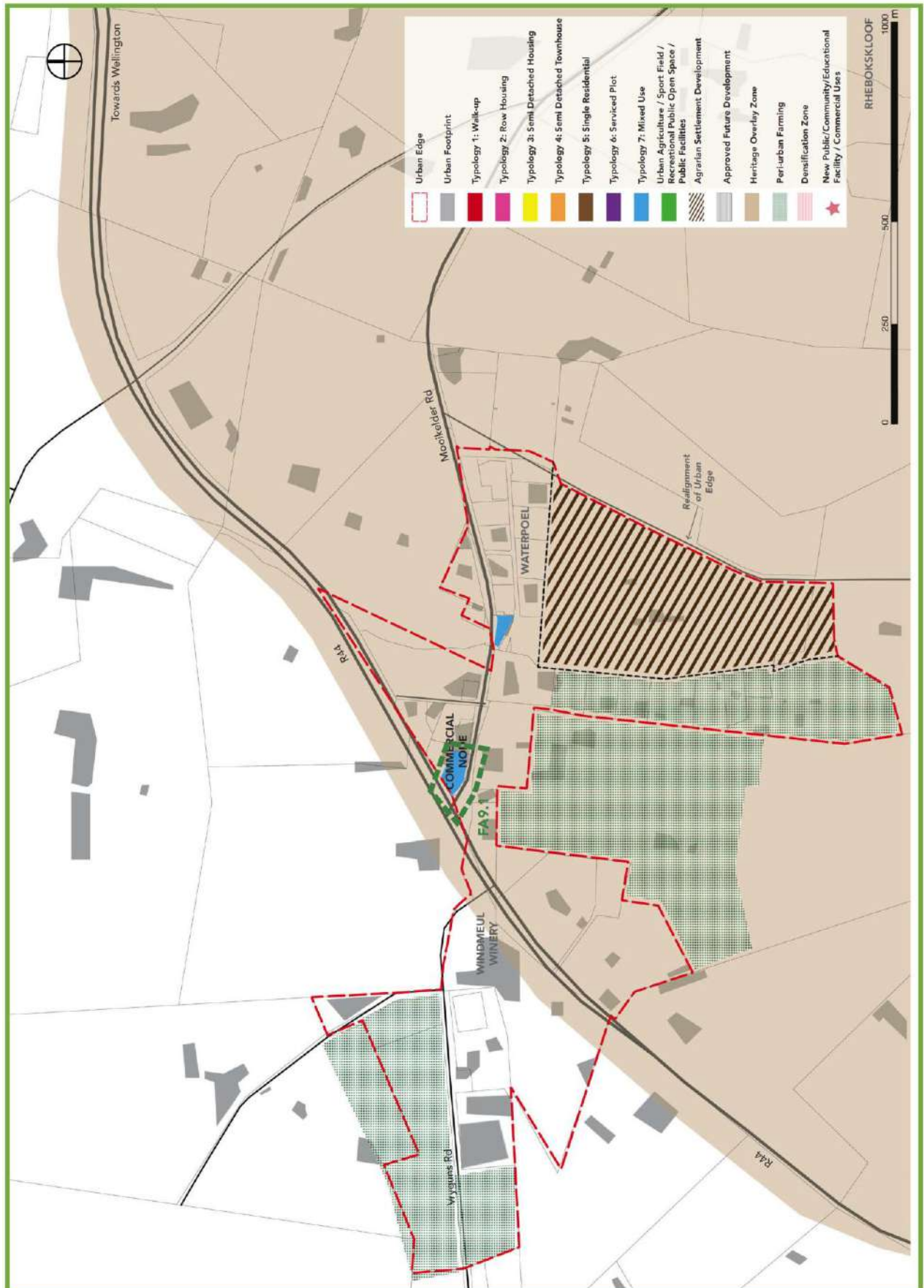
### Theme 6: Settlement and Communities

- 6.1. Limited expansion of town with off-grid residential development to be allowed.
- 6.2. Promote a community service centre as per Windmeul SDF (2001).



# FA 9 WINDMEUL

## PROPOSED LAND USE IMPLICATIONS FOR KEY SITES



KEY CONCEPTS AND INTERVENTIONS	CHECK BOX
1. Lack of services – limited scope for urban expansion	
2. Allow for expansion of off-grid residential to increase population threshold of village	
3. Focus on small scale farming and attracting limited convenience business and social services to support local need	

PARALLEL POLICIES, PLANS AND PRECONDITIONS	SOURCE / CONTACT	RELEVANT FA PLANS	ANNEXURE
1. Provide green building standard guidelines for new industrial development and encourage off-grid facilities through incentives (Green Building Manual of Drakenstein Municipality, 2010)	DM	ALL	
2. Implementation of proposed Heritage Overlay Zones and associated land use management guidelines	DM	ALL	
3. Ensure that all new development remains off-grid to avoid costly construction of new infrastructure services	DM / GLS	ALL	

\* Typologies have been carefully considered based on infrastructure capacity and community development. Certain sites may contain more than one preferred option. The typology indicated in the Land use implications map (left) does not confine a site to only one option of urban form, the typology indicated is an indication of the preferred predominant typology for the development of that site and that at least 50% of the site should be covered with this typology. It is suggested that the typology above or below the preferred typology indicated in the matrix (refer Table 22) , could also be implemented, so as to ensure that suitable densities are achieved.



Table 31: Implementation Matrix for FA9

PROJECT NO. & TITLE	DESCRIPTION	TIMEFRAME AND PRECONDITIONS	IMPLEMENTING AGENTS	POSSIBLE FUNDING SOURCES
<b>FA9.1 Urban Design Framework</b>	Guidelines for development of public spaces and new residential and commercial developments to ensure for the protection of settlement character and heritage resources. Incentives to attract small-scale commercial activity and service station to gateway area around existing store location to support local community needs and provide local services. Landscaping and paving of gateway space to maintain local character.	Medium Term (5 - 10 years)  Bulk water and sewer upgrades required. On 0-5 year capital budget for bulk water services. No funding for sewer services provision in 0-5 years.	Drakenstein Municipality	Local Businesses Private Land Owners
<b>FA9.2 Realignment of Urban Edge</b>	Adjusting the urban edge to include area south of Waterpoel for future low density off-grid low impact rural lifestyle development to attract investment to Windmeul and increase population threshold and economic base.	Medium Term (4 - 8 years)	Drakenstein Municipality	
<b>FA9.3 Agrarian Reform Opportunities</b>	Facilitate opportunities for small-scale farmers and farm workers on identified portions in peri-urban areas for future land reform and community development purposes on a rental basis to support local produce food chain and markets.	Short to Long Term (on-going) (2 - 20 years)	Drakenstein Municipality Cape Winelands Municipality	WC Department of Agriculture CASIDRA Private Land Owners Local community / farm workers

## Electricity Networks

The existing 11 kV networks must be upgraded to supply development in this area.

## FA10 HERMON

### SPATIAL CONCEPT





## 6.11. Focus Area 10: Hermon

Hermon is a very small hamlet situated at the intersection of the R44 and the R46 to Riebeeck Kasteel. The town has its origins as a mission station (Rondeheuwel), from where it developed into a local service centre for the farming community related to the railway line. Hermon has a distinct sense of place with the potential to attract limited tourism activities and possibly businesses and industries interested in alternative technologies. The key to the future of this hamlet is to retain this sense of place and build on the tourism/green industry potential without comprising its scale and character.

### Theme 1: Environmental Management

- 1.1. Ensure appropriate interface with river through river setbacks and address disaster management and flooding.
- 1.2. Improve the management of water quality.
- 1.3. Improve waste management through community-based recycling projects.

### Theme 2: Agriculture, Land Reform and Rural Development

- 2.1. Protect irrigated footprint and agricultural resources.
- 2.2. Explore opportunities for allotments within existing irrigated footprints for agrarian reform purposes outside of the Berg River riparian zone.
- 2.3. Explore opportunities for extensive agrarian reform (livestock) and agri-processing orientated LED programmes.

### Theme 3: Heritage And The Cultural Landscape

- 3.1. Protect rural setting of settlement and protect distinctive/defining surrounding cultural landscape.
- 3.2. Allow for appropriate adaptive reuse of historic buildings/sites for the upgrading of heritage buildings and the regeneration of historic core.
- 3.3. Link tourism opportunities with surrounding activities and programmes such as festivals taking place in Riebeeck Kasteel and Wellington.

### Theme 4: Connectivity and Green Logistics

- 4.1. Upgrade and encourage the adaptive reuse of industrial buildings.
- 4.2. Attract small-scale green industries.
- 4.3. Strengthen north-south connections through development and upgrading of R46.

### Theme 5: Sport and Education

- 5.1. Facilitate skills training programmes and opportunities.
- 5.2. Upgrade the sport facilities for improved quality and increased use by local community.

### Theme 6: Settlement and Communities

- 6.1. Provide the community with mobile social facilities such as a library and clinic.
- 6.2. Create improved public transport linkages for commuting to schools in urban centres.
- 6.3. Explore opportunity for limited market driven residential development of appropriate scale and character and infill for farmworker housing.

# FA 10 HERMON

## PROPOSED LAND USE IMPLICATIONS FOR KEY SITES





KEY CONCEPTS AND INTERVENTIONS	CHECK BOX
1. Contain footprint of urban area	
2. Allow for limited new market driven residential development	
3. Encourage green industry	
4. Improve connection between northern and southern portion	

PARALLEL POLICIES, PLANS AND PRECONDITIONS	SOURCE / CONTACT	RELEVANT FA PLANS	ANNEXURE
1. Removal of alien invasive species in green open spaces and old Rondeheuwel Village cemetery as per Celebration of Gateways Report (2014)	DM / Urban Concepts	ALL	
2. Implementation of proposed Heritage Overlay Zones and associated land use management guidelines	DM	ALL	
3. Facilitate the implementation of small community library and clinic	DM	ALL	
4. Facilitate off-grid development and renewable energy connections to avoid costly upgrading of existing electricity, water and sewer networks currently under stress	DM / GLS	ALL	

\* Typologies have been carefully considered based on infrastructure capacity and community development. Certain sites may contain more than one preferred option. The typology indicated in the Land use implications map (left) does not confine a site to only one option of urban form, the typology indicated is an indication of the preferred predominant typology for the development of that site and that at least 50% of the site should be covered with this typology. It is suggested that the typology above or below the preferred typology indicated in the matrix (refer Table 22) , could also be implemented, so as to ensure that suitable densities are achieved.

Table 26. Implementation Matrix for FA10

1

PROJECT NO. & TITLE	DESCRIPTION	TIMEFRAME AND PRECONDITIONS	IMPLEMENTING AGENTS	POSSIBLE FUNDING SOURCES
<b>FA10.1 Industrial Precinct Renewal Plan</b>	Renewal of industrial buildings along Main Street to attract small-scale agri-processing industry activities while maintaining settlement character.	Medium to Long Term (5 - 15 years)	Drakenstein Municipality	Private Land Owners Local Businesses
<b>FA10.2 Urban Design Plan</b>	Upgrading of public realm through landscaping and simple paving to improve quality of built environment. Guidelines for new developments.	Short to Medium Term (2 - 5 years)	Drakenstein Municipality	
<b>FA10.3 North-South Connection Plan</b>	Planning for improved linkages between east and west through the use of connected NMT routes and connected system of safe open spaces. Identify mechanisms to attract small commercial/tourism activities at intersection to provide clear entry point and feed off tourists traveling through town to Riebeeck Valley.	Short to Medium Term (2 - 5 years)	Drakenstein Municipality	
<b>FA10.4 Agrarian Reform Opportunities</b>	Facilitate opportunities for local small-scale farmers and farm workers on identified portions in peri-urban areas for future land reform and community development purposes on a rental basis to support local produce food chain and markets.	Short to Long Term (on-going) (2 - 20 years)	Drakenstein Municipality Cape Winelands Municipality	WC Department of Agriculture CASIDRA Private Land Owners Local community / farm workers

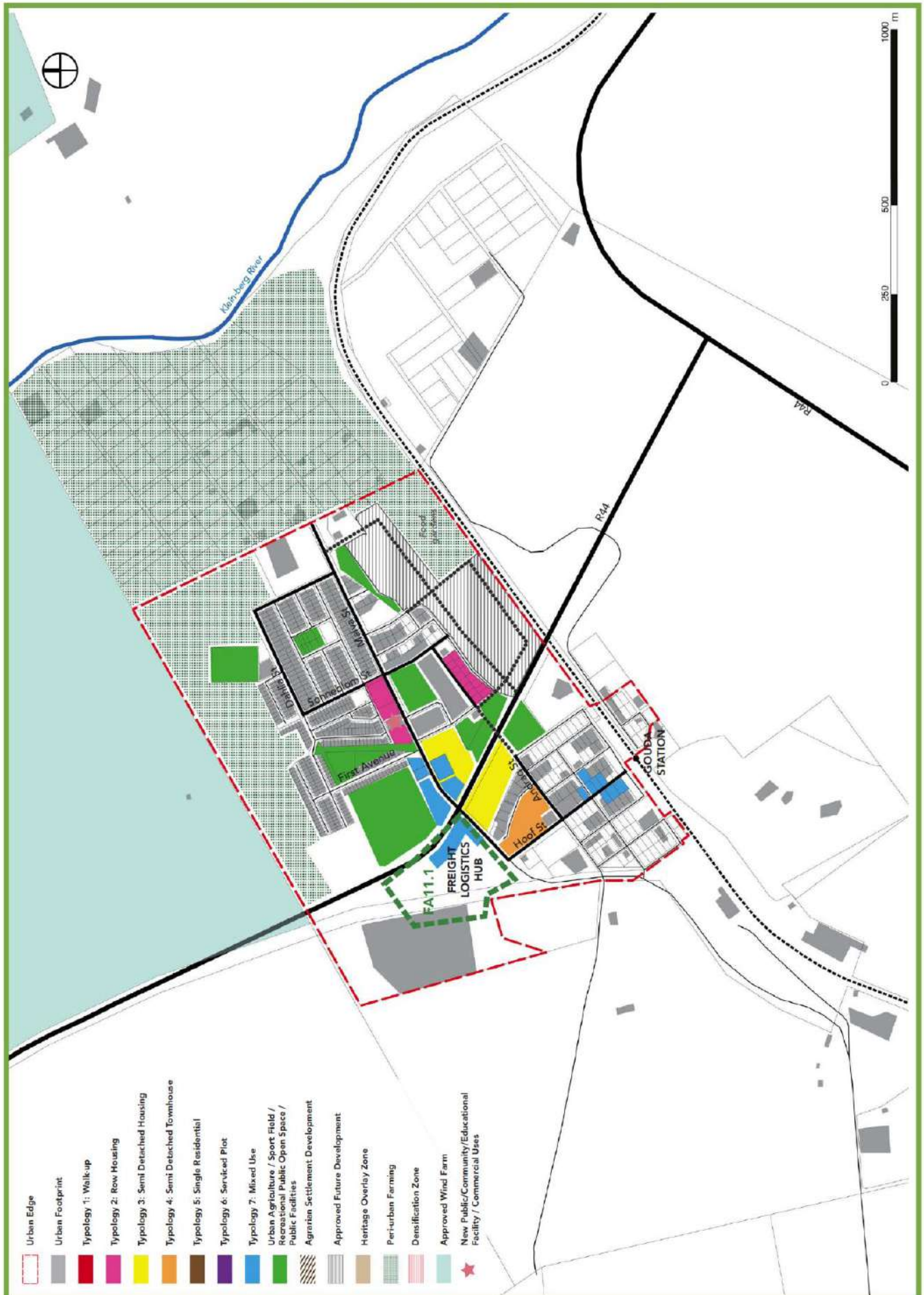
## Electricity Networks

This area is serviced by Eskom.



# FA11 GOUDA

## PROPOSED LAND USE IMPLICATIONS FOR KEY SITES



KEY CONCEPTS AND INTERVENTIONS	CHECK BOX
1. Contain footprint of urban area	
2. Focus effort on socio-economic interventions such as skills training	
3. Capitalise on location on R45/R44 – freight logistics hub, weigh-bridge, service station	
4. Investment in public realm	

PARALLEL POLICIES, PLANS AND PRECONDITIONS	SOURCE / CONTACT	RELEVANT FA PLANS	ANNEXURE
1. Upkeeping and maintenance of municipal owned land and community facilities	DM	ALL	
2. Discussions with wind farm developers to ensure for local benefits	DM	ALL	
3. Facilitate off-grid development and renewable energy connections to avoid costly upgrading of existing electricity, water and sewer networks currently under stress	DM / GLS	ALL	
4. Resolve storm water related problems and management of leivoor system	DM	ALL	

\* Typologies have been carefully considered based on infrastructure capacity and community development. Certain sites may contain more than one preferred option. The typology indicated in the Land use implications map (left) does not confine a site to only one option of urban form, the typology indicated is an indication of the preferred predominant typology for the development of that site and that at least 50% of the site should be covered with this typology. It is suggested that the typology above or below the preferred typology indicated in the matrix (refer to pg.53), could also be implemented, so as to ensure that suitable densities are achieved.



# FA11 GOUDA

## INFRASTRUCTURE PRIORITIES AND PRE-CONDITIONS



SOURCE: GLS CONSULTING ENGINEERS

Table 33. Implimentation Matrix for FA11

PROJECT NO. & TITLE	DESCRIPTION	TIMEFRAME AND PRECONDITIONS	IMPLEMENTING AGENTS	POSSIBLE FUNDING SOURCES
<b>FA11.1 Freight Logistics Hub</b>	Facilitate the development of a freight logistics hub at R44 Malfa Street intersection through the consolidation of freight and transport facilities such as regional weigh bridge and overnight truck stop. Precinct to include safe parking, kiosk, overnight and restrooms and a drive-through truck wash. Possible service station and associated commercial activities at intersection node to support hub activities.	Medium to Long Term (5 - 10 years)	Drakenstein Municipality Private Developer/s	Private Land Owners Local Businesses
<b>FA11.2 Urban Design Plan</b>	Guidelines for development along R44 to ensure integration is achieved while maintaining and enhancing local sense of place. Plan to protect heritage and facilitate new NMT and road connections to create legible urban structure.	Short to Medium Term (2 - 8 years)	Drakenstein Municipality	
<b>FA11.3 Agrarian Reform Opportunities</b>	Facilitate opportunities for small-scale farmers and farm workers on identified portions in peri-urban areas for future land reform and community development purposes on a rental basis to support local produce food chain and markets. Mechanism for containing future encroachment into surrounding landscape.	Short to Long Term (on-going) (2 - 20 years)	Drakenstein Municipality Cape Winelands Municipality	WC Department of Agriculture CASIDRA Private Land Owners Local community / farm workers

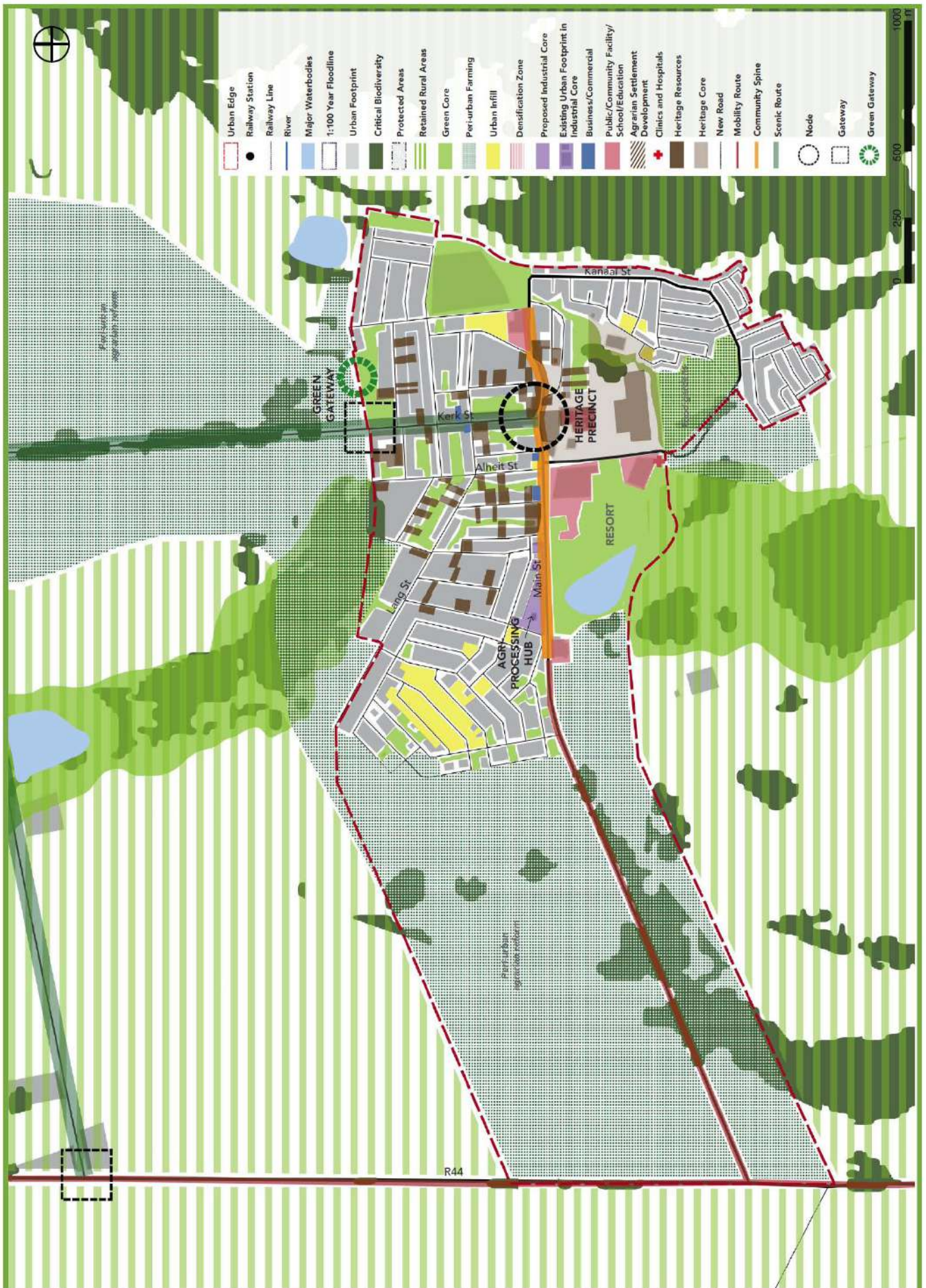
## Electricity Networks

This area is serviced by Eskom.



# FA12 SARON

## SPATIAL CONCEPT





## 5.13. Focus Area 12: Saron

The historic settlement of Saron has been in relative decline due to a variety of factors including changes in lifestyles, loss of the town's water rights and the state of the economy. The key assets of this town are its historic buildings, pattern of development (garden allotments), its setting in a scenic rural landscape and these should be preserved at all cost. Investment should focus on skills development and socio-economic opportunities for the resident community. Excessive growth should be resisted - infill development can be allowed, but the urban footprint should not expand. Key interventions would be investment in the public realm – particularly in the historic core, and approach routes to the town, and the supporting eco/adventure tourism opportunities. The whole town and its surrounding commonage is currently the subject of a land claim, which would probably take a substantial number of years to resolve. The commonage provides opportunities for a variety of farming opportunities at various scales and should be preserved for the benefit of the whole community in the long term – urban development should be not be allowed.

Major bulk water services, including WWTW and reservoir capacity are required for the existing town, plan for 5 -10 years.

### Theme 1: Environmental Management

- 1.1. Protect CBAs identified in urban and rural areas especially lower slopes of Saronberg, extending westward towards Saron.
- 1.2. Manage stormwater and WWTW run-off to restrict surface and groundwater pollution, especially pollution of the Vier-en-Twintigriviere.
- 1.3. Improve waste management through community-based waste recycling projects.

### Theme 2: Agriculture, Land Reform and Rural Development

- 2.1. Resolve issues around the processing of land claims, facilitate transformation in terms of TRANCRAA and reserve commonage land for agricultural purposes.
- 2.2. Compile an integrated agricultural development plan to give effect to transformation of the commonage (ie. Irrigated land, grazing).
- 2.3. Secure a source of water for irrigated agriculture, including the dam in the kloof together with distribution infrastructure.
- 2.4. Reinstate home and community gardens together with 'leivoor' network through improved distribution of water for urban agriculture use.
- 2.5. Facilitate a local produce market.

### Theme 3: Heritage And The Cultural Landscape

- 3.1. Upgrade the leiwat system and protect heritage core from insensitive development.
- 3.2. Investigate expansion of provincial heritage site to Bo-winkel and mill area and the formal protection of long garden allotments.
- 3.3. Repair and maintain church and other historic buildings (thatching and plastering) and cemetery and upgrade the church werf through hard and soft landscaping.
- 3.4. Explore adventure/eco-tourism opportunities through linkages with Groot Winterhoek Nature Reserve and its rich archaeological record and rock art.
- 3.5. Create a gateway precinct at northern entrance along Church street through signage and soft landscaping and heritage signage along R44.
- 3.6. Implement the proposed replacement for Andrag building as a tourism facility for interpretive heritage information centre.
- 3.7. Upgrade the Meulplein and Bo-winkel forecourt.

### Theme 4: Connectivity and Green Logistics

- 4.1. Base economic development on local resource base i.e. agriculture and traditional skills and investigate opportunities for re-establishing traditional enterprises such as milling.
- 4.2. Support events for celebrating local culture.

### Theme 5: Sport and Education

- 5.1. Upgrade and maintain community sports facility for optimal access and social benefits.
- 5.2. Local skills development (e.g. thatching and plastering) for maintenance of buildings.

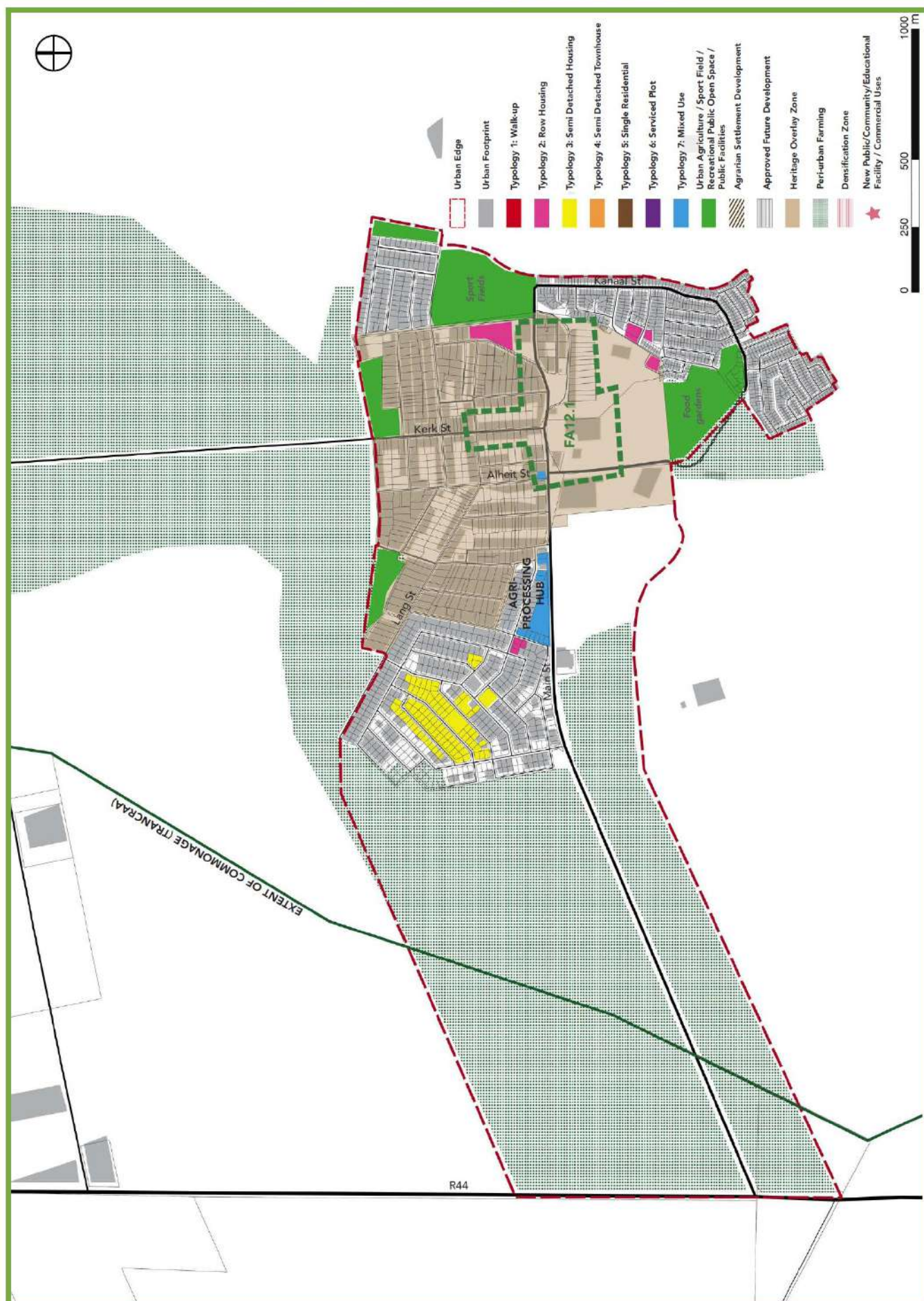
### Theme 6: Settlement and Communities

- 6.1. Restrict new housing development to infill opportunities on internal vacant plots.
- 6.2. Ensure that infill opportunities along main streets are sensitive to the historic streetscape.



# FA12 SARON

## PROPOSED LAND USE IMPLICATIONS FOR KEY SITES



KEY CONCEPTS AND INTERVENTIONS	CHECK BOX
1. Recognise the importance of the village character in viability of town	
2. Focus efforts on investment in historic core, tourism (adventure/sports) and human development	
3. Retain commonage for agricultural use	

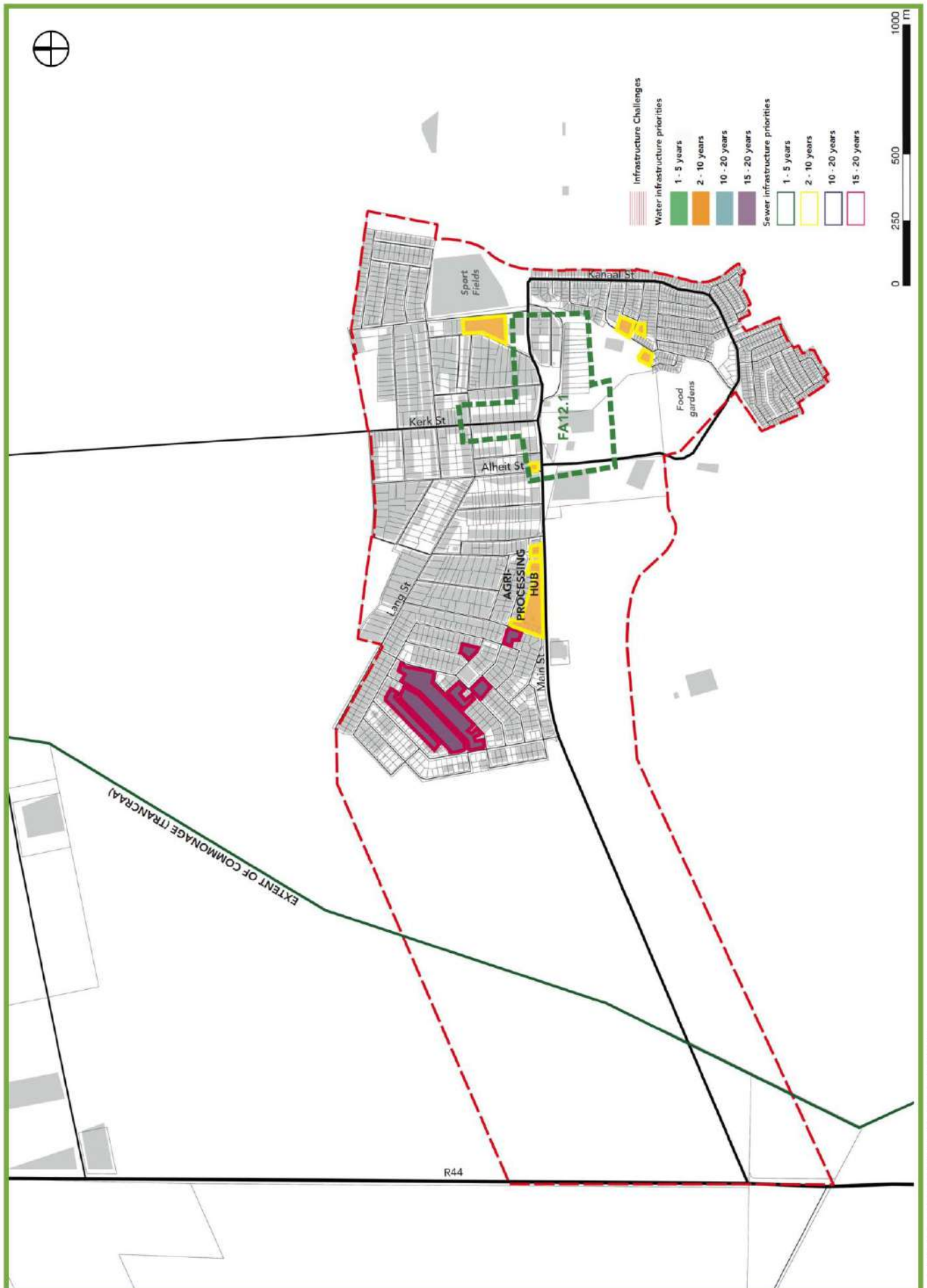
PARALLEL POLICIES, PLANS AND PRECONDITIONS	SOURCE / CONTACT	RELEVANT FA PLANS	ANNEXURE
1. Implementation of proposed Heritage Overlay Zones and associated land use management guidelines	DM	ALL	
2. Resolution of future of commonage land (implications of TRANCRAA)	DM	ALL	
3. Implementation of 6 identified projects, proposed new buildings and proposed heritage projects as per Saron Heritage Development framework (2009)	DHK / Urban Concepts / Planscape		2.12
4. Facilitate off-grid development and renewable energy connections to avoid costly upgrading of existing electricity, water and sewer networks currently under stress	DM / GLS	ALL	

\* Typologies have been carefully considered based on infrastructure capacity and community development. Certain sites may contain more than one preferred option. The typology indicated in the Land use implications map (left) does not confine a site to only one option of urban form, the typology indicated is an indication of the preferred predominant typology for the development of that site and that at least 50% of the site should be covered with this typology. It is suggested that the typology above or below the preferred typology indicated in the matrix (refer to pg.53), could also be implemented, so as to ensure that suitable densities are achieved.



# FA12 SARON

## INFRASTRUCTURE PRIORITIES AND PRE-CONDITIONS



SOURCE: GLS CONSULTING ENGINEERS

Table 34. Implementation Matrix for FA 12

PROJECT NO. & TITLE	DESCRIPTION	TIMEFRAME AND PRECONDITIONS	IMPLEMENTING AGENTS	POSSIBLE FUNDING SOURCES
<b>FA12.1 Heritage Core Precinct Plan</b>	Detailed precinct plan and urban design guidelines for the upgrading and maintenance of the Meul Plein, Church Werf, cemetery, Pastorie and surrounding historic buildings. Restoration of the old Mill and Ancillary buildings. To include the rebuild of New Andrag building as potential tourism information facility. Resurfacing of sidewalks, landscaping of tree-lined avenues (especially Church Street) and the rehabilitation of leivoor system. Initiate tree-planting projects to beautify town.	Short to Medium (2 - 6 years)	Drakenstein Municipality  Private Developer/s WC Department of Housing	Private Land Owners Local Businesses Tree planting initiative organisations (Greenpop/Reliance/Trees and Food for Africa)
<b>FA12.2 Heritage Festival (Leiwater Festival)</b>	Festival to celebrate local heritage as mission station and scenic landscape. Combine with tourism and recreational activities and link with nature reserve hikes and MTB trails.	Short Term (annual) (1 - 3 years)	Drakenstein Municipality DLTA	WC DCAS Drakenstein Heritage Foundation
<b>FA12.3 Agrarian Reform Opportunities</b>	Facilitate opportunities for small-scale farmers and farm workers on commonage for future land reform and community development purposes on a rental basis to support local produce food chain and markets.	Short to Long Term (on-going) (2 - 20 years)	Drakenstein Municipality Cape Winelands Municipality	WC Department of Agriculture CASIDRA Private Land Owners Local community / farm workers
<b>FA12.4 Agri-Processing Hub</b>	Consolidate industrial requirements for surrounding farmers and local urban agriculture at central processing hub for small-scale production and packaging. Identify and secure municipal owned land. Provide employment opportunities and link with renewable energy projects.	Medium to Long Term (6 - 15 years)	Drakenstein Municipality Private Developer	Private Land Owners Local community / farm workers

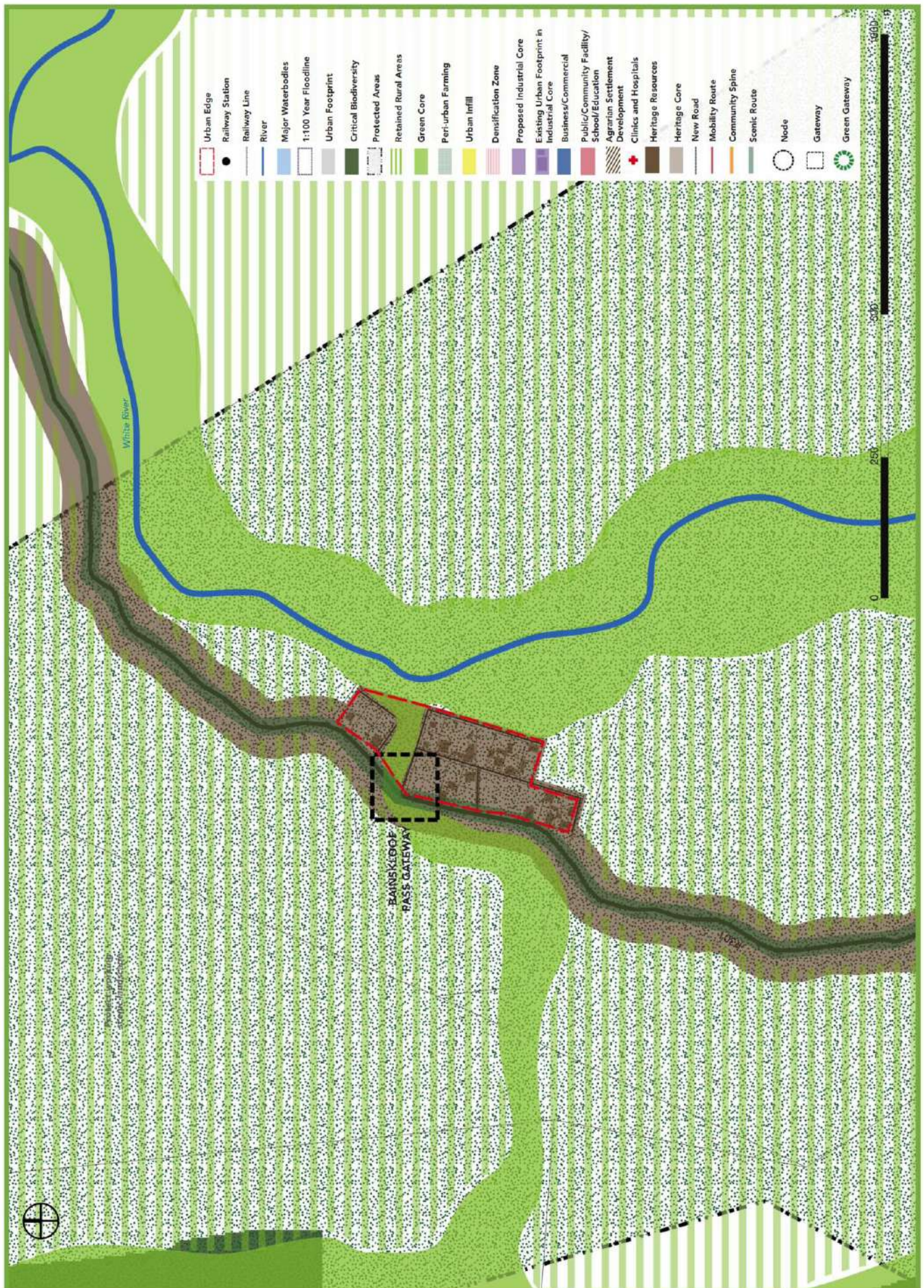
## Electricity Networks

This area is serviced by Eskom.



# FA13 BAINSKLOOF VILLAGE

## SPATIAL CONCEPT





## 6.14 Focus Area 13: Bainskloof Village

The historic village of Bainskloof provides access to the sport and recreation opportunities of Hawequa Mountains. Whereas no further development should be allowed so as protect the sense of place of the historic village and surrounding conservation area investment in the public areas would be appropriate so as to celebrate this gateway to the mountain.

Only limited infrastructure services available at Bainskloof. Water source can not be extended.

### Theme 1: Environmental Management

- 1.1. Ensure that fire management plan is in place.

### Theme 2: Agriculture, Land Reform and Rural Development

- 2.1. Restrict loss of cultivatable land and protect existing irrigated footprint.
- 2.2. Upgrade of hotel to generate local income and create job opportunities.

### Theme 3: Heritage And The Cultural Landscape

- 3.1. Protect village character and heritage buildings by strict control over new development and alterations to existing buildings.
- 3.2. Upgrade public facilities and public entrance areas.
- 3.3. Provide guidelines for signage and scenic route.

### Theme 4: Connectivity and Green Logistics

- 4.1. Only limited business opportunities to be allowed in support of tourism, outdoor recreational activities.
- 4.2. Only low-key unobtrusive business to be allowed such as guest houses or rental accommodation in existing buildings.

### Theme 5: Sport and Education

- 5.1. Improve and promote access to adventure sport and nature-based recreation opportunities.

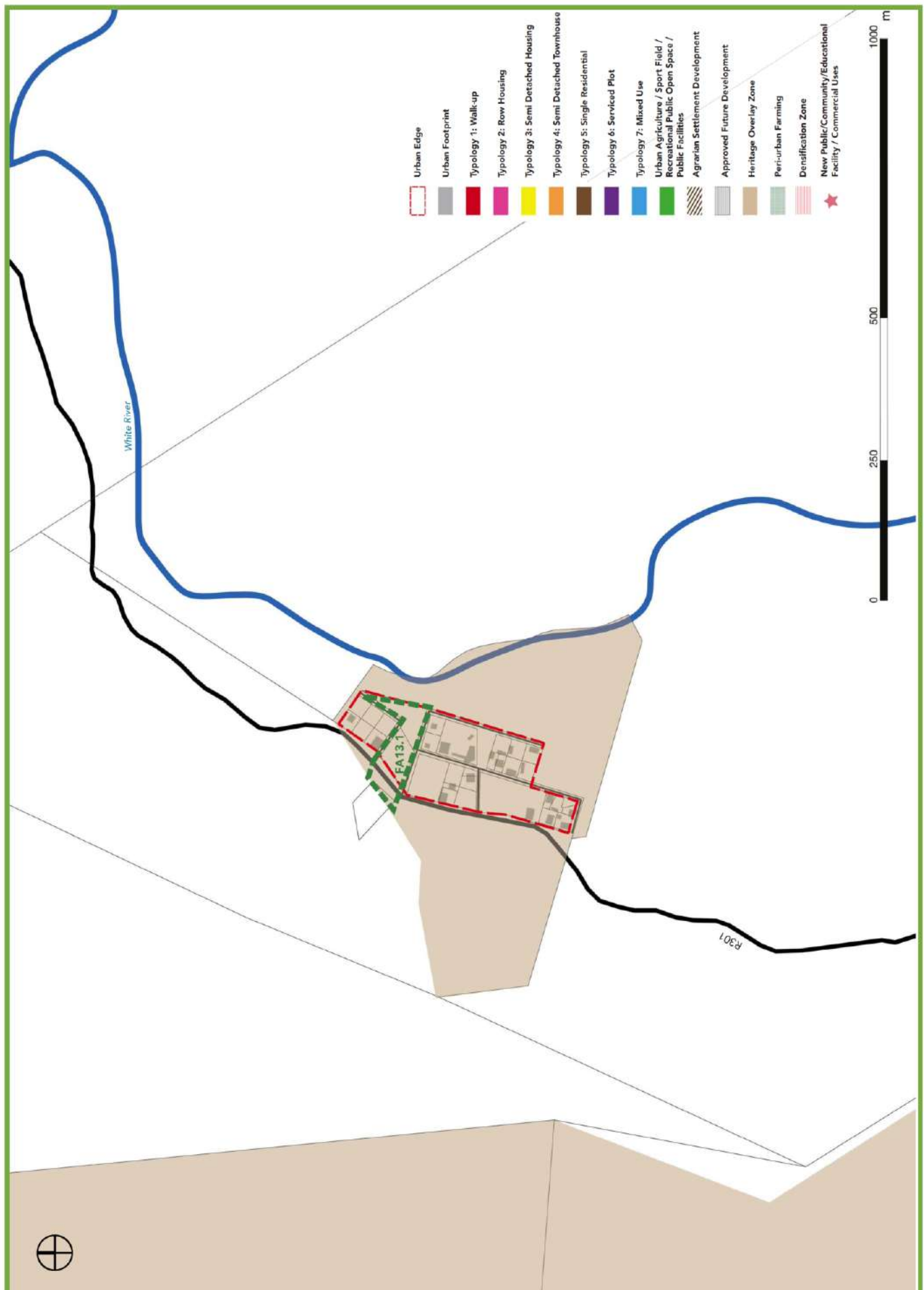
### Theme 6: Settlement and Communities

- 6.1. No new development or expansion of village footprint allowed.



# FA13 BAINSKLOOF VILLAGE

## PROPOSED LAND USE IMPLICATIONS FOR KEY SITES



KEY CONCEPTS AND INTERVENTIONS	CHECK BOX
1. Contain footprint and protect heritage resources	
2. Invest in public areas as gateway to mountain experience	
3. Retain sense of place	
4. Fire management	

PARALLEL POLICIES, PLANS AND PRECONDITIONS	SOURCE / CONTACT	RELEVANT FA PLANS	ANNEXURE
1. Implementation of proposed Heritage Overlay Zones and associated land use management guidelines	DM / Service Provider (Commissioned 2014)	ALL	

Table 29. Implementation Matrix for FA13

PROJECT NO. & TITLE	DESCRIPTION	TIMEFRAME	IMPLEMENTING AGENTS	POSSIBLE FUNDING SOURCES
<b>FA13.1 Public Gateway Precinct Plan</b>	Guidelines for upgrading of public space through landscaping to create well-defined gateway area while ensuring for the protection of settlement character and heritage resources.	Medium Term (5 - 9 years)	Drakenstein Municipality DLTA Private Land Owner	WC DCAS Drakenstein Heritage Foundation Private Land Owner

## Infrastructure services and Electricity Networks

This area is serviced by Eskom.



# 7.

## Implementation Framework





## 7.1. Policies and Strategies

The Drakenstein Municipality has a number of policies in place that will support the SDF proposals. These policies are summarised below. In addition the municipality has also recently commissioned policy documents that will support the implementation of the SDF - these projects are summarised below, as well as suggestions for additional policies needed to implement the SDF proposals.

### 7.1.1. Existing Policies

#### 7.1.1.1. Paarl Farms Land Use Management Policy (2005)

This policy is aimed at guiding the future use of the Paarl "town" farms. The policy adopted by the Drakenstein Council concludes that all the remaining farms are of significance to Paarl and contribute hugely to the unique character and sense of place of Paarl, and thus none of the farms may be developed outright. Limited residential development could be considered on land not actively farmed or suitable for farming contiguous to urban areas, provided that such proposals are subject to detailed studies that will inter alia investigate the impact on heritage and visual resources.

#### 7.1.1.1.1. Densification and Urbanisation Strategy and Open Space Utilisation Policy (2006)

This report presents a conceptual approach densification and urbanisation as well the future use of public open space and vacant land within the settlements of the Drakenstein Municipality. The focus is on Paarl and Wellington although reference is made to Hermon, Gouda and Saron.

The proposed strategy is underpinned by three principles:

1. 50% of such activities should be within walking distance of where people live thus the extent of mixed use development should be expanded.

2. A socio-economic gradient with appropriate interfaces between various community groups should be established so as to ensure that communities are not divided by large gaps in the living standards between those living near each other.
3. A minimum gross average density of 25du/ha must be achieved so that urban settlements can become more efficient and convenient and to support the

efficient implementation of public transport systems.

The strategy proposes the following mechanisms for achieving densification:

- Demolition and redevelopment
- Infill
- Subdivision, Second Dwellings, Sectional Title
- Greenfield Development
- Brownfield Development

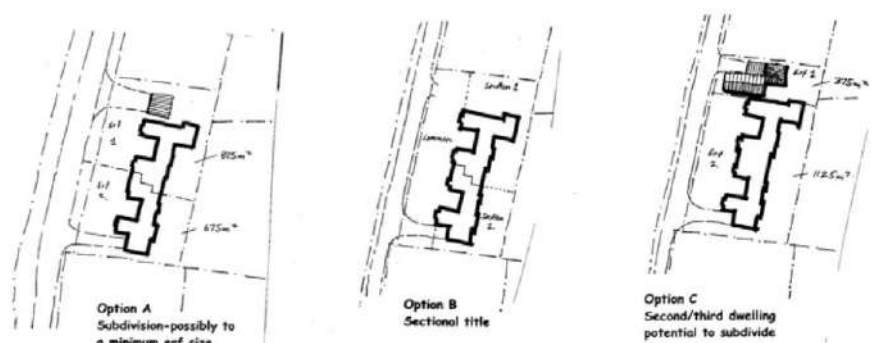


Figure 11. Three options for the subdivision of large plots (CNdV, 2006)

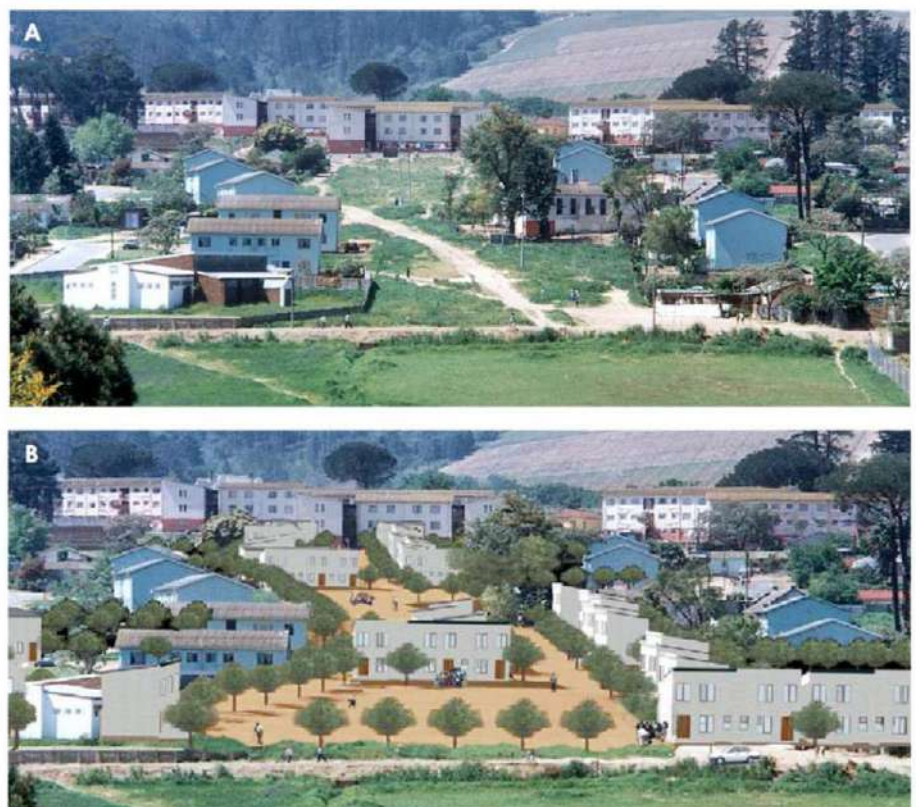


Figure 12. Underutilised open space before and after infill development (CNdV, 2006)



#### 7.1.1.3. Informal Settlement Strategy and Programme (2014)

This report presents a strategy for the upgrading of existing informal settlements to formalised urban areas, using National Housing programmes and other subsidy mechanisms.

These include: Upgrading of Informal Settlements Programme (UISP), Integrated Residential Development Programme (IRDP), Urban Settlement Development Grant (USDG), Emergency Housing Programme (EHP), Enhanced People's Housing Process (EPHP), as well as capital contributions from municipal finances and other relevant instruments, including the Municipal Infrastructure Grant (MIG).

The strategy provides a detailed investigation of all informal settlements in the municipality and identifies suitable mechanisms and the interventions required to upgrade specific settlements.

#### 7.1.1.4. Environmental Management Framework (2012)

The Environmental Management Framework (EMF) for the municipality is based on the vision for Drakenstein: "An environment to sustain livelihoods, and the health and wellbeing of its people".

The objectives of the framework are to:

- Guide location of development in Drakenstein in such a way that it conserves:
  - high productivity agricultural soils;
  - important biodiversity;
  - systems that regulate and provide a reliable supply of clean water;
  - land cover to prevent erosion; and
  - landscape character and aesthetic qualities.
- Guide location of development in order that it avoids and minimises:
  - pollution of land, air, surface and groundwater; and
  - exposure to natural hazards.

- Guide environmental decision making regarding development in such a manner that it promotes:

- good stewardship of land;
- greater efficiency of energy, land and water use; and
- rehabilitation and restoration of degraded natural areas.

The framework includes detailed mapping of the environmental assets and resources of the municipality. Based on the relative importance of these resources, three Environmental Management Zone (EMZ) categories have been established and applied to the municipal area - these are:

- Zone 1: Keep assets intact
- Zone 2: Be careful
- Zone 3: Limited Constraints

A management framework as well as a matrix linking attributes and activities/types of development that may be considered inappropriate or appropriate were developed for each EMZ.

#### 7.1.2. Required New Policies

##### 7.1.2.1. Strategy for the provision of serviced sites

Given the urgent need to address the housing backlog in the municipal area, it is evident that the municipality would have to implement a strategy of providing serviced sites, where beneficiaries will be able to construct their own homes. A strategy is needed to guide the municipality in assisting beneficiaries to develop housing at a high density over time (so-called incremental housing).

The City of Cape Town has been in the process of investigating different design typologies, delivery models and funding mechanisms to provide incremental housing opportunities to strategic sites with the metro. See Annexure 3 for further detail and guidance.

##### 7.1.2.2. Formalisation of Backyard Structures

The Drakenstein Municipality has recently employed a civil engineering company to conduct a backyard informal housing structure survey for the municipality. It is anticipated that the survey data should be analyzed in such a way as to guide the policy formulation process at a later stage.

##### 7.1.2.3. Urban renewal / regeneration policy

This policy should consider the mechanisms for initiating and driving urban renewal projects and the role that the municipality can play in facilitating such initiatives. Aspects to be investigated would include:

- Best practice and latest thinking re urban renewal programmes, including local and international case studies.
- Achieving the support and buy-in of local communities and property owners for urban renewal programmes.
- Institutional mechanisms to attract investment such as the establishment of "business improvement districts" and financial incentives.

- Land use management issues and innovations related to urban renewal.
- Funding investment in the public realm.
- How to identify and demarcate areas for urban renewal programmes.

A clear policy that provides guidance for the private sector implementing urban renewal programmes and spells out the role of the municipality in supporting such programmes.

#### 7.1.2.4. Student Housing policy

Although it is recognised that in terms of land use management, one cannot differentiate between housing typologies based on the occupation of the recipients, it is never the less acknowledged that the provision of housing for students presents unique challenges as the spatial requirements are regarded as unique. As the education economy is regarded as growth sector for the municipality, it is thus suggested that the problems and challenges related to student housing is investigated with a view to providing input the LUMS and detailed spatial planning for areas under pressure for delivering more student accommodation such as Wellington. The study should investigate problems and trends in the delivery of student housing in the Drakenstein area, as well as other Western Cape towns (e.g. new housing typologies evolving in Stellenbosch), consider international case studies, with a view to making proposals regarding appropriate housing typologies and land use management mechanisms to address the issues and problems.

#### 7.1.2.5. Sporting Economy Strategy

Building on the work commissioned in 2013 (Drakenstein Sport and Recreational Master Plan prepared by Aurecon), a focused implementation plan for sport and recreation facilities and programmes is needed, that also includes an investigation into the potential contribution of sport and recreation to the local economy and how to optimise the associated opportunities.

## 7.2. Guidelines

The Drakenstein Municipality has recently commissioned or is in the process of commissioning a number of guidelines and by-laws that will support the implementation of the SDF. The briefs for these projects are summarised below, as well as initial suggestions for additional guidelines needed to implement the SDF proposals.

### 7.2.1. Guidelines and By-laws for the protection and management of Heritage Overlay Zones and Heritage Resources

The Drakenstein Municipality has recently appointed a service provider to compile guidelines and a by-law for the protection and management of 16 Heritage Overlay Zones (HOZ) and identified Grade III Heritage Resources (as identified during the 2010 Heritage Survey).

These guidelines and by-laws will ultimately be incorporated into the Integrated Zoning Scheme envisioned for Drakenstein Municipality. This will put the municipality in a position to gain competency for dealing with Grade III heritage resources in terms of Section 7 of the National Heritage Resources Act, 1999, (Act no 25 of 1999) (NHRA).

The 16 overlay zones identified in the Heritage Resources Survey, include the urban areas of Paarl, Wellington, Hermon, Saron, Gouda and Simondium and the rural areas of Boviël, Blouviël, Groenberg, Daljosafat, Klein Paardeberg, Wemmershoek, Bergriver Corridor, Simondium slopes, Agter Paarl and Paardeberg.

The project brief states that the project should inter alia address the following:

- Development of a vision statement/and or guidelines for the overlay zones.
- A general section on guiding principles for heritage management and criteria for

heritage significance in terms of the NHRA.

- Principles for the control and guidance of development within a HOZ.
- The development of management provision including Council's consent and factors to be considered before granting consent within a HOZ.
- Mechanisms for the protection and management of buildings, structures and other elements deemed to be of Grade III significance.



### 7.2.2. Land Use Management System (Integrated Zoning Scheme)

The municipality is in the process of commissioning a Land Use Management System (LUMS) for the municipality which will include a new integrated zoning scheme. The brief for the project emphasises the alignment of the system with the SDF and. Aspects that are highlighted include the need to address changes in agricultural practices (e.g. small scale farming), achieving mixed-used development and facilitating business opportunities; alternative housing typologies, managing informality and addressing the challenges posed by climate change. Innovation and a fresh approach to land use management as opposed to rigid mono-functional zoning that dates back to a modernist paradigm combined with apartheid policies to address the specific needs of the municipality is regarded as critical to the success of the LUMS.

With regard to housing options, the LUMS should specifically include mechanisms for site and service delivery and the accompanying incremental housing. Following on the SDF proposal to create opportunities for small scale farming and land reform in peri-urban areas, a variety of issues as set out in 6.2.3 will have to be addressed. The LUMS provision for mixed-used development should not be restricted to overlay zones for nodes and activity streets (i.e. traditional business areas), but should also recognise the need for a introducing a variety of uses at community nodes, including sports facilities.

In addition to issues set out in the brief for the LUMS, it is suggested that the following issues are addressed in the LUMS:

- Managing the impact of development against slopes
- Protecting scenic routes from insensitive development (also requires coordination at district level)

- Managing business creep into residential areas
- Managing the impacts of secondary uses on commercial farms (refer also to HOZ by-law and guidelines study above)
- Mechanisms to achieve appropriate densification through overlay zones, including formalisation of backyard dwellings (see also 6.1.2.2)
- Provisions for green industry, including the possible creation of special economic zones to attract green industries and the land use management rules associated with such industries
- Appropriate land use management rules for the specific needs of industry in Drakenstein (e.g. smaller spaces)

### 7.2.3. Provision of Engineering Infrastructure and Services (Development charges)

In conformance with sec 21 of Spatial Planning and Land Use Management Act, 16 of 2013

(h) identify, quantify and provide location requirements of engineering infrastructure and services provision for existing and future development needs for the next five years;

(n) determine a capital expenditure framework for the municipality's development programmes, depicted spatially;

The above requirements have been represented spatially in the plan. The base information has been derived from master planning and 20 year budget framework held in the Civil Engineering Department. As there are constraints on the Municipal budget in that the demand for services exceeds the funding available, the principle of development charges that have been fixed in the MFMA Act 56 of 2003 expanded upon in sec 49 of SPLUMA and sec 48 of LUPA have been acted upon.

Development Charges are further dealt with in sec 82 and 83 of the Draft Drakenstein Land Use Planning By-law.

In the Policy Framework for Municipal Development Charges issued by National Treasury certain requirements are set out for incorporation into a Municipal Policy on Development Charges. One of the main requirements of the framework is that the development charges be calculated in an equitable manner. The Draft Drakenstein Development Charge Policy has been written with all the above in mind and it includes a calculator that complies with the requirements of National Treasury.



## 7.2.4. Peri-Urban Agrarian Reform Guidelines

The following guidelines have been developed as part of the SDF process to support the notion of peri-urban agrarian reform in the urban edge. Further formalisation of these guidelines and the development of a robust policy document will be required to ensure for the appropriate management and implementation mechanisms to achieve a more sustainable model for land reform in the Drakenstein Municipality.

1. Peri-urban agrarian reform to employ a range of land reform programmes to facilitate commercial farming, food security gardens and non-farming ventures (e.g. eco-tourism).
2. Peri-urban agrarian reform to focus on the following peri-urban areas:
  - Existing commercial farms (e.g. viticulture) to accommodate equity schemes.
  - Undeveloped, underutilized or uneconomical (i.e. size) land of suitable agricultural potential for intensive small-scale commercial farming (i.e. crop or livestock production for markets).
  - Undeveloped agriculturally suitable municipal commonage or state land within or peripheral to settlements for community-based food security gardens (i.e. small allotments).
3. Agricultural units within the peri-urban area on which soil-based farming is to take place (i.e. commercial small and large units and community-based food security gardens) only be established on land that has agricultural potential (i.e. soils and irrigation water). Accordingly, non-soil-based farming and non-farming ventures (e.g. free-range livestock/poultry, eco-tourism ventures) should not be permitted on high potential or unique agricultural land.
4. All peri-urban agrarian reform developments (i.e. agricultural and non-farming models) be subject to a business plan in accordance with the specifications of the Department of Rural Development and Land Reform and the Western Cape Province Department of Agriculture. Where such developments include project-based agricultural units (i.e. small units) or multiple participants (i.e. community-based food security gardens) an institutional framework/memorandum of participation be put in place.
5. Cadastral units on which peri-urban agrarian reform projects are to be established must remain intact. The smaller agricultural or non-farming units within project-based developments must also resort within the original cadastral unit, with such land units to be defined in terms of the leasehold rights issued to the beneficiaries and the extent of such units to reflect the sustainability of the project's objectives, the minimum size of the latter to be advised on by the Western Cape Province Department of Agriculture for various crop and livestock farming models.
6. Settlement rights (i.e. dwelling establishment) within peri-urban agrarian reform developments (i.e. farming and non-farming units) will require careful consideration to manage impacts on the cultural landscape. At most one dwelling unit per cadastral unit could be considered with limitations on scale, with such provision also applying to individual leasehold units in project-based schemes. Settlement rights should be excluded from community-based food security garden allotments. This aspect should be fully investigated and unpacked in a comprehensive policy statement.
7. Zoning of peri-urban agrarian reform land units to be appropriate (i.e. agricultural, rural) in order to protect the soil and water resources that reflect the agricultural potential. Given the need for agricultural

diversification and local economic development the zoning must allow for primary product processing, limited guest accommodation (e.g. farmstay) and marketing of local produce (i.e. temporal or permanent market) through consent uses within the primary zone, provide that impacts on heritage resources are adequately managed.

8. Peri-urban agrarian reform to exclude "smallholdings", ensuring a clear distinction between residential lifestyle unit within the urban edge and small scale commercial agricultural units outside the urban edge.
9. Peri-urban agrarian reform development will inter alia serve to reinforce the urban edge and protect agricultural and environmental resources in close proximity to urban communities
10. Peri-urban agrarian reform development be guided by the following:
  - Western Cape Policy for the Establishment of Agricultural Holdings in the Urban Fringe (2000).
  - Western Cape Spatial Development Framework (2014): Rural Land Use Planning and Management Guidelines (to be revised).

## 7.3. Priority Projects

Table 30 combines all high priority projects as set out per Focus Area to identify and inform where focus should be placed on providing guidance and informants to the municipal IDP and all other relevant sector plans.

Additional projects for subsequent timeframes can be found in the implementation matrices for each focus area.



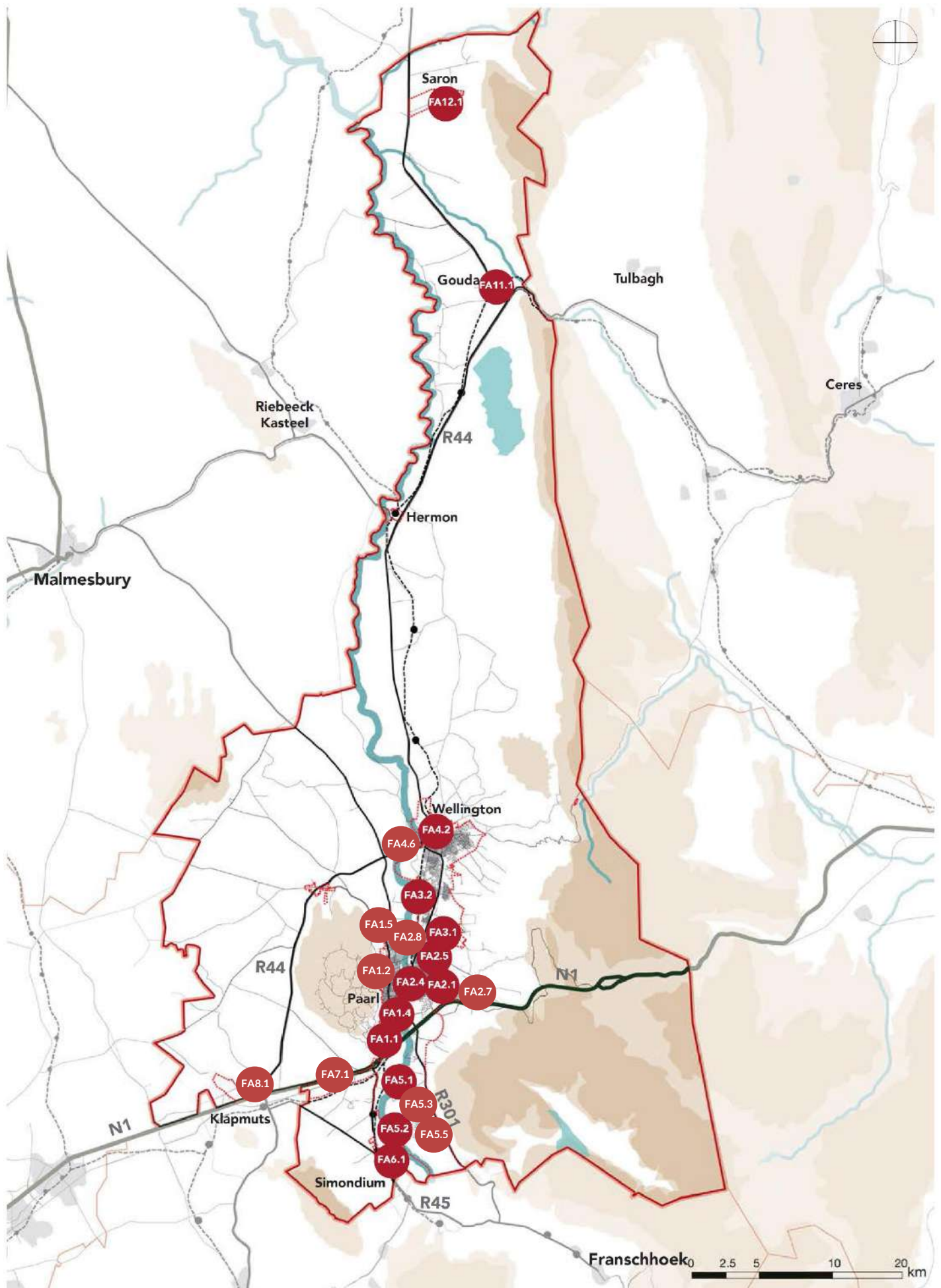


Figure20. Spatializing the high priority IDP implementation projects at a municipal scale

**Table 36: List of high priority IDP Status Implementation Projects**

PROJECT NO. & TITLE	TIMEFRAME	IMPLEMENTING AGENTS
FA1.1 De Poort & Paarl Hamlet Precinct Plan	Long Term (5 – 10 years)	Drakenstein Municipality De Poort Board of Directors (Task Team) Drakenstein Local Tourism Association (DLTA)
FA1.2 Heritage Management Plan	Short Term (0 – 2 Years)	Drakenstein Municipality
FA1.2 Mountain Slope Study	Short Term (0 – 2 Years)	Drakenstein Municipality
FA1.3 Paarl CBD (Main Road) Urban Design Framework	Short Term (0 - 2 Years)	Drakenstein Municipality Private Developers
FA 1.4 Paarl Waterfront and Arboretum Precinct Plan	Short to Medium Term (3 – 7 years)	Drakenstein Municipality Paarl CBD Partnership DLA
FA1.5 Nieuwedrift Development Framework	Medium Term (4 -6 Years)	Drakenstein Municipality Private Developers
FA2.1 Klein Drakenstein Road Central Improvement District Plan	Short to Medium Term (3 – 7 Years)	Drakenstein Municipality
FA2.4 Hugenote Station Precinct Plan	Short Term (2 – 5 Years)	Drakenstein Municipality Paarl CBD Partnership DLTA
FA2.6 VPUU Priority Projects Roll-Out	Short to Long	Drakenstein Municipality VPUU
FA2.7 Development of Hugenote Tunnel Long Haul Facility	Small to Medium Term (5 – 8 Years)	Drakenstein Municipality Private SANRAL
FA2.8 Dal Josafat Station Precinct	Medium Term (4 – 6 Years)	Drakenstein Municipality Transnet
FA3.1 Roggeland Precinct Plan	Short to Medium Term (3 – 6 Years)	Drakenstein Municipality SAHRA Heritage Western Cape
FA3.2 Mbekweni Station Precinct Plan	Short Term (2 – 4 Years)	Drakenstein Municipality
FA3.5 Mbekweni NMT Plan	Short to Medium Term (2 – 10 Years)	Drakenstein Municipality
FA4.2 Wellington CBD Urban Design Framework	Medium to Long Term (5 – 20 Years)	Drakenstein Municipality
FA4.4 Wellington Heritage Management Plan	Short Term (2 - 4 Years)	Drakenstein Municipality Heritage Western Cape
FA4.5 Wellington Urban River Plan	Short to Medium Term (2 – 6 Years)	Drakenstein Municipality WC DEDAT Local Community and Land Owners
FA4.6 Wellington Industrial Park	Short to Medium Term (2 - 10 Years)	Drakenstein Municipality Private Developers
FA5.1 Paarl South Floodline Study	Short to Medium Term (2 - 4 Years)	Drakenstein Municipality Private Land Owners
FA5.2 Paarl South New Public Road link	Short to Medium Term (3 - 6 Years)	Drakenstein Municipality
FA5.3 & FA5.5 South of N1 Local SDF	Short Term (0 – 2 Years)	Drakenstein Municipality Private Developers
FA6.1 Simondium New Rural Village Precinct Plan	Short to Medium Term (5 – 8 Years)	Drakenstein Municipality



FA7.1 Ben Bernhard Business and Logistics Park	Short Term (2 - 4 Years)	Drakenstein Municipality Private Developers
FA8.1 Klapmuts Local SDF	Short to Medium Term (2 - 4 Years)	Drakenstein Municipality
FA11.1 Gouda Transport Logistics Hub	Short to Medium Term (5 - 10 Years)	Drakenstein Municipality Private Developers
FA 12.1 Saron Heritage Core Precinct Plan	Short to Medium Term (2 - 6 Years)	Drakenstein Municipality Private Developers
FA12.2 Saron Heritage Festival (Leiwater Festival)	Short Term (Annual)	Drakenstein Municipality DLTA

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