

Langeberg Spatial Development Framework, 2023 – 2028 Draft 1

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Langeberg Spatial Development Framework 2023-2028

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Executive Summary

Status of the Langeberg SDF, 2023 – 2028, Draft 1

The Langeberg SDF, 2023 -2028 will be adopted as core component of the 5th generation Langeberg IDP, 2023 – 2028 (MSA Section 26(e)). The rewrite of the SDF focus on proposals that will be included as projects planned for the next five years and for the next 20-year and alignment of these projects with the Capital Expenditure Framework of Langeberg Municipality. The rewrite forms part of Langeberg Integrated Development Plan (IDP) five-year cycle review. SDF Draft 1 will be circulated for public participation, after adoption by Langeberg Council.

Purpose & Vision

The purpose of the Langeberg Spatial Development Framework (SDF) is to guide growth and development in the

Langeberg's municipal area in a sustainable manner. Hence the spatial vision for the Langeberg is:

"An economically prosperous region and sustainable liveable environment for all Langeberg residents."

The vision is derived from a SWOT and Status Quo analysis. Langeberg has strong agricultural and tourism corridors running along the R60 East West bending South East and a long intensively cultivated corridor along the R 318 (Koo and Keisie) and R62. In contrast with but



in support of the cultivation are significant stretches of natural conservation worthy veld being home to threatened biomes. Development proposal to follow are informed by values, performance qualities, structural tools and strategies.

Land Requirements and Supply

According to the HSP, 225ha of land is required to provide for settlement opportunities:

Settlement	Robert son	Montagu	Ashton	Bonnievale	McGregor	Total
Land (gross ha)	86,33	17,8	48	53,8	19,2	225,13
2014 waiting list	4795 3717 (Robertson) 1078 (Nkqubela)	1168	3901 2599 (Ashton) 1302 (Zolani)	2432	582	12 878
Land Required (nett ha) as per 2014 waiting list	86, 31ha	21.024	70.2	43.8	10.5	231.8

Land for dealing with the waiting list is slightly under-provided for at 6.5ha, whilst sufficient provision was made for future growth in the next 5 years and in the longer term (next 20 years).

Provincial Government contributed to Social Infrastructure and particular to Housing, Education and Health and Transport (Roads) and Langeberg to sports and recreation, social development and public safety with the bulk of the budget allocated to tradeable services such as electricity, water management and waste management.

An overview of the status of the Bulk Infrastructure Capacity

The availability of bulk infrastructure and services in the Langeberg settlements contribute to the economy and future development (investors' confidence).

	Robertson	Nkqubela	Bonnievale	McGregor	Ashton	Zolani	Montagu	Ashbury
E-Capacity	42.2	2MVA	21.2MVA	7.4MVA	26.0MVA		33.256	6MVA
E-Demand 2012	32.1	1MVA	8.9MVA	2.5MVA	10.7MVA		8.265MVA	
E-Demand Estimated 2023	43.625MVA (Excl.)	&28.839MVA	11.546 MVA	3.454MVA 11.275MVA			11.042MVA	
E-Demand Estimated 2028	47.281MVA (I (Excl.)	ncl.)31.052MVA	13.385 MVA	4.133MVA	11.882MVA		Of 12.764M	VA
E-Distribution	3x 15MVA 66/11kV transformer Conductors within capacity		1x 20MVA 66/11kV transformer. Conductors to be upgraded	1x 10MVA 66/11kV Conductors have additional capacity	2 x 20MVA 66/11kV& 5MVA 66/11kVA transformers. Distributors to be upgraded		Conductors additional ca	have apacity
W-storage			2 960 kl	10 700 kl	6 700kl	3 475 kl	11 700 kl	
W-volume required	5,0 Mℓ (Res 5 3,0 Mℓ (Res 3 2,5 Mℓ (Res 4))	5,5 MŁ Old Res 4,0 MŁ New Res	2,0M ℓ Res 1	10,5 Mł ((Res)	Cogmanskloof	2,0 MłBads 3,5 Mł Ash reservoir	hoogte bury Upper
W-purification					Upgrade W	TP		
W-distribution	Insufficient ca water demand	pacity for future ls	Insufficient capacity for future demand	Insufficient capacity for future demands	Insufficient future water	capacity for demands	Insufficient of future dema	capacity for inds
W-main feeder	Upgrade one o (Res 1 to Tow Upgrade 75 n Nkqubela boo	of two 250mm Ø n Centre) nm Ø (Res 1 to ster pump)	Utilize 200 mm Ø as additional supply New 315 mm Ø (Old Res to New Res)	No Upgrades	Upgrade 20 315 mm Ø r Langeberg f	00mm Ø to a nain. (WTP to factory)	Upgrade 2 (WTP Reservoir). mm Ø Badshoogte	00 mm Ø – Ash New 160 (main to Res)
S-capacity Actual'	4 709 kl/d		2 775 kl/d	483 kl/d	3 845 kl/d		3 284 kl/d	
S-capacity AADD potential	8252 kl/d		4 810kl/d	1 048kl/d	6 596 kl/d		5 748kl/d	
S- distribution								

	Goudmyn	Le Chasseur	Noree	
E-Capacity	18.382MVA	9I226MVA	11.081MVA	
E-Demand	8.8MVA	3.8MVA	5.278MVA	
	10.272 MVA	4.632MVA	6.855MVA	
	11.843MVA	5.115MVA	7.813 MVA	
E-Distribution	2x 10MVA 66/11kV	2x 5MVA transformers;	1x 10MVA 66/11kV	
	transformers;	Conductors have	transformer. Conductors	
	Conductors within Capacity	additional capacity	have additional capacity	

Development proposals for the five settlements in Langeberg follow:

Development Proposals per Langeberg Settlements

McGregor (5)

Functional Integration

Activity Streets: Voortrekker, Church and Office Street as part of the activity corridor Support mixed uses along main road in CBD precinct (social & economic integration).

Improve Main Road within the character of the historic settlement.

Social Integration

Development reinforced along pedestrian walkway along main activity routes linking to CBD and particular to high density precinct integrating open space network.

Landscape northern gate way of settlement, Keep southern gateway unannounced.

Create and develop conservation corridors and open space networks linking natural and urban areas: along activity corridors such as Voortrekker Street, Bree Street and Church Street

Develop open space areas in McGregor and plant trees and provide street furniture.

Intensification & Variety

Keep to existing architectural character.

Historic: Urban structure is a traditional grid pattern, large plots shaped by extensive agricultural landscape. Protect large erf-block grid.

Accommodate growth by internal subdivision of larger erven guided by the character of town: Church town character

Spatial Integration

Mixed use along link road between high density development and McGregor

Residential and Infill development in north west of Zone C, within urban edge.

Business: CBD – Zone A, neighbourhood - Zone B

- Cemetery Expansion
- Residential Expansion
- CBD intensification
- Flood line formalization
- Landscape Gateway

Montagu North (7), Ashbury (12) & Rural areas; Montagu South (11) & Rural Areas

Functional Integration

R62 also known as Long Street.

R318 becoming Main Street accessing Montagu's CBD and industrial precincts, being a main activity axis.

Activity streets being part of CBD:

Direction East west: R62, Bath, Buitekant and Wilhelm Thys Streets.

Direction North South: Barry Ismael and Kohler Streets.

Social Integration

An upgraded community sports complex to serve bigger community.

Develop a destination between Ashbury and Montagu.

Develop multi-use trails as open space corridors, natural habitat links and recreational facilities (hiking & mountain bike trails).

Plant trees in higher density residential developments.

Design interactive development interfaces along open space network and along main routes.

Enhance recreational public nodes: Link sport grounds and golf course.

A safe pedestrian and cycling route along Main Road (off Muskadel to CBD).

Open spaces along river at Ashbury to be integrated into open space network.

Intensification & Variety

Different housing typologies and densities.

Provision of additional social and community services in new housing project area.

Different housing typologies and densities and densities in brown field developments

Prohibit residential development on agricultural plots.

Historic: A Voortrekker Rydorp having long streets aligned perpendicular to the contours of the upper town and a strip of water erven through the centre of town along the river.

Spatial Integration

Infill development in areas to achieve a more effective urban form but keep to the character of Montagu. Mixed use development along main pedestrian and activity routes.

Mixed and alternative uses along activity roads.

Residential and Infill residential development in Zone A (Ashbury), B (precinct along R318, towards Hot Springs) and D (old town).

•

Zone H (Industrial precinct)- gate way to Klein Karoo: only Infill and activity street interface residential development. Water Zone erven: only to develop along street front, keep river frontage open

Industrial expansion: Zone C

Business: neighbourhood – Zone A & D, CBD – Zone F, destination – Zone C

- Upgrade Informal Settlement •
- Agri-Industry •
- Neighbourhood Business Node •
- **Residential Expansion** •
- **Residential Infill** •
- CBD Intensification •
- **Residential Infill** ٠
- **Business Node** •
- **Residential Expansion** ٠
- **Cemetery Expansion** •

- Industrial Expansion **Residential Expansion**
- Neighbourhood Business Node
- Place of Instruction •
- Upgrade Informal Settlement
- Small Scale Farming •
- **Residential Expansion** •
- Mixed use with agricultural buffer along R60 •
- Landscape gateways •

Robertson Central (1), North (3) and East (6), Nkqubela (2)

Functional Integration

Activity Streets: North-West to South East (backward slanted): Voortrekker, Church, Albert, Van Zyl, Paddy, Mary, Burwana and August, Johan De Jong, Keerom; North- East to South West (Forward slanted): Paul Kruger, Reitz, Pieter

Commercial uses in Nkqubela reinforced.

Social Integration

An integrated, multi-purpose active open space network along rivers and within settlement and along activity nodes.

Integrated community sport facilities and recreational public nodes: Link sport, show grounds and open spaces. More social and commercial services and a safe pedestrian and cycling route between Droë Heuwel and Robertson along activity streets; A safe pedestrian and cycling route along Main Road from Nkqubela. A centrally located community node between Robertson & Nkqubela including a school

Intensification & Variety

Different housing typologies and densities in brown field developments, keep grid layout pattern.

Establish a heritage route as Robertson has the most heritage building in Langeberg.

Historic: A grid located between two rivers, Willem Nels River and Hoops River with town blocks defined north south streets a 100m apart. Water erven along the river, with an irrigation system with furrows and sluices, strictly rationed (Fransen, 2008, 195). Church block, positioned in historic town centre, with adjoining blocks halved to intercept the church block to afford axial views along Church Street."

Spatial Integration

Mixed uses along Johan De Jong Street to integrate Robertson and Droë Heuwel.

Integrated development along link road between Robertson East and Nkqubela.

Infill residential development in Zone A, B, C, D and F

Formalize informal development in A and F

Industrial expansion: Zone E and D

Business: neighbourhood – Zone A & B and CBD

- Residential Extension
- Cemetery Expansion
- Residential Extension
- Mixed Use development precinct
- Residential infill
- Neighbourhood Business Node
- Formalise Settlement
- Residential infill
- Amenity: Education and Instruction
- Residential Expansion
- Residential Infill
- Amenity: Education and Instruction
- Residential Infill

- Business corridor
- Small business neighbourhood node
- CBD intensification and gentrification
- Mixed use development
- Residential Infill
- Amenity: Education & Instruction
- Residential Infill
- Residential expansion
- Industrial expansion
- Agri-industrial development
- Residential expansion
- Neighbourhood business node
- Industrial expansion
- Landscape Gateways

Bonnievale East (8) & Happy Valley (4)

Functional Integration

Activity Streets: - Main Road (R317), Leeubekkie, Landbou; Keurboom, Madeliefie; Barlinka Street, New Cross; New Cross, Saltana; Saltana, Milner, Milner, Angora; Angora, to main road (R317)

Social Integration

An open space network and community facilities to connect Happy Valley & Bonnievale.

Smaller and well located social and neighbourhood commercial nodes in Happy Valley.

Develop a market area along activity corridors such as corner of Madeliefie & Barlinka Streets

Formalize open space areas (landscaped recreational facilities play parks, picnic and outdoor gym equipment) inside and adjacent to settlement.

Develop hiking and mountain bike trails and along main activity routes.

Intensification & Variety

Different housing typologies and densities in brown field developments.

Historic: Traditional grid pattern urban structure along two main access streets (Long & Main) Has a unique agricultural character.

Utilize heritage character as tourism attraction.

Spatial Integration

Mixed uses along activity streets. Infill development on vacant land in settlement.

Infill residential development in A, B, C and I

Residential development in D and F. Expand residential development between the western and eastern portions (Zone D) Formalize informal settlement in D

Provide for different residential types/ housing topologies and effective utilisation of services

Industrial expansion, Zone E

Business, neighbourhood - Zones B, C and L, CBD - Zone H

- Residential Infill
- CBD intensification & gentrification
- Agri Industry precinct development
- Cemetery expansion
- Residential expansion & formalization
- Residential infill
- Residential infill
- Neighbourhood business node
- Neighbourhood business node
- Industrial intensification
- Industrial intensification
- Industrial Intensification

Ashton North (9) & Rural Areas; Ashton South & Zolani (10) (urban)

Functional Integration

Activity Streets: Building Avenue, Kalase Avenue, Bogard Avenue, Khosi Avenue, Spofana Street and Mantlana Street interlink at different points

Social Integration

Use sports facilities more efficient to enhance integration.

Create an Open Space network in central Ashton.

Link Ashton CBD and Zolani with continued pedestrian walkway to Ashton South.

Design interactive development interfaces along open space network (developments face open space networks).

Intensification & Variety

Different housing typologies and densities and densities in brown field developments.

Different housing typologies and densities and densities in brown field developments.

Historic: Some Art Deco remnants along Main Street. Develop urban design and architectural guidelines and built upon Art Deco theme to consolidated Ashton's character.

Spatial Integration

Infill development on vacant land to support a more effective urban form.

Mixed and alternative uses along activity roads.

Residential development in B (Old town), E (Transition Area – East of Arch bridge), F (Industrial Area) and G (Zolani) Formalizing existing informal settlement areas in A (Conradiedorp) and G (Zolani).

Industrial expansion: Zone F

Business: CBD – Zone C & E

Proposals

- Upgrade Informal Settlement
- Agri-Industry
- Neighbourhood Business Node
- Residential Expansion
- Residential Infill
- CBD Intensification
- Residential Infill
- Business Node
- Residential Expansion
- Cemetery Expansion

- Industrial Expansion
- Residential Expansion
- Neighbourhood Business Node
- Place of Instruction
- Upgrade Informal Settlement
- Small Scale Farming
- Residential Expansion
- Mixed use with agricultural buffer along R60
- Landscape gateways

Liveable Settlement Directives:

To limit the extent of land required, the following guidelines for Connectors and Settlement Densities direct settlement Form and Function:

- Roads
 - Robertson, Ashton, Montagu & Bonnievale: Introduce speed calming & greening of route. Introduce landscaping/ tree lanes, street furniture and sufficient lighting. Provide for multi-purpose crossings.
 - Improve Mobility
 - All settlements: Develop guidelines for commercial facades, advertising signs and information signs: Main Road to have a rural character.
- Gateways

- All settlements: Enhance and announce town entrances and gateways: plant trees and landscape entrances:
- Activity Streets & Corridors
 - Concentrate higher order social amenities and mixed-use development along activity streets.
 - Provide for public transport, Non-Motorised Transport and pedestrian mobility.
 - Provide for a taxi rank/bus stop next to CBD.
- Rail
 - Alternative for freight & passengers
 - •
 - Robertson: Prolong Blue Train stop over.
- Pedestrian & Cycling
 - Develop trails and routes in settlements linked to natural conservation areas or farmland
 - Robertson, Ashton, Montagu & Bonnievale: Provide for safe pedestrian walkways between residential areas

Settlement Densities

Settlement	CWSDF 2009	Proposed du/ha 2027	Proposed du/ha 2032
Robertson	4.5	8	10
Ashton	4.7	8	10
Montagu	6.5	7	8
Bonnievale	3.7	5	8
McGregor	3.9	5	6

Development Proposals for the Langeberg: Rural and Regional

The spatial patterns in the Langeberg originate from the landscape and some manmade features as per the included the matrix. Being part of the Cape Winelands region, Langeberg is located north and south of the Langeberg Mountains. The Breë River is the main waterway in the region.

Landscapes	Wilderness: Biomes, Bioregions & Ecosystems	Wildemess: Mountains	Waterways and Connections	Connection Routes and Comidors	Agricultural Landscape	Social Focus and community	Cultural and historical, & Routes
Expresses Sense of Place/ Place Making	х	х	x			х	х
Conserve natural vegetation and habitat and provide ecosystem services,	х	х	х				
Counter Climate Change,	х	х					
Attract Tourism	х	х	Х		х		Х
Represent an Economic resource &present opportunities,				х			х
Enable Access and Mobility.				Х			
Secure Food					х		
Generate Employment					х		Х
Offer safety and security						Х	

There are five bio-regions that can be distinguished according to the natural environment and economy: The bioregions are:

- Anysberg the northern Karoo plains much of it within the Anysberg Nature Reserve (CapeNature)
- The Koo high lying valley well known for fruit, fruit processing and tourism;
- Keisies valley high lying scenic valley with intensive agriculture and start of the R62 tourism route beginning in Montagu
- Breede River Valley intensely farmed, mainly vineyards and a wine producing area. Wine farms offer tourism attractions such as festivals, accommodation, restaurants, wine tasting. One of the most popular wine routes. Contains main settlements, Robertson, Ashton, Bonnievale;
- Riviersonderend Mountain Valleys high lying series of three valleys also intensive agriculture, mainly vineyards and tourism, but at a reduced level compared to the activities in the Breede River Valley. McGregor is the main settlement, albeit the smallest in the municipality

The table to follow provide an overview of the five regions:







	ANYSBERG	THE KOO	KEISIE	BREEDE VALLEY	RIVIERSONDEREND MOUNTAIN VALLEYS
Altitude (m)	500 – 1000	750 – 1250	250 – 1000	100 - 500	250 – 1250
Population distribution	Very sparse		<u>+</u> 15 000 urban	<u>+</u> 45 000 urban	<u>+</u> 3 000 urban
Agriculture (Primary Economy)	Stock and game farming with some dry land cultivation in river valleys	Mainly stone fruit orchards	Some wine, table grapes and fruit orchards	Rich mixed farming area including wine, table grapes, dairy and fruit	Minimal mixed farming, mainly wine, table grapes, stock
Mining (Primary Economy)	n/a	n/a	n/a	Agricultural lime and gypsum mine in the west	n/a
Bio-diversity	Succulent Karoo	Succulent karoo in the deeper river valleys to the east. Shale renosterveld shale and granite fynbos on mountain slopes	Succulent karoo in the deeper river valleys – shale fynbos and granite fynbos on mountain slopes, shale renosterveld	Complex mosaic of alluvial vegetation, succulent karoo to the west and shale renosterveld to east	Granite fynbos on high mountain slopes with succulent karoo to the west and shale renosterveld to the east
Secondary Economy			Agri-Processing	Agri-Processing in Ashton & Bonnievale	Wineries
Tertiary Economy	Few holiday farms	Few holiday farms and well-developed tourist attractions	Montagu historic tourist and desirable residential town, well developed network of holiday farms and farmstalls along R62 tourism route. Montagu is often considered as the western starting point of this route.	Well-developed mix of agricultural and wilderness tourism, Robertson financial, retail and agricultural service centre with historic heritage potential.	Well-developed holiday farms and tourist attractions focused around McGregor
Renewable energy potential	Relatively low wind speeds Medium to high levels of solar radiation	Relatively low wind speeds Medium to high levels of solar radiation	Relatively low wind speeds Medium to low levels of solar radiation	Relatively low wind speeds Medium to low levels of solar radiation – small solar plant proposed near Bonnievale	High wind speeds along Riviersonderend mountains Medium to low levels of solar radiation– small solar plant proposed near McGregor
Hydrology	Touws River – seriously modified	The Koo – moderately modified	Keisie – seriously modified	Breede – moderately modified, Vink, Riviersonderend seriously modified	Poesjenels, Houtbaais Rivers in poor state
Landscape character	Cosmic	Classical	Classical	Romantic	Classical

The following rural and regional proposals were concluded for all Langeberg's natural assets. All proposals should be read and implemented according to the directives as per the Western Cape Land Use Planning: Rural Guidelines, 2018.

Water / Hydrology

- Promote the use of rivers for recreation aligned with the relevant Langeberg by-laws.
- Delineate Flood lines in Montagu and Ashton and all other settlements.
- · Promote findings of cemetery study and include in CEF.
- Promote finding of solid waste sites and include in CEF.

Land / Soil

- Provide for the establishment of an Intensive Rural Corridor along R60 & R317 (from R60 T-junction to Bonnievale).
- Identify urban areas to be utilised for community gardens in Bonnievale, Montagu, Ashton, Robertson and McGregor.

Mineral Resources

• Limit mining in Breede Valley Bio-Region to viable operations.

Vegetation, Fauna & Flora, Ecosystems

- Promote the development of Open Space Networks and Conservation Corridors.
- Promote Langeberg as part of the bigger Winelands and Conservation (ecotourism): Birdlife, Biomes, lush agricultural landscape, Horses, wine production, cooking and cultivation.
- Delineate additional tourism routes.
- Promote expansion of Gouwritz Cluster Biosphere (Westwards) over entire area northern of Langeberg area linking to Anysberg Reserve ((neighbouring municipality).
- Promote The Langeberge and the Riviersonderend Mountains and Gouwritz Cluster Biosphere as important conservation corridors across municipal boundaries.
- Provide for the R60 rural corridor around and between Robertson and Ashton including agricultural industries and big box agricultural buildings.
- Promote Agri & conservation and eco-tourism in Montagu and in Keisie and Koo.
- Promote Agri & eco-tourism corridor at Montagu along Kinga River corridor/ meander and along Breede River at Bonnievale.

- Promote investment in and develop tourism infrastructure (roads and existing services), based on environmental impact assessment considerations.
- Promote preschools and particularly on farms.

Air and Wind

- Promote generation and use of alternative energy.
- Promote planting of trees as part of every development to contribute to clean air.

<u>Sun</u>

• Promote generation and use of alternative Energy.

Connectors

• Develop a precinct plan for clustered agricultural development along scenic routes (i.e., R60 corridor).

Agricultural Technology: Netting, tunnels and Agri Sheds

The erection and location of poly tunnels and agricultural shade netting or/ and the establishment of an agricultural industry/ shed of 2000 m² and more in extent on a farm should address concerns of adverse impacts on visual, cultural and heritage amenities and the Municipality may require repositioning, screening and any other measures which may address negative adverse impacts whilst taking cognisance of the importance of agriculture and food security

The decommissioning of poly tunnels and agricultural shade netting is compulsory. The conversion of agriindustrial buildings for a different purpose instead of demolishing such infrastructure should address again concerns of adverse impacts on intensity of surrounding use (traffic, movement, noise) character (sense of place) and cultural and heritage amenities.

Adverse impacts on surrounding properties, in respect of, but not limited to, noise, traffic congestion, pollution, emissions or the gathering of large numbers of people, or the presence of people hindering agriculture e.g., during spraying season, should be dealt with. Nor may tourist activities have an adverse impact on any *bona fide* agricultural activities on the farm itself or on neighbouring properties.

The rural and	Fences comprising of only wire or steel palisade (painted charcoal, black or dark green), not exceeding 2,1m are allowed. No masonry wall exceeding 1 meter and no brick piers shall be permitted in wire or steel palisade fences and only the entrance gate structure maybe of solid brick structures in moderation	regional propo	sals
		composite map	.0
follow:			



The following objectives drive the Langeberg SDF:

Spatial Objectives

The spatial objectives of the SDF will be informed by the IDP's strategic objectives and the Langeberg SDF Vision.

SPATIAL OBJECTIVES & IDP OBJECTIVES		SPATIAL STRATEGIES
Objective 1: Grow (& unlock) economic prosperity [Economic Environment]	SS1	Grow economy & stimulate sector diversification & product development
SO2: PROIVDE INFRASTRUCTURE FOR SUSTAINABLE AND AAFFORDABLE BASIC SERVICES Review infrastructure master plans;	SS2	Strengthen mobility and economic links (investor confidence)
Research alternative sources of electricity to supply municipal waste water treatment pland and water treatment plant; Upgrade Robertson waste water treatment works; SO4: PROMOTE AND FACILITATE INVESTMENT AND LOCAL ECONOMIC DEVELOPMENT Review land policy and perform land audit; Provide support and Local Tourism Associations (LTA's) Develop an investment area management plan and conduct annual business survey to monitor local economic growth. SO 5: PROVIDE SUSTAINABLE FINANCIAL MANAGEMENT	SS3	Develop product and trade advantages (export value chain & agri-industry corridors) and competitive advantage.
Objective 2: Proximate convenient and equal access	SS4	Protect economic vibrancy
SO2: PROIVDE INFRASTRUCTURE FOR SUSTAINABLE AND AAFFORDABLE BASIC SERVICES Revie roads asset maintenance plan	SS5 SS6	Provide (change) sustainable infrastructure and services (smart growth) Provide zoned land for residential and industrial development
Objective 3: Sustain material, physical and social well-being SO2: PROIVDE INFRASTRUCTURE FOR SUSTAINABLE AND AAFFORDABLE BASIC SERVICES Identify alternative municipal land fill sites; Implement title deeds restoration projects; Facilitate shelter options; SO4: PROMOTE AND FACILITATE INVESTMENT AND LOCAL ECONOMIC DEVELOPMENT Review land policy and perform land audit'; Support establishment of vegetable garden; Review Langeberg cemetery policy; SO3: PROMOTE A SAFE AND SECURE ENVIRONMENT	SS7 SS8 SS9 SS10	Protect safety and security Protect fundamental community resources (air, water & energy) Provide (change) social infrastructure and services (as per norm) to facilitate smart growth Manage risk & disaster (man-made and natural)

Objective 4: Protect and grow place identity (sense of place) and cultural integrity [Built Environment]	SS11	Protect heritage resources & place identity.
SO4: PROMOTE AND FACILITATE INVESTMENT AND LOCAL ECONOMIC DEVELOPMENT Review land policy and perform land audit;	SS12 SS1	Grow cultural potential. Grow economy (landscape & conservation, tourism & new markets and economic sectors) & stimulate sector diversification.
Objective 5: Protect ecological and agricultural integrity [Biophysical or Natural Environment]	SS13	Protect food & water security & apply bioregional classification
SO4: PROMOTE AND FACILITATE INVESTMENT AND LOCAL ECONOMIC DEVELOPMENT Review land policy and perform land audit	SS14	Grow conservation potential and formalise conservation of CBAs and apply coastal management
SO1: ENSURE EFFICIENT ADMINISTRATION FOR GOOD GOVERNANCE.	SS15	Protect and preserve sensitive habitats and enhancing Ecosystem services

Sectoral Plan and Provincial & Regional SDF Analysis and Directives

Three sector plans or strategies, Local Economic Development Plan, Tourism Strategy and Risk Management Plan, provide spatial and development directives inclusive of:

- Enabling policy;
- Accelerating the economy;
- Growing tourism (longer stays, average spend increase, number of visitors);
- Focus on capital investment supportive of the tourism industry;
- Create job and business opportunities as tourism sector strengthen and grows;
- Rural communities to socially benefit from tourism sector economy;
- Enhance conservation; anf
- Integrate Disaster Risk Management into the strategic, operational planning and project implementation of all line functions and role players within Langeberg municipality.

The Cape Winelands district includes Breede Valley, Drakenstein, Stellenbosch, Witzenberg and Langeberg. The CWDSDF sets objectives to achieve a) institutional preparedness, b) human wellbeing, c) economic imperative and, d) environmental integrity.

LIST OF ABBREVIATIONS

Abbreviation	Definition
AADD	Annual Average Daily Demand
ADMD	After-Diversity-Maximum-Demand
AFF	Agriculture, Foresting & Fishing
AIDS	Acquired Immune Deficiency Syndrome
AQMP	Air Quality Management Plan
ART	Antiretroviral Treatment
B-BBEE	Black Broad Based Economic Empowerment
CARA	Conservation of Agricultural Resources Act. Act 43 of 1998
CBA	Critical Biodiversity Area
CBD	Central Business District
CBR	Cogmanskloof Besproeiingsraad
CEF	Capital Expenditure Framework
CFR	Cape Floristic Region
CSIR	Council for Scientific and Industrial Research
CW	Cape Winelands
CWD	Cape Winelands District
CWDM	Cape Winelands District Municipality
CWDMIWMP	Cape Winelands District Third Generation Waste Management Plan, 2015
CWDSDF	Cape Winelands District Spatial Development Framework
CWSDF	Cape Winelands Spatial Development Framework
DEA&DP	Department of Environmental Affairs and Development Planning
DG	Director General
DMP	District Management Plan
DoHS	Department of Human Settlements
ECD	Early Childhood Development
EIIF	Ecological Infrastructure Investment Framework
EMPr	Environmental Management Programme
EPWP	Expanded Public Works Programme
ESAs	Ecological Support Areas
ETs	Eskom Transformer
FAS	Fetal Alcohol Syndrome
FLISP	Finance Linked Individual Subsidy Projects
FPSU	Farmer Production Support Unit
GAP	Affordable Housing
GBR	Gouritz Cluster Biosphere Reserve
GDP	Gross Domestic Product
GDPR	Gross Domestic Product Rate
GP	General Plan
GPS	Growth Potential Study
GVA	Gross Value Added
HIV	Human Immunodeficiency Virus
HSP	Human Settlement Plan
	Information and Communications Technology
	Integrated Development Plan
IDZ	Industrial Development Zone
IPCC	Intergovernmental Panel on Climate Change

IPWIS	Integrated Polluted and Waste Information System
IRDP	Integrated Residential Development Programme
ISSP	Informal Settlement Support Programme
ITP	Integrated Transport Plan
IUDF	Integrated Urban Development Framework
IWMP	Integrated Waste Management Plan
IZS	Integrated Zoning Scheme
LED	Local Economic Development
LG	Local Government
LLM	Langeberg Local Municipality
LUPA	Land Use Planning Act
MBT	Minibus Taxi / Mountain Bike Trail
MCAA	Mountain Catchment Areas Act
MEC	Member of Executive Council
MERO	Municipal Economic Review Outlook
MFSCSGP	Municipal Financial Sustainability of Current Spatial Growth Patterns
MIWMP	Municipal Waste Management Plan
MMR	Maternal Mortality Rate
MPRDA	Mineral and Petroleum Resources Development Act
MSA	Municipal Systems Act
MTREF	Medium Term Revenue and Expenditure Framework
MVA	Megavolt Ampere
NBSAP	National Biodiversity Strategy and Action Plan
NDP	National Development Plan
NEM	National Environmental Management
NEM: AQA	National Environmental Air Quality Act, Act No.39 of 2004
NEM: PAA	NEMA for Protected areas
NEM: BA	National Environmental Management Act for Biodiversity
NEM: WA	National Environmental Management: Waste Act
NEMA	National Environmental Management Act
NFA	National Forest Act
NFEPA	National Freshwater Ecosystem Priority Areas
NHRA	National Heritage Resources Act
NHIS	National Household Travel Survey
NMI	Non-Motorized Transport
NNR	No Natural Remaining
NRS	National Regulatory Services
NRW	
NSDP	National Spatial Development Plan
NWA	National Water Act
NWMS	National Waste Management Strategy
PBSAP	I ne Provincial Biodiversity Strategy and Action Plan
	Peak Daily Dry Weather Flow
	Project Feasibility Report
	Primary nearingare Unities
	Project Initiation Document
	Western Cape Provincial Land Transport Framework
	Western Cape Provincial Land Transport Infrastructure Framework
PPTIF	western Cape Provincial Public Transport Infrastructure Framework: Strategy Report

PSDF	Provincial Spatial Development Framework
PV	Photovoltaic
RD	Registration Division
RMU	Ring Main Unit
RSA	Republic of South Africa
RSMCA	Riviersonderend Mountain Conservation Area
SA	South Africa
SALA	Subdivision of Agricultural Land Act
SALGA	South African Local Government Association
SANBI	South African National Biodiversity Institute
SANS	South African National Standards
SDF	Spatial Development Framework
SEP	Socio-Economic Profile
SG	Surveyor General / Spatial Goal
SMME	Small, Medium and Macro Enterprises
SPC	Spatial Planning Category
SPLUMA	Spatial Planning Land Use Management Act
STI	Sexually Transmitted Infection
SUAL	Sustainable use of Agricultural Land Law
SWOT	Strengths, Weaknesses, Opportunities and Threats
SWP	Sewer Master Plan
ТВ	Tuberculosis
ТР	Treatment Plant
UISP	Upgrade Informal Settlement Project
UNESCO	United Nations Educational, Scientific and Cultural Organisation
USPs	Unique Selling Points
UWDs	Unit Water Demands
VGK	Verenigde Gereformeerde Kerk
VIPL	Ventilated Improved Pit Latrines
WC	Western Cape
WCBA	Western Cape Biodiversity Act
WCBF	Western Cape Biodiversity Framework
WCBSP	Western Cape Biodiversity Spatial Plan Handbook
WCFS	Western Cape Freight Strategy
WCIF	Western Cape Infrastructure Framework
WCIWMP	Western Cape Second Generation Integrated Waste Management Plan
WCLUPG: RA	Western Cape Land Use Planning Guidelines: Rural Areas
WCPSDF	Western Cape Provincial Spatial Development Framework
WCPSDP	Western Cape Provincial Spatial Development Plan
WDSDF	Winelands District Spatial Development Framework
WMA	Water Management Area
WMP	Vvaste Management Plan
WIP	Water Treatment Plant
WWII	World War I wo
WWTW	Wastewater Treatment Works

This chapter states the purpose of the Spatial Development Framework; detailed the principles required to achieve the desired spatial form and outlines the project plan to implement the SDF.

1.1 Purpose

The purpose of the Langeberg Spatial Development Framework (SDF) is to guide growth and development in the Langeberg's municipal area in a sustainable manner. Hence, future growth, development and land use planning will embrace the spatial vision and principles to protect and develop integrated, sustainable settlements and liveable environments, and enable economic and social prosperity.

This rewritten version of the Langeberg SDF is for the 2022 - 2027 period.¹

1.2 Spatial Context

The Langeberg Municipality (WCO26) is located within the Western Cape and Province forms part of the Cape Winelands District Municipality together with Drakenstein, Breede Valley, Stellenbosch and Witzenberg (IDP, 2022).



Map 1: Contextual Map

¹Scope of Work: SPLUMA Section 12 and SMA Section 24 (1) and 26 (e)

The five main settlements are: Robertson, Montagu, Ashton, Bonnievale, and McGregor. The municipality is divided into twelve (12) wards which include the five settlements and surrounding rural areas, which contain the agricultural and natural environments. The table below lists the urban settlements and rural areas within the different wards (IDP, 2022).

Ward Number	Settlement	Urban	Urban and Rural
Ward 1, 3 & 6	Robertson	1, 3	6
Ward 2	Nkqubela	2	
Ward 4 & 8	Happy Valley & Bonnievale	4	8
Ward 5	McGregor		5
Ward 7 & 12	Montagu & Rural Areas		7 & 12
Ward 9	Ashton	9	
Ward 10	Zolani, Ashton	10	
Ward 11	Ashton and Montagu	11	

1.3 Structure of the SDF Document

The SDF provides the municipality with the necessary tools for the effective management of future development to ensure that development is balanced, sustainable and which creates socio-economic opportunities. The document comprises the following chapters:

Chapter 1:	SDF Purpose and Principles
Chapter 2:	Issues, Visions and Goals
Chapter 3:	Spatial Analysis: Legislation & Sector Plans, Status Quo & Neighbouring
	Municipalities
Chapter 4:	Land Demand and Supply
Chapter 5:	Spatial Planning Proposals: Settlements
Chapter 6:	Development Proposals: Rural & Regional, Environmental & Climate Change
	Management
Chapter 7:	Implementation and Capital Expenditure Framework

1.4 Langeberg SDF Status and IDP, National & Provincial Policy Alignment

The Langeberg SDF, 2022 -2027, will be adopted as core component of the 5th generation Langeberg IDP, 2022 – 2027 (MSA Section 26(e)). The rewrite of the SDF focuses on proposals that will be included as projects planned for the next five (5) years and for the next twenty (20) years and the alignment of these proposals with the Capital Expenditure Framework of Langeberg Municipality (MSA, 2000)

In accordance with Section 3(1) of the Langeberg Municipality: Land Use Planning By-Law, 2015, the Langeberg SDF was prepared as part of the municipal IDP in accordance with the provisions of the Municipal Systems Act (MSA) (Act 32 of 2000). Sections 3 - 10 of the Langeberg Municipality: Land Use Planning By-Law guides the content of and procedure to follow to compile or amend an SDF. The approval or adoption of this SDF will be undertaken in accordance with Section 10 of the Langeberg Municipality: Land Use Planning By-Law. This Langeberg SDF once adopted is then valid for five (5) years².

Besides legislation instructing the development and amendment of Spatial Development Frameworks, municipal spatial development frameworks have to be aligned with different national, provincial and local legislation, policies³ and strategies which provide a spatial planning agenda. The alignment between these strategies is illustrated in the table below (MSA, 2000):

²Scope of Work: SPLUMA Section 12; MSA Section 24 (1) & 26 (e)

³National Policy Context: SPLUMA Section 12(5) and Section 7e(ii) & Municipal Policy Context SPLUMA Chp4, Section 12.1©, Sec 20(2) and Sec 7(e)(ii)

	National		Provincial			Local
Political Mandate	NDP 2030	IUDF 2016	WCPSDP 2014		Langeberg SDF (proposed	I) IDP
	Political	Theme & SPLUMA & LUPA I	Principle: Jobs & Opportunities, S	patial Jus	stice	
 Infrastructure-led growth EPWP expansion LED one stop shops, prioritise job- creation, partner local business Implement taxi & bus services Provide a range of housing topologies Ownership transferred Connect communities to internet 	 Economy & Employment (No 1) Infrastructure (No 2) Inclusive rural economy (No 4) Local vs. SA (No 5) 	Integrated urban planning and management (No 1) Integrated transport and mobility (No 2) Inclusive economic development (No 6)	Housing: Effective approach to integrat settlements and improved living condit households Safeguard inland and coastal water and manage the sustainable use of wat Safeguard the Western Cape's agricu- mineral resources, and manage their si use (R3) Diversify and strengthen the rural econor Revitalise and strengthen urbar economies as the engine of growth (E3 Improve inter and intra-regional access	ed human ions of all resources er (R2) iltural and ustainable omy (E2) n space) ibility (S2)	Grow econor prosperity (Obj [Economic Environment]	nic Local Economic 1) Development: Create an enabling environment for economic growth and decent employment Effective stakeholder engagements to promote civic education
	Political Theme & SPL	UMA & LUPA Principle: Resp	oonsive Local Government – Efficienc	y & Good	Administration	
 Graduate recruitment appointments Access drug addiction treatment 	Building capable state (No 11)	Efficient land governance and management (No 5) Empowered active communities (No 7) Effective urban governance (No 8) Sustainable finance (No 9)	Protect biodiversity and ecosystem services (R1) Recycle and recover waste, deliver clean sources of energy, shift from private to public transport and adapt to and mitigate against climate change (R4) Safeguard cultural and scenic assets (R5)	Protect ar identity integrity (Environme Protect e agricultura 5)[Biophys Environme	nd grow place and cultural (Obj 4) [Built ecological and I integrity (Obj ical or Natural ent]	An Efficient, effective, responsive and accountable administration Effective stakeholder engagements to promote civic education
Political Theme & SPLUMA & LUPA Principle: Better Service Delivery – Efficiency & Spatial Sustainability						
 Maintain roads (potholes) Access to electricity, water & sanitation Regular maintenance of infrastructure 	 Improve education, training & innovation (No 7) Health care for all (No 8) 	Integrated transport and mobility (No 2) Integrated Urban Infrastructure (No 4) Inclusive economic development (No 6)	Use regional infrastructure investment to leverage economic growth (E1)	Sustain n and social 3)[Social E Grow eco (Obj 1 Environme	naterial, physical I well-being (Obj Environment] nomic prosperity I) [Economic ent]	Basic Service Delivery: Maintain infrastructure to provide basic services to all citizens Sound Financial Management: Adherence to all laws and regulations applicable to LG

Political Theme & SPLUMA & LUPA Principle: Stop Corruption – Good Administration					
 Effective systems: complaints processing Staff appointed: add value Exclude councillors from recruitment Open tender adjudication Open council meetings 	• Fighting Corruption (No 12)	Efficient land governance and management (No 5) Empowered active communities (No 7) Effective urban governance (No 8) Sustainable finance (No 9)	Protect, manage and enhance sense of place, cultural and scenic landscapes (S1)	Protect and grow place identity and cultural integrity (Obj 4) [Built Environment]	An Efficient, effective, responsive and accountable administration Sound Financial Management: Adherence to all laws and regulations applicable to LG
	Politica	al Theme & SPLUMA & LUPA F	Principle: Meaningful redress –	Spatial Justice	
 Inclusive amenities & spaces Reliable public transport True B-BBEE Urban planning integrates communities & levels of income 	 Environmental resilience (No 3) Transform settlements (No 6) Nation Building (No 13) 	Integrated urban planning and management (No 1) Integrated transport and mobility (No 2) Integrated sustainable human settlements (No 3)	Promote compact, mixed use and integrated settlements (S3) Balance and coordinate the delivery of facilities and social services (S4) Promote sustainable, integrated and inclusive housing in formal and informal markets (S5)	Proximate, convenient and equal access (Obj 2) [Economic Environment]	Housing: Effective approach to integrated human settlements and improved living conditions of all households
Political Theme & SPLUMA & LUPA Principle: Making Communities safer – Spatial Resilience					
 Prevention units: gang & drugs Law enforcement service: traffic & crime 	 Social protection (No 9) Safer Communities (No 10) 	Empowered active communities (No 7) Effective urban governance (No 8)	Promote compact, mixed use and integrated settlements (S3) Balance and coordinate the delivery of facilities and social services (S4)	Sustain material, physical and social well-being (Obj 3) [Social Environment]	An Efficient, effective, responsive and accountable administration To facilitate social cohesion, safe and healthy communities (SO 6)

(IUDF, 2016) (PSDF, 2014)

1.5 Values and Performance Qualities

The settlement and rural proposals were informed by the values and performance qualities described below. Planning shifted from separate development and modernism (functionalism) to human- and nature-centred settlement making. Such settlements are scaled for pedestrians (neither pedestrians nor vehicles dominate); are compact (with high building densities); are integrated; composite parts reinforcing each other; have a strong spatial feel with well-defined public spaces and have complex spatial structures offering choices in terms of intensity of interaction, privacy of living conditions, lifestyles, housing options and movement systems (physical, social, and economic integration). Well-performing settlements and regions have the qualities of Liveable Environments and Sustainable Settlements.

A liveable settlement satisfies more than the basic needs of a community as the individual as well as the community's needs for social facilities and health facilities are met. Quality of life is key. (Van Kamp et al, 2003). Liveable environments are recognised by the present relationship between people and their settlements and features economic growth, accessibility and place identity.

Sustainable settlements are Well-managed entities in which economic growth and social development are in balance with the carrying capacity of the natural systems on which they depend for their existence and result in sustainable development, wealth creation, poverty alleviation and equity (Department of Local Government and Housing, 2005). A

sustainable settlement improves the liveability of a settlement by reducing the impact on the environment through reduced use of resources and the generation of less waste. Sustainable settlements present the future relationship between **settlement and environment and features** Ecological integrity (Planet), Social justice (People) and Economical effectiveness (Prosperity) (NEMA, 1998).



1.5.1 Spatial Elements of Settlements and Regions

Settlements are structured spaces that facilitate the interplay between a) formally planned development (assigned land uses and corresponding engineering services) and spontaneous development (settlement plans which accommodate uncertainty and change) as well as b) public environments, shared by all inhabitants, vs. private realms of individual households.

The spatial elements of regions are topography (form), cultivation and landscape and man-made elements that include road networks and settlements, as described below:

Element	Settlement	Regional
Connection or Networks	Refers to movement of all kinds, including fixed line systems e.g., roads, light and heavy rail, underground rail, pedestrian and bicycle	Movement networks, spaces and systems connecting settlement.
(circulation networks and public transport systems)	routes. Movement system is network of spaces through which people move (network of movement spaces) – allowing for the public life of a community	Movement Infrastructure, Main Routes, Railway line and Stations, Existing Settlements
Space, built and natural	Lies at the heart of settlement making and include all spaces being used in settlement making.	Delineated and merged landscapes which are
	Characterised by diversity, different spaces on continuum of public to private, there is a structural order.	characterised by conservation, cultivation, and natural growth.
	Public spaces are meeting places of people in settlements, comprising of urban rooms and seams of connectivity. There is a degree of publicness and privacy.	Mountains and Fynbos Ecosystems, Rivers and Freshwater ecosystems, Wetlands, Formal and Informal
	A continuum or hierarchy of public spaces and movement systems, which attract and give order to activities, events, and elements in accordance with their need for publicness or privacy. Considering roads as public spaces.	Conservation areas, Arable land, Beaches, and Dunes.
Institutions (public	Institutions most valued by society, i.e., institutions of learning, worship, exchange, markets served as structuring elements.	A network or association of different institutions within a
amenities)	Their location determined the location of other more private uses. Most important public institution today is the open or social space. Location of institutions in relation to other elements of structure is of critical importance (central places, easily accessible in terms of movement patterns, announced by public space)	region across municipal boundaries. Such an institutional network is enabled, enhanced, or supported by the responsible government department(s).
	Abutting institutions give unique character and often attract informal activities.	
Utility services (engineering services)	Refer to engineering services that are essential to functioning of settlements (water provision, sewage removal, storm water disposal, solid waste removal and electricity supply to maintain public health)	Refer to bulk services that are essential to functioning of settlements e.g., solar farms
	Should be provided as efficiently and cost-effectively as possible, taking due cognisance of human and nature centred approach to settlement making.	
	Utility services should follow structure and not lead structuring the built environment.	

(CSIR, 2000)

1.5.2 Structural Tools and SPLUMA Principles

Settlements demonstrating desirable spatial element qualities which are scaled for pedestrians (neither pedestrians nor vehicles dominate); are compact (with high building densities); are integrated and composite

parts reinforce each other; have a strong spatial feel with well-defined public spaces and have complex spatial structures offering choices in terms of intensity of interaction, privacy of living conditions, lifestyles, housing options and movement systems.

The application of four spatial measures is central to the use of space to create positive settlements: definition, scale, flexibility and intensity. Each spatial measure consists of two opposite measures or structural tools as per the table below:

Spatial Measures	Description	Structural Tools
Definition	In positive environments, public open spaces are defined by buildings and other space defining elements such as walls and landscaping. The elements create a feeling of enclosure in contrast with free standing elements in a shapeless sea of space.	Continuity and Discontinuity (Containment)
Scale	Refers to the relationship between size, distance and height. "Human Scale" is a norm for all development planning.	Externalization and Localization
Flexibility	Refers to the creation of spatial structures that accommodate unexpected change over a period of time.	Same and Different (Homogeneity and Heterogeneity)
Intensity	 Refers to the creation of High-level support for economic and social goods and services An economic climate to prosper economic activities has: Conditions for sustainable public transport systems Effective infrastructure use Improved land use, contributing to compact urban areas, reduced transportation and energy use as well as the reduction of pollution. 	Denseness and Sparsity (Openness)

(CSIR, 2000)

The application of structural tools creates man-made spatial elements e.g.

- Centres/ Nodes (Administrative, Educational, Legal and Services)
- Nodes (Collective & Specialised Economies, Services, Manufacturing, Tourist Attractions)
- Hubs (Economic, Jewellery, Petro Chemical, Logistics)
- Routes (Tourist)
- Axis (Transport)
- Corridors (Industrial Development Zones (IDZ), Nature Reserves and Conservancies)
- Zones (Tourist, Commercial, Agricultural and Irrigation, Alternative Energy)

The table below provides a description of the structural tools applied to the spatial elements and its resultant man-made elements and or qualities:

DENSENESS (REINFORCEMENT): SPLUMA & LUPA PRINCIPLE: SPATIAL SUSTAINABILITY						
Connection		Space	Public Institutions	Public Utilities		
Single corridor movement network: Different forms of transport are brought together (pedestrian, bicycle, train, taxi, bus and vehicles).		Economic agglomeration (integration of different developments (new and old))	A network of public facilities located according to their hierarchical level.	Infrastructure cluster where different utilities are managed e.g.,		
Activity Axis: Core of activity corridor/ tertiary network or Street (local network). Activity nodes: Different forms of transport connect.		Densification and Strategic densification: Reduction of erf size, alternative housing types (housing topologies), infilling, redesign, mixed development.		water & sewerage.		
SPARSITY (OPEI	SPARSITY (OPENNESS)					
Connection	Space		Public Institutions	Public Utilities		
Single mode transport networks (thresholds are too low to justify other modes) or Roads	Movement networks (part of a system of public places). Protection and enhancement of Heritage Resources through: Heritage overlay zone Conservation (biophysical) overlay zones and categories.		Multipurpose facilities where different social services are offered.	Single Infrastructure yard e.g., sewerage works.		
Coastal Management lines and zones						

CONTINUITY: SPLUMA & LUPA PRINCIPLE: EFFICIENCY					
Connection	Space	Public Institutions	Public Utilities		
Ordering structure of movement networks: <u>Settlement level</u> : network energy released through stopping, exit (not through movement); server rather than integrate space. <u>Inter-settlement level</u> : Routes which do not allow stopping (i.e., freeways) serve as integrators of space.	Enclosure: Achieving a sense of enclosure and definition: Buildings, either through a building itself, its walls, or planting, should contribute to defining a public space it abuts.	Integration: Integrate new parcels of development with existing development to obtain agglomeration economies. Absorb settlement output: in green spaces i.e., evaporation ponds and storm water retention systems.	Above Ground Infrastructure.		

DISCONTINUITY (CONTAINMENT)					
Connection	Space	Public Institutions	Public Utilities		
Along <u>higher-order routes</u> , create special places, such as public open space (squares) and parks.	Natural habitats:Ecologicalsystems,complex,continuous, allow migration ofspecies,productive/	Public space used to interrupt built form, to ensure convenient access, dimensions of scale.	Underground Infrastructure.		
On <u>lower-order routes</u> create qualities of secrecy or privacy; discourage through-traffic.	conservation/ preservation space. Integrate natural and rural areas into urban landscape.	Mobile services. Multifunctional centres.			
EXTERNALIZATION: SPLUMA & LUPA PRINCIPLE: SPATIAL JUSTICE					
Connection	Space	Public Institutions	Public Utilities		
Social facilities and higher order urban activities should be located along continuous movement routes rather than within residential precincts.	Higher order facilities should reinforce private quality of residential areas and contribute to symbiotic relationship between different activities and facilities.	Higher order facilities not to be entirely dependent on the resources of a particular local community. Facilities to be widely accessible.	District or regional utilities.		
LOCALIZATION					
Connection	Space	Public Institutions	Public Utilities		
Intensive activities concentrated at most accessible points along continuous movement routes.	Multi-purpose facilities as public spaces Corridors as agglomeration of economic and industrial activities.	Functional integration ensures availability and accessibility of a wide range of service and facilities.	Local Utilities.		

SAME: SPLUMA & LUPA PRINCIPLE: SPATIAL RESILIENCE					
Connection	Space		Public Institutions	Public Utilities	
Non-motorized vs. motorized.	Public and pr terms of sar mixed-use homogeneity (public).	ivate space: Reflect diversity in neness, areas of diversity or development and cultural (private) and cultural diversity	Minimalism: Centralize decisions at institutional level, not at site development level.	Centralize decision making involving local directives and needs.	
DIFFERENT					
Connection		Space	Public Institutions	Public Utilities	
Non-motorized vs. motorized corridors: intensification of development; mix of uses; pedestrian and cyclist friendly; high quality street landscaping.		Connection between space and structure recognises that different activities, cultures, and lifestyles have their own requirements, which must be met in the settlement making process.	Mixed use: commercial, social, service, trade and residential areas of different densities and types.	Various utility types e.g., solar farm, electrical transformers, etc.	

(CSIR, 2000)

1.5.3 Policy as a structural tool

Policies that organise space and provide structure, when applied, are the Critical Biodiversity Framework,

Spatial Bioregional Planning Categories and Coastal Management:
• Environmental Principles and Guidelines

Sustainable development is generally defined as development that satisfies the needs of the current generation without jeopardising the ability of future generations to provide for their needs. The National Environmental Act, Act 107 of 1998, defines sustainable development as integration of social, economic and environmental factors through planning, implementation and decision making to ensure that development can support future generations. The following frameworks and policies promote sustainable development:

• Critical Biodiversity Framework

The Western Cape Critical Biodiversity Framework (WCBF) (2010) integrates key biodiversity information relevant to land-use such as Protected Areas, Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) into a single layer map. It was recently replaced with the provincial Biodiversity Spatial Plan, 2017, which included CBA and ESA areas for the entire province. CBA maps for the Langeberg were developed, which were used to inform the development of the Bioregional Spatial Planning Categories maps for the Langeberg and which form the basis of the SDF maps (WCBA, 2021).

• Bioregional Spatial Planning Categories

The Bioregional Spatial Planning Categories (SPCs), consistent with the principles of bioregional planning and UNESCO's MaB (Man and the Biosphere) Programme have their origins in the Bioregional Planning Framework for the Western Cape. Bioregions can occur across municipal boundaries to provide meaningful geographical areas with common interest. The implementation of the categories is to support conservation and integration of natural areas, e.g., nature reserves and biospheres (WCBA, 2021).

The Bioregional SPCs were translated by the Department of Environmental Affairs and Development planning to SPCs as per the matrix below. A SPC map constitute the basis of the Langeberg SDF.

Biodiversity information critical to land use vs. Spatial Planning Categories	Protected Areas	CBA* 1	CBA 2	ESA* 1	ESA 2	ONA*	NNR*
Core 1							
Core 2							
Buffer 1							
Buffer 2							
Intensive Agriculture							
Settlement							
Industry & Existing Mining							

Table 1: CBA & ESA Maps Categories, recommended corresponding Spatial Planning Category

*(CBA – Critical Biodiversity Areas, ESA – Ecological Support Areas, ONA – Other Natural Areas, NNR – No Natural Remaining)

The table below describes the Spatial Planning Categories and recommend land use activities.

Spatial Planning Cate	gories					
Core 1, Formal Conservation	No go area, only non-consumptive activities are permitted, e.g., passive recreation and tourism (hiking trails, bird watching) religious ceremonies, research and environmental					
	education & associated buildings, no agriculture.					
Core 2,	Biodiversity compatible and low impact conservation land uses as per Core 1 areas, but					
Critically endangered	allowing for a limited increase in the scale of development in less sensitive areas.					
Buffer 1,	Biodiversity compatible uses as informed by transformation thresholds, including: low					
Endangered	recreation facilities, additional dwelling units, renewable energy projects.					
	Extensive agriculture: game and livestock farming:					
Buffer 2,	Activities and uses directly related to primary agricultural enterprise, including a					
Vulnerable & least threatened	homestead, agricultural buildings and worker accommodation, additional dwelling units to limited 5 units.					
	Additional land uses include small scale holiday accommodation (farm stay, B&B, guesthouse, boutique hotel); restaurant, lifestyle retail, venue facility; farm stall & farm store; home occupation; local product processing (e.g., cheese making), and Tourist and recreational facilities (e.g., hiking trail, mountain biking, 4x4 routes).					
Intensive Agriculture	Activities and uses directly related to the primary agricultural enterprise, Farm buildings and associated infrastructure (e.g., homestead barns, farm worker accommodation, etc.). 5 Additional dwelling units. Ancillary rural activities of appropriate scale, not detract from farming production but diversify farm income, and add value to locally produced products.					
Settlement	Agricultural activities of an excessive scale (regional product processing) and non- agricultural activities not suited for location in the Intensive Agricultural and Buffer 1 and Buffer 2 areas to be located within settlements or their "fringe areas".					

Table 2: Description of Spatial Planning Categories and recommended land use activities (WCBSP, 2017)

A SPC map has been developed for the Langeberg municipal area.



Map 2: Langeberg Spatial Planning Categories

Langeberg Spatial Development Framework 2023-2028

CHAPTER 2: Issues, Vision and Goals

This chapter provides an overview of Strengths, Weaknesses, Opportunities, and Threats. It spells out the Spatial Vision for Langeberg and set Goals to achieve its desirable spatial form.

2.1 Overall Priorities of Langeberg

The Langeberg IDP's priorities is listed below:

Priorities	No
ENSURE EFFICIENT ADMINISTRATION FOR GOOD GOVERNANCE	1
PROIVDE INFRASTRUCTURE FOR SUSTAINABLE AND AAFFORDABLE BASIC SERVICES	2
PROMOTE A SAFE AND SECURE ENVIRONMENT	3
PROMOTE AND FACILITATE INVESTMENT AND LOCAL ECONOMIC DEVELOPMENT	4
PROVIDE SUSTAINABLE FINANCIAL MANAGEMENT	5

Table 3: Langeberg Needs, 2022

The priority issues for each ward are listed under *Development Proposals per Town* and *Development Proposals* for rural areas and the region (IDP, 2022).

2.2 Strengths, Weaknesses, Opportunities and Threats

The SWOT analysis outlines the biophysical, social and economic and built environments (as per the Status Quo report) and highlights the key strategic issues within the Langeberg region.

Strengths	Weaknesses
Settlements	Maintenance of Infrastructure
 Growth towns/ Service Centres (Robertson - regional, Ashton–agri-processing). Tourism nodes (McGregor and Montagu) with strong historic identity. Strong settlement character: Bonnievale has scattered nodes amongst vineyards; Montagu includes a variety of open spaces (vineyards, conservation areas and tree patches), McGregor has farm yards incorporated within in the settlement. Robertson, 	 Maintain & secure upgrading and provision of new infrastructure for future development including state subsidized housing. Road maintenance in many urban settlements (McGregor, Ashton as priority reduces potential priority to other infrastructure priorities). Zoned land and Shelter Require 225ha over the next 5 years (projection for 25
agri-processing service centre	years (till 2030). Robertson lacks land for housing.
Urban Edges:	 Housing backlog estimated as 9 340 households (2018).
For 20-year periods: protecting high value agricultural land,	•Fully subsidized housing provided on settlement
Water Sources/ Courses	periphery.
Breë River, Koo, Dwariega, Kinga and Keisie combining into	 Rousing provided of low quality. Densition too low; modium density not provided for
Cogmanskloof and several other small rivers.	•Densities too low, medium density not provided for. Mobility
Soil potential and Cultivation	 Lack of integration between movement networks and
Fertile and suitable soil for agricultural cultivation.	modes of transport.
Land Cover	Unemployment
Mountains & Hills: Langeberg, Riviersonderend, Waboom and Koega Mountain ranges.	Low levels of income/ Poverty

 Diversity in agriculture; Fresh produce and agri processing: fruit, dried fruit, wine, cheese. Infrastructure Roads (R60, R62, R315) and high regional connectivity and movement systems. Economy Agriculture (13 998 or 25.9%) is the highest contributor to employment, followed secondly by Wholesale & Retail, Catering & Accommodation (12 981 or 24%) Finance, Insurance, Real Estate and Business Services (7 202 or 13.3%), General Government & Community – Social Services (6 896 or 12.8%) and Manufacturing (4650 or 8.6%). 1 2 3 4 5 Empl Agri Ret Acc Fin Est Gov Manu Eco Ret Acc Manu Fin Est Agric Trans Wholesale & Retail, Catering & Accommodation (19.4%) followed by Manufacturing (17.7%) are the highest contributors to GDP followed by Finance, Insurance, Real Estate and Business Services (17%). The fourth and fifth biggest contributors are Agriculture (12.8%) and Transport (10.6%). Intensive Agriculture takes place on the Breë River plain around between Robertson and Ashton, around Bonnievale and north of the Lorander Processor (10.100). 	 67% or 16 784 households earned less than R 38 200 per annum (Per capita of R39 000 in 2018). At R58, Langeberg's per capita GDPR is below Cape Winelands District (R72 778) and Western Cape (R84 967) in 2020. Gini Coefficient (income inequality) increased from 0.56 in 2014 to 0.61 in 2020. Dependency ratio: 54% or 2 (number of working age population (aged 15 to 64) to 1 dependent (aged 0 - 14 and over 65)). Medium Human Development Index (Langeberg): increased 0.72 in 2020, lower than WC: 0.63 in 2018 (life expectancy at birth, adult literacy levels, gross educational enrolment and GDP). Dependency on subsidies. School drop outs 2019 18 474 learners enrolled in school, whilst the retention rate was 60.3%. Early childhood development for children becomes imperative. Literacy rate (successful completion of a minimum of seven years of formal education for those 14 years of age and older) in the Langeberg, is <u>51.6%</u>. (Illiteracy rate is 48.4%).
the Langeberg Mountains in the Keisle and Koo Valley.	Throata
	Feenemie Clebelization
 Access to Cape Town: R60 provides easy access to N1 and in turn to ports (air and sea). Access to information driving future economic development Access to information should be promoted. Governance and regulation (SPLUMA) SPLUMA provided Langeberg municipality with delegated powers to govern and regulate development to enable economic growth and establish Langeberg as a place to invest. Education Low skills levels and largely young population. World economy Langeberg is home to export industries and business (to South Africa & world). Hence provide for sufficient industrial and commercially zoned land in and agri-industrial land between Robertson and Ashton. Consideration alternative to road transport (existing railways), to reduce carbon footprint. Integrate agri-industries and tourism. World nature conservation initiatives Gouritz Cluster Biosphere, Riviersonderend Mountain Catchment Area (including Dassieshoek, Montagu Mountain and Twisniet Nature Reserve) and Anysberg Nature Reserve, Langeberg Wes Mountain Catchment area, Vrolijkheid, Goedemoed, Skuilkrans and Monte Co Nature Reserve links to conservation areas outside the municipal area to promote greater environmental sustainability for the region. 	 Machination and technology require less but skilled labour. Cultivation requirements conflicts with natural character of the region (netting). Climate change Causes changes to precipitation, seasons, microclimates and habitat stability, can lead to direct agricultural and natural vulnerabilities and indirect economic consequences. Urbanization Population increased from 97 724 (2011) to 119 962 (2021) of which ±70% is urbanized (29.98% or 29299 people live in rural areas in 2014). A high percentage of these households are dependent on state subsidized housing. Illegal land occupation leads to settlement disfunction and a loss in market confidence. (Increased stress on civil, electrical and financial capacity). Pose a challenge to create compact liveable urban environments. Lack of strategic land for settlement (housing) development. Insufficient electricity provision Robertson has insufficient electrical capacity; funding (own contribution) not forthcoming. Poverty & Unemployment Lack of public transport decreases economic mobility (to reach work and to conduct business).

Table 4: SWOT Analysis

2.3 Conceptual Proposal

From the SWOT analysis of the Langeberg, it can be concluded that the R60 & R62 is the main East-West connector and the R317 and R318 the North-South connector and both are vibrant and growing tourism corridors. Ashton has developed as settlement node where all these connector roads link and present a variety of economic opportunities within the conservation worthy agricultural and natural landscape, whilst settlements along these connectors present similar opportunities.

Within settlements, the following transitions are important:

From	То
 Development in the sixties fragmented communities and destroyed the unique character and quality of life in rural settlements as it caused: Unsympathetic architecture and structure Wide roads and excessive black tar surfaces Conflict between pedestrians and motorcars Commercial ribbon development and an overload of billboards Security gates, telephone poles, masts and satellite dishes Loss of continuous open spaces Minimal landscaping (and being repeated day zero) 	 Rejuvenate and grow settlements to be liveable, diverse and enable the population to be economically mobile. Promote complementing architecture and plant trees Soften main roads in settlements and calm traffic Promote pedestrian and cycling pathways (NMT) Develop a code for where and how to display billboards Reticulate services underground (communication) instead of above ground Protect the agricultural landscape Promote open spaces as part of an open space networks Encourage landscaping and require each land unit being created to plant two trees Prepare for climate change and as topography inform development
Landscapes determines the status of assets and includes Agricultural landscape, Wilderness landscape, Waterways and connectors, Cultural-historical landscape, Connector routes and Corridors, social Foci and Community facilities and activities	Enhance landscapes and utilise assets as tourist destinations
Settlement urban edges weredelineated for 5, 10, and 20 year horizons whilst low densities prevailed.	Intensify land uses within settlement edges in accordance with IZS.
Langeberg Municipality owns 1337.2ha common land and 3 208.7ha in total. A vacant land audit identifieddevelopable land within the urban areas.	Enhance economic mobility and sustainable settlements
Density norms were determined for each town. A densification rate was determined and infill development is encouraged in order for settlements to achieve its 50 years' density parameters.	Promote rejuvenation of settlement whilst keeping precinct character including infill development, increased floor factor and where subdivisions or renewal development can occur.

2.4 Spatial Vision and Strategy

The spatial vision emerging from the above SWOT analysis, the biophysical, socio-economic and built environment status quo and the conceptual proposal (See *Map 3: Langeberg Conceptual Proposal*) is:

"An economically prosperous region and sustainable liveable environment For all Langeberg residents."

To attain this vision, the overall goal or mission is:

- To promote conservation and tourism in the Gouritz Cluster Biosphere, Riviersonderend Mountain Catchment Area, Langeberg West Mountain Catchment Area (including Dassieshoek, Montagu Mountain and Twisniet Nature Reserve), Matroosberg Management Catchment Area and Provincial Nature Reserves (Anysberg Nature Reserve and Vrolijkheid Nature Reserve) and Private Nature Reserves including Goedemoed, Skuilkrans and Mont Eco Nature Reserve.
- To enhance and intensify agriculture specifically in the Breede, Keisie and Koo Valleys.
- To strengthen sense of place of Langeberg settlements, rural areas and scenic routes.

The SDF Vision is in support of Langeberg IDP vision:

"To create a safe and healthy environment for delivering sustainable quality services" (IDP, 2022).

2.5 Conceptual proposal

Langeberg has strong agricultural corridors running along the R60 East West bending South East and a

long intensively cultivated corridor along the R 318 (Koo and Keisie) and R62. In contrast with but in support of the cultivation are significant stretches of natural conservation worthy veld being home to threatened biomes.

To prudently manage this vision in the spatial realm, five objectives will assist in achieving it:



Map 3: Conceptual Map

2.6 Spatial Objectives

The spatial objectives of the SDF will be informed by the IDP strategic objectives and the Langeberg SDF Vision. The Langeberg Municipality spatial objective and strategies are aligned with the strategic objectives of the IDP (IDP, 2022).

SPATIAL OBJECTIVES & IDP OBJECTIVES		SPATIAL STRATEGIES
Objective 1: Grow (& unlock) economic prosperity	SS1	Grow economy & stimulate sector
[Economic Environment]		diversification & product development
SO2: PROIVDE INFRASTRUCTURE FOR SUSTAINABLE AND		Strengthen mobility and economic links
AAFFORDABLE BASIC SERVICES	SS2	(investor confidence)
Review infrastructure master plans;		
Research alternative sources of electricity to supply municipal waste		Develop product and trade advantages
water treatment pland and water treatment plant;	SS3	(export value chain & agri-industry
Upgrade Robertson waste water treatment works;		corridors) and competitive advantage.
SO4: PROMOTE AND FACILITATE INVESTMENT AND LOCAL		
ECONOMIC DEVELOPMENT		
Review land policy and perform land audit;		
Provide support and Local Tourism Associations (LTA s)		
Develop an investment area management plan and conduct annual		
Objective 2: Provimate convenient and equal access	001	Protect economic vibranov
	004	Frotect economic vibrancy
	SS5	Provide (change) sustainable
SO2' PROIVDE INFRASTRUCTURE FOR SUSTAINABLE AND	000	infrastructure and services (smart growth)
AAFFORDABLE BASIC SERVICES		Provide zoned land for residential and
Revie roads asset maintenance plan	SS6	industrial development
Objective 3: Sustain material, physical and social well-being	SS7	Protect safety and security
SO2: PROIVDE INFRASTRUCTURE FOR SUSTAINABLE AND	SS8	Protect fundamental community resources
AFFORDABLE BASIC SERVICES		(air, water & energy)
Identify alternative municipal land fill sites;	SS9	Provide (change) social infrastructure and
Implement title deeds restoration projects;		services (as per norm) to facilitate smart
Facilitate shelter options;		growth
SO4: PROMOTE AND FACILITATE INVESTMENT AND LOCAL	SS10	Manage risk & disaster (man-made and
ECONOMIC DEVELOPMENT		natural)
Review land policy and perform land audit';		
Support establishment of vegetable garden;		
SU3: PROMUTE A SAFE AND SECURE ENVIRONMENT		
Objective 4: Protect and grow place identity (sense of place) and	SS11	Protect heritage resources & place
cultural integrity [Built Environment]		identity.
SO4: PROMOTE AND FACILITATE INVESTMENT AND LOCAL		Grow cultural potential.
ECONOMIC DEVELOPMENT	SS12	Grow economy (landscape &
Review land policy and perform land audit;	SS1	conservation, tourism & new markets and
		economic sectors) & stimulate sector diversification.

Objective 5: Protect ecological and agricultural integrity [Biophysical	SS13	Protect food & water security & apply
or Natural Environment]		bioregional classification
SO4: PROMOTE AND FACILITATE INVESTMENT AND LOCAL	SS14	Grow conservation potential and formalise
ECONOMIC DEVELOPMENT		conservation of CBAs and apply coastal
Review land policy and perform land audit	SS15	management
SO1: ENSURE EFFICIENT ADMINISTRATION FOR GOOD		Protect and preserve sensitive habitats
GOVERNANCE.		and enhancing Ecosystem services

(IDP, 2022)

2.7 Planning Legislation and Policy frameworks

Several national acts and policies provide spatial directives which enabling Municipalities to guide development and to focus capital expenditure.⁴ These can be found in Addendum 5/ References.

⁴ National Policy Context: SPLUMA Section 12(5) and Section 7e(ii)

CHAPTER 3: Status Quo: Municipal & Neighbouring Municipalities, Sector Plans and Legislation

The spatial analysis of three environments, that is biophysical, socio-economic, and built environment, will link to the directives derived from the applicable legislation governing these resources. The spatial analysis and derived directives will then be aligned with the sector plans and cross cutting resources and challenges of the neighbouring municipalities.

	Biophysical
Geology & Soils:	Soils with strong texture contrasts and 15% and 35% clay are located around and between Robertson and Ashton and around Bonnievale Similar clay content is also present in Northern Koo Valley and ideal for cultivating stone fruit and vineyards.
Climate: Rainfall	Summers are hot and dry, while Winters are wetter and relatively cold with typical annual rainfall. Rainfall ranges between 400mm to more than 1000mm per annum, with the highest rainfall experienced along Langeberg and Riviersonderend Mountains. Hence stone fruit orchard and vineyards are irrigated.
Wind	During summer time, the predominant wind direction is southeast and during winter, west-northwest. The northern part of Langeberg has a mean annual wind speed of 8–9m/s and alternative wind facilities can be considered. Horizontal Global Irradiance above Langeberg is 1901 – 2000 kWh/m ² /annum and on the western and northern border 2001 – 2100kWh/m ² /annum where solar facilities can be considered.
Topography:	The Langeberg Mountains, with an average height of 1000m to 1500m above mean sea level, runs through the middle of the municipal area and create a typical classic landscape: clearly defined mountains and hills, imaginable spaces such as valleys and basins Norberg-Schulz's (1980).
Hydrology:	Langeberg falls in two WMAs: North of the Waboom Mountains is the Gouritz and south thereof is the Breede. The Breede River is ±337km long with a catchment area of approximately 12.984km ² . North west of the Langeberge is the Koo and Keisie Rivers and the Dwariega and Kinga to the north east. The Kogmanskloofrivier links the north of the region to the south. SANBI: NFEPA (2007), class the Breede River as Moderately Modified. Seriously Modified tributaries include the Vink, Keisie, and Touws Rivers.
Biodiversity:	Langeberg Municipality is endowed with a comprehensive system of CBA corridors of which a large extent is already formally or informally conserved and of which several are mostly continuous throughout the municipality. The different biomes that are present in the Langeberg Municipal Area are the Azonal Vegetation (3.11%), Fynbos Biome (74.03%), and the Succulent Karoo Biome (22.86%) and the map illustrated their location.

3.1 Spatial Analysis of Status Quo

Mining:	Langeberg is home to three active mines, one being the Langvlei Strati form Mine, located in the west where lime and Gypsum is mined and 13 ceased quarries. The remaining two mines are sand mines. All the mines are in Breede Rivier subregion. Azonal vegetation is located south of Robertson, between Robertson and Ashton and around Bonnievale. McGregor, Robertson and Montagu are characterized by the surrounding Succulent Karoo biome. A large section of Succulent Karoo Biome can also be found in the north east of the region. The majority of the municipal region is covered with Fynbos Biome.
Agriculture:	Agricultural cultivation is mostly intensive, comprising irrigated vineyards, orchards and pastures. Crop cultivation according to the subregion are: Keisie: vineyards (dry climate, naturally limed soils, high slopes and on fertile alluvial soil along riverbanks) and olives; Anysberg: conservation and growing honey bush tea; Wabooms Valley or Brakrivier Valley: wheat and Proteas; Breëde River: large scale fruit, wine, tamatoes, pumpkin variants, vegetables, and melons; McGregor and north of Riviersonderend Mountains: extensive vineyards. Koo valley: apples, pears, apricots and peaches. Dairy farming had been reduced drastically and milk is imported from the Overberg District. Agri-processing and agriculture are Langeberg's major economic activities and employer. Substantial volumes of cultivated produce are dried or canned. Agriculture, Foresting & Fishing contributes 14.4% to Langeberg's GVA along with 28.33% to employment (CSIR, 2019)). Since 2019, agricultural's contribution are slowly decreasing as does the number of commercial farming entities. Small scale farming or subsistence farming is limited.
Tourism:	The agricultural landscape together with the magnificent scenery and agricultural activities, especially wine-making, form the basis of its vibrant tourism industry. The growth of tourism is slowing down gradually. A Langeberg tourism development strategy is being developed.

Socio-Economic

Demography	Between 2022, the population of Langeberg increased by 20 000 people and 5 404 households over a ten year period.								
			Census 20	Census 2011 Census 2016		SEP 2021	SEP 2025		
	Ρορι	ulation	97 724		105 483		119 962	126 464	
	Hous	seholds	25 125 (3.7))					
	Annu	ual Growth Rate	2.02% (200	1 -2011)	2.27% (2011 -2021)		1.3% (2021	-2025)	
	In 2016, the majority of the Langeberg population was between 15 and 64 years of								
	age, a cohort that represents the labour force.								
		Age	0-14	15-34	1	35-64	65-116	Total	
		2016	31 025	34 49	7	34 511	31873	105 483	
		% of Total	29.4%	32.7%	6 0	32.7%	5.2%	100%	
	Comparing the age distribution across all municipalities in the Western Cape, Langeberg had								
	the highe	st proportion of	children ag	ed 0–14	year	s (29.4%)	in 2016.		
	In 2016, over 3 000 young people less than 18 years of aged were orphaned either by								
	the loss of a biological father (1 936) or a mother (898) or both (335)								

	Langeberg	Mate	rnal Orph	ans	Paternal Orphans		Double Orphans			
	3169	898			1936		33	5		
Urban Rural	Langeberg's	settlemen	ts classifie	ed accord	ing to thei	r populatio	ns ('000)	have:		
Population &	- Robertson as regional service center (population between 25 000 – 60 000),									
Settlement	- Montagu, Aston and Bonnievale as villages (population between 5 000 – 25 000) and								nd	
Classification	- McGrego	r as remot	e village (populatio	n ≤5 000)	(Stats SA,	2016).			
	Town		Robertso	on M	ontagu	Ashton	Bonnie	evale	McGre	gor
	Population,	2016	30 675	1	7 551	14 133	10 229		3493	
	A third (29.98%) of the population resides in rural areas.									
Health	In 2020, Langeberg municipal area had the following Health Facilities:									
	13 public pi	rimary he	ealthcare	clinics (I	PHC) of v	which / F	HCs we	ere fixe	ed and	6 PHCs
	were mobile).								
	2 district ho	spitals (F	Robertsor	ו 50 bed	s & Mon	tagu 30 b	eds), 8	ART c	linics/tr	reatment
	sites and 13	B TB treat	ment clin	ics (IDP	2022-202	23).				
Education	From 2017	to 2020 v	within the	Langeb	erg the n	umber of	schools	has de	eclined	from 55
	to 52.									
	The proport	ion of no	-fee scho	ols decr	eased fro	om 48 to 4	15 (86.5	%) and	d are re	gistered
	with the We	stern Ca	be Depar	tment of	Educatio	n as no-fe	e schoo	ols. Les	ss than	half (17)
	of the 52 sc	hools we	re equipp	ed with l	ibraries.					
	ln 2010, 225	6 children	aged 0 –	6 years ir	the Lang	eberg mun	icipality a	attendin	ng an eo	lucational
	institution (re	gistered E	ECD preso	chools ac	commodat	te 6 childre	en and m	nore). F	acilities	having 6
	children and	less regis	ter as a pl	ay-school	s and are	excluded.				
	Settlement		Ashton	Bonniev	ale McG	Fregor M	ontagu	Rober	tson	
	Number of o	children	413	350	78	5	10	905		
	Of the population aged 20 years and older (as per StatsSA 2016), a total of									
	no or incomplete completed primary or incomplete complete secondary schooling									
	primary scho	ol :	secondary	schooling	and are ser	ni-skilled	or a tertia	arv qua	lificatior	ייים אוני ו
	28.3%		46.5%	-			32.4%			
Feenemy	Majar aantri	hutoro to	Lengeha		·'~ ~ ~ ~ ~ ~) in 201(
Economy		DULOIS LO	Langebe		1 S econo	my (GDP) IN 2013 0.00/ - F			. 17 20/
						sector, I	0.2%, F	-inance	Sector	, 17.3%,
	Agriculture, I		Transpor The testic	l, 10.0%.	A BIOSO S					15 - 2019
	CONTIRMS (SE	P 2021):	i ne tertia	ry sector	Increased		ual rate	013.1%	b. Finan	ce sector
			the trans				and was	S THE KE	ey tertia	IFY SECTOR
	growth driver	s. Trade	sector, th	e largest	contributo	r to GDP I	n Langer	berg, in	creased	1 DY 2.5%
		ng the per	riod of revi	ew.						
		s ⊨mploy	rment Se	ctor Con	Indutors		4			
	Employment	1 Agriculture	Z Reta	il & Accom	3 Finance & I	Real Estate	4 Governm	nent N	o Manufactu	ring
	Economy	Retail & Ac	com Mani	ufacturing	Finance &	Real Estate	Agricultu	ure 1	Transport	
(SEP, 2021)				-						

Hierarchy and Role of Settlements	Robertson is the the largest win pass and has between Mont Ashton Cannir Langeberg mu manufacturing The GPS (2014 (17) in relation Montagu and F	ne main urba e producing i dried fruit, r agu and Ro ng (Tiger Bra unicipal area of peach and 4) confirmed to the WC. C Robertson is	n and agricultural s regions in SA. Mont muskadel and hot bertson and home ands) is in operatio in the near futur d apricots products the growth potentia omposite Growth potentia	ervice centre be tagu is situated r springs as sign to the canning on but schedule re. Bonnievale and for making I of the Langebe otential of Ashtor	eing located within north of the Cogm ature. Ashton is g-factories of whi ed to relocate ou is known for its cheese. erg municipal area n, Bonnievale, Mo	n one of nankloof located ich only it of the wines, a as Low Gregor,
Roads & Transportati on modes	Mini-bus taxi (I long-distance s Bus services d Cape Departm City providing infrastructure e airport located (NHTS) highlig	MBT) is the d services with lo exist for tra- nent of Educa a commer exists for frei on the easte hted that over	ominant public trans limited supportive i ansporting learners ation) and for long o rcial service daily) ght movement only rn outskirts of settle er 58.9% of all work	sport mode prov nfrastructure. (a contract serv distance travelle) with no publ /. Robertson ha ement. National I trips are made	viding both community vice provided by Ners (TransLux and lic busstop facil s a regional light Household Travel on foot in the Lan	Uter and Vestern City to lity Rail aircraft Survey ngeberg.
Waste	According to the of waste was go of organic was following tonna Town	ne draft Integr generated in 2 ste and 1 136 age: Ashton	rated Waste Manag 2020 made up of 2 ⁴ 6 tons of Construct Bonnievale	Jement Plan (IW 4 059 tons of mu ion & D. The se McGregor	MP, 2021), ±27 (unicipal waste, 18 ettlements genera Montagu)00 tons 371 tons ated the Robert
	The waste ger average 15% were applied 8	and more or the volume	ded 61% recyclable ganic waste (WCS of waste until 2027 Future estimated otal Waste Generation 32 865 34 193	es, 24% or more, 2016). Future is: waste generation ra Low Income 57% 18 733 19 490	e non-recyclables e waste generation ates (tons) Middle Income 12 489 12 993	and on on rates
Sewerage	The sewerage Sewerage: (Pr Potential, assu Ashton Bonnievale McGregor Montagu Robertson Master plan im R 4 606 R/k {/d towns within L 10 664 k {/d to t be progressive their licenses a	volumes in 2 resent Water D ming all stands plementation . The implem angeberg fro he future PD ely improved and achieve	2012 are tabulated to emand, 2012) occupied n costs are estimated nentation will increa m its present Peak DWF of ± 21 766 kt to comply with the the minimum potat	below: Water use (kl/d) 5 534 3 848 891 5 171 7 015 ed at R 54.1 mill se the total sew Daily Dry Wea /d (SWP, 2012). e effluent quality ble (drinking) wa	NRW est. (kl/d 1 062 962 157 575 1 238 lion (2012) or unit er system capacit ther Flow (PDDW Existing WWTWs requirements se ater, contact, pho	AA 65 48 10 57 82 t cost of ty of the VF) of ± s should et out in osphate,

Electricity	According to the Langeberg Master Planning Investigation in 2017 Ashton, Bonnievale, Goudmyn, Le Chasseur, McGregor, Montagu & Noree medium voltage networks are all lightly loaded with the 5, 10 and 15 year growth forecasts easily absorbed by the existing network. The Robertson network requires immediate upgrade to continue to function as a reliable and stable medium voltage network given the volt-drop of 5%, which is higher than the recommended guidelines of 3%. Bonnievale, McGregor and Ashton and Zolani need an upgraded distribution system.							
Water	 Water Sources are listed below (Water Services Development Plan 2014/2015). Ashton: Breede River irrigation canal, the Cogmanskloof Irrigation Board (CBR), two small streams in the Langeberg Mountain Catchment Area (Robertson Canal). Bonnievale: Breede Riverand Zanddrift Irrigation Canal. McGregor: Houtsbaais River which is treated at McGregor;s water treatment plant. Montagu: Kruiskloof, Keurkloof, Rietvlei and the CBR pipeline scheme and supplemented from aquifers in Badskloof (Montagu West). Robertson: Langeberg Mountain catchment area north of Robertson and Breede river irrigation canal. (Brandvlei Irrigation Scheme (Breede River) Dassieshoek and KoosKok Dams Hoops River Irrigation Scheme) An additional AADD of 31 533 kl/d capacity is required. The master plan implementation at a cost of R 120.5 million will increase the Municipal system capacity from its present Annual Average Daily Demand (AADD) of 18 542 kl/d to the future AADD of 33 374 kl/d. 							
Human	According to HSP 2014 – 2018, the estimated fully subsidized housing backlog is: 9 340.							
Settlement	The 2014 housing waiting list total: 12 878 individuals (Department of Human							
	 Robertson – 3717 individuals and Nkqubela – 1078 individuals Ashton – 2599 individuals and Zolani – 1302 individuals Bonnievale – 2432 individuals; Montagu – 1168 individuals; McGregor - 582 individuals. According to the HSP, 225ha of land is required to provide for tenure opportunities: 							
	Settlement Robertson Montagu Ashton Bonnievale McGregor Total							
	 In McGregor on Erf 360, 478 houses were completed with 10 houses outstanding and 15 affordable sites available. In Nkqubela 172 top structures are under construction on Erf 435 a portion of Erf 136). Projects to be implemented are: Montagu, Mandela Square 173 ISSP & 148 serviced sites (UISP), RE/Ptn Erf 1 & 937 Montagu Kingna River (adjoining Mandela Square) – ±500 IRDP, Rem/Erf 937. Bonnievale, Boekenhoutskloof (224) UISP, Erf 907 & RE/Farm 174 Swellendam RD. Robertson Heights (189 services - 188 IRDP/UISP, Erven 2981 & 2445). 							
Amenities	Cemetery capacity is required in most settlements. Ashton cemetery was enlarged. Ongoing maintenance is required and a fencing programme should be implemented. Early childhood Development facilities are required and should be firmly promoted.							
Heritage	The settlements in Langeberg were founded between 1853 and 1861, and a summary of the built heritage resources, mainly in McGregor, Montagu and Robertson, are tabulated below:							

Founded	Declared	Settlement	Grade 2	Grade 3A	Grade 3B	Grade 3C	Total
1853	1857	Robertson	6	5	36	156	203
1853	1857	Ashton					
1853	1857	Bonnievale					
1856	1895	Montagu	22		22	30	74
1861	1892	McGregor	13	2	10	12	37
		Rural	4	5	24		33

Robertson and McGregor have grid layouts whilst Montagu has a Voortrekker Rydorp layout with water erven.

The two scenic routes are:

<u>Cogman's Kloof Pass</u> which as mountain pass extends across a river valley and runs through a poort in the Langeberg Mountain range that links Ashton and Montagu. The pass follows the path of the Kingna River and is therefore susceptible to flooding.

<u>R317, road between Robertson to Bonnievale</u> hugs the Breede River, and takes in some of the most fertile wine and fruit farms in the region. The road itself is famously lined with red Canna Lillies and trees, and in certain seasons provides a bouquet of colour.

(GLS Consulting (Pty) Ltd, 2012) (WorleyParsons RSA (Pty) Ltd, 2017)

3.2 Sectoral Plan and Provincial & Regional SDF Analysis and Directives

Three sector plans or strategies, Local Economic Development Plan, Tourism Strategy and Risk Management Plan, provide spatial and development directives inclusive of:

- Enabling policy;
- Accelerating the economy;
- Growing tourism (longer stays, average spend increase, number of visitors);
- Focus on capital investment supportive of the tourism industry;
- Create job and business opportunities as tourism sector strengthen and grows;
- Rural communities to socially benefit from tourism sector economy;
- Enhance conservation; anf
- Integrate Disaster Risk Management into the strategic, operational planning and project implementation of all line functions and role players within Langeberg municipality.

The Cape Winelands district includes Breede Valley, Drakenstein, Stellenbosch, Witzenberg and Langeberg. The CWDSDF sets objectives to achieve a) institutional preparedness, b) human wellbeing, c) economic imperative and d) environmental integrity.

Vertical alignment proposals of the Western Cape PSDF, Western Cape Growth and Development Strategy and the Cape Winelands District SDF includ (Cape Winelands Municipality, 2021)e:

3.3 Spatial Analysis and Neighbouring Municipal Resources

Five local municipalities abut Langeberg Municipality, namely the Breede Valley, Theewaterskloof, Swellendam, Kannaland, and Laingsburg Local Municipality.

Municipality	Breede Valley	Theewaterskloof	Swellendam	Kannaland	Laingsburg
Shared boundary	Western boundary along	Small section on	Eastern boundary of	Small section of north	Small section of
	Riviersonderend	southern boundary along	Langeberg abuts	eastern boundary	north-eastern
	Mountains	Riviersonderend	Swellendam		boundary
Mountain Ranges:	Langeberg mountain	South: Genadendal	South: Wagenboom	North Fast: Anyshera	North East
a) -Conservation corridors extends along	includina:	[Galgeberg].	[Stormsvlei].	Klein Karoo vallev.	Anysberg West.
the boundaries.	North: Zoutkuil and	Schilpadkop,	[Naauwkloof], Turks.	formed by Swartberge	
b) - protect lower slopes and minimise	Leeuwbosch.	Zondereinde, Dasberg	L 2'	and Langeberge,	
visual and ecological intrusion.			South East: Bakoven,	traversed by the Groot	
	North west: Kanetvlei,		Beton Paal,	and Gamka Rivers.	
Key:	Waterkloof, (Ben Heatly),		Leeuwriviersberg,		
Mountains and Mountain Ranges	and Naudesberg		Gueugeiuui.		
- named according to Trigonometric	and Naddosberg.		East: [Akkerboom].		
Beacons are indicated (in	West: Langkloofsberg,		Vlakterand,		
DIACKEIS)	Bosjesveld and		[Windvogel],		
close to Langeberg Municipal	Gannasberg.		Kalkoenshoek,		
Boundary.			Ratelfontein,		
Pivore	North: Kraggarivier	South: Poesienels River	[200V00IDy].	North East: Tousrivier	
Enhance biodiversity conservation and	(Tousrivier) Brakrivier	Gobos River and Sland	Riviersonderend		
wilderness tourism opportunities.	Lopenderivier.	River.	Kwassadierivier,		
Provide for local recreation need.			Heskwasrivier, Freek		
	North West:		Bothas River.		
	Raaswatertivier, Nuyrivier.		Frat. Des Videriae		
	West: Breërivier		East: Breefirvier,		
			Gatskraalserivier		
Conservation & Proclaimed	North: Gouritz Cluster	South: Riviersonderend	South: Riviersonderend	North East: Gouritz	Gouritz Cluster
conservation areas	Biosphere Reserve, Gecko	Mountain Catchment	Mountain Catchment	Cluster Biosphere	Biosphere Reserve
	Rock Private Nature	Area, Riviersonderend	Area, Hessakwaskloof		

Maintain conservation status of mutual Nature Reserves. Promote extension of reserves into a continuous biodiversity corridor through stewardship conservancies on private farms. Protect indigenous and listed alien ⁵ woodlots and mature trees.	Reserve, Urban Retreat, Lettaskraal. North West: Matroosberg Mountain Catchment Area, Patrys Kloof Private Nature Reserve. West: Langeberg Wes Mountain Catchment Area, Zoetigheid, Riviersonderend Nature Reserve, Riviersonderend Mountain Catchment Area. Langeberg Conservation Breë River.	Nature Reserve, Sangebethu Private Nature Reserve, Greyton Local Nature Reserve.	South East: Gouritz Cluster Biosphere Reserve, Marloth Nature Reserve, Langeberg Wes Mountain Catchment Area. East: Gouritz Cluster Biosphere Reserve, Sanbona, MontEco Private Nature Reserve, Eyerpoort and Anysberg Nature Reserve is a mutual conservation area. Eyerpoort Nature Reserve	Reserve, Anysberg Nature Reserve.	including Anysberg Nature Reserves. Anysberg Nature Reserve, Lettaskraal.
Transport Network Direct development in rural areas to urban settlements with opportunity to grow economic e.g. tourism in Greyton, Genadedal and McGregor in Riviersonderend Mountain conservation area. (RSMCA). Promote tourism routes e.g. R62.	N1 (Cape Town to Gauteng) links to Breede Valley transport corridor (rail line & R62/N15), and Langeberg to Swellendam, R318, R60.		R317, R60, R62.	R62 as main Klein Karoo route and connects Montagu and Uniondale, 400kms apart.	
Agriculture Protect river systems and catchments. Protect conservation of natural vegetation.	Intensive agricultural around Worcester, Rawsonville & Doorns		South East: Viticulture Farming, Small Stock Farming, Small Grain	North East: Small Stock Farming.	North East: Small Stock Farming.

⁵See annexure x

	similar to around McGregor, Bonnievale & Robertson & between Robertson & Ashton.		Farming and Stone Fruit Farming. East: Small Stock Farming.		
	North: Small Stock Farming. West: Viticulture (Wine Grape) Farming		Ŭ		
Settlement status	Worcester is a regional service centre (>100 000) with a population of ±127 000.	Caledon is a village (between 5 000 and 25 000) with a population of 13 000+.	Swellendam is a village (between 5 000 and 25 000) with a population of ± 17 000.	Ladismith is a village (between 5 000 and 25 000) with a population of ± 9 000.	Laingsburg is a village (between 5000 and 25000) of a population of ± 6000 .

Directives generated from national, provincial, and local laws, policies and strategies are aligned to

the Status Quo analysis, can broadly

be categorised into proposals:

- to protect,
- to change and
- to develop resources in the three environments.

The proposals and directive in the chapters to follow, are presented accordingly.







Map 4: Cross Boarder Elements

CHAPTER 4: Land Demand, Supply and Settlement Development Guidelines

The Western Cape Growth Potential Study (2014) determined the settlement and socio-economic status of settlements in the Western Cape outside of the Cape Town metropolitan area along with their growth potential and investment directives. The study identifies the growth potential of the Langeberg municipal area as Low (17) in relation to the Western Cape, as it is not located adjacent to the Cape metropole (There is a direct correlation between the growth potential of municipalities and their proximity to Cape Town). Composite Growth potential of Ashton, Bonnievale, McGregor, Montagu and Robertson are Medium.

Index	Ashton	Bonnievale	McGregor	Montagu	Robertson
Human Capital	Low	High	Medium	High	Medium
Economic	Medium	Medium	Medium	Medium	High
Physical	Medium	Medium	High	High	Medium
Infrastructure	Medium	Medium	Medium	Medium	Medium
Institutional	Medium	Medium	High	High	High
Composite Growth Potential	Medium	Medium	Medium	Medium	Medium

Though the composite growth potential is Medium, the socio-economic needs are very high in Robertson, Medium in Ashton, Bonnievale and Montagu and Iow McGregor.

		Household ser	Household services, Education level, Housing need & Economic characteristics						
		Very Low	Low	Medium	High	Very high			
a	Very low								
enti	Low								
th Pot	Medium	McGregor		Ashton, Bonnievale, Montagu	Robertson				
Nov	High			_					
G	Very High								

Socio-economic needs including:

4.1 Land Demand and Supply Projections

4.1.1 Population Growth Projections

SPLUMA requires that the future demand/need for housing and related social and infrastructure services be considered and addressed as part of the SDF to allow for effective and sustainable planning of areas. For each urban area the demand for land within the short term (5 years) and long term (15-20 years) timeframes has been considered in the spatial proposals.

The needs and projected demands were established using the demographic information from the 2016 Community Census data as incorporated in the Status Quo report. Langeberg's settlements classified according to their populations ('000) range from Robertson being a regional service centre, Montagu, Ashton and Bonnievale being villages and McGregor being a remote village.

Town	Robertson	Montagu	Ashton	Bonnievale	McGregor
Population '000	25 – 60	5 – 25			≤5
Classification	Regional Service Center	Villages			Remote Village
Population, 2016	30 675	17 551	14 133	10 229	3493

Table 5: Langeberg Settlement Population (StatsSA, 2016)

Between 2001 and 2022, the population in Langeberg increased by approximately 15 000 people and 4 000 households in the first 10 years and 20 000 people and 5 000 households in the second 10 years.

	Census 2001	Census 2011	Census 2016	SEP 2021	SEP 202	5
Population	81 274	97 724	105 483	119 962	126 464	
Households	21 057 (3.8)	25 125 (3.7)		31 000 (3.9)		
Annual Growth Rate	2.02% (2001 -20	11)	2.27% (2011 -2021)		1.3% 2025)	(2021-

Table 6: Langeberg Population & Households (StatsSA, 2001, 2011 & 2016 & SEPs)

A third (29.98%) of the population resides in rural areas.

Langeberg is one of the most populated areas in the Cape Winelands District. In 2016, the majority of the Langeberg population was between 15 and 64 years of age, a cohort that represents the labour force. Comparing the age distribution across all municipalities in the Western Cape, Langeberg had the highest proportion of children aged 0–14 years (29.4%) in 2016.

Age	0-14	15-34	35-64	65-116	Total
2016	31 025	34 497	34 511	31873	105 483
% of Total	29.4%	32.7%	32.7%	5.2%	100%

Table 7: Langeberg Age Distribution (StatsSA, 2016)

4.1.2 Land Demand

According to the HSP, 225ha of land is required to provide for settlement opportunities:

Settlement	Robert son	Montagu	Ashton	Bonnievale	McGregor	Total
Land (gross ha) HSP	86,33	17,8	48	53,8	19,2	225,13
2014 waiting list	4795 3717 (Robertson) 1078 (Nkqubela)	1168	3901 2599 (Ashton) 1302 (Zolani)	2432	582	12 878
Land Required (nett ha) as per 2014 waiting list	86, 31ha	21.024	70.2	43.8	10.5	231.8

Land for dealing with the waiting list is slightly underprovided for at 6.5ha, whilst sufficient provision was made for future growth in the next 5 years and in the longer term (next 20 years).

Provincial Government contributed to Social Infrastructure and particular to Housing, Education and Health and Transport (Roads) and Langeberg to sports and recreation, social development and public safety with the bulk of the budget allocated to tradeable services such as electricity, water management, and waste management.

Status of Bulk Infrastructure Capacity

The availability of bulk infrastructure and services in the Langeberg settlements contribute to the economy and future development (investors' confidence).

	Robertson	Nkqubela	Bonnievale	McGregor	Ashton	Zolani	Montagu	Ashbury
E-Capacity	42.	.2MVA	21.2MVA	7.4MVA	26.	OMVA	33.256MVA	
E-Demand 2012	32.	.1MVA	8.9MVA	2.5MVA	10.	10.7MVA		MVA
E-Demand Estimated 2023	43.625MVA &28	3.839MVA (Excl.)	11.546 MVA	3.454MVA	11.275MVA		11.042MVA	
E-Demand Estimated 2028	47.281MVA (I (Excl.)	Incl.) 31.052MVA	13.385 MVA	4.133MVA	11.882MVA	11.882MVA		A
E-Distribution	3x 15MVA 66/11kV transformer.		1x 20MVA 66/11kV transformer. Conductors to be upgraded.	1x 10MVA 66/11kV Conductors have additional capacity.	2 x 20MVA 6 66/11kVA Distributors to	2 x 20MVA 66/11kV& 5MVA 66/11kVA transformers. Distributors to be upgraded.		have bacity.
W-storage			2 960 kl	10 700 kl	6 700kl	3 475 kl	11 700 kl	
W-volume required	5,0 Mℓ (Res 5). 3,0 Mℓ (Res 3). 2,5 Mℓ (Res 4).		5,5 Mℓ Old Res. 4,0 Mℓ New Res.	2,0Mł Res 1.	10,5 Mℓ (Cogmanskloof Res).		2,0 Mℓ Badsh 3,5 Mℓ Ash reservoirs.	oogte. Ibury Upper
W-purification					Upgrade WTF	P.		
W-distribution	Insufficient capacity for future water demands.		Insufficient capacity for future demand.	Insufficient capacity for future demands.	Insufficient ca water demand	pacity for future ls.	Insufficient of future demand	capacity for ds.
W-main feeder	Upgrade one of two 250mm Ø (Res 1 to Town Centre). Upgrade 75 mm Ø (Res 1 to Nkqubela booster pump).		Utilize 200 mm Ø as additional supply. New 315 mm Ø (Old Res to New Res).	No Upgrades.	Upgrade 200 mm Ø ma Langeberg fac	mm Ø to a 315 iin. (WTP to ctory).	Upgrade 200 – Ash Reserve mm Ø Badshoogte F	mm Ø (WTP oir). New 160 (main to Res).
S-capacity Actual'	4 709 kl/d		2 775 kl/d	483 kl/d	3 845 kl/d		3 284 kl/d	
S-capacity AADD potential	8252 kl/d		4 810kl/d	1 048kl/d	6 596 kl/d		5 748kl/d	
S- distribution								

(GLS Consulting (Pty) Ltd, 2012) (WorleyParsons RSA (Pty) Ltd, 2017)

	Goudmyn		Le Chasseur	Noree	
E-Capacity	18.382MVA		9I226MVA	11.081MVA	
E-Demand	8.8MVA		3.8MVA 5.278MVA		
	10.272 MVA	١	4.632MVA	6.855MVA	
	11.843MVA		5.115MVA	7.813 MVA	
E-Distribution	2x 10MVA 66/11kV		2x 5MVA transformers;	1x 10MVA 66/11kV	
	transformers;		Conductors have	transformer. Conductors	
	Conductors within C	apacity.	additional capacity.	have additional capacity.	

Table 8: Langeberg Infrastructure Status Quo

New infrastructure and upgrades should be aligned with WCPSDF, 2014, policy R2: *Safeguard inland water resource, and manage the sustainable use of water* by providing sustainable social infrastructure and service/ utilities to facilitate smart growth and bringing about spatial sustainability (SPLUMA principle).

Directives for bulk services

Effective management and use of water as a scarce natural resource requires an overarching approach to water demand and the provision of adequate bulk water infrastructure in the Langeberg to adequately plan for the impact of future droughts and climate change conditions. The following directives apply:

- a) Ensure that a base level of services is available for all residents in the municipality including those households qualifying for indigent grants.
- b) Where possible implement GAP housing schemes as part of subsidy projects so as to help cross-subsidise the required infrastructure projects.
- c) For low-density settlements, promote sustainable use of natural resources and reduce dependency on conventional grid services. The following solutions are proposed:
- d) Promote the use of solar hot water projects.
- e) Promote use of solar water heaters; PV panels; grey water recycling; waste separation at source; and passive building design to minimize energy, solid waste and water demand.
- f) Encourage rainwater harvesting and grey water recycling.
- g) Determine the bulk infrastructure required in the Langeberg over the next 20 years considering the growth rate, densification strategy and needs of the community.
- h) Determine the most suitable locations for bulk infrastructure facilities to allow the delivery of services at an acceptable cost.
- i) Use non-renewable resources in a responsible manner not exceeding predetermined limits.
- j) Provide environmentally friendly infrastructure and services in rural areas (improved quality of life of people living in the rural areas and effective environmental sustainability).
- k) Investigate alternative water resources in Langeberg to plan for future drought conditions.

4.2 Land Supply

The land supplied as per the Langeberg SDF is included within the proposed delineated urban edges and informed by settlement form and function.

4.2.1 Urban Edges

Acknowledging the spatial importance afforded to urban edges to guide and control orderly development of the built environment, the existing edges as approved in the Langeberg Spatial Development Framework were revised and in most instances according to the growth potential and requirements of each town. These proposed urban edges for the 2023-2028 Langeberg Spatial Development Framework provide the demarcated urban areas for the next five (5) year to twenty (20) years. Urban development for the next five (5) years should therefore be contained within these demarcated areas. However, the proposed urban edges also include informal settlements (as per the composite map below).

In order to support spatial sustainability in accordance with the planning principles as advocated in SPLUMA and LUPA, a compact urban form is supported. For the proposed urban edges of the towns in the Langeberg, consideration was given to the protection of high value agricultural land and compact urban form, as well as provision of opportunities for spatial integration (Montagu and Ashton) while providing for additional land to address future urban growth simultaneously.

The revision of the urban edges has to be conducted within the framework of national, provincial, and relevant Langeberg municipal guidelines. The revision should take into account the economic and social development as well as the environmental sustainability of the Langeberg region (SPLUMA, 2013).

The directives below shall apply:

- Give sufficient protection to land requiring protection, inter alia, high value agricultural land currently under cultivation;
- Encourage contraction (a compact urban form) rather than expansion of urban settlements to promote non-motorised transport modes and spatial integration where appropriate;
- Provide sufficient land for development to satisfy the needs of the area for about the next 20 years, given the current growth rate and the availability of under- or unutilized vacant land;
- Include municipal vacant land as part of the Land Supply. Hence, a vacant land audit should inform the Human Settlement Plan.



Figure 1: Proposed urban edges including existing informal settlement precincts.

4.2.1 Settlement Form and Function

The table below provides a description of how land supply within Langeberg settlements was guided by the relevant policies:

Consideration	Land Supply Directives	WCPSDF, 2014	SDF Objective	SDF & SPLUMA principles
Settlement Status and Economic Basis: Function	Prioritize rural development investment where economic growth and spatial resilience is present: Robertson, main agri service centre; Ashton & Bonnievale, industrial and agri-processing hubs, need industrial & residentially zoned land. Montagu and McGregor tourism service centres, destination development, limited residential development.	Policy S3: Ensure compact, balanced & strategically aligned activities & land use.	<i>Obj 1: Economic prosperity</i> is supported.	Same – Different & spatial resilience.
Settlement Form: Densification and Intensification	Densification is strongly promoted in settlement expansion precincts in Robertson and Ashton. Intensification and densification are strongly promoted in infill development within Montagu and Bonnievale and to a lesser extent McGregor.	Policy S1: Protect, manage & enhance province's sense of place, heritage & cultural landscapes Policy S5: Ensure Sustainable, Integrated and Inclusive human settlement planning and implement range of housing & tenure options.	Obj 3: material, physical and social well-being sustained (Obj 4): place identity and cultural integrity are protected and grown.	Denseness – Sparsity Continuity- Discontinuity And Spatial sustainability and efficiency (SPLUMA).
Settlement From: Restructuring and Integration	 Restructuring through <u>socio economic integration</u>: Robertson & Nkqubela & Droë Heuwel and Ashton & Zolani and Cogmanskloof: Position social services and infrastructure centrally for sharing by various communities, for example - sports fields, market squares, open space networks, such as rivers and natural areas, including social spaces like picnic areas. <i>Provide a variety of housing types</i>, especially around the centre of town and, if required, upgrade or replace infrastructure: Robertson, Ashton, Bonnievale and Montagu. Encourage different income (social gradient) and property values between adjacent areas. Bonnievale, Robertson Integration Zones and Social Housing Restructuring Zones should be identified in urban settlements, as these zones will support convenient and equal access as promoted by several WCPSDF policies: Robertson. Restructuring can be achieved through <i>functional integration</i>: Implement the "within walking distance" principle (walking distance norm: 20 minutes/1 kilometer) for at least 50% of all social amenities. In older, established areas, integrate through rezoning of residential erven. In subsidized housing/ high density precincts establish secondary business nodes. 	Policies S1: sense of place, heritage and cultural landscapes. Policy S3: Ensure compact, balanced & strategically aligned SPLUMA activities & land use. Policy S5: Sustainable, Integrated and Inclusive housing planning and implementation.	Social and functional integration is achieved mainly through development along main activity routes which include mixed use (a combination of commercial, residential and low impact service industries).	Spatial sustainability, resilience and efficiency (SPLUMA).

To support spatial sustainability in accordance with the planning principles as advocated in SPLUMA and LUPA, a compact urban form is supported. The following guidelines direct a compact urban form:

5.1 Guidelines for achieving compact settlements

Densification

- Densification ensures optimal use of land and efficient use of infrastructure and services.
- Smart growth and containing urban sprawl within settlements can be achieved through infill, intensification and densification targets.
- Densification targets for Langeberg, mindful of transport infrastructure, biodiversity, heritage resources, open spaces, flood lines, services capacity and existing densities are in the table below:

Settlement	CWSDF 2009	Calculated 2023	Proposed du/ha 2027	Proposed du/ha 2032
Robertson	4.47	4.9	8	10
Ashton	4.7	4.6	8	10
Montagu	6.45	0.8	7	8
Bonnievale	3.7	1.1	5	8
McGregor	3.9	0.5	5	6

Table 9: Proposed densification targets for Langeberg settlements

Intensification

- Sensitively fill in and redevelop major arterial axes in clearly defined precincts;
- Develop both sides of activity streets and corridors to consentrate activities;
- Sensitively development around and incorporate heritage buildings;
- Enhance street character through landscaping, street furniture and architectural guidelines for new developments;
- Encourage mixed use development to provide a range of businesses (start-up to mature) multi level market entries and to create jobs;
- Enhance links between nodes and corridors within and amongst settlements. ; and,
- Encourage densification and intensification as allowed by services capacity within corridors.
- Cluster together a hierarchy of three levels at urban nodes, containing business and community facilities, to ensure that larger investments, for higher order facilities, will be enjoyed by the greatest number of people:
 - Tertiary: Technicon's, hospitals, courts, multi-purpose centres, regional or metropolitan transport interchanges, museums and indoor sports complexes; and
 - Secondary: high schools, day care centres, hospitals, libraries, sports and community halls and sports fields; and
 - Primary: primary schools, crèches, clinics, bus and mini-bus taxi stops.

Develop nodes to concentrate business therein and, where growth is required, nodes should be
encouraged to grow, along corridors, towards each other. This is to control and prioritise the
implementation of needed infrastucture, in a strategic and orderly manner, and to provide the best
opportunity for success of these businesses.

Restructuring and Integration

- Provide for social amenities according to the land requirement standards:
 - 1 crèche / 5 000 persons 0.08ha
 - 1 primary school/ 3 000 4 000 persons of 1 000 dwellings 2.8ha
 - 1 secondary school/ 6 000 10 000 persons of 2 500 dwellings 2.6ha
 - 1 library/ 10 000 persons of 2 500 dwellings 0.1ha
 - 1 church / 1 000 persons 0.015 0.3ha
 - 1 mobile clinic / 5 000 persons of 1 250 dwellings
 - 1 community hall/ 10 000 persons/ 2 500 dwellings 0.2ha
 - 1 police station/ 25 000 persons/ 6 250 dwellings 0.1ha
- Locate activities (residential, transport, work, recreation, etc.) within walking distance;
- Locate most frequented activities in the most central / accessible localities, e.g. industrial and commercial;
- Do not, as a general rule, target Human Settlement schemes exclusively at a single income group, usually Subsidy or Site and Service, and always include at least a GAP housing and top structure subsidy component;
- Arrange housing, for the various income groups, according to the socio-economic gradient principle, with the higher end of the market closest to the main thorough fare;
- Use all well-located vacant land;
- Locate all future residential areas within walking distance of urban centres, where space permits; and,
- Give residents freehold tenure immediately, i.e. title deeds, so that shack upgrading will commence as soon as possible.

Open Space Systems:

- Create open space systems that integrate significant elements of a settlement to contribute to a meaningful urban structure. This can be done by:
 - Create connectivity and establish linkages between open spaces;
 - Define open spaces with surrounding public buildings; and
 - Establishing a continuum of special activities along major routes and open space corridors.
- Link symbolic elements (heritage building) and public facilities (library, clinic, etc.) to open spaces in relation to their importance and character.
- Balance defined public open space (by surrounding buildings) with private spaces.
- Create visual recognition and surveillance along open spaces and public routes through:

- Locating buildings around open spaces and along streets so that sufficient enclosure is created;
- Ensuring appropriate heights of buildings;
- Locating highest buildings along the southern side of the open space, with lower buildings or trees along the northern side.
- Permit occasional activities such as markets at highly accessible locations to ensure the greatest viability possible. These locations include modal interchanges and intersections of the movement network directing urban structure.
- Accommodate a variety of users in and uses along streets by the following:
 - Concentrate intensive activities along major vehicular and public transport routes;
 - Locate the majority of public buildings and increase densities along these routes; and
 - Locate buildings closer, rather than further, from the streets to increase pedestrian activity, a sense of enclosure and surveillance.
- Create appropriate road cross-section widths that can provide for vehicle traffic, parking, pedestrian movement, cycling and landscaping.
- Promote access (penetration) and encourage economic activity by orientating the short side of blocks to major streets, wherever possible.
- Plan for adequate solar exposure of buildings. Orientate roof pitches of buildings in such a way that roof solar panels maximise continuous direct access to the sun.
- Consider the heritage value, elements of vernacular architecture and, where possible, retain these important elements when entertaining proposals for the development of buildings. Similarly, the historical characteristics of existing buildings should be considered to be integrated, where practical, into the design and construction of close by new buildings.
- Encourage the use of local materials in the construction of new buildings.
- Encourage appropriate water-wise landscaping.

Sensitively and naturally landscape gateways to announce settlement entrances. Encourage landscaping along activity streets.

5.2 Guidelines for Liveable Settlement Directives:

To limit the extent of land required, the following guidelines for Connectors and Settlement Densities direct settlement Form and Function:

- Roads
 - Robertson, Ashton, Montagu & Bonnievale: Introduce speed calming & greening of route. Introduce landscaping/ tree lanes, street furniture and sufficient lighting. Provide for multipurpose crossings.
 - Improve Mobility.
 - All settlements: Develop guidelines for commercial facades, advertising signs and information signs: Main Road to have a rural character.

- Gateways
 - All settlements: Enhance and announce town entrances and gateways: plant trees and landscape entrances:
- Activity Streets & Corridors
 - Concentrate higher order social amenities and mixed-use development along activity streets.
 - Provide for public transport, Non-Motorised Transport and pedestrian mobility.
 - Provide for a taxi rank/bus stop next to CBD.
- Rail
 - Alternative for freight & passengers.
 - Robertson: Prolong Blue Train stop over.
- Pedestrian & Cycling
 - Develop trails and routes in settlements linked to natural conservation areas or farmland.
 - Robertson, Ashton, Montagu & Bonnievale: Provide for safe pedestrian walkways between residential areas.

Settlement Densities

Settlement	CWSDF 2009	Proposed du/ha 2027	Proposed du/ha 2032
Robertson	4.5	8	10
Ashton	4.7	8	10
Montagu	6.5	7	8
Bonnievale	3.7	5	8
McGregor	3.9	5	6

.5.3 Management priorities: Built Environment and Service Areas

General management priorities include:

Management Priority	Priority Focus Area
Improvement and rehabilitation.	Improve and rehabilitate all town and service areas, especially after
	construction, and afterwards during operational run time.
Conservation and preservation.	Keep and save town and service zones.
Environmental Impact Assessment	All urban uses and service zones that may have an impact on the
Requirements.	environment and as identified by legislation must be subject to
	environmental impact assessment.
Monitoring and management	All assembly and management actions are determined and must be
aspects.	implemented according to the standards, permit requirements,
	environmental management plans as applicable.

A General Environmental Impact Management Framework is outlined below:

		Types of developme	ent	
Development Types	That should not occur	That may have significant impact	That have no significant impact	Related environmental management policies and guidelines
Energy Zones	Any development except energy generating infrastructure.	Any development except energy generating infrastructure.	Energy generating infrastructure.	Environmental Impact Assessment and Guidelines. Provincial Spatial Development Framework for
Sewage Works	Any development except sewage infrastructure.	Any development except sewerage infrastructure.	Sewerage infrastructure.	the Western Cape Province. All legislation with an environmental aspect and
Wastewater sites and Buffer areas	Any development except waste landfill infrastructure.	Any development except waste landfill infrastructure.	Wastewater infrastructure. Wastewater recycling and reclamation facilities.	corresponding regulations, policies and guidelines.
Industrial Areas	Any non-industrial developments.	Any non-industrial developments.	All industrial related infrastructure.	Environmental Impact Assessment and Guidelines.
Commercial Areas	Any non- commercial developments.	Any non-commercial developments.	All commercially related infrastructure.	Provincial Spatial Development Framework for the Western Cape Province. All legislation with an environmental aspect and corresponding regulations, policies and guidelines.
Infrastructure servitudes	Any development that conflicts with	Any development that conflicts with the	Any development that does not conflict with	Environmental Impact Assessment and Guidelines.
	the inherent right as contained in servitude.	inherent right as contained in servitude.	the inherent right as contained in servitude.	Provincial Spatial Development Framework for the Western Cape Province. All legislation with an environmental aspect and corresponding regulations, policies and guidelines.

5.4 Ashton

Ashton is located at the heart of Langeberg between Montagu and Robertson and Bonnievale. Ashton is known for its canning-factories of which only Ashton Canning (Tiger Brands) is in operation but scheduled to relocate out of the Langeberg municipal area in the near future.



Connecto	rs		
	Elements	No.	Proposals
Protect	Roads:	1	R60: connector to Robertson, Montagu (R62) and Swellendam: a mobility junction
	Activity Streets & Corridors:	2	Building Avenue, Kalase Avenue, Bogard Avenue, Khosi Avenue, Spofana Street and Mantlana Street interlink at different points.
	<u>Rail:</u>	3	The rail infrastructure exists for freight movement and there is no passenger rail or tourist rail service provided.
	Roads:	4	Capitalise on R60 through Ashton and celebrate Arch bridge: Promote commercial and mixed uses.
		5	Enhance and announce town entrances and gateways.
Change	Activity Streets & Corridors:	6	Develop guidelines for commercial facades, advertising signs and information signs: Main Road to keep a rural character.
		7	Develop a Master Plan for surrounding road networks.
		8	Landscape and beautify activity streets and main street (R60). Plant tree lanes.
		9	Promote intensification and densification along activity streets.
		10	Develop guidelines for activity street interface (See guidelines for Main Road/ R60).
	<u>Rail:</u>	11	Allow for an integrated rail network of freight and passenger rail services as well as tourist rail services.
	Pedestrian and cycle routes:	12	Support safe pedestrian & cycle routes along main and identified connector roads between Ashton and Zolani
		13	Enhance movement of people overall.
		14	Provide for non-motorized transport.
		15	A non-motorized transport system focused on integrating the main settlements should be implemented.
		16	Support hiking trails
		17	Provide an environment that supports recreational/sport events to enhance tourism (marathon, bicycle race)
Develop	<u>Roads:</u>	18	Extent Industrial Road to connect with R60 at Zolani.
	Activity Streets & Corridors:	19	Introduce speed calming & greening of route: Reduced road-width and related parking. Introduce landscaping/ tree lanes, street furniture and sufficient lighting.
		20	Provide for pedestrian crossings (consider raised at Zolani area),
	<u>Rail:</u>	21	Industrial precinct along railway line and lobby use of railway services.
	Pedestrian and cycle routes:	22	Develop surfaced and shaded pedestrian walkway along Main and activity streets to integrate Zolani and central Ashton.
		23	Develop recreational hiking trails.
		24	Develop a cycle route in Ashton along R 60 between Ashton west, Ashton central and Zolani.

Objective 2: Proximate convenient and equal access

Public Util	ities & Service		
	Elements	No.	Proposals
Protect	<u>Water</u>	25	Ashton receives its water from four sources, i.e. the Breëde River irrigation canal, the Cogmanskloof Irrigation Board, two small streams in the Langeberg Mountain Catchment Area and water abstracted from the Breëde River. The water is purified at the Ashton Water Treatment Plant (WTP). (Breede River (Montagu Included) Cogmanskloof Irrigation Scheme (CBR) Robertson Canal (Breede River)
		26	Reservoir capacity is 6 700kl and 3 475kl for Ashton and Zolani respectively.
	Waste Water	27	Water born sewerage system.
		28	3 845 kl/d Actual capacity.
		29	Maintained WWTW so that the water quality of the rivers and water-bodies with which they are associated achieve minimum potable (drinking), contact, phosphate, nitrate and e-coli standards. This requires that they comply with the effluent quality requirements set out in their licenses
	Electricity:	30	A 26.0MVA substation with 11.882MVA required in 2028.
		31	2x 20MVA 66/11kV Transformers & 5MVA 66/11kV transformer
	Storm Water:	32	Street storm water system exists.
	<u>Waste:</u>	33	A licensed domestic waste landfill in Ashton, permitted in 1999, operates. (Draft IWMP, 2021) The landfill site allows for a further 3.5 times airspace.
		34	Ashton and Robertson had the highest percentage of recyclables (64%) in the LLM.
		35	Ashton has an operational transfer station.
		36	Weekly waste is collected from door to door and delivered at drop-off facility. A separation at source service (2-bag system) waste collection is provided. A (building) material recovery facility and licensed garden waste to save landfill space (IWMP, 2012) operates
	<u>Safety:</u>	37	Enhance Police and Fire Station site and services rendered.
Change	Future Demand:	38	Identify areas with high absorption capacity to limit impact on landscape for expansion of bulk infrastructure.
	Water	39	Upgrade Water Treatment Plant.
		40	 Upgrade distribution network: supply pipelines between Ashton WTP pumpstation & Cogmanskloof reservoir pump station (Langeberg & Ashton Foods).Upgrade one 200 mm Ø feeding mains from WTP to Langeberg factory to a 315 mm Ø main. between Conradiedorp reservoir & future development Zone D between Zolani reservoir & future development Zone E
		41	Downsize Coomanskloof to Conradiedorp pump station.
		42	Add a 3rd pump set for standby at Ashton WTP to Langeberg factory pump station.
		43	Install new Conradiedorp booster pump station
	Waste Water	44	Existing WWTWs should be progressively improved to accommodate 6 596 kl/d AADD required for all erven occupied.
		45	Where urban development proposals will exceed infrastructure capacity, applications should be refused until the provision is made to deal with the additional loads.
		46	Reuse grey water and provide for greywater recycling
	Electricity:	47	Provide adequate street lightning.
		48	Upgrade obsolete electrical infrastructure
	Storm Water:	49	Improved storm water system especially in areas where flooding might occur
	Waste:	50	Provide for waste facilities in rural areas.
		51	Expand landfill site as there is space for expansion should Worcester regional landfill site establishment be delayed.
	<u>Safety:</u>	52	Consider (small scale/satellite) Fire Station for Langeberg in future.
Develop	Future Demand:	53	Ensure SDF growth proposals are aligned with bulk infrastructure master planning.
		54	Support sustainable & effective use of natural resources i.e. alternative energy, water reuse and recycling
	Water	55	Provide for 10.5MI reservoir at Cogmaskloof residential precinct.
		56	Provide for harvesting of rainwater
	Electricity:	57	Encourage installation of green building technology such as solar geysers and PV roof panels.

Objective 2: Proximate convenient and equal access

Objective 1: Grow economic prosperity and facilitate economic sector growth and Objective 4: Protect and grow place identity and cultural integrity

Built Spa	ce		
	Elements	No.	Proposals
Protect	<u>Heritage</u>	58	Although Ashton is not considered to have the same quality of heritage resources as Robertson, McGregor
	and Tourism		and Montagu it has some remnants of an Art Deco character along the main street. This could be built upon
			through the use of urban design and architectural guidelines as a theme to promote an improvement in the
			town's appearance and presentation to through travellers, visitors and residents (previous SDF)
	Residential	59	Ashton follows a curvilinear street pattern & grid layout and can be divided into 4 main urban areas:
			 Ashton-West has high density residential development west of Bruwer street;
			B. Town centre, a combination of residential and commercial uses characterised by low density
			residential area;
			C. Industrial centre between the town centre and Zolani. Pockets of high density residential areas and
			mixed use area proposed north of Abattoir/industria Road.
	la du strial	<u></u>	D. Zolani, a medium nigh density stand-alone township, east of the urban centre.
Change	Industrial Heritege	60	Preserve agricultural charter of eastern gateway (R60 & R62 Intersection) particular on all sides.
Change	Heritage	01	
		62	Identify Heritage Streets and apply heritage overlay zone.
		63	Compile guidelines for future development.
		64	Develop a tourism and agri-toursim strategy for Ashton as connector node (R60, R62, N1 and N2). Support
			Agri-tourism based development and celebrate Arch bridge.
		65	Provide skills development in agri- tourism.
		66	Make use of urban design and architectural guidelines as a theme to promote an improvement in the town's
			appearance and presentation to travelers, visitors and residents
	Residential	67	Increase density for from the current 5.8 units per hectare to 6.5 units per hectare in Ashton.
		68	Higher residential developments and mixed uses should be encouraged along activity streets in the town.
		69	Provide for farmworker housing and joint ventures with farming enterprises.
		70	Identify land for GAP housing, including farm owners that would like to create agri villages.
		71	Keep housing waiting list up to date.
		72	Single residential, Subsidized and Rental
		73	Below Density norm: 15 Du/ha
		74	Develop areas in accordance with availability and capacity of infrastructure and services.
		75	Enhance integration of central Ashton (CBD) with Zolani.
		76	Support densification through Subdivision, Infill development and Renewal and restructuring.
	Commercial:	77	Support development of CBD and secondary nodes and neighbourhood commercial facilities.
		78	Support integrated development and mixed uses in neighbourhoods.
		79	Intensify commercial development along main roads and activity streets
	Industrial	80	Support agricultural service industry related development.
		81	Support Industrial growth.
Develop	Heritage	82	Preserve what little heritage features are still left.
- 0 . 0.0p	and Tourism	83	Support and improve tourism infrastructure e.g. local tourism information office signage and standard of
		00	tourism facilities.
		84	Support accommodation facilities for tourists in rural and urban areas.
		85	Develop educational hiking trails in natural surroundings. Market these features.
		86	Beautify and landscape town at the entry points to support tourism industry.
		87	Support the development of a cycle route along the R60 between the towns.
		88	Support tourism development that will increase visitor numbers, increase average spend per visitor, extend
		•••	visitor stays and expand product offering.
		89	Explore green tourism options.
	Residential	90	Provide for future subsidised housing demand in Ashton.
		91	Develop vacant land north and west of Zolani.
		92	Provide adequate land for different housing topologies (residential types)
		02	Provide for and support development of housing topologics (residential types).
		0/	Encourage urban expansion for GAP housing on eastern perinhery of Zoloni
		94 Q5	Plan for expansion of hulk infrastructure to support future residential growth
		90	Allow for minimum subdivision size of single residential erven of 500m ² and rural living erven in identified
		30	zones of 1000m ² and 2000m ² respectively

Commercial:	97	Support development of CBD especially south of Main Road with appropriate scale businesses.
	98	Support secondary node in central Ashton at intersection between Main and Station Road.
	99	Support variety of commercial land uses to alternate provision of jobs from predominantly in industrial sector.
	100	Support commercial services which alleviate the pressure on Agri-services as the economic base of Ashton.
Industrial	101	Support expansion of industrial area along Industria/Abattoir Road and Trunk Road 3201 (eastern Ashton.)
	102	Encourage development of smaller scale agri -processing/packaging industries (allow value adding of products close to the source).
	103	Strengthen Abattoir Road (Industria Street) as the access road to the industrial area.
	104	Support cemetery expansion: Develop underutilized areas around Ashton WTP.

As per Proposal Map:

Name	Zoning, Proposed	Gross_Area	Zone
A01	Department of Human Settlement	14,948	А
A02	Infill Development	0,889	А
A03	Agri-Industry	5,735	А
A04	Business Node	4,528	А
A05	Residential	6,207	E
A06	Industrial	53,419	D
A07	Department of Human Settlement	22,505	F
A08	Industrial	4,896	D
A09	Residential	1,249	В
A10	Residential	4,278	А
A11	Residential	1,052	В
A12	Public Open Space	0,874	В
A13	Public Open Space	1,054	В
A14	Residential	10,41	В
A15	Central Business District	10,445	С
A16	Cemetery	9,842	D
A17	Business Node	8,117	E
A18	Business Node	2,354	E
A19	To be Formalised	28,84	F
A20	Residential	20,822	F
A21	Place of Instruction	1,42	F
A22	Business Node	1,265	F
A23	Mixed-Use Development	51,229	G
A24	Place of Instruction	1,121	F
A25	Department of Human Settlement	5,934	Α




Open Spa	ce		
	Elements	No.	Proposals
Protect	Nature and Conservation:	105	Ashton is surrounded by high potential agricultural land which is
			focused mainly on fruit enterprises that produces grapes and
		400	
Change	Nature and Conservation:	106	Agricultural areas to be preserve
		107	Limited and appropriate uses along critical biodiversity features/areas.
		108	Support effective use of natural/open space areas by communities.
		109	Design interactive development interfaces along open space network (developments face open space networks).
	Public and Private Open Spaces	110	Create an Open Space network in central Ashton.
		111	Develop guidelines regarding applicable architectural style, scale, height of built structures.
		112	Create an open space network through town.
Develop	Public and Private Open Spaces	113	Determine development (including agriculture) line along Kogmanskloof River.
		114	Identify conservation areas within urban areas
		115	Identify a heritage route.
		116	Enter into a stewardship programme with Cape Nature to manage
			conservation areas.
		117	Develop hiking trails, mountain bike trails, events facilities and
			venues.
		118	Plant trees to link to open spaces and to provide shade.
		119	Plant trees to improve visual attractiveness of Zolani (higher density neighbourhood) and the western precinct of Ashton.

Objective 5: Protect ecological and agricultural integrity

LAND USE ZONE PROPOSALS FOR ASHTON

Ashton has been divided into seven (7) zones (areas with common characteristics) and the table below outlines allowable land uses (and descriptions of these use at the end of this chapter) for every zone.

	ASHTON LAND USE ZONES	Low Density Residential Uses	Medium Density Residential Uses	High Density Residential Uses	Secondary Educational Uses	Place of instruction	Professional Use	Business Uses	Secondary Business Uses	Place of worship	Institution	Guest houses/self -catering	Authority	Sport/Recreational Facilities	Industries & Service Trade
A	Zone A has a high density residential character which includes housing development and a secondary business node. Allow for opportunities for infill residential development and agricultural industries.		x	X	x	x	x		x	x		x	x	x	
В	Zone B has a low density residential character with opportunities for infill development.	X	X		X	X	x		X	X	X	X	X	X	
С	Zone C is the town's central business district where mostly commercial and other compatible functions are supported to enhance the node. Mixed use development is promoted.		x	х	x	х	x	x	х	х	х	x	x	x	
D	Zone D consist of the Ashton industrial area with industrial expansion proposed. This zone also includes the proposed cemetery expansion.					х	x	x			х		x		x
E	Zone E is a secondary business node which supports commercial uses as well as high density residential uses.		x	х	x	х	x	X	x		х	х	х		X ²
F	Zone F has a high density residential character. Allow supporting social and neighbourhood orientated commercial services.		x	х	x	х	x	X1	x	х	х	x	x	x	
G	Zone G is the proposed mixed use precinct. Interface entrance to Kogmanskloof to be acknowledged.	x	x	х	x	х	x	x	x	х	х	x	x	x	X²
(1) At identified nodes(2) Only Service trades			Business Uses e.g. shop, supermarket and service station Place of instruction e.g. Schools, Universities, Colleges Professional Use e.g. Doctors, dentists, architects Secondary Business Uses allows for neighbourhood businesss e.g. Café, house shops, small shop & offices and home occupation. House taverns only to be allowed along activity streets in residential areas Secondary Educational Uses e.g. Crebes day care											afé, ly to	



5.5 Bonnievale

Bonnievale is located along the Breëde River approximately 30km south-east of Robertson. It is an agri tourism destination as making wine, making cheese and cultivating peaches and apricots provide for a beautiful landscape with great food.



Connecto	ors		
	Elements	No.	Proposals
Protect	Roads:	1	R317 connects with N2 (Riviersonderend to south and Roberston to west.)
		2	Bonnievale connects to Ashton via Skilpadhoogte Kloof.
	Activity streets	3	R317 as Main Road within Bonnievale.
	& Corridors:	4	Activity Streets:
			Main Road connecting to Leubekkie which connects with Landbou
			Keurboom connecting with Madeliefie
			Barlinka Street connecting with New Cross
			New Cross connecting with Salatana
			Milner connecting with Angora
			Angora connects to main road (R317)
Change	Roads:	5	Enhance and announce town entrances and gateways: plant trees and landscape entrances:
onango	110000	Ŭ	Skilpadhoogte pass specifically
		6	Introduce speed calming & greening of route. Introduce landscaping/ tree lanes, street
			furniture and sufficient lighting. Provide for pedestrian crossings.
		7	Develop guidelines for commercial facades, advertising signs and information signs: Main
			Road to have a rural character.
	Activity streets	8	Concentrate higher order social amenities and mixed use development along activity streets.
	& Corridors:	9	Provide for public transport and pedestrian mobility.
		10	Landscape and beautify activity streets and main street (R317). Plant tree lanes, provide street furniture and develop pedestrian walkways.
		11	Encourage railway transport as alternative public transport system.
		12	Develop multi- use, safe and disabled pedestrian walk & cycling ways and crossings, in
			settlement and between southern and eastern precincts.
		13	Develop trails and routes in settlements linked to natural conservation areas or farmland
		14	Robertson, Ashton, Montagu & Bonnievale: Provide for safe pedestrian walkways between residential areas
Develop	Activity streets	15	Develop commercial activities along roads parallel to and along Main and Voortrekker Streets
	& Corridors:	16	Strengthen Main & Voortrekker Streets' intersection as a development node.
		17	Provide for a taxi rank/bus stop next to CBD.

Public Uti	ilities & Service		
	Elements	No.	Proposals
Protect	<u>Water:</u>	18	Bonnievale receives its water from the Breëde River. Water is extracted from the river at two points, i.e. a pumping station directly from the river and via an irrigation canal which runs through the town. The main extraction point to the WTP is the canal. Extraction directly from the river is only done as a supplementary source and in emergency conditions. (Breede River and Zanddrift Irrigation Canal)
	Waste Water:	19	2 775kl/day actual capacity
	Electricity:	20	A 21.2MVA substation with sufficient capacity as it is estimated that 13.385MVA is required in 2028 (Medium voltage networks is lightly loaded with growth forecasts easily absorbed).
		21	1x 20MVA 66/11kV transformer.
	Storm water:	22	Internal roads and the storm water system are considered inadequate
	<u>Waste</u>	23	Maintain licensed domestic waste landfill site with estimated capacity until 2065 and drop-off facility.
		24	Weekly waste is collected from door to door and delivered at land fill. A separation at source service (2-bag system) waste collection is provided. A (building) material recovery facility and garden waste and composting plant to save landfill space (IWMP, 2012).
Change	<u>Water:</u>	25	There is 2 960 kl water storage capacity. An additional 5.5 Ml at the Old Reservoir and 4Ml a new reservoir site is required.
		26	The water distribution network is insufficient for estimated future water demand.
	Waste Water:	27	4 801kl/d AADD, all erven occupied.
		28	Keeping 500m buffer around sewerage works
	Electricity:	29	Upgrade obsolete electrical infrastructure.
		30	Provide for a second transformer.
		31	Provide for adequate street lighting
	Storm water:	32	Improve storm water system
	<u>Waste</u>	33	Maintain licensed garden waste and builder's rubble site as capacity is insufficient.
		34	Provide for recycling facilities of recyclable material and organic waste.
	<u>Safety</u>	35	Implement river maintenance and upgrade programme
Develop	Future Demand:	36	Ensure SDF growth proposals are aligned with bulk infrastructure master planning.
		37	Support sustainable & effective use of natural resources i.e. alternative energy, water reuse and recycling
	Water:	38	Provide for water harvesting
	Electricity:	39	Encourage installation of green building technology such as solar geysers and PV roof panels.
	Waste	40	Establish a composting plant

Objective 1: Grow economic prosperity and facilitate economic sector growth and Objective 4: Protect and grow place identity and cultural integrity

Built Spa	ce		
	Elements	No.	Proposals
Protect	<u>Heritage and</u> <u>Tourism</u>	41	Bonnievale was founded in 1922, and was named after the railway siding called Vale at its opening in 1902 and Bonnie Vale in 1917. Municipal status was gained in April 1953.
		42	Traditional grid pattern (urban structure) along two main access streets (Long & Main) Has a unique agricultural character.
		43	Bonnievale is surrounded by the Langeberge and Riversonderend Mountains. Situated on the Cape Wine Route, the area caters to tourists] with locally made cheese and wine, along with private game reserves and extensive hiking trails.
	Residential:	44	Bonnievale has a relatively sparse and fragmented Urban Structure mainly due to its topography consisting of: A Higher density residential development on the western periphery of the town which includes a business node.
			A medium to low density on the inner western portion of the town which also includes a business node and a cemetery
			The eastern portion of the town consists of an industrial node with cemeteries located in close proximity The eastern periphery of the town includes the CBD with a low to medium density residential development And a medium to low density residential development located north east of the town
	Commercial:	45	CBD at intersection of Main and Voortrekker roads & along several secondary roads leading off main roads.
		46	Small secondary business node, in south western part of Bonnievale as well as on the southern periphery.
		47	The town centre contains a unique and significant agricultural service centre supporting agricultural services and other unrelated light industries.
Change	Heritage and	48	Support tourism related uses in the town to diversify the economy and create opportunities.
	<u>Tourism</u>	49	Improve information about and linkages between heritage assets.
		50	Align and blend roadside signage relative to historic buildings and in sensitive landscapes
		51	Address loss of, and impact of development on cultural & heritage resources.
		52	Control alterations and demolitions of buildings older than 60 years
		53	Conserve graded buildings, areas and features.
	Residential:	54	Expand residential use toward the southern periphery to integrate the western and eastern portions.
		55	Provide for different residential types/ housing topologies and effective utilisation of services.
		56	Expand small residential area in northern eastern precinct.
		57	Align development with bulk infrastructure capacity and services.
		58	Support densification in Bonnievale through: Subdivision; Infill development; and Renewal and restructuring
		59	Densify in accordance with zone proposals. Explore medium density residential development potential
		60	Provide GAP housing in Bonnievale
	<u>Commercial:</u>	61	Formalise the existing commercial a reason the south-eastern periphery of the settlement (Zone H) and create opportunities for housing and service industries around this node.
		62	Support integrated development and mixed uses in neighbourhoods.
		63	Diversify agricultural related businesses.
		64	Establish affordable & integrated commercial properties. (Secondary CBD).
		65	Support establishment of house shops along activity streets and home occupation in residential areas Support mixed uses in CBD including residential opportunities.
	Industrial	66	Provide the opportunities for limited service related industries.
Develop	Heritage and	67	Support the utilization of heritage assets as tourism attractions
	<u>Tourism</u>	68	Acknowledge heritage resources' significance and need for protection.
	Residential:	69	Develop higher density residential uses in and around the CBD and along activity streets.
		70	Provide for subsidized housing & affordable land.
		71	Provide for farm workers on housing waiting list
		72	Support establishment of house shops along activity streets and home occupation in residential areas
		73	Support mixed uses in CBD including residential opportunities.
		74	Explore medium development potential "Growth Potential Study (2007)" attributes it to: Connectivity (N7 and railway) Accessibility & proximity to Cape Town & West Coast Infrastructure (primary education)
	Commercial:	75	Create more affordable commercial properties and more integrated commercial areas in previously disadvantaged neighbourhoods
		76	Support CBD along Main and Voortrekker road.
		77	Support economic growth and diversification: value added products close to the source.

	78	Allow agricultural related industries
Industrial	79	Ensure adequate bulk infrastructure capacity to support industrial expansion.
	80	Identify areas for future industrial expansion (Zone E & J)

As per Proposal Map

Name	Zoning_PRP	Gross_Area	Zone
B01	Residential	0,068	Α
B02	Residential	0,443	А
B03	Industrial	15,386	E
B04	Residential	0,459	А
B05	Residential	0,448	A
B06	Department of Human Settlement	29,24	D
B07	To be Formalised	15,918	D
B08	Place of Instruction	0,77	D
B09	Cemetery	1,89	E
B10	Residential	2,1	А
B11	Business Node	4,484	В
B12	Residential	0,896	С
B13	Residential	0,606	С
B14	Business Node	0,991	С
B15	Cemetery	4,115	С
B16 * Outside Urban Edge	Cemetery	2,857	B16 * Outside Urban Edge
B17	Industrial	7,977	E
B18	Central Business District	10,268	Н
B19	Agri-Industry	5,858	J
B20	Agri-Industry	34,213	J
B21	Agri-Industry	3,044	J
B22	Mixed-Use Development	26,399	L
B23	Infill Development	5,451	
B24	Cemetery	2,601	Outside Urban Edge





Social Amer	nities							
	Elements	No.	Proposals					
Protect	Community Facilities:	81	Adequate social services and infrastructure to create safe living environments					
		82	Protect good infrastructure: sport facilities & school.					
		83	Enhance Police Station site and services rendered.					
Change	Change <u>Community Facilities:</u> 84 Locate community facilities in a central area							
		Align provision of social infrastructure to norms.						
	Promote multi-functional recreational areas (e.g. children's play parks, day camping and picnic facilities) close to and along river.							
		87	Allow for adequate expansion of cemeteries					
Develop	Community Facilities:	88	Provide adequate:					
			Primary health facilities;					
			 Education facilities specifically crèches and secondary facilities. 					
		89	Allow community orientated uses (crèches) in residential areas.					

Objective 3: Sustain material, physical and social wellbeing

Objective 5: Protect ecological and agricultural integrity

Open Spa	ice		
	Elements	No.	Proposals
Protect	Natural and Conservation Landscape:	90	Bonnievale contains various Critical Biodiversity areas mostly located in and around the settlement as identified by the Western Cape Biodiversity Spatial Plan 2017
	<u>Waterways:</u>	91	The Bree River is the southern boundary of Bonnievale and runs in a north to east direction.
Change	Natural and Conservation Landscape:	92	Improve visual character of higher density residential, and in particular subsidised housing developments, though planting of trees along streets & developing functional open space areas
		93	Support interactive development along open spaces where developments face the open space networks
		94	Develop conservation management plans.
	Public and Private Open	95	Provide street furniture & landscape central settlement node.
	<u>Space:</u>	96	Beautify and Landscape main town access points
Develop	Natural and Conservation Landscape:	97	Enter into a stewardship programme with Cape Nature to ensure effective management of conservation areas.
		98	Create and protect open space areas (landscaped recreational facilities play parks, picnic and outdoor gym equipment) inside and adjacent to Bonnievale.
		99	Develop hiking trails, mountain bike trails and alternative uses for events facilities and venues along main activity routes.
		100	Encourage developments next to open spaces where appropriate to interact with such spaces.
	Public and Private Open Space:	101	Develop a market area along activity corridors such as on the corner of Madeliefie and Barlinka Street
		102	Link open spaces

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LAND USE ZONE PROPOSALS FOR BONNIEVALE

Bonnievale has been divided into twelve (12) zones (areas with common characteristics) and the table below outlines allowable land uses (and descriptions of these use at the end of this chapter) for every

zone.

	BONNIEVALE LAND USE ZONES	Low Density Residential Uses	Medium Density Residential Uses	High Density Residential Uses	Secondary Educational Uses	Place of instruction	Professional Use	Business Uses	Secondary Business Uses	Place of worship	Institution	Guest houses/self -catering	Authority	Sport/Recreational Facilities	Industries & Service Trade
A	Zone A is home to a high density housing development with the same character includes. This zone allows for opportunities for infill residential development and intensification of use along the south eastern boundary of the precinct,		x	x	x	x	x		X 1	x	x	x	x	x	
В	Zone B has a low density residential character and include a neighbourhood business node. There are opportunities for infill development to achieve a medium density character Development on the southern boundary should be sensitive to the agricultural interface including boundary treatment.	x	x		x	x	x	X 3	X 1	x	x	x	x	x	
С	Zone C is a residential precinct with mixed densities and include a neighbourhood business node and cemetery. Opportunities include intensification of use and expansion of cemetery space.	x	x	x	x	x	x	X 3	X 1	x	x	x	x	x	
D	Zone D is an informal precinct and require formalization as a high to medium density development and limited intensification.	x	x	х	x	x	x		x	x	x	x	x	x	
E	Zone E is home to industrial uses and a cemetery. There are opportunities for industrial and cemetery expansion.									x			x	x	x
F	Zone F has a low density residential character with opportunities for infill development.	x			x		x					x	x	x	
G	Zone G has a mixed density residential character and there is opportunity for intensification.	x	x	X	x	x	x		X 1	x	x	x	x	x	
Η	Zone H is home to the central business district where mostly commercial and compatible uses are supported. Intensification is encouraged.	x	x	X	x	x	x	X	X	x	x	x	X	X	
Ι	Zone I consists of residential and industrial (Parmalat factory) uses with proposed infill development opportunities. Intensification is encouraged.		x		x										X
J	Zone J is an Agri Industry node.														X 4

K	Zone K has a medium residential character and expansion should be prohibited.		Х		x				X 1			x	x		X 5
L	L Zone L is a mixed use business development node and expansion should be prohibited.			x	x	x	x	х	x	x	x	x	х	X	x
(1)	 Along activity streets (2) Only Service trades (3) At identified nodes (4) Only Agri-industries (5) Only service industry 	Bu Pla Pr Se ho be	ace of ofess cond use sl allow	ss Uses f instructional U ary Bu nops, sr ed along	e.g. s ction se e.g sines nall sh g activ	shop, e.g. So J. Doct s Use lop & d vity stro	super chools tors, d es allo offices eets ir	marke s, Univ entists ows fo s and l n resic	et and versitie s, arch or nei home lential	servic es, Co nitects ghbou occup areas	e stat lleges irhood ation.	ion busi Hous	ness e tave	e.g. C rns on	Café, Ily to
Secondary Educational Uses e.g. Crèches/day care															



5.6 McGregor

McGregor, located on the Riviersonderend Mountain plain, is a well-known tourist attraction as a result of its unique rural sense of place and over 60 well-preserved heritage homesteads, some of which have been declared national monuments.



Connecto	ors								
	Elements	No.	Proposals						
Protect	Roads:	1	Langverwagten Road, off Reitz, connects Robertson to McGregor and is the main activity route serving surrounding farms.						
	Activity Streets & Corridors:	2	Commercial uses located along main road, Voortrekker, Church and Office Street as part of activity corridor						
Change	Roads:	3	Divisional Road 1334 & 1339 and others: Maintain gravel roads to keep rural character whilst improving mobility of locals and tourists.						
	Activity Streets	4	Support mixed uses along main road in CBD precinct (social & economic integration).						
	& Corridors:	5	Improve Main Road within the character of the historic settlement.						
	<u>Pedestrian /</u>	6	Develop trails and routes in settlements linked to natural conservation areas or farmland						
	cycle routes:	7	Robertson, Ashton, Montagu & Bonnievale: Provide for safe pedestrian walkways between residential areas						
		8	Develop hiking trails and mountain bike routes in the surrounding natural areas and along activity corridors such as Voortrekker Street, Bree Street and Church Street						
Develop	Roads:	9	Provide for supporting infrastructure.						
		10	Provide for public transport connecting McGregor and Robertson						
	<u>Pedestrian /</u>	11	Provide for safe pedestrian walkways and cycling routes between residential areas						
	cycle routes:								

Public Ut	ilities & Service	,	· · · · · · · · · · · · · · · · · · ·
	Elements	No.	Proposals
Protect	Water:	12	Water supplied from the Houtsbaais River.
		13	Reservoir has a capacity of 10 700 kl
	Sewerage and Sanitation:	14	Water borne sewerage system. Actual capacity is 483kl/d.
	Electricity:	15	McGregor has a 7.4 MVA Substation and it is estimated that 4.133MWA will be required in 2028.
		16	1x 10MVA 66/11kV transformer
		17	Conductors have additional capacity
	<u>Waste</u> :	18	Weekly waste is collected from door to door and delivered at drop-off facility. A separation at source service (2-bag system) waste collection is provided. A (building) material recovery facility and licensed garden waste to save landfill space (IWMP, 2012). McGregor had the lowest percentage of recyclables (54%) and the highest percentage for organic waste (21%).
Change	<u>Future</u> <u>Demand</u> :	19	Identify areas with high absorption capacity to limit impact on landscape for expansion of bulk infrastructure
	Water:	20	Harvest rainwater in tanks on residential erven
		21	Minimizing leaks by reducing water pressure and a stepped tariff system.
		22	Develop a range of water demand management strategies for all sectors.
	Sewerage and	23	Provide for AADD capacity required of 1048kl/d should all erven occupied
	Sanitation:	24	Effluent discharge into wetlands should be prohibited.
	Electricity:	25	Increase inadequate street lighting
	<u>Waste</u> :	26	The garden waste and builder's rubble site in McGregor is unlicensed and was closed, but no rehabilitation has been done.
Develop	<u>Future</u>	27	Ensure SDF growth proposals are aligned with bulk infrastructure master planning.
	<u>Demand</u> :	28	Support sustainable & effective use of natural resources i.e. alternative energy, water reuse and recycling
	Water:	29	Develop future extension of 2MI next to the existing reservoirs.
	Sewerage and Sanitation:	30	Provide for additional sewerage infrastructure expanding or improving, -*keeping 500m buffer in mind
	Electricity:	31	Encourage installation of green building technology such as solar geysers and PV roof panels.

Objective 1: Grow economic prosperity and facilitate economic sector growth and Objective 4: Protect and grow place identity and cultural integrity

Built Spa	Built Space								
	Elements	No.	Proposals						
Protect	Heritage &	32	Church town character. Town established by Dutch Reform church						
	<u>Tourism:</u>	33	Residential centre within an extensive agricultural area, home to farm workers, artists and artisans						
		34	Urban structure is a traditional grid pattern						
		35	Large plots shaped by extensive agricultural landscape. Protect Large erf block grid						
	<u>Residential:</u>	36	Urban structure of residential areas, with lower density residential areas in southern part adjoining with strong rural character						
		37	Compact town with a small CBD along Main Road and a primary school located in higher density						
		•	residential area of McGregor						
		38	Rural residential, agri & eco-tourism, natural conservation						
	Industrial/	39	CBD along Main Road.						
	<u>Commercial:</u>	40	Small scale informal farming north of Langverwagten Road						
Change	Heritage &	41	Develop architectural guidelines to maintain and enhance town character						
	<u>Tourism:</u>	42	Identify and preserve streets & buildings with unique historical character						
		43	Improve visual quality of the town and beautify and develop open space network.						
		44	Control alterations and demolition of heritage buildings						
		45	Conserve graded buildings, areas, streets and features						
		46	Recognise development potential is very low						
	<u>Residential:</u>	47	Strategically densify providing medium density housing types (group and town houses and second dwellings) creating impression of large manor houses.						
		48	Support compact form of McGregor with medium and higher density development along higher order roads with main road as activity corridor						
		49	Integrate new residential developments and locate in close proximity to job opportunities and social infrastructure						
		50	Support different types of housing subject to directives of immediate surrounding area.						
		51	Plant cypress trees in new subsidized extension- some in front and some along the side of the double story dwellings.						
	Industrial/	52	Expand commercial areas and develop along Voortrekker Street access route						
	<u>Commercial:</u>	53	Allow commercial and mixed use in CBD, along Main Road and other activity routes.						
		54	Support house shops/home occupation in residential areas along activity streets.						
		55	Support integrated development and mixed use activities in neighbourhoods.						
		56	Limit Industrial uses to light industrial uses.						
Develop	Heritage &	57	Promote McGregor and surrounding rural area as a tourism attraction.						
	<u>Tourism:</u>	58	Establish high quality tourist accommodation by allowing holiday accommodation and housing						
		59	Protect Heritage streets by promulgating an overlay zone and compile guidelines for future development.						
		60	Focus investment on social services & tourism						
		61	Accommodate growth by internal subdivision of larger erven guided by the character of town.						
	Residential:	62	Develop in accordance with available infrastructure and services.						
		63	Enrol farm workers on waiting lists.						
		64	Allow farm owners opportunities in town to provide farm worker housing.						
		65	Accommodate future need for subsidised housing in Robertson.						

As per Proposal Map

Name	Zoning, Proposed	Gross_Area	Zone
Mc01	Central Business District	6,97	А
Mc02	Business Node	0,212	В
Mc03	To be Formalised	2,583	С
Mc05	Residential	2,76	В
McCemetery	Cemetery	3,062	Outside Urban Edge
McCemetery Cemetery		3,392	Outside Urban Edge





Social Amenit	Social Amenities						
	Elements	No.	Proposals				
Protect		66	And enhance Police Station site and services rendered.				
Change		67	Provide for early childhood development and education.				
		68	Allow expanded use of school sport grounds by community.				
		69	Facilitate expansion of the cemetery.				
		70	Provide for skills development in agri-tourism industry to enhance economic opportunities				
Develop		71	Secure a satellite library and early childhood development facility.				
		72	Support crèches within residential areas.				
		73	Develop community gardens in using purified water from Waste Water Treatment Works.				

Objective 3: Sustain material, physical and social wellbeing

Objective 5: Protect ecological and agricultural integrity

Open Spa	Jpen Space							
	Elements	No.	Proposals					
Protect	Natural conservation:	74	McGregor is located on Riviersonderend Mountains plain. The town is known for its unique rural character and heritage and aesthetic value.					
	<u>Waterways:</u>	75	The Houtbaai and Hoeks River					
		76	All wetland ecosystems should be protected such that their ecological and storm water purification function is maintained.					
	Vegetation:	77	Some intact natural vegetation surrounds the town					
Change	Natural conservation:	78	Create and develop conservation corridors and open space networks linking natural and urban areas.					
		79	Integrate open space network and pedestrian walkways along main activity routes between CBD					
		80	Obtain stewardship agreements with Cape Nature for conservation worthy areas of open space system.					
	Public & Private Open	81	Landscape northern gate way of settlement					
	<u>Spaces</u>	82	Keep southern gateway unannounced.					
Develop	Natural conservation:	83	Develop and market hiking and mountain bike trails in natural areas in and around urban areas.					
		84	Plant trees along routes to create between open spaces.					
		85	Develop open space areas in McGregor and plant trees and provide street furniture.					
		86	Maintain the relevant setback lines along the rivers to limit potential impact on environment and safety of areas.					
	Public & Private Open	87	Upgrade public areas					
	<u>Spaces</u>	88	Formalize small farmers at settlement entrance.					

LAND USE ZONE PROPOSALS FOR MCGREGOR

McGregor has been divided into three (3) zones (areas with common characteristics) and the table below outlines allowable land uses (and descriptions of these use at the end of this chapter) for every

zone.

MCGREGOR LAND USE ZONES			Medium Density Residential Uses	High Density Residential Uses	Secondary Educational Uses	Place of instruction	Professional Use	Business Uses	Secondary Business Uses	Place of worship	Institution	Guest houses/self -catering	Authority	Sport/Recreational Facilities	Industries & Service Trade
A	Zone A is the town's central business district where mostly commercial and other compatible uses are supported to enhance the node. Mixed use development is promoted. Keep to grid layout.		x	X 1	x	x	x	x	x	x	x	x	x	x	
в	Zone B has a low to medium density residential character with opportunities for infill development. This node also includes a secondary business node. Keep to grid layout.	x	X		X	x	x	X 2	X	x	X	x	X	x	
С	Zone C has a high density residential character. Allow supporting social and neighbourhood orientated commercial services. Keep to grid layout.			x	X	X	X		X	x		X	X	X	
 (3) At identified nodes (4) Only at identified nodes 			ace of ofess cond use sl allow cond	ss Uses f instructional Use ary Bust nops, sn ed along ary Edu	e.g. s ction of se e.g siness nall sh g activ ication	hop, e.g. So . Doct s Use op & c ity stro nal Us	super chools ors, d es allo offices eets ir ses e.	marke s, Univ entists ows fo and h resid g. Crè	et and versitie s, arch or neig nome lential oches/o	servic es, Co nitects ghbou occup areas day ca	e stati lleges rhood ation. are	busii House	ness (e tave	e.g. C rns on	afé, Iy to

MCGREGOR KEY: R Residential CBD Central Business District Cemetery BN TBF Business Nod To be formalized Urban Edge Activity Street Demarcation Areas Krans Nature Reserve DoHS Department of Human Settlements Urban edge expansion Rivers EXISTING SERVICES: Ø Water Treatment Works Reservoir TBF 4

5.7 Montagu

Montagu is situated at the north of the Langeberg, at the entrance to the Cogmankloof pass. It serves as the main centre for wine, fruit and dried fruit production. It is well known for its muskadel and hot springs.



MONTAGU

Connecto	Connectors							
	Elements	No	Proposals					
Protect	Roads:	1	R62 through Montagu, connecting Ashton and Barrydale.					
		2	Eastern gateway, where R62 connects to R318. R318 connects to N1.					
		3	Western gateway: Cogmans Kloof tunnel as national monument.					
	Activity Streets	4	R62 also known as Long Street.					
	and corridors:	5	R318 becoming Main Street accessing Montagu's CBD and industrial precincts, being a main activity axis.					
		6	Activity streets being part of CBD: Direction East west: R62, Bath, Buitekant and Wilhelm Thys Streets. Direction North South: Barry Ismael and Kohler Streets.					
	Pedestrian and	7	Main Street (R62), R318 and along Muskadel Street.					
	cycle routes	8	Out of town cycling routes, such as:					
			Ashbury Koop Route 14km					
			 Jeep Track via Joubert's Pass – 37km 					
			 Ouberg Route – 52km 					
			Bobejaans Bult Route – 38km					
			Baden Route & Pietersfontein Dam Loop – 43 km					
			 Talana Route – 41 km 					
Change	Roads:	9	Continual maintenance and upgrading of local movement network.					
		10	Road interface along R318 has to be sensitively treated and soften by tree lanes.					
		11	Enhance and announce town entrances and gateways (Cogsmankloof R62 west and east, R318 and Muskadel Street).					
	Activity Streets	12	Promote intensification and mixed use along activity corridors and streets.					
	and corridors:	13	Provide for parking and pedestrian infrastructure, all disabled friendly, but keep heritage character intact.					
		14	Road interface along R318 to be sensitively treated and soften by tree lanes, provide for street furniture and pedestrian walkways and crossings					
	Pedestrian and cycle routes	15	Cycling and walking tracks on settlement outskirts to be multi-purpose to improve pedestrian mobility					
		16	Develop trails and routes in settlements linked to natural conservation areas or farmland					
		17	Robertson, Ashton, Montagu & Bonnievale: Provide for safe pedestrian walkways between residential areas					
Develop	Activity Streets and corridors:	18	Provide for a centralised taxi/bus stop with an all-weather shelter and related infrastructure in CBD					
	Pedestrian and cycle routes	19	Provide for a safe and adequately lit multi-use pedestrian/ cycle route between CBD and Ashbury (along R318 and Muskadel Street)					

Public Ut	Public Utilities & Service							
	Elements	No.	Proposals					
Protect	<u>Water</u>	20	Montagu's water resources from: Kruiskloof, Keurkloof, Rietvlei and the CBR pipeline scheme.					
		21	Aquifers in Badskloof, Montagu West, serving as water source supplement.					
		22	Water treatment plant where water is purified.					
	Waste Water	23	Water borne sewerage system.					
	Electricity	24	33.256MVA Substation, sufficient capacity.					
	<u>Waste</u>	25	Weekly waste is collected from door to door and delivered at drop-off facility. A separation at source service (2-bag system) waste collection is provided. A (building) material recovery facility and licensed garden waste to save landfill space (IWMP, 2012) is licenced and operational.					
	<u>Safety</u>	26	Montagu has a police station which also serves the surrounding rural areas.					
		27	Enhance Police Station site and services rendered.					
Change	Future Demand:	28	Identify areas with high absorption capacity to limit impact on landscape for expansion of bulk infrastructure					
	<u>Water</u>	29	Manage adequate capacity for future demand (MI/annum) as per "Water Services Development Plan": Rainwater harvesting, grey water recycling and similar technical enhancements such as low flow shower heads, dual flush toilets and water wise gardens should be encouraged for new residential, commercial and community projects					
	Electricity	30	Maintain adequate bulk capacity: Require 12.764MVA in 2028.					
	-	31	Upgrade obsolete electrical infrastructure.					
		32	Maintain adequate street lighting.					
	Storm water	33	Improve the status of the rivers					
		34	Improve and maintain storm water system.					
	Waste	35	Create a greater awareness of waste minimisation.					
		36	Provide for recycling facilities.					
Develop	Future Demand:	37	Ensure SDF growth proposals are aligned with bulk infrastructure master planning.					
		38	Support sustainable & effective use of natural resources i.e. alternative energy, water reuse and recycling					
	Water	39	Align bulk infrastructure planning with SDF growth proposals.					
		40	Earmark land for new and expansion of bulk infrastructure and align with SDF proposals minimizing impact on landscape.					
	Waste Water	41	Alternative forms of sewage disposal and treatment for new developments should be investigated with a view to minimizing the source of waste water and minimizing the pollution of surface and ground water					
	<u>Electricity</u>	42	Encourage installation of green building technology such as solar geysers and PV roof panels.					

Objective 1: Grow economic prosperity and facilitate economic sector growth and Objective 4: Protect and grow place identity and cultural integrity

Built Spac	e		
	Elements	No.	Proposals
Protect	<u>Heritage &</u> <u>Tourism</u>	43	Montagu was founded on the farm "Uitvlugt" in 1851, and is known for its hot mineral springs and scenic mountains. It is also an agricultural centre, where orchards and vineyards are in production and local herbs are grown.
		44	The Town began as a Voortrekker Rydorp with long streets aligned perpendicular to the contours in the upper town. There is a strip of water erven through the centre of the town along which the river passes.
		45	Both the Kinga and Keisie rivers runs perpendicular with the R62 and combine in the west as the Cogmanskloof River. These rivers and their floodplains are part of the identity of Montagu.
	Residential	46	Montagu follows a traditional grid pattern with long streets aligned perpendicular to the contours in the upper town
		47	 The town is characterised by historic buildings. The CBD area is located around and between Main Street (R62), with the industrial node east of the CBD. There are several precincts in Montagu: Historical commercial core with low to medium residential uses. A high density precinct north of the CBD. Low and medium density residential precincts south and west of the CBD. Medium to high density and subsidized residential areas north and east around the golf course.
	Industrial:	48	Various industrial uses and agricultural industries provide local community job opportunities.
Change	Heritage &	49	Ensure new developments are sympathetic to heritage buildings and the local character is protected.
Ū	Tourism	50	Develop a tourism strategy for Montagu to identify focus areas. Support Agri-tourism based development Provide skills development in agri- tourism.
		51	Support and provide for tourism infrastructure e.g. information and tourism signs and improve tourism facilities.
		52	Support accommodation facilities for tourists in rural and urban areas.
	Residential	53	Provide for housing for farm workers.
		54	Densify using willingness of owners to subdivide, existing zonings, consider the character of surrounding environment, the unique sense of place and historical context.
		55	Zone C's allowable development to be: Infill, river edge and activity street interface residential development. The most southern precinct of Zone C is the gate way to the Klein Karoo and sensitively clustered low residential development can be allowed: Where possible change layout of north east precinct at R318 and R62 T Junction to be long thin erven with river frontage and building footprints along R318 and towards development footprints in the north of the precinct. Keep orchards and vineyards even across long thin erven.
		56	Increase density for next 20 years (ending 2028).
		57	Identify land for GAP housing, including farm owners that would like to create agri villages.
		58	Keep housing waiting list up to date.
		59	Develop areas in accordance with availability and capacity of infrastructure and services.
		60	Support densification through Subdivision, Infill development and Renewal and restructuring.
	Commercial	61	Support development of CBD and secondary nodes and neighbourhood commercial facilities.
		62	Support integrated development and mixed uses in neighbourhoods
		63	Support development of house shops/home occupation/professional services in residential areas.
		64	Support business uses along activity streets.
	Industrial:	65	Support agricultural service industry related development.
		66	Upgrade services
Dalla	11	67	Support development of agri-industries.
Develop	Heritage &	68	Develop and market educational niking trails in natural surroundings.
	Tourism	09 70	Frovide for effective control of the extensions to or demolition of heritage buildings
	Residential	70	Provide adequate land for different housing topologies
	<u>rtcoldentidi</u>	72	Provide and support development of housing topologies.
		73	Support the development of residential opportunities (FLISP) for farm worker
		74	Provide residential opportunities that can be upgraded with top structures.
		75	Support integrated housing opportunities
		76	Careful consideration be made on
	Commercial	77	Develop integrated and smaller secondary commercial nodes in higher density neighbourhoods. Commercial uses
			in these secondary nodes can include residential elements.
		78	Develop mixed-use (commercial and dual residential and single residential) in exiting industrial area in Zone C

Industrial:	79	Provide opportunities for additional industrial development towards the north east, along Muskadel street below the golf course.
	80	Encourage development of smaller scale agri - processing/packaging industries (allow value adding of products close to the source).

As per Proposal Maps

Name	Zoning, Proposed	Gross_Area	Zone
M01	Cemetery	3,685	A
M02	Department of Human Settlement	2,973	А
M03	Department of Human Settlement	2,827	Α
M04	Department of Human Settlement	2,187	Α
M05	Department of Human Settlement	1,228	Α
M06	Department of Human Settlement	2,503	А
M07	Business Node	0,334	Α
M08	Place of Instruction	0,264	В
M09	Residential	3,12	В
M11	Illegal Occupants	4,633	Α
M12	Residential	2,406	Α
M13	Residential	2,369	В
M14	Mixed-Use Development	12,573	С
M15	Business Node	1,221	D
M16	Residential	1,455	D
M17	Central Business District	19,511	F
M18	Industrial	13,648	С
Outside Urban Edge	Illegal Occupants	3,892	Outside Urban Edge





Social Ame								
	Elements	No.	Proposals					
Protect	Community Facilities	81	Continue maintenance of the sport grounds to serve the community of Montagu.					
		82	Support the local community initiatives for provision of social services in neighbourhoods to better serve communities.					
	Existing cemetery	83	Facilitate the ongoing maintenance of cemeteries throughout the municipality especially relating to security and fencing.					
Change	Community Facilities	84	Provide for and support community orientated services (for example crèches, soup kitchens) in the residential areas.					
		85	Provide for adequate:					
			 Educational facilities - with need for crèches and day care facilities in neighbourhoods 					
		86	Expand the existing sport facilities on the northern periphery					
	Existing cemetery	87	Ensure that capacities of cemeteries are monitored on an on-going basis to ensure additional space requirements are timeously addressed.					
Develop	Community Facilities	88	Support the continued development and maintenance of community facilities in close proximity to the communities.					
	Existing cemetery	89	Provide for cemetery expansion at the north east cemetery.					

Objective 3: Sustain material, physical and social wellbeing

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Objective 5: Protect ecological and agricultural integrity

Open Spa	ce		
	Elements	No.	Proposals
Protect	Nature and Conservation:	90	Montagu nature reserve to be maintained and enhanced for recreational use.
		91	Any orchards and lucern fields should be kept intact in association with farming in the Koo and Keisie valleys
Change	Nature and Conservation:	92	Link open space areas and mobility routes by planting tree lanes.
		93	Develop shared use trails as open space corridors, natural habitat links and recreational facilities (hiking & mountain bike trails).
		94	Protect natural areas lawfully and determine allowable uses.
		95	Improve appearance of higher density residential developments (subsidised housing) by planting tree lanes.
		96	Design interactive development interfaces along open space network and along main routes.
	Public and Private Open	97	Enhance recreational public nodes:
	<u>Space:</u>	98	Link sport grounds and golf course
		99	Support the multi-use of public open spaces
		100	Formalise and maintain multi-use routes and tracks in conservation areas and public open spaces (including reserves around town).
Develop	Nature and Conservation:	101	Formalise conservation of conservation worthy natural areas by entering into stewardship programme with Cape Nature.
		102	Develop management plans and determine allowable uses of conservation areas.
		103	Remove alien vegetation from open space areas.
		104	Require subsidised housing projects to provide functional open spaces.

LAND USE ZONE PROPOSALS FOR MONTAGU

Montagu has been divided into nine (9) zones (areas with common characteristics) and the table below outlines allowable land uses (and descriptions of these use at the end of this chapter) for every zone.

MONTAGU LAND USE ZONES			Medium Density Residential Uses	High Density Residential Uses	Secondary Educational Uses	Place of instruction	Professional Use	Business Uses	Secondary Business Uses	Place of worship	Institution	Guest houses/self -catering	Authority	Sport/Recreational Facilities	Industries & Service Trade
A	Zone A has a high density residential character including a neighbourhood business area and a place of instruction. Informal housing within Zone A requires formalization and creates opportunity for infill residential development. Both cemeteries can expand.			x	x	X	X	X 3	X 1	X		x	X	X	
В	Zone B had a medium density residential character with opportunities for infill development and a place of instruction. The Golf Course adds to Zone B as gate way to the rural areas north of Montagu. Thus the interface along the access road has to be sensitively treated and soften by tree lanes.	x	x		x	x	x			x	x	x	x	x	
С	Zone C has a mixed use character with opportunities for industrial, destination (tourism) and business development including dual residential opportunities. Infill, river edge and activity street interface residential development should contribute to Zone C's character. The most southern precinct of Zone C is the gate way to the Klein Karoo and sensitive clustered low residential development can be allowed. A character of openness and cultivation should be kept intact.	x	×	x	x	x	×	×	x	x	x	x	x	x	x
D	Zone D has a high density residential character and include a place of instruction, open spaces, neighbourhood business node and public spaces.		X	x	x	X	X	X 3	X 1	X	X	X	X	x	
E	Zone E has a medium residential characteristic as its open spaces including historic and operational cemeteries and a sports field.	x	X		x	X	X		X 1	X	X	x	X	x	
F	Zone F is the central business district where mostly commercial and other compatible uses are supported to enhance the node. Mixed uses are supported but should be sensitive to the character of Montagu.	x	x	X	x	x	x	x	x	x	x	x	x	x	
G	Zone G is a medium to low residential area with opportunities for infill development.	x	X		X	X	X			Х	Х	X	X	X	
Н	Zone H can be identified as a low density residential area which includes a hospital,	x	х		x	x	x		х		х	х	x	x	

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	place of instruction and an approved proposed housing development.		4						1						
I	Zone I can be identified as a low density residential area consisting of "water erven" and development should be harmonising with the rural character around Montagu and be limited. The Agricultural character should be preserved.	x	x		x	x	x			x	x	x	x	x	
		Βι	isines	s Uses	e.g. s	shop,	super	marke	et and	servic	e stati	on			
(1)	(1) Along activity street		Place of instruction e.g. Schools, Universities, Colleges												
	(2) Only Service trades		Professional Use e.g. Doctors, dentists, architects												
	(3) At identified Nodes(4) Existing uses	Secondary Business Uses allows for neighbourhood business e.g. Café, house shops, small shop & offices and home occupation. House taverns only to be allowed along activity streets in residential areas													
			cond	ary Edu	Icatio	nal Us	ses e.	g. Crè	ches/	day ca	are				



5.8 Robertson

As the main urban centre, Robertson has the largest population in Langeberg Municipality. It serves as an agricultural service centre being located within one of the largest wine producing regions in South Africa.



Connecto	rs		
	Elements	No	Proposals
Protect	<u>Roads</u>	1	R60 (east-west direction), linking to N1 via Worcester and N2 via Swellendam
		2	R317 to Bonnievale.
		3	Langverwagten Road to McGregor
	Activity Streets & Corridors	4	North-West to South East (backward slanted): Voortrekker, Church, Albert, Van Zyl, Paddy, Mary, Burwana and August, Johan De Jongry, Keerom
		5	North- East to South West (Forward slanted): Paul Kruger, Reitz, Pieter
Change	Roads	6	Introduce speed calming & greening of route. Introduce landscaping/ tree lanes, street furniture and sufficient lighting. Provide for pedestrian crossings.
		7	Develop guidelines for commercial facades, advertising signs and information signs: Main Road to have a rural character.
		8	Enhance and announce town entrances and gateways: (R60 east & west, R317 and Langverwagten Road).
	Activity Streets & Corridors	9	Concentrate higher order social amenities and mixed use development along activity streets.
		10	Provide for public transport and pedestrian mobility.
		11	Landscape and beautify activity streets and main street (R60). Plant tree lanes, provide street furniture and develop pedestrian walkways.
	Rail	12	Investigate private rail services on public line.
		13	Lobby for prolonged Blue Train stop.
	Pedestrian and Cycle Routes	14	Develop trails and routes in settlements linked to natural conservation areas or farmland
		15	Robertson, Ashton, Montagu & Bonnievale: Provide for safe pedestrian walkways between residential areas
Develop	<u>Roads</u>	16	Upgrade intersection of R317 and railway line.
		17	Upgrade section of R317 from roundabout to Constitution Road, along Nkqubela.
		18	Provide for pedestrian crossing over R317.
		19	Upgrade of R60 from roundabout eastwards to the end of runway.
	Activity Streets &	20	Develop a taxi rank/bus stop next to CBD.
	Corridors	21	Introduce speed calming in Johan De Jong Avenue.
	Pedestrian and Cycle Routes	22	Develop accessible, safe and adequately lit, surfaced and shaded pedestrian walkways and cycle paths along Johan de Jong Avenue, R60 (main street) and R317 (along Nkqubela)

Public Util	ities & Service		
	Elements	No.	Proposals
Protect	<u>Water</u>	23	Robertson receives its water from two sources:Langeberg mountain catchment area north of Robertson.
		24	Breëde river irrigation canal. The water is purified at the Robertson TP. (Brandvlei Irrigation Scheme (Breede River) Dassieshoek and Koos Kok Dams Hoops River Irrigation Scheme) (From Water Services Development Plan 2014/2015).
	Waste Water	25	4 709kl/d actual capacity
	Electricity	26	A 42.2MVA substation lacks electrical capacity.
		27	3x 15MVA 66/11kV transformers and conductors within capacity.
	<u>Waste</u>	28	Weekly waste is collected from door to door and delivered at drop off facility. A separation at source service (2-bag system) waste collection is provided. A (building) material recovery facility and composting plant to save landfill space (IWMP, 2012).
		29	The Robertson waste disposal facility is closed and rehabilitated, accompanied by a closure license.
	<u>Safety</u>	30	Enhance Police Station site and services rendered.
Change	<u>Future</u> Demand:	31	Identify areas with high absorption capacity to limit impact on landscape for expansion of bulk infrastructure.
	<u>Water</u>	32	Upgrade existing reservoir capacity to accommodate growth and demand.
		33	Encourage retrofitting of water demand management technologies into existing buildings and offer an incentives program.
	Waste Water	34	Provide for 8 252kl/d AADD capacity required, all erven occupied.
	Electricity	35	Upgrade obsolete electrical infrastructure, especially conductors.
		36	Maintain adequate street lighting
	<u>Waste</u>	37	Maintain transfer station site
	Storm Water	38	Improve and upgrade formal storm water system.
Develop	<u>Future</u>	39	Ensure SDF growth proposals are aligned with bulk infrastructure master planning.
	Demand:	40	Support sustainable & effective use of natural resources i.e. alternative energy, water reuse and recycling
	<u>Water</u>	41	Manage adequate land for future expansion of storage capacity. Support use of natural sources
	Electricity	42	Prioritise the provision of bulk electricity: Estimated, a 47.281MVA and 31.052 substations are required
		43	Encourage installation of green building technology such as solar geysers and PV roof panels.
	Storm Water	44	Upgrade internal roads and storm water systems
Objective 1: Grow economic prosperity and facilitate economic sector growth and Objective 4: Protect and grow place identity and cultural integrity

Built Spac	e		
	Elements	No.	Proposals
Protect	<u>Heritage and</u> <u>Tourism:</u>	45	Robertson's follows a grid and is located between two rivers, the Willem Nels River and Hoops River. First erven were established with access to water (water erven) as an irrigation system with furrows and sluices that were strictly rationed, were devised (Fransen, 2008, 195). The grid consists of town blocks defined by north south streets (between the two rivers) a 100m apart. "The church block is located in the centre town, and the adjoining blocks are halved so that the church block "intercepts" Church street and affords axial views along this street."
	Residential:	46	Robertson originated around the historic church grid block in the CBD. The Willem Nels and Hoops Rivers guides development
	Business	47	Old town CBD is established along Main Road and within proposed heritage overlay zone.
Change	<u>Heritage and</u> Tourism:	48	Improve tourism infrastructure including recreational facilities accommodation and information points and signage.
		49	Control extension or demolition of heritage buildings.
		50	Proclaim heritage overlay zones.
		51	Develop guidelines including architectural style, scale, height and mass of built structures for development within heritage overlay zone.
	Residential:	52	Increase density for next 20 years (which ends in 2028) from the current6 – 7.3 du/ha units per hectare in Robertson.
		53	Enrol farm workers on housing waiting list.
		54	Provide for future subsidised housing demands in Robertson.
		55	Require different housing options/ topologies to proposed developments are sustainable, integrated and utilise services effectively.
		56	Support densification through subdivision; infill development; renewal and restructuring in accordance with zone proposals;
		57	Align subdivisions and CBD renewals with surrounding densities and character of the built environment.
		58	Infill opportunities exist in Zone A and B on residential properties.
	Business	59	Develop the CBD as public node and central meeting and market place.
	Industrial	60	Provide adequate bulk infrastructure capacity to support industrial expansion
Develop	Heritage and 61 Tourism:		Focus tourism development on the natural environment with development of hiking routes along the Willem Nels and Hoops Rivers and development of recreational node for motorbikes and mountain bikes within Zone B, close to main road/ gateway.
		62	Develop Station building as possible tourism hub.
		63	Improve esthetical quality of the town with the street lighting, street furniture and tree planting.
	<u>Residential:</u>	64	Keep waiting list up to date.
		65	Provide GAP housing.
		66	Utilise developable vacant land for development and infill development.
		67	Encourage expansion of residential market, especially subdivision or second dwelling on larger properties
		68	Provide within the urban edge for industrial uses and limited residential development.
		69	Develop areas in accordance with availability of service resources and infrastructure capacity.
		70	Provide for expansion of bulk infrastructure
	Business	71	Develop and expand several business nodes as per Land Use Schedule.
		72	Develop node around roundabout (business precinct, airstrip precinct, industrial precinct and residential & industrial precinct) to utilise vacant land optimally and to integrate
	Industrial	73	Provide for expansion on Bullida Grounds and around train station keeping in mind future bulk infrastructure requirements.

Name	Zoning, Proposed	Gross_Area	Zone
R01	To be Formalised	4,578	A
R02	Approved Development, but vacant	1,411	А
R03	Residential	0,227	Α
R04	Business Node	2,041	Α
R05	Mixed-Use Development	45,22	Α
R06	Place of Instruction	0,81	Α
R07	Residential	11,774	В
R08	Residential	3,844	Α
R09	Residential	10,589	Α
R10	Cemetery	7,231	В
R11	Business Node	3,837	В
R12	Industrial	11,837	E
R13	Small Business	2,301	В
R14	Residential	7,549	В
R15	Infill Development	0,698	В
R16	Residential	5,484	E
R17	Place of Instruction	0,483	E
R18	Central Business District	41,714	D
R19	Mixed-Use Development	5,254	С
R20	Residential	1,056	В
R21	Place of Instruction	2,322	А
R22	Department of Human Settlement	7,261	Α
R23	Fire Station Satellite Station	0,497	С
R24	Residential	5,179	С
R25	Industrial	19,918	E
R26	Industrial	2,437	E
R27	Industrial	40,475	E
R28	Business Node	0,305	Α
R29	Business Node	0,937	Α
R30	Residential	4,28	E
R31	Industrial	16,924	E
R32	Agri-Industry	5,383	E
R33	Public Open Space	0,366	Α
R34	Department of Human Settlement	3,615	F
R35	To be Formalised	10,641	F
Heritage Area	Heritage Area	136,649	Heritage Area
R_Outside Urban Edge	Department of Human Settlement	21,023	Outside Urban Edge

As per Proposal Map





Objective 3: Sustain material,	physical and	social wellbeing
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Social Ame	nities					
	Elements	No.	Proposals			
Change	Community Facilities	74	Provide community facilities in neighbourhoods to improve accessibility.			
		75	Support the expansion and upgrade of the sports grounds in Zone A and E.			
		76 Provide adequate primary health facilities				
		77	Provide for and expand education facilities and particularly crèches and adult education/skills development			
		78	Expand White street cemetery and infill Droëheuwel cemetery.			
Develop	Community Facilities	79	Formalise public area in CBD as local market square, formal trading space and a bus and taxi stop.			
		80	Formalise the open space system.			
		81	Provide for a school at Nkqubela.			

Objective 5: Protect ecological and agricultural integrity

Open Spa	ace		
	Elements	No.	Proposals
Protect	Nature & Conservation	82	The Willem Nels and Hoops Rivers forms the framework across which Robertson was established lying in the rain shadow of the South Western Mountains.
		83	North East of Nkqubela lies a large protected area which have been identified as a critical biodiversity area by The Western Cape Biodiversity Spatial Plan (WCBSP)
Change	Nature & Conservation	84	Establish a heritage route as Robertson has the most heritage building in Langeberg.
		85	Formalise use of natural/open space areas for recreation: Provide for hiking trails, mountain bike trails and alternative uses and facilities.
		86	Design interactive development interfaces along open space network.
		87	Develop a conservation management plan to preserve the critical biodiversity areas.
	Public and Private Open	88	Enhance recreational public nodes: Link sport, show grounds and open spaces.
	<u>Space</u>	89	Create an open space network through town.
Develop	Nature & Conservation	90	Formalize identified conservation areas within and adjacent to settlement.
		91	Plant trees along main activity routes
	Public and Private Open	92	Develop multi-use public open spaces along activity nodes
	<u>Space</u>	93	Create a recreational route for mountain and motorbikes.

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LAND USE ZONE PROPOSALS FOR ROBERTSON

Robertson has been divided into eight (8) zones (areas with common characteristics) and the table below outlines allowable land uses (and descriptions of these use at the end of this chapter) for every zone.

	ROBERTSON LAND USE ZONES	Low Density Residential Uses	Medium Density Residential Uses	High Density Residential Uses	Secondary Educational Uses	Place of instruction	Professional Use	Business Uses	Secondary Business Uses	Place of worship	Institution	Guest houses/self -catering	Authority	Sport/Recreational Facilities	Industries & Service Trade
A	Zone A has a high density residential character which includes housing development, a secondary business node and several places of instruction. Allow for infill residential development opportunities.			x	x	x	x	X 3	X 1	x	x	x	x	x	
В	Zone B has a medium to high density residential character with opportunities for infill development and intensification. This node also includes a cemetery with expansion potential, a neighbourhood commercial node as well as a secondary business node.		x	x	x	x	x	X 3	X 1	×	x	×	×	×	
С	Zone C has a low to medium density residential character with opportunities for infill development and intensification. A mixed use development and a fire station satellite office support residential uses.	x	x	x	x	x	x		X 1	x	x	X	x	x	
D	Zone D is the central business district where mostly commercial and compatible uses are encouraged to enhance the node.	x	x	x	x	x	x	x	x	x	x	x	x	x	
E	Zone E represents the Robertson's industrial area with industrial expansion proposed. Agri industry and residential uses are encouraged.			X	X	x	x	X 4	X		x		X	X	x
F	Zone F consists of a high density residential character including a cemetery.			x	x	x	x	X 3	X 1	x	x	x	x	x	
G	Zone G consists of the Robertson's Golf Course development. The zone further has a medium to high density characteristic	x	x	x	x		x					X	x	x	
Н	Zone H includes a medium density development that forms part of Zone G.	X	X	X	Х		X					X	X	X	

(1) Along activity nodes (2) Only Service trades (3) At identified nodes (4) At identified main nodes	Business Uses e.g. shop, supermarket and service station Place of instruction e.g. Schools, Universities, Colleges Professional Use e.g. Doctors, dentists, architects Secondary Business Uses allows for neighbourhood business e.g. Café, nouse shops, small shop & offices and home occupation. House taverns only to be allowed along activity streets in residential areas Secondary Educational Uses e.g. Crèches/day care
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5.9 Description of proposed land uses for development zones

Description of propos	sed land uses in the identified Development Zones of the Langeberg towns
Proposed land uses	Description
Low density Residential uses	Residential densities of up to 15 units per hectare within the Single Residential Zone I* zoning can be
	accommodated within these zones.
Medium density Residential uses	Residential densities of up to 20 to 50 units per hectare within the Single Residential Zonell, General
	Residential Zones I and II* can be accommodated within these zones.
High density Residential uses	Residential densities of above 50 units per hectare can be accommodated within these zones with
	proposed zoning General Residential Zone III* (along activity streets and within business nodes).
Secondary Educational uses	Allow for educational uses such as Creches, After Care facilities and Day Care Centres.
Place of instruction	Allow for places of instruction (crèches, schools, colleges, universities, research institutions, library,
Due for a la vertilita e	museums, art galleries, nostels etc.)
Protessional Use	Means that kind of use which is normally and reasonably associated with professionals such as doctors,
	from trading are one of the distinguishing factors
Rusiness llees	Rusingss uses that include busingss promises, restaurants, service trade as included under Rusingss
Dualiteaa Uaea	Zone I (at nodes) Rusiness Zone II (along activity streets and at nodes) and Rusiness Zone III* (along
	activity streets and at nodes) and Business Zone IV and V.
Secondary Business Uses	Allow for low intensity commercial and mixed uses to provide for the needs of the local neighbourhood
·····, ····	in terms of consumer goods and personal services (including house shop, home occupation, small
	offices, house taverns, cafes, but not limited to these uses). House taverns only to be allowed along
	activity streets in residential areas. These types of uses should be limited and must be able to integrate
	with surrounding residential areas without negatively impacting these areas. As allowed for under
	Business Zones II and III.
Place of worship	Places of worship under Community Zone II and as consent uses under Business Zones I, II, V and
	Industrial Zone I *.
Institution	Allow for Institution uses (social, health and welfare facilities) with specific reference to hospital, clinic,
	home for the aged, indigent or handicapped that are allowed for under the Community Zone III* as well
0	as consent under Business Zone IV and Community Zones I and II *.
Guest Houses	For the provision of guest accommodation as allowed for as a consent use under Agricultural Zones I
Authority	a in Single Residential 2016 i, and guest lodges under General Residential 2016 iv .
Autionty	locality and alignment of authority uses should consider existing and planned future uses in the
	surrounding area. Uses as allowed under Utility Zone
Sport/Recreational Facilities	Allow for sport facilities and other related recreational and tourism facilities like show grounds, picnic
	and camping areas.
Industrial/Service Trade and	Allow for development of industries, service industries and service trade related uses, with the different
Industries	types of industries considering the context and locality in the urban areas. Certain commercial uses
	including shops, restaurants, places of assembly, adult entertainment as well as funeral parlours and
	places of worship that are allowed for under these zones in accordance with the zoning scheme.

* The proposed zoning is according to the Langeberg Integrated Zoning Scheme Regulations of 2018, or as may be amended in future. The proposed zonings only provide an indication of the zonings that can be allowed within the zones. Any land use application within the development zones area however will still be subject to other regulations that are applicable to the specific areas and within the zoning scheme.

CHAPTER 6: Development Proposals: Rural & Regional – Cross Border & Climate Change





• Anysberg – the northern Karoo plains much of it within the Anysberg Nature Reserve (CapeNature)

• The Koo – high lying valley well known for fruit, fruit processing and tourism;



• Keisies valley – high lying scenic valley with intensive agriculture and start of the R62 tourism route beginning in Montagu



• Breede River Valley – intensely farmed, mainly vineyards and tamatoes. Wine farms offer tourism attractions such as festivals, accommodation, restaurants, wine tasting. One of the most popular wine routes. Contains main settlements, Robertson, Ashton, Bonnievale;

• Riviersonderend Mountain Valleys – high lying series of three valleys – also intensive agriculture, mainly vineyards and tourism, but at a reduced level compared to the activities in the Breede River Valley. McGregor is the main settlement, albeit the smallest in the municipality (CNdV Africa, 2013).

egion's identity is defined by its environment and agricultural crops offering a variety of values to its inhabitants.	Wilderness: Biomes, Bioregions & Ecosystems	Wilderness: Mountains	Waterways and Connections	Connection Routes and Corridors	Agricultural Landscape	Social Focus and community	Cultural and historical & Routes
Expresses Sense of Place/ Place Making	Х	Х	Х			Х	Х
Conserve natural vegetation & habitat, provide ecosystem services	Х	Х	Х				
Counter Climate Change	Х	Х					
Attract Tourism	Х	Х	Х		Х		Х
Represents an economic resource and presents opportunities				Х			Х
Enable access and mobility.				Х			
Secure food					Х		
Generate employment					Х		Х
Offer safety and security						Х	



Map 8: Langeberg Bio-Regions

	ANYSBERG	THE KOO	KEISIE	BREEDE VALLEY	RIVIERSONDEREND MOUNTAIN VALLEYS
Altitude (m)	500 – 1000	750 – 1250	250 – 1000	100 – 500	250 – 1250
Population distribution	Very sparse		<u>+</u> 15 000 urban	<u>+</u> 45 000 urban	<u>+</u> 3 000 urban
Agriculture (Primary Economy)	Stock and game farming with some dry land cultivation in river valleys.	Mainly stone fruit orchards.	Some wine, table grapes and fruit orchards.	Rich mixed farming area including wine, table grapes, dairy and fruit.	Minimal mixed farming, mainly wine, table grapes, stock.
Mining (Primary Economy)	n/a	n/a	n/a	Agricultural lime and gypsum mine in the west.	n/a
Bio-diversity	Succulent Karoo.	Succulent karoo in the deeper river valleys to the east. Shale renosterveld shale and granite fynbos on mountain slopes.	Succulent karoo in the deeper river valleys – shale fynbos and granite fynbos on mountain slopes, shale renosterveld.	Complex mosaic of alluvial vegetation, succulent karoo to the west and shale renosterveld to east.	Granite fynbos on high mountain slopes with succulent karoo to the west and shale renosterveld to the east.
Secondary Economy			Agri-Processing.	Agri-Processing in Ashton & Bonnievale.	Wineries.
Tertiary Economy	Few holiday farms.	Few holiday farms and well-developed tourist attractions.	Montagu historic tourist and desirable residential town, well developed network of holiday farms and farmstalls along R62 tourism route. Montagu is often considered as the western starting point of this route.	Well-developed mix of agricultural and wilderness tourism, Robertson financial, retail and agricultural service centre with historic heritage potential.	Well-developed holiday farms and tourist attractions focused around McGregor.
Renewable energy potential	Relatively low wind speeds. Medium to high levels of solar radiation.	Relatively low wind speeds. Medium to high levels of solar radiation.	Relatively low wind speeds. Medium to low levels of solar radiation.	Relatively low wind speeds. Medium to low levels of solar radiation – small solar plant proposed near Bonnievale.	High wind speeds along Riviersonderend mountains. Medium to low levels of solar radiation– small solar plant proposed near McGregor.
Hydrology	Touws River – seriously modified.	The Koo – moderately modified.	Keisie – seriously modified.	Breede – moderately modified, Vink, Riviersonderend seriously modified.	Poesjenels, Houtbaais Rivers in poor state.
Landscape character	Cosmic.	Classical.	Classical.	Romantic.	Classical.

Table 10: Characteristics of Langeberg's five bio-regions.

The following rural and regional proposals were concluded for all Langeberg's natural assets. All proposals should be read and implemented according to the directives as per the Western Cape Land Use Planning: Rural Guidelines, 2018.

6.1 Development Proposals for the Langeberg: Rural and Regional

Water / Hydrology

- Enhance use of rivers for recreation aligned with the relevant Langeberg by-laws.
- Delineate Flood lines in Montagu and Ashton and all other settlements.
- Include findings of cemetery study and include application process in CEF.
- Include finding of solid waste sites and include application process in CEF.

Land / Soil

- Establish an Intensive Rural Corridor along R60 & R317 (from R60 T-junction to Bonnievale).
- Identify urban areas to be utilised for community gardens in Bonnievale, Montagu, Ashton, Robertson and McGregor.

Mineral Resources

• Limit mining in Breede Valley Bio-Region to viable operations.

Vegetation, Fauna & Flora, Ecosystems

- Support the development of Open Space Networks and Conservation Corridors.
- Grow Langeberg as part of the bigger Winelands and Conservation (ecotourism): Birdlife, Biomes, lush agricultural landscape, Horses, wine production, cooking and cultivation.
- Delineate Routes.
- Expand Gouwritz Cluster Biosphere (Westwards) over entire area northern of Langeberg area linking to Anysberg Reserve ((neighbouring municipality).
- Promote The Langeberge and the Riviersonderend Mountains and Gouwritz Cluster Biosphere as important conservation corridors across municipal boundaries.
- R60 rural corridor around and between Robertson and Ashton including agricultural industries and big box agricultural buildings.
- Agri & conservation and eco-tourism in Montagu and in Keisie and Koo.
- Agri & eco-tourism corridor at Montagu along Kinga River corridor/ meander and along Breede River at Bonnievale.
- Invest in and develop tourism infrastructure (roads and existing services), based on environmental impact assessment considerations.
- Promote preschools and particularly on farms.

Air and Wind

- Promote generation and use of alternative energy.
- Promote planting of trees as part of every development to contribute to clean air.

<u>Sun</u>

• Promote generation and use of alternative Energy.

Connectors

• Develop a precinct plan for clustered agricultural development along scenic routes.

Agricultural Technology: Netting, tunnels and Agri Sheds

The erection and location of poly tunnels and agricultural shade netting or/ and the establishment of an agricultural industry/ shed of 2000 m² and more in extent on a farm should address concerns of adverse impacts on visual, cultural and heritage amenities and the Municipality may require repositioning, screening and any other measures which may address negative adverse impacts whilst taking cognisance of the importance of agriculture and food security.

The decommissioning of poly tunnels and agricultural shade netting is compulsory. The conversion of agriindustrial buildings for a different purpose instead of demolishing such infrastructure should address again concerns of adverse impacts on intensity of surrounding use (traffic, movement, noise) character (sense of place) and cultural and heritage amenities.

Adverse impacts on surrounding properties, in respect of, but not limited to, noise, traffic congestion, pollution, emissions or the gathering of large numbers of people, or the presence of people hindering agriculture e.g., during spraying season, should be dealt with. Nor may tourist activities have an adverse impact on any *bona fide* agricultural activities on the farm itself or on neighbouring properties.

Fences comprising of only wire or steel palisade (painted charcoal, black or dark green), not exceeding 2,1m are allowed. No masonry wall exceeding 1 meter and no brick piers shall be permitted in wire or steel palisade fences and only the entrance gate structure maybe of solid brick structures in moderation.

6.2 Regional and Rural Proposals & Climate Change

The rural spatial framework focuses on its natural resources: Water, Soil (Land), Minerals, Vegetation – Fauna - Ecosystems, Air - Wind, Sun and Connectors (the only man-made resource). The framework considers *Natural Disasters*, *Opportunities* and *Risks* for each natural resource.

The combination of the impact on the environment or environmental threats and the vulnerability of the Langberg Community measured as governance and municipal management, are illustrated in map below:



Map 9: Vulnerability to environmental threats in Langeberg (combining socio-economic and governance indicators)

Overall, Langeberg is evaluated to be at a lower risk given its natural resources and its governance.

6.2.1 Water/ Hydrology

6.2.1.1 Natural Resource: Surface (Rivers) and Ground Water

<u>Surface</u> and <u>underground water</u> constitute the natural resource. Langeberg is home several <u>rivers</u> and <u>boreholes</u> as its water sources.

The major rivers in the Langeberg are: The Breëde River that flows across the plain between the Langeberg and Riviersodnerend mountains. North of the Langeberg are the Koo and Keisie Rivers to the west and the Dwariega and Kinga to the east. The Kogmanskloofrivier originates from the Kinga and Keisie combined, links the north of the region to the south. South of the Langeberg *Langeberg Spatial Development Framework* 2023-2028 97

mountains are several rivers running into the Breëde River such as the Boesmans, Groot, Hoeks, Korings, Houtbaais and Poesjenels River.



The department of Water Affairs delineated <u>Water Management Area</u> as illustrated by the map below:

Map 10: Langeberg Water Management

The Western Cape population reached 3.5 million in 1986, the saturation point for the available water sources.

Management directives for water sources and water catchment area include:

Protect

- Provide for current and future basic human water needs.
- Provide equal access to water.
- Promote the effective and sustainable use of water in the interests of the general public.
- Facilitate social and economic development through access to water.
- Preserve aquatic and associated ecosystems and their biological diversity.
- Reduce and prevent pollution and the degradation of water resources.
- Effectively manage floods and droughts.
- Create new irrigation schemes for sustainable water use.
- Monitor irrigation from rivers and use of underground water sources.

- Monitor ground water quality and capacity.
- Prohibit the overexploitation of underground water resources and aquifers.
- Maintain water catchment areas by especially removing alien vegetation with the exception of heritage trees (trees older than 20 years).

Change

- Investigate alternative water resources to alleviate water shortages during droughts.
- Plan for, provide and maintain adequate water resources, water storage capacity and networks.
- Maintain sanitation according to prescribed standards and expand bulk infrastructure.

Develop

- Encourage water harvesting and installation of domestic water tanks. ater harvesting and promote water storage tanks.
- Promote reuse of water and storm water (industrial use, irrigation of golf courses.

An Environmental Management Framework for hydrological zones is outlined below:

Management Priority	Priority Focus Area
Improve and rehabilitate	All intensive farming practices, such as intensive feed farming i.e. cattle housing, located on top of underground water resources, must ensure that all measures are taken to ensure that storm water is not polluted. Agricultural poisons that are blended at aircraft landing strips or on farms near rivers, wetlands or underground water sources can cause pollution. Industrial areas, service stations and fuel distribution pollute storm water. Storm water treatment areas need to be improved and rehabilitated to control the pollution of water and water resources. The rivers, with their flood plains and no identified development buffer areas, must be respected and managed. Rehabilitation needs to be implemented when necessary and regulated by an environmental management plan.
Conserve and preserve	A 32m wide buffer area along river banks and wetlands, must be adhered to. No development, except if an environmental impact assessment authorizes it, may occur within rivers and wetlands and their buffer areas.
Environmental Impact Assessment Requirements	All proposed developments covering an area of 50m ² and more and within 32m from the banks of a water source, must have completed a Basic Environmental Impact Assessment and have Environmental Approval before development may take place.
Monitoring and management aspects	River monitoring must take place within the guidelines of the Department of Water Affairs River Health Programme. Borehole monitoring must take place in all developments that could lead to possible groundwater pollution, e.g. waste landfills, intensive farming practices. Water quality monitoring is required for all water treatment systems. All management and monitoring aspects must be regulated by an Environmental Management Plan.
Research and Education	The river health projects, as managed by the Department of Water Affairs. Education in schools to make youth aware of the value of water resources, due to climate change and scarcity of water resources. Community awareness campaigns, to specially emphasize water scarcity.

6.2.1.2 Natural Disaster: Droughts and Floods

<u>Drought</u> and <u>Flooding</u> are natural disasters enhanced by climate change. According to the climate change risk and vulnerability map for Langeberg <u>flooding</u> is anticipated in and around Montagu.



 Mortagu

 Mortagu
 <

Langeberg Spatial Development Framework 2023-2028

<u>Environmental Impact Management directives</u> for water sources and water catchment area include	Environmental Imp	pact Management	directives for	water sources	and water	catchment ar	ea include:
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	Types of developments, land uses or activities		
Flood Risk Area:	That should not occur	That may have significant impact	That have no significant impact
Flood Risk Area 1 Include areas within the 1:50 flood line, where floods are equal to or greater than the every 50 year average.	Any Infrastructure Development.	Residential, Commercial and Industrial Developments. Intensive agricultural practices. Waste Management Areas. Storage and handling of harmful substances.	Grazing by cattle.
Flood Risk Area 2 Include areas within the 1: 100 flood line, where floods are equal to or greater than the every 100 year average.	Cemeteries, Industrial Areas, Fuel Storage Facilities and Intensive Agricultural Uses.	Residential, Commercial and Industrial Developments. Intensive agricultural practices.Fuel storage facilities.	Residential development and expansion services as necessary, mitigation actions as indicated by an environmental impact study and specialist studies.
Flood Risk Area 3 The area is exposed to floods not only caused by rivers, but by groundwater or storm water collection in low-lying areas.	Cemeteries, Industrial Areas, Fuel Storage Facilities and Intensive Agricultural Uses.	Residential, Commercial and Industrial Developments. Intensive agricultural practices. Fuel storage facilities.	Residential development and expansion services as necessary, mitigation actions as indicated by an environmental impact study and specialist studies.

6.2.1.3 Opportunities: Dams, Irrigation and Recreation

The main inland water bodies (<u>dams</u>) are the Keerom Dam in the north-west, the Pietersfontein Dam in the north and the Potjieskloof Dam in the east. Poortjieskloof Dam in Groot River, Pietersfontein Dam in Pietersfontein River and Keerom Dam in Nuy River.

Irrigation (Agriculture) cause rivers to be modified. National Freshwater Ecosystem Priority Areas (2007), class the Breëde River as Moderately Modified. Seriously Modified tributaries are the Vink, Keisie, and Touws Rivers. A summary of the status of rivers follows particularly those with few modifications and moderately modified and those extremely modified. No rivers were classified as unmodified, largely modified and seriously modified.

Largely natural, few modifications	Moderately Modified	Critically/ Extremely modified
Raaswater, Brak, Doring, Kruis, Stinkfontein Se Langkloofspruit.	Dwariega, Kingna, Koo, Die Brak, Lopende, Gatskraalse, Pietersfontein.	Keisie, Touws.
Konings, Hoek, Bosm Ans.	Kogmanskloof, Breë, Groot, Houtbaais, Willem Nels, Noree, Hoops.	Vink, Poesjenels, Keisers.



Map 13: Langeberg River Conservation Status

Water source and bodies provide opportunity for recreation. The preservation of the rural character around dams and water bodies proactively enhances the local economy.

Reintroduce Breede River as mode of transport and recreational transport as a point of departure. The Breede River dissects the Langeberg and supports various agriculture and tourism activities linking Breede Valley and Swellendam Municipality. It represents historic transport connections as in 1816 the Breede River was confirmed navigable for six hours or 50 km inland and there are numerous suitable landing places along its length (Muller, 1985: 12). A harbour was established at the Breed River mouth and named Port Beaufort after Lord Somerset's father, Duke of Beaufort.

Management directives for water sources and bodies include:

Develop

- Ensure the primary and operational requirements of dams and other water resources (e.g. water quality, safety and flood control).
- The development in and around dams and other water features can be evaluated, considered and implemented through the development of a water resources zoning plan as reference.

- Prevent the unsustainable, uncontrolled and unsafe use of state water resources.
- Strengthen the natural and cultural environment around dams and water resources through development of tourism, sport and recreation facilities, which will also provide opportunities for the creation of job opportunities.
- Effective and fair management of State dam basins, water resources and catchment areas. Take social, economic and environmental impact into consideration. Include all land located within the catchment areas of a dam or water resource to effectively manage the health of the system.

Change

- Promote river boat trips and rafting along the Breë and other River:
 - Goedereede Canoe Adventure;
 - Rafting Route 62;
 - Breede River Goose Boat Trips;
 - Kolgans River Boat; and,
 - Viljoensdrift River Cruises & Picnics.
- Promote recreation including fishing, resorts: camping, caravan parks including the hot springs.
- Promote mountain catchment area:
 - Matroosberg;
 - Langeberg-West; and,
 - o Riviersonderend.

6.2.1.4 Risks: Water Security, Cemeteries and Waste Sites

Water and <u>Water Security</u> (Climate Change Theme 4) is a key factor for socioeconomic development, food security and healthy ecosystems, and is vital for reducing the burden of disease and improving the health, welfare and productivity of communities. A deteriorating water catchment system will consequently lead to lower inputs into the water supply systems, and a lower overall water security due to lower natural retention and lower quality of water.

According to the climate change risk and vulnerability map (below) for Langeberg, <u>water security</u> does not show the severity of the risk, just the relative risk between regions. It must be understood as highlighting areas with the highest risk, rather than as absolute values.

The vulnerability score is derived by combining the default socio-economic/ governance score with a groundwater dependency score obtained from the Ecological Infrastructure Investment Framework (EIIF) project of DEA&DP4.

Map 14: Water Security Risk in Langeberg



<u>Management directives</u> for water sources and bodies, should development in general be considered, include:

Change

- All resources, especially surface water resources, need to be re-evaluated, especially where demand is close to the safe, one-in-twenty-year yields. Assurance of supply levels of all water sources should be established.
- Increase assurance of supply of the water resources by ensuring that there is at least 10% additional capacity (headroom), when considering the maximum 24 hour demand at the highest demand month of the year.
- Do not undertake new developments unless a proper investigation of the implication on water sources and sustainability in the long term has been undertaken.
- Vigorously implement Water Demand Management measures, especially in terms of the following:
 - increased water efficiency;
 - o frequent monitoring of the water supply system, from the sources to the consumers; and
 - o regular and adequate system maintenance and repairs.
- Diversify water resources, e.g. surface water, groundwater and wastewater re-use.

Protect

- Consider water quality standards and thresholds in all development and planning processes.
- Consider all applicable guidelines, policies and legislation pertaining to freshwater impacts where relevant to developments.
- Encourage efficient water use in all development proposals.
- Pursue environmental justice so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.

Management directives for water sources and bodies, should development of cemeteries and waste sites

(Climate Change Theme 1) be considered, include:

Develop

- A regional cemetery.
- A regional waste facility.

Change: Cemeteries

• To expand settlement cemeteries as per cemetery identification report (2019).

Change: Waste Site

- Prioritise municipal waste site. Investigate transfer stations along major routes and at large farming operations; Investigate recycling of domestic and garden waste.
- Implement a waste management strategy.
- Protect environmental health & prevent ecological degradation as per norms and standards (waste management, control, licensing & remediation of contaminated land).
- Implement a waste management hierarchy during lifecycle of waste:
 - o avoid and reduce waste,
 - o re-use and recycle,
 - o recover,
 - Treat and dispose.
- Address potential impacts of climate change and manage waste sustainable:







Environmental Impact Management directives for hydrological zones is outlined below

	Types of developments, land uses or activities			
Rivers, wetlands and buffer areas	That should not occur	That may have significant impact	That have no significant impact	Related policies & guidelines
Rivers, wetlands and buffer areas The buffer areas are calculated by standardized methodology (refer to Floodplains and Rivers Management Policy): River buffer areas vary between 10 - 40m from the river bank. Vleiland buffer areas differ and can be up to 75m wide, measured from the outer edge of the wetland.	Any Infrastructure Development.	Residential, Commercial and Industrial Developments. Intensive agricultural practices. Fuel storage facilities.	Grazing by cattle.	Environmental Impact Assessment and Guidelines. Provincial Spatial Development Framework for the Western Cape Province.
Highly Productive Underground Water Sources The zones include highly productive interrelated, broken down, and a combination of both, underground water sources.	Waste disposal sites.	Intensive agricultural activities, waste management (transfer & recycle) sites. Fuel storage facilities. Industrial areas.	Residential development. Normal agricultural activities.	All legislation with an environmental aspect and corresponding regulations, policies
Average productive underground water source The zones include average productive interrelated, broken and inter granular and broken ground underground water resources.	Waste disposal sites.	Residential, Commercial and Industrial Developments. Intensive agricultural practices. Fuel storage facilities.	Residential development. Normal agricultural activities.	and guidelines.

6.2.1.5 Proposals

- Enhance use of rivers for recreation aligned with the relevant Langeberg by-laws.
- Delineate Flood lines in Montagu and Ashton and all other settlements.
- Include findings of cemetery study and include application process in CEF.
- Include finding of solid waste sites and include application process in CEF.

6.2.2 Land/ Soil

6.2.2.1 Natural Resource: Soil Suitability (Agriculture),

Management directives for soil and land resources include:

Protect

- Protect and preserve agricultural resources (productive land and landscape).
- Retain and conserve the rural character and agricultural landscape of the area.
- As of the main economic sectors in Breede River it connects with most of the surrounding municipalities. The cross-boundary activities include conservation agriculture towards the north and north east, viticulture to the west (Breede Valley municipality) and stone fruit to the west.

Change:

- Support crop cultivation as a landscape attraction promoting tourism and preserve and support the agricultural production areas and landscapes.
- Support continued research into climate change on current crop production & sustainable cultivation.
- Protect agriculture both extensive agricultural production and intensively irrigated areas along Breë River and other water courses.
- Protect limited underground water, practice dry land cultivation instead of irrigation.
- Effectively manage erosion using conservation agriculture methods, planting of perennial legumes and management of contour lines.
- Maintain fire breaks around farms.
- Support different sizes of agricultural entities. (Support both creation of extensive agricultural farms and smaller farm units).
- Increase the variety of agriculturally related land uses including tourism.
- Subdivision of agricultural land for creation of smaller economic-production entities should be guided by current policies of the Department of Agriculture.
- Distinguish between "small farm units" of 20 to 40ha, smallholdings of 5 to 10ha and rural living smallholdings.
- Support cultivation and conservation e.g. Biodiversity and Wine Initiative.
- Support Langeberg cultivation routes (wine, stone fruit and grain/ Lucerne and pastures) and the development of related infrastructure, facilities and accommodation.

Develop

- Increased production to participate in value chain.
- Settle new and upcoming farmers (small and commercial).
- Support existing land reform projects and identify opportunities for land reform on intensive irrigation areas.
- Create smallholders forums in the smallholding areas to deliberate development issues and establish development parameters.
- Support the development of an Intensive Rural Development Corridor along the R60 from Rooiberg west of Robertson to Ashton.
- Provide for and support land uses tourist facilities and farm stalls and big box agri sheds.
- Provide for skills development facilities of agricultural workers to develop skills in agriculture, tourism and niche products.
- Support and provide for nodal development in agricultural areas along prominent transport links and intersections.
- Prepare Robertson and surrounding area as a potential future Agricultural Farmer Production Support Unit (FPSU) for the proposed Worcester/Swellendam Agri Hub (as per as part of the Langeberg District Rural Development Plan).



An <u>Environmental Management Framework</u> for soils as economic aid zones is outlined below:

Management Priority	Priority Focus Area	
Improvement and rehabilitation	High potential agricultural land.	
Conservation and preservation	High potential agricultural land.	
Environmental Impact Assessment	All infrastructure requiring environmental approval as prescribed in the	
Requirements.	Environmental Impact Assessment Regulations.	
Monitoring and management	All Environmental Approvals' implementation is regulated by an	
aspects	approved Environmental Management Plan that regulates management	
	and monitoring aspects.	

6.2.2.2 Natural Disaster: Climate change type of farming

Crop production and animal rearing cease. Climate change contributes to prohibit agricultural cultivation and rearing of stock and other agricultural activities may replace traditional activities.

6.2.2.3 Opportunities: Agri-industries and Processing, Land Reform and Agri-tourism

Wine routes amongst the established wine area around Roberson, McGregor, Bonnievale and Montagu and surrounding rural areas includes silos, mills, museums and industries that tell the story of wine production in the Langeberg Wine routes extend across and between municipal boundaries (Breede Valley and Drakenstein and Stellenbosch). The natural and cultivated heritage landscape along the Langeberge and Riviersonderend mountains as backdrop to the wineries is the major draw card for Langeberg's wine area as a destination.

Management directives for soil and land resources include:

Agri-Industries and Processing Change

- Provide for and promote agricultural and agricultural related industries: composting, alternative energy generation, communication network facilities.
- Provide for support services to agricultural activity (e.g. repairs).
- Provide for agricultural industries to enhance job opportunities.
- Support alternative transport i.e. rail for mining stock to limit impact on roads and improve economic viability of the railway network: (Cape Town over Robertson and Ashton to Gauteng lines.)

Develop

- Produce niche products on-site (value adding) on the farm. Investigate the production of new agricultural related and complimentary products rand promote their production on farms e.g. aqua culture farming.
- Provide for tourism related activities on farms e.g. farm stays, leisure accommodation, agriprocessing, tastings, restaurants, farm stalls, wineries and private nature reserves.
- Encourage labour intensive processing and manufacturing (for small scale agriculture)
- Brand Langeberg produce.
- Provide for initiation of commercial activities in which farm workers are involved (e.g. farm stalls and local markets).
- Enhance opportunities to establish new markets at local, regional, provincial and national level.
- Grow products and markets of agricultural produce (cultivation of wine grapes, stone fruit and breeding horses) and by-products. (Current products and current markets i.e. labelling, niche products, bio fuel, develop agricultural service industries, strengthening supply chains, job creation).
- Grow and diversify agricultural sector combining cultivation (wine grapes) and conservation area creating new products and new markets i.e. tourism, climate, alternative energy, utilise unique landscape features for film industry.
- Support development of commercial infrastructure on farms along routes, including farm stalls and agri-processing, to support transport network and tourism routes
- Strengthen value chain and support tourism development on farms.

Develop

• Update Land Reform Implementation map below (2011)



Map 18: Langeberg Land Reform

Develop:

- Tourism Routes and Destinations:
 - Wine route: Robertson to Bonnievale (R317); Robertson to McGregor (Langverwagten Road), Langeberg western boundary along R60 to Robertson and to Ashton, R60 to Riverside and Goree, Robertson to Middelbosjesveld.
 - Stone fruit route: Keisie Valley along R318.
 - Klei Karoo/ agricultural landscape: (1) Montagu along R62 toward Lydismith; (2) From Brakkefontein Game farm along Ouberg nature reserve, Tibani Nature reserve and Montevue Nature Farm to Wardia VGK primary School.
 - o Klein Karoo: across Drie Kuilen & Rooikrans private nature reserves.
 - Horses: Around Ashton and Bonnievale (R317).
 - o Promote rail route on Blue train, negotiate a shorter route.
- Support the development and establishment of:
 - o farm stalls, involve more people in the tourism industry.
 - \circ recreational routes and accommodation facilities.
 - o agri-tourism (harvesting and cooking).
- Grow Langeberg as part of the bigger Winelands and Conservation (ecotourism): Birdlife, Biomes, lush agricultural landscape, Horses, wine production, cooking and cultivation.
- Promote events/ festivals and wine tasting to build the agricultural brand:
 - o Robertson Wine Valley's Hands-on Harvest;
 - o kykNET and Robertson Wine Valley's Wacky Wine Weekend;
 - o Robertson Slow Lifestyle Festival; and,
 - Robertson Wine on the River.

6.2.2.4 Risks: Food Security

Extensive research is underway by the relevant department and only the impact of securing food production will be dealt with in the MSDF.

<u>Management directives</u> for soil and land resources include:

Protect:

- Protect agricultural landscapes.
- Protect water sources and quality.
- Promote food security.
- Conserve and protect agricultural resources:
 - Ensure no cultivation of virgin land takes place without the written consent of the Minister of Agriculture.
 - Ensure no land with a slope of more than 20% will be cultivated without written consent of the Minister of Agriculture.
 - Ensure cultivated land is effectively protected against water and wind erosion.
 - Avoid use of vegetation in a marsh or a water sponge or in a floodplain.
 - Reserve productive agricultural land for agricultural purposes.

Change:

- Promote locally produced agricultural products (in mass or small scale) to be produce of preference.
- Promote innovative land reform models.
- Foster innovative food production and diversification.

Revitalise the rural economy to address poverty and improve access to local economy.

Develop:

- Identify areas with low, medium and high potential agricultural soil close to urban development.
- Promote agricultural units of different sizes (small agricultural units (20-50 ha), small holdings (5-20 ha) and extensive residential holdings (<5ha)).
- Strengthen associations to promote community participation in local development issues and to determine land use-/ zoning guidelines.
- Establish an Intensive Rural Corridor along the R60 and along the R317 from the R60T-junction to Bonnievale.
- Identify potential areas within urban areas to be utilised for community gardens in Bonnievale, Montagu, Ashton, Robertson and McGregor.
- Re-orientate existing agricultural model to allow for the creation of smaller agricultural units in rural areas.
- Develop an Intensive Agricultural Corridor along the R60 and R317 including the heritage areas in the rural areas.

Environmental Impact Management directives for soil and land resources outlined below

	Types of c			
Agricultural Land Potential	That should not occur	That may have significant impact	That have no significant impact	Related policies and guidelines
High potential unique agricultural land	Any development that will not exploit the high agricultural potential and value.	Any development that will not exploit the high agricultural potential of the area.	Any development that will exploit the high agricultural potential of the land.	All guidelines, policies and legislation applicable to the Agricultural Industry.
Agricultural land of significant value	Any development that will not utilize the significant potential and value of the land.	Any development that will not exploit the significant potential of the land.	Any development that will exploit the significant potential of the land.	

Other Agricultural Areas	Uncontrolled development.	Uncontrolled development.	Controlled development.
Smallholdings and	Non-agricultural	Non-agricultural	Managed agricultural
agricultural uses	oriented activities.	oriented activities.	oriented developments.

6.2.2.5 Proposals

Protect intensive and extensive agricultural land to secure food production.

6.2.3 Mineral Resources

6.2.3.1 Natural Resource: Minerals

Lime and sand are the main mineral resources in the Langeberg.

Management directives for mineral resources include:

Protect

- Protect sensitive environments (visual, agricultural resources, natural, cultural) from the potential impact of mining.
- Map all viable mineral and geological resources for mining.

Change

- Support sustainable mining and determine the potential cumulative impacts associated with mining activities on the Langeberg landscape. Facilitate mining activities to limit ecological and aesthetic damage (visual intrusion). Rehabilitate ceased mines and as per EMPr.
- Develop guidelines for the assessment of sand mining applications in the Langeberg to limit impact on other resources such as the landscape.
- Align mining activities with spatial planning, land use and environmental norms: Ensure the
 protection of landscape features and natural and agricultural environment during exploitation
 and rehabilitation.
- Control rehabilitation of mines and ensure continued rehabilitation of mining operations during and after operations, whilst the rehabilitation of mines not previously rehabilitated is promoted.
- Limit potential impact of mine dumps (sand mine heaps) on rural landscape feature. Store overburden on acquired farm next to mine.
- Require compliance to sustainable environmental norms (minimizing economic, environmental and social impacts) in the consideration of mining applications in the Langeberg.
- Identify all mineral and geological sources suitable for mining and determine its viability (based on financial viability [i.e. quality of the sand] versus environmental degrading [aesthetic value, tourism, boutique wine industry and intensive agricultural land uses]. Develop detailed Precinct Plans for these areas to prohibit mining work against tourism.
- Assign land use parameters to suitable resources and support the land use changes required for excavating natural resources, applying sustainability norms, mitigate existing impacts, effective rehabilitation and alternative transportation to dispatch product.
- Caution mining activities which is not viable and are counterproductive to the character of the area, particularly sand mining.



Map 19: Mineral Resources

6.2.3.2 Natural Disaster: Earth Quakes and Floods

None

6.2.3.3 Opportunities: Mining related Industry

Opportunities include related industry development and growth and employment creation.

6.2.3.4 Risks: Dust, Colouration and Visual Impact

Risks in the mining industry include:

- Generation of dust that cause colouration of the landscape.
- High visual impact on the magnificent landscape.
- No compliance to rehabilitate.

Environmental Impact Management directives for Mineral zones are outlined below:

	Types of developments, land uses or activities			
Mineral Resource Risk Management	That should not occur	That may have significant impact	That have no significant impact	Related policies and guidelines
Priority Mineral Resource Areas	No development that is in contradiction with the mine.	Workers housing	Mine oriented infrastructure.	All guidelines, policies and legislation applicable to the Agriculture and Mineral Industry.

6.2.3.5 Proposals

- Limit mining in Breede Valley Bio-Region to viable operations

6.2.4 Vegetation, Fauna, Ecosystems

6.2.4.1 Natural Resource: Natural Environment (critical and common fauna & flora) and Landscapes

Management directives for natural environment zones include:

Protect

- The disturbance of ecosystems should be avoided, minimized or restored.
- Any activities being mining, cultivation or business that have an impact on the environment need to comply with regulations of the National Environmental Management Act.
- Allow no development in flood line.
- Maintain environmental setback lines.
- Create open space network along rivers.
- Classify all Renosterveld as Core 1 & 2 areas, as is listed threatened ecosystems that are classified as Critically Biodiversity Areas (CBA's).
- Promote application of spatial planning categories, to facilitate the objective decision making in development applications.
- Establish a register for all the national, provincial and local conservation areas.
- Protect natural assets and resources including; biodiversity, topography, soils and water resources, geology, hydrology.
- Develop in accordance with the identified bio regional planning categories e.g. Core Areas (Langeberge, Riviersonderend berg, Anysberge), Buffer Areas (along Riviersonderend and Langeberg & unprotected areas being part of the Biosphere), Intensive Agricultural (Breede Valley, Koo and Keisie) area and urban development.
- Promote the official categorization of all mountains and all Public and Private Nature Reserve as Core 1 and 2 areas.

Change

- Manage conservation areas in accordance with national norms and standards.
- Integrate ecological processes with the needs of the communities to ensure the sustainable use of resources in and around the Mountain areas and along rivers (bioregional planning based on bioregional planning principles).
- Combine tourism and conservation.
- Promote alternative and more effective use of conservation areas to allow opportunities for alternative income generation on the farms.
- Promote use of rivers, mountains and other natural features to enhance tourism
- Building awareness of conservation and cultivation in supporting Robertson Wine Valley's Handson Harvest, kykNET and Robertson Wine Valley's Wacky Wine Weekend; Robertson Slow Lifestyle Festival; and Robertson Wine on the River.
- Continuously clear alien vegetation.
- Limit internal fences to create a natural corridor.
- Promote and support responsible stewardship of natural resources and environment and conservation area, including mitigation of environmental damage.
- Minimise waste and environmental damage in the food production chain.
- Be cautious where the impacts are unknown and uncertain.
- Act within ecological constraints and preserve critical natural capital that provides for continuous income from ecosystem advantages such as biological diversity, mineral resources and clean air and water.
- Ensure that the joint capacity of the biophysical environment is not exceeded.

Develop

- Link the natural environment in the Langeberg Municipal area to the larger network of reserves and conservation areas in the larger region. The north eastern side of the municipal area already forms part of the Gouritz Cluster Biosphere Reserve (GBR).
- Promote the establishment of wild flower and nature reserves.
- Provide for recreational opportunities: Hiking, mountain bike trails around and along adjoining hills and mountains, bird watching, horse riding, 4 x 4 trails and clay pigeon shooting, whale watching.
- Develop interface guidelines (use of colours, landscaping, lighting, massing and form) to manage open space & river frontage and routes.
- Determine a development line along foot of mountain (conservation & landscape).



Map 20: Gouritz Cluster Biosphere Reserve

Management directives for natural environment and agricultural zones include:

Agriculture and Conservation. Protect:

- Protect critical biodiversity areas, ecological corridors and natural habitats and provide for ecological links to support connectivity between habitat areas.
- Promote Conservancies enhancing land management.

- Promote the conservation of natural, cultivated & domestic (farm yard) Langeberg landscapes; Protect landscape features including heritage elements, old farmsteads, mature trees and tree lanes, changing of seasons reflected in landscape colour and structure.
- Protect scenic routes and vistas and unique natural landscapes.
- Promote erosion (wind and water) prevention and rehabilitation through protective preparation methods and the planting of perennial crops.

Change:

- Establish landscape and buffer areas or climate change corridors: from North West of Langeberg with Anysberg Reserve (neighbouring municipality).
- Support the establishment of Open Space Networks and Conservation Corridors in urban and rural areas to protect natural habitat areas and to mitigate climate change.
- Establish buffer conservation area along mountain corridors to ensure effective conservation and management of natural vegetation remnants.
- Protect and conserve the agricultural landscape through development guidelines.
- Support evolving heritage as tourism destinations such as a cultural and landscape routes.
- Protect the sensitive natural environment and agricultural resources maintaining food security from inappropriate and opportunistic development.

Develop:

- Support development of capacity for environmental awareness and education.
- Support the application of an Environmental Management Framework (as part of this SDF) for Langeberg
- Promote management and conservation of catchment areas, clearing of alien vegetation, wetland and river management.
- Promote risk and disaster management plans.

Environmental Impact Management directives for natural environment zone are outlined below:

Management priority	Priority focus areas
Improve and rehabilitate	All management and rehabilitation activities within the biodiversity priority zones, must be set out by the Environmental Management Plans for the identified areas.
Conserve and preserve	Conservation areas designated as biodiversity priority areas as indicated in the Spatial Development Framework, must be retained and preserved. All other impacts on natural veld must be identified and guided by an environmental impact study.
Environmental Impact Assessment Requirements	All proposed impacts that will lead to the clearing of more than 300m ² of natural vegetation, where natural vegetation covers more than 75% of the area, must be subjected to an environmental impact assessment and environmental approval must be obtained before the activities may take place. Proposed large scale tourism facilities must be subjected to an environmental approval must assessment and environmental approval must be obtained before the development may take place.
Monitoring and management aspects	All monitoring and management aspects must be set out by a biodiversity environmental management plan, to be drawn up for priority areas.

6.2.4.2 Natural Disaster: Ecosystem Deterioration

Ecosystems Deterioration (Climate change -Theme 1) should be avoided.


Map 21: Ecosystems Deterioration Risk in the Western Cape, highlighting areas where compromised natural features coincide with vulnerable population

6.2.4.3 Opportunities: Tourism and Agri-tourism,

The natural landscape provides a sense of place that reflects the cultural integrity and heritage of the environment. Langeberg as a conservation and ecotourism area provide a magnitude of opportunities of which one is an Outdoor Sport and Recreation route. Such a route should encourage outdoor activities (recreational opportunities (hiking and mountain biking in Montagu, bird watching, wild flower, horse trails and fishing and water sport (e.g. canoeing on Breede River)) and provide for hiking and mountain bike trails on farms, public and private nature reserves. Such a route could include church towns (Robertson, Montagu and Bonnievale) and should extent across municipal boarder to Worcester and Swellendam.

Management directives for natural environment and agricultural zones include:

The National Heritage Resources Act, Act 25 of 1999 (NHRA), supports the integration of heritage management and planning functions. Accordingly and to the provisions of Sections 30 (5) and 31 of this Act, it is the responsibility of the local authority to compile a heritage inventory in its areas of jurisdiction inclusive of heritage resources, landscapes and prominent natural features, which form an important part of the cultural resources and give Langeberg its **sense of place of the Langeberg** and forms the basis of tourism

Municipalities are responsible for the grading of heritage resources to ensure the effective management and preservation thereof. Grading has to be overseen by the Provincial Heritage Authority. The local authority can, under the Heritage Act, become a heritage authority in the local areas for some of the approved grading. The grading of heritage resources is in three categories: Grade I - heritage resources in the national interest, Grade II – heritage resources in provincial and regional interest, and Grade III – other heritage resources.

Management directives for natural environment zones concerning tourism and agri-tourism includes:

Conservation and Agri-Tourism Develop:

Tourism Routes and Destinations:

Develop eco-tourism opportunities and increase awareness.

Promote recreation: Hiking, Cycling/mountain biking, Fishing.

Promote Resorts: Camping, caravan parks, hot springs and game reserves.

Promote Nature reserves located in the Municipality including:

Provincial:

- Anysberg Nature Reserve; and,
- Vrolijkheid Nature Reserve.

Local:

- Dassieshoek Nature Reserve; and,
- Montagu Mountain Nature Reserve.

Forest Act Protected Area:

- Twistniet Nature Reserve;
- Marloth Nature Reserve;
- Witbosrivier Nature Reserve; and,
- Riviersonderend Nature Reserve.

Include tourism sites and heritage resources found throughout Langeberg as part of proposed routes or

festivals:

- Myrtle Rigg Memorial Church (Erf 494, Bonnievale);
- Hodges Bridge (located approximately 700m from the R60 and R62 intersection towards Montagu);
- Voortrekker Monument (c/o Bath and Cross Streets, Montagu);
- Powder Magazine (located along R60 outside of Robertson, towards Worcester);
- Guano Caves (located along the R62, Portion 16 of Farm 149 Montagu); and,
- The Fort (located approximately 2.5km south of Montagu).

Promote tourism strategy being revised regularly:

- Promote the link between rural, urban and agri-tourism opportunities. Map farms offering tourism opportunities and link them as part of wider tourism routes.
- Promote effective management and maintenance of existing tourist attractions and investigate new tourism opportunities.
- Provide for tourism infrastructure (roads and existing services), based on environmental impact assessment considerations.
- Provide opportunities for the local community, especially unemployed and disadvantaged people, to access to economic opportunities (arts and crafts, local guides, and local food).
- Support agri-tourism opportunities on farms especially along the Langeberg Rivers and in mountains ranges.

- Promote the use of socio-economic resources such as the biomes, wildflowers, unique natural vegetation, existing parks, conservation areas, historical and cultural heritage and landscapes as tourism resources. Conservation Route (R62); Montagu to Robertson, Conservation & Heritage area: Langeberg and Riviersonderend Mountains and Mountains on northern boundary of Langeberg.
- Support tourism routes within the Winelands District Municipal jurisdiction, incorporating the areas of Langeberg i.e.
 - The Winelands Wine Route including Robertson, Ashton, Montagu, Bonnievale& McGregor.
 - The Winelands scenic routes: R60, R317 from Bonnievale and Robertson.
- Support the development of water resources for sport and recreation. Provide specifically for pick nick areas on and in the water.
- Promote infrastructure that will support the local tourism industry in urban and rural areas.
- Delineate zones and routes related to agriculture and tourism & support farm stays and tourism accommodation to these zones and routes.
- Development of guidelines for resorts along Bree River and other rivers in Langeberg.
- Encourage Film industry uses (business tourism).

Agri-Tourism

- Promote development of infrastructure (private and public), facilities and accommodation on farms that support tourism routes and freight networks, including farm stalls (leisure tourism) and agriprocessing (business tourism) informed by environmental impact assessments where required.
- Support tourism accommodation, leisure accommodation and resort development along tourism routes, on farms and along waterways and water sources e.g. Breede River.
- Incorporate heritage resources as part of festivities.
- Strengthen value chain and support tourism development on farms as an additional source of income:
- Capitalise on recreation and sports events as commercial opportunities e.g. Bree River canoe marathon, river rafting and create moe opportunities for canoeing, fishing and water sports.
- Strengthen tourism routes between Langeberg and neighbouring municipalities.
- Provide opportunities where the local community, especially unemployed and disadvantaged people can get access to economic opportunities (arts and crafts, local guides, local food).
- Strengthen and expand tourism routes, festivals (e.g. Wine Valley's Wacky Wine Weekend) and events (e.g. Rafting).
- Support agri-tourism opportunities on farms especially along the Bree River and other rivers.
- Support and develop socio-economic resources such as unique natural vegetation and existing parks, historical and cultural heritage, landscapes (vineyards & orchards & horses) and mountains.

Develop:

In rural and urban areas with economic potential, develop opportunities and promote growth in the following:

- Regional and local agricultural service centres (Robertson wards 8, 9, 10, 11, Ashton ward 1, 2, 3, Montagu– ward 5, 6 and Bonnievale & West ward 3) such as:
- R60 rural corridor around and between Robertson and Ashton including agricultural industries and big box agricultural buildings.
- Agri & conservation and eco-tourism in Montagu and in Keisie and Koo.
- Agri & eco-tourism corridor at Montagu along Kinga River corridor/ meander and along Breede River at Bonnievale.

- Strengthening and support of the agri-tourism industry (improve accommodation facilities on farms, development of niche products, develop hiking and mountain bike trails), support agricultural festivals in the region, develop new tourism routes (Wine route McGregor Bonnievale Robertson Direction Worcester [R60]) (Stone fruit route Robertson to Montagu [R62] into Keisie [R318]) (Tourism route: Robertson to Bonnievale; Robertson to McGregor [R317 &Langverwagten Road] &Robertson to Montagu [R62]). (Agricultural Landscape Route: Robertson to direction McGregor&Bonnievale), support farm stalls, involve more people in the tourism industry).
- Grow Langeberg as part of the bigger Winelands region: Birdlife, Biomes, lush agricultural Landscape, Horses, wine production.
- Support economic incentives to stimulate growth.
- Support alternative uses of farms.
- Re-orient existing agricultural model to allow for the creation of smaller agricultural units and cooperative farming in rural areas.
- Capitalise on mild climate: Hot dry summersand mild wet winters
- Promote development of infrastructure (private and public) and facilities on farms that support freight networks, including agri-processing and storage.

Management priority	Priority focus areas: Cultural and Recreation Resource Zone
Improve and rehabilitate	Rehabilitate buildings that have culturally historical value.
Conserve and preserve	Manage, rehabilitate and preserve culturally historical landscapes, graves,
	monuments, etc. as described under the Heritage and Cultural Law.
Environmental Impact	All monitoring and management aspects must be set out by an environmental
Assessment Requirements.	management plan to be drawn up for biodiverse priority areas. The assessment
	process will determine what impacts may occur on the cultural-historical aspect.
Monitoring and management	Specialist studies will identify monitoring and management aspects.
aspects	These must be included in the Environmental Management Plan, which will
	regulate the management and monitoring of all cultural historical areas.

An Environmental Management Framework for Natural Environment Zones are outlined below:



Map 22: Langeberg Tourism Routes Langeberg Spatial Development Framework 2023-2028 Management directives for natural environment zones concerning landscapes and settlements includes:

Settlements and Rural Settlements and Sense of Place

Landscapes

Change:

- Preserve the character of the Langeberg, inclusive of the unique landscape of winelands, mountains and agriculture.
- Promote information about heritage resources and prohibition of loss of, and impact on cultural & heritage resources.
- Promote improved roadside signage and buildings in sensitive landscapes.
- Promote and protect the landscape (natural and heritage) features of the Langeberg as part of the tourism attraction.
- Promote the utilization of heritage resources as assets that need protection and can be utilised as a tourism attraction.
- Promote tourism to develop sensitively and contribute to the protection of the landscape and heritage landscape.
- Map landscape, incorporate in tourism maps and promote the protection of these landscapes.
- Promote the planting of trees by all households settled within Langeberg.
- Promote the:
 - Declaration of special heritage planning areas.
 - Protection of heritage resources and creation of areas with a fresh or new sense of place through urban design and rejuvenation. Support the restoration of historic spatial patterns and the effective and efficient use of existing infrastructure.
 - Issue of development and no-development instruction.
 - Submit the inventory of heritage resources and the heritage overlay zones to the relevant provincial heritage authority for formalization. The inventory should include historic buildings and structures, archaeological resources and heritage landscapes.

Develop:

- Develop understated, unique gateways/ entry point features to settlements.
- Map heritage areas on farms and in settlements to ensure appropriate development.
- Develop support infrastructure and spaces for festivals, events and celebrations.
- Support the development of integrated settlements and establish precincts with a fresh or new sense of place.
- Limit the impact of development and urban growth on significant landscape features.
- Promote scenic and heritage routes and the development of special management guidelines.

Develop:

- Support farm owners to develop agri-villages for their workers. These erven will become worker owned. The agri-villages can either be on farms or on municipal land in townships. Funding is available for either. Enrol farmworkers on housing waiting list.
- Promote urban agriculture: Make land available in urban areas for community gardens.
- Harvest storm water to cultivate community gardens.

- Develop design and development parameters to protect settlement patterns and visual landscape: Conserve historical town centres often determined by the location of drinking water or a church and grid layout pattern.
- Develop interface guidelines (use of colours, landscaping, lighting, massing and form) to manage open space & river frontage and routes.
- Protect unique character of settlement and within settlements.
 - Protect critical biodiversity areas, ecological corridors and ecosystems.
 - Protect unique natural and manmade landscape features and structures.
 - Protect scenic routes and vistas.
 - o Protect heritage features and landscapes and create future heritage landscapes.

Management priority	Priority focus areas: Conservation & Biodiversity Zone
Improve and rehabilitate	All management and rehabilitation activities within the biodiversity priority zones, must be set out by the Environmental Management Plans for the identified areas.
Conserve and preserve	Conservation areas designated as biodiversity priority areas as indicated in the Spatial Development Framework, must be retained and preserved. All other impacts on natural veld must be identified and guided by an environmental impact study.
Environmental Impact Assessment Requirements	All proposed impacts that will lead to the clearing of more than 300m ² of natural vegetation, where natural vegetation covers more than 75% of the area, must be subjected to an environmental impact assessment and environmental approval must be obtained before the activities may take place. Proposed large scale tourism facilities must be subjected to an environmental assessment and environmental approval must be obtained before the development may take place.
Monitoring and management aspects	All monitoring and management aspects must be set out by a biodiversity environmental management plan, to be drawn up for priority areas.

An Environmental Management Framework for the natural environment is outlined below:

6.2.4.4 Risks: Impact of Agricultural and Mining Production and Technology

Management directives for natural environment zones include:

Netting, tunnels and agricultural industry and public utilities. **Change:**

The erection and location of poly tunnels and agricultural shade netting or/ and the establishment of an agricultural industry on a farm of 2000 m² and more in extent should address concerns of adverse impacts on visual, cultural and heritage amenities and the Municipality may require repositioning, screening and any other measures which may address negative adverse impacts whilst taking cognisance of the importance of agriculture and food security

The decommissioning of poly tunnels and agricultural shade netting is required. The conversion of agriindustrial buildings for a different purpose instead of demolishing of such infrastructure instead of demolishing should address again concerns of adverse impacts on intensity of surrounding use (traffic, movement, noise) character (sense of place) and cultural and heritage amenities.

An adverse impact on surrounding properties, in respect of, but not limited to, noise, traffic congestion, pollution, emissions or the gathering of large numbers of people, or the presence of people hindering agriculture e.g. during spraying season, nor may the tourist activities have an adverse impact on any *bona fide* agricultural activities on the farm itself or on neighbouring properties.

Municipality shall impose conditions relating to the period of validity, other operational requirements, as well as future rehabilitation of the mine after closure.

Fences comprising of only wire or steel palisade (painted charcoal, black or dark green), not exceeding 2,1m are allowed. No masonry wall exceeding 1 meter and no brick piers shall be permitted in wire or steel palisade fences and only the entrance gate structure maybe of solid brick structures in moderation.

Public Utilities:

- Promote communication corridors and zones, improved communication networks and promote access to information & technology including access to internet prioritizing rural areas
- Support the establishment and sensitive location of communication network facilities/ data centres / telecommunication towers in rural areas and on farms
- Provide for adequate bulk infrastructure and the location thereof according the change directives above

An Environmental Management Framework for the natural environment is outlined below:

	Types	Types of developments, land uses or activities					
Conservation and Critical Biodiversity Areas	That should not occur	That may have significant impact	That have no significant impact	Related policies and guidelines			
Conservation areas	Developments that are not focused on eco-tourism.	Developments that are not focused on eco-tourism.	Eco-tourism developments.	Environmental Impact Assessment and Guidelines.			
Critical Biodiversity Areas 1	Developments that are not closely focused on eco- tourism.	Developments that are not focused on eco-tourism.	Eco-tourism developments.	Provincial Spatial Development Framework for the Western Cape Province.			
Critical Biodiversity Areas 2 (Rehabitable & irreplaceable areas)	Developments that are not closely focused on eco- tourism.	Any developments that are not focused on eco-tourism.	Eco-tourism developments.	All legislation with an environmental aspect and corresponding regulations,			
Critical Ecological Support Areas. Other Ecological Support Areas	Developments that are not closely focused on eco- tourism.	Residential Developments, Commercial and Industrial Developments. High intensity agricultural activities.	Services distribution. Limited development after Environmental Impact Assessment has determined the guidelines.	policies and guidelines.			
Other Natural Vegetation Areas	Uncontrolled development.	Residential Developments, Commercial and Industrial Developments. High intensity agricultural activities.	Residential Developments, Commercial and Industrial Developments.				

Cultural & historical areas	Types of d			
Environmental Impact management	That should not occur	That may have significant impact	That have no significant impact	Related policies & guidelines
Towns	Demolition of historical buildings. Any negative impacts on buildings or sites that have cultural or historical values.	Any development.	Restoration of buildings for offices, guest houses, etc.	Cultural and historical legislation, policies and guidelines.
Landscapes	Uncontrolled, unsightly development.	Uncontrolled, unsightly development.	Limited, low density development that is not visually	Cultural and historical legislation, policies and guidelines.

Historical areas	Uncontrolled, unsightly development.		Uncontrolled, unsightly I development.		apparent and adds value to the environment. tly Limited, light density development that is not visually apparent and adds value to the		Cultural and historical legislation, policies and guidelines.
					environment.		
Scenic routes	Uncontrolled, unsight development e.g. win	sightly Uncontrolled, . wind farms development.		isightly	ly Limited, light density development that is not visually apparent and adds value to the environment.		Cultural and historical legislation, policies and guidelines.
Public open spaces:	That should not occur	That may l	That may have significant That I impact		ave no significant impact	Re	ated policies and guidelines
Structured open spaces & networks	Commercial, Industrial or residential developments.	Commercia residential	nmercial, industrial or dential developments.		Limited development.		al Impact Assessment and Guidelines. Datial Development Framework for the De Province. In with an environmental aspect and Ing regulations, policies and guidelines.



6.2.4.5 Proposals

- Investigate the establishment wild land interfaces of a 100m 1000m respectively using the outline of settlements and agricultural production units as per previous SPC map where all farming areas are categorised as buffer areas.
- Expand Gouwritz Cluster Biosphere over entire area northern of Langeberg area.
- Promote the Langeberge and the Riversonderend Mountains and Gouwritz Cluster Biosphere as important conservation corridors across municipal boundaries.

6.2.5 Air & Wind

6.2.5.1 Natural Resource: Air and Wind



Map 23: Average Wind Speed, Langeberg

6.2.5.2 Natural Disaster,

Cyclones and Tornados, which is unlikely.

6.2.5.3 Opportunities: Alternative Energy

Alternative energy sources mitigate climate change and air quality contribute to good health.

Management directives for air and wind include:

Alternative energy from wind and solar facilities:

- Promote alternative energy generation facilities in viable zones only.
- Protect Surface & Groundwater: Design of roads and treatment of runoff from roads and disturbed surfaces, to reduce sedimentation and eliminate erosion. Prohibit potential for erosion and soil types influence caused by road construction and re-vegetation.
- Detailed vegetation assessment needed if the proposal is not in an agriculturally disturbed area; Assessment should include location and condition of:
 - Extent of disturbed or alien vegetation.
 - Extent of any natural vegetation.

- \circ $\;$ Indigenous and endemic species.
- o Rare and threatened species.
- Consider the following for terrain suitability:
 - Slopes by gradient classes.
 - o Rocky areas.
 - Soil type and permeability
 - o Natural watercourses and areas with high water tables, rainfall data.
 - o Vegetation.
- Require highly stable underlying geology for heavy wind turbines and consentrated sun facilities: Investigate existence of bedrock, subterranean voids and possible seismic activity.
- Consider placement on Slopes given impact on:
 - Wind Potential slopes, up to a certain gradient, orientated towards prevailing wind directions, tend to augment average wind speed;
 - Solar radiation slopes influence placement and various technologies require different placement direction.
 - Visibility wind and solar farms on slopes have increased visibility;
 - Road layout and design slopes to be considered in road layout to reduce erosion potential, of road run-off, rock-fall and landslide potential;
 - Tower foundation/ pedestal design needs to consider falls across the platforms;
 - Soil stabilization steep road verges and cuts require re-vegetation to reduce erosion from run-off.



6.2.5.4 Risks: Air Quality

Poor air quality compromises people's health (Climate Change Theme 5) and livelihoods - specifically when exposure to atmospheric pollutants leads to respiratory diseases, which indirectly weakens immune systems and reduces optimal functioning. Poor health, in turn, increases vulnerability to the impacts and effects of other, unrelated threats brought about by disasters or economic hardship, such as extreme weather conditions or food shortages.

A map of potential risk, i.e. combining air pollution hazard with vulnerability, is generated by multiplying a vulnerability index with the values from potential emissions factors calculations (Figure below). The map shows how the potential hazard (count of potential emissions source types) and vulnerability interact to generate a picture of the relative risk of experiencing impacts from poor air quality.

Susceptibility to respiratory infection, on the other hand, is not mapped directly by authorities, but the CSIR has compiled a health index at census enumerator area scale for the purposes of mapping COVID-19 related risk 7 based on a combination of values for:

- Poverty
- Age
- Child mortality
- HIV
- Life expectancy

This index is used to highlight where communities are most likely to have high sensitivity to poor air quality from a health risk perspective.



Map 24: Relative index of air quality related risk

Management directives for air and wind include:

Air Quality and Wind Develop:

Where information is available or where emission factors can be applied to quantify emissions, an emissions inventory for air pollution sources has been compiled for the CWDM. Potential air pollution sources in the Langeberg have been identified as:

• *Industrial operations* - mainly emissions from small boiler sources and larger industry such as canning factories and lime mining.

- Agricultural activities although not quantified, agricultural activities are considered to be a contributor to ambient particulate concentrations. Agriculture is a dominant land-use within the Langeberg.
- *Mining Activities* Mining activities, yet to a limited extent. Pollution sources are mainly surface activities like waste loading and unloading, resource loading and unloading, exposed screening plants, waste dumps, stock yards, exposed pit surfaces, transport roads and haul roads.
- Biomass burning (veld fires) also not quantified, owing to the irregular and seasonal nature of this source.
- *Domestic fuel burning* mainly wood and paraffin burning in informal settlements: Robertson, Nkqubela and informal farmers at McGregor are the largest contributors to domestic fuel burning emissions, mainly due to the predominant use of wood.
- *Vehicle tailpipe emissions* from petrol and diesel vehicles along major roads but this is not considered to be a significant air pollution source.
- *Waste Treatment and Disposal* information regarding disposal facilities (landfills and incinerators) has been partially collected.
- Dust from paved and unpaved roads.
- Other fugitive dust sources such as wind erosion of exposed areas.
- Particulate and gaseous emissions from industrial operations, domestic fuel burning and vehicle tailpipe emissions have been quantified for this assessment (See SANS 1929:2005 - Ambient Air Quality - Limits for common pollutants and National Environmental Management: Air Quality Act 39 of 2004).

Air quality can decrease because of increased temperatures, greenhouse gas emissions and demand for local fuels. Impacts associated with climate change and the failure to implement mitigation measures may result in increased air pollution episodes. Measures to address climate change include increasing the number of monitoring stations in the Western Cape, effective dissemination of air quality information and introducing cleaner fuel programmes for households and transport.

Develop

Support Langeberg Municipality to:

- Identify priority pollutants (in terms of its by-laws).
- Establish Local air quality standards (more stringent).
- Establish Local emission standards.
- Appoint Local Air Quality Officer.
- Develop an Air Quality Management Plan (AQMP) as part of their IDPs.
- Monitor ambient air quality.
- Prepare an annual report regarding the implementation of the AQMP.

6.2.5.5 Proposals

Promote planting of trees and plants that keeps air clean as part of every development.

6.2.6 Sun

6.2.6.1 Natural Resource: Solar Radiation



Map 25: Solar Radiation

6.2.6.2 Natural Disaster: Heat wavers

Unlikely.

6.2.6.3 Opportunities: Alternative Energy

Management directives for sun include:

Alternative Solar Energy Facilities

Change:

- See management directive for alternative wind energy facilities.
- Promote alternative energy generation facilities in viable zones only.
- Provide for solar facilities to cater for future urban expansion. Generate alternative energy: Robertson, McGregor, Bonnievale, Ashton and Montagu.
- Provide for expansion of transmission infrastructure.

6.2.6.4 Risks: Evaporation

Too high or low evaporation.

6.2.6.5 Proposals

Delineate firebreak buffers around towns.

Promote Solar Energy allowable overall of Langeberge.

6.2.7 Connectors

6.2.7.1 Man-made Resource: Roads and Rail, Social Amenities

R60 and R62, R317 and R318, railway.

R60 and	The locality of the Langeberg as connector to the Klein Karoo in the north, the rest of the Winelands
R62	and the Overberg districts in the south, cause three important freight and scenic routes, to cross the
	region. These freight routes are:
	 R60 as gateway to N1 and the markets in and from Cape Town in the south;
	 R62 as link between the Winelands and Klein Karoo (Oudtshoorn) and N12;
	 R317 as link between the Winelands and Struisbaai on the Coast.
R318 &	Link between Breede River and Groot Karoo.
317	Link between Breede River and Coast.
Public	Public transport is limited to the local bus and taxi services operating on some public transport
Transport	routes.
Transport	Intersection nodes is located at the intersection of the R60 and R317 in Robertson; and at the R60
Nodes	and the R62 in Ashton.
Railways	There is a railway line from Belville to Gauteng passing through Robertson and Ashton. Rail freight
	has declined significantly, while road freight has increased exponentially with the R60 and R62 as
	a major freight route through the Langeberg.
Airways	There is a private airport at Robertson.

6.2.7.2 Disasters: Natural Disasters

Flooding disrupting connection.

6.2.7.3 Opportunities

Management directives and development proposals for connectors include:

Mobility, Transport Networks &	Protect: Maintain existing and develop new transport infrastructure sensitively to the agricultural and conservation landscape conservation. Change:
Economic	Rail
links	 Promote use of rail as alternative transport (freight – agriculture and mining) and introduce passenger rail (commuters & tourists) through Winelands (Belville to Oudtshoorn. (inter municipal route).
	 Promote renewal/ upgrading existing station buildings as well as crop storage facilities along the line.
	 Promote private rail operators to provide alternative transport between Worcester, Robertson and Ashton to support increased economic links & mobility of people.
	Road
	 Functionally (easy access) integrate rural and urban areas using connector roads.

	 Promote maintenance of road network to support economic activities (commercial, industrial and agricultural).
R60 and	Support the enhancement of freight routes:
R62	R60 as gateway to N1 and Cape Town in the south and provide for opportunities in
	Robertson and Ashton for freight and distribution related industries;
	• R62 as link between the Winelands and Klein Karoo (Oudtshoorn) and N12 and provide for
	tourism infrastructure and activities;
	R317 as link between the Winelands and Struisbaai on the Coast and provide for tourisme
	infrastructure and activities.
R318	Strengthen link between R62 & R318 connecting Breede River and Groot Karoo.
Public	Support the determination of the viability of and promote a reliable public transport service along the
Transport	R60 between Robertson and Ashton, Ashton and Montagu (R62) as well as between Robertson
	and Bonnievale (R317) to increase the mobility of the local community.
Transport	Safeguard the formalization of the intersection of the R60 and the R317 in Robertson and the R60
Nodes	and R62 in Ashton. Promote the development of the intersections as nodes.
Railway	Support the implementation of special train trips:
	 Between Robertson & Ashton (tourism and employment elsewhere or access to
	education). (railway line to Gauteng).
	- from Cape Town to Robertson and Ashtonand Bonnivale during winter season.

Social Amenities

Change:

- Promote tertiary education facilities in the Langeberg.
- Promote farm schools and sport facilities to ensure easy access to education and a balanced life.
- Promote mobile social services to be provided in rural areas, including mobile clinics, early childhood education facilities, mobile libraries, firefighting, ambulance service, busses and taxis, law enforcement.
- Promote improved mobility in rural areas: Provide for upgrading pedestrian routes and adequate lighting.
- Promote access for farm workers to education and development programmes.
- Provide social amenities according to CSIR standards to ensure access to social services.

Develop:

- Provide for and support development of early childhood education facilities on farms and rural areas.
- Enhance public areas or spaces through promoting urban design and landscaping.
- Promote the identification and formalization of public open spaces along specific water courses.
- Promote safe living environments and provision of supportive infrastructure.
- Identify strategic sites to provide for consolidated, centralised social and sport infrastructure in highly accessible nodes i.e. sport complexes combined with community facilities such as a Thusong centre.
- Identify and provide for safe/all-weather bus/taxi stops along main transport network to serve the rural community.

6.2.7.4 Risk

Lack of social services and deterioration Human Development Index.

6.2.7.5 Proposals

Provide social amenities according to CSIR standards to ensure access to social services.

6.3 Composite Proposals

The composite spatial plan⁶ illustrates all the rural development proposals. The composite plan also illustrates the well-connected location of the Langeberg and the opportunities for spatial integration of the rural development proposals provide.



Map 26: Langeberg Composite Proposal

⁶ Composite SDF: SPLUMA Section 12(g)(k)(l)(o), Section 21(b)(n)(o) and Sec21(p)(iii)

CHAPTER 7: Implementation Plan and Capital Expenditure Framework

7.1 List of proposals for settlements and rural area

Ashton

Reference (GLS)	Use 2023+	Use 2017+	HA23	HA17	HA CE
A03	Agri-Industry		5.735		5.735
A04, A17, A18, A22	Business Node		16.264		16.264
A16	Cemetery		9.482		9.482
	Central Business				
A15	District		10.445		10.445
	Dept of Human				
A01, A07, A25	Settlements		43.387		43.387
		High Density			
A11		Affordable		6.5	6.5
A04, A01, A03, A07, A08, A09,					
A10, A12, A13, A14, A15, A16,		High Density			
A17		Single Res		61.7	61.7
A06, A05	Industrial	Industrial	58.315	27.2	58.315
A02	Infill Development		0.267		0.267
	Mixed Use				
A23	Development		15.369		15.369
		Parks & Sports			
A02		field		2.5	2.5
A21. A24	Place of Instruction		2.541		2.541
A12, A13	Public Open Space		1.928		1.928
A05, A09, A10, A11, A14, A20	Residential		44.018		44.018
A19	To be formalised		28.84		28.84
A19	To be formalised		28.84		28.84

Robertson

Reference (GLS)	Use 2023	Use 2027	Ha 23	Ha 17	HA CE
R32	Agri-Industry		5.383		5.383
R02	Approved Deve	lopment	1.411		1.411
R04, R11, R28, R29	Business Node		7.2		7.2
R26, R27		Business/Commercial	0.5		
R10	Cemetery		7.231		7.231
R18	Central Busines	s District	41.714		41.714
R22, R34	Dept of Human	Settlements	31.899		31.899
23, R Outs	Fire Station		0.497		0.497
HA	Heritage Area		136.649		136.649
R01, R02, R03, R05, R06, R09,	R24, R11, R10,				
R18, R25, R15		High Density Single Re	es	68.5	68.5

R12, R25, R26, R27, R31, R13,					
R16, R17	Industrial	Industrial	91.591	12.5	91.591
		Cluster G	roup		
R23, R28, R30, R29, R04, R32, R33	, R31	Housing	0.698		0.698
R15	Infill Developr	nent	0.698		0.698
R07, R08, R19, R20, R21, R22		Medium Density S	Single red	40.9	40.9
05. R19	Mixed Use De	evelopment	50.474		50.474
R06. R17. R21	Place of Instru	uction	3.615		3.615
R33	Public Open S	Space	0.366		0.366
R03. R07. R08. R14. R16. R20.					
R24. R30	Residential		49.982		49.982
R13	Small Busines	SS	2.301		2.301
R01, R35	To be formalis	sed	15,219		15.219
Reference (GLS)	Use 2023	Use 2027	Ha 23	Ha 17	HA CE
R32	Aari-Indust	rv	5.383		5.383
R02	Approved [)evelopment	1.411		1.411
R04, R11, R28, R29	Business N	ode	7.2		7.2
R26 R27		Business/Commerc	ial 0.5		
R10	Cemeterv		7.231		7.231
R18	Central Bus	siness District	41 714		41 714
R22 R34	Dept of Hu	man Settlements	31 899		31 899
23 R Outs	Fire Station		0 497		0 497
HA	Heritage Ar	ea	136 649		136 649
R01 R02 R03 R05 R06 R09 R2	4 R11 R10	04	100.010		100.010
R18. R25. R15	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	High Density Single	Res	68.5	68.5
R12, R25, R26, R27, R31, R13, R16		5			
R17	Industrial	Industrial	91.591	12.5	91.591
R23, R28, R30, R29, R04, R32, R33	, R31	Cluster Group Hous	sing 0.698		0.698
R15	Infill Develo	pment	0.698		0.698
R07, R08, R19, R20, R21, R22		Medium Densitv Sir	nale red	40.9	40.9
05. R19	Mixed Use	Development	50,474		50,474
R06. R17. R21	Place of Ins	struction	3.615		3.615
R33	Public Ope	n Space	0.366		0.366
R03, R07, R08, R14, R16, R20, R24	, ,	(
R30	Residential		49.982		49.982
R13	Small Busir	ness	2.301		2.301
R01. R35	To be form	alised	15.219		15.219

Montagu

Reference (GLS)	Use 2023	Use 2027	Ha 23	Ha 17	HA CE
M07, M15	Business Nod	е	1.555		1.555
M01	Cemetery 3.685				3.685
M17	Central Business District 1		19.511		19.511
M02, M03, M04, M05, M06	Dept of Huma	n Settlements	11.718		11.718
M15		High Density Affo	rdable	1.8	1.8
M11, M17, M18, M16, M13	High Density Single Res			31.4	31.4

M11, Outs	Illegal Occupatio	n	1.39		1.39
M18, M05, MO6	Industrial	Industrial	13.548	1.8	13.548
M14		Low Density Single Re	S	13.4	13.4
M01, M02, M03, M04, M07, M08,	M09,	Medium Density Single	e red	42.2	42.2
M14	Mixed Use Deve	lopment	12.573		12.573
M08	Place of Instructi	on	0.264		3.615
M12		Parks & Recreation		4.4	4.4
M09mM12, M13, M16	Residential		9.35		9.35

Bonnievale

Reference (GLS)	Use 2023	Use 2027	Ha 23	Ha 17	HA CE
B19, B20, B21	Agri-Industry		43.115		43.115
B11, B14	Business Not	de	5.475		5.475
B09, B15, B16, B24	Cemetery		11.462	5.458	11.462
B18	Central Busin	ness District	10.286		10.286
B06,	Dept of Huma	an Settlements	29.24		29.24
B05, B06	-	High Density Single Res		52.7	52.7
B03, B17, B03, B08, B09	Industrial	Industrial	23.363	18.2	23.363
B23	Infill Develop	ment	0.698		0.698
B07		Low Density Single Res		15.1	15.1
B01, B02, B04		Medium Density Single re	d	13.9	13.9
B22	Mixed Use D	evelopment	26.399		26.399
B08	Place of Instr	ruction	0.77		3.615
B01, B02, B04, B05, B10, B12,					
B13	Residential		5.02		5.02
B07	To be formali	sed	15.918		15.918

McGregor

Reference (GLS)	Use 2023	Use 2027	Ha 23	Ha 17	HA CE
Mc02	Business Node		0.212		0.212
McCem	Cemetery		6.454		6.454
Mc01	Central Busines	s District	6.97		6.97
Mc03, Mc04, Mc05	High Density Sir	ngle Res		6	6
		Cluster Group			
Mc02		Housing		9	9
Mc01		Parks & Recreation	0.366	3.1	3.1
Mc05	Residential		2.76		2.76
Mc03	To be formalised	b	2.583		2.583

7.2 List of infrastructure requirements (proposals that require infrastructure, infrastructure allocations, Infrastructure required)

- Robertson requires new sewer works

- Robertson, Ashton, Bonnievale, Montagu require reliable electricity supply

7.3 Priorities

	Housing &	Commercial/	Industrial	Sewer	Electricity	Water
	Residential	Mixed Use				
Ashton	3				1	1
Bonnievale					2	
McGregor						
Montagu	2	1 (Destination)			3	
Robertson	1		1 (Bullida & Erf 2)	1	1	1

Development of Industrial Area (Bullida & Erf 2)

Private Residential and Subsidized Residential development in Montagu, Bonnievale and Robertson.

Development of Destination hub (Commercial) in Montagu

7.4 Budget

Infrastruktuur tipe	Infrastructure Type	22/23	23/24	24/25	25/26	26/27
Kapitale vervangingsreserwe	Capital Replacement Reserve	59 542 944,00	163 195 408,00	40 863 232,00	41 075 381,00	N/A
Eksterne Lenings	External Loans	47 800 000,00	33 500 000,00	-		N/A
Subsidies	Grants	48 743 413,00	41 093 043,00	38 843 478,00	40 630 278,00	N/A
c. Oorhoofse Kapitale begroting	g uitgawes per infrastruktuur tipe/ Hi	gh Level Capital Budget	Expenditure per Infrast	ructure Type		
Infrastruktuur tipe/ Befondsingsbron	Infastructure Type/ Funding Source	22/23	23/24	24/25	25/26	26/27
Subsidies	Subsidy	43 555 076,00	41 093 043,00	38 843 478,00	40 630 277,99	N/A
Geprioretiseerde fondse	Prioritized funds	79 622 508,00	161 923 701,00	31 672 000,00	33 128 912,00	N/A
Basiese Dienste & Pad Infrastruktuur	Basic Services and Road Infrastructure	123 177 584,00	203 016 744,00	70 515 478,00	73 759 189,99	N/A
Subsidies	Subsidy	2 777 337,00	-	-		N/A
Geprioretiseerde fondse	Prioritized funds	8 738 500,00	8 600 000,00	4 700 000,00	4 916 200,00	N/A
Sosial & ekonomiese Infrastruktuur	Social & Economic Infrastructure	11 515 837,00	8 600 000,00	4 700 000,00	4 916 200,00	N/A
Subsidies	Subsidy	43 555 076,00	41 093 043,00	38 843 478,00	40 630 277,99	N/A
Geprioretiseerde fondse	Prioritized funds	79 622 508,00	161 923 701,00	31 672 000,00	33 128 912,00	N/A
Operasionele Infrastruktuur	Operational Infrastructure	123 177 584,00	203 016 744,00	70 515 478,00	73 759 189,99	N/A

d. 5jaar Kapitaalbestedingsraamwerk/5-year Capital Expenditure Framework

e. Verwagte kapitaal benodig vir projekte op munisipale skaal en operasionele infrastruktuur./ Expected capital requirements for municipal wide projects and operational infrastructure.

7.5 Funding

Funding sources are Municipal income, Loans, Subsidies, Donations

7.6 Proposed priorities

7.8 Spatial Priority Areas

Robertson, Montagu & Bonnievale

- 7.9 Precinct Plans
- 7.10 Capital Investment and Expenditure Framework
- 7.11 Capital Investment Framework
- 7.12 Prioritisation Model for Capital Asset Investment
- 7.13 5 Year Capital Expenditure Framework
- 7.14 Affordability vs Expected Expenditure
- 7.15 Comprehensive project list
- 7.16Implementation Requirements
 - a) Institutional Structure
 - b) Private Sector Participation
 - c) Review and Monitoring of the SDF
 - d) Amendment of SDF

ADDENDUM, CHAPTER 3: Spatial Analysis, Legislative & Sectoral Plan Directives

3.1 Spatial Analysis and Legislative Directives

3.1.1 Biophysical Environment

3.1.1.1 Geology and Soils

Elements	Directives	Applicable Legislation
Geology and Soils: Langeberg is home Shale in river deltas and	Soil type (sandy gravel or alluvial soils) and	CARA, 1998: Protect natural resources (a)
floodplains, Arenite in fluvial aprons and deposits of Conglomerate	depth determine agricultural activities and	uncultivated agricultural land (b) slope > 20%
(sedimentary rock).	cultivation, flora and natural vegetation.	(c) vegetation within a vlei, wetland, marsh or
	Demarcate SPC to protect agricultural	within flood areas.
	productive, agricultural supportive and	Support production potential of agricultural
	natural areas.	land (prevent erosion -wind & water and
	Protect agricultural landscapes, rural areas	degradation of water resources).
	and scenic routes.	Effectively manage invasive plants.
Soils with strong texture contrasts and 15% and 35% clay are	Higher clay content around Robertson and	
located around and between Robertson and Ashton and around	Ashton requires detailed geo-technical	
Bonnievale Similar clay content is also present in Northern Koo	studies prior to development.	
Valley. Remaining soil has less than 15% clay. The deepest soils		
are around Bonnievale followed by Robertson and underlined by		
shale formations.		



Langeberg Soil Types and Depth

Local Municipalities Soil Types SIMBOOL, SIMBCLASS AC - Red-yellow well drained soils lacking a strong texture contrast BA - Soils with a plintic catena CA - Soils with a strong texture contrast CB - Soils with a strong texture contrast EA - Soils with limited pedological development EB - Soils with limited pedological development EC - Soils with limited pedological development EE - Soils with limited pedological development GA - Rocky areas Soil Clay and Depth CLAYDESCR, DEPTHDESCR Clay: < 15%; Depth < 450 mm Clay: < 15%; Depth >= 450 mm and < 750 mm Clay: < 15%; Depth >= 750 mm Clay: >= 15% and < 35%; Depth < 450 mm Clay: >= 15% and < 35%; Depth >= 450 mm and < 750 mm Map Center: Lon: 20°0'57.9"E Lat: 33°47'49.7"S Scale: 1:577 791 Date created: January 25, 2023



Map 27: Langeberg Soil Depth & Soil Type

3.1.1.2 Climate

Elements	Directives	Applicable Legislation
Climate: Majority of the region experience a semi-	Day night and (summer and winter) temperature	DMP
arid cold climate whilst to the north eastern part at	contrast, rainfall and rain season and wind	Strategically addresses risks. Fire; Drought; Floods; Road
Anysberg and both north and south of	determine agricultural activities, cultivation, flora	accidents; Wind; HIV/Aids; TB (risk reduction &
Cogmanskloof around Ashton and Montagu an arid	and natural vegetation types.	preparedness).
and cold climate is experienced (Köppen Geiger	Building design have to consider insulation, orientation,	
Climate system). Summers are hot and dry, while	materials (environmentally sensitive design, & thermal	
Winters are wetter and relatively cold with typical	characteristics), and help to reduce water demand and	
annual rainfall.	to mitigate climate change.	
	Risk zones should be identified and delineated.	
Rainfall ranges between 400mm to more than	Demarcate SPC to protect agricultural productive,	NWA, 1998
1000mm per annum, with the highest rainfall	agricultural supportive and natural areas.	Regulate use, development, management of water
experienced along Langeberg and Riviersonderend	Protect agricultural landscapes, rural areas and	resources & protect it.
Mountains.	scenic routes.	NFEPA project aims to Identify Freshwater Ecosystem
		Priority Areas to meet national biodiversity goals for
		freshwater ecosystems.
During summer time, the predominant wind	Spatially delineate likely locations for alternative	NEM: AQA, 2004
direction is southeast and during winter, west-	energy facilities according to irradiation and wind	Ensure national air quality is not harmful to health and
northwest. The northern part of Langeberg has a	speed and consistency:	well-being (ambient air quality standards, local
mean annual wind speed of 8–9m/s.	Langeberg north has medium solar radiation and	emission standards; and air quality monitoring and
Horizontal Global Irradiance above Langeberg is 1901	Langeberg north west & north east and south east	reporting).
- 2000 kWh/m ² /annum and on the western and	have average wind speeds of 7-8m/s.	White Paper for Sustainable Energy Use in the
northern border 2001 to 2100kWh/m²/annum. South of	Consider dominant wind direction (South East to	Western Cape, 2010 Zoning Scheme Regulations.
Langeberg it drops to 1801 – 1900kWh/m ² .	West North West) in settlement and building	
	design.	



3.1.1.3 Climate Change & Vulnerable Systems

Elements	Directives	Applicable Legislation
Langeberg experienced climate change alike the trends	Contribute to efforts to reduce emission of greenhouse	Climate Change Strategy:
anticipated in the Western Cape Climate Change Strategy (2008) for the period 2030 – 2045:	gasses to delay the impact of climate change. Protect water resources:	to reduce Provincial carbon footprint by regulating air quality; encourage alternative domestic energy
 Strategy (2008) for the period 2030 – 2045: Increased annual average temperature of at least 1 °C by 2050 (Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (2017) expected an increase of between 3 and 5 °C by 2100); Increased frequency and intensity of extreme events; Increased conditions conducive to wildfires (higher temperatures and increased wind velocity); Reduced rainfall in the western parts of the Western Cape; Decreased water resources; Reduced soil moisture from an increase in temperature coupled with a decrease in average precipitation; and, Temperature changes impacting on crop cultivation and causing crop burn, drought, pests and microbes resulting in yield reductions, and loss of rural livelihoods and use of shade netting. 	 Protect water resources: artificial groundwater recharge and strict ground water management systems; desalination of groundwater; local water resource management and monitoring; grey water recycling; Tariff structures to reduce water consumption. Waste water to be factored in when planning for growth, e.g. major industrial development Protect water sources in closer proximity of landfill sites. Building orientations, architecture and materials used must be sensitive to aspects (i.e. north facing, south facing, etc.) in order to reduce unnecessary energy consumption. Appropriate thermal treatment of buildings needs to be applied to ensure they maximise the use of natural energy and minimise the use of electricity. Appropriate treatment could for example include: Insulating outer walls, ceilings and windows to prevent heat/cool air loss; Constructing buildings with lighter coloured reflective roofs to reduce heat absorption in summer which will reduce 	 air quality; encourage alternative domestic energy use; use of refined (cleaner) fuels for transport; energy efficiency and renewable energy overall. White Paper for Sustainable Energy Use (2010) sets targets for sustainable energy use for the WC. 15% of electricity consumed in WC is to be sourced from renewable energy sources by 2014 measured against 2006 WC consumption. NWMS, 2011 Implement a waste management hierarchy during lifecycle of waste: avoid and reduce waste, - re-use and recycle, - recover, - treat and dispose. NBRBSA (1977) – Energy efficient buildings. SmartAgri, 2016 Sets out to: Provide a time-specific strategic roadmap to a climate-resilient agricultural sector. Provide spatially explicit, commodity-specific and scale-sensitive implementation pathways that are practical and effective for specific climate risks. Promote opportunities created by climate change adaptation and mitigation.
The changes above impact on four vulnerable systems:	reliance on air-conditioning;	in the face of complex and uncertain changes.
• The built environment, livelihoods and	Insulating geysers with thermal blankets; and,	• Strengthen enabling environment for
disasters – social systems, extreme events	Installing energy efficient lighting and appliances.	autonomous (farmer-led) and planned
(floods, fires).	Implement rainwater harvesting throughout the municipality. Building orientations, architecture and	(ยางอาการคน) เอริษาเรอร์.

 Natural systems – water, biodiversity, and coastal and marine systems and resources; Economic resources and infrastructure – energy, transport, health and air quality; and, Economic sectors – agriculture, tourism and fisheries. 	materials used must be sensitive to aspects (i.e. north facing, south facing, etc.) in order to reduce unnecessary energy consumption. Implement rainwater harvesting throughout the municipality. Educate residents on water saving measures and waste reduction through a municipal wide climate change programme.	 Facilitate a more integrated, co-ordinated and co-operative response through strong multi-stakeholder partnerships, networks, and knowledge sharing. Mobilize and direct new investments in agriculture in support of adaptation and mitigation.
Climate change will result in raised temperature, variability in precipitation, changes in precipitation patterns, changes in the growing season, rainfall pattern and availability of water, for both natural and irrigated agricultural production for example the wild flowers season and livestock farming. Given the dependency on water to cultivate, food security reduces as water resources decrease and competition for water increase. Changes in summer and winter temperatures result in crop damage. Agriculture and tourism are economic drivers in Langeberg.	 Preserve intensive (vineyards, orchards and pastures) and Extensive Agricultural cultivation. Regulate water demand especially for agricultural purposes; Develop more effective water management strategies; Improved technologies to be explored; Protection of ecological water reserves should be a priority. Protect agricultural landscapes, rural areas and scenic routes and settlement character. 	NWA, 1998 – Effectively managing water resources. Langeberg Municipality falls within the Breede-Gouritz Water Management Area. This agency plays a key role in protecting, using, developing, conserving, managing and controlling water resources in a cooperative manner.
Loss of biodiversity and resultant loss of ecosystem services (a 30% loss in species is projected, worst case scenario) and increased veld fires due to increased temperature, likely spread of alien vegetation, floods (rainfall events is likely to be fewer, with more dry days in between but more intense, impacting on crops, livestock, natural flora (wild flowers) and settlements).	 Demarcate SPC to protect and maintain biodiversity and eradicate alien vegetation. Mitigate the changes in cultivation practices and use of scarce resources and its impact on the landscape and tourism. Protect landscapes providing resilience: Georges, provide important connectivity and temperature and moisture refuges; South facing slopes, which, similar to gorges, provide refuge habitats; Topographically diverse areas, which contain important altitude and climatic gradients, ensures a range of microclimates. Riverine corridors, provide important connectivity. 	WCBSP, 2017 – Preserve Critical Biodiversity Areas. These are areas in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure. They are required to be maintained in a natural or near- natural state, with no further loss of natural habitat. Only low-impact, biodiversity-sensitive land uses are appropriate in these areas.

3.1.1.4 Topography

Elements	Directives	Applicable Legislation
The Langeberg Mountains, with an average height of 1000m to 1500m	Topography determines agricultural cultivation and	CWDM IDP, 2022/23 –
above mean sea level, runs through the middle of the municipal area.	natural vegetation.	2026/2027: Protect CBA's:
Different landscape character types, based on elevation of the	Demarcate SPC to protect agricultural productive,	agricultural activities and
landscape, are identifiable (Norberg-Schulz's (1980)):	agricultural supportive and natural areas.	urban development where
• Cosmic: does not contain individual places, but forms a continuous	Protect agricultural landscapes, rural areas and scenic	impact on biodiversity is
neutral ground.	routes: Intensify land use within urban areas.	lowest.
Classic: clearly defined mountains and hills, imaginable spaces such	Provide for minimal and mitigated urban development	
as valleys and basins.	along scenic corridors and routes.	
 Romantic: indefinite multitude of different places. 	Ensure land use changes maintain the integrity,	
Valleys and basins create a distinctive classic character with vast open	authenticity and accessibility of significant cultural	
central parts and lack of urban development being cosmic.	landscapes (WCPSDF, 2009).	
Langeberg Mountain ranges include:	Preserve rivers and topography determining river flow	WCPSDF, 2014
 Langeberge running northwest to southeast, 	Delineate buffers to prevent erosion of river banks and	Changes in land use to
Breede River, south of Langeberg, flows northwest to southeast.	slopes.	maintain integrity,
Riviersonderend Mountains forms southern municipal boundary.	Prevent sheet erosion being deposited into streams	accessibility and authenticity
 individual Mountains and Nougaspoort, forms northern boundary 	and riverbeds causing sediment and rivers becoming	of significant cultural
Waboom Mountains, midway between Langeberge and north eastern	shallow.	landscapes.
municipal boundary.	Preserve natural vegetation.	Guidelines for Human
	Positioning of conventional and subsidized housing: on	Settlement Planning and
	north facing slopes to benefit from most exposure to	Design, 2000 - topography of
	sunlight.	the site is the most important
		structural element to start
		with.
Slopes of more than 25% (greater than 1:4) are present at:	Avoid settlement making on slopes steeper than 1:4,	
 North and south of Robertson; 	locate on leveled areas to mitigate visual impact; and	
East of Bonnievale;	mountain ridges, high building costs given foundation	
North of Ashton; and,	requirement for steep slopes (>1:4).	
East of Montagu.		

3.1.1.5 Hydrology

Elements	Directives	Applicable Legislation
Langeberg falls in two WMAs: North of the Waboom Mountains is the	Delineate buffers to preserve rivers and river systems to protect	NWA, 1998:
Gouritz and south thereof is the Breede. The Breede River is approximately 337km long with a catchment area of approximately 12.984km ² and flows into the Indian Ocean at Witsand, 303km east of Cape Town. The catchment area of the Breede River is in the Skurweberg Mountains near Ceres and below the Brandvlei dam numerous tributaries feed the Breede River from the Langeberg West and Riviersonderend Management Catchment Areas. The Breede River flows across the plain between the Langeberg and Riviersodnerend mountains. North of the Langeberg are the Koo and Keisie Rivers to the west and the Dwariega and Kinga to the east. The Kogmanskloofrivier creates the valley linking the north of the region to the south. South wards are several rivers running into the Breede River such as the Boesmans, Groot, Hoeks, Korings, Houtbaais and	 water now (quantity) and quanty. Manage stream banks it area of Witsand, River is Nullei am erg West indexe and agricultural development, on rivers. Implement rehabilitation programmes to mitigate the impact of sediment generated by irrigation run off on river depth and flow. Implement WDSDF 2021–2026 Environment & Water: Link Langeberg area to a larger network of natural areas, reserves and conservation areas. 	
Poesjenels River. The main inland water bodies are the Keerom Dam in the north- west, the Pietersfontein Dam in the north and the Potjieskloof Dam in the east.	 Maintain productive agricultural land. Consider environmental impact and provisions of NEMA. Mitigate climate change. Protect key biodiversity and agricultural assets. 	
SANBI, 2007 defines rivers based on whether their natural conditions have been modified and their ability to contribute to the river ecosystem. Rivers that are classified Unmodified, Natural or Largely Natural with Few Modifications are considered intact and able to contribute towards river ecosystems. SANBI: NFEPA (2007), class the Breede River as Moderately Modified. Seriously Modified tributaries are the Vink, Keisie, and Touws Rivers.	 Hydrology determines Landscape Character. Develop broad directives to mitigate agricultural technology and infrastructure supporting intensive agricultural cultivation (for example netting). Adhere to development parameters for water bodies and streams. Protect dams (private and state). Enhance water saving strategies. Encourage landscaping with waterwise plants. 	NWA, 1998 NFEPA, 2011 (enable protection of FEPAs including free-flowing rivers). The NFEPA project aims to: Identify Freshwater Ecosystem Priority Areas to meet national biodiversity goals for freshwater ecosystems.

3.1.1.6 Biodiversity

Elements	Directives	Applicable Legislation
Biodiversity is the variety of and interaction between plant and animal life in a particular habitat (called ecological process	Provide for Tourism destinations. Enhance ecological processes and biodiversity	NBSAP, 2015 : Sustainable use of biodiversity promotes social development and economic
and biodiversity patterns). Langeberg Municipality is endowed with a comprehensive system of CBA corridors of which a large extent is already formally or informally conserved. Protection of the Langeberg corridor is already mostly continuous throughout the municipality.	patterns and establish climate change corridors. Delineate natural and agricultural areas to be preserved.	growth. A people-centered approach to biodiversity, recognising that the well-being of South Africa's people is dependent on the well-being of the environment. CWDM IDP, 2022/23 – 2026/2027 : Integrated Regional Plans: Transport, Economics, Disaster, Environmental, Community, Waste & Water.
The different biomes that are present in the Langeberg Municipal Area are the Azonal Vegetation (3.11%), Fynbos Biome (74.03%), and the Succulent Karoo Biome (22.86%). Azonal vegetation is located south of Robertson, between Robertson and Ashton and around Bonnievale. McGregor, Robertson and Montagu are characterized by the surrounding Succulent Karoo biome. A large section of Succulent Karoo Biome can also be found in the north east of the municipality. The majority of the municipality consists of Fynbos Biome.	 Delineate SPCs to preserve Biomes (natural vegetation). Protect and manage biomes resources to ensure survival and longevity. Protect areas identified as Endangered. No urban development permitted in CBAs or Protected Areas. Delineate climate change corridors to establish links with existing conservation areas and biomes. 	NBSAP, 2015: Mainstreaming of awareness of the value and importance of biodiversity across society. The biodiversity sector contributes to the transformation of South Africa to a more equitable society. Biodiversity contributes to sustainable development. NEMA, 1998: Responsible use of non-renewable resources. Ecosystems disturbance (avoid, minimize, rectify).
3.1.1.7 Vegetation

Elements	Directives	Applicable Legislation
The north of Langeberg Municipal Area falls within the winter-	Minimise the impacts of urban development in fynbos areas	NEM: PAA, 2003:
rainfall Succulent Karoo biodiversity hotspot, as well as the	by clustering houses within a fire-free zone and create an	Protect ecologically areas representing
Cape Floristic Region (CFR) fynbos in the south. The	appropriate fire belt. Firebreaks must be cleared within the	biodiversity, natural landscapes & coastline.
Succulent Karoo biome exhibits the highest plant	development footprint, not in adjacent veld.	NEM: BA, 2004: Monitoring, Control &
diversity for a semi-arid ecosystem in the world.	For development purposes, footprints should be minimised	Eradication Plans, 2015 An "Invasive Species
The sandy boulder gravel soils of mountain slopes and rich	and alternatives that maximise retention of indigenous	Monitoring, Control and Eradication Plan for land
alluvial soils of the valley floor support a rich variety of flora.	habitats, species & ecological processes should be	under Cape Nature's control (Control Plans)."
The transitions from one veld type to another makes	selected.	Integrate biodiversity conservation with land use
Langeberg particularly botanically rich and diverse. The	When development is proposed within natural to near	planning & development: CBAs included in SDF
montane fynbos flora of the Langeberg has one of the highest	natural habitats, biodiversity offsets should be investigated	and IDP.
levels of local plant species endemism in the world.	where equal-sized or larger areas of the same vegetation	PBSAP, 2016:
Alluvia Vegetation and Shale Renosterveld (southeast)	type are secured for conservation by funding from the	By 2025 management, consolidation and
have been classified as Critically Endangered. The	developer(s).	expansion of all the categories of the Western
surrounding Shale Renosterveld in this area is classified	Development in close proximity or within endangered	Cape Province's network of conservation areas
as Vulnerable. Vegetation types classified as Endangered	vegetation types must be avoided and discouraged.	Promotion of existing and new biodiversity; -
include the Inland Saline Vegetation types south of	Search and rescue should be considered for all	mainstreaming and conservation initiatives; -
Robertson and the Rain shadow Valley Karoo Bioregion	development, especially when development may result in	enabling of an inclusive and sustainable
and Alluvium Renosterveld in the southwest. To the north	the irreversible loss of rare or threatened plant populations.	biodiversity based economy; and active
of Robertson and Ashton, the Shale Renosterveld and	Preserve Critically & Endangered vegetation types:	participation of citizens.
Shale Fynbos have been identified as Vulnerable.		
The dominant vegetation types in the municipality are the	Provide for preservation of transition areas of one	PBSAP, 2016: progressively contribute to
following:	veld type to another.	attainment of biodiversity conservation, economic
 Shale Renosterveld (37.30%) 	Uniqueness calls for establishment of eco-tourism	and development vision of WC.
 Sandstone Fynbos (26.66%) 	destinations.	WCBSP, 2017: Most recent and best quality
Rainshadow Valley Karoo Bioregion (24.02%)	Spatially guide agricultural activities not to negatively impact	spatial biodiversity information inform land use
Alluvium Renosterveld (5.13%)	on critical biodiversity, transitional and degraded areas.	and development planning, environmental
Alluvial Vegetation (2.34%)		assessments & authorizations, natural resource
Quartzite Fynbos (1.66%)		management and other multi-sectoral planning
		processes.



Map 129: Langeberg Biomes

Langeberg Spatial Development Framework 2023-2028

Map 130: Langeberg Nature ReservesMap 131:



Map 138: Langeberg Nature Reserves

Lange

3.1.1.8 Mining

Elements	Directives	Applicable Legislation
Active Mines: Langeberg is home to three active mines,	Preservation of floristic regions (natural vegetation, flora	WCBA, 2021: To provide for the framework
one being the Langvlei Strati form Mine, located in the	and biodiversity): fynbos in the south and succulent	and institutions for nature conservation and
west where lime and Gypsum is mined and 13 ceased	Karoo in the north of Langeberg whilst enhancing	the protection, management and sustainable
quarries. The remaining two mines are sand mines. Other	primary economic activities.	use of biodiversity and ecosystems in the
mining resources include Gold, Tungsten, and	Critically Endangered and Endangered vegetation types	Province; and for matters incidental thereto;
Manganese is potential minerals that could be mined	to be preserved and buffered.	MPRDA, 2002: Sustainable development of
within the municipal area.	Provide for mine rehabilitation and vegetation	mineral and petroleum resources.
All the mines are in the Breed River region	restoration.	Secure mining, prospecting, and exploration
		mining & production operations tenure.
	Where is mining allowed, ensure that mines are	NEMA, 1998: Provide a framework for all
	rehabilitated, topsoil is properly stockpiled and that the	developments having an environmental
	post mining platforms comply with the envisaged post	impact: Mining, infrastructure, planning or
	mining use of the land and landscape to preserve the	business conforms to regulations.
	scenic character.	



Map 146: Langeberg Mining and Mineral Types

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3.1.1.9 Agriculture

Elements	Directives	Applicable Legislation
Soils suitable for arable agriculture are mostly located east of Robertson and east and west of Bonnievale. The most intensely cultivated areas are located between Robertson and Ashton and also around and to the east of Bonnievale. The majority (95.6%) of agricultural land is suitable for grazing.	Preserve agricultural areas both intensive (vineyards, orchards & pastures) and extensive cultivation. Protect both soil and water: agricultural irrigated cultivation (Intensive) is dependent on the availability of irrigation water and suitable land.	NFA, 1998 Formally demarcate, protect, manage forests, establish community forests, and manage deforested areas.
Agricultural cultivation is mostly intensive, comprising vineyards, orchards and pastures. Together with the magnificent scenery, these resources and agricultural activities, especially wine-making form the basis of its vibrant tourism industry.	Create an enabling environment as agricultural activities (wine-making) and cultivation is the basis for a vibrant tourism industry. Enhance tourism routes and destinations within the cultivated landscape.	Draft Langeberg LED Strategy (2013) - The tourism sector is one of the key sectors within Langeberg, through its contribution to the economy, but also its links to other sectors, and the role it has in marketing the area as a whole.
Crops include wine grapes, which are the largest crops, and to a much lesser extent, table grapes, apples, apricots, pears, plums, peaches, olives, citrus tomatoes and gooseberries are produced. Wine grapes (46%) and peaches (22%) are the highest earning enterprises. Large scale tomato production whittled down to a few hectares of which the yield is being dried as Sundried Tomatoes. Other small scale cash crops produced, mostly for the local market, in this area are the pumpkin variants, baby marrows, cabbage, carrots, cauliflower, chili peppers, peppers lettuce, spinach and melons.		 SALA, 1970: Ensure agricultural land is not fragmented and is maintained as viable economic entities. SmartAgri, 2016 Sets out to: Provide a time-specific strategic roadmap to a climate-resilient agricultural sector. Provide spatially explicit, commodity-specific and scale-sensitive implementation pathways that are practical and effective for specific climate risks. Promote opportunities for the sector through climate change adaptation and mitigation. Inspire farmers and agri-business to optimise decision-making for a resilient and sustainable future in the face of complex and uncertain changes. Strengthen the enabling environment for autonomous (farmer-led) and planned (government-led) responses. Facilitate a more integrated, co-ordinated and co-operative response through strong multi-stakeholder partnerships, networks, and knowledge sharing.

		Mobilize and direct new investments in
		agriculture in support of adaptation and
		mugauon.
Wheat, barley, oats, triticale, lupines, and ray are produced	Provide for climate change impacts on	
merely for animal feed. The number of dairy cattle has been	agricultural cultivation.	
reduced drastically in this area the last few years resulting		
in milk being transported from the Overberg District to		
supply in the processing needs of the dairies in Bonnievale.		
The Koo valley farming area lies north of Montagu where apples,	Protect the uniqueness dof farming areas and	CWDM IDP, 2022/23 – 2026/2027: Protect
pears, apricots and peaches are cultivated. The Keisie is ideal for	regions.	CBA's: agricultural activities and urban
the cultivation of vineyards (dry climate, naturally limed soils, high	Protect suitable soil given the contribution of	development where impact on biodiversity is
slopes and on fertile alluvial soil along riverbanks) and olives.	crop type and related agri-industries to the	lowest.
Anysberg is known for conservation and growing honey bush tea.	economy and GVA.	CWDM IDP, 2022/23 - 2026/2027: Develop Agri-
Wabooms Valley or Die Brakrivier Valley is where dryland wheat	Provide for changes in cultivation and	parks, agri-clusters, and eco-villages.
and Proteas are cultivated.	cultivation practices based on threatened	Assist land conservation and preservation.
The Breëde River Valley is known for being the largest fruit and	resources and its impact on job creation.	SUAL: This act will replace Act 70 of 1970 and
wine producing valley the plain around McGregor and north of the	Enhance conservation agriculture as a tourism	Act 43 of 1998 to ensure food security and land
Riviersonderend Mountains is home to vineyards for winemaking.	attraction and destinations.	reform
Agri-processing and agriculture are Langeberg Municipality's	Protect suitable soils for intensified cultivation	SALA, 1970: Ensure agricultural land is not
most important economic activities and employment sector. The	(impacting soil suitability).	fragmented and is maintained as viable
Agriculture, Foresting & Fishing (AFF) sector contributes 14.4%	Supplement commercial food production (food	economic entities.
to Langeberg's GVA along with 28.33% to employment (CSIR,	demand and exports) with small scale farming	
2019)). Since 2019, the contributions of agriculture are slowly	to encourage self-sufficiency.	
decreasing as is the number of commercial farming entities.	Anticipate the social cost of high labour cost as	
Small scale farming or subsistence farming has declined since	a major contributing factor to high production	
2015 (drought and water restrictions) as an important part of	costs resulting in mechanization and fewer low	
livelihoods in both rural and urban areas. More than half of	and semi-skilled workers being employed.	
agricultural households exclusively grew crops.	0 1 -)	

3.1.1.10Tourism

Elements

Directives

Applicable Legislation

The growth of tourism is slowing down gradually and needs to be supported and expanded through the adoption of a Langeberg tourism development strategy as envisaged in the Langeberg SDF.

The strategy should look at

- Co-ordinate and link rural, urban and agri-tourism opportunities.
- Continue effective management and maintenance of existing tourist attractions and investigate new tourism opportunities.
- Invest in and develop tourism infrastructure (roads and existing services) based on environmental impact assessment considerations.
- Provide opportunities where the local community, especially unemployed and disadvantaged people can get access to economic opportunities (arts and crafts, local guides, local food).
- Strengthen and expand tourism routes, festivals (e.g. Montagu Book festival, Cape Winelands Drama festival, Indigenous Music Festival) and events (e.g. Meander trail run, Mountain Bike events).
- Support agri-tourism opportunities on farms especially in the hills along the Breede (Moderately modified), Koo and Seriously Modified Rivers: Keisie, Vink and Touws Rivers and several other rivers: Dwariega and Kinga to the east, Kogmanskloofrivier (north – south). South wards are several rivers running into the Breede River such as the Boesmans, Groot, Hoeks, Korings, Houtbaais and Poesjenels River.
- Support and develop socio-economic resources such as wildflowers, unique natural vegetation and existing parks, historical and cultural heritage, landscapes and coastline.
- Map farms offering tourism opportunities and link them as part of wider tourism routes.
- Create destinations within settlements and in rural areas.

3.1.2 Socio-Economic Environment

3.1.2.1 Demographics

Elements						Directives	Applicable Legislation
Between 2001	and 2022, th	e population	in Langebe	rg increas	ed by	Remodel settlements to be sustainable whilst	CWDM-IDP, 2022/23 –
approximately	15 000 peop	le and 4 000	households	in the firs	st 10 years and	catering for the needs of the population across	2026/2027
20 000 people	and xx hous	eholds in the	second 10	vears.		income groups.	
					Anticipate a higher growth rate and prepare for	Better quality of life to all	
	Census	Census	Census	SFP	SEP 2025	coping with informal settlements	residents
	2001	2011	2016	2021			
Population	81 274	97 724	105 483	119 962	126 464	Provide for housing need aligned with	
Households	21 057 (3.8)	25 125 (3.7)				infrastructure capacity	
Annual	2.02% (2001 -	2011)	2.27% (201	1 -2021)	1.3% (2021-20)	initiatitatito supusity.	
Growth Rate	(
Table: Langeber	a Population						
Table: Langeber	gropulation						
l angeberg is on	a of the most	nonulated area	as in the CW	ח			
Langeberg is on				D.	n 15 and 61	working ago pooplo and a relatively young	MCA 2000 Support again
		Langeberg p	opulation w	as betwee	en 15 and 64 y	working age people and a relatively young INSA , 2000, Suppor	WSA, 2000, Support social
or age, a conor	t that repres		ur lorce.			requires educational facilities for skills	and economic upintment.
A	0.44	45.04	25.04	05 440	T . 4 . 1	development to combat uncomplexities for skills	CA Council 1000: Chaushing
Age	0-14	15-34	35-64	65-116	lotal	development to compat unemployment and	SA Const, 1996: Structure
2016	31 025	34 497	34 511	31873	105 483	zoned land for economic opportunities.	Support safe & healthy
	01.020	01101	01011	01010			
% of Total	29.4%	32.7%	32.7%	5.2%	100%	Youth and children (young population)	environments.
						require recreation and sports facilities to be	
Table: Langeber	rg Age Distribu	ution (StatsSA,	2016)			able to develop skills to set goals and	
						develop discipline.	
Comparing the	age distribu	tion across al	I municipali	ties in the	Western Cap		
Langeberg had	the highest	proportion of	children ag	jed 0–14 y	/ears (29.4%)		
2016.							

In 2016, over 3 000 young people less than 18 years of aged were orphaned either by the loss of a biological father (1 936) or a mother (898) or both (335).							f aged w her (898)	ere orpl) or botl	naned n (335).	Settlement remodeling to enhance economic mobility of people and address skills development and income disparities.	SA Const, 1996 : Structure spending & planning.
Langel	berg	Materna	al Orphans	Pa	ternal C	Orphans	Dou	ble Orph	ans		Support safe & healthy
3169		898		193	36		335			Migration into Langeberg impacts on services	environments.
The majority (70.5%) of the population in Langeberg is Coloured, followed by							Coloured	and available land and demand sustainable			
Black A	fricans (17.5%) v	whom has	had th	e large	est influx	x in numt	pers sin	ce 2011.	infrastructure and services provision and maintenance.	
	Black Af	irican	Coloured		Indian	/Asian	White		Total		
	N	%	N	%	Ν	%	Ν	%			
2016	18 429	17.5	74 319	70.5	147	0.1	12 588	11.9	105 493		
2011	2011 15 882 16.25 68 708 70.3 312 0.32 11983 12.26 97 724						11983	12.26	97 724		
Table F	Table Race Distribution, Langeberg (StatsSA, 2016)										
It is est	imated th	nat in 20	24 the 202	21 fema	ale to r	nale rat	io of 95.6	6 males	per 100	Create adaptive living and economic	
females	s is likely	to incre	ase to 96.	6 male	s per 1	00 fem	ales (202	21 – 202	22 IDP).	environments to cater for potential inflow of working males.	
In 2016	over 3 (000 vou	na people	less th	an 18	vears o	f aged w	ere orpł	naned	Provide for Social Housing, located in	SA Const. 1996: Provide
either b	y the los	s of a bi	ological fa	ther (1	936) c	or a mot	her (898) or botł	า (335).	restructuring zones.	access to housing,
	•		Ū	,	,			,	()	Create living environments that enhances health	education & health care.
Langeberg Maternal Orphans Paternal Orphans Double Orphans				ble Orph	ans	and particularly prohibit female mortality.					
3169		898		193	36		335				
Table O	rphans										
Langeb	erg's settle	ements c	lassified ad	cording	to thei	r popula	tions ('000	0) have:		Focus the provision of engineering services in	GPS, 2014: Guide PSDF
- Rob	ertson as	regional	service cer	nter (pop	oulatior	n betwee	n 25 000	- 60 000)),	Robertson being the most populated urban area.	implementation informed by
- Montagu, Aston and Bonnievale as villages (population between 5 000 - 25 000) and								Carefully balance provision of engineering	settlement characteristics &		
 McGregor as remote village (population ≤5 000) (Stats SA, 2016). 							SA, 2016).	service delivery between Langeberg	performances.		
Town		Rok	pertson	Montag	u As	shton	Bonnieva	ale M	cGregor	settlements.	
Popul	ation, 201	16 30 6	675	17 551	14	133	10 229	34	493	Provide for improved service delivery (health	SA Const, 1996: Structure
A third (29.98%) of the population resides in rural areas.									care, education, etc.) in rural areas including Unique and area specific initiatives.	spending & planning.	

3.1.2.2 Health

Elements	Directives	Applicable Legislation
In 2020, Langeberg municipal area had the following Health Facilities: 13 public primary healthcare clinics (PHC) of which 7 PHCs were fixed and 6 PHCs were mobile, having 56 nurses. 2 district hospitals, 8 ART clinics/treatment sites and 13 TB treatment clinics (IDP 2022-2023). Robertson Hospital has 50 beds, 9 doctors and 52 nurses. Montagu hospital has 30 beds, 4 doctors and 39 nurses.	New public health facilities are located in line with NSDP principles, i.e. where there is economic growth potential and where most people are located. Three quarter (75.1%) of WC households use public healthcare services as 24.9% (& 16.9% in SA) use private healthcare services and has medical aid (2019 Inequality Trend Report, StatsSA, 2017).	MSA, 2000 : Support social and economic upliftment.
Mobility of Patients: In 2020 Langeberg had 1.2 provincial ambulances (excluding private service providers) per 10 000 inhabitants, below the District's average of 2.4 ambulances per 10 000 people. There is a dedicated helipad situated at the Robertson Hospital in Van Zyl Street, two smaller airstrips close to Robertson and two more airstrips in close proximity of Ashton and Montagu.	 Social amenities provision standards: 1 mobile clinic / 5 000 persons of 1 250 dwellings 1 community hall / 10 000 persons/ 2 500 dwellings – 0.2ha 	CSIR Social Amenities Provision standards: Provides guidelines that assist with the planning of social facilities.
The registered 3 729 HIV/ AIDS patients receiving antiretroviral treatment (ART) in 2020 is on the increase (250 patients more since 2019). The number of new HIV/ AIDS patients decreased from 2019/20 to 2020/21 in Langeberg and in the Winelands District.	Create awareness and focus on reversing effects of HIV/AIDS through educational courses and programmes.	SA's National Strategic Plan for HIV, TB and STI's 2017-2022: Outlines the strategic framework for a multi-sectoral partnership to further accelerate progress in reducing the morbidity (illness) and mortality (death) associated with HIV, TB and STIs in South Africa. SA Const, 1996: Provide access to housing, education & health care.

By 2020, Child Health overall improved in Langeberg since	Raise awareness for example by means of the "First	National Child Care Protection Policy 2019:
2018 as the:	1000 Days Programme" and Early Childhood	
• Immunization rate increased with 5% from 71% to 76.3%.	Development Programmes.	SA Const, 1996: Provide access to housing,
Malnutrition rate for children under five years (per 100 000)		education & health care.
decreased slightly from 3.2 to 2.2.		
 Neonatal mortality rate (per 1000 live births) remained 		
constant at 9.9.		
• Low birth weight indicator decreased from 14.9% to 13.9%.		
Female Health in Langeberg is slightly declining as the	An increased maternal mortality rate impacts on the	Sustainable DG 3.7,d: By 2030, ensure universal
maternal mortality rate (MMR) has remained at zero in 2018	sex ratio (no of female to males) and on the number	access to sexual & reproductive healthcare services,
and 2019 but increased to 123.2 in 2020.	of single parent families and/ or orphans.	incl. family planning, education & information.
The delivery rate of women under 19 years of age remained	Improving access to sexual and reproductive	
at zero for 2018 while rising to 17.2 in 2019 and tapered off	healthcare services for this vulnerable sub-	
to 15.3 in 2020.	population.	
The termination of pregnancy rate decreased marginally		
from 0.5 to 0.4 between 2019 and 2020.		

3.1.2.3 Education

Elements	Directives	Applicable Legislation
Learner enrolment and retention in Langeberg declining with (SEP	Provide for primary, secondary and	PSDF, 2014: SG 2: Improving Education
2021):	tertiary education facilities:	Outcomes & Opportunities for Youth
The Learner-teacher ratio marginally decreasing from 28.5 to 28.9	Bonnievale, Ashton Robertson needs	Development.
learners per teacher.	high school and	
The Learner enrolment increasing by 285 from 18 374 in 2018 to 18	Bonnievale & Ashton a primary school;	
659 in 2019.	Provide for recreation and sport facilities for all	
The Learner retention being very low with an average rate of 69.4%	age groups.	
in Cape Winelands and 60.3% in Langeberg.		
A high Gr 12 school drop-out rate, 21.2%, in 2019.		
The matric pass rate within Langeberg municipal area dropped		
marginally from 79.5 per cent in 2018 to 79.0 per cent in 2019 and		
further to 73.8 per cent in 2020.		
From 2017 to 2020 within the Langeberg:	Provide for allowing students access to	CSIR Social Amenities Provision standards:
The number of schools has declined from 55 to 52.	information which is in turn directly linked to	• 1 primary school/ 3 000 – 4 000 persons of
The proportion of no-fee schools decreased from 48 to 45.	improved education outcomes: Libraries	1 000 dwellings – 2.8ha
	within schools contribute towards narrowing	 1 secondary school/ 6 000 – 10 000
In 2020 in Langeberg 86.5% of schools are registered with the	the academic attainment gap.	persons of 2 500 dwellings – 2.6ha
Western Cape Department of Education as no-fee schools.		 1 library/ 10 000 persons of 2 500
Less than half (17) of the 52 schools were equipped with libraries.		dwellings – 0.1ha
The matric pass rate has dropped from 79.5 per cent 78.8 per cent	The decline in number of schools could	PSDF, 2014: SG 2: Improving Education
in 2019. Within the Cape Winelands area, the matric pass rates in	negatively impact upon the learner-	Outcomes & Opportunities for Youth
Stellenbosch and Drakenstein are generally higher compared to	teacher ratio and education outcomes,	Development.
Langeberg, Breede Valley and Witzenberg.	also given the gradual increase in learner-	
	enrolment.	

In 20	010, 225	6 children	aged 0 - 6 y	ears in the	Langeberg		Access to preschool facilities.	CSIR Social amenities provision standards:
municipality attending an educational institution (registered ECD								1 crèche / 5 000 persons – 0.08ha.
preschools accommodate 6 children and more). Facilities having 6						having 6		
children and less register as a play schools and are excluded.					d are exclu	ded.		
Settlement Ashton Bonnievale McGregor Montagu Robertson								
Nur	nber of	413	350	78	510	905		
chil	dren							
Of th	e popula	tion aged 2	0 years and o	lder (as per S	StatsSA 201	6), a total of	Access to skills development facilities/	MSA, 2000: Support social and
-	28.3	% has no o	r incomplete p	primary schoo	ol education.		Educational/ community facilities for	economic upliftment.
- 46.5% has completed primary or incomplete secondary schooling						y schooling	those out of school.	
and are semi-skilled.							Those members of the community with no	
-	32.4	% has com	plete seconda	ry schooling	or a tertiary	qualification.	schooling should be significantly reduced	
							through a municipal wide initiative.	

3.1.2.4 Municipal Expenditure and Investment

Elements				Directives	Applicable Legislation
As per Langeberg Municipal multi-year sourced from different levels of Govern Municipal Budgeting and Reporting Reg R140 925 Million for 2021/2022 and R5 (MTREF, 2021).	capital budge nent in accor ulations: 678 million	et, funds have dance with t for 2022/202	e to be the 23		PSDF, 2014 SG 4: Enabling a Resilient, Sustainable, Quality and Inclusive Living Environment.
 Economic Infrastructure 2020/2021 Budget 96.8% or R202.0 million of the WC budget spend on: Highest allocation to Transport and Pub maintenance objectives. Second highest allocation to Education, Third highest allocation to settlement de 30.4% or R34.8 million of Municipal capital above. Social Infrastructure 2021/2022 Budget 3.2% of the WC Budget allocation to Lange o Education, R4.0 million, Human So R0.771 million and Langeberg Municipal Budget allocation of 1 for: Social Development, R2.1 million, recreation, R5.5 million, Public Sa allocation). Infrastructure Municipal 30.4 34.8 3.2% Economic 18.2% 20.8 96.8 Trading 46.4% 53.1 0% 	llocation to La ic Works as per Health (social velopment (ho spending will a berg will be sp ttlements, R2 3.2% (or R20.4 Housing, R7.7 ety, R5.6 million ncial 6.7 6 202.2 0	angeberg will I er ITP targets infrastructure busing) (IDP, 2 also be spent of eend on: .0 million, Hea 8 million) was 7, Sports and on (Municipal Total 41.5 1 223.0 53.1	be and a). 2022). on the alth,	Enhance National Monetization Infrastructure, Multi use of facilities. Enhance multi-purpose architecture. Health facilities (both hospitals and clinics) & ART facilities. Recreation and sports facilities for youth. Educational/ community facilities for those out of school.	CWDM IDP, 2022/23 – 2026/2027: Transport, Economics, Disaster, Environmental, Community, Waste & Water. MSA, 2000: Support social and economic upliftment. PSDF, 2014: SG 1: Creating Opportunities for Growth & Jobs; MERO, 2020: provides detailed economic intelligence disaggregated at a metro, district and municipal level to help inform policy intervention and budgeting at local government.

Trading Services (MTREF, 2021)	Less coal generated electricity to curb	Alternative Energy facilities (Dual
Municipality's Infrastructure Budget allocated 46.4% or R53.1 million for	Climate change.	energy facilities).
provision of basic services (trading services):	Reuse waste water to curb climate change	Cleaning of waste water facilities
Water (R24.7 million),	reduce waste water to carb climate change.	Minimal resources in terms of capacity
Electricity (R15.6 million or 13.7 per cent)	Water wise house installations and	and finances are available to fund
Waste management (R10.2 million or 9 per cent) and	gardening to curb climate change.	growth initiatives;
	Waste recycle to curb climate change	Fin Pln: Evaluate services levels and
Of this allocation 38.4% or R43.917 million for providing free basic services to 6	Recycle facilities.	types of services rendered against
844 indigent: Water (Basic charges) R8 100 M, Electricity R5 069 M, Waste /	,	ability to pay for services.
Refuse R14 848 M and Sewerage R15 900 M.		
		Integrated Resource Plan 2019: An
		electricity infrastructure development
		plan based on least-cost electricity
		supply and demand balance, taking
		into account security of supply and the
		environment (minimize negative
		emissions and water usage).
From 2010/2011 to 2011/2012:		Fin Pln: Improve municipal financial
- Levels of operating income increased by 16.21% as outstanding property		position to provide services at
rates are proactive limited and timeous payment trends are re-enforced.		affordable levels (a 3 year budget).
 reliance on grants and subsidies decreased from 33% to 26%. 		
At the end of 2012, staff vacancy levels are at 7.2% of total staff. None of these		
vacancies are key positions, yet several managerial positions remain unfilled.		

3.1.2.5 Economy

Element	5					Directives	Applicable Legislation
Major co	ntributors to Lange	berg region's e	economy (GDP) in 20	19 were:		Prioritize settlements for	MSA, 2000: Provide access to
Trade se	ctor contributed 19	9.9%, Manufact	turing sector, 18.2%,	Finance sect	or, 17.3%,	investment and provide for	quality and affordable services.
Agricultu	re, 12.8% and Trai	nsport, 10.6%.				sufficient zoned land to	
Langeber	g's economic sector	performance pro	ofile: Competitiveness r	elative to Prod	luction output	improve the economy. The	CW LED Strategy, 2011/12 –
High	High competitiven	ess, low outpu	t High competitive	eness, high o	utput	development of zoned land,	2018/19: Support economic growth in CW:
-	Competitors		Performers		*	which grows the construction	•Provide road infrastructure and
SSS	Small export focus	s, None	Manufacturing			sector, should benefit the	production areas;
tivene			Wholesale & Re	tail		Langeberg economy.	•Suitable areas for small farmers;
mpeti	Low competitivene	ess – Low outp	out Low competitive	ness – high o	output		 Agricultural markets;
Õ	Weak sectors		Internal focus			Sectors competing in the	 Multi use of structures.
	Electricity & Water	r	Finance, insurar	nce, real esta	te &	economy that could be	WCLUDC, DA 2010, Cuido the
	Community, socia	l, personal	business			considered as performers	type and extent of activities
	services		General Govern	ment		should be provided for	supported in a rural context (fast
	Mining & Quarryin	g	Agriculture, Fish	ing & Forest	ry,	spatially. Secondary	track development)
	Transport & Comr	nunication	Transport			activities related to	
	Construction					sector activities such as	PSDF 2014: SG 1: Creating
Low	Low		Output		High	Wholesale and Retail	Opportunities for Growth and
_						including tourism has a high	Jobs
Economi	c vs Employment S	Sector Contribu	utors:			output and high	
Rank Employme	1 Agriculture	2 Petail & Accom	3 Finance & Real Estate	4 Covernment	5 Manufacturing	competitiveness	MFSCSGP. 2014: Provides sound
Economy	Retail & Accom	Manufacturing	Finance & Real Estate	Aariculture	Transport		economic and financial evidence to
,		<u> </u>		5		Provide for clustering	support spatial principles and weight
A Broad S	Sectoral Overview of	the period 2015	– 2019 confirms (SEP	2021):		industries adding high value	to spatial plans.
The tertia	ary sector increase	d at an annual	rate of 3.1% between	n 2015 and 2	019.	and that are labour intensive.	
Finance	sector contributed	4.9% and the t	ransport sector contri	ibuted 3.2% a	and was the key	Provide alike or differently for	
tertiary s	ector growth driver	S.				the remaining sectors	
Trade se	ctor, the largest co	ontributor to GE	P in Langeberg, incr	eased by 2.5	% annually	contributing either employment	
during th	e period of review.					opportunities or add value.	

Economic	Sector Employment contribu	tors in 2018/ 2019 respective	ly:	Secure services and	CWDM SDF, 2021 - 2026
Agriculture	e, forestry and fishing (13 998	8 or 25.9%),		resources for industry:	 Economic growth.
Wholesale	and retail trade, catering an	d accommodation (12 981 or	24.4%)	Water, Electricity,	Enhance infrastructure investment
Finance, Ir	nsurance, Real Estate and B	usiness Services (7 202 or 13	3.3%),	Sewerage and Waste	in high economic growth potential
General G	overnment, community, soci	al and personal services (12 §	981 or 24%) and	removal services.	areas.
Manufactu	ring (4 650 or 8.6%).				 Facilitate employment creation, economic growth and tourism
	,			Provide spatially for sector	development access to education
Langeberg	's economy in 2019 was val	ued at R7.2 billion (current pri	ces) with 53 489 people	interdependence and value	and health facilities.
being emp	loyed.			chains.	
2020, the (GDPR contracted by 4.9% in	real terms, employment decl	ined, with the region	Enhance agricultural value	WCPSDF, 2014
experienci	ng 2 921 job losses: Trade s	ector lost 807 jobs, Communi	ty services sector lost	chain developments: Enhance	Spatial economy promoted:
676 jobs a	nd Agriculture sector lost 56	9 jobs. Only government crea	ted 45 additional jobs.	manufacturing, trade and other	- Regional growth drivers: Worcester
2015 – 201	19: the secondary and prima	ry sectors experienced signific	cant job losses (and	services as adding high value	- Mosseibaal, Regional development corridors:
particular i	n amongst low-skilled individ	luals) that was offset by strong	g economic	and being labour intensive.	Langeberg Valley:
performance	ce in the tertiary sector.			Protect the employment	Regional transport corridors: R60 –
				intensity provided by	N2;
Langeberg's	s economic sector performance	e profile: Value Added relative to	Employment	Agriculture Ecrostry and	Leading towns (growth potential).
High	Finance, Insurance, real	Wholesale & Retail		Fishing and protect	One Cana 2040, ef 2042
-	estate & business	Manufacturing		agriculture areas by	Transition towards a more inclusive
	Transport &	Construction		delineating Agriculture SPC	and resilient economic future for the
Ided	Communication			denneating Agriculture of C	Western Cape region.
le Ac		General government		Provide for agri-facilities	Working together to develop our
Valı	Electricity & Water	Agriculture, Fishing &		that are not agri-industry	economy and our society.
	Mining & Quarraying	Forestry		outside urban areas (Value	
		Community, social and		chain activities) given the	
Low		Personal service		scale thereof Provide for	
	Low Emplo	byment High		on-farm agri- industry and	
				agri-industry facilities	
Employme	nt Langeberg is predominan	tly (61.2%) formal whilst the r	emaining 38.8%	agir madday raomaoo.	
employme	nt opportunities are informal	for example:		Provide for and guide net	
Wholesale	and Retail Trade, Catering a	and Accommodation 54.7%.		coverage (netting)	
Transport,	Storage and Communication	n 52.0%.			

Community, social and personal services sector 44.5% and;	Provide for strengthening the
Construction 44.2%.	core growing sectors that
	contribute to the economy (and
Unemployment rates in 2019 are:	gross value added) and
Langeberg's 7.2%; Cape Winelands District's 10.7% and Western Cape 19.4% (StatsSA,	employment: Wholesale and
2022). The unemployment rate amongst youth is a cause of concern.	Retail and Manufacturing and
COVID-19 lockdowns along with the civil unrests in 2021 impacted negatively on the	Construction. Sectors
economy. Of most concern is the increase in the number of discouraged job seekers since	Agriculture and Community,
2020 whilst employment opportunities decreased.	Social and Personal Services
	are labour intensive but add
	less value. Finance, Insurance,
	Real Estate & Business and
	Transport, Storage and
	Communication are sectors
	with the highest value addition
	but are not labour intensive.

3.1.3 Built- Environment

3.1.3.1 Hierarchy and Role of the Settlements

Elements	Directives	Applicable Legislation
The largest town in Langeberg is Robertson and main urban centre in the	How to enhance the growth	MSA, 2000:
municipal area and serves as an agricultural service centre being located	potential and economic capacity of	Support social and economic upliftment.
within one of the largest wine producing regions in SA.	Robertson.	
Montagu is situated at the northeastern side of the Langeberg at the	How to enhance the	MSA, 2000
entrance to the Cogmankloof pass and serves as the main centre for wine	interdependency between the	Support social and economic upliftment.
and fruit production and dried fruit production, muskadel and hot springs	settlement within the Municipality	Prioritize development of geographical areas.
as tourist destination during both on-and-off seasons.	where necessary: Robertson,	
Ashton is located between Montagu and Robertson. Ashton is known for	Ashton and Montagu	SA Const, 1996
its canning-factories of which only Ashton Canning (Tiger Brands) is in	Robertson & Ashton: 18km	Structure spending & planning; Support safe &
operation but scheduled to relocate out of the Langeberg municipal area	Robertson & Bonnievale: 30km	healthy environments; Provide access to housing,
in the near future.	Robertson & Montagu: 30km	education & health care.
Bonnievale is located along the Breede River approximately 30km south-east of	Robertson & McGregor: 21km	
Robertson. The agricultural activities, especially the production of wines,	Enhance economic mobility	IUDF 2016 : Guide development of inclusive,
manufacturing of peaches and apricots and the production of cheese are tourist		resilient and liveable urban settlements, while
attractions.	Promote Mixed Use.	directly addressing the unique conditions and
McGregor is located south of Robertson in the foothills of the		challenges facing South Africa's cities and towns.
Riviersonderend Mountains. The town is a well-known tourist attraction as		
a result of its unique rural character and heritage and aesthetic value.		
McGregor has over 60 historical homesteads some of which have been		
declared national monuments.		
The GPS (2014) determined the growth potential and socio-economic needs of	Need for investment into human	CWDM IDP, 2022/23 – 2026/2027
settlements in the WC outside of the Cape Town metropolitan area. The study	capital is low in Ashton, medium in	Better quality of life to all residents
identifies the growth potential of the Langeberg municipal area as Low (17) in	Robertson and McGregor and	Attend to job creation;
relation to the WC, as it is not located adjacent to the Cape metropole (There is	high in Bonnievale and Montagu	
a direct correlation between the growth potential of municipalities and their	Provide for sufficient space for	MSA, 2000 , Provide access to quality and
proximity to Cape Town).	skill training facilities.	attordable services.
Composite Growth potential of Ashton, Bonnievale, McGregor, Montagu and	Provide for educational facilities.	
Robertson is Medium.		

Index	Ashton	Bonnievale	McGregor	Montagu	Robertson	How to make human skills	PSDF, 2014, SG 5: Embedding Good
Human Capital	Low	High	Medium	High	Medium	development more accessible	Governance Integrated Service Delivery
Economic	Medium	Medium	Medium	Medium	High	Provide for non-motorized	through Spatial Alignment
Physical	Medium	Medium	High	High	Medium		C. 4. Enchling a Deciliant Sustainable
Infrastructure	Medium	Medium	Medium	Medium	Medium	transport facilities.	SG 4: Enabling a Resilient, Sustainable,
Institutional	Medium	Medium	High	High	High		Quality and Inclusive Living Environment.
Composite	Medium	Medium	Medium	Medium	Medium	How to support and enhance the	Sustainable development (future generation)
Growth						informal economy.	"triple bottom line": Ecological Integrity
Potential						Provide for small businesses and	(Planet) Social Justice (People): Economic
						informal trading.	Effectiveness (Market).

Towns	Robertson	Montagu	McGregor	Bonnievale	Ashton
Settlement Status	Main Service Centre.	Rural Town and Service Centre.	Rural Settlements.	Rural Town and Service Centre.	Service Centre. Hart of Langeberg: locational, functional and connectivity.
Economic Base	Agri services & Processing.	Rural Residential, agri- services, tourism.	Rural Residential, tourism	Agri-services	Agri-services.
Opportunity generation	Export value chain, Agri- processing.	Rural residential, agri & eco- tourism, conservation (natural & cultural), processing of "niche agri-related products.	Rural residential, agri & eco-tourism, natural conservation.	Agri-processing & processing of "niche" agri-related products.	Export value chain, Agri- processing.
Convenient & equal access	Density: 6 – 7.3 du/ha	Density: 5.3 – 8.1 Du/ha	Density:8.5 – 10.5 Du/ha	Density: 4.3 – 6.4 Du/ha	Density: 5.8 – 6.5 Du/ha
Resource frugal	Single residential, Subsidized and Rental. Below Density norm: 15 Du/ha	Single residential, Subsidized and Rental. Below Density norm: 15 Du/ha	Single residential and Subsidized. Below 12 Density norm:	Single residential, Subsidized and Rental. Below Density norm: 10 Du/ha	Singleresidential,Subsidized and Rental.BelowDensitynorm:15
			Du/ha		Du/ha
Institution frugal	Functional Integration between Nkqubela, Robertson, Robertson Airstrip.	Social Integration: Between Montagu, Ashbury, Bergsig & Montagu Springs.	Functional Integration between income groups. Social integration and	Staggered settlement with no functional or social Integration between: Happy Valley, Mountain View, Bonnievale,	Limited Functional Integration between Ashton West & Ashton.
	Robertson North and Droëheuwel lack social institutions and commercial proximity. Several business nodes spread across settlement.	Lack of social & commercial services at Ashbury subsidized housing precinct. Informal pedestrian walkway	infrastructure is lacking.	and Boekenhoutskloof.	Lack of social institutions and commercial proximity in Ashton West, Ashton & Zolani.
	Lack of safe pedestrian & cycle routes along main and identified connector roads.	along between Montagu and Ashbury precincts.			Lack of safe pedestrian & cycle routes along main and identified connector roads. Ashton and Zolani.

Choice: variety & diversity	Functional Integration: Main commercial node and several neighbourhood nodes or spaza shops. Industrial precinct along railway line.	Mixed used along activity streets and link roads (Historical core). Industrial along river and between settlement nodes.	Neighbourhood commercial node. No industrial precinct.	Mixed & uses (commercial and industrial) along activity streets and on larger agricultural plots.	Mixed use along connector road. Industrial precinct along railway line and some industrial (agri-processing) in disuse.
Quality of place/ Timeless	Grid layout in the historic core.	Grid layout in historic core; Setting.	Grid Layout; Setting.	Linear & Grid Layout following along and dispersed nodes from river.	Linear & Grid Layout both side of river and railway line crossing.
Aesthetically appealing (Sensory qualities)	Greened main road. Open space (river) network within town.	Historic character of settlement precinct along main road. Large erven along river integrate agriculture and settlement making. Southern gateway emphasise integration of nature and conservation and settlement making.	Unique character and scale. Wide open gravel streets emphasize permeability.	Settlement nodes dispersed in agricultural cultivation.	Bygone industrial settlement. New bridge emphasize connector role.
Resilience: withstand stress, survive, adapt, bounce back	Frail: Insufficient services, cannot accommodate interruption (electricity supply).	Frail:Insufficientservices,cannotaccommodateinterruption.Sufficientservice,canaccommodateinterruption.	Frail: Insufficient services, cannot accommodate interruption.	Frail: Insufficient services, cannot accommodate interruption.	Frail: Insufficient services, cannot accommodate interruption.
Towns	Robertson	Montagu	McGregor	Bonnievale	Ashton
Settlement Status	Main Service Centre.	Rural Town and Service Centre.	Rural Settlements.	Rural Town and Service Centre.	Service Centre. Hart of Langeberg: locational, functional and connectivity.
Economic Base	Agri services & Processing.	Rural Residential, agri- services, tourism.	Rural Residential, tourism	Agri-services	Agri-services.

Opportunity generation	Export value chain, Agri-processing.	Rural residential, agri & eco-tourism, conservation (natural & cultural), processing of "niche agri- related products.	Rural residential, agri & eco-tourism, natural conservation.	Agri-processing & processing of "niche" agri-related products.	Export value chain, Agri- processing.
Convenient & equal access	Density: 6 – 7.3 du/ha	Density: 5.3 – 8.1 Du/ha	Density:8.5 – 10.5 Du/ha	Density: 4.3 – 6.4 Du/ha	Density: 5.8 – 6.5 Du/ha
Resource frugal	Single residential, Subsidized and Rental. Below Density norm: 15 Du/ha	Single residential, Subsidized and Rental. Below Density norm: 15 Du/ha	Single residential and Subsidized. Below 12 Density norm: Du/ha	Single residential, Subsidized and Rental. Below Density norm: 10 Du/ha	Single residential, Subsidized and Rental. Below Density norm: 15 Du/ha
Institution frugal	FunctionalIntegrationbetweenNkqubela,Robertson,RobertsonAirstrip.Robertson North and Droëheuwel lacksocialinstitutionsandcommercialproximity.Severalbusinessspreadacrosssettlement.Lack of safe pedestrian & cycle routesalongmainandidentifiedconnectorroads.	Social Integration: Between Montagu, Ashbury, Bergsig & Montagu Springs. Lack of social & commercial services at Ashbury subsidized housing precinct. Informal pedestrian walkway along between Montagu and Ashbury precincts.	Functional Integration between income groups. Social integration and infrastructure is lacking.	Staggered settlement with no functional or social Integration between: Happy Valley, Mountain View, Bonnievale, and Boekenhoutskloof.	Limited Functional Integration between Ashton West & Ashton. Lack of social institutions and commercial proximity in Ashton West, Ashton & Zolani. Lack of safe pedestrian & cycle routes along main and identified connector roads. Ashton and Zolani.
Choice: variety & diversity	Functional Integration: Main commercial node and several neighbourhood nodes or spaza shops. Industrial precinct along railway line.	Mixed used along activity streets and link roads (Historical core). Industrial along river and between settlement nodes.	Neighbourhood commercial node. No industrial precinct.	Mixed & uses (commercial and industrial) along activity streets and on larger agricultural plots.	Mixed use along connector road. Industrial precinct along railway line and some industrial (agri-processing) in disuse.

Quality of place/ Timeless	Grid layout in the historic core.	Grid layout in historic core; Setting.	Grid Layout; Setting.	Linear & Grid Layout following along and dispersed nodes from river.	Linear & Grid Layout both side of river and railway line crossing.
Aesthetically appealing (Sensory qualities)	Greened main road. Open space (river) network within town.	Historic character of settlement precinct along main road. Large erven along river integrate agriculture and settlement making. Southern gateway emphasise integration of nature and conservation and settlement making.	Unique character and scale. Wide open gravel streets emphasize permeability.	Settlement nodes dispersed in agricultural cultivation.	Bygone industrial settlement. New bridge emphasize connector role.
Resilience: withstand stress, survive, adapt, bounce back	Frail: Insufficient services, cannot accommodate interruption (electricity supply).	Frail: Insufficient services, cannot accommodate interruption. Sufficient service, can accommodate interruption.	Frail: Insufficient services, cannot accommodate interruption.	Frail: Insufficient services, cannot accommodate interruption.	Frail: Insufficient services, cannot accommodate interruption.

3.1.3.2 Transportation

Elements	Directives	Applicable Legislation
Public Transport	Need for investment into mobility	PSDF, 2014: Prioritise & guide
According to the National Household Travel Survey (DoT, 2004), public transport	of people.	investment & infrastructure
accounts for 8% of total transport demand in Langeberg. Currently mini-bus taxi	Provide for sufficient non-	development.
(MBT) is the dominant public transport mode providing both commuter and long-	motorized and motorized facilities.	
distance services. Due to low population densities, travel demand is low, making bus	An efficient road network is crucial in	MSA, 2000: Prioritize development of
services insufficient and not cost effective. Bus services do exist for transporting	promoting the economy of a	geographical areas.
learners as part of the contract services provided by the Western Cape Department	municipality. The requested upgrades	
of Education (DoT, 2016).	to roads, particularly the R317 and	CWDM SDF, 2021 – 2026:
The commercial bus services that operate through Langeberg Municipality are	R62, and the construction of new	Concentrate investment in
TransLux and City to City. The service operates daily with 3 busses per day from	roads should be undertaken to not	settlements with economic and
Cape Town to East London, with stops at Robertson and Ashton. A bus facility is	stifle on-going economic growth	resource potential.
required in Robertson, as the stop in Ashton is privately owned. The rail infrastructure	A bus service is required in the	
exists for freight movement and there is no passenger rail or tourist rail service	Langeberg Municipality area.	PLIF, 2011: The purpose is to:
provided.		 State provincial objectives and policies that give direction to transport on a
Robertson and Ashton have formal taxi ranks are established. There are two MBT	How to enhance the	provincial-wide scale.
Associations in Langeberg, namely the (1) Robertson Taxi association and the (2)	interdependency between the	 Ensure national planning objectives
Montagu Taxi Association. There are currently 15 operational MBT ranks located	settlement within the Municipality	and policies are implemented at the
within Langeberg Municipality; 8 of these ranks are located in the towns of Robertson	where necessary: Robertson,	provincial scale.
and Ashton. Approximately 65% of all taxi ranks in Langeberg Municipality are paved,	Ashton, McGregor and Montagu	• Assist in coordinating and integrating
with 50% of these ranks located off street. Most ranks in Langeberg Municipality are	and Bonnievale.	transport in the province.
informal in nature and are not equipped with sufficient infrastructure such as seating	Enhance economic mobility	Serve as basis for preparation of
and ablution facilities. The highest demand for this service is on Saturday mornings,	Robertson & Ashton: 18km	other public transport plans in WC
especially at the end of the month. Long distance taxi services (more than 60km) are	Robertson & McGregor: 21km	
provided on demand only. However, in the more isolated settlements, the public	Robertson & Bonnievale: 30km	province.
transport operations are less frequent and may operate once a week only (DoI,	Robertson & Montagu: 30km	
2016).		
Transport Improvement Proposals include Road infrastructure upgrades of R1 million,	The major road treight related issue in	Langeberg IIP, 2016: provide district
Planning and Feasibility Studies of R1.9 million, Public Transport Infrastructure of R5.7 million	Langeberg Municipality towns along	and local municipalities with a planning
and NMT Facilities of R1 million.	the R62 and R60 are the lack of	

	overnight facilities to accommodate freight vehicles and operators.	guide to overcome the challenges identified within the transport system. WCFS, 2018 , To provide an action plan for improving the WCs freight transport network's ability to meet the demand for the movement of goods reliably, at optimal cost and in a sustainable manner to support the province and South Africa's development goals.
The Blue Train route from Cape Town to Gauteng passes through Langeberg and stops at Robertson.		
Robertson has a regional light aircraft airport located on the eastern outskirts of settlement with a tar surface, 1500m long runway that is 50m wide and has night landing facilities. Typically, flying clubs, emergency services, and charter services use the site. There is also a dedicated helipad situated at the Robertson Hospital in Van Zyl Street. A private gravel landing strip is situated on Vinkrivier farm, approximately 20 km to the west of Robertson. There is a private tar landing strip situated on the Zandvliet farm in Ashton; adjacent to Ashton Canning. On Derdeheuwel farm, to the east of Montagu, there is a private derelict gravel landing strip.	The publicly owned airstrips should be maintained and managed to ensure the maximum benefit of this facility. The publicly owned airstrips should be maintained and managed to ensure the maximum benefit of this facility. Residential developments close to the Robertson airfield should not be allowed within the 55dBA and higher noise levels.	 SA Const, 1996 Structure spending & planning. Support safe & healthy environments. Civil Aviation Act (Act 13 of 2009): Deals with acquisition of land use rights in connection with airports and consultation with interested parties.
Non-Motorized Transport (NMT) There is no NMT network in Langeberg Municipality. The National Household Travel Survey (NHTS) has shown that over 58.9% of all work trips are made on foot in the Langeberg. Walking is a major mode of transport for rural communities. (ITP, 2010) There is a high frequency of lower order settlement nodes along the R60 route, the majority of which are within 15km of either the two towns. There is however a pavement management programme.	How to enhance movement of people Provide for transport and non- motorized transport. A public transport and non-motorized transport system focused on integrating the main settlements should be implemented.	CWDM IDP, 2022/23 – 2026/2027: Integrated Regional Plans: Transport, Economics, Disaster, Environmental, Community, Waste & Water. PPTIF, 2015 SALGA Smart City Development Maturity Framework: Smart

PAVEMENT MA	NAGEMEN	IT SYSTEM (I	Pavement	Management S	System Assessn	nent)	
Town	Total Length	Total Area (m²)	Total Segme	Resurfacing	Cost (R)	Resurfaci (m²)	ng Area
	(m)		nts	1st Year	2 nd Year	1st Year	2nd Year
Main Arterials	5 820	46 865	25	R2 641 700	R887 600	22 152	9 053
Ashbury	7 135	48 145	62	R378 500	R1 097 300	7 110	27 388
Ashton	1 706	12 692	8	R306 200	R288 200	5 080	6 384
Badshoogte	4 474	35 350	36	R470 800	R1 540 600	5 536	29 486
Bonnievale	27 194	192 914	192	R2 349 300	R7 307 300	27 363	100 190
Cogmanskloof	11 335	74 370	109	R909 900	R1 475 300	13 189	45 961
Conradie Dorp	9 765	99 617	69	R1 584 600	R2 154 300	31 138	68 479
Droeheuwel	2 151	11 075	17	0	R22 000	0	383
McGregor	10 281	61 230	76	0	R1 452 200	0	31 084
Montagu	32 103	256 558	267	R2 899 300	R10 727 700	32 347	195 200
Moreson	786	4 248	14	0	0	0	0
Nkqubela	8 579	54 519	74	R441 800	R830 400	5 574	32 103
Robertson	63 850	483 277	471	R4 153 700	R17 404 300	71 812	381 637
Zolani	11 627	66 026	129	R312 200	R996 300	3 120	46 242
Total	196 800	1 446 886					

3.1.3.3 Solid Waste Management

Elements	5							Directives	Applicable Legislation	
The draft I	Integrated	d Waste N	lanagement Pl	an (IWMP) d	raft Report R	levision (1,	Promote recycling	Langeberg MIWMP, 2021: Manage	
notes that approximately 27 000 tons of waste was generated in 2020 made up of 24 059									Provide for recycling facilities of	waste sustainable
tons of m	nunicipal	waste, 1	871 tons of a	organic wast	e and 113	6 tons c	of C&D. The	ne	recyclable material and organic	NEM: WA, 2008: Protect environmental
settlemen	ts genera	ated the fo	llowing tonnag	e:					waste.	health & prevent ecological degradation as
								The Municipality should proceed with	per norms and standards (waste	
Town		Ashton	Bonnievale	McGregor	Montagu	Roberts	on		the implementation of the IWMP which	management, control, licensing &
Tonnage		4518	3053	1 012;	4 721	9 778			includes the public consultation	remediation of contaminated land.).
Operatio	nal	Transfer	Drop off	Drop off	Transfer	Transfer	station &		process and the development of	
facilities		station	facility	facility	station	composi	ting facility	_	detailed action plans and key	CWDM IDP, 2022/23 – 2026/2027
									performance indicators:	Integrated Regional Plans"
The wast	e genera	ated inclu	uded more the	an 60% recy	/clables, 20)% or m	ore non-		- Make the public aware of waste	Transport, Economics, Disaster,
recyclabl	es and c	on averaç	ge 10% and n	nore organic	c waste.				management procedures and	Environmental, Community, Waste &
	Was	ste charac	terization stud	y results (LLI	/IWMP , 201	7)			available facilities; Water	Water.
Waste Ca	ategory	Ashto	n Bonnieval	e McGrego	or Montag	u Rob	pertson		- Create a greater awareness of	
Recyclab	les	64%	62%	54%	59%	6	64%		waste minimisation.	SALGA Smart City Development
Organic v	vaste	13%	10%	21%	19%	1	12%		- Municipality to prepare an	Maturity Framework: Smart Transport –
Non recyc	ciables	23%	2170	23%	Z170		24 %		Integrated Waste Management by	encompasses transportation network
Future w	aata aan	oration r	atao wara an	lied & they	aluma af w	aata unt			law that includes papalties inform	optimization (including mixed-modal
rulure wa	aste gen	eration	ates were app		olume of w	aste uni	II 2027 IS.		and instruct industries to submit	access) traffic management logistics and
		F	uture estimated	waste generat	on rates				Industry Wests Management	related smart mobility elements
Year	Popula	tion	Total Waste	Low Incon	ne Mide	dle · 38%	High Income		Diana and industry waste	incorporating enhanced ICT infrastructure
2023	127 1	32	31 589	18 006	12 0	04	1 579		information and quantition	with real time monitoring and control
2025	132 2	68	32 865	18 733	12 4	89	1 643		All weath man and quantities,	systems
2027	137 6	11	34 193	19 490	12 9	93	1 710		- All waste management facilities	Systems.
									snould be audited on a regular	
									basis as required in terms of each	
									respective waste permit.	

The Municipality operates a licensed domestic waste landfill in Ashton, permitted in 1999 and in Bonnievale. (Draft IWMP, 2021). The Ashton landfill site allow for a further 3.5 times airspace. Next to the landfill site there is space for expansion before delivering waste at the Worcester regional landfill site will be considered.	Provide for waste facilities for rural areas & for settlements The Municipality should not consider the establishment of additional waste disposal sites until such time that the outcome of the regional waste site is finalised (IWMP, 2012).	CWDM: IDP, 2022/23 – 2026/2027 : Integrated Regional Plans: Transport, Economics, Disaster, Environmental, Community, Waste & Water.
The Municipality is currently providing a separation at source service (2-bag system) in all towns as well as a material recovery facility and composting plant to save as much landfill space as possible, i.e. reduce the volume of waste dropped at the landfill site (IWMP, 2012). The Robertson waste disposal facility is closed and rehabilitated, accompanied by a closure license.		WCIWMP, 2017: Manage waste sustainably & promotes integrated waste management.
A licensed garden waste and builder's rubble site is operational in Montagu and Bonnievale. The site in McGregor is unlicensed. No external auditing is done on these sites and no resident's monitoring committees exist. Operations of these sites are considered average to good. None of these sites have sufficient capacity. The McGregor site was closed, but no rehabilitation has been done.		
There is a need to purchase skips, re-fence landfill sites and a total budget of R2.17 million was required for 2020 to 2021, whilst an operational budget of R44.36 million was required for the same period.		
The results from the waste characterization study conducted in 2016 illustrated that the percentage of recyclables is 61%, organic waste 15% and non-recyclables 24% of the total of waste generated in the LLM (LLM IWMP, 2017). McGregor had the lowest percentage of recyclables (54%) and the highest percentage for organic waste (21%). The study illustrated that Ashton and Robertson had the highest percentage of recyclables (64%) in the LLM. According to the study, Bonnievale generates the lowest percentage of organic waste (10%).		NWMS, 2011: Implement a waste management hierarchy during lifecycle of waste: - avoid and reduce waste, - re-use and recycle, - recover, - treat and dispose.
Summary of the total waste generated per waste category and the fraction of the total waste that each waste category consumes according to the IPWIS data. The organics include all garden refuse quantities from the Robertson composting facility.		NSDP, 2019 : Address environmental, social & economic inequalities; Focus state investment on areas with economic growth potential; Focus economic and

	Table	of waste generation	on as per IPWIS	reports				settlement growth along nodes & activity
YEAR	MUNICIPAL	COMMERCIAL &	INDUSTRIAL	ORGANICS	C&D			corridors.
2018	26 307	-		1 403	2 261			
2019	24 929	-		1 557	2 698	-		
2020	24 059	-		1 871	1 136	-		
Percenta	ge of waste d	iverted from land	fills for 2018, 2	2019 and 202) (January	/ to June)		CWDMIWMP, 2015
according	g to the IPWIS	data received is v	ery low. The div	verted waste pe	ercentage	of organic		 Manage waste sustainable;
waste ind	cludes only the	e garden refuse d	liverted to the	Robertson con	nposting fa	acility and		Divert waste to regional landfill sites:
the C&D	is used as dai	ly cover material.	As the LLM m	unicipal waste	diversion	rates, low		Minimize adverse impacts
and addi	tional initiative	s will have to be in	mplemented to	achieve highe	r diversior	n rates.		
Langebe	rg owns the fo	llowing waste mai	nagement facil	ities:			Provide for waste facilities for	WCIF, 2013: Align the planning,
• _ Ro	bertson transf	er station and com	nposting facility	(operational):			settlements and for rural areas	delivery and management of
• Mc	Gregor drop o	ff facility (operatio	nal):	(,,			Municipality should not consider	infrastructure, provided by all
• Bo	nnievale dron	off facility (operati	ional):				establishment of additional waste	stakeholders to the strategic agenda
• As	nton transfer s	tation (operationa	1)·				disposal sites until such time that the	and vision for the WC
• Mo	ntagu transfer	station (operation	"/, nal)				outcome of the regional waste site is	PSDF 2014: Prioritise & guide
IVIO	nagu transier		iai).				finalised (IWMP 2012)	investment & infrastructure
							A minimum of a 500m buffor should be	development
		Landfill Site Su	Immary Table				A minimum of a Soom burler should be	development.
Landfill	Site Classi	fication	Remainir	ig Airspace			observed around solid waste sites. No	
Robert	Robertson Class 2 N/A – landfill closed and rehabilitated						residential development should be	
McGre	gor G:	C:B	N/A – lar	dfill closed			located within this buffer.	
Bonnievale G:S:B 2065 at current deposition rate (JPCE, 2020)								
Ashto	on G:	S:B Non	e. LLM applied	for opening a ne	w cell			
Monta	gu G:	S:B Non	e. Should be clo	sed and rehabil	itated.			

3.1.3.4 Sewerage

Elements				Directives	Applicable Legislation	
The table below provides an overview or	f the sewer c	apacity in La	ngeberg.	Provide for additional sewerage infrastructure	WCIF, 2013	
				expanding or improving, keeping 500m buffer	The Western Cape infrastructure	
Langeberg Sewer Master Plan 2012 (Pr	resent Water	Demand)		in mind.	framework (WCIF) is intended to	
Sewerage System	Water use	NRW est.	AADD (kl/d)	Master plan implementation costs are estimated	align the planning, delivery and	
Ashton				at R 54.1 million (2012).	management of infrastructure,	
Actual	3 845	824	4 669	Ine Implementation will increase the total sewer	strategic agenda and vision for the	
Theoretical, based on UWD's	3 963	748	4 710	from its present Reak Daily Dry Weather Flow	province	
Potential, assuming all stands occupied	5 534	1 062	6 596	(PDDW/F) of + 10 664 kl/d to the future PDDW/F		
Bonnievale	<u> </u>	1		of ± 21766 kl/d (SWP, 2012).	PSDF, 2014	
Actual	2 775	1 306	4 081	• This amounts to an implementation unit cost of R	Prioritise & guide investment &	
Theoretical, based on UWD's	2 884	721	3 605	4 606 R/kℓ/d (SWP, 2012).	infrastructure development.	
Potential, assuming all stands occupied	3 848	962	4 810	• Existing WWTWs should be progressively		
McGregor	McGregor			improved and realized by means of regulatory	SALGA Smart City Development	
Actual	483	121	604	measures and thereafter maintained so that the	Maturity Framework: Smart	
Theoretical, based on UWD's	485	86	570	water quality of the rivers and water-bodies with	Transport – encompasses	
Potential, assuming all stands occupied	891	157	1 048	which they are associated achieve minimum	transportation network	
Montagu	1	1		potable (drinking), contact, phosphate, nitrate	optimization (including mixed-	
Actual	3 284	210	3 493	and e-coli standards. This requires that they	modal access), traffic	
Theoretical, based on UWD's	3 347	372	3 719	comply with the effluent quality requirements set	related smart mobility elements	
Potential, assuming all stands occupied	5 171	575	5 746	out in their licenses.	incorporating enhanced ICT	
Robertson				 Where urban development proposals will exceed infrastructure, capacity, applications, should be 	infrastructure with real time	
Actual	4 709	1 034	5 743	refused until the provision is made to deal with	monitoring and control systems.	
Theoretical, based on UWD's	4 781	844	5 625	the additional loads.		
Potential, assuming all stands occupied	7 015	1 238	8 252			

Reuse arey water	Langeberg IDP Review 2022 -
Drovido for grovy otor rocycling	2022: Pagio Santico Delivert
Provide for greywater recycling	ZUZJ. Basic Service Delivery:
 Off-grid, small bore, dry and alternative 	 Maintain infrastructure to provide
technologies such as bio-gas (permane	t basic services to all citizens.
occupation) or enviro-loos/biolytic filters/ventilate	t t
improved pit latrines (VIPL) (also suitable for	r SALGA Smart City Development
periodic occupation) should be used.	Maturity Framework: Smart
Alternative forms of sewage disposal ar	J Transport – encompasses
treatment for new developments should be	e transportation network
investigated with a view to minimizing the source	e optimization (including mixed-
of waste water and minimizing the pollution	f modal access), traffic
surface and ground water.	management, logistics, and
All wetland ecosystems should be protected successful to the protected successful	related smart mobility elements,
that their ecological and storm water purification	incorporating enhanced ICT
function is maintained. Water abstraction from an	infrastructure with real time
effluent discharge into wetlands should h	monitoring and control systems.
prohibited	
promibiled.	

3.1.3.5 Energy

Elements	Directives	Applicable Legislation
According to the Langeberg Master Planning Investigation in 2017 Ashton, Bonnievale, Goudmyn, Le Chasseur, McGregor, Montagu & Noree medium voltage networks are all lightly loaded with the 5, 10 and 15 year growth forecasts easily absorbed by the existing network. These networks all operate within their general thermal limits of the network elements. Some element upgrades are however required to these medium voltage networks so that they continue to function as reliable medium voltage networks, given the estimated growth forecasts for the next 5, 10 and 15 years (WorleyParsons RSA (Ptv) Ltd. 2017)	The SDF should identify opportunities for alternative energy sources, e.g. solar and wind energy.	 WCIF, 2013: To align the planning, delivery and management of infrastructure, provided by all stakeholders to the strategic agenda and vision for WC. PSDF, 2014 Prioritise & guide investment & infrastructure development
The Robertson medium voltage network is relatively lightly loaded in terms of connected load; however based on the results from the simulations, some element upgrades are required immediately to enable the Robertson network to continue to function as a reliable and stable medium voltage network. The volt-drop on the Robertson medium voltage network is 5%, which is higher than the recommended guidelines of 3% as per NRS 034 – Electricity Distribution Guidelines for the Provision of Electrical Distribution Networks in Residential Areas (WorleyParsons RSA (Pty) Ltd, 2017).	Decrease domestic load by using renewable energy sources, i.e. solar hot water cylinders and photo-voltaic systems should be encouraged and implemented in all new developments.	CWDM-SDF 2021-2026 SALGA Smart City Development Maturity Framework: Smart Transport – encompasses transportation network optimization (including mixed-modal access), traffic management, logistics, and related smart mobility elements, incorporating enhanced ICT infrastructure with real time monitoring and control systems.

	Wards 9 &	Ward 10	Wards 4 & 8	Ward 5	Wards 7 &	Ward 4	Wards 1, 3 & 6	Ward 2
					12		(excl / incl Le Chasse	ur & Goudmyn)
Towns	Ashton	Zonlani	Bonnievale	McGregor	Montagu	Ashbury	Robertson	Nkqubela
Installed Capacity	26.019MVA		21.153MVA	7.4MVA	33.256MVA o	fMV	42.2MVA	
Growth per annum	1.054%		3%	3.65%	2.94%.		1.8%	

Current Peak/ Diversified Maximum Demand	10.705MVA (2010)	8.930MVA	2.502MVA (Estimated 2016)	8.265MVA (March 2014)	32.1MVA (2013)
MV Network	diversified and lightly loaded.	diversified and lightly loaded.	diversified and lightly loaded.	diversified and lightly loaded.	lightly loaded.
Demand factor	±0.411 (0.411 x 26.019 = 10.705MVA).	±0.42 (0.422 x 21.153 = 8.930MVA).	±0.338 (0.338 x 7.4 = 2.502MVA).	±0.248 (0.248 x 33.256 = 8.265MVA).	±0.47 (0.47 x 42.2MVA = 20MVA).
Eskom Transformer (ETs)	Two ETs: 20MVA 66/11kV& 5MVA 66/11kVA; 5MVA ET does not contribute to load, in open position.	One ET: 20MVA 66/11kV No redundancy, Introduce a 2nd ET, same size.	One ET: 10MVA 66/11kV.		Three ETs: 15MVA 66/11kV.
Lines & cables/ Conductors supplying network within thermal utilization range	95.04%, 0 to 35%	93%, 0 to 35%.	100%, between 0 to 35%. Overall power factor of current network is 0.947.	96.55%, between 0 and 35%.	Overall power factor is 0.946.
An after-diversity- maximum-demand (ADMD), compared with estimated ADMD			ADMD of 2.494MVA, compared with 2016 ADMD of 2.502MVA.	ADMD of 8.124MVA, compared with 2014 ADMD of 8.265MVA.	ADMD of 32.296MVA compared with 2013 ADMD of 32.124MVA.
5 Year Peak Demand	10.699MVA (growth < 2010 maximum demand).	9.959MVA.	ADMD of 2.918MVA, calculated at 2.887MVA.	9.553MVA.	37.456MVA & 24.119MVA (Excl.).
MV network	Stable	Stable	Lightly loaded	Relatively lightly loaded	
Conductors/ lines & cables supplying network Feeders thermal utilisation capacity	95%; between 0% - 35%. Feeders in Stasie Weg operates at 71.22%.	92%; 0 -35%. Overall network power factor: 0.935.	100%; between 0 and 35%. Overall network power factor: 0.943.	91% between 0 and 35%.	16.6% of the Conductors operates above 35% & 11.1% above 50%, 1 Conductors operates above 80% & 1 Conductor above 100%.
10 year Peak Demand	11.275MVA.	11.546 MVA.	Approximately 3.454MVA.	11.042MVA.	43.625MVA & 28.839MVA (Excl.).
	System lightly loaded.	Lightly loaded.	ADMD 3.484MVA vs. calculated 3.454MVA.	Stable, 89% below 35%.	
Conductors	Operates at 80%, Replace	Reaching upper limits of thermal capacity,	Stable, 100%, below 35%.		

Feeders; thermal utilisation capacity	Stasie Weg, operates at 74% Station RMU operates at 72%.	Bonnievalemainsubstation, operate above72% (Feed Angora line).			
15 year Peak Demand	11.882MVA	13.385 MVA	4.133MVA	Of 12.764MVA	47.281MVA (Incl), 31.052MVA (Excl)
MV Network	System diversification under 50%. Upgrade feeders & underground conductors when reaching 11.882MV.	Lightly loaded.	Lightly diversified (55% of capacity) & stable.	Operate at 126% (2x 5MVA Transf.).	
Conductors/ Feeders within thermal utilization range	4% operates above 35%, 5% above 50%, 1 above 78%. Stasie Weg @ Main Ashton substation operates at 78.4%. Feeder @ Station RMU operates at 75.5%.	 91.5%, between 0 and 35%. 5%, above 50%. 3 above 80%. 	99%, between 0% and 35%.	2 above 75%.	

Rural Areas	Goudmyn	Le Chasseur	Noree
Installed Capacity	18.382MVA	9.226MVA	11.081MVA
Growth per annum	2%	2%	2.65%
Current Peak/ Diversified maximum Demand	8.8MVA (Figures from Langeberg Municipality)	3.8MVA	5.278MVA
Network& demand factor		Relatively diversified and lightly loaded, demand factor: $\pm 0.411 (0.411 \times 9.226 = 3.8 \text{MVA}).$	Diversified, demand factor: ± 0.476 (0.476x 11.081= 5.278MVA).
Transformers supplying x network	Two 10MVA 66/11kV transformers which supply the Goudmyn network.	Two 5MVA transformers which supply the Le Chasseur MV network.	One 10MVA 66/11kV transformer which supplies the Noree Municipal MV network.
After-diversity-maximum- demand (ADMD) compared with actual ADMD	8.813MVA compared with actual ADMD of 8.8MVA.	3.897MVA compared with real ADMD of 3.8MVA.	5.317MVA compared with recorded 2015 ADMD of 5.278MVA.
MV Network	Lightly loaded	Lightly loaded	lightly loaded, 91.8% between 0 and 35%.
within thermal utilization range of	73.3%, between 0 and 35%.	96.8%, between 0 and 35%.	
5 Year Peak Demand	9.716MVA	ADMD of 4.182MVA, compared to estimate of 4.195MVA	6.015MVA
MV network	appears stable	lightly loaded	lightly loaded
---	---	--	--
% of lines & cables/	66.5%; between 0 and 35%	Overall power factor is 0.947	60%, (66/11kV 10MVA transformer) 91%; between
thermal utilization range	Overall power factor of the network is 0.926		0 and 35%.
			Overall power factor of the network is 0.943
10 year Peak Demand	In the region of 10.272 MVA	Approximately 4.632MVA	Approximately 6.855MVA
	Lightly diversified.	Lightly diversified, (50% under installed capacity).	66/11kV transformer operates at 68%.
Network & supplying lines	appears stable,	appears stable,	Appears stable,
and cables within thermal utilization range	65%, between 0 and 35%	93.7%, below the 35%	91%, below 35%
	Overall power factor is 0.924.	Overall power factor is 0.944.	Overall power factor of the network is 0.939.
15 year Peak Demand	11.843MVA	5.115MVA	7.813 MVA
Network	Lightly loaded.	Two 5MVA transformers operate above 50%.	lightly loaded.
		(should one transformer fail,2 nd operates above 100%).	66/11kV 10MVA transformer is operating at 77%.
% of electrical conductors	62%; between 0 and 35%.		91.7%; between 0 and 35%.
within thermal utilization range	23 Conductors operate above 50%; 7 Conductor operate above 80%.		

3.1.3.6 Water Infrastructure

Elements	Directives	Applicable Legislation
Ashton receives its water from four sources, i.e. the Breede River irrigation canal, the Cogmanskloof Irrigation Board, two small streams in the Langeberg Mountain Catchment Area and water abstracted from the Breede River. The water is purified at the Ashton WTP. (Breede River (Montagu Included) Cogmanskloof Irrigation Scheme (CBR) Robertson Canal (Breede River). Bonnievale receives its water from the Breede River. Water is extracted from the river at two points, i.e. a pumping station directly from the river and via an irrigation canal which runs through the town. The main extraction point to the WTP is the canal. Extraction directly from the river is only done as a supplementary source and in emergency conditions. (Breede River and Zanddrift Irrigation Canal). McGregor is supplied with water from the Houtsbaais River which is treated at the McGregor water treatment plant. Montagu receives its water from four sources, i.e. Kruiskloof, Keurkloof, Rietvlei and the CBR pipeline scheme. This supply is also supplemented with water from aquifers in Badskloof situated in Montagu West. The water is purified at the Montagu WTP. Robertson receives its water from two sources: - Langeberg mountain catchment area north of Robertson. - Breede river irrigation canal. The water is purified at the Robertson TP. (Brandvlei Irrigation Scheme (Breede River) Dassieshoek and KoosKok Dams Hoops River Irrigation Scheme) (From Water	 Provide for water infrastructure such as reservoirs and water treatment plants. Implement water demand management techniques such as minimizing leaks by reducing water pressure and a stepped tariff system that effectively addresses excessive water consumption. Develop a range of water demand management strategies for all sectors. Encourage retrofitting of water demand management technologies into existing buildings and offer an incentives program. Educating consumers on water wise initiatives including gardening across the Municipality. Rainwater harvesting, grey water recycling and similar technical enhancements such as low flow shower heads, dual flush toilets and water wise gardens should be encouraged for new residential, commercial and community projects 	 PSDF, 2014 Prioritise & guide investment & infrastructure development. WCIF, 2013 The Western Cape infrastructure framework (WCIF) is intended to align the planning, delivery and management of infrastructure, provided by all stakeholders to the strategic agenda and vision for the province. SALGA Smart City Development Maturity Framework: Smart Transport – encompasses transportation network optimization (including mixed-modal access), traffic management, logistics, and related smart mobility elements, incorporating enhanced ICT infrastructure with real time monitoring and control systems.
Services Development Plan 2014/2015).	The meeter plan implementation at a cost of	SA Const 1996
outlined in the following table which outlines the cost to upgrade the	Ine master plan implementation at a cost of R 120.5 million will increase the Municipal	SA Const, 1990
water storage, distribution and purification capacity. To upgrade the	system capacity from its present Annual	Support safe & healthy environments.
water system in Langeberg including the distribution system, bulk supply	Average Daily Demand (AADD) of 18 542	
and water demand will cost R120.4 million.	kl/d to the future AADD of 33 374 kl/d.	

Proposed works, cost estimates & phasing - Future System					
Sub-totals (R)	Distribution System Items	Bulk Supply Items	Water Demand Management	TOTALS (R)	
Ashton	6 539 400	24 105 200	300 000	30 944 600	
Bonnievale	4 674 600	19 153 400	200 000	24 028 000	
McGregor	2 562 000	575 400	100 000	3 237 400	
Montagu	7 032 200	21 074 200	500 000	28 606 400	
Robertson	11 536 000	21 638 400	500 000	33 674 400	
Total	32 344 200	86 546 600	1 600 000	120 490 800	

• This amounts to an implementation unit cost of R 8 124 R/kℓ/d (WMP, 2012).

The status of water storage, distribution and purification capacity is outlined

Water	Wards 9 & 11	Ward 10	Wards 4 & 8	Ward 5	Wards 7 & 12	Ward 4	Wards 1, 3 & 6	Ward 2
Towns	Ashton	Zolani	Bonnievale	McGregor	Montagu	Ashbury	Robertson	Nkqubela
Source/ Supply								
Reservoirs total volume (kl)	6 700	3 475	2 960	10 700	11 700			
Total AADD served (kl/d)	2 409	4 077	593	3 490	5 712			
Reservoir volume required	10,5 Mℓ (reservoir augr Langeberg & Ash	Cogmanskloof nenting for ton Foods).	5,5 Mℓ additional storage at Old reservoir.4,0 Mℓ additional capacity for new developments Zone D at New reservoir site.	2,0 MI at McGregor reservoir 1 site.	2,0 Ml at Badsh tank site. 3,5 Ml at As reservoir site storage for lowe George Brink &	oogte balance shbury Upper (emergency er lying zones: Ashbury.	5,0 Mł (Reservoir 5) (balancing reservoir zone (west). 3,0 Mł (Reservoir 3) in Reservoir 2 & 3 z 2,5 Mł (Reservoir 4) in Reservoir 4 zone	additional storage r) to Reservoir 1 additional storage ones. additional storage
Distribution network	Insufficient capar water demands (f & future developn Upgrade supply p • between Ash Cogmans-kloof	city for future ull occupation) nent areas ipelines: ton WTP & reservoir	Insufficient capacity for future water demands (full occupation) & future development areas. Improve network conveyance: • Require inter-connections	Insufficient capacity for future water demands (full occupation) & future development areas. Some distribution pipelines to reinforce water supply.	Insufficient capa water dem occupation) development and A number o pipelines are reinforce water	acity for future ands (full & future eas. f distribution required to supply and for	Insufficient capacity demands (full occ development areas. Re-zone the distribu	y for future water upation) & future ution system.

	 (Langeberg & Ashton Foods). between Conradiedorp reservoir & future development A06 between Zolani reservoir & future development A07. 	 in Happy Valley. Reinforcing pipelines in Old reservoirs zone. A new main supply pipeline in New reservoir zone to supply future development areas Zone E and D. 	Re-zone existing network to incorporate new booster zone.	new supply at development areas. Re-zone existing Ashbury Lower network in order to incorporate the proposed Ashbury Upper zone.	Reinforcing pipelines to improve supply and ring network conveyance in Reservoir 1 zone. A new main supply pipeline for Nkqubela is needed.
Main feeders	Upgrade one 200 mm Ø feeding mains from WTP to Langeberg factory to a 315 mm Ø main.	Utilize 200 mm Ø rising main between new reservoir as additional supply to old reservoir. New 315 mm Ø dedicated rising main between Old and New reservoirs.	No upgrade required.	Upgrade 200 mm Ø rising main from Montagu WTP to Ashbury Upper reservoir. New 160 mm Ø feeder main to proposed Badshoogte reservoir.	Upgrade one of two 250 mm Ø feeders from Reservoir 1 supplying central town area. Upgrade 75 mm Ø feeder main from Reservoir 1 network to Nkqubela booster pump station.
Pumping station	Upgrade Ashton WTP to Cogmanskloof reservoir pump station. Downsize Cogmanskloof to Conradiedorp pump station. Add a 3rd pump set for standby at Ashton WTP to Langeberg factory pump station. New Conradiedorp booster pump station.	The duty point of existing pumps 1 - 4 should be verified. Propose a new pumping station at Old reservoirs site to supply water from Old to New reservoir.	A new booster pump station is proposed for the higher lying areas. Propose a new pumping station at Old reservoirs site to supply water from Old to New reservoirs.	New Ashbury Upper to Badshoogte pump station at Ashbury Upper reservoir. Upgrade Mill Street, Kanonkop booster and WTP to Ashbury pump stations. Add 2nd pump set for standby at WTP to South pump station. Add a 3rd pump set for standby at WTP to George Brink pump station. Verify duty points of existing pump stations in Montagu.	Propose upgrade of both existing pump sets at Reservoir 1 pumping stations: upgrading mechanical and electrical items. Upgrading Reservoir 1 - 2 & Reservoir 2 - 3 pump stations. New reservoir 4 booster pump station.

3.1.3.7 Housing

Subsidized HousingProvide for different housing typologies.MSA, 2000According to HSP 2014 – 2018, the estimated fully subsidized housing backlog is: 9 340. Housing supplies has slowed in recent years, to• The Land Audit report served before Council on 28 October 2008 resolved the following:Provide access to quality and affordable services.
According to HSP 2014 – 2018, the estimated fully subsidized housing backlog is: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing supplies has slowed in recent years, to access to quality and affordable october 2008 resolved the following: 9 340. Housing slowed here 2008 resolved here 2008 resolved here 2008 resolved here 2008 r
backing is: 9 340. Housing supplies has slowed in recent years, to October 2008 resolved the following:
connection table 100 units non commerced to 1 400 units non Desidential encodes to residential table WCIE 2012
approximately 100 units per annum, compared to ± 400 units per o Residential erven in various towns be considered to be wcir, 2013
for the next 2.5 years indicate on every supply of element 500 units
ner annum
The 2014 housing waiting list total: 12 878 individuals (Department of planning department identifies suitable land for bousing infrastructure provided by all stakeholde
Human Settlements (DoHS):
Robertson – 3717 individuals: Agricultural land owned by the Municipality should be province.
 Ashton – 2599 individuals: Ashton – 2599 individuals:
 Bonnievale – 2432 individuals: Business sites should be investigated to be sold by way
 Montagy – 1168 individuals; of public auction but that before any business sites are
 McGregor - 582 individuals: sold they should be submitted to the Mayoral
Nkgubela – 1078 individuals: and, Committee.
 Zolani – 1302 individuals. Requests for land in Nkqubela for business and
churches should be investigated.
Historically housing opportunities were not generally located close to Langeberg Municipality committed to develop the most Langeberg IDP Review 2022 -2023
economic opportunities did not facilitate integration. The majority of suitable site according to the following settlement planning An Efficient, effective, responsive a
top structures built were of poor quality; an estimated 5000 require principles:
structural repairs and are currently being repaired. Single, free-hold • Locate activities (residential, transport, work, human settlements and improved live
tenure recreation, etc.) so that at least 50% of them are in conditions of all households.
valied, no vast improvements have been made to deal with the valiety walking distance; Sound Financial Management: Adherence to
far short of meeting the demand
accessible localities, e.g. industrial and confinencial, Effective stationoidal engagements to prome
According to the HSP. 225ha of land is required to provide for housing
opportunities.
distance of urban centres where space permits

Property Market and Growth Pressures

The demand for urban properties increased as the popularity of the unique and tranquil lifestyle in combination with the relative affordable prices. The property market trends for each settlement follow:

Residential property	Robertson	Ashton	Montagu
average sale prices per annum	rise 4-8%	rise 6-10.2% per annum;	rise 9.4 %
Reasons 1:	housing demand created by a growing workforce;	higher demand for housing	well established market, rise slower
Reasons 2	Known for popular annual wine festival events attracting potential buyers. A sellers property market	Significant increase in asking price (29.3%). Number of properties entering market stays low.	

- The highest average urban property prices are found in McGregor and the lowest in Robertson.
- Ashton has the most urban properties for sale.
- Robertson has the highest R/Ha rural property values.

According to the HSP, 225ha of land is required to provide for housing opportunities:

Settle	Robertso	Montag	Ashton	Bonnieva	McGre	Total
ment	n	u		le	gor	
Land (ha)	86,33	17,8	48	53,8	19,2	225,13

SA Const, 1996 Structure spending & planning Support safe & healthy environments Provide access to housing, education & health care. Table below illustrates status of providing housing opportunities in 2022. Some of the proposed sites fall outside the urban edges of the settlements.

PROJECT DESCRIPTION (no. of sites)	COMMENTS
Completed	projects
Robertson Muiskraalkop – (129) IRDP Erf 7973 (Ptn/Rem Erf 2 Rob).	129 Top Structures completed.129 Deeds transferred.
GP No. 2022/2014 Erven 7974-8183 Robertson.	
Robertson Kenana – (505) UISP	 505 Sites completed.
Erf 1466. (part of Rem/Erf 2 & Ptn/R/Erf 136).	Transfer of properties continuing.
	Conveyancer to confirm documents required
GP No 842/2019 Erven 1474-1983 Nkqubela.	to transfer remaining properties.
Implementation: projects currently being	serviced or construction taking place
McGregor - 496 IRDP.	 486 Top structures completed.
- (486 Deeds transferred.
Erf 360 McGregor. GP No. 558/2016 Erven1401-1939.	 10 Outstanding Top structures to be completed no approved beneficiaries to date.
	 15 affordable sites available.
15 FLISP.	
Robertson Nkqubela (adjoining sports field) (172).	 172 top structures currently under construction.
Erf 435 Nkqubela (part of R/Ptn Erf 136).	Conveyancer to confirm documents required
GP No. 1061/2022 Erven 2024-2197.	to open township register in order to transfer properties.

Medium term planning: projects with Hou initiation docume	using Pipeline approved by Council & project ents (PID) submitted
ISSP Montagu Mandela Square (173) UISP Rem/Ptn Erf 1 & 937 Montagu. Project footprint 148 service sites.	 Project Feasibility Report (PFR) required. Project Implementation Readiness Report (PIRR) required.
Montagu Kingna River (adjoining Mandela Square) – IRDP. Rem/Erf 937 Montagu. Potential number of units 500.	 Project Feasibility Report (PFR) Required. Complies with principles for densification and infill development. Optimise undeveloped land.
Bonnievale Boekenhoutskloof (224) UISP. Erf 907 Bonnievale& R/Farm 174 Swe.	 Project Feasibility Report (PFR) Required. Project Implementation Readiness Report (PIRR) required. PFR and PIRR to be submitted in 2022/23 Financial year.
Robertson Heights (189 services - 188 units) IRDP/UISP. Erven 2981 & 2445 Robertson.	 Conclude older project all development rights have been obtained. Obtained environmental authority however the department (DoHS) has not received the proof thereof. PIRR being prepared, but neither Planning nor Conditional Approvals obtained yet.

Long-term planni	ng: projects on municipal housing pipeline
Robertson Portion of Erf 1206	Privately owned land therefore project Initiation Document
Heyl's Land (1000) UISP.	submitted with Land Acquisition to be completed.
	Project will accommodate an existing settlement.
Zolani Portion of Farm 197 (1000)	High priority possible solution to deal with informal dwellings,
UISP	Nkandla and Riemvasmaak, backyarders as well as the natural
Ptn of Goree 197, Montagu RD.	growth of the area.
	Privately owned land.
	PID must still be submitted with Land Acquisition Section to be
	completed.
Mantagu Kriskatuald (65 apprings 8	Buik Capacity to be determined.
65 upite)	
	Existing water & sowerage upgrades needed
Ptn of Rem/ Erf 728 Montagu	Project Initiation Document (PID) must still be submitted
T thorntomic En 720 Montaga.	neither Planning nor Conditional Approvals obtained vet
	Careful consideration be made on utilising land zoned sports
	to housing development.
Bonnievale Uitsig (58) IRDP.	Environmental authority obtained.
Ptn 1, 2, 4 & 5 / 695 Śwellendam.	Bulk capacity sufficient for development.
10 units for GAP housing.	Land use approval obtained.
ISSP McGregor Remainder Erf 397	Small Informal Settlement of non-qualifiers that refuse to be
(30) UISP.	relocated.
Remainder Erf 397 McGregor	Current environmental authority does not will only be
(Robertson SG region).	considered through a formal application.
	Project Initiation Document (PID) required.
	Adjoins Hoeks river – very high-water table, not suitable for
	residential development in terms of sustainability and
	resilience principles.

Other: projects funded from different sources other than the uisp or hsdg grants (social		
	housing funds)	
Strydom Straat Erven 2384, 2385,	Reconstruction of severely degraded houses.	
2386, 2387, 2388, 2389, 2390,	Demolition and rebuilding will be needed. Very complex	
2391, 2392, 2394 & 2395 Montagu	project.	
(14) IRDP.	PID must still be submitted. Project identified as a MEC	
	Priority Project.	
	Awaiting the DoHS commitment to the project.	

Canc	elled projects
Ashton Remainder of Portion 71 of Farm 158 (161 services & 161 units) IRDP.	Portion next to Ashton cemetery.
Ashton Portion 17 of Farm 158 Zandvliet (520).	Bulk electrical supply is a major issue halting this project. Urban edge extension was not supported by DEA&DP.

3.1.3.8 Amenities

Elements	Directives	Applicable Legislation
Social Amenities, Cemeteries		
There are cemeteries in Robertson, Montagu, McGregor, Ashton and Bonnievale.		
 The municipal IDP noted that sufficient capacity exists but that additional capacity should slowly be allocated as certain cemeteries are reaching capacity. The following challenges were noted in the IDP: Vandalism and plundering of graves/tombstones; and, Locating and identifying additional land. The Minister of Health has, in terms of Section 68(1)(b) read with Section (90(4)(c) of the National Health Act 2003 (Act 61 of 2003), made regulations relating to the management of human remains (Government Gazette R363, dated 22 May 2013). Section 15(2)(b) of the mentioned regulations has very serious implications. The mentioned sub-sections reads as follows: <u>"All</u> burial sites must comply with the following environmental requirements- (a); (b) be located at least 350m from ground water sources used for drinking purposes and <u>at least 500m from the nearest habitable building;</u> (c); " The extent of such 500m restriction and the impact on existing urban areas are included in each settlement proposal section. 	 Facilitate the ongoing maintenance of cemeteries throughout the municipality especially relating to security and fencing. Ensure that capacities of cemeteries are monitored on an on-going basis to ensure additional space requirements are timeously addressed. The cited sub-section dictates that there shall be no residential (habitable) buildings within 500m of any burial site. The requirement of this regulation could hamper efforts at densification in urban areas. 	 MSA, 2000 Provide access to quality and affordable services. WCIF, 2013 Align the planning, delivery and management of infrastructure, provided by all stakeholders to the strategic agenda and vision for the province. Provision standards for social amenities: 1 church / 1 000 persons - 0.015 - 0.3ha. 1 community hall/ 10 000 persons/ 2 500 dwellings - 0.2ha. 1 police station/ 25 000 persons/ 6 250 dwellings - 0.1ha

3.1.3.9 Heritage

Elements						Directives	Applicable Legislation
The settlements in L	angeberg we	ere founded be	tween 1853 a	nd 1861.		Preserve the following Heritage Themes	NHRA, 1999 Sections 30
Founded	ł	Declared	Sett	ement		1. Pre-colonial archaeology and early inhabitants of the	(5) z7 31 supports
1853		1857	Robe	ertson	_	area.	integration of heritage
1853		1857	Asht	on	_	2. Early colonial history and settlements; agriculture in	management and planning
1853		1857	Bonr	nievale	-	well-watered fertile valleys and foothills late C17th	iunctions.
1856		1895	Mon	agu	-	early C18th.	Heritage resources that
1861		1892	McG	regor	-	3. Early contact/ contestation between settlers and with	need to be protected
Buildings older than 60 years are graded in accordance with the three-class rating system of heritage resources, as set out in the National Heritage Resources Act, namely Grade 1, 2 and 3. Heritage Western Cape's categorize Grade 3 or local resources in three grades, namely Grade 3A, 3B and 3C. Three hundred and fifty eight and more preservation worthy buildings are in Langeberg with the highest concentration of buildings located in the towns of Robertson (203), Montagu (74), McGregor (37) and the rural areas (33).While the predominant number of heritage resources is residential buildings, there are also a range of commercial, institutional, social and industrial buildings that have been identified. A summary of the distribution of preservation worthy buildings in the study area are summarized in the table		 indigenous peoples; displacement of San and Khoekhoe. 4. Cultivation and agricultural production; history of fruit and wine farming and associated secondary industries. 5. Slavery and labour; Farm yard and agricultural production to mid C19th; sites of slavery including 1808 Slave Revolt. 6. Religion; C19th Church towns. 7. Routes and Transport; mountain passes; early cattle and wagon routes, outspans; 	include the built environment and the landscape and other prominent natural features which form an important part of the cultural resources.				
Town	Grade 2	Grade 3A	Grade 3B	Grade 3C	Total	 Railway development in Cretin, associated stations and development 	
McGregor	13	2	10	12	37	9 Military History: outposts: SA Anglo-Boer War action	
Montagu	22		22	30	74	9. Winitary History, outposts, SA Angio-Doer war action,	
Robertson	6	5	36	156	203	10 Pagianal Arabitactura: Cana Dutab Castraian	
Rural	4	5	24		33	Vietorian Cano Povival Art Dooo; farm yord of the	
Total	45	12	92	198	347	victorian, Cape Revival, Art Deco, farm yard of the	
						edily U 19(1).	
						TT. Outstanding Scenic Beauty.	

	12. Recreation and Tourism: destination places, themes	
	and routes; wine, fruit, olives and horses and other	
	places of cultural interest and scientific interest.	
There are a number of areas of heritage value identified on town level in terms of	To protect these special qualities and areas a Heritage	Provide for the conservation
preservation worthy buildings, the proximity of other similar buildings and the epitome of	Overlay Zone are proposed in these 3 settlements.	of cultural & heritage
a town landscape character, particularly in Robertson, Montagu and McGregor.	Consideration needs to be given to - cultural landscapes,	resources as these
Robertson's spatial pattern started a grid between two rivers, the Willem Nels River and Hoops River. The first erven were established with access to water (water erven) as an irrigation system with furrows and sluices that were strictly rationed, were devised (Fransen, 2008, 195). The grid consists of town blocks defined by north south streets (between the two rivers) a 100m apart. "The church block is located in the centre town, and the adjoining blocks are halved so that the church block "intercepts" Church street and affords axial views along this street." Hence the Gothic Revival Style church is a focal point. Perpendicular streets (east west), spaced closer to the centre and further apart outwards to the rivers, divert from the grid pattern. Robertson is one of five Cape country towns with the richest buildings predating 1900. Stellenbosch, Paarl, Worcester and Graaf-Reinet being the other four (2008: 196). Robertson is 30 years younger than Worcester and thus thatched roofs were replaced by corrugated iron, rectangular, two-rooms, deep plan houses with taller gables dominates, with more double story, Georgian buildings on street corners. Robertson exhibits landscape patterns throughout, especially in the treatment of erf boundaries with hedges and the lining of streets with oak, jacaranda and other large, shady trees. Gardens have an ornamental, formal front flower garden, with a productive vegetable garden and fruit trees toward the back. These gardens are complimented by several town parks. Montagu is situated on the fringe of the little Karoo and not in the wider Breed River Valley. "It is spectacularly situated, at a natural gateway within the Langeberg Mountain Range with the winding Cogman's Kloof and it convulated rock masses suddenly opening up to reveal an intimate, verdant valley and a charming cluster of old houses (2008: 254).	 heritage areas and sites, form giving elements of scenic rural landscapes, and the relationship between the natural and cultural environment. The natural environment in the Langeberg forms the basis of various activities that include tourism, conservation, recreation and agriculture. Development in the rural and natural areas need to: Exploit (develop) economic opportunities in a sustainable manner; Protect the sensitive natural environment and agricultural resources from inappropriate and opportunistic development; Create (change to) sustainable rural livelihoods. 	 provide an insight into the past & give a sense of social and individual identity to the inhabitants of an area. (forming an important connection to the people's history and different cultural backgrounds in the area). support and explanation of the diverse cultures in the region and contribute to a better understanding of the cultural diversity.
Cosman's Kloof. The grid pattern between these two rivers is entirely rectilinear. No		

special concessions were made for public buildings which instead occupies ordinary erven. Two kinds of erven were provided: "water erven" and "dry erven". Water erven were between 1 to 4 acres in size and located on the flat, alluvial soil of the river valley, irrigated by a communal "lei-water" system fed from the Bath River. Provision was made for market and church squares and village pasturage. Montagu started as a thriving agricultural centre, and many of the buildings had common forms, mostly simple rectangular buildings, sometimes with gables, set in a landscape of vineyards and orchards, divided by. Quince and pomegranate hedges. Sections of Long street were defined by werf walls, punctuated at intervals by more substantial walls of houses, barns and cellars. Bath street became the main commercial spine of town with many double story buildings. Many thatched, homestead-type houses with central gables, interspersed with noble double storeys with decorative parapets in a remaining "green" town with gardens and undeveloped river erven. Montagu is an intensely cultivated agrarian settlement with, more "urban" services like those of artisans, shopkeepers and the like forming a distinct minority (The Landscape and architecture of Montagu: 1850-1915, 1992). Montagu still retains its green, productive gardens throughout the town, and has virtually unimpeded river lands. McGregor, first named Lady Grey, is a rectangular spaced town made up of three-by-eight almost square blocks with blocks in the south being half size in order to offer smaller erven. It is situated in a shallow valley of the Riviersonderend Mountains, with several large gabled homesteads in its vicinity and one of the best-preserved gridiron towns in the Cape. Ashton is a modern settlement originating from the trading post Roodewal that became a railway station. Its scatus changes just before World War II (1939 -1940) when the first canning factory was introduced with the second following after WWII (1949). In the latter half it became famous fo		
Rural Areas:	Protect the Langeberg heritage resources with	
Historic buildings in rural areas are modest and simple using neoclassical detail.	vulnerabilities against potential impacts:	

Robertson, Montagu and McGregor all generally exhibit "compressed-H" shaped ground plans within their town houses, consisting of two rows of rooms under one roof; "the front row is divided into two by a narrow passage, for which light is provided by a fanlight above the front door, and a glazed passage door, also with fanlight" (Obholzer et al, 1985 et al. 315).Homesteads date from mid-1800s, when the establishment of shipping trade between Port Beaufort and Cape Town were thriving.The key rural homesteads of heritage significance within the Langeberg region include: Baden, Bakovens, Bo-Noree, Noree-Vinkrivier/Orange Grove, Boesmansdrift, BruintjiesrivierClairvauxRhebokskraal, RietvleiDerdeheuwel, Die Bos, Die Erf, De Hoop, De Bon Cap, Die Ou HuisScheepersrus, Steenboksvlakte, Takkap, TemenosExcelsior, GoedemoedTakkap, TemenosJan Harmansgat, JoubertsdalVinkrivierKlaasvoordsKrugershof, Kruispad			Infrastructural development: highways, power lines, wind and solar farms. Agricultural practices: tunnel farming, bird netting. Agricultural operational changes: re-location of farm labour to housing settlements, larger economic units leading to consolidation /abandonment of smaller farms / redundancy or unsuitability of existing structures / lack of maintenance of heritage fabric and resources. Inappropriate development including suburban sprawl, walled or security-fenced village/ townhouse and industrial development; unsympathetic alterations and additions to heritage structures; filling stations and refreshment outlets or large industrial type structures (sheds and wineries) poorly sited relative to scenic routes, ridgelines etc.	
	Wolfklkoof/Wolvekloof, Wilde PaardeKloof, Zevenfontein	•	Removal of benign or non-invasive "alien" trees,	
 <u>The Landscape Character of the Towns</u> All three of the 19th Century towns in the municipality have similar landscape characters in this regard, perhaps still more evident in McGregor than in Robertson, which has grown and been subdivided significantly during the 20th Century, However, the 1945 aerial photographs of each town shown their underpinning landscape commonalities, namely: The setting of cultivated and natural landscapes, namely the natural landscapes of the surrounding mountain peaks and river valleys, and closer to the towns the cultivated landscape of vineyards, meadows and orchards. The embracing riverine corridors, whose constant water source was a primary defining element for the location of each town where it was sited. The incorporation of orchards and vineyards into certain areas of the towns, where the "leiwater" system allowed for irrigation of smaller fields. These "water-erwe" typically occurred towards to the outskirts of the town, close to the rivers 		To course the bu tak str irre Th lar pu Th of pla rep cou	deschini and Japha note that the factors which ntribute to the town's character are complex, and eaningful conservation measures cannot be limited to a protection of a few isolated buildings or groups of ildings. Unless the landscape features of the town are even into account within any conservation and planning ategy, the uniqueness of the townscapes will be lost etrievably (1990: 19). e municipality should undertake a detailed study of the adscape character of each town within the area, and t in place systems to maintain them into the future. is will include, among other things, the maintenance the leiwater systems, and the establishment of a tree- anting programme to ensure that old or sick trees are placed, and the landscape pattern of tree-lined streets ntinued into the 21 st Century.	

 from which irrigation was led. Todeschini and Japha also point out that these sections of the town still have a "semi-rural" character, defined by thatched and parapeted buildings set amongst a landscape of orchards and vineyards. These structures architecturally had more in common with the outlying homesteads. The smaller and denser fabric of the "droe-erwe", which were not irrigated and therefore came to accommodate a more urban type of fabric and use. The structures form a continuous edge to the street, but along with this, the streets are lined with avenues of trees on both sides, which create a very urban landscape pattern. In the larger towns, some of the areas between these two types of urban and landscape patterns have been set-aside as public parks, and these create green "lungs" within the townscape. Further, in all instances the central, Dutch Reformed Church is set within its owns block, and surrounded by landscaped gardens. 	
Scenic Routes Two scenic routes have been identified within the area, and both have entirely different characters. Cogman's Kloof Pass extends across a poort (mountain pass), which runs through the Langeberg between Ashton and Montagu. The pass follows the path of the Kingna River and is therefore susceptible to flooding. The pass provided the primary link to the main settlement for transporting the produce of the first farms beyond market, and was difficult to traverse and open to flooding. The original track was running alongside the riverbed incorporating eight drifts. To pass the Kalkoenkrantz, wagons had no other option but to travel in the riverbed itself. In 1961 the building of a 5.5km road was authorized and work began in 1867 including establishing an unlined tunnel through the hard rock of the Kalkoenkrantz. A bridge was constructed in 1915. Tarring of the strip of road took place in 1931. Approaching from the Ashton side, one is struck by the beauty of the area. The wide riverbed, running below the road, is flanked by vineyards in an idyllic setting, which give way to the stark, rugged beauty of the rock formations as one enters the kloof. (samountainpasses.co.za, see figure 11.1).	

R317. Robertson to Bonnievale	
The road between Robertson and Bonnievale hugs the Breede River, and takes in some	
of the most fertile wine and fruit farms in the region. The road itself is famously lined with	
trees and flower beds, and in certain seasons provides a riot of colour.	
The road also follows a 20th Century canal in the stretch closes to Bonnievale, which	
irrigates the fields and vineyards between the road and river. The R314 exhibits all the	
elements that make up the cultural landscape of the area to great effect.	

3.2 Spatial Analysis and Sectoral Plan Directives

Three sector plans or strategies, Local Economic Development Plan, Tourism Strategy and Risk Management Plan, provide spatial and development directives inclusive of:

	Local Economic Development Plan	Tourism Strategy	CWSDF	WC SDF, 2014
Policy & Enabling Environment	reateanurturingeconomicCreate an enabling environment (institutional framework in municipality) to grow tourismF-emerging tourism businessesandequitablebusinessdevelopmentM-Local economic development(previously disadvantaged):id-job creation, andObjective 3: coordinate marketing;Objective 5: tourists have readily access to information.information.		Robertson as a First Order town and Montagu as a Second Order town. McGregor, Ashton and Bonnievale are identified as third order towns.	
Economy	Accelerate economic growth through: - Business Retention, Expansion, - fostering new businesses, job creation.	A sector-based strategy growing tourism Objective 1: Route and destination development (foster current attractions). Objective 2: Competitive advantage products Objective 4: Targeted Marketing (introduce new and unique tourism product offerings catering for market preferences).	Urban densities are to be increased to 25du/ha before allowing expansion to urban edges. Land development incentives are given as a possible means of encouraging densification in desired locations.	Promote R60 and R62 as a continuous combined road/rail transport corridor and the R62 as a continuous tourism corridor. Promote higher order services and urban densities in Robertson as first order settlement.
Tourism	 Grow the tourism sector and agriprocessing as investment attractions and, Grow and capacitate existing businesses and new ventures, differnt sectors Facilitate SMMEs growth and formalise informal sector Enhance tourism's electronic footprint. Its going and staying green a brand that is unique and speaks to the area's unique social heritage. 	 <u>Proposed Vision:</u> Grow LLM as a sought after, all year round, unified tourism destination with an increasing contribution to the local economy: <u>Broad Objectives</u> To grow the number of visitors to the LLM, particularly from identified target markets. To increase the length of stays of visitors and the average spend, offering a diverse range of tourism products, across LLM. To ensure products are available and accessible, with information on them 	Ensure that the needs of communities & interest groups are identified, acknowledged and addressed; Coordinate the effective use of resources (financial, human & natural); Urban densification should take cognisance of ecological and heritage concerns.	 Develop the tourism potential of the Langeberg region. Promote tourism development along the R62. Promote the extension of the conservation status of existing reserves into a series of continuous biodiversity corridors: Waboom; Langeberg, Breede River and Riviersonderend Mountains. Protect intensive agriculture areas to ensure food security.

		1		
	ease travelling access to and	readily available, based on USPs of		
	within the region.	LLM, and demand by identified target		
		markets.		
		Provide co-ordinated approach to tourism		
		development: and facilitate cooperation:		
		Objective 12: facilitate transformation		
		Objective 13: Ensure institutional capacity in		
		place to grow LLM as a tourism destination.		
		Objective 14: To regularly monitor tourism		
		sector performance and trends.		
Investment,	Cape Winelands to co-ordinate	Ensure tourism infrastructure & human	Disadvantaged communities are to be	
Capital	investment: Develop LLM as an	resources are in place to grow tourism.	accommodated (strategically located)	
Expenditure:	investment and tourism destination	Guide public & private investment	through infill development. Well located	
	and provide services and innovative	Objective 7: Ensure local infrastructure is	land along corridors and close to	
	travel infrastructure.	supportive of tourism growth.	employment opportunities are	
		Objective 8: Spatially spread tourism in	considered ideal locations.	
		Langeberg through infrastructure provision.		
		Objective 9: Facilitate more transport option.		
Rural	Protect natural resources	Focus on unique selling points of all areas		
Development	Implement Water-efficient farming	Objective 6: collaborate with areas outside		
	practices.	Langeberg and include rural areas		
	Provide for new technology	(enable the entry of new, previously excluded		
	applications and Langeberg's	areas and enterprises into the market).		
	area's knowledge industry			
	enhancing agriculture & tourism			
	 enhance sectror cluster formation. 			
Social	Establish a better life for all (Sector	Support tourism sector to contribute to		
Development/	Plan): Reduce:	employment and socio-economic		
Human	• FAS (Fetal Alcohol Syndrome)	development:		
Resources	and substance abu se.	- Transform the tourism industry.		
	Domestic Violence.	- Enable Human Resource Development		
	Matric dropout rate & teenage	and placement.		
	pregnancies.	- involving all stakeholders.		

	Improve levels of eduction, offer skills	Objective 10: To ensure awareness of the	
	training to improve service delivery.	tourism sector by all residents.	
		Objective 11: Grow tourism skills.	
		Objective 12: Facilitate transformation of the	
		tourism sector in the LLM.	
	Langeberg Disaster Management Plar	n (2022/23) – Climate Change	
Disaster Mana	gement Plan (DMP) is an information gu	ide to relevant role players and should advise	
them on how t	to lead in the case of a disaster, to preve	ent or mitigate any negative effects due to an	
incident.			
Submit DMP to	relevant Governmental structures, such a	as the Disaster Management Control Centres of	
CWDM, WC and National.			
Increase munic	cipal capacity to prevent and deal with disa	aster:	
DMP			
Integrate Disaster Risk Management into the strategic, operational planning and project implementation			
of all line functions and role players within Langeberg municipality;			
Prepare for iint	egrated, fast and efficient response to em	ergencies and disasters by all role-players.	

References

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Urban Edge		EXISTING SERVICES:
Urban Edge Expansion		Waste Water Treatment Works
Activity Street		Water Treatment Works
Heritage Area		$\mathbf{\Psi}$
Demarcation Wards		
Business Nodes	0	
Main Nodes	0	
	Urban Edge Urban Edge Expansion Activity Street Heritage Area Demarcation Wards Business Nodes Main Nodes	Urban EdgeUrban Edge ExpansionActivity StreetHeritage AreaDemarcation WardsBusiness NodesMain Nodes



MCGREGOR



BONNIEVALE



KEY: Rivers R Residential Central Business District CBD IND Industrial Cemetery С POI Place of Instruction BN **Business Node** Urban Edge ID Infill Development AI Agri-industry TBF To be formalized - -Urban Edge Expansion Activity Street Demarcation Areas Proposed Road Upgrade MU Mixed Use DoHS Department of Human Settlement Rivers **EXISTING SERVICES**: \oplus Water Treatment Works \oplus Water Reservoir Refuse Disposal Area ٠

ASHTON



MONTAGU

