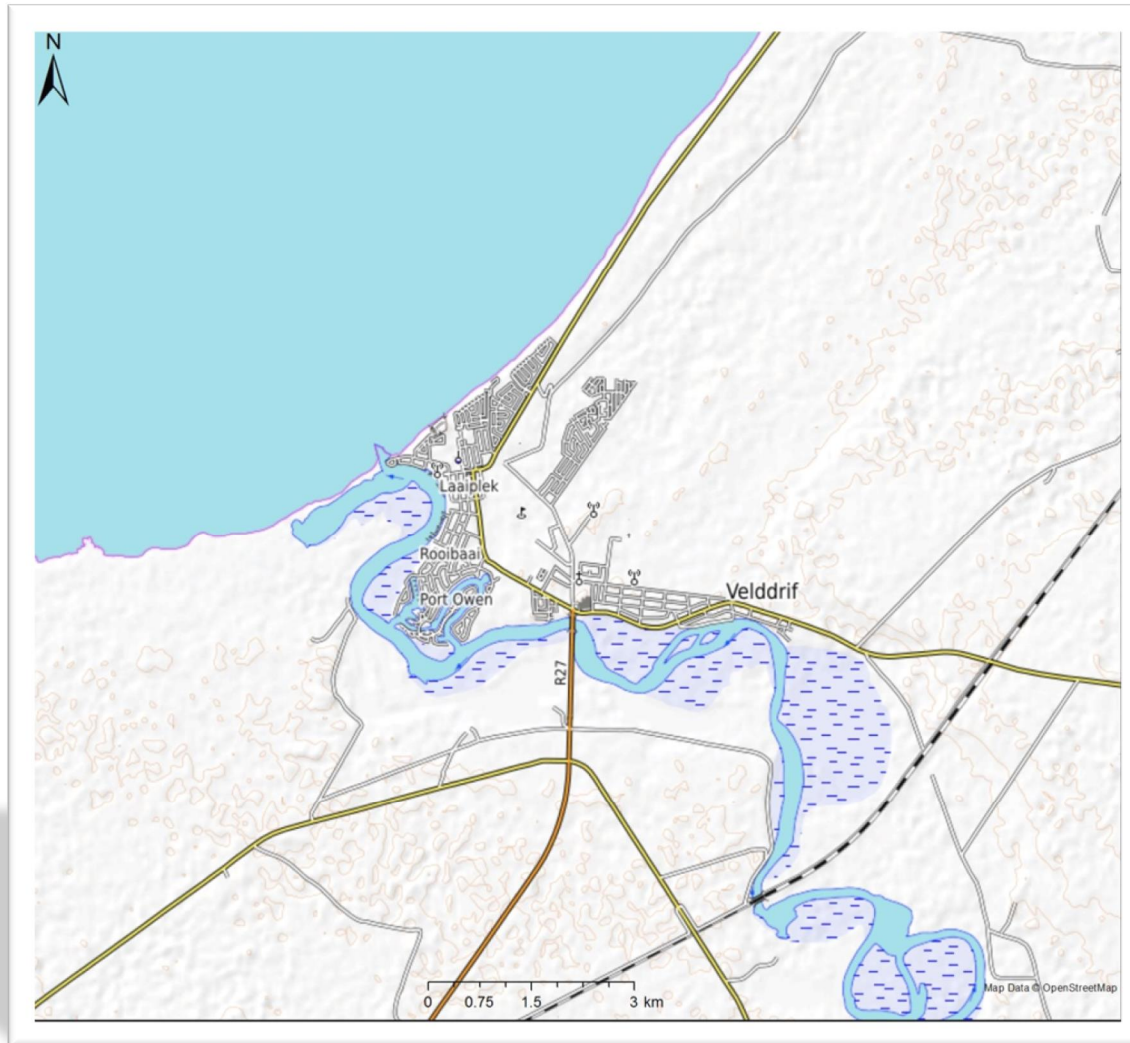


**PROPOSED AD HOC AMENDMENT OF
BERGRIVIER SPATIAL DEVELOPMENT FRAMEWORK:
STATUS QUO, 2012 - 2017**



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LIST OF ABBREVIATIONS:

BSDF	Bergvriev Spatial Development Framework: 2013 – 2017
IDP Survey, 2017	Municipal Survey, 2017, IDP needs and Customer Satisfaction Survey
IDP	Integrated Development Plan
LUPA	Western Cape Land Use Planning Act, 2014 (Act 3 of 2014)
MSA	Local Government Municipal Systems Act, 2000 (Act 32 of 2000)
PGWC	Provincial Government Western Cape
SDF	Spatial Development Framework
SPLUMA	Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013)
VLPP	Velddrif and Laaiplek Precinct Plan
WC	West Coast
WCPSDF	Western Cape Provincial Spatial Development Framework
WCSDf	West Coast Spatial Development Framework

Note that when an abbreviation was used at the end (or start) of a paragraph it implies that the content was taken from the specific report represented by the abbreviation.

Please read the report in conjunction with the maps illustrating the Status Quo Analysis at the end of the document.

Executive Summary

Several land use applications were made to develop the southern bank of the Bergrivier at Velddrif. None of these land use applications were consistent with the Bergrivier Spatial Development Framework, 2012 – 2017 (BSDF). Hence, Bergrivier Municipality was requested to amend the Bergrivier Spatial Development Framework with particular reference to Velddrif, Laaiplek, Noordhoek and Port Owen (Ward 7) (and hereafter referred to as Velddrif/ Laaiplek except where specific reference was made to one of the precincts) in accordance with the Municipal Systems Act 2000 (Act 32 of 2000) (MSA), to allow for opportunity to consider such applications.

The amendment of the BSDF will be done according to Integrated Development Plan (IDP) amendment timelines. The steps to enable such an amendment are set out in the Bergrivier By-Law on Municipal Land Use Planning, 2015.

As a Spatial Development Framework Document consists of two components, this document represents the Status Quo. The two components are:

1. A Status Quo: analyses the municipal and regional space and sector activities for which the SDF is written. From the analysis a vision is proposed.

2. A Spatial Development Framework: provides proposals and guidelines after spatial principles and tools were applied to generate concepts, obtain the buy-in from abutting municipalities, other government departments, politicians and the public, and provides an implementation plan and budget.

This Status Quo Report was compiled by combining the content of the Status Quo reports of BSDF, Velddrif and Laaiplek Precinct Plan (VLPP) and the West Coast Spatial Development Framework (WCSDF). Relevant information and data from other sources, such as the 2017 IDP Municipal Survey, were also included.

The status quo considers the biophysical, socio-economic and built environments. Each environment is introduced with *Spatial Informants and Implications* elicited from the *Detailed Status Quo Analysis* followed to remind us of the context of Velddrif, Laaiplek, Noordhoek and Port Owen. The Implications were then categorized as Strengths, Weaknesses, Opportunities and Threats (SWOT).

The Status Quo report will be followed by a conceptual proposal and development framework to be considered as the amendment of the BSDF.

The status quo of Velddrif's biophysical, socio-economic and built environments follow:

Biophysical Environment Informants and Implications:

- Natural beauty of Velddrif/Laaipek and the region. Lack of sense of place and no aesthetic guidelines for the river route-scape and coastline interface (See Figure 1).
- Wind and sand storms (from urban development that removed coastal vegetation and ploughed agricultural fields) impact on the landscape and development. The southern bank of the Berg River, where Velddrif and Laaipek is located, is on the receiving end of the summer wind (See Figure 3).
- Velddrif/ Laaipek has fossil assets and is part of the palaeontological landscape of the West Coast (See Figure 4).
- Salt mining, an export economy, and its linkages with relevant secondary and tertiary economies i.e. transport of mined produce on the one hand. And the role of salt pans in the functioning of the wetland ecosystems on the other.
- Climate change impacts most likely to occur at Velddrif/ Laaipek:
 - o Decreased water volumes to be considered for future development and growth.
 - o Coastal development to be located behind the coastal setback line (PGWC- Development Setback Line) as per Coastal Development Management Act of 2009 considering expected rise in sea level over 30 to 50 years. The Coastal Set Back Line, which is in some cases more restricting than 100m from statutory high water mark, avoid damages due to sea level rises, manage coastal interface and protect low lying areas (See Figure 5).
 - o Damages to infrastructure due to extreme events i.e. floods, which have an indirect impact on the economy.
 - o Urban activities along river and its ecosystems. WCDM and others are registering the Berg River estuary ecosystem as a Special Protected Area. Seven zones to guide boat traffic and water sports to conserve the wetlands (Integrated Estuary Management Plan (IEMP 2010)). Berg River part of West Coast Biosphere Reserve (See Figure 5)
 - o Cultivation and urban development that encroaches onto sensitive biodiversity areas whilst rehabilitation and conservation of ecosystem functioning is required.
 - o Environmental stress caused by pollution (boat oil) and water abstraction (flushing of engines) associated with fishing and speed boats particularly at both Laaipek - and Pelican harbour.
 - o Riparian erosion and damage to birds nest as a result of boating on the river (wake of boats).

- Decreased Tourism due to risk of encountering extreme events i.e. flooding and extreme heat.
- Heat-island effect and increased storm water run-off into the wetland as a result of hard and impermeable urban development infrastructure and surfaces.
- Agricultural crop yield and types and impact on landscape due to changing temperatures and precipitation.
- Decreased biodiversity through extinction and lack of landscape connectivity to allow for species migrating in the face of climate change.
- Application of Bioregional Spatial Planning Categories, the basis for spatial planning, to protect biodiversity and ecosystems.

Socio- Economic Environment Informants and Implications

- Historic similarities exist between the economies of St Helena Bay (Velddrif/Laaipek) and Saldanha Bay. Both local economies were originally based on maritime trading and artisanal fishing. The economy of the Bay of Saldanha, being the only deep water port on the West Coast, is additionally based on the transportation of bulk goods and natural resources.
- Saldanha Bay-Vredenburg area is the nucleus of development activity in the district due to Saldanha Bay Port attracting economic

activity and enhancing growth potential of adjacent towns and nodes. Velddrif is within easy reach of the Saldanha Bay Industrial Development Zone, presenting high development potential for the town (See Figure 7).

- Settlement form was dictated by access to the river and easy and safe transfers of men and cargoes from boat to shore and vice versa. Settlement pattern is determined by Saldanha Bay harbour and main access route to Namibia i.e. N7.
- Interaction between towns in the district, as well as movement of people, business and resources are not tied to municipal boundaries in the district and cut across boundaries due to factors such as convenience, proximity, variety, etc.
- The Bay of Saldanha is also home to rich archaeological and palaeontological assets.
- Population growth rate of WCD, Bergrivier and Velddrif is higher than surrounding districts and provincial growth rates (See Figure 9). This implies an assumed higher migration figure into the district:
- Provide for in migration, most likely both work seekers and retirees (Low and middle income migrants). Retirees also favour the area together with second home residents. Velddrif/Laaipek functions

as a coastal town providing jobs mainly in the tourism, fishing and salt mining industries with supporting services and social infrastructure (church, school, library, clinic and sporting facilities) also for the surrounding rural areas.

- Access to a variety of education facilities in Saldanha Bay (See Figure 10).
- The West Coast shows an annual Real Growth in GDP of 3.1% compared to 4.1% for WC as agriculture & fishing decreased and manufacturing experienced weak growth. Development should be focused primarily in areas with the highest growth potential, which are clustered within the Saldana Bay and Swartland Municipalities (See Figure 9).
- Unemployment increased due to contraction in agriculture and mechanisation in manufacturing.
- Increased unemployment has negative social impacts and increased dependency on state funding for housing, infrastructure and social facilities and security measures: Ensure provision of services happens at an acceptable level (municipal responsibility).

- Demand for housing and employment requires spatial consideration of locality, accessibility and affordability for Bergrivier and Velddrif. High number of informal dwellings and need for housing provision in Saldanha Bay.

Built Environment Informants and Implications

- Although Piketberg is the main town of the Bergrivier Municipal Area, Vredenburg is a major regional centre and Velddrif is closer thereto. Piketberg's sphere of influence is removed whilst Vredenburg Saldanha and St. Helena Bay's sphere of influence is close by.
- Velddrif is located nearly the same distance from the IDZ as is St Helena Bay, an alternative residential node for the industrial economy, both fishing and tourism settlements (See Figure 7)
- The precinct's urban form and structure constrain permeability, legibility and sense of place and legibility (See Figure 16)
- Strong sense of place due to Velddrif/ Laaiplek's unique position on the north bank of the Berg River, and the vast open space of the

surrounding estuary. Fishing boats entering the river from the sea via the river mouth to moor along the river.

- The golf course as a major buffer between the three urban areas of Laaiplek, Velddrif and Noordhoek (See Figure 14).
- Lack of public access to the waterfront and beach. (See Figure 16).
- Goods and people need to move (See Figure 12):
 - Public transport services primarily relate to mini-bus taxis;
 - Freight transport (road, rail & water) is a key element of movement in the district and existing road and rail infrastructure need to be maintained and upgraded to accommodate future growth, especially linkages to Saldanha Bay Port and proposed future IDZ.
- WCD would benefit if one of existing airfields can be upgraded to a commercial airport.
- Upgrading of harbours for local fishing industry and tourism
- Lack of water. Build a desalination plant: To provide for the increased demand for water (average annual demand of 3.53%) a desalination plant needs to be approved and established.

- Development is curbed and efficient provisioning of services is hampered as subdivision of erven is restricted to not smaller than 500m², subject to capacity of existing infrastructure.
- Land fill sites (See Figure 9): Waste is delivered at Highlands Land fill site outside Malmesbury. There is a waste site at Vredenburg. Being located in a sensitive environment, properly engineered/registered waste disposal facilities that minimise risk of environmental pollution and degradation of surrounding areas are a prerequisite for local sustainability. Groundwater resources have to be protected.
- Waste disposal requires to be monitored to enable WCDM to be aware of the final destination of all waste, general, hazardous and healthcare, that is generated within its boundaries.
- Energy generation
- Minimizing the collective carbon footprint by using renewable energy and to ensure reliable energy supply are considerations for using alternative energy.
- Wind resources are substantial and the region leads with Darling, Hopefield, Gouda and Sere north of Vredendal. Saldanha harbour

has sufficient infrastructure and manoeuvrability to facilitate the importing of wind turbines into the West Coast District.

- Acquire suitable land and adjudicate such land to identified and qualifying beneficiaries that would be supported in continuing agricultural produce on such land (Agricultural Land Reform).
- West Coast is a popular tourist destination due to natural beauty, quaint coastal villages and proximity to Cape Metropole as primary tourist attraction.
- Opportunities for economic growth in rural areas exist, especially through the tourism sector (Figure 13)
- Rural development and tourism corridors are required to include rural nodes with economic growth potential.
- Improve the following types of tourism
- Holiday destinations – Coastal Towns with unique coastline
- Adventure – recreational activities
- Nature conservation and natural beauty
- Cultural Tourism
- Agri-Aqua Tourism

- Velddrif, Laaiplek and Noordhoek have a lack of appropriately zoned land (See Figure 15). Industrial and commercial land is required to change the economic status (from developing to developed) and economic sector representation (primary to secondary & tertiary) of the town.
- Land use mix and location provide strong directives. As land uses are integrated and as the tertiary economy grows, the need for residential development at the location where these commercial and industrial uses take place or in close proximity thereto will increase.
- Change the development focus within Velddrif and Laaiplek from residential development, with some supportive commercial land uses, to commercial and industrial development with social and residential uses in support thereof, to bring about the absorption or redevelopment of large isolated residential development that have not been taken up by the market.
- Besides different land uses, mixed use developments should provide for integrated housing developments which represent a variety of housing typologies that cater for various income groups and different spatial needs.

- Exploit the advantage Velddrif has due to its proximity to the IDZ, and its accessibility via the R27 and the R339 as identified as freight routes (per WCDM SDF). (Figure 12)
- Lack of economic diversity that hinders sustainable development goals: Conservation and associated direct enhancement of tourism should be strengthened to compliment industrial development. This will bring about diversity in economic activity, which has been a

Velddrif's vision

According the VLPP, the vision statement for Velddrif and Laaiplek is:

Transform Velddrif and Laaiplek into a vibrant, well managed and attractive town which offers safe, integrated open space, streets and amenities, where the unique landscape, cultural and social assets of the town create opportunities for residents and attract tourists.

Concluding the analysis, it is proposed that the vision statement is amended to read:

A vibrant, well managed and attractive Velddrif and Laaiplek which offers safe, integrated open space, streets and amenities, where the unique landscape, cultural and social assets of the town and its proximity to the IDZ, location within a functional growth potential area and the West Coast Biosphere create opportunities for residents and attract tourists.

Recommendation

The adaptation of this Status Quo by the Municipal Council is a prerequisite and requirement of SPLUMA and LUPA, to facilitate the amendment of the BSDF.

It is recommended that this status quo report is adopted as an addition to the existing Status Quo Reports in the BSDF and the VLPP. It will serve as the informant for the proposed amendment of the development footprint of Velddrif to include a portion of the southern bank of the Berg River.

Proposed ad hoc amendment of Bergrivier Spatial Development Framework: Status Quo, 2012 - 2017

1. Purpose and approach

Several land use applications were made to develop the southern bank of the Bergrivier at Velddrif. None of these land use applications were consistent with the Bergrivier Spatial Development Framework, 2012 – 2017 (BSDF). Hence, Bergrivier Municipality was requested to amend the Bergrivier Spatial Development Framework with particular reference to Velddrif, Laaiplek, Noordhoek and Port Owen (Ward 7) (and hereafter referred to as Velddrif/ Laaiplek except where specific reference was made to one of the precincts) in accordance with the Municipal Systems Act 2000 (Act 32 of 2000) (MSA), to allow for opportunity to consider such applications.

The amendment of the BSDF will be done according to Integrated Development Plan (IDP) amendment timelines. The steps to enable such an amendment are set out in the Bergrivier By-Law on Municipal Land Use Planning, 2015 as outlined below:

1.	Bergrivier Municipality decided not to establish an Intergovernmental Steering Committee (IGSC)
2.	All members of Council to be given reasonable notice of the amendment.
3.	A notice of the proposal to amend the BSDF must be published in

	two of the official languages of the Province, most spoken in the area, in two newspapers being circulated in the area. The Notice must indicate the: <ol style="list-style-type: none"> a) Municipal intention to compile an SDF b) Process to be followed for the amendment of the SDF
4.	Bergrivier Municipality has to inform the Provincial Minister in writing of the intention of the Ad Hoc review/amendment of the BSDF and indicate whether or not the IGSC process will be undertaken and the process to be followed for the amendment.
5.	Register the relevant stakeholders who may be invited to comment on the draft BSDF amendment.
6.	Bergrivier Municipality to establish a project committee. The project committee should consist of: <ul style="list-style-type: none"> • Municipal Manager or a municipal employee designated by the Municipal Manager; • Municipal employees appointed by the Municipal Manager from at least the following municipal departments: IDP, Spatial Planning, Engineering, Local Economic Development (LED) and Housing.
7.	Bergrivier Municipality considers Status Quo Report
8.	Bergrivier Council considers first draft of Ad Hoc amendment for comment.
9.	First draft of the Ad Hoc amendment to be advertised in the local press for public/local comment for period of 60 days. Organs of State and other role-players also to be identified and invited to comment. The District Municipality must be consulted and given opportunity to comment.

10.	If the municipality has not decided to establish an IGSC the draft Ad Hoc Amendment must be submitted to the Provincial Minister for written comment within 60 days. Municipality may not approve the amendment until comment has been received or 60 days have passed.
11.	All comments received must be taken into account.
12.	Council must consider all representations received in respect of the proposed SDF amendment and adopt the final Ad Hoc Amendment.
13.	If adopted by Council, a notice of the adoption must appear in the media and the Provincial Gazette within 14 days of the date of adoption.
14.	Once adopted the Municipal Manager must submit a copy of the amended BSDF as adopted by Council to the MEC of Local Government within 10 days of the adoption. This submission must include: <ul style="list-style-type: none"> a) Summary of the public participation process; b) Statement that the process set out in Section 29(1) of the MSA has been complied with; c) Copy of the District Framework for Integrated Development Planning.

A Spatial Development Framework Document consists of two components i.e.:

3. A Status Quo: analyses the municipal and regional space and sector activities for which the SDF is written. From the analysis a vision is proposed.

4. A Spatial Development Framework: provides proposals and guidelines after spatial principles and tools were applied to generate concepts, obtain the buy-in from abutting municipalities, other government departments, politicians and the public, and provides an implementation plan and budget.

This document represents the Status Quo report as per Step 7 aforementioned.

This Status Quo Report was compiled by combining the content of the Status Quo reports of BSDF, Velddrif and Laaiplek Precinct Plan (VLPP) and the West Coast Spatial Development Framework (WCSDF). Relevant information and data from other sources, such as the 2017 IDP Municipal Survey, were also included.

The status quo considers the biophysical, socio-economic and built environment. Each environment is introduced with *Spatial Implications* elicited from the *Detailed Status Quo Analysis* followed to remind us of the context of Velddrif, Laaiplek, Noordhoek and Port Owen. The Implications were then categorized as Strengths, Weaknesses, Opportunities and Threats (SWOT).

The Status Quo report will be followed by a conceptual proposal and development framework to be considered as the amendment of the BSDF.

2. Detailed Status Quo Analysis and Implications

The three environments i.e. the biophysical, socio-economic and built environments are considered in this section. These environments represent sustainable development. Each environment is introduced with *Spatial Implications* elicited from the *Detailed Status Quo Analysis* followed to remind us of the local and regional context of Velddrif, Laaiplek, Noordhoek and Port Owen.

2.1 Biophysical Environment

Informants and Implications:

- Natural beauty of Velddrif/Laaiplek and the region. Lack of sense of place and no aesthetic guidelines for the river routescape and coastline interface (See Figure 1).
- Wind and sand storms (from urban development that removed coastal vegetation and ploughed agricultural fields) impact on the landscape and development. The southern bank of the Berg River, where Velddrif and Laaiplek is located, is on the receiving end of the summer wind (See Figure 3).
- Velddrif/ Laaiplek has fossil assets and is part of the palaeontological landscape of the West Coast (See Figure 4).
- Salt mining, an export economy, and its linkages with relevant secondary and tertiary economies i.e. transport of mined produce on the one hand. And the role of salt pans in the functioning of the wetland ecosystems on the other.
- Climate change impacts most likely to occur at Velddrif/ Laaiplek:
 - o Decreased water volumes to be considered for future development and growth.
 - o Coastal development to be located behind the coastal setback line (PGWC- Development Setback Line) as per Coastal Development Management Act of 2009 considering expected rise in sea level over 30 to 50 years. The Coastal Set Back Line, which is in some cases more restricting than 100m from statutory high water mark, avoid damages due to sea level rises, manage coastal interface and protect low lying areas (See Figure 5).
 - o Damages to infrastructure due to extreme events i.e. floods, which have an indirect impact on the economy.
 - o Urban activities along river and its ecosystems. WCDM and others are registering the Berg River estuary ecosystem as a Special

Protected Area. Seven zones to guide boat traffic and water sports to conserve the wetlands (Integrated Estuary Management Plan (IEMP 2010)). Berg River part of West Coast Biosphere Reserve (See Figure 5)

- Cultivation and urban development that encroaches onto sensitive biodiversity areas whilst rehabilitation and conservation of ecosystem functioning is required.
- Environmental stress caused by pollution (boat oil) and water abstraction (flushing of engines) associated with fishing and speed boats particularly at both Laaipek - and Pelican harbour.
- Riparian erosion and damage to birds nest as a result of boating on the river (wake of boats).
- Decreased Tourism due to risk of encountering extreme events i.e. flooding and extreme heat.
- Heat-island effect and increased storm water run-off into the wetland as a result of hard and impermeable urban development infrastructure and surfaces.
- Agricultural crop yield and types and impact on landscape due to changing temperatures and precipitation.
- Decreased biodiversity through extinction and lack of landscape connectivity to allow for species migrating in the face of climate change.

- Application of Bioregional Spatial Planning Categories, the basis for spatial planning, to protect biodiversity and ecosystems.

Analysis of Biophysical Environment

Geology & Soils

The Geology and Soil types for Velddrif and the region are similar: Sandy soil, well drained and dry, can be used for the production of wheat, barley, oats or potatoes.

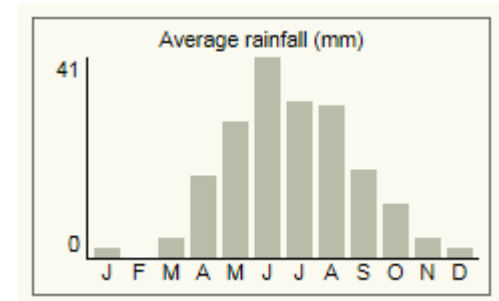
Climate

The climate for Velddrif and the region is similar. Gale force berg winds frequently blow seawards from the interior and carry dust over 500km. Prevailing winds are South Westerly and Southerly during summer (from Port Owen to harbour) and Northerly during winter (VLPP).

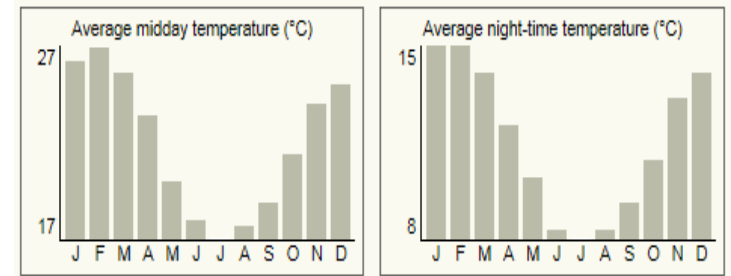
Land and sea breezes occur usually at right angles to the coast. Land breezes (Easterly and North-Easterly winds) are frequent during the night or early morning time periods (down the Berg River). Sea breezes (South-Westerly and Westerly winds) are more prominent in the afternoon (Afternoons from Port Owen to Velddrif) (Source: Heydorn & Tinley, 1980) (VLPP).

Advective sea fog occurs which is associated with cold water upwelling, causing coastal lows which lead to longshore move and hence the sea fog. (VLPP)

Velddrif normally receives about 190mm of rain per year mostly during winter as it has a Mediterranean climate. The chart illustrates the average rainfall values for Velddrif per month in general. It receives the lowest rainfall (0mm) in February and the highest (41mm) in June.



The monthly distribution of average daily maximum temperatures in general shows



that the average midday temperatures for Velddrif range from 17°C in July to 26.9°C in February. The region is the coldest during July when the mercury drops to 7.6°C on average during the night.

Informant and Implications

Wind impacts on the landscape, and only specific vegetation types survive in the near desert conditions (VLPP).

Development (urban and agricultural) and the accompanying removal of vegetation, and particularly along the coastline, have resulted in sand storms. With sand being blown over surrounding urban areas, the neighbourhood of Noordhoek bears the brunt. (VLPP)

Sand is also blown from ploughed fields on the southern banks of the Berg River.

Climate change implications applicable to Velddrif include:

- Decreased water volumes due to Lower precipitation and increased evaporation.
- Decreases biodiversity – some species of sensitive terrestrial and marine biodiversity could become extinct.
- Lack of landscape connectivity prohibiting species migrating in the face of climate change (WCSDF).
- Changed agricultural crop yields and types due to changing temperatures and precipitation.
- Damages to Infrastructure due to Extreme events i.e. floods that have an indirect impact on the economy. Infrastructure to be carefully planned and positioned.
- Decreased Tourism due to risk of encountering extreme events i.e. flooding, sand storms and extreme heat.
- Health-mitigation is required to lessen the severity of the impact.

- Limited coastal development as development needs to be set back beyond the coastal setback line (PGWC) to avoid damages due to sea level rises;

Hydrology & aquatic ecosystems

The Berg River estuary is the third most important estuary in South Africa (VLPP) and the primary hydrological system in the Bergrivier Municipality.

Smaller rivers and streams feed into the Berg River and drain towards the ocean (WCSDF).

Man-made dams in the Berg River are the Berg River Dam and Misverstand Dam, used for bulk water reticulation for domestic and agricultural uses.

Informants and Implications

Environmental stress: Pollution (boat oil) and water abstraction (flushing of engines) associated with fishing and speed boats need to be curbed through delineation and provision of appropriate boat fuelling areas particularly at Laaiplek and Pelican harbours (VLPP)

Topography & slopes

The topography consists largely of flat sand plains and coastal land accompanied by an even lower estuary floodplain, with several shallow

silted alluvial terraces within the tidal zone storing some of the seawater. These marshes are important to migratory birds (VLPP)

Informants and Implications

Protect low lying areas and apply setback line, consistent with the Coastal Development Management Act of 2009 considering expected rise in sea level over 30 to 50 years.

Biodiversity

A large variety of bird species, including about 30 000 wading birds, migrate to the estuary annually. Berg River Estuary is declared as an Important Bird Area (IBA) (WDCM, 2010) (VLPP).

The environmental integrity and biodiversity of large portions of the coastal zone, the Berg River wetlands and the surrounding salt marshes are important in both local and regional ecosystems and biodiversity corridors, particularly due to landscape gradients such as the Greater Cederberg Biodiversity Corridor as well as natural heritage and archaeological sites in relation to the Berg River (VLPP).

Application of Bioregional Planning as basis for spatial planning as adopted by Provincial Government of Western Cape is required (WCSDf).

The Cape West Coast Biosphere Reserve (CWCBR) is located in the Cape Floral Region and stretches from Diep River in the Cape Metropolitan Area northwards along the coastline and coastal plain towards the northern banks of the Berg River north of Saldanha and Vredenburg (WCSDf).

The CWCBR is bordered by the Greater Cederberg Biodiversity Corridor. The GCBC spans across two District Municipalities but the biggest extent is located in the Bergrivier, Cederberg and Matzikama Municipalities (West Coast District)

Coastal Conservation and Management

The Atlantic Coastline is sensitive with a variety of marine and ecological species and conservation worthy elements:

The major conservation areas are located in the Cederberg Wilderness area, Langebaan West Coast National Park area and the Knersvlakte in Matzikama – Provincial Nature Reserve.

Informants and Implications

Protect the natural beauty of Velddrif and the region.

Address key challenges:

- Urban interface (built up areas adjacent to ocean)

- Access: Existing harbours, jetties and boat landings, Public & Vehicular access to beaches;
- Fishing
- Pollution

West Coast Integrated Coastal Management Plan guide management of coastal interface. The Coastal Set Back Line (Development Setback Line) is applicable and is in some cases more restricting than 100m from statutory high water mark.

Urban activities must be aligned to complement the river and its ecosystems. West Coast District Municipality (WCDM) and others are working to register the Berg River estuary ecosystem as a Special Protected Area. As part of their Integrated Estuary Management Plan (2010), the estuary has been divided into seven zones to guide boat traffic and water sports, to conserve the wetlands. This plan does not address sense of place and the river routescape (WCSDF).

Apply Bioregional Planning as basis for spatial planning as adopted by PGWC (WCSDF).

Cultivation and urban development have encroached onto sensitive biodiversity areas which has to be minimised into the highly sensitive areas

whilst rehabilitation and conservation to optimise ecosystem functioning, are encouraged (VLPP).

Vegetation

Vegetation consists mainly out of Cape Estuarine Salt Marsh Vegetation (short, shrubby and succulent), to Sand Fynbos depressions on either side of the lower Bergrivier, to seasonal Flats Strandveld Mosaic and Hopefield Sand Fynbos and Saldanha Flats Strandveld, dependent on underground water. Beyond the Sand Fynbos, the Langebaan Dune Strandveld, a mixture of shrubs with varying height (0.5 to 2m) and thickness, is found on calcareous (alkaline) dune sands. Spring annuals can be spectacular on these sandy soils whilst north of the Bergrivier, the Dune Strandveld becomes less species rich.

Conservation, Heritage & Sense of Place

A fossil bank is present along the northern stretch of Laaiplek's coastline, which represents a pro-grading coastline - one of few occurring along the South African Coast. Such seaward growth of the shoreline has preserved Holocene and Pleistocene beach levels with the fossil bank being an important indicator of sea level and paleo-environmental change. (VLPP)

The region has a fossil park located between Hopefield and Vredenburg.

Informants and Implications

Velddrif and the regions is an important palaeontological landscape that needs protection. ‘

Agriculture

Agriculture contributes largely to the economic base (primary) of the West Coast. Primary farming activities practised commonly around Velddrif is mixed farming i.e. grain, sheep and potatoes (irrigated).

Informants and Implications

Agriculture around Velddrif and Saldanha Bay is not contributing to an export economy, whilst the Swartland, Cederberg and Matzikama and the rest of the Bergrivier are.

Building Materials & Mining

No building materials are mined in close proximity of Velddrif (Ward 7). Salt mining forms part of primary economic sector activities. Salt was mined at

numerous pans on the coastal plain for local use and food preservation. It is precipitated in evaporation pans in the Berg River Estuary, the Sout River estuary and in artificial pans.

Although mining can expand given the vast number of mineral resources to make an increased contribution to the WCDM economy, the natural resources and road infrastructure should be carefully considered when mining applications are considered as some mining areas have a negative impact on critical biodiversity areas and other natural area.

Mining is not dominant, although important due to linkages between this sector and manufacturing and transport.

Informants and Implications

Mining is an export economy.

Important linkages with relevant secondary and tertiary economies i.e. transport of mined produce.

2.2 Socio- Economic Environment

Informants and Implications

- Historic similarities exist between the economies of St Helena Bay (Velddrif/Laaiplek) and Saldanha Bay. Both local economies were originally based on maritime trading and artisanal fishing. The economy of the Bay of Saldanha, being the only deep water port on the West Coast, is additionally based on the transportation of bulk goods and natural resources.
- Saldanha Bay-Vredenburg area is the nucleus of development activity in the district due to Saldanha Bay Port attracting economic activity and enhancing growth potential of adjacent towns and nodes. Velddrif is within easy reach of the Saldanha Bay Industrial Development Zone, presenting high development potential for the town (See Figure 7).
- Settlement form was dictated by access to the river and easy and safe transfers of men and cargoes from boat to shore and vice versa. Settlement pattern is determined by Saldanha Bay harbour and main access route to Namibia i.e. N7.
- Interaction between towns in the district, as well as movement of people, business and resources are not tied to municipal boundaries in the district and cut across boundaries due to factors such as convenience, proximity, variety, etc.
- The Bay of Saldanha is also home to rich archaeological and palaeontological assets.
- Population growth rate of WCD, Bergrivier and Velddrif is higher than surrounding districts and provincial growth rates (See Figure 9). This implies an assumed higher migration figure into the district:
- Provide for in migration, most likely both work seekers and retirees (Low and middle income migrants). Retirees also favour the area together with second home residents. Velddrif/Laaiplek functions as a coastal town providing jobs mainly in the tourism, fishing and salt mining industries with supporting services and social infrastructure (church, school, library, clinic and sporting facilities) also for the surrounding rural areas.
- Access to a variety of education facilities in Saldanha Bay (See Figure 10).

- The West Coast shows an annual Real Growth in GDP of 3.1% compared to 4.1% for WC as agriculture & fishing decreased and manufacturing experienced weak growth. Development should be focused primarily in areas with the highest growth potential, which are clustered within the Saldana Bay and Swartland Municipalities (See Figure 9).
- Unemployment increased due to contraction in agriculture and mechanisation in manufacturing.
- Increased unemployment has negative social impacts and increased dependency on state funding for housing, infrastructure and social facilities and security measures: Ensure provision of services happens at an acceptable level (municipal responsibility).
- Demand for housing and employment requires spatial consideration of locality, accessibility and affordability for Bergrivier and Velddrif. High number of informal dwellings and need for housing provision in Saldanha Bay.

Analysis of Socio-Economic Environment

History and Heritage

During pre-colonial times the Khoi relied on the sea for their survival. During colonial times, fish were salted (rantsoen fish and bokkoms) and a fish house was build followed by a fish processing facility.

Transport infrastructure i.e. harbour where fish were loaded (Laaiplaats later Laaiplek) developed and the use of the river for transporting commodities was optimized i.e. a pont was used to cross river from 1899 to 1950. The Carinus Bridge was completed in 1959 and the link to Cape Town permanently established. Rail (owned by state) replaced river transport (private) and the local economy declined.

The fish factory revolutionised the fish industry. Ideal weather, easy access to Salt River water and the sea and locally produced salt, enhance production of Bokkoms. (Sourced from Ellis, 2008)

The farm Velddrif, owned by Martin Melck, stretched along the north bank of the river from the sea to the adjoining farm (Doornfontein) for a distance of 15 km. The farm was sold off in three portions, i.e. Velddrif, De Plaat and Melckplaas in 1850.

The Stephan's acquired rights to a portion of the farm Velddrif via T.E. Smit where fisherman constructed their reed and mud dwellings followed later by the mud brick fisherman's cottages still standing today. These stretched haphazardly along the river bank from around the Pont eastwards to De Plaat.

Due to the economy originally being based on maritime trading (Laaiplek) and artisanal fishing (Velddrif), settlement form was dictated by access to the river and easy and safe transfers of men and cargoes from boat to shore and vice versa. This was provided by the north bank, save for a piece of low lying marshland between Laaiplek and Velddrif which was uninhabitable when the Berg river was in flood, (the site of the present Port Owen).

The Bay of Saldanha got its name in 1601. The Atlantic Coast was home to battles and wars since colonial times, and is the burial place of several ships wrecked along the coast, and is shelter of our earliest history: homo sapiens remnants, fossils and later civilizations such as the Khoikhoi of whom their rock art traces a feint memory of their existence and later the hunting of whales (VLPP).

Informants and Implications

The local economy was originally based on maritime trading and artisanal fishing. Settlement form was dictated by access to the river, to fish and to safely transfer men and cargo. The economy of the Bay of Saldanha was and is based on fishing and transporting goods.

The Bay of Saldanha is also home to the beginning of civilization on the African continent given its rich archaeological and palaeontological assets.

Demographic profile

2017 IDP survey confirmed the 2017 population of Velddrif to be 15 126 people. The compound annual population growth rate of Velddrif is 5.6%, which is higher than West Coast District and Bergrivier which was 4% in 2017. The average household size is 3.6.

Twelve percent (12.3%) of the population moved into the town in the last five (5) years from outside the municipal area.

According to the 2011 Census, the annual population growth rate of Velddrif/ Laaiplek was 5 – 6% (BSDF).

The WCSDF provides a slightly different annual population growth rate based on the 2011 Census:

- South Africa: 1.5%
- Western Cape: 2.6%
- WCD: 3.3% (due to migration)
- Bergrivier: 2.9%

Attractiveness of the area could be attributed to a number of reasons, including economic growth in finance and construction sectors, good infrastructure (schools, hospitals, roads, etc.) and relatively well managed public sector.

Informants and Implications

Provide for in migration, most likely both work seekers and retirees (Low and middle income migrants)

Education

Velddrif has preschools, two primary schools and a high school. WCD and Saldanha in particular provides for special schools, Airforce Academy, Navy Academy and West Coast College.

Informants and Implications

Access to a variety of education facilities in Saldanha Bay

Economy

The Economy of Velddrif and Laaiplek changed from a centre for services and processing fish and agricultural products to a more service-based tourism economy. Velddrif also serves as administrative (municipal) centre and hosts light industrial activity.

Laaiplek hosts the fishing industry and related services as well as social services (court & police station).

Noordhoek serves as community centre.

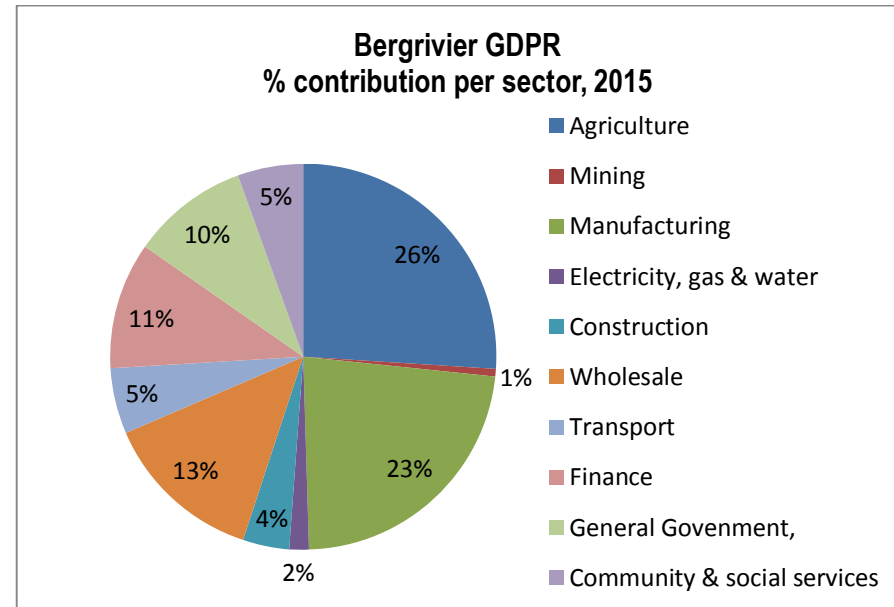
Velddrif, Laaiplek and Noordhoek are home to year-round local residents whereas Port Owen is more seasonally occupied.

Commercial services are providing for tourists, fishing and agriculture and daily community stores and house shops provide food, drink, beauty and health (VLPP).

The development potential of the town is based on the fishing industry, tourism potential, agriculture and the development of Saldanha Bay Industrial Development Zone (IDZ) (WCSDf).

The economic sectors contributing most to the economy of the West Coast in 2015, according to 2017 Quantec calculations, are Manufacturing (21.6%), Agriculture (18.2%), and Wholesale (15.5%) whilst in the Western

Cape, economic growth can be largely contributed to following sectors namely: construction; finance, insurance, real estate and business services and general government. The main economic sectors contributing to the Bergrivier economy is the agriculture, forestry and fishing sector (26%), the manufacturing sector (23%), and the wholesale and retail trade, catering and accommodation sector (13 per cent).



Graph 1: Sectoral GDP contribution (% share) to West Coast Economy (Quantec 2015 - MERO, 2017)

The West Coast shows an average growth in GDP of 3% (2005 – 2015) and 5% in 2015 compared to 1.5% (2015) for Western Cape.

Informants and Implications

Velddrif/Laaipek functions as a coastal town providing jobs mainly in the tourism, fishing and salt mining industries with supporting services and social infrastructure (church, school, library, clinic and sporting facilities) also for the surrounding rural areas.

Retirees also favour the area together with second home residents.

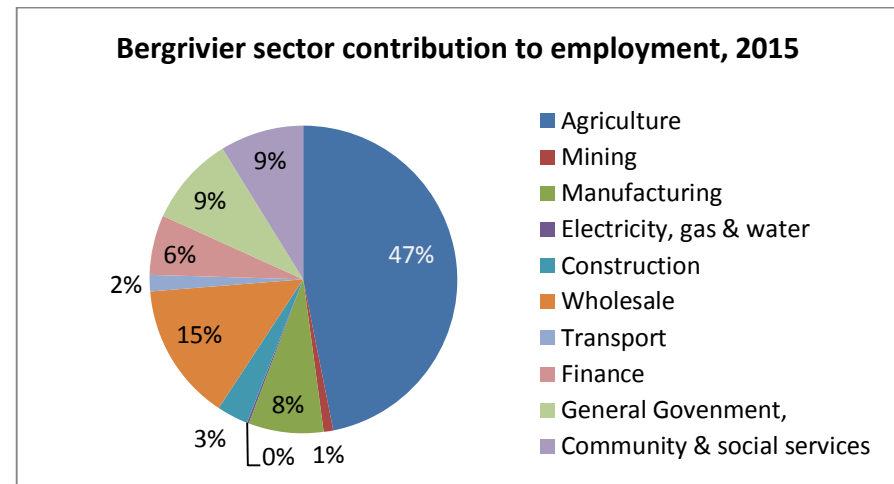
Velddrif is within easy reach of the Saldanha Bay IDZ, holding high development potential for the town. Saldanha Bay-Vredenburg area is the nucleus of development activity in the district due to Saldanha Bay Port attracting economic activity and enhancing growth potential of adjacent towns and nodes. Settlement pattern is determined by Saldanha Bay harbour and main access route to Namibia i.e. N7.

Interaction between towns in the district, as well as movement of people, business and resources are not tied to municipal boundaries in the district and cut across boundaries due to factors such as convenience, proximity, variety, etc.

Employment, Occupation and Levels of Income

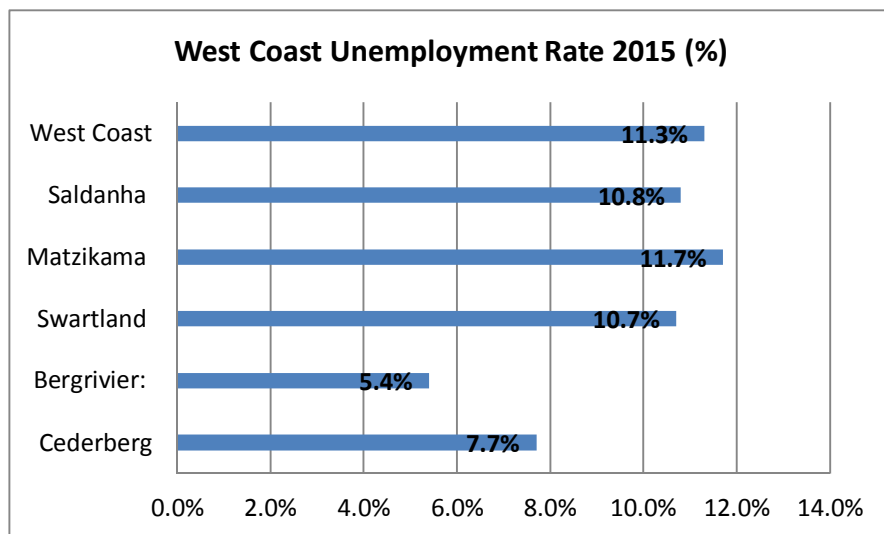
The labour force consists of the 15 – 64 year old population that's ready and able to work, excluding persons not economically active and discouraged work-seekers.

Employment in Agriculture (on smaller land units with fewer resources i.t.o. labour and water) and Manufacturing contracted the most in the region, but manufacturing sector's negative employment growth suggests a degree of mechanisation taking place as manufacturing output remained stable whilst employment contracted notably.



Graph 2: Sectoral employment contribution (% share), Bergvriër (Quantec 2015 - MERO, 2017)

Unemployment in Western Cape was 21.56% (decreasing) whilst in the West Coast it was 14.6% (increasing) and in Bergrievier it was 5.4% (2015) and decreasing.



Graph 3: 2015 Unemployment rate within the West Coast District (MERO 2017)

Informants and Implications

Unemployment increased due to contraction in agriculture and mechanisation in manufacturing.

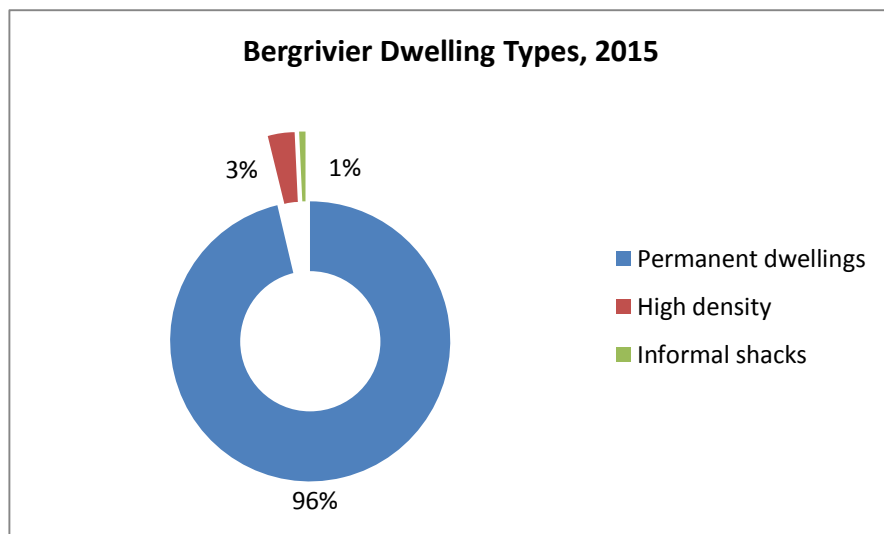
Increased unemployment has negative social impacts and increased dependency on state funding for housing, infrastructure and social facilities and security measures: Ensure provision of services happens at an acceptable level (municipal responsibility).

Property market patterns and growth pressures

The Saldanha Bay Housing backlog in 2013 was 7734 dwellings. The Swartland Housing backlog in 2014 was 16 332. Saldanha Bay has the highest number of informal structures 4 930, whilst Bergrievier has 137 informal dwellings.

The Bergrievier municipal housing waiting list reflects 826 applications for Velddrif/ Laaiplek whilst the demand in 2007 was 338 households. At a gross density of 25 units per hectare this represents 33 hectares of land.

2017 IDP survey confirmed that 96.1% of households live in permanent single residential dwellings, 3.1% (130 households) in high density dwellings (flats or town houses) and 0.7% in informal shacks. Across this dwelling type distribution, 11.1% (467) of households live in backyard dwellings.



Graph 4: Bergrivier Dwelling Types, 2015

Informants and Implications:

Population growth rate of WCD, Bergrivier and Velddrif is higher than surrounding districts and provincial growth rates. This implies an assumed higher migration figure into the district:

Demand for housing and employment requires spatial consideration of locality, accessibility and affordability for Bergrivier and Velddrif. High number of informal dwellings and need for housing provision in Saldanha Bay.

Municipal finance

According to the IDP 2017 -2022 the operational budget of Ward 7 is R3.607 million to be spend over the next 5 years which include upgrading of tourism facilities. The Capital Expenditure Programme per Town reflects that R10 million will be spend over the next three years (2017 – 2020) (IDP)

Town	“000	“000	“000
Bergrivier	10254	12 595	14 457
Piketberg	4177	2 400	4 830
Velddrif	900	4 122	5 406
Porterville	12 608	14 195	15 801
Aurora	140	565	560
Redelinghuys		975	200
Velddrif & Piketberg	900	950	900
Redelinghuys, Dwarskersbos & Eendekuil		1 650	1 800
Velddrif & Porterville	750		
Dwarskersbos	90	115	50
Piketberg	1 500	350	
Total	31 320	37 917	44 004

Table 1: Capital programme per town (IDP 20017 – 2022)

Informants and Implications

Bergrivier Municipality is faced by developments where infrastructure were provided by the developers and

- a) Either a capital contribution was paid (the balance of the capital cost should the municipality had to provide the infrastructure) and the municipality took over all supply, running and maintenance of infrastructure and collect all Rates and Taxes and Levies from owners.
- b) Or no capital contribution was paid and the supply, running and maintenance of infrastructure stayed in private hands.

The municipality experienced that the service delivery in private developments were not up to standard and that owners complained and requested the municipality to take over the services.

2.3 Built Environment

Informants and Implications

- Although Piketberg is the main town of the Bergrivier Municipal Area, Vredenburg is a major regional centre and Velddrif is closer thereto. Piketberg's sphere of influence is removed whilst Vredenburg Saldanha and St. Helena Bay's sphere of influence is close by.
- Velddrif is located nearly the same distance from the IDZ as is St Helena Bay, an alternative residential node for the industrial economy, both fishing and tourism settlements (See Figure 7)
- The precinct's urban form and structure constrain permeability, legibility and sense of place and legibility (See Figure 16)
- Strong sense of place due to Velddrif/ Laaiplek's unique position on the north bank of the Berg River and the vast open space of the surrounding estuary. Fishing boats entering the river from the sea via the river mouth to moor along the river.
- The golf course as a major buffer between the three urban areas of Laaiplek, Velddrif and Noordhoek (See Figure 14).
- Lack of public access to the waterfront and beach. (See Figure 16).
- Goods and people need to move (See Figure 12):
- Public transport services primarily relate to mini-bus taxis;
- Freight transport (road, rail & water) is a key element of movement in the district and existing road and rail infrastructure need to be maintained and upgraded to accommodate future growth, especially linkages to Saldanha Bay Port and proposed future IDZ.
- WCD would benefit if one of existing airfields can be upgraded to a commercial airport.
- Upgrading of harbours for local fishing industry and tourism
- Lack of water. Build a desalination plant: To provide for the increased demand for water (average annual demand of 3.53%) a desalination plant needs to be approved and established.
- Development is curbed and efficient provisioning of services is hampered as subdivision of erven is restricted to not smaller than 500m², subject to capacity of existing infrastructure.

- Land fill sites (See Figure 9): Waste is delivered at Highlands Land fill site outside Malmesbury. There is a waste site at Vredenburg. Being located in a sensitive environment, properly engineered/registered waste disposal facilities that minimise risk of environmental pollution and degradation of surrounding areas are a prerequisite for local sustainability. Groundwater resources have to be protected.
- Waste disposal requires to be monitored to enable WCDM to be aware of the final destination of all waste, general, hazardous and healthcare, that is generated within its boundaries.
- Energy generation
- Minimizing the collective carbon footprint by using renewable energy and to ensure reliable energy supply are considerations for using alternative energy.
- Wind resources are substantial and the region leads with Darling, Hopefield, Gouda and Sere north of Vredendal. Saldanha harbour has sufficient infrastructure and manoeuvrability to facilitate the importing of wind turbines into the West Coast District.

- Acquire suitable land and adjudicate such land to identified and qualifying beneficiaries that would be supported in continuing agricultural produce on such land (Agricultural Land Reform).
- West Coast is a popular tourist destination due to natural beauty, quaint coastal villages and proximity to Cape Metropole as primary tourist attraction.
- Opportunities for economic growth in rural areas exist, especially through the tourism sector (Figure 13)
- Rural development and tourism corridors are required to include rural nodes with economic growth potential.
- Improve the following types of tourism
 - Holiday destinations – Coastal Towns with unique coastline
 - Adventure – recreational activities
 - Nature conservation and natural beauty
 - Cultural Tourism
 - Agri-Aqua Tourism
- Velddrif, Laaiplek and Noordhoek have a lack of appropriately zoned land (See Figure 15). Industrial and commercial land is required to change the economic status (from developing to

developed) and economic sector representation (primary to secondary & tertiary) of the town.

- Land use mix and location provide strong directives. As land uses are integrated and as the tertiary economy grows, the need for residential development at the location where these commercial and industrial uses take place or in close proximity thereto will increase.
- Change the development focus within Velddrif and Laaiplek from residential development, with some supportive commercial land uses, to commercial and industrial development with social and residential uses in support thereof, to bring about the absorption or redevelopment of large isolated residential development that have not been taken up by the market.
- Besides different land uses, mixed use developments should provide for integrated housing developments which represent a variety of housing typologies that cater for various income groups and different spatial needs.

- Exploit the advantage Velddrif has due to its proximity to the IDZ, and its accessibility via the R27 and the R339 as identified as freight routes (per WCDM SDF). (Figure 12)
- Lack of economic diversity that hinders sustainable development goals: Conservation and associated direct enhancement of tourism should be strengthened to compliment industrial development. This will bring about diversity in economic activity, which has been a weakness in the economy of Velddrif and Laaiplek.

Analysis of Built Environment

Hierarchy and role of settlements

Velddrif and Laaiplek have been developed on the northern bank of the Berg River, with the municipal jurisdiction stretching over the river to the farms on the southern side, where no existing urban land uses exist.

The Berg River estuary is a most valuable resource, specifically concerning tourism. An overview of the spatial identity of the urban area of Velddrif follows in the table below.

Economic Base	Place Identity	Investment Priorities	SDF classification
Serviced based tourism, fishing and salt mining industries with supporting services and social infrastructure Two (2) central business districts	Coastal fishing towns combined with sensitive natural areas along the river and coast.	Major infrastructure	High order service centre

Settlement patterns in the West Coast District is primarily determined by the coastline, agricultural hinterland and river corridors. Velddrif is a river corridor settlement and Laaiplek a coastal town.

The main town or central place for Bergrivier Municipality is Piketberg, whilst for Saldanha it is Vredenburg. Main towns are determined by population, economic activity and administrative functions. (Growth Potential Study classified towns into five categories: Regional, Agricultural service centre; Fishing/ industrial; Residential and Tourism)

Vredenburg is a Regional Centre whilst Piketberg is an Agricultural service centre.

Velddrif is a fishing/ tourism settlement whilst Saldanha is fishing/ Industrial, and St-Helena is fishing/ residential settlement.

Informants and Implications

Although Piketberg is the main town for the Bergrivier Municipal Area, Vredenburg is a major centre and Velddrif is closer thereto.

Velddrif is located the same distance from the IDZ than St Helena Bay, an alternative residential node for the industrial economy, both fishing and tourism settlements.

Piketberg's sphere of influence is removed whilst Vredenburg Saldanha's sphere of influence is close by as is St. Helena Bay.

Form and functionality

Velldrif has developed in a linear pattern all along the river (2km before river enters sea) whilst Laaiplek developed on the curved ocean's edge closer to the river mouth. The third urban area is that of Noordhoek lying to the north between Velldrif and Laaiplek. No physical connection exists between these three urban nodes and is it separated by flat vacant land and the golf course.

The urban structure of Velldrif are further defined by main roads i.e. the R27 crossing the Berg River and Voortrekker Road, running parallel to the river and the coast meeting the R27 at the Carinus Bridge. Noordhoek is connected to Velldrif via Church Street and Laaiplek via Lofdal Street. The Carinus Bridge intersection is a thoroughfare for trucks and unfriendly to pedestrians.

In Laaiplek the "cul de sac" main road connects to Dwarkersbos and ends at Elands Bay. The R27 link to Main Road at Noordhoek.

In the older neighbourhoods of Laaiplek and Velldrif the historic street grid ensures for ease of access and orientation whereas in more recent developments such as Port Owen the curvilinear street network constrains permeability and general thoroughfare.

Lower density residential erven are located along the river and ocean front and higher density residential uses to the northwest of the town. There are various vacant land parcels distributed throughout the town, which provide for infill opportunities. (BSDF)

Informants and Implication

The precinct's urban form and structure constrain permeability, legibility and sense of place.

Sense of place

The character of Velldrif and Laaiplek is dominated by the setting of the river, fishing, harbour and factory activities and the defining coastline. The Berg River is most visible when entering from Cape Town (south) and crossing the river plain and the Carinus Bridge with a 180 degrees vista of the river floodplain. However, the urban landscape is disconnected to water features as blank edges and dead-ends face onto the water edges (VLPP).

Main identity-defining nodes are at Laaiplek and Pelican harbours and Bokkomlaan due to the historical value and partial preservation of architecture and activity of these nodes i.e. West Coast architecture, large fishing boats and smaller yachts moored together and guarded by several water birds such as White Pelicans and Lesser Flamingos, represent the mixed land use (recreation, conservation, industrial and commercial).

The main entry into the precinct at the Carinus Bridge into Velddrif creates a defined gateway space and sense of arrival, whereas entry from Piketberg and Dwarskersbos is predominantly undefined.

An impression of openness dominates the urban landscapes of Velddrif, Laaiplek and Noordhoek due to vast tracks of vacant land, the dispersed built character of the town and the wide road layouts.

The visual impression is faded by a combination of built-up areas, underutilised open spaces and a river interface dominated by private development, with little access to the water, incomplete housing projects situated along the northern coast (also limiting access to the waterfront and coast) in Laaiplek, the location of vacant properties throughout the settlements and the eclectic building facades in the urban centres. The peripheral segregated neighbourhood of Noordhoek lacks any sense of place or identity due to its harsh urban character, and its complete separation from all natural attributes. The location of the golf course also serves as a major buffer between the three urban areas with development in this buffer area constrained due to the existing watercourse and high water table (VLPP).

Similarly, a unique coastal character of the built environment derived from historic responses to the natural landscape from a biophysical and socio-economic perspective. This is evident in the old “werf” layouts, fisherman’s

cottages and the placement of trees around farmsteads and houses to create shields from the wind and sun. The fishing cottages theme is carried through to present day development. (VLPP)

The town’s unique position on the north bank of the Berg River provides for extensive views over the river estuary, salt marshes and plateau-like landscape especially to the south. Fishing and recreational boats can enter the river from the sea via the river mouth to moor along the river. These sensitive visual elements of the town need to be protected in future development (VLPP).

Informants and Implications

Protect Velddrif/ Laaiplek’s unique position on the north bank of the Berg River. Protect the sense of space and openness and ability of fishing boats to enter the river from the sea via the river mouth to moor along the river.

Change the golf course as a major buffer between the three urban areas to an integrated social space.

Increase public access to the waterfront and beach.

Settlement densities

Velddrif/ Laaiplek’s urban structure and form does not support walkability and ease of movement, especially for tourists and local pedestrians, due to

vast open spaces between the various activity centres and the general lack of cycle routes and clearly defined pedestrian pathways (unpaved). Pedestrian movement is mainly along

- a) two access streets into Noordhoek (Church & Lofdal)
- b) Voortrekker and Main road.

A taxi rank is located at Lofdal, Church and Albatross street intersection, serving the community of Noordhoek. Local community centre is also situated here but lacks further, complementary uses.

The current gross density for Velddrif/ Laaiplek is 5,1du/ha indicating a very low urban density. Future densification of the town will be subject to vacant land being made available for development. A vacant land audit was done for all the towns in the Bergrivier Municipal area.

Informants and Implications

Develop the 260ha of vacant land on 13 portions as residential, commercial or industrial. Should 15 dwelling units per hectare be achieved a total of 3911 erven will be created.

Land Use Management Issues'

Land use activity in Velddrif and Laaiplek is generally quite complimentary and concentrated, with the majority of businesses and facilities located

within the two central nodal centres and concentrated along the associated movement corridors. In general there is a lack of diversity (See Figure 6).

The dominant land use within the town is single residential dwellings which are supported by a light industrial component as linked to the fishing industry. Social uses include schools, community hall, clinic, municipal offices and library, sports grounds, business premises and cemeteries.

The following table provides an overview of the existing land uses in Velddrif/ Laaiplek.

Velddrif/ Laaiplek Land uses		
Land Use	Number	Description
Residential	4046	A large number of these erven are situated north of Laaiplek and are still undeveloped.
Business	±100	Situated in Velddrif at entrance to town over Carinus bridge. Along main feeder roads. At harbour in Port Owen. Main road in Laaiplek and in harbour area.
Clinic	1	
School	2	Noordhoek Primary – 975 learners Velddrif High School – 414 learners
Library	2	1 at town hall and other in Noordhoek
Cemetery	2	One to northwest of town has space for expansion, but no more burials are currently taking place. Existing cemetery east of WWTW has ample room for expansion directly to the north.
Community Hall	2	Town Hall at Municipal offices
Resorts	2	Pelican & Stywe Lyne
Golf course	1	9 Hole course

Table 2: Spatial classification of Velddrif/ Laaiplek

Implications

Velddrif, Laaiplek and Noordhoek have a lack of appropriately zoned land. Industrial and commercial land is required to change the economic status (from developing to developed) and economic sector representation (primary to secondary & tertiary) of the town.

Consider the land use mix and location as a strong directive. As land uses are integrated and the tertiary economy grows, the need for residential development at the location where these commercial and industrial uses take place or in close proximity thereto will increase.

Change the development focus within Velddrif and Laaiplek from residential development with some supportive commercial land uses, to commercial and industrial development, with social and residential uses in support thereof, to bring about the absorption or redevelopment of large isolated residential development that have not been built up.

Besides different land uses, mixed use developments should provide for integrated housing developments which represent a variety of housing typologies that cater for various income groups and different spatial needs.

Transportation

Velddrif/ Laaiplek is partially functional as the town extends 6.2km east west and 4.3km north-south which means that all services are not within walking distance of all residents, thus encouraging vehicle traffic.

Direct access from the south over the river to Velddrif/ Laaiplek is via a tarred road, the R27, which is the connecting road to Cape Town and Vredenburg. Velddrif and Laaiplek are also linked via Main Road 529 to Piketberg in the east, and via a tarred road to Dwarskersbos and Elands Bay in the north.

Public Transport i.e. minibus taxis, is privatised as is the long distance bus service, Intercape and others. The long distance route departs from Cape Town along N7 to Windhoek in Namibia and alternatively to Upington in the Northern Cape. Intercape provides a daily service between Saldanha Bay and Cape Town. There are only minibus taxi services and private transport to Velddrif.

Within Velddrif and Laaiplek, taxis are used or people walk along activity axes and informal footpaths i.e. between Noordhoek and Laaiplek.

A freight rail line runs between Cape Town and Saldanha and Cape Town and Bitterfontein. No passenger rail service exists for Velddrif, although planned for in future. The Sishen-Saldanha (Orex) line is a dedicated line

to move iron-ore and mining sand from Sishen and Namaqua Sands at Brandsebaai to Saldanha. Rail freight is declining.

Road freight transport services are frequent due to the strategic location of Saldanha Bay Port and associated industrial activity as well as proposed IDZ. The services access the transport corridor between Cape Town and Windhoek (Namibia) and Cape Town and Upington.

The WCDM has no commercial airports that cater for domestic and international airlines. Several airstrips present are municipal, private or military owned. Langebaanweg airfield has the potential to be upgraded to a commercial airfield in future.

Saldanha is a major harbour on the West Coast. Besides handling all iron ore exports from Sishen, the harbour also accommodates a variety of vessels, including cargo, bulk carriers, containerships, tankers, coasters, foreign fishing vessels, SA trawlers and others.

Other harbours in the District, primarily concerned with small fishing boats and recreational boats, are located in Lambert's Bay, Elands Bay, Velddrif, St Helena Bay, Yzerfontein, Saldanha and Doringbaai.

Informants and Implications:

Goods and people need to move:

- Public transport services primarily relate to mini-bus taxis;
- Freight transport (road, rail & water) is a key element of movement in the district and existing road and rail infrastructure need to be maintained and upgraded to accommodate future growth, especially linkages to Saldanha Bay Port and proposed future IDZ.
- District would benefit if one of existing airfields can be upgraded to a commercial airport.
- Local harbours need upgrading for local fishing industry and tourism

Infrastructure

West Coast District Municipality is the provider of partial bulk services infrastructure i.t.o. water supply and solid waste management. Other bulk services such as sewer, electricity and storm water are locally provided. Service infrastructure of District Municipality is integrated with local municipal services and connects to these systems.

- Water resources are under pressure and new water sources need to be identified and established. Critical to execute desalination plant at Saldanha Bay and St Helena bay.
- Solid waste should be processed at regional facilities, local land fill sites to be closed and waste should be reduced.

- Eskom lines and substations planned will have spatial implications on local level.
- Alternative energy facilities i.e. solar and wind will have spatial, environmental and visual impacts.

The table below provides an overview of the civil and social service provision for the West Coast, and the Western Cape, based on the Census 2011 statistics. Each service type is described separately in a section following thereafter.

Indicator		West Coast District	City of Cape Town	Western Cape province
Civil	% of households with electricity	94.4	93.8	93.3
	% of households with piped water	95.9	87.3	88.4
	% of households with a toilet facility	87.3	90.1	85.8
	% of households with household refuse removal	78.2	94.9	91.09
Social	% of population (age 5-24) attending school	57.4	63.3	62.2
	% of population (age 20+) with no schooling (illiteracy)	5.03	1.7	2.6

Table 3: Service provision in the West Coast District (Census 2011).

Informants and Implications

- Built a desalination plant

- Upgrade the waste site at Vredenburg.
- Generate own energy

Water Infrastructure

- Water is supplied to Velddrif/ Laaiplek off the West Coast District Municipal pipeline on the southern banks of the Berg River and crossing into Velddrif along the Carinus Bridge. The development of a substantial number of new erven north of Laaiplek, brought about storage capacity problems, in that water can only be stored for 36 hours and not the required norm of 48 hours (BSDF).
- WCDM provides for municipal areas Swartland, Saldanha Bay and Bergrivier (Velddrif and Laaiplek) through an extensive bulk distribution system. There are two water distribution systems i.e. Withoogte and Swartland.
- Water sources for these systems are the Bergrivier (Misverstand Dam), Voëlvlei Dam and Langebaan Aquifer.

Informants and Implications

- To provide for the increased demand for water (average annual increased demand of 3.53%) desalination plant needs to be approved and established in Saldanha Bay and St Helena Bay areas.

- No water and a lack of water cause development to be curbed. Efficient provisioning of services is hampered as subdivision of erven is restricted to not smaller than 500m², subject to capacity of existing infrastructure.

Waste Water Treatment (Sanitation)

Two sewerage systems currently exist for Velddrif/ Laaipek, a waterborne system for the Port Owen, Noordhoek and new development areas, whilst a septic tank system exists for the older residential areas. The WWTW is situated to the north of the town with pump stations to pump sewage to the treatment works. The WWTW was upgraded from an Oxidation Pond System to an Activated Sludge System

Solid Waste Management

The disposal site to the northwest of Noordhoek, was closed and rehabilitated. Refuse is collected from erven and transported to the Transfer Station next to the WWTW from where it is taken to the Highlands Landfill site outside Malmesbury.

WCDM is responsible for regional solid waste management as per Integrated Solid Waste Management Plan (2011). The plan is consistent with the specifications of NEMA: Waste Act No 59 of 2008 and:

- Prevent waste generation

- Recover waste of which generation cannot be prevented
- Safe disposal of waste that cannot be recovered.

The waste from the two transfer stations at Piketberg and Velddrif are transported to Highlands at Malmesbury and all other waste are transported to Vredenburg.

Informants and Implications

Change waste delivery to Vredenburg landfill site. It being located in a sensitive environment, properly engineered and licensed waste disposal facilities, that minimise risk of environmental pollution and degradation of surrounding areas, are a prerequisite for local sustainability. Groundwater resources are thus protected.

Monitor waste disposal to ensure that WCDM is aware of the final destination of all waste, general, hazardous and healthcare, that is generated within its boundaries.

Energy

An electricity capacity upgrade, to double capacity, to the town was completed (overhead cables also entering Velddrif via the Carinus Bridge). Eskom is the bulk provider of electricity.

The guidelines for windfarm compiled by DEA&DP should be considered.

Little wave energy is used. Solar developments are perceived as expensive and cause loss of agricultural land.

Other biomass such as electricity generation from landfill methane gas sites is feasible, largely because of carbon revenue available for methane emissions reduction.

Small scale hydro energy can be generated mainly in the mountains.

Informants and Implications

Use renewable energy to minimize the collective carbon footprint. Considerations for using alternative energy include how to ensure reliable energy supply.

Favourable wind patterns are a positive resource for the generation of electricity, and the region leads with wind farms at Darling, St Helena Bay, Hopefield, Gouda and Sere, north of Vredendal. Saldanha harbour has sufficient infrastructure and manoeuvrability to facilitate imported wind turbines into the West Coast District.

Storm water

An adequate system to control storm water run-off is already in place for all residential areas. At Noordhoek and newer higher density areas proper storm water channels feed into a storm water retention pond.

Telecommunications

Existing telecommunication infrastructure needs upgrading.

Human Settlements

Laaiplek developed as a node around the Stephan's commercial structures at the river mouth, whilst Velddrif followed the river with a linear form, related to fishing along the lower reaches of the river.

Farm worker housing/ settlements

No formal agri-villages exist in the area. The provision of bulk services infrastructure and basic services to small residential communities in isolated new rural settlements, such as agri-villages, should be discouraged. Housing should be provided within existing rural nodes.

Focus settlement development in existing urban areas with the highest growth potential. Rural areas are associated with a lack of available job opportunities and challenges i.t.o. bulk service infrastructure and provision of basic services.

Rural settlements contain lower order facilities and have vital links to higher order urban settlements to meet local needs for services, household goods and community facilities.

Land Reform

Land Reform incorporates more than agricultural land redistribution, but includes amongst other integration of communities segregated by apartheid, strengthening local economic development initiatives and creation of an environment that support and motivates equal opportunities to all residents.

Informants and Implications

Acquire suitable land and adjudicate such land to identified and qualifying beneficiaries that would be supported in continuing agricultural production on such land (Agricultural Land Reform).

Secondary Sectors: Manufacturing, Construction and Transport

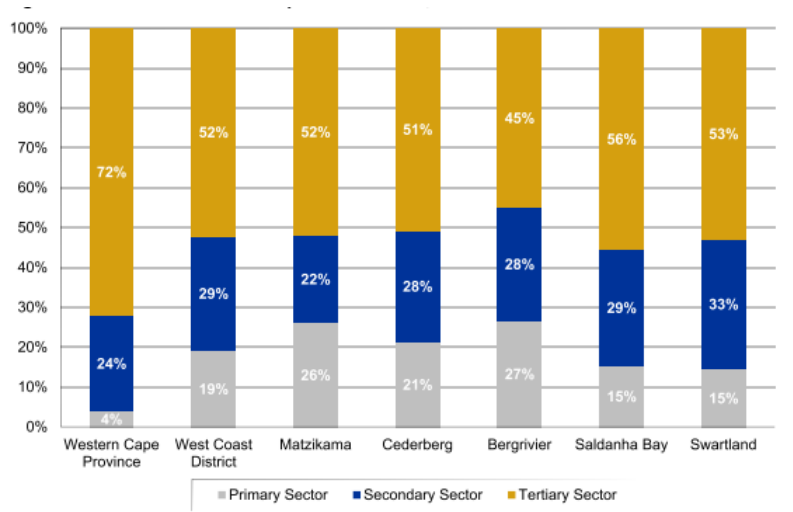
Velddrif and Laaiplek's economy can be described as a developing one. Within the regional context, Velddrif is still the place where one "pass over the river" as the R27 crosses the Berg River. Its primary economic resource, the estuary and coast has not changed, but the product being traded, i.e. fish, has been replaced by experience of beauty, safety and accessibility (tourism).

The 2015 economy of the WCD is driven by manufacturing (21.6%), agriculture, forestry & fishing (18.2%), wholesale & retail trade, catering & accommodation services (15.5%) and finance, insurance & business

service (11.6%) whilst the biggest contributors to employment are Commercial Services (39%), agriculture (18%), general government and CSP (15%) and manufacturing (11%). As the primary sector is strongly represented in the WCD and Bergrivier economies (See table and graph following), reflecting a developing economy, the representation of the secondary and tertiary sectors lag behind its representation in a developed economy.

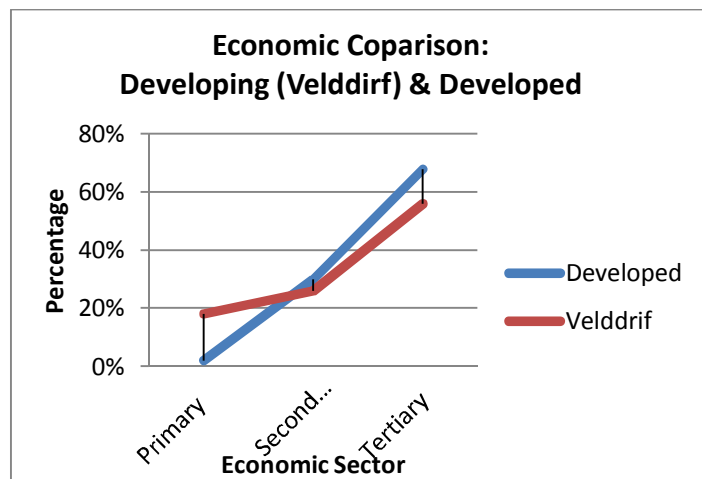
Sector	Sector Contribution: 'Developed Economy	Sector Contribution Developing Economy Bergrivier (2015)
Primary	0.8 – 3%	Agriculture, forestry & fishing (26%)
Secondary	18 - 34%	Manufacturing (23%)
Tertiary	63 – 79%	Wholesale & retail trade, catering & accommodation services (13%) Finance, insurance & business services (11%) (Total 24%)

Table 4: Main sector contribution to economies



Graph 5: GDP contribution per main sector, 2015

The same can be said for the economy of Velddrif as compared in the graph to follow.



Graph 6: Economic comparison – developing and developed economies

Assessment of growth potential include settlement indices i.e. Human Capital, Economic, Physical, Infrastructure, Institutional and a composite growth potential. Future planning considering growth potential has to consider the natural environment too.

Functional Areas are not related to statutory boundaries. The GPS divide the West Coast into three functional areas. Velddrif is included in one such an area containing Saldanha Bay, extending across the northern portion of Swartland (excluding Malmesbury) and beyond the Berg River to its northern bank. The approach of the functional areas is that IDP priorities can better be realised through the combined and integrated efforts of Local Authorities, together with the District Municipality, through regional economic development vehicles. Such an approach is consistent with the Western Cape Strategic Objective #10, namely “Integrated services delivery for maximum impact” (WCSDf)

Informants and Implications

Exploit Velddrif’s advantage of its proximity to the IDZ and its accessibility via the R27 and the R339 as identified as freight routes (per WCDM SDF).

Economically, to build and re-establish the core business of Velddrif i.e. living from the estuary and coast as the main resources whilst protecting the environment, the apparent opposites will have to become supportive of one

another. Its conservation and hence direct enhancement of tourism will have to integrate with opportunities created through its accessibility and its close proximity to the IDZ. This will bring about diversity in economic activity, which has been a weakness in the economy of Velddrif and Laaiplek.

Strengthen the comparative advantage of the region includes but is not limited to:

- Economic development based on identified functions of core urban areas e.g. Vredenburg is an administrative locus.

Future growth has to be driven by the unique comparative economic advantages of each town i.t.o. primary economic function and potential future development. Comparative advantages include

- Accessibility
- Provincial, district and local road network
- Established and future railway linkages
- International linkages (port, airport, etc.)
- Availability of suitable land for industrial development
- Availability of suitable land for housing development
- Established agriculture service and trade area
- Availability of natural resources, such as water

- Established infrastructure with available capacity (e.g. waste water treatment plants, etc.);

Interaction between towns in the district, as well as movement of people, business and resources are not tied to municipal boundaries in the district and cut across boundaries due to factors such as convenience, proximity, variety, etc.

Tourism

Unique tourism attractions and potential tourism development exist in Velddrif/ Laaiplek. Velddrif offers various accommodation and tourism-related activities at the historic and commercial cores of Velddrif and Laaiplek, Port Owen Marina, two coastal resorts (Stywelyne and Pelikaan Holiday Resort) as well as Bokkomlaan and both Laaiplek - and Pelican harbour with its associated industrial areas.

The well-known annual Berg River Canoe Marathon starts in Paarl and ends at the Carinus Bridge in Velddrif, drawing a large number of visitors to the town. The first Berg River Canoe Marathon took place in 1962 and has gained not only a reputation for being one of the toughest races in the world, but also the longest course in South Africa. The Berg River estuary is an important bird habitat, home to around 30,000 birds, including up to 80

species which are endemic to the Cape coast. Regular boat cruises along the river can be enjoyed whilst enjoying some bird watching.

Swimming and fishing spots are located:

- Just north of Laaiplek harbour on the coast.
- Along the south-eastern riverbank at the Carinus bridge.

Recreational activities (swimming and fishing) occur in fragmented pockets with large tracks of inactive or undeveloped areas between nodes or hotspots.

The town also forms part of the Crayfish Route along the West Coast. A common scene in the area is the wooden jetties where fish are dried for the speciality food named Bokkoms. Port Owen lies between Velddrif and Laaiplek and comprises 100 hectares and has 3.5 km of waterways linking to the Berg River. There is a holiday resort around the marina area of Port Owen while two other resorts (Pelican Park & Stywelyne) are also available to the public.

There are two hotels, numerous guesthouses and self-catering accommodation is available. The restaurants in Velddrif and nearby Laaiplek serve fresh fish and other seafood. The town attracts a number of tourists, especially for its birds, fishing, boating, yachting and the West

Coast Gallery, where work of over 100 artists and craftsmen in the area are sold.

The annual Berg River Canoe marathon is also a huge capital injection for the town.

Informants and Implications

West Coast is a popular tourist destination due to natural beauty, quaint coastal villages and proximity to Cape Metropole as primary tourist attraction.

Develop opportunities for economic growth in rural areas, especially through the tourism sector. Thus create rural development and tourism corridors including rural nodes with economic growth potential.

Improve the following types of tourism

- Holiday destinations – Coastal Towns with unique coastline
- Adventure – recreational activities
- Nature conservation and natural beauty
- Cultural Tourism
- Agri- Aqua Tourism

3. Strengths, Weaknesses, Opportunities and Threats (SWOT)

A SWOT analysis of the three environments representing sustainability: natural, socio- including built and economic, is detailed below:

Strengths

Environment

- Location on the banks of and within the Berg River Estuary and on the coast (natural beauty) (VLPP)
- Palaeontological assets (fossil banks)

Social

- History and role of town within the regional context
- In-migration of people

Built

- Small scale of the town (a feature of towns with strong tourist economies is a sense of walkability or small scale) (VPLL)

Economic

- Salt mining
- Holiday destination
- Tourist related developments to support economic growth
- Location on the R27 and part of freight routes north (WCSDf)

- Functional regions (interaction between towns and district across municipal boundaries)

Weaknesses

Environment

- Ignorance regarding the sensitivity of Estuary:
[Degradation and disruption of natural estuary and coastline (by intensive man-made interventions and development); illegal fishing, pollution and alien vegetation (highly damaging to significant ecological systems of river and coastal zone)(VLPP)]
- Lack of water and hence positive public space:
[A lack of water causes a lack of positive public space, which impact negatively on the quality of life of the community as well as the potential for the precinct to develop economically and maximizing opportunities for tourism: Public spaces in the urban areas to be developed to create spaces of social interaction while attracting by-passers, tourists, visitors and surrounding communities. Public space facilities have to respect the environment while creating a variety of movement linkages between vibrant activity and tourism nodes (VPLL)].
- Lack of sense of place and aesthetic guidelines for river routescape

Social

- Limited public access to the water for recreation(VLPP)
[Improve public access to the water in a sustainable and responsible manner that will maximize the untapped tourism potential of the area. (VPLL)]
- Open space buffers i.e. golf course
- High levels of unemployment (VLPP) and low skills levels
- Large cohort of people in lower income category
- Absence of Land Reform

Built

- Bulk services challenges
- General lack and dated public and community facilities [VPLL].
- Lack of urban quality [Vacant or underutilised harbour and sea front developments & fragmentation and isolation within and between neighbourhoods. Vast open spaces and underutilised land undermine walkability of the precinct (VLPP)].
- Lack of appropriately zoned developable land.

Economic

- Dependence on social grants due to inaccessibility to fishing permits – leads to increased social problems including drug and alcohol

dependency (social & economic).

- Limited economic diversity and opportunity [VPLL]
- Limited access to river and sea.
- Slow uptake of developed residential land.

Opportunities

Environment

- Sensitivity of Estuary: [Regeneration and protection of environment as is important for both tourism and biodiversity functioning (VLPP)]
- Coastal setback lines (protection)
- Bioregional Spatial Planning Categories

Social

- Education (related to estuary, coast and conservation)\
- Land Reform
- Establishment of aquaculture
- Informal trading to serve the tourist market

Built

- Role of town within the West Coast Region
- Opportunities for mixed residential densities and typologies to provide

for a more diverse residential market and reassessment of allocated urban land uses (zoning) and public open spaces.

- Access to education

Economic

- Proximity to and sphere of influence of IDZ (Vredenburg Saldanha)
- Establishment of alternative electricity and water sources
- Economic growth
- Tourism

Threats

Environment

- Climate change
 - o Decreased biodiversity
 - o Changing agricultural crops and yields

Social

- Fishing culture being replaced by cosmopolitan coastal tourism (social) (outside intervention – VLPP)
-

Built

- Lob-sided development (residential)][Inefficient use of vacant land, slow uptake of zoned land (VLPP)]
- Potential damage to infrastructure due to climate change(VLPP)

Economic

- Lack of industrial and commercial development (economic)
 - Demise of fishing industry (economic) [VLPP]
 - Decline of agriculture (economic)
 - Slow take up of developed land (economic)
 - Freight trucks passing through towns cause noise, safety concerns and damages road infrastructure.
-

According the VLPP, the **vision statement** for Velddrif and Laaiplek is:

Transform Velddrif and Laaiplek into a vibrant, well managed and attractive town which offers safe, integrated open space, streets and amenities, where the unique landscape, cultural and social assets of the town create opportunities for residents and attract tourists.

Concluding the analysis, it is proposed that the vision statement is amended to read:

A vibrant, well managed and attractive Velddrif and Laaipek which offers safe, integrated open space, streets and amenities, where the unique landscape, cultural and social assets of the town and its proximity to the IDZ, location within a functional growth potential area and the West Coast Biosphere create opportunities for residents and attract tourists.

4. Recommendation

The adaptation of this Status Quo by the Municipal Council is a prerequisite and requirement of SPLUMA and LUPA, to facilitate the amendment of the BSDF.

It is recommended that this status quo report is adopted as an addition to the existing Status Quo Reports in the BSDF and the VLPP. It will serve as the informant for the proposed amendment of the development footprint of Velddrif to include a portion of the southern bank of the Berg River.

5. Maps illustrating Status Quo Analysis

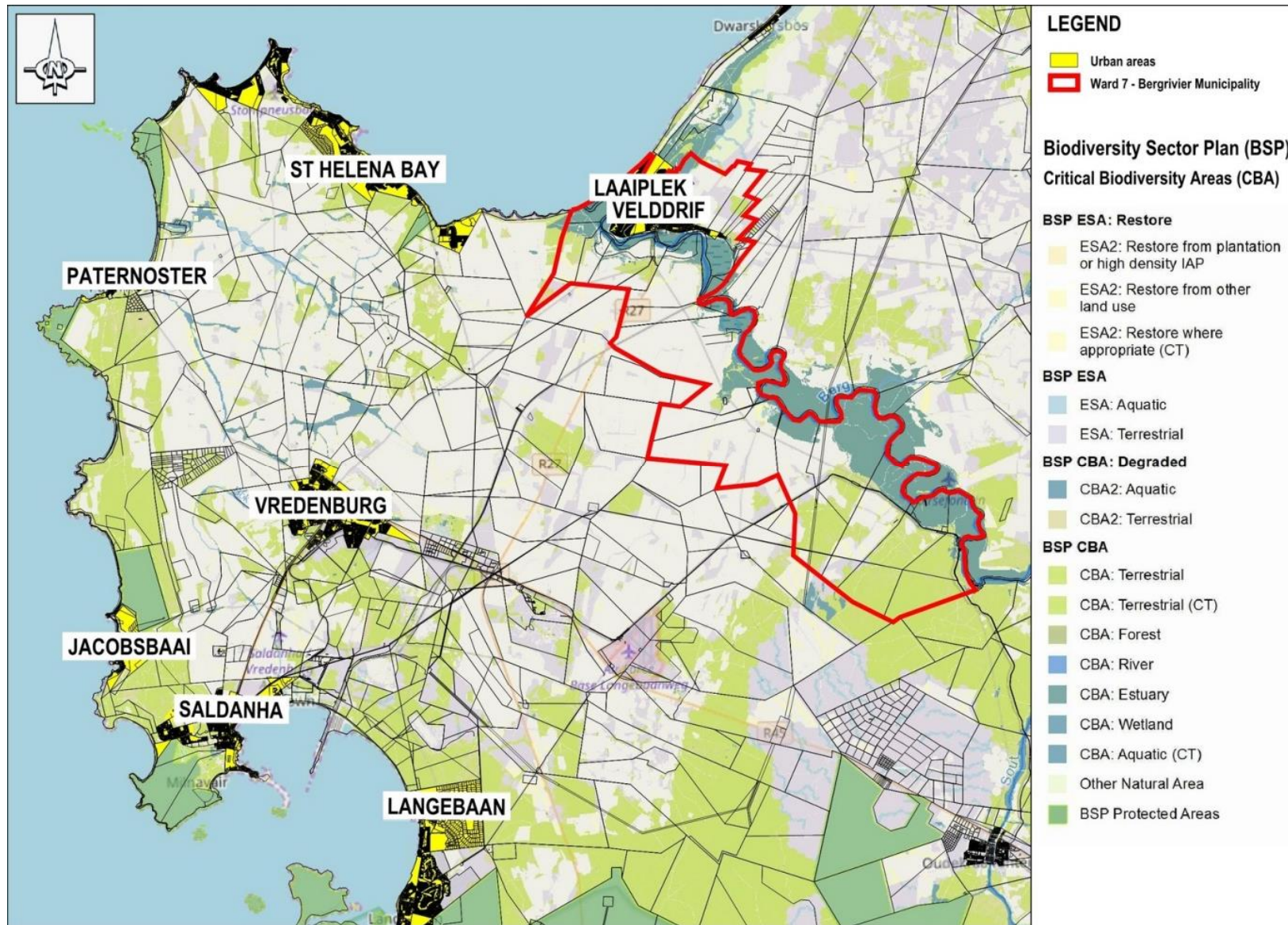


Figure 1: Biodiversity in Saldanha and St Helena Bay and Ward 7, Bergrivier Municipality



Figure 2: Bioregional Spatial Planning Categories and Conservation corridors in Saldanha and St Helena Bay and Ward 7, Bergrivier Municipality (Reference: <http://capebiosphere.co.za/images/map.jpg>)

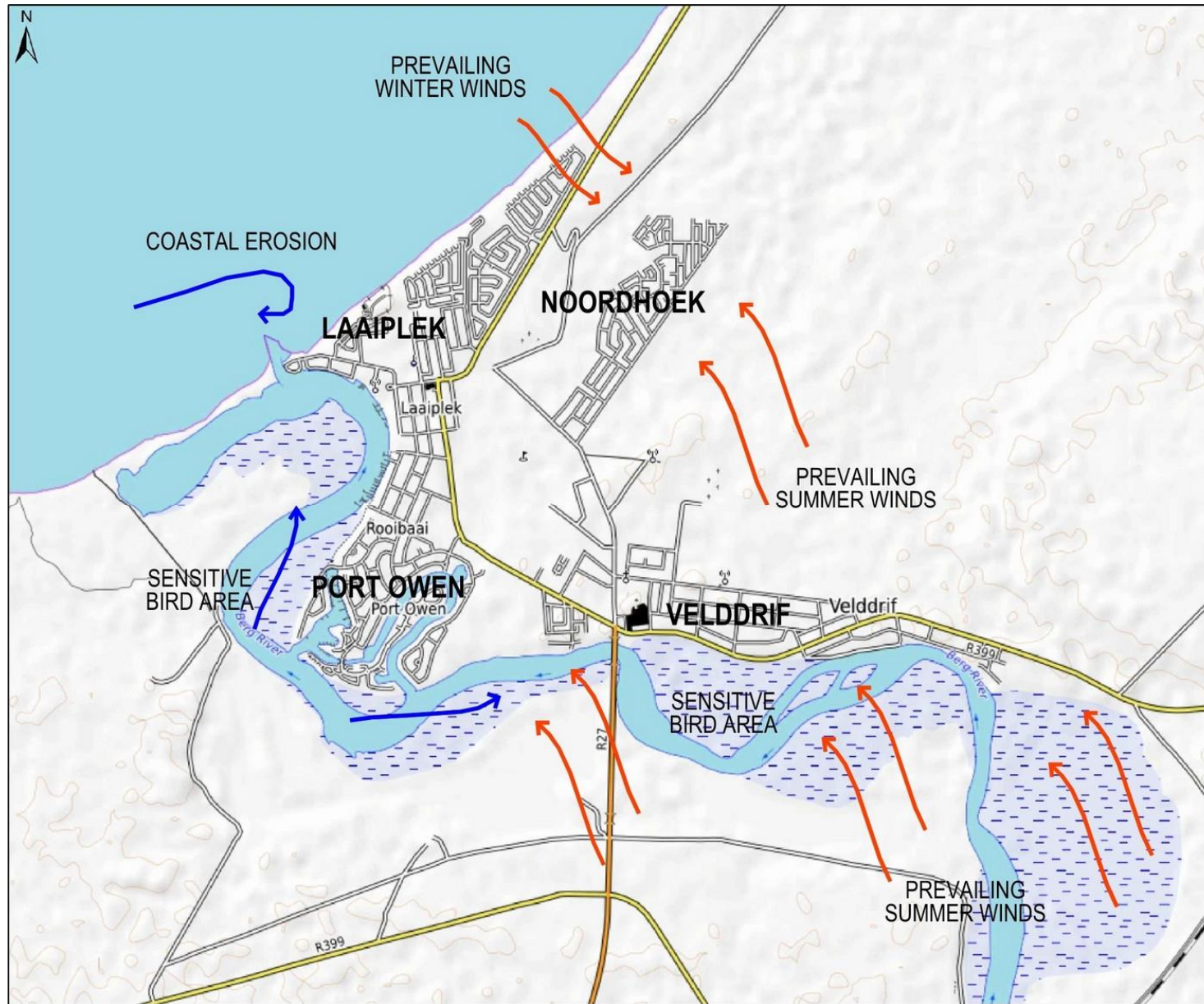


Figure 3: Wind direction and development location – Velldrif & Laaiplek

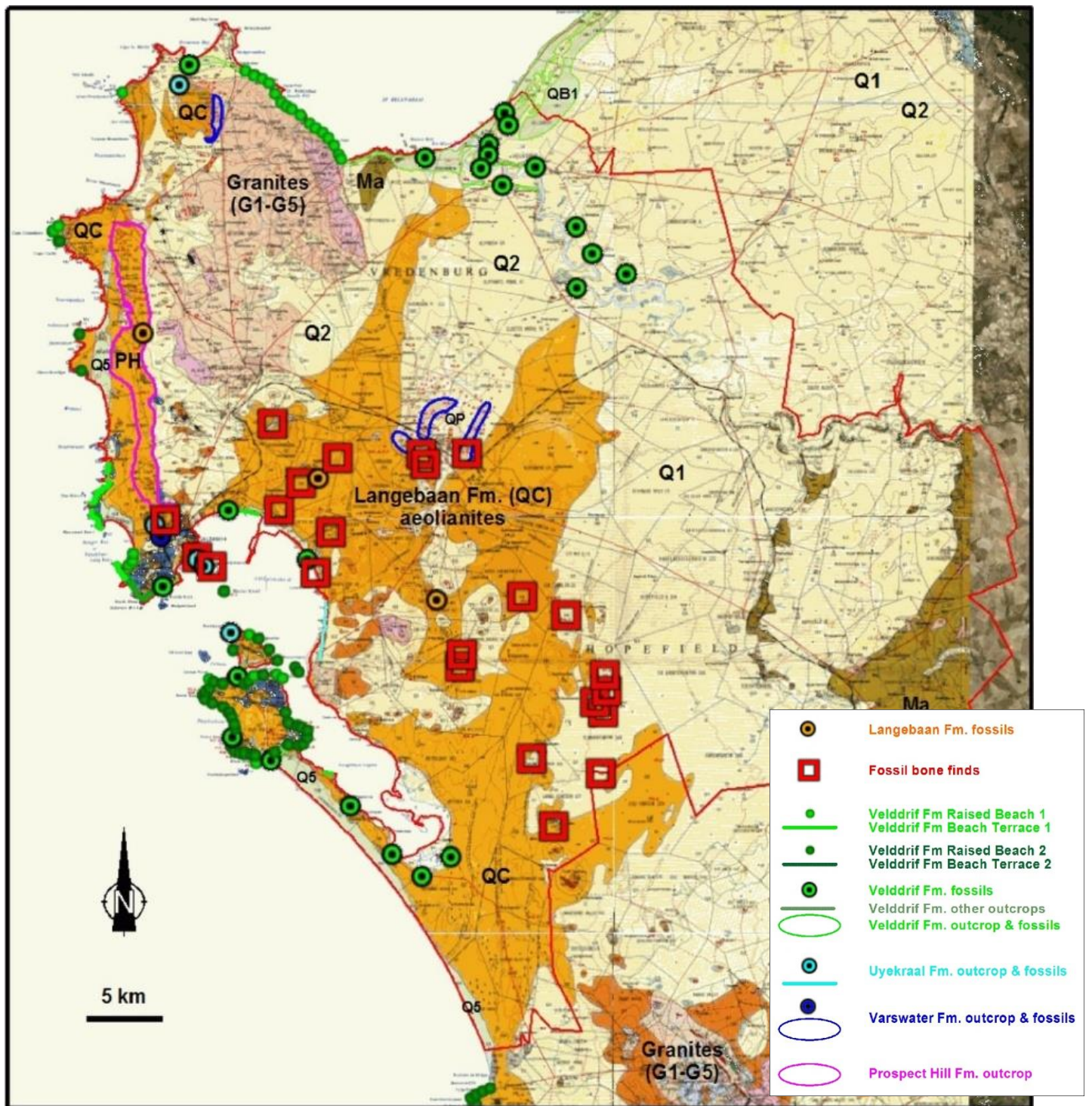


Figure 4: Fossils and Palaeontological Resources – West Coast (Reference: Pether, J. Palaeontological input to the Saldanha Environmental Management Plan, 2012)



Figure 5: Coastal Setback Line – Velddrif and Laaiplek (Reference: Department of Environmental Affairs, Western Cape)



Figure 6: Location of Cape West Coast Biosphere Reserve and Ward 7 of Bergrivier Municipality

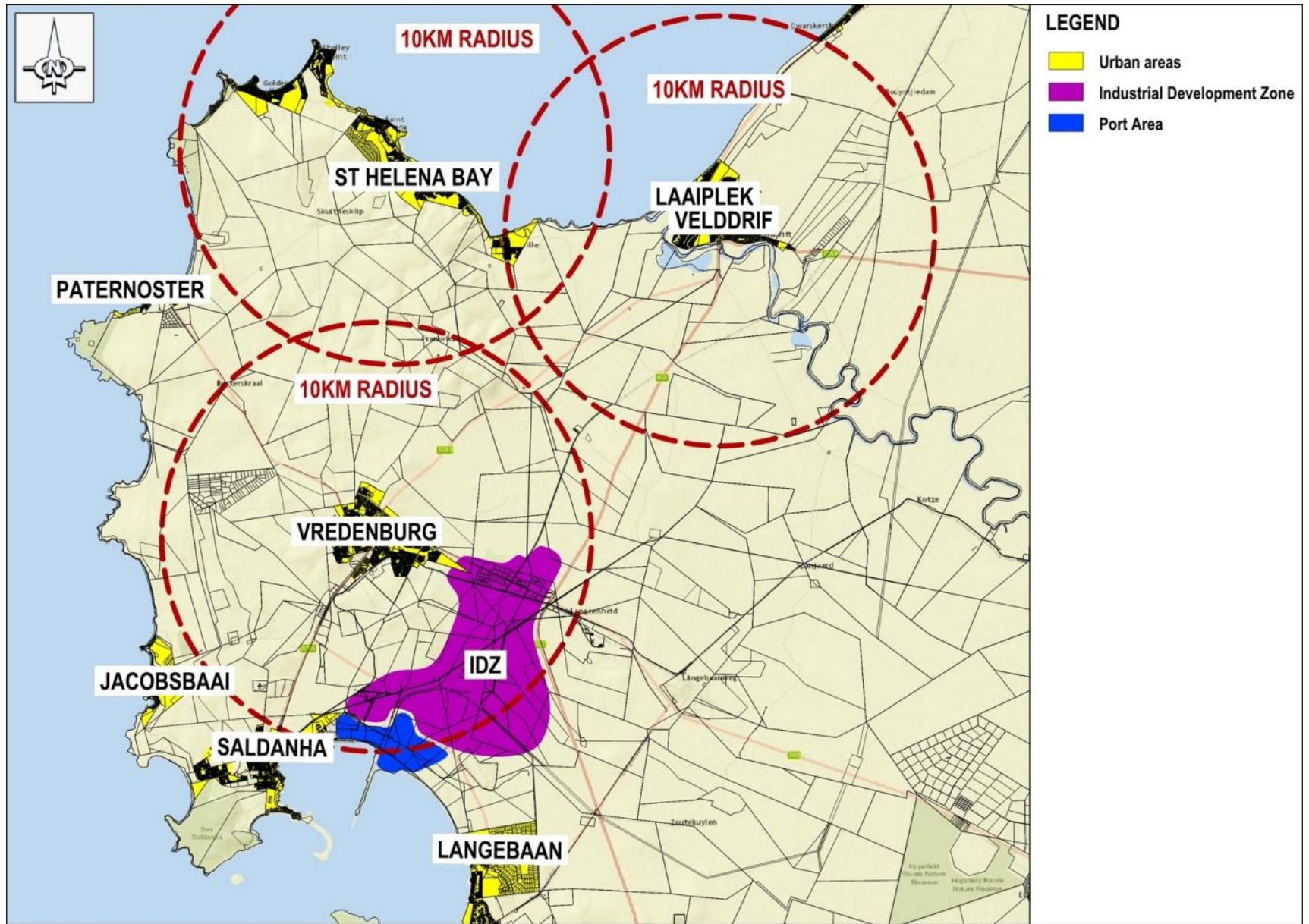


Figure 7: Saldanha Bay Industrial Development Zone and proximity of Velddrif and St Helena



Figure 8: Functional Areas (red lines) in the West Coast District (GPS, 2013) (Reference: West Coast District Municipality: WCSDF, 2014)

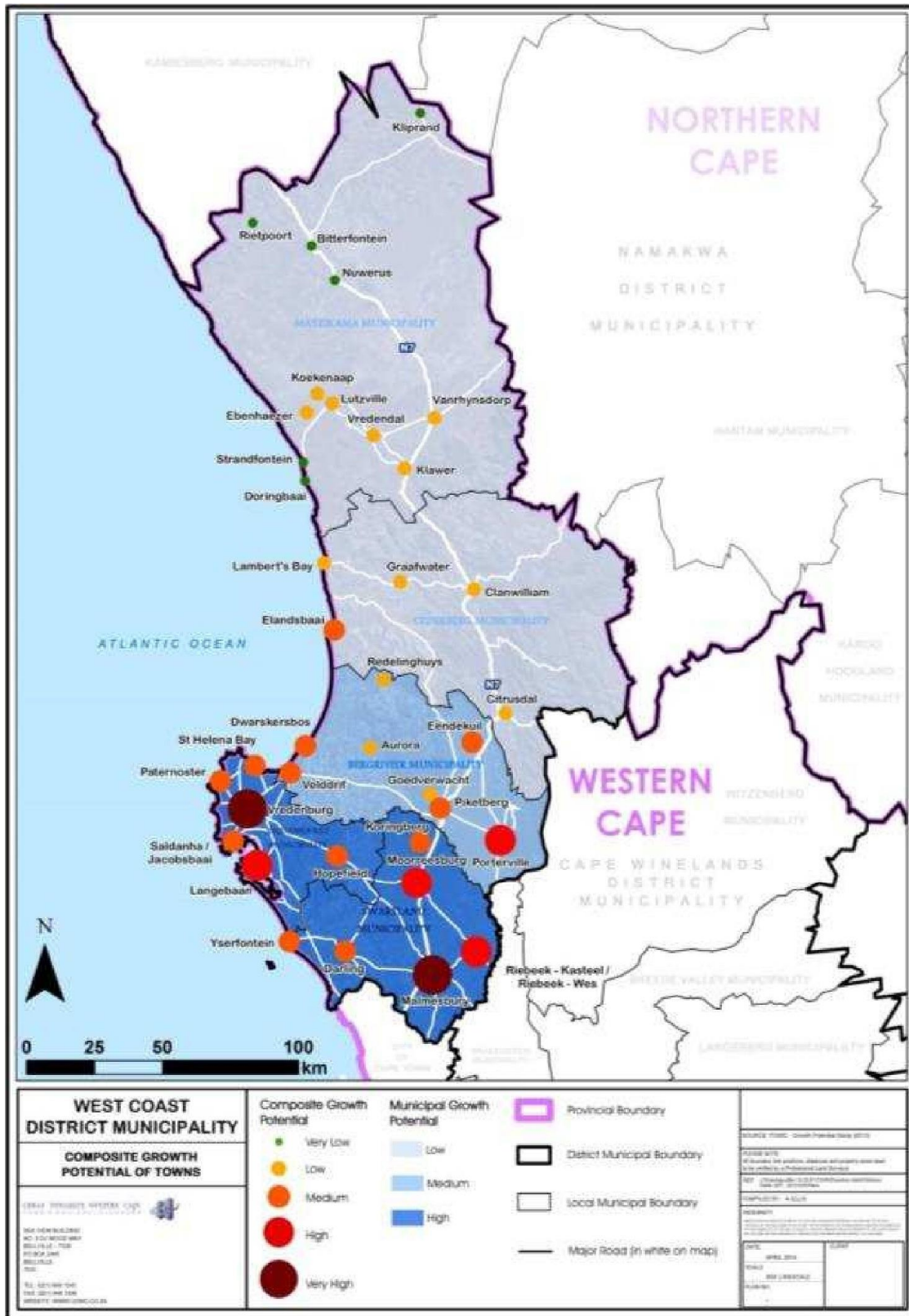


Figure 9: Composite Growth Potential of Towns in the West Coast District (Reference: West Coast District Municipality: WCSDF, 2014)



Figure 10: Distribution of Medical and Education Facilities (PGWC, 2013) (Reference: West Coast District Municipality: WCSDF, 2014)



Figure 11: Landfill Sites (Existing – brown and proposed - yellow) (Reference: West Coast District Municipality: WCSDF, 2014)

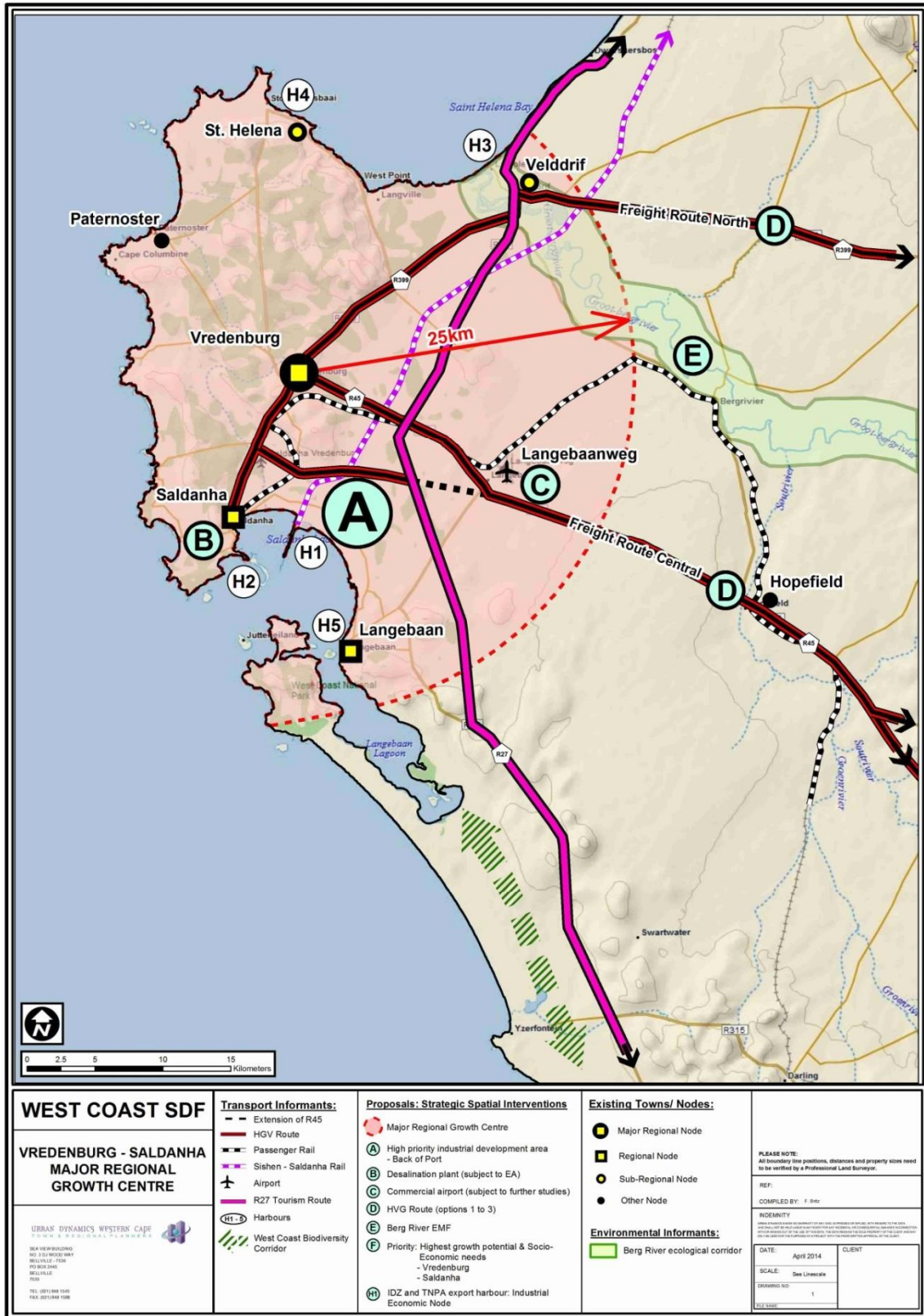


Figure 12: Transport Routes and Saldanha Bay's Sphere of Influence (Reference: West Coast District Municipality: WCSDF, 2014)

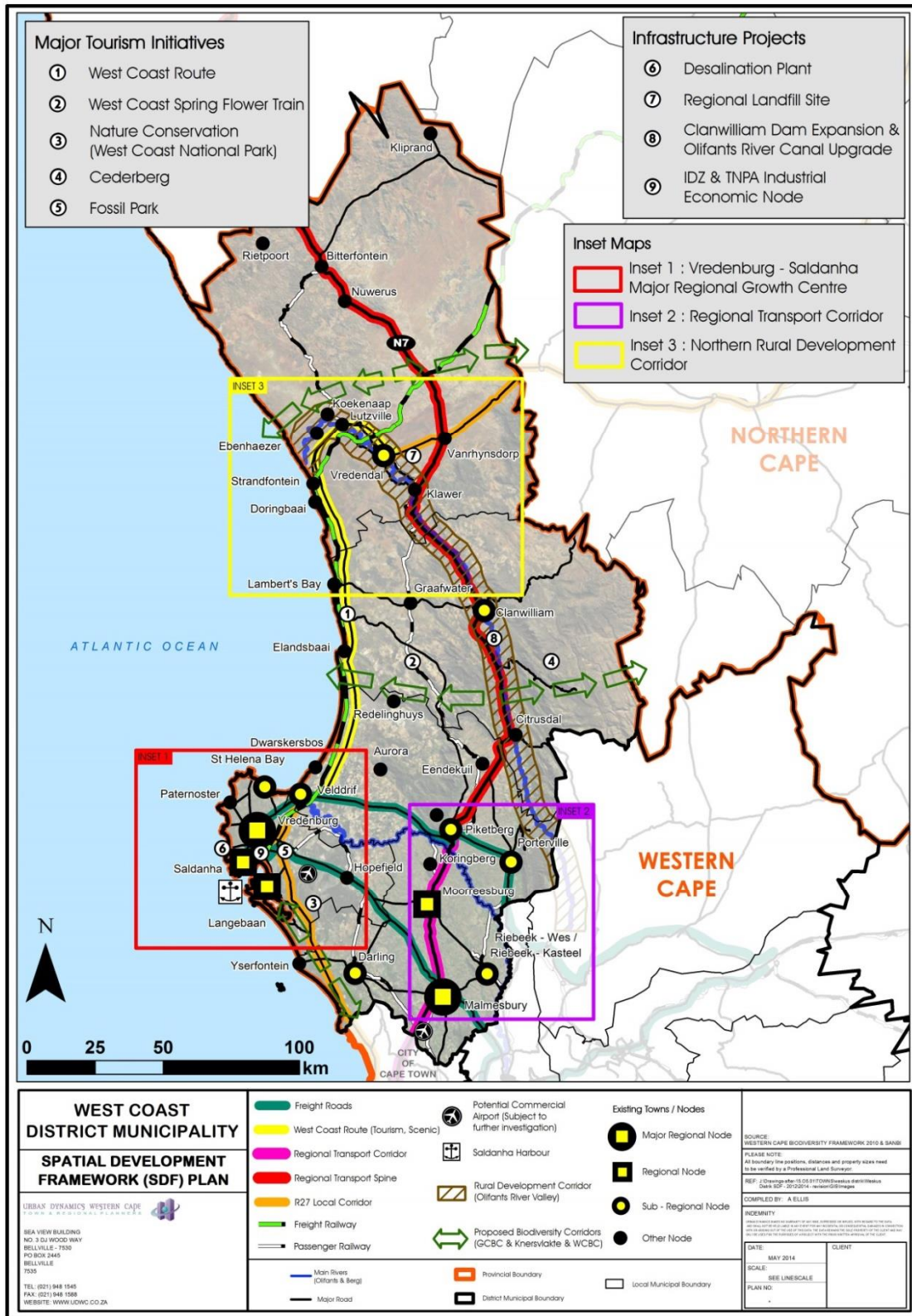


Figure 13: Spatial Development Framework (SDF) Plan, West Coast (Reference: West Coast District Municipality: WCSDF, 2014)

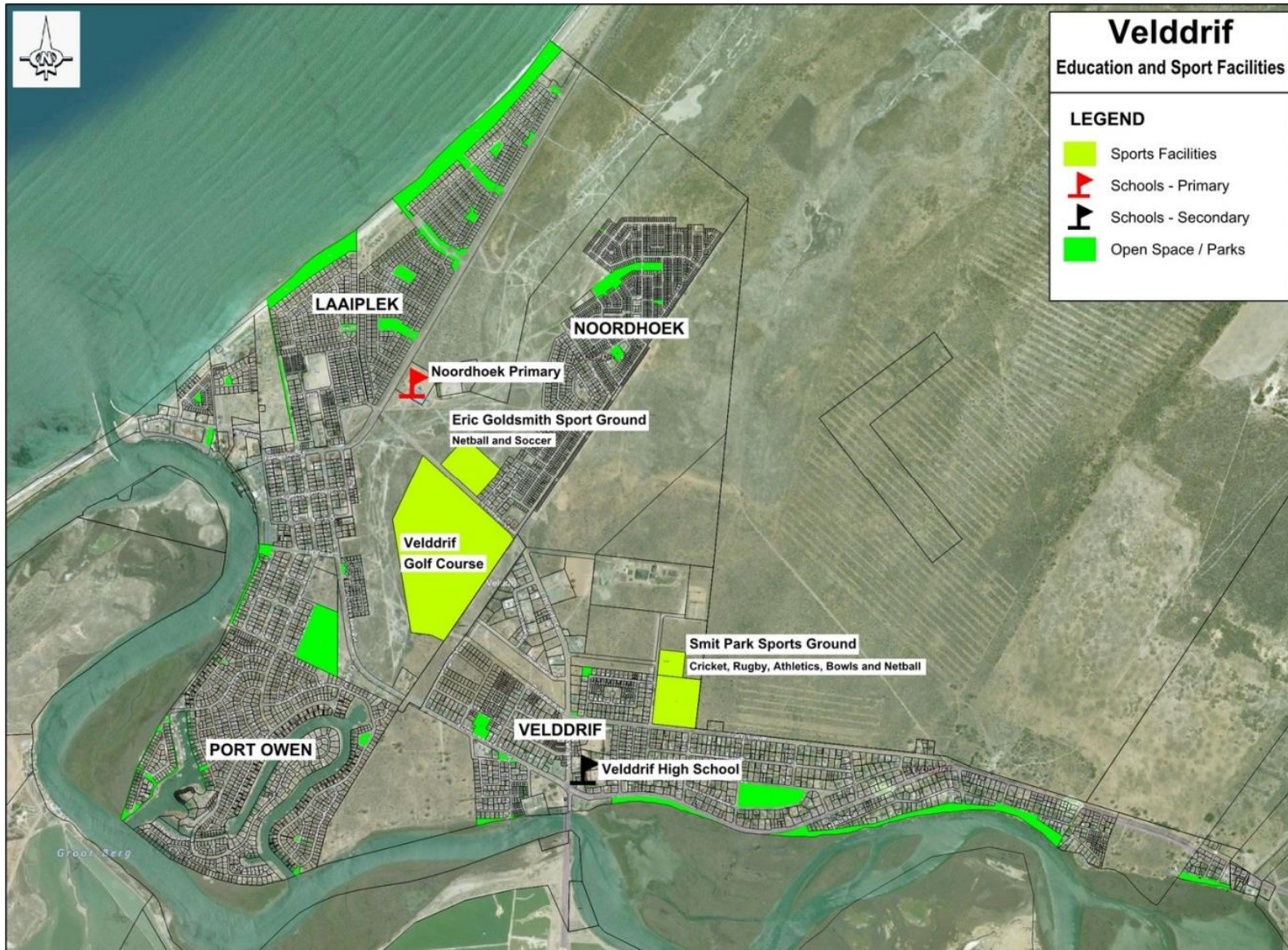


Figure 14: Education and Sport Facilities in Velddrif



Figure 15: Key activities and Land uses – Velldrif (Reference: Velldrif and Laaplek Precinct Plan, Bergvriër Municipality, 2014)



Figure 16: Public access to Berg River and Atlantic Ocean – Velddrif/ Laiplek (Reference: Velddrif and Laiplek Precinct Plan, Bergrivier Municipality, 2014)