SAPS	South African Police Services
SDF	Spatial Development Framework
SDP	Spatial Development Plan
SEA	Strategic Environmental Assessment
SIP	Strategic Infrastructure Plan
SMME	Small, Medium and Micro Enterprises
SoER	State of the Environment Report
SOEs	State Owned Enterprises
SPC	Spatial Planning Category
SWOT	Strengths, Weaknesses, Opportunities and Threats
TB	Tuberculosis
WC-DSDF	West Coast District Spatial Development Framework
WC-PSDF	Western Cape Provincial Spatial Development Framework
WWTW	Waste Water Treatment Works

1. INTRODUCTION

1.1 PURPOSE OF THIS REPORT

The purpose of this report is to provide an understanding of the state of the Beaufort West Municipality (see Figures 1.1.1 and 1.1.2) and the various issues facing it in order to prepare a Spatial Development Framework to help address those issues from a Spatial Perspective.

The report is structured in the following manner:

Section 1 describes the purpose and need for an SDF.

Section 2 describes a number of national provincial, district and local guidelines, policy documents and concepts, all of which have a bearing on the SDF.

Section 3 describes the current state of the Municipality under the following subsections:

- Natural Systems;
- Built Systems; and
- Socio-economic systems.

1.2 BRIEF OVERVIEW OF BEAUFORT WEST MUNICIPALITY

- The Beaufort West Local Municipality is a category-B municipality, comprising the settlements of Beaufort West, Merweville, Nelspoort and Murraysburg and is located in the Central Karoo District;
- It is the largest municipality and also the administrative capital of the district;
- It is the economic hub of the region, strategically situated approximately 450 kilometers from Cape Town along the N1 route, which connects Cape Town, Bloemfontein and Johannesburg;
- Its population has grown considerably from approximately 37 000 (Census 2001) to 49 000 (Census 2011). This 'growth' may largely be attributed to the inclusion of the DMA into Beaufort West Local Municipality in 2009/10, which includes Murraysburg and surrounding farms, and not necessarily natural or in-migratory growth.

1.3 WHAT IS AN SDF AND WHY IS IT NEEDED?

The spatial management of growth in urban and rural environments due to rapid urbanisation rates and the subsequent impact on resources was previously done through the Guide Plans and Structure plans. These took the form of rather inflexible master plans which were underpinned by the principles of discrimination and separate development.

The new democratic government, post 1994, adopted a new system of spatial planning described in the Development Facilitation Act and Municipal Systems Act. This new system had two components to it.

The first was an indicative plan or Spatial Development Framework (SDF) that was intended to show desired patterns of land use, directions for future growth, indicate the alignment of Urban Edges, and depict other special development areas.

The impact of SDFs is limited to providing policy to guide and informing land development and management. They do not change or confer real rights on land.

The second component is the Land Use Management System (LUMS). This is similar to a town planning or zoning scheme. In many instances where they have not been replaced or repealed these still take the place of LUMS. In contrast to SDF's LUMS have a binding effect on the development rights attributed to land and confer real rights on properties.

Because development in Municipalities is dynamic and responds to changing socio-economic and environmental circumstances, it is impossible to predict the exact requirements of development rights in every instance, therefore, LUMS may be amended from time to time to take into account these changing circumstances. This is normally achieved through the processing of rezonings, subdivisions and removal of title deed restrictions applications. It is in these instances where SDF's play an important role in guiding appropriate future change and helping to guide motivations as to the need and desirability, or not, of proposed land use changes.

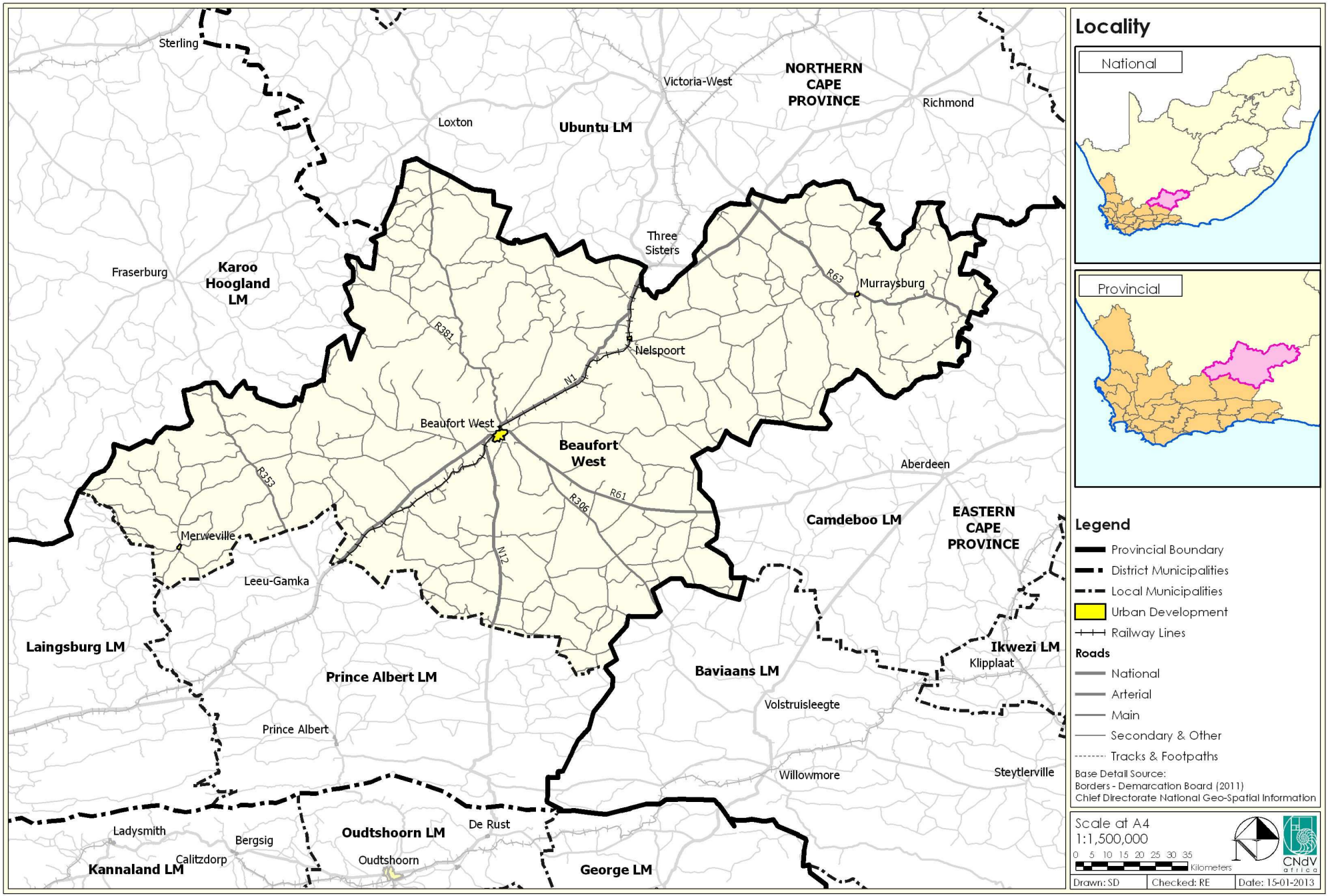


Figure 1.1.1 Study Area

Because of their guiding and informing nature SDF's also have a number of other important functions in addition to guiding LUMS.

These include:

- Giving effect to the principles contained in the Development Facilitation Act Chapter 1, see Section 2.1.1;
- Setting out objectives that reflect the desired spatial form;
- Defining strategies and policies to achieve these objectives which must indicate, amongst others:
  - the desired pattern of land use;
  - how spatial reconstruction will be addressed; and
  - providing strategic guidance in respect of the location and nature of development. (In this regard it should be noted that the SDF's should inform the investment decisions of the public ***and the private*** sectors.)
- Set out a capital investment framework for development programs; (this will mainly inform public sector investment priorities);
- Include a Strategic Environmental Assessment (SEA) in the compilation of the SDF;
- Identify programs and projects for development of land;
- Be aligned with neighbouring Municipal SDF's; and,
- Provide a visual representation of the designed spatial form with the Municipality in the form of a map which must indicate the following:
  - public and private land development and infrastructure investment;
  - desired and undesired use of land;
  - may delineate the Urban Edge;
  - identify areas for strategic investment;
  - where policy intervention is needed; and,
  - indicate where authority spending is required.
- Informing the spatial location of budget spending in the IDP, see Section 2.4.1.

1.4 LEGAL STATUS OF THE SDF

Within the limitations of a SDF as laid down by the Local Government Municipal Systems Act, 2000 (Act 32 of 2000) i.e. that it should be a guiding and informing document and does not confer real rights on land, it is intended that the SDF should be a binding document endorsed by the Municipal Council and approved in terms of the Municipal Systems Act, Act 32 of 2000. These endorsements will assist with the processing of development applications, demonstrating compliance with different sectoral policies and motivating project funding and budgets.

1.5 RELATIONSHIP WITH OTHER PLANS

The SDF links the development objectives taken from the Integrated Development Plan (IDP) and the Budget of a particular municipality. Therefore, the SDF becomes the spatial presentation of the IDP objectives that guide projects funded through the budget of the local municipality. This link between the SDF, IDP and Budget is shown in Figure 1.4.1.

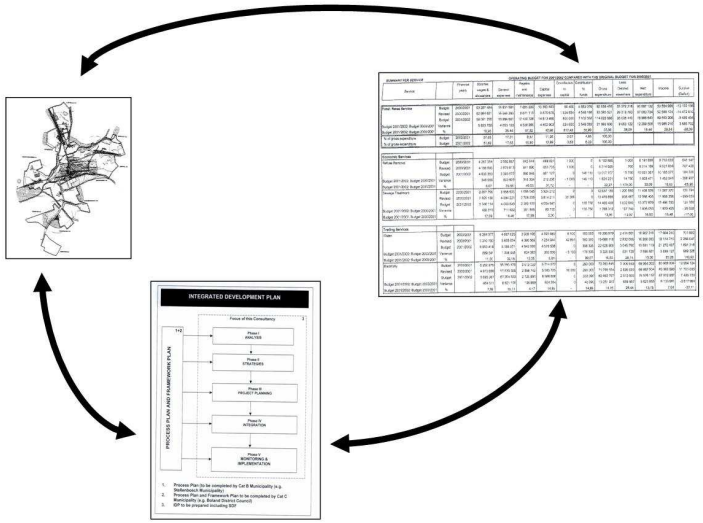


Figure 1.4.1 Link between SDF/IDP/Budget

The Beaufort West Municipal SDF is further linked to other spatial policies at different levels of detail depending on their level of jurisdiction. The National Spatial Development Perspective (NSDP) provides the broad national development goals, objectives and strategies. This informs the Western Cape Provincial SDF (WC-PSDF). The WC-PSDF in turn informs the Central Karoo District Municipal SDF.

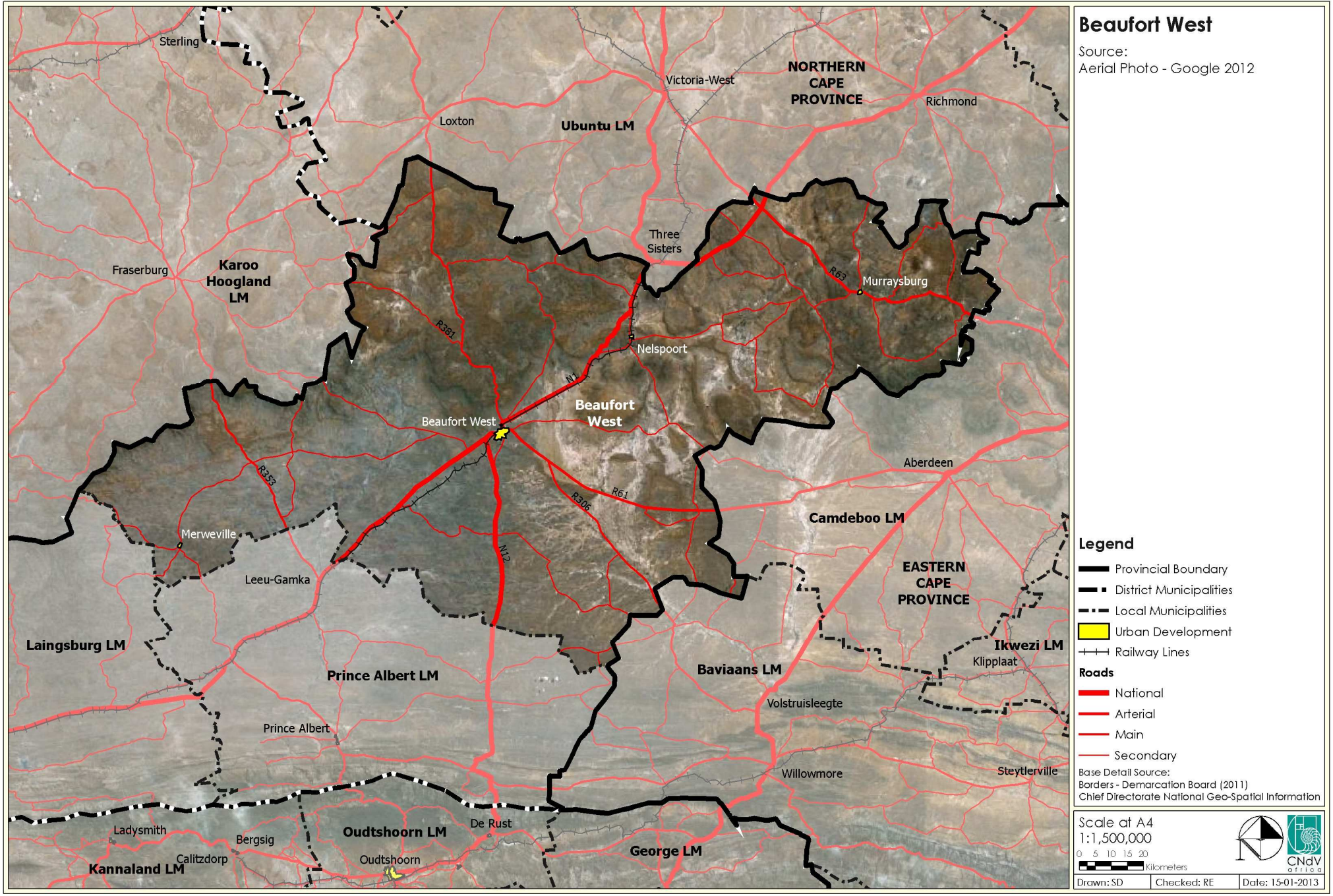


Figure 1.1.2 Aerial Photograph

The Central Karoo District Municipal SDF then informs the preparation of the Beaufort West Municipal SDF. It should be noted that the hierarchy is not only top down but also bottom up, i.e. the lower level plans also inform the higher level plans through the updating process as a result of more local level detailed information. The lower the level of the plan the more detailed the plan becomes and vice versa. This is illustrated in Figure 1.4.2.

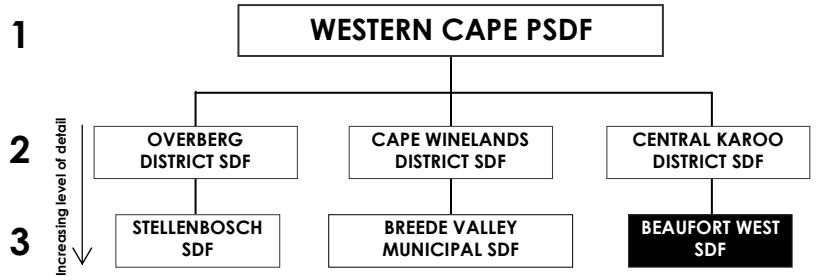


Figure 1.4.2 Layers of SDF and Level of Detail

The SDF should consider the impact of the natural environment (rivers, sensitive areas) as well as built environment aspects such as housing, infrastructure and socio-economic issues relating to economy, human development indicators, etc. The SDF must guide all of the Municipality's departments as well as national sector departments, State Owned Enterprises (SOEs) and the private sector. Therefore, the SDF is informed by and in turn informs the plans and activities of the various municipal line departments, see Figure 1.4.3.

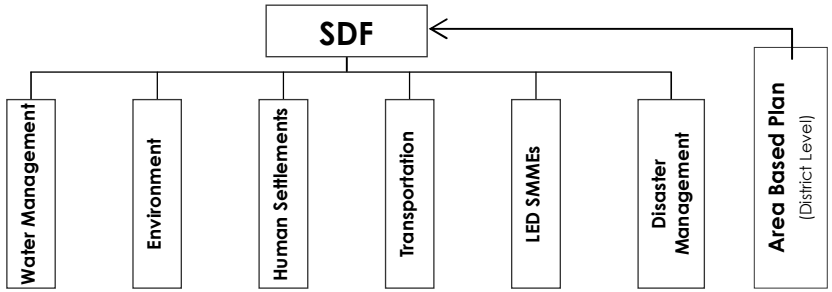


Figure 1.4.3 SDF relationship to sector plans

1.6 CONSULTANT'S BRIEF

The consultants brief is to prepare an SDF for the Beaufort West Local Municipality.

The DEADP has produced guidelines for preparing SDFs, see Figure 1.5.1.

The following products of the SDF will be produced in the different phases of the SDF as shown below in Figure 1.5.2.

The following methodology, in line with both the national and provincial guidelines for the preparation of Spatial Development Frameworks, see Figure 1.5.2, is used in this project:

Product One: Inception Report
Product Two: Status Quo Report
Product Three: Conceptual Framework (draft SDF)
Product Four: Final SDF Implementation Strategies and Programmes

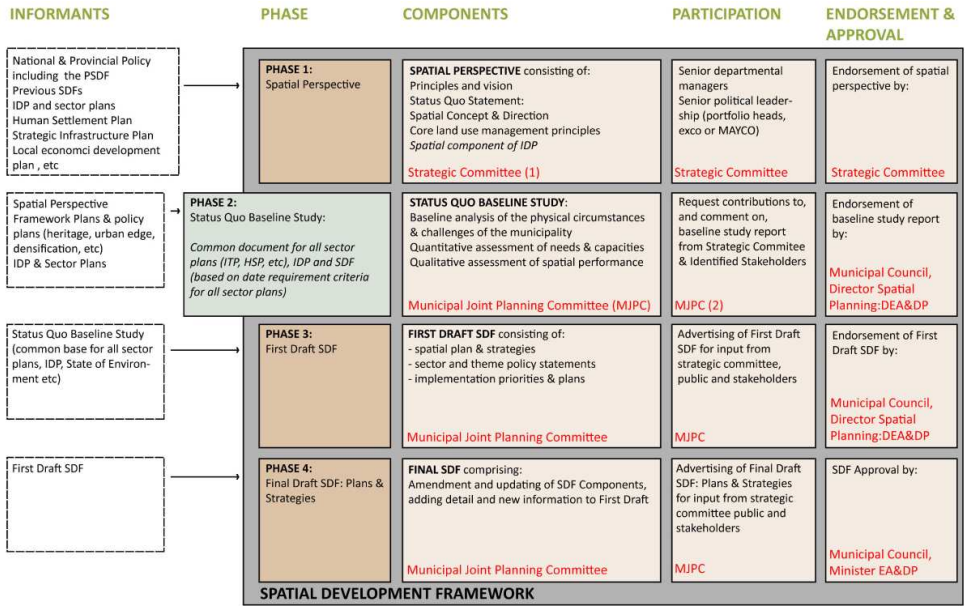


Figure 1.5.1 Guidelines for preparing SDFs (source: DEADP, 2009)

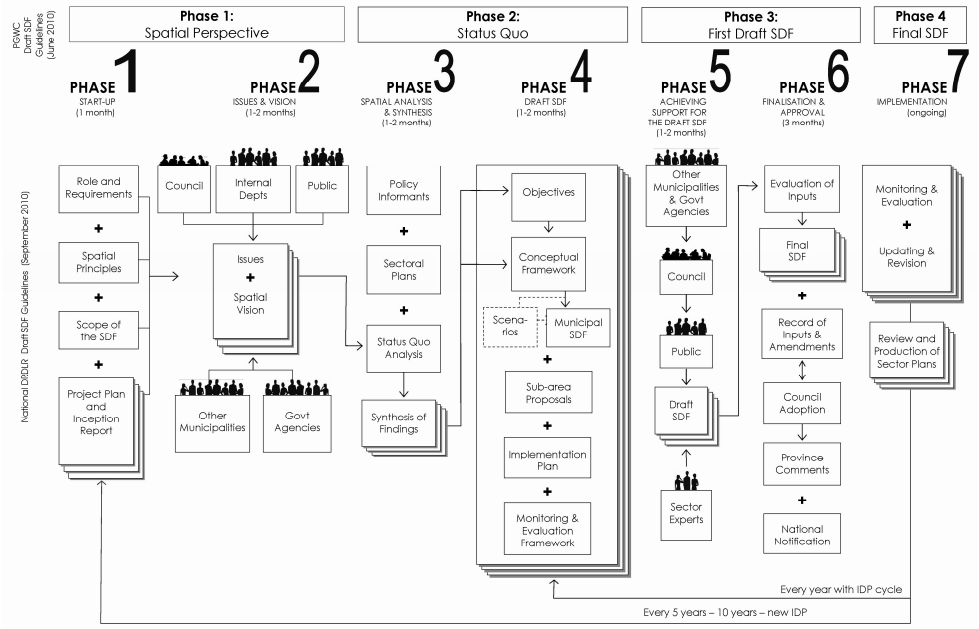


Figure 1.5.2 Phases in the process of completing an SDF (source: CNdV, 2010)

The following serves as specific foci:

CRITICAL MILESTONES AND DELIVERABLES

The following milestones are necessary phases of the project to ensure a credible and comprehensive SDF as required by the above policy and regulation:

- Inception Report
- Status Quo of the Municipality;
- Conceptual Spatial Development Framework (SDF); and,
- Final SDF, Implementation Strategies and Programmes.

It is expected that each milestone should cover several deliverables. Following below is a list of deliverables for each of the four milestones.

PRODUCT 1 INCEPTION REPORT

An inception report should be prepared containing details pertaining to the project process (contained in a work plan). As part of this phase a project inception meeting will be conducted with the client to agree on a process forward and deliverables/products of the SDF. The starting date of the project and agreed payment schedule will also be contained herein.

PRODUCT 2 SPATIAL ANALYSIS OF THE CURRENT REALITY

This section should check whether the "environment" is spatially conducive, able or geared for the delivery of the IDP and the relevant sector plans. It should not repeat the status-quo information as contained in the IDP. This phase must contain a **spatial analysis with maps**, and should indicate the following:

- Municipal-wide spatial issues (in relation to the needs identified) and existing projects proposals (including their locality);
- The municipal investment and spending patterns. For example, are the municipality spending patterns:
    - aligned with the DFA;
    - biased towards urban areas or rural settlements?
- The status of a Comprehensive Rural Development Programme (CRDP) in the municipality; and how do the proposals relate spatially and economically to the adjacent settlements and towns? and,
- A review, where necessary, of the existing municipal policies, plans, resolutions and by-laws, pertaining to spatial planning, supportive of what the municipality wants to achieve in particular with regard to rural development; or do they need to be revised?
- Spatial implications of applicable provincial and national plans, legislation, policies, strategies and directives including:
    - the District SDF
    - Provincial SDF
    - the Growth and Development Strategy
- Settlement spatial patterns and dysfunctionalities including:
    - Evidence of urban sprawl, integration and spatial impacts, effects of apartheid
    - Status of the environment and its functioning as a system of eco-system services
    - Feasibility and progress with IDP proposals

- Identification and analysis of existing nodal points indicating their:
    - Viability and sustainability for promoting economic growth
- Identification and analysis of strategic located vacant land and land with development potential:
    - Note, only important vacant land should be described. Analysing every piece of land in the rural municipality should be avoided
- Major structuring elements, urbanisation trends and their spatial implication in the municipality;
- Strategic roads and transportation networks (district, provincial and municipal roads):
    - Level of functionality and contribution to the system as a whole
    - A need for new roads
    - Roads which need to be upgraded and for what reason.
    - Roads whose upgrading will boost the economic growth of the municipality, etc.
- Location and trends of basic services and infrastructure:
    - Demand for services and infrastructure
    - Alignment with other development programs including highlighting dysfunctionalities
- Housing (human settlements):
    - Location of BNG housing
    - Viability of locations from an economic and access point of view?
    - Existence of supporting infrastructure
- Environmental degradation, conservation and sensitive areas and the impact which specific development may have on the environment:
    - No development areas
    - Where some development could be allowed with strict management
- Agriculture:
    - Agricultural potential
    - Land currently affected by land claims
    - Land requirements for other purposes
- Land reform:
    - Areas suitable for land reform purposes
    - Clarify what type of land is more suited to land reform than others
- Sports:
    - Location of major sporting nodes or areas and status of relevant infrastructure
- Spatial relationships between urban and rural areas:
    - Nature of urban / rural interfaces
    - Nature of relationship between the two
    - Patterns of infrastructure, deficits of poverty, welfare grants, markets thresholds, economic or cultural activities
- The relationship between the spatial issues and the vision of the municipality:
    - Alignments or contradictions including relationships with surrounding municipalities.

- **SPATIAL PERSPECTIVE OF THE IDP OF THE MUNICIPALITY**

Because the SDF should also include a spatial representation of the IDP, understanding and interpreting the IDP spatially is seen as an important phase of the process. Therefore, this section should also include the following:

- Highlight the vision and mission of the IDP and its spatial implications;
- Confirm the interrelationship of the municipality's vision and that of the district from a spatial planning point of view;
- Identify key principles and strategies as contained in the IDP and how they translate spatially;
- Delineate the municipal boundary, settlements, farms and wards; and,
- Map the area where the main pressing needs and the proposed multi-sector project(s) are located.

This information should be summarised to determine the way forward in terms of how the municipality should be shaped from a spatial point of view.

PRODUCT 3 CONCEPTUAL SPATIAL DEVELOPMENT FRAMEWORK

In this phase the conceptual proposals are developed. They should indicate how the spatial form of the municipality should be shaped and links with the outcomes of the two phases mentioned above.

This section should include and map the following:

- Relevant objectives and principles that will guide activities into the desired spatial form;
- The macro-conceptual framework showing the desired spatial form including how the municipality should be portrayed as to how it will function sustainably as a system;
- A micro spatial plan of key focus/growth/nodal points in the municipality;
- Horizontal and vertical alignments of the conceptual SDF with other relevant plans such as PGDS, NSDP, District SDF and District IDP, etc;
- Priority settlements for the implementation of the CRDP;
- Rural towns needing revitalisation;
- Strategic located land for agri-villages and agro-industries;
- Land to be acquired or reserved for land reform activities including land for proactive acquisition (PLAS) by the Department of Rural Development and Land Reform;
- Strategic sites for Thusong Service Centres (formerly also known as Multi Purpose Community Centres (MPCC's));
- Strategic development areas and priority areas for investment;
- Viable land for housing and other economic development and supporting infrastructure;
- Viable and functional nodal points, and identify potential nodes and how they should be developed.
- Nodes without development potential. Name or identify the nodes;
- Functional development corridors and how they should be developed to support the nodes;
- Urban edges and direction for growth for any of the different areas at micro framework level and for the municipality as a whole at macro level;
- Functional and integrating municipal/district roads and public passenger transportation network;
- Proposals for upgrading of or new roads; and,
- Proposed major bulk infrastructure for the whole municipality;
- Where appropriate, include new bulk infrastructure and the relevant services;
- Environmental conservation and sensitive areas;
- Major sporting nodes as well as areas with tourism potential
- High agricultural potential and areas affected by claims which municipality needs the most for developmental purposes; and,
- Areas needing urgent policy intervention.

PRODUCT 4 IMPLEMENTATION STRATEGIES AND PROGRAMMES

This is the most important phase of the SDF in which the ideas as conceptualised in the previous phases should be realised. For implementation to succeed it is necessary to ensure the following from the start of the process:

- There should be a strategic vision for the spatial structure of the municipality as a whole shared by councillors, all the municipal department's officials, the district in which the municipality is located, national the sector departments and the private sector;
- The development of the SDF should be consultative from the beginning until to the end of the process; and,
- There should be strategies and processes in place to involve the relevant decision-makers and stakeholders.

From this work the following deliverables should be included in the SDF:

- Relevant strategies and policies to implement the framework and determine the points of intervention by the municipality; and,
- Amendments to the relevant sector plans to facilitate the implementation of the SDF.

  Note: Except for Land Use Management System (LUMS), most of the implementation of the SDF will occur via the sector implementation plans, e.g. HSP, SIP, PTP, disaster management, LED, EMF. The SDF provides the spatial guidance to all of these plans.

  Sector plans must always be aligned to advance the interests of the SDF and hence the IDP, see Figure 1.5.3.
- Land ownership with updated cadastral information that can be used by the municipality as part of a land audit;
- Guidelines for transportation, infrastructure and other sector plans, policies and plans;
- LUMS guidelines or recommendations for the formulation of a land use management scheme (not included in this brief);

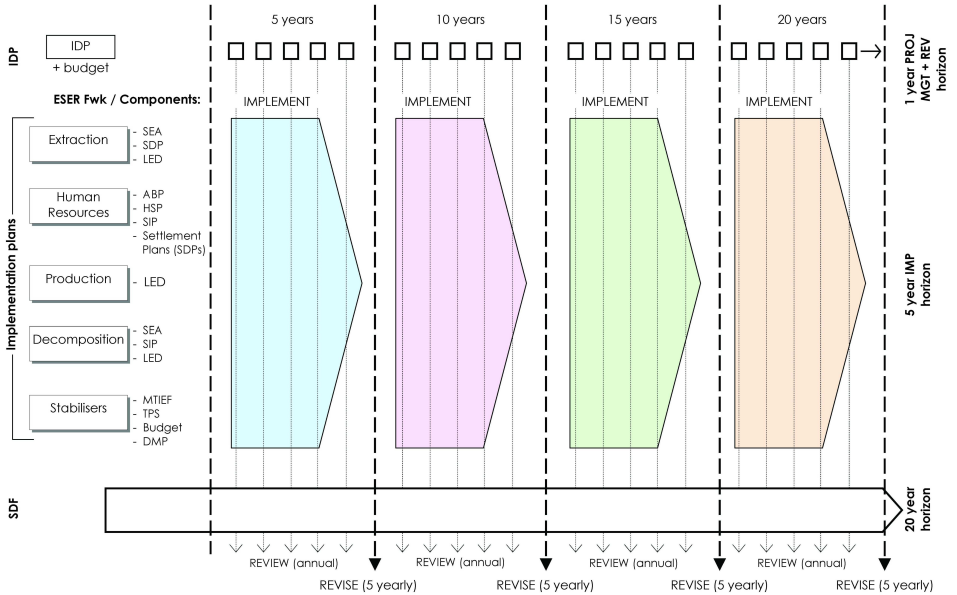


Figure 1.5.3 Proposed Relationship between IDPs, Implementation Plans, including HSPs and SDFs (source: CNdV 2010)

- Tools (densification, infill, redevelopment, greenfields) to facilitate development in strategic areas;
- Recommend strategies to facilitate linkages between rural and urban areas;
- Proposals on how to ensure the sustainability of land with high agricultural production potential; and,
- An Implementation Plan that summarises the following from the sector implementation plans:
    - Capital Expenditure Framework for the municipality's development programmes and budget process;
    - Prioritised list of developmental interventions and spatial location;
    - Cost and budget estimates;
    - Timing and phasing of development;
    - Sources of finance;
    - Implementation agent and their roles and responsibilities;
    - Recommendations for the revision of existing policies or strategies, where necessary;
    - Proposals on how the SDF can be used for the implementation of projects by Sector Departments; and,
    - Institutional capacity recommendations.
    - Review of trends and alignment with adjacent municipalities with those of the Municipality under consideration;

The following general deliverables are to be included:

i. Resumes of meetings;

ii. Powerpoint slide shows and hand-outs of presentations;

iii. Reports to be produced incrementally as project progresses;

- Inception Report
- Status Quo Report
- Conceptual Framework Report
- Final Spatial Development Framework (complete report)

All of these products should be compatible with national, provincial and district GIS databases.

2. GOVERNANCE AND LEGISLATION - IMPLICATIONS

There are a number of Acts, policies and guidelines to be considered in the preparation of the SDF. The following section spells out the more important documents in this regard.

2.1 NATIONAL POLICY

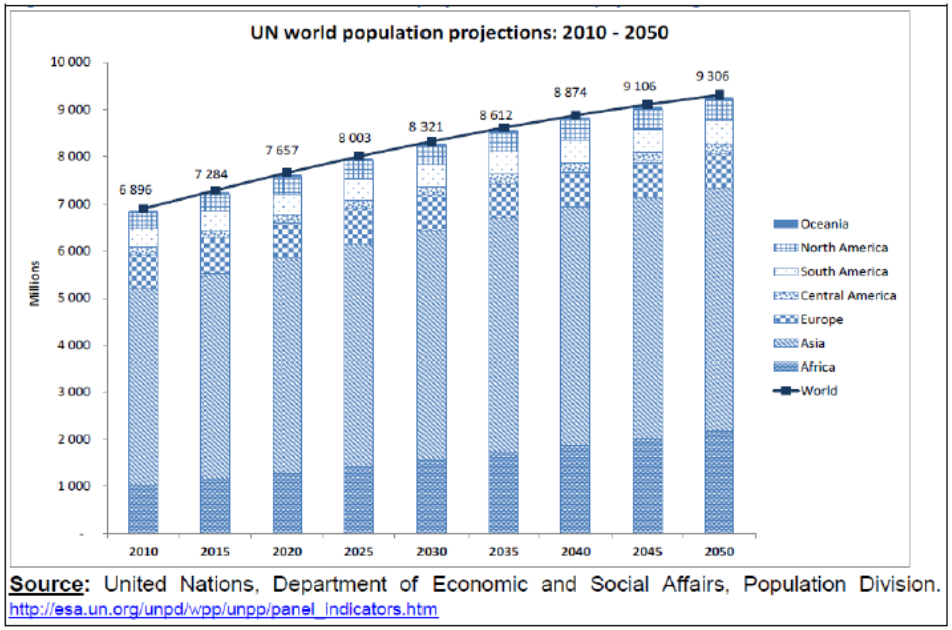
The National Planning Commission (NPC) identified the following key driving forces:

- **Globalisation: The World Becoming More Joined Up**

- **South Africa's political-economic dynamics**
  - Electricity costs are likely to continue to rise;
  - GHG emissions will increase by 25% to 2014;
  - After 2015 there will be oil shortages as global supply drops by 4% per annum;
  - Fuel shortage will be prevalent in the smaller cities in the interior and will present a strain on heavy industry and transport; and
  - After 2025 there will be tougher energy laws and increased fuel and food prices.
  - By 2050 the situation will improve due to more affordable renewable energy; alternative transport; energy and waste recycling; tourism and local food production

- **The Future of Africa and the world's fastest growing market:**

Africa has a compound annual population growth rate of 2,3% (more than double that of Asia). It will have more than 2 billion people by 2044. Graph 2.1.1.1 shows the global population growth projection between 2010 and 2050.



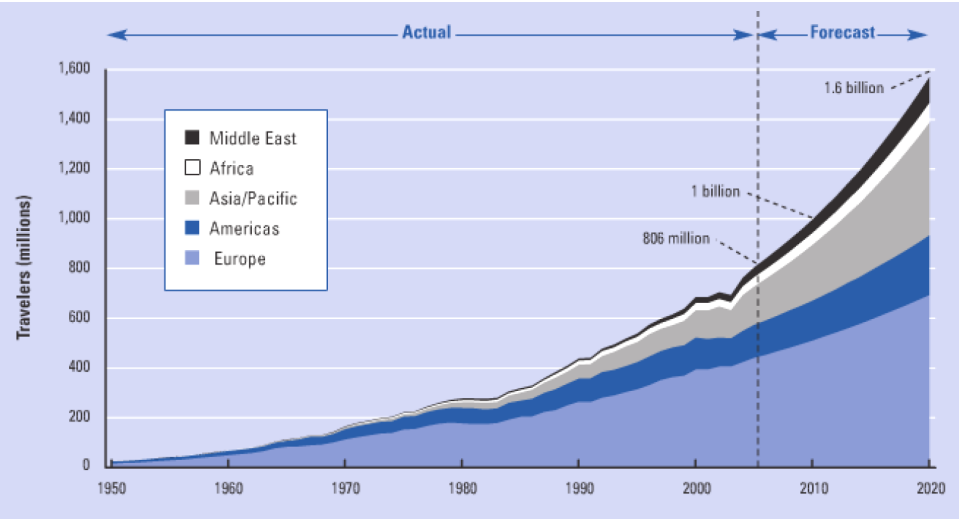
Graph 2.1.1.1 World Population growth projections 2010 to 2050

- **Climate change and the world getting hotter**
  - Of most concern is the next 10-15 years which is called the energy interregnum a period of generally high energy prices and major fluctuations as the world adjusts to an alternative energy scenario.
  - To cope Municipalities would need to plan for:
    - public transport and rail freight;
    - extensive use of solar water heating
    - Stringent energy conservation in business and industry
    - Recycling or energy from waste

- **Amazing new Technologies**
  - Manufacturing will need fewer and more skilled workers
  - Tele-processing will reduce the need for meeting travel
  - 50% of people will work from home by 2050.

- Accelerated connectivity and economic growth of rural and urban parts of Municipalities can be expected.
- As technology continues to replace human labour and prosperity allows more people in more countries to travel, tourism is set to maintain its position as the world's biggest and fastest growing industry.

- **World Tourism Boom**
  - Expected increase of between 15-20% in tourism;
  - Graph 2.1.1.2 shows the projected growth in global and regional international tourist arrivals between 1950 and 2020.



Graph 2.1.1.2 Projected growth in global and regional international tourist arrivals between 1950 and 2020 (source: United Nations, Department of Economic and Social Affairs, Population Division, http://esa.un.org/unpd/wpp/unpp/panel_indicators.htm)

- **Population Growth and migration**
  - Of concern is the impact of HIV/AIDS and the size of the work force (growing or declining).

Implications for Beaufort West Municipality

- The following tourism activities could be focussed on by the Municipality:
  - Mountain biking, quad biking, adventure sports, game drives (Karoo National Park);
  - Bird watching;
  - Fossil exploring (Karoo National Park);
  - Hunting.
- Towns within the municipality should grow their tourism sector to increase economic growth. Section 3.4.1.6 provides details on the existing tourism attractions in the municipality.
- Off-grid and alternative energy sources should be considered to reduce the rate and impact of climate change.
- The implications of climate change need to be considered not only from a disaster management perspective but also from its impact on infrastructure provision; such as buildings; agriculture; and the natural environment.
- Primary settlements are likely to experience an influx of people, e.g. Beaufort West is the largest settlement in the Municipality with the highest concentration of people – therefore it needs to be planned carefully to ensure that it is efficient and attractive and able to accommodate growth.
- Alternative transport typologies, such as freight and passenger rail, needs to become established as a viable alternative to oil-based transport methods, which Beaufort West can strategically position itself to both service and link in to. These transport services should offer both goods movement and tourism needs.
- The likelihood is that with decreased global oil supply, road freight transport will decrease over the medium to long term. Concurrently, rail freight between Cape Town and JHB will increase its share. A similar trend is likely for passenger rail services, which will increase, as road passenger services decrease over the medium to long term.

2.1.1 DFA Principles

The Development Facilitation Act (DFA) provides an important set of overarching guidelines in the principles contained in Chapter 1 of the Act, see Figure 2.1.1.

- Promote efficient and integrated land development:
  - Integrate social, economic, institutional and physical aspects of land development;
  - Integrate land development in rural and urban areas;
  - Promote availability of residential and employment opportunities in close proximity to each other;
  - Optimise the use of existing resources;
  - Promote a diverse combination of land uses;
  - Discourage the phenomenon of urban sprawl and contribute to development of more compact towns and cities;
  - Contribute to the correction of historically distorted spatial patterns of settlement in the Republic; and,
  - Encourage environmentally sustainable land development.

Figure 2.1.1 DFA : Chapter 1 - Land Development Principles

Key themes contained in these principles include:

- Socio-economic integration;
- Rural and urban integration;
- Promoting high levels of access to minimise the use of private motor vehicles; and,
- Limiting urban sprawl so as to increase urban efficiencies relating to business thresholds and minimise the impact of urban growth on agricultural land, areas of scenic beauty and areas of high biodiversity potential.

Implications for Beaufort West Municipality

- The outward growth of settlements should be restricted to prevent the consumption of valuable agricultural and natural environments. This is especially a concern for Merweville and Nelspoort that have vacant land in the inner parts of the settlement.
- Emphasise the creation of integrated settlements especially with regards to poorer communities.
- Provide compact urban environments.

2.1.2 Neighbourhood Development Partnership Grant (NDPG) Requirements

The Neighbourhood Development Partnership Grant (NDPG) aims to "stimulate and accelerate investment in poor and underserved neighbourhoods." (Republic of South Africa: National Treasury, 2007)

This stimulation is driven through technical assistance and capital grant financing for municipal projects that are linked to distinctive private sector element or intended to create such a link.

The NDPG seeks to address the lack of development (primarily economic) in townships, informal areas and low income settlements.

The following focus areas of challenges are identified:

2.1.2.1 Socio-Economic Challenges

The typical challenges on the socio-economic front, relating to townships, are:

- Large concentrations of poor households in both urban and rural locations;
- High levels of unemployment;
- Poorly performing residential property markets;
- Slower household income growth;
- Limited income retention;
- Undiversified and marginal local economies;
- Limited private sector investment; and
- Considerable fiscal burden.

2.1.2.2 Planning and Investment Challenges

The challenges to coordinated public sector planning and investment and its ability to creatively attract private and community investment include:

- Exclusion by design which limits investment leverage;
- Absence of township, and township nodal development plans and limited municipal capacity to develop integrated projects;
- Limited funding for capital works for public facilities and places;
- Low levels of private sector investment;

- Limited municipal capacity to assemble and align multiple funding sources;
- Risk of mismatch between capital investment made and maintenance and operational budgets of municipalities; and
- Focus on inner city metropolitan areas and established business centres.

2.1.2.3 Interventions that the NDPG Supports

NDPG supports the following types of interventions:

- Township area - to turn dormitory townships into fully functional neighourhoods;
- Strategic economic development projects;
- Land use restructuring;
- Stimulating property markets;
- Purchasing power retention;
- Public sector investment as catalyst;
- Leveraging non-governmental investment;
- Ensuring municipal support; and
- Kick-starting township regeneration.

Given the above the target areas are:

- Township areas;
- New, post 1994 (generally), RDP housing and low-income housing estates developed using the same principles prevalent prior to 1994;
- Areas and town centres that are populated mainly by Black people and low-income; and
- Informal settlements.

2.1.2.4 Types of projects and eligibility

The focus is generally public infrastructure projects that will attract private and community investment to help achieve township regeneration. These projects include:

- Nodal and/or precinct projects;
- Linkage projects (internal and/or external); and
- Environmental Improvement projects.

Examples of these projects are:

- Public transport interchanges and linkages;
- Libraries as hubs of information, education and e-government;
- Tourism precincts;
- Heritage, cultural, social, and traditional amenities and/or precincts;
- Sports precincts (providing it can be demonstrated to fulfil a critical community and
- economic role in the township);
- Educational precincts;
- Revitalisation of existing nodes/ centres/ precincts/ high streets/ economic activity centres;
- Multi-Purpose Community Centres (MPCCs), including town halls and youth centres;
- Informal trading facilities;
- Any element that may be required in order to secure private sector investment, providing it can form part of the project, and can be demonstrated to be instrumental in securing that investment into the project area

Implications for Beaufort West Municipality

- The multiplier effect cannot take place in parts of the Municipality, as people need to leave it to buy goods and services that are not offered within the towns located therein.
- The development of malls may be having a negative impact on the 'main street' of the town of Beaufort West. There appears to be an 'oversupply' of malls in Beaufort West, as both malls currently have a 50% vacancy rate

2.1.3 NSDP Spatial Guidelines

The National Spatial Development Perspective (NSDP) is an effort by National Government to find the best way of allocating scarce resources in the various geographic regions in the country. The basic premise of the NSDP is that if there are not enough resources to satisfy all needs wherever they may occur then they should be allocated to where the benefits will be greatest.

The NSDP takes the form of a spatial narrative, a set of maps and a strategic response. Using these tools, the NSDP objectives are to:

- Provide a framework within in which to discuss future development;
- Act as a common reference point for national, provincial and local government for the analysis of development potentials;
- Identify areas of tensions/ priority in achieving positive spatial outcomes with government infrastructure;
- Provide governments response to the above mentioned for a given time period.

"The NSDP is unique in the sense that it proposes a mechanism that will link local, provincial and national planning in one integrated system of planning for development." (source: NSDP)

The NSDP contains five major principles:

- Economic growth is most likely to continue where it has previously occurred and therefore economic potential will be highest in these localities (NSDP, pg 24);
- Economically active people will tend to move to localities where jobs or other livelihoods are available (NSDP, pg 24);
- Efforts to address past social inequalities should focus on people and not in places where it will be difficult to promote sustainable and economic growth (NSDP, pg 24);
- It is important that people are trained and skilled to participate effectively in the economy. Because of the tendency of people to move to areas of greatest opportunity, especially when they have skills, programs in areas with low economic development potential should focus on enhancing people skills rather than the construction of fixed infrastructure. This will avoid the risk of such investment becoming redundant if people move away or there is not sufficient demand to justify high levels of expenditure;
- Future government spending on infrastructure and development should be in localities that will not become poverty traps (NSDP, pg 25);

Figure 2.1.2 illustrates the principles of the NSDP Spatial Guidelines.

Centres which have existing or potential economic growth should be the priority for economic investment, i.e. fixed infrastructure such as housing, underground services and roads. Centres with low economic potential should not be priorities for fixed infrastructure. However, social capital programs such as health, adult basic education and training, entrepreneurship development, and business and technical training should be directed to wherever people may require them. In this way, should the recipients decide to move to other centres, they will, in effect, be able to take this investment with them.

Facilities for the delivery of these programs in centres or areas of low economic potential should use and share existing facilities. In many of these locations there are under-utilised school buildings, clinics, etc. which could be refurbished and used as multi-purpose centres.

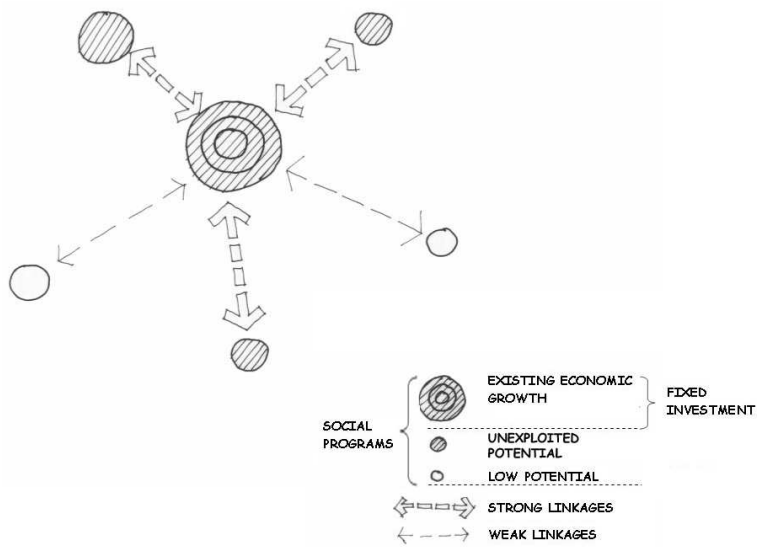


Figure 2.1.2 Principles of the NSDP Spatial Guidelines

The NSDP also recognises that development potential tends to be greatest along linear corridors or axes, see Figure 2.1.3. This is as a result of the relationship between urban nodes of opportunity and the transport and communication routes that connect them. In some instances a river whose banks also have enhanced economic opportunities could also give rise to linear development corridors as zones of investment priority.

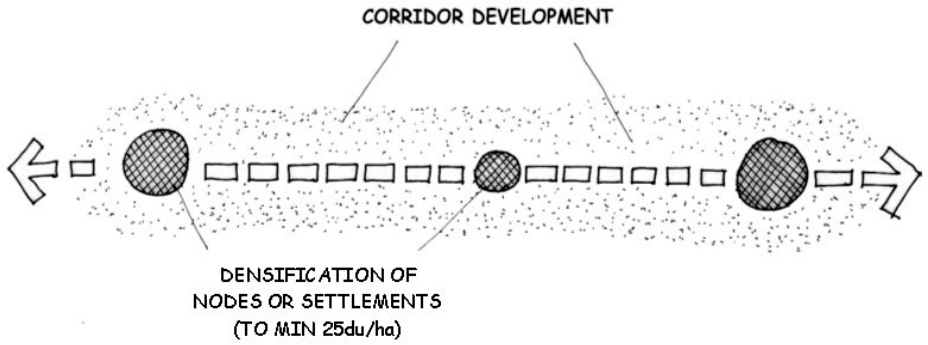


Figure 2.1.3 Development Potential along Linear Corridors

Figure 2.1.4 shows Beaufort West Municipality in the context of a draft SDF for the whole country.

Difficult Choices and Decisions

The principle of allocating investment into areas of greater economic potential is considered controversial in situations where there is a concern that this might lead to socio-economic or spatial marginalisation of areas of less economic potential. While this is a valid concern, it needs to be clearly understood that in spatial terms resources are not equally distributed.

Figure 2.1.5 illustrates the difference between ideal relationships where all space is equal, people are distributed evenly across that space, and resources and opportunities are also equally distributed and reality which is that space is warped by topography, the unequal distribution of mineral resources, and the greater concentration of ecosystem services such as water, soil fertility, areas of biodiversity, in some areas than in others.

As a consequence of the warping of these patterns different parts of the landscape have greater opportunities than others. This, in turn, is reflected by the uneven development of infrastructure providing access to these areas of opportunity. This leads to a similarly biased or uneven pattern of economic potential and population distribution.

It is important that the uneven pattern of these very powerful underlying forces is understood when resources are being allocated so as to minimise wastage and inefficiencies.

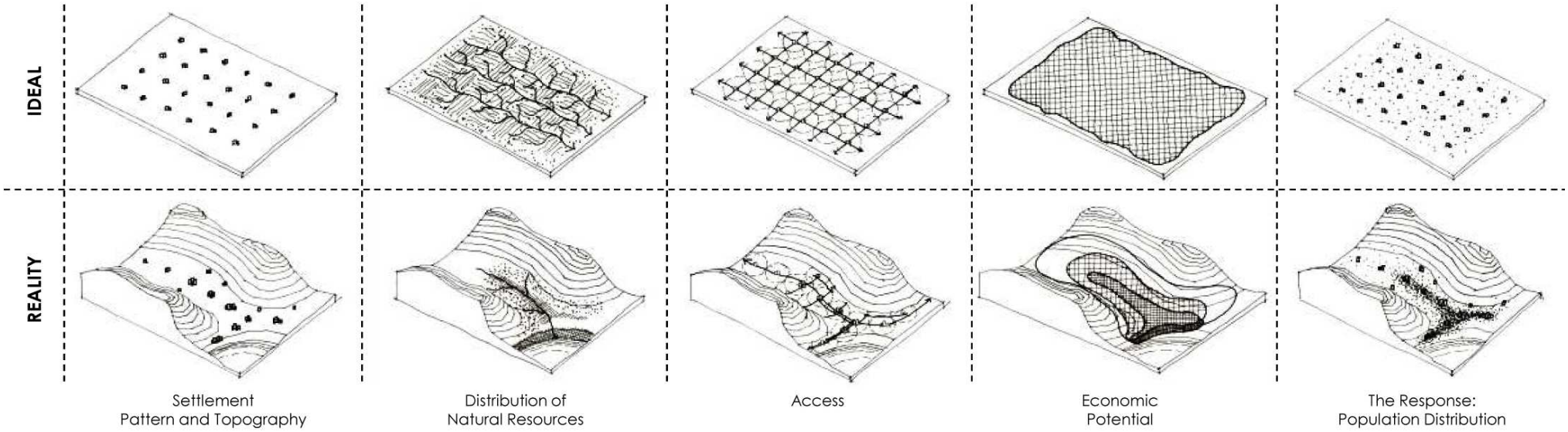


Figure 2.1.5 Differences between Ideal and Actual Patterns of Resources and Opportunities

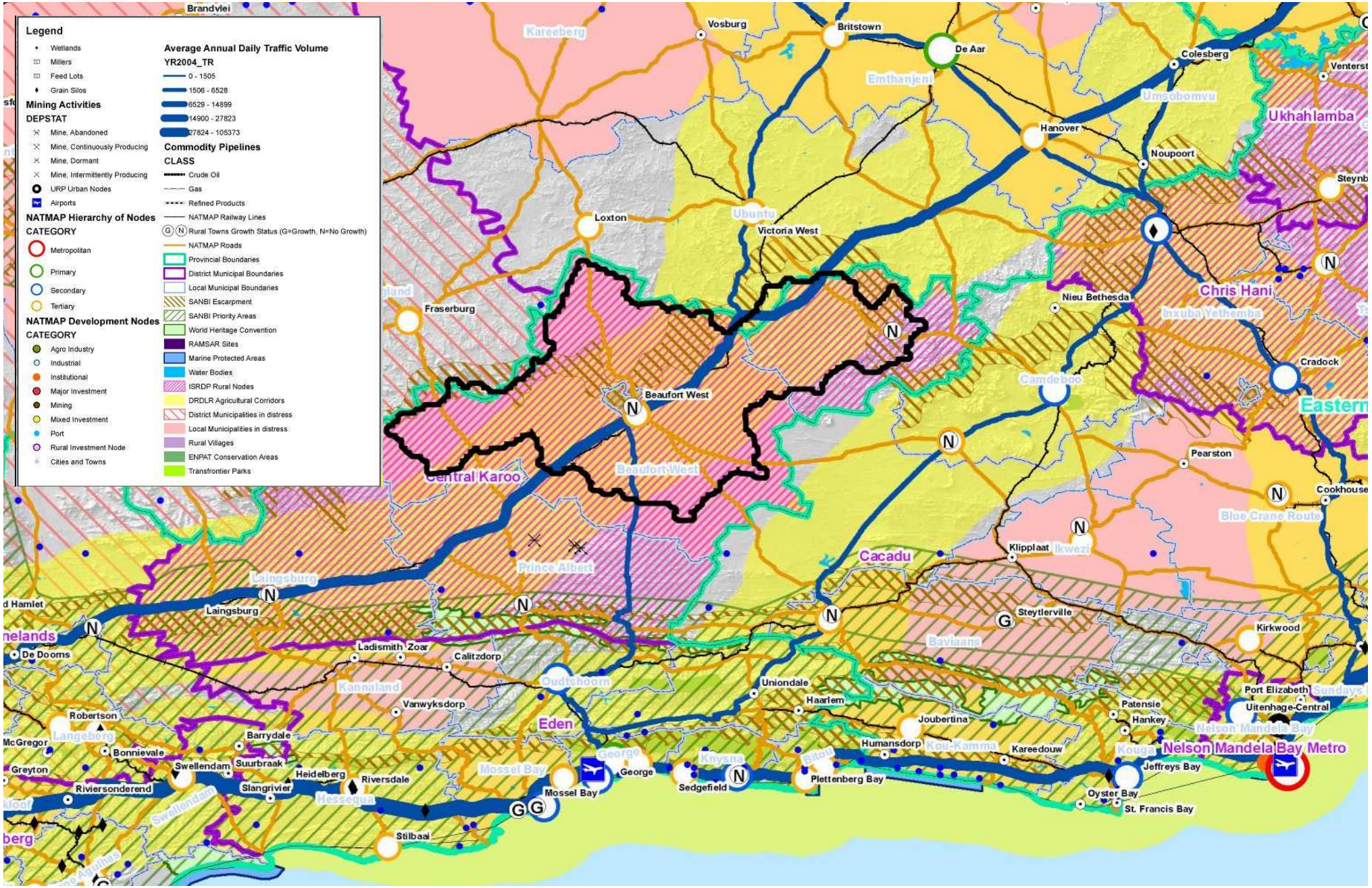


Figure 2.1.4 Proposed Draft National SDF (source: PGWC, 2009)

In summary, the NSDP aims to direct where government invests its money. It targets areas that have high economic growth potential for the infrastructural (major physical) and social investment. Other areas that do not have high economic growth potential may receive only social capital investment i.e. investing in people, in educating, empowering, and uplifting the people.

It is argued that people who are located in areas of low or no economic growth potential will most likely move to areas of higher economic growth potential and in that way the investment in infrastructure in the low economic growth potential areas will be wasted. Therefore, it is considered more beneficial to invest in the people who can then take the skills with them. Alternatively the people may improve their current living conditions and standards in areas of low growth potential which may eventually result in their area improving its economic potential. By following this strategy government would have invested wisely and ensured the best return for public investment.

Implications for Beaufort West Municipality

- Beaufort West is identified as a tertiary node at the national level.
- Beaufort West Municipality's areas of opportunity focus mainly on the N1 corridor that traverses Beaufort West town. The N1 corridor has an estimated Average Annual Daily Traffic (AADT) Volume of between 27000 – 105000 vehicles.
- The areas of Murraysburg, Merweville and Nelspoort represent a challenge in terms of prioritising capital expenditure and these areas should be the focus of social development grants.
- A band across the north western and south eastern parts of the municipality is identified as the location of Integrated Sustainable Rural Development Programme (ISRDP) rural nodes.
- A thin band traversing the municipality from west to east, located north of Beaufort West is identified as SANBI Escarpment.
- Beaufort West is identified as a town with high development potential and a high social need.
- Merweville is identified as a town with low development and a very high social need.
- Murraysburg is identified as a town with very low development potential and a very high social need.
- Beaufort West should be the focus of both infrastructure and social interventions, while the smaller settlements (Murraysburg, Merweville and Nelspoort) should be provided with social interventions and basic services.

2.1.4 Department Of Environmental Affairs And Tourism: South Africa's National Biodiversity Strategy and Action Plan

The Department of Environmental Affairs and Tourism prepared the National Biodiversity Strategy and Action Plan (NBSAP) "to develop a plan of action for the conservation and sustainable use of the country's biological diversity."

During the NBSAP preparation, the National Biodiversity Implementation Plan identified objectives, outcomes and activities required for the NBSAP to achieve its goals.

These objectives and targets include:

- ***Strategic Objective One***: A policy and legislative framework that allows the integration of biodiversity management objectives into the economy.
  Targets:
  - South Africa is to meet its international obligations with regards to biodiversity
  - Biodiversity issues become integrated in the macro-economy, informing policy, planning, budgeting and decision making at all levels

- ***Strategic Objective Two***: Ensure good governance in the biodiversity sector by enhancing institutional effectiveness and efficiency.
  Targets:
  - Biodiversity concerns occupy a significant place on the national agenda
  - Government, stakeholders and role-players work together (effectively and efficiently) to achieve biodiversity management objectives

- ***Strategic Objective Three***: Integrated terrestrial and aquatic management to minimise the impacts of threatening processes on biodiversity, enhances ecosystem services and improve socio-economic security.
  Targets:
  - By focusing on programmes aimed at poverty alleviation, effective control of priority invasive species is achieved

- Meet biodiversity objectives within all biodiversity priority areas
- Produce disaster prevention and management plans incorporating wise ecosystem management principles and practices
- Genetically modified organisms which threaten biodiversity, are not to be released into the environment
- Consider biodiversity in all aspects of resource use

- ***Strategic Objective Four***: Enhance human well-being and development by enhancing the sustainable use of biological resources and equitable sharing of benefits.
  Targets:
  - Economies based on the use of species and genetic resources are optimized and sustainably managed
  - Priority fish stocks recover to sustainable levels
  - No species status declines
  - National products sector contribution to GDP grows by 50%
  - With more effective and equitable resources, poverty is alleviated

- ***Strategic Objective Five***: Maintain key ecological processes across the landscape and seascape.
  Targets:
  - Comprehensive biodiversity monitoring systems inform planning
  - Protected area network in marine environmental hence contribution to representation targets in priority areas
  - No further loss of endangered ecosystems
  - Establish protected environments and manage effectively

Implications for Beaufort Municipality

- There are four biomes in the Municipality (Nama-Karoo, Azonal vegetation, Grassland Biome and Fynbos), see Figure 3.2.6.1. Special policies need to be formulated in this regard in order to protect these vegetation types.
- Terrestrial CBAs are to be effectively managed especially those identified in Figure 3.2.6.4a on Page 97.
- Ensure that Beaufort West's transport hub (rail, road and passenger) is developed to accommodate future growth and to exploit the competitive advantage of Beaufort West along the N1 transport corridor.

2.1.5 Regional Industrial Development Strategy (RIDS)

The Department of Trade and Industries (DTI) Regional Industrial Development Strategy (RIDS) seeks to move South Africa's industrial development policy from the apartheid era's top-down localized approach to a bottom-up approach that treats regions as functional entities and builds on locally available skills and resources and relies on external investment. (The DTI, Draft Regional Industrial Development Strategy, June 2006, pg 16)

Therefore, it also seeks to strengthen world-class regions. These are high performance regions that contain companies or networks of companies which need to constantly upgrade so that they do not fall behind in global competition. (The DTI, ibid)

One strategy here is to concentrate a critical mass of firms in a chosen industry sector together with its upstream suppliers and service providers in a specific geographic location. Necessary support infrastructure includes transport, logistics, communications, education and training. Gauteng's Blue IQ is an example of such a regional economic development strategy.

RIDS identifies four levels that determine systematic competitiveness, see Figure 2.1.6.

National and regional industrial development policy is responsible for the Meta and Macro levels. It is at the Meso and Micro levels where district and local municipal policies can have the greatest effect.

Figure 2.1.7 opposite indicates that Beaufort West Municipality is considered to have static economic growth potential.

Figure 2.1.8 indicates that the central areas of Beaufort West Municipality has significant levels of gross valued added compared to most rural Municipalities that do not have large urban concentrations; e.g. Bloemfontein, mining activity; e.g. Welkom and Free State gold fields; or, large irrigation schemes; e.g. the Vaal Harts scheme In Phokwane Municipality.

Peaks of around R90 – 130 GVA / 50km²/pa are indicated around Beaufort west.

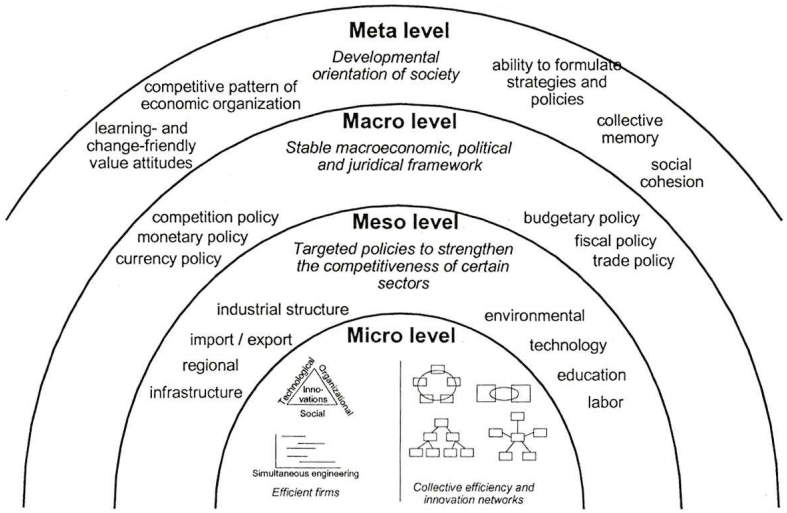


Figure 2.1.6 **Determinants of Systemic Competitiveness**
(source: Draft Regional Industrial Development Strategy, DTI, 2006, pg20)

Implications for Beaufort West Municipality

- Promote Beaufort West as the main driver of the Beaufort West municipal economy.
- Beaufort is the main business and administrative hub of the municipality.
- Forward and backward linkages need to be developed to support economic activities.

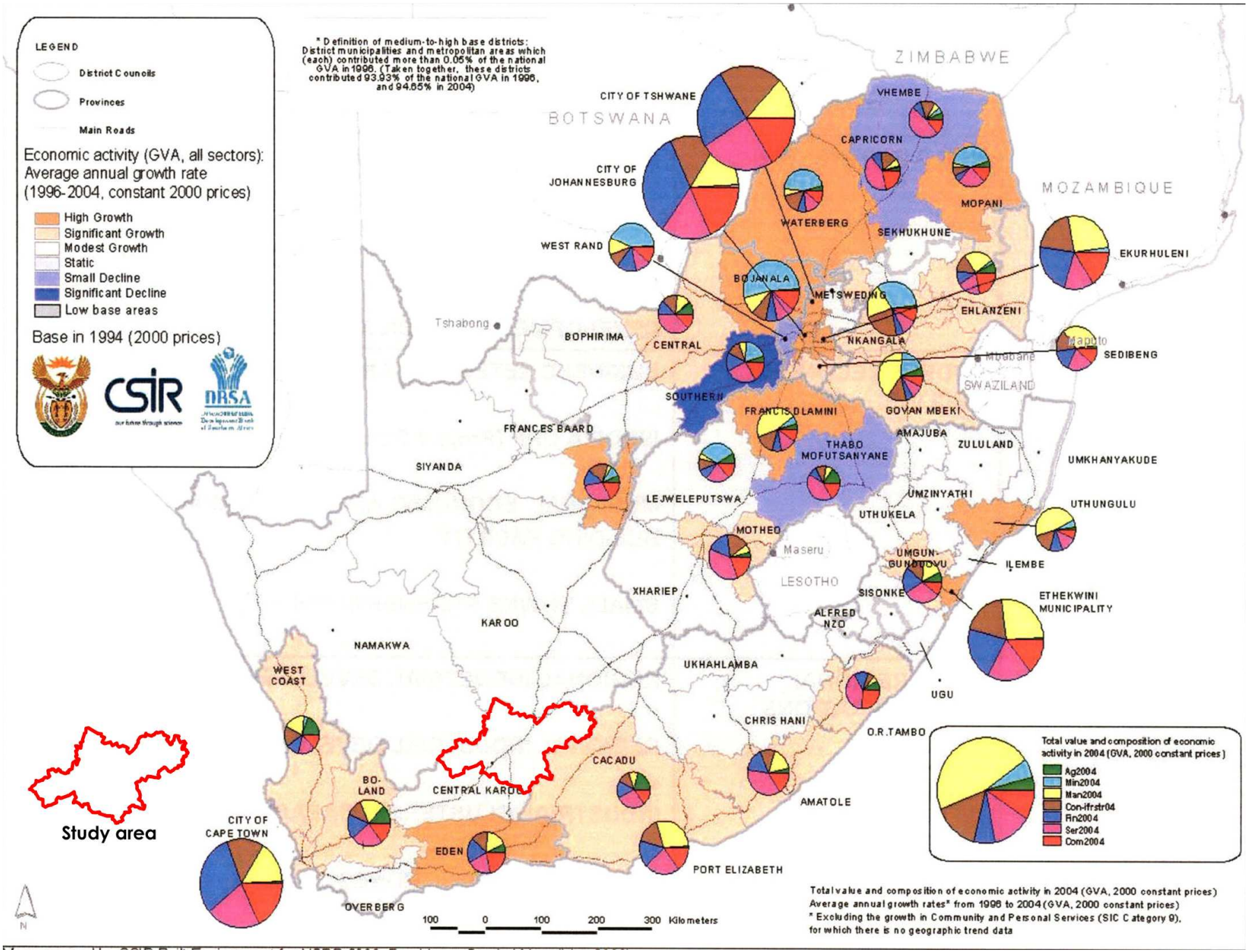


Figure 2.1.7 Medium to High Base Areas (source: CSIR, 2006)

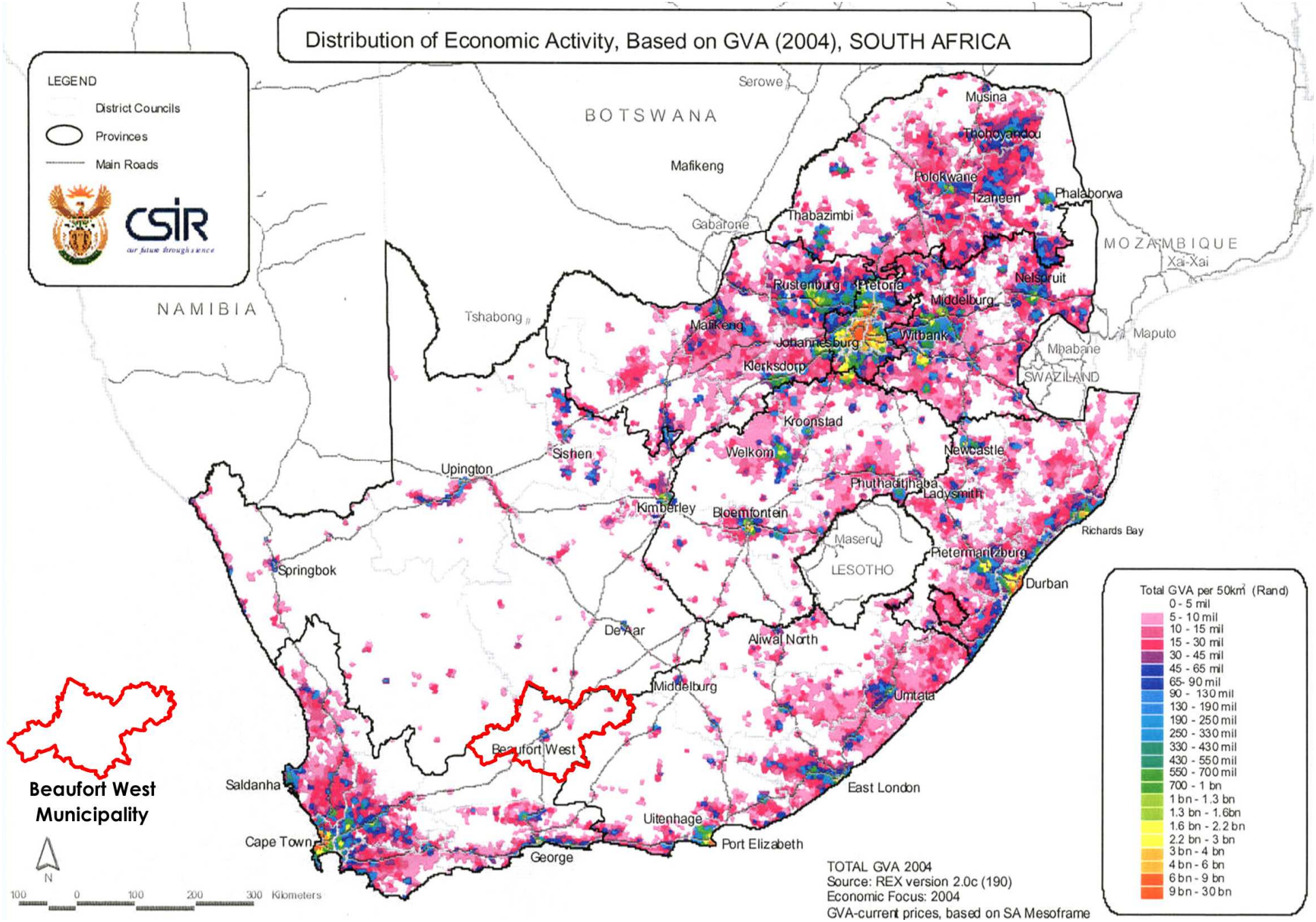


Figure 2.1.8 Distribution of Economic Activity, based on GVA (source: CSIR, 2006)

2.1.6 Breaking New Ground: A Comprehensive Plan for the Development of Sustainable Human Settlements (2004)

Breaking New Ground: A Comprehensive Plan for the Development of Sustainable Human Settlements was prepared in 2004 with the purpose of outlining a plan for the development of sustainable human Settlements.

The policy states the following objectives:

- Accelerating the delivery of housing as a key strategy for poverty alleviation;
- Utilising provision of housing as a major job creation strategy;
- Ensuring property can be accessed by all as an asset for wealth creation and empowerment;
- Leveraging growth in the economy;
- Combating crime, promoting social cohesion and improving quality of life for the poor;
- Supporting the functioning of the entire single residential property market to reduce duality within the sector by breaking the barriers between the first economy residential property boom and the second economy slump; and,
- Utilizing housing as an instrument for the development of sustainable human settlements, in support of spatial restructuring.

The policy notes that its initiative is to move beyond the provision of basic shelter towards achieving the broader vision of sustainable human settlements and more efficient cities, towns and regions.

Spatial restructuring will be enhanced by:

- Progressive Informal Settlement Eradication;
- Promoting Densification and Integration;
- Enhancing Spatial Planning;
- Enhancing the location of new housing projects;
- Supporting Urban Renewal and Inner City Regeneration;
- Developing social and economic infrastructure; and,
- Enhancing the Housing Product.

2.2 PROVINCIAL POLICY

2.2.1 Western Cape Provincial Spatial Development Framework (WC-PSDF) (November 2009)

The Western Cape Provincial Spatial Development Framework was approved by the provincial cabinet in December 2009 and aims to give direction and guidance for spatial development within the Western Cape.

This policy document formulates proposals that deal with the following areas of intervention: social economic development; urban restructuring and environmental sustainability.

The WCPSDF composite map, see Figure 2.2.1.2, indicates broad spatial planning categories derived from a bioregional planning approach. These five broad spatial categories (SPCs) provide policies for development and activities in areas designated as:

- Core areas;
- Buffer areas;
- Intensive agriculture areas;
- Urban development; and,
- The Urban Edge.

It is intended that the broad spatial planning categories will be refined at a detailed level by district and local SDFs when they are prepared.

The PSDF also indicates the prioritisation of the province's urban settlements is indicated with respect to their relative levels of human need and economic potential so as to prioritise fixed investment and social capital program.

A study on the growth potential of towns outside of the City of Cape Town has informed the proposals relating to the prioritisation of locations for fixed capital investment and those which would only receive human needs programs or social investment.

With regard to urban restructuring and integration relating to urban settlements, the WCPSDF proposes that Urban Edges be defined around current urban developed areas to contain the outward growth of areas and to increase the gross densities within those areas to an average of 25du/ha for urban settlements requiring public transport services. Smaller urban settlements attain their efficiencies at average gross densities of 15du/ha. Only resort types of development should be permitted outside of Urban Edges.

The WCPSDF is guided by the following objectives:

- Objective 1: Align the future settlement pattern of the province with the location of environmental resources for economic opportunities
- Objective 2: Deliver human development and basic need programs wherever they may be required
- Objective 3: Strategically invest scarce public sector resources where they will generate the highest socio-economic returns
- Objective 4: Support land reform
- Objective 5: Confirm and strengthen the sense of place of important cultural landscapes, artefacts and buildings
- Objective 6: Heal the apartheid structure of urban settlements
- Objective 7: Conveniently locate urban activities and promote public and non-motorised transport
- Objective 8: Protect biodiversity and agricultural resources
- Objective 9: Minimize the consumption of scarce environmental resources particularly water, fuel, burning materials, mineral resources, electricity and land.

The WC-PSDF aims to:

- "Be the spatial expression of the Provincial Growth and Development Strategy;
- Guide IDP's, SDF's and provincial and municipal SDP's;
- Help prioritise and align investment and infrastructure plans other provincial departments as well as national departments;
- Provide clear signals to the private sector about desired development directions;
- Increase predictability in the development environment;
- Redress the spatial legacy of apartheid."

Figure 2.2.1.1 indicates the spatial concept of the WC-PSDF. The WCPSDF identifies the N1 Freeway and the railway line as major transport corridors with important linkage opportunities. The N1 Freeway and the railway line bisects Beaufort West Municipality and town and is of vital importance to the sustainability of the Municipality.

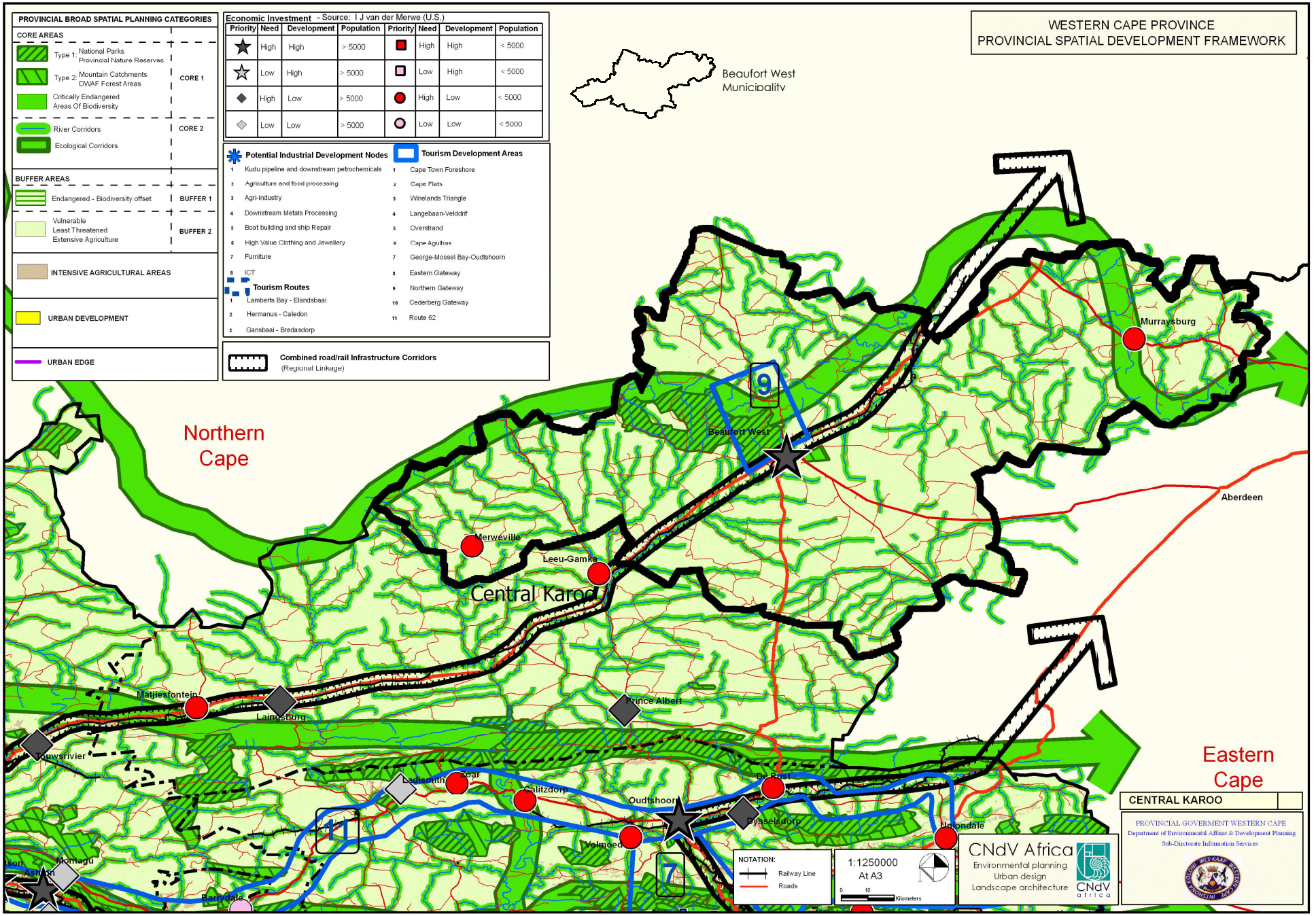


Figure 2.2.1.2 WCPSDF: Central Karoo (source: CNdV, 2006)

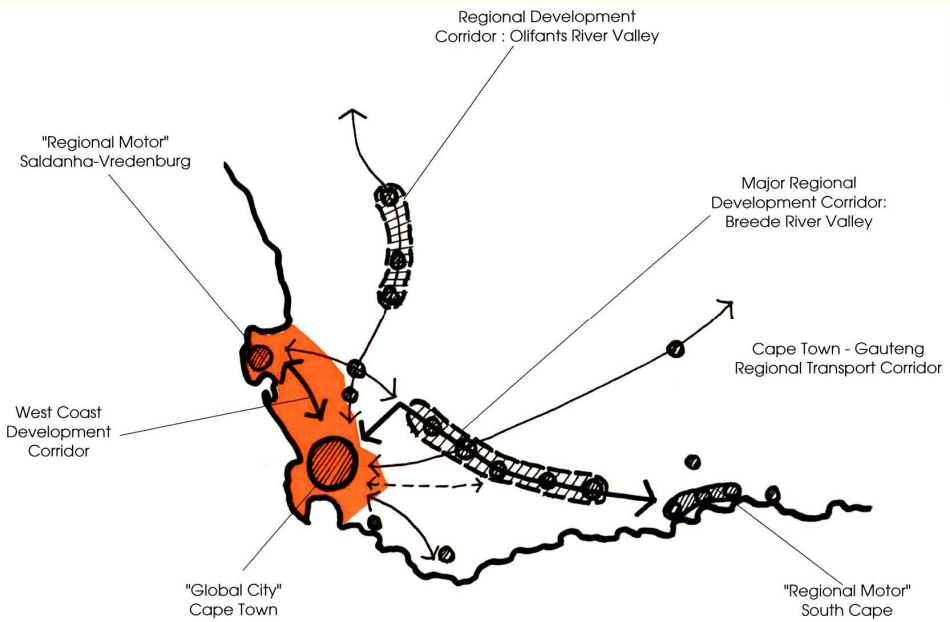


Figure 2.2.1.1 Patterns of Economic Activity (source: PSDF, 2006)

Some of the issues identified in the WC PSDF include:

- Arid area of depopulation;
- High percentages of human development problems although relatively few people;
- Veld management, biodiversity conservation and stock carry capacity problems;
- Need for inclusionary policy in places like Prince Albert; and,
- Desertification from the westward movement of the Karoo.

The strategies of the PSDF for the Central Karoo are:

- Reinforce development potential and urban efficiencies of towns with economic growth potential like Beaufort West, Prince Albert and Laingsburg.
- Support the work of SANBI and the Department of Agriculture's Soil Conservation Committees to achieve synergy with veld management programs that will improve both biodiversity conservation and stock carrying capacity.

Implications for Beaufort West Municipality

- The order of development priority for Beaufort West Municipality is as follows:
  - Beaufort West;
  - Merweville, Murraysburg and Nelspoort.
- A combined road and rail transport corridor is indicated along the railway that passes through Beaufort Municipality and onwards to the Northern Cape.
- An area located north of Beaufort West is identified as a tourism development area.
- Ecological corridors are located along the southern and northern region of the municipality in an east-west direction.
- The Municipality lacks a public transport and affordable accessibility and mobility. There is a significant need for the implementation of the Central Karoo Mobility Strategy to integrate scholar, health and general public transport services into a single service.

2.2.2 Strategic Infrastructure Plan (SIP), Provincial Government: Western Cape Department of Public Works and Transport, May 2006

The Strategic Infrastructure Plan has been formulated in line with the WC-PSDF and Micro-Economic Development Strategy to determine the requirements to improve growth and development for the Western Cape.

Each sector of the SIP describes the current situation, what the plan should aim to achieve by 2015 and methods of how to attain these aims.

The six key aims identified by the SIP are:
- Increasing economic growth;
- Improve well-being;
- Linking with WC-PSDF to attain sustainability;
- Fostering creativity;
- Building communities; and,
- Expanding opportunities.

The eleven sectors below were identified to achieve results in terms of sustainable development, economic viability and social equity in the province.

Sector	Current status / proposals for Beaufort West Municipality
Transport	*No reference to Beaufort West Municipality*
Land and Property	• *Encourage investment into disadvantaged areas;* • *Use the sale of land to fund social objectives*
Information & communication technology	• *Currently planning or implementing Information and Technology (IT) based performance management systems in municipalities*
Energy	• *Support the implementation of renewable energy/sources, energy efficiency building codes and standards, electrify low-income/informal households and develop public transport systems.*
Environment	• *Develop a strategy for conserving biodiversity* • *Develop an integrated approach to manage the ecological and scenic sensitivity of the coastal zone* • *Encourage wise water use, conservation and water re-use projects.* • *The recycling of construction material and manually producing concrete stone could be explored.* • *Implement large waste minimisation and recycling initiatives.* • *Investigate alternative burial sites and alternative methods (mausoleums).*
	• *Implement a strategic plan for establishing and developing the Forensic Pathology Service and transfer mortuaries from SAPS to the Western Cape Department of Health.*
Community services	• *Assess and improve the Expanded Public Works Programme (EPWP)* • *Infrastructure Maintenance and Rehabilitation Fund to be created at the MIG office* • *Provincial fund to be developed to provide basic sanitation.* • *Implement the Breaking New Ground initiative on a provincial level.*
Health	• *Comprehensive Primary Health Care (PHC) maintenance plan be put in place.*
Justice and security	• *Shorten waiting trial periods and providing affordable bail.*
Risk Reduction & Emergency Management	• *Formulate a disaster management plan*
Tourism and Recreation	• *Support the economic benefits of the Tourism Black Economic Empowerment (BEE) Scorecard.* • *Ensure the safety of visitors* • *Improve road signage to tourism sites.* • *Promote tourism through the establishment of icon sites.* • *Develop a safe and efficient public transport system.* • *Ensure the equitable provision of recreational facilities.* • *Develop a cultural tourism strategy throughout the province.* • *Develop museums.*
Education and skills	• *Re-align the provincial education budget and human resources behind strategic priorities.*

Table 2.2.2.1 Strategic Infrastructure Plan (SIP), Provincial Government: Western Cape Department of Public Works and Transport, May 2006 (source: SIP, 2006)

The Western Cape Infrastructure Framework (WCIF) is in the process of being developed. The Strategic Infrastructure Plan (SIP) is being replaced by this.

2.2.3 Provincial Urban Edge Guideline Manual

The following is extracted from the Provincial Urban Edge Guideline Manual dated December 2005. (ref: DEA&DP, 2005)

An Urban Edge is a demarcated line to contain, manage, direct and control the outer limits of development around an urban area. The intention of an Urban Edge is to establish limits beyond which urban development should not occur and to promote urban and environmental efficiency, effectiveness and economy in the interest of all, see Figure 2.10.

The function of an Urban Edge is three-fold, namely:

- to assist with restructuring the urban areas and integrating the currently segregated social groups and urban uses;
- as one of a number of growth management tools to assist with limiting sprawl and the outward growth of urban areas, support densification and infill development, and to ensure the more efficient use of resources and land within the urban area; and
- as a conservation tool to exclude certain parts of the environment from the urban area in order to protect or preserve or to discourage development in the short and medium term while the long term implications are being understood.

Urban development includes all development of land where the primary use of the land is for the erection of structures. Residential estates on farms and golf estates would, for this purpose if located outside the Urban Edge, be defined as urban uses, albeit that the "primary use" is "agriculture" or "private open space" and the "secondary use" is residential.

Agricultural uses, open space uses, conservation areas, transport zonings (excluding public transport interchanges, ranks and stations that consist mainly of buildings) and many similar use zonings refer to the use of the land rather than buildings erected on the land in order for the use to occur. These are non-urban uses.

Smallholdings used for bona fide agricultural purposes would or should typically be excluded from the urban area by delineation of an Urban Edge.

Golf courses, polo fields and other sporting facilities with low ancillary facilities are seen as rural in nature, whereas a golf estate, i.e. a golf course with housing, is an urban use, unless it is a resort. Agricultural estates, i.e. farms with a large residential components for owners or shareholders (as opposed to bona fide labourer's residences) or for unrelated freehold or sectional title ownership are seen as urban if the density exceeds one unit per ten hectare.

The following issues, criteria and factors are regarded as informants when considering Urban Edges for the urban areas:

- Services infrastructure (barrier effect);
- Services infrastructure (capacity and reach);
- Vacant under-utilised land in urban area;
- Availability of developable land in urban area;
- Higher order roads, access routes and transport infrastructure;
- Cadastral boundaries of adjoining land units;
- Growth requirements over predetermined period;
- Land use applications for new development;
- Visual impact;
- Cultural heritage resource areas;
- Ownership of land and existing land use rights;
- Informal settlements;
- Urban agriculture and small scale farming;
- Bio-regional spatial planning categories (core and buffer); and
- Density policy for residential development in rural towns.

Given the criteria, issues and facilities for determining Urban Edges, Urban Edges should be determined to:

- Exclude prominent landforms and environmental character areas from the urban area;
- Exclude valuable soils for agricultural purposes;
- Exclude valuable soils for mining purposes;
- Exclude surface and ground water resources that could be used to produce potable water;
- Exclude surface and ground water features;
- Exclude ecological resources and establish suitable; ecological corridors to link resource areas;
- Exclude all statutorily declared, proclaimed and protected natural areas;
- Exclude high intensity use and high potential agricultural resources and

activity areas;
- Exclude scenic routes and routes of tourism significance;
- Exclude cultural and heritage resource areas and sites;
- Exclude areas that have visual sensitivity, skylines, mountainsides, ridgelines and hilltops; and
- Exclude the WC-PSDF defined core areas.

Implications for Beaufort West Municipality

In the Beaufort West Municipality the following elements play a critical role in delineating the urban edge (DEA&DP, 2005):

- Agricultural land: currently farmed land, high potential agricultural land, agri-processing (wine tasting facilities, restaurants and guesthouses);
- Rivers, wetlands and floodplains: 1:50 year flood plains, 1:100 year floodplains and the 30m buffer zone around river corridors;
- Heritage aspects such as landscapes, viewsheds, rural landscapes and gateways;
- Topography: Major topographical features (hills, ridgelines and focal points), visual or aesthetic quality of scenery, slopes;
- The policy plans for desired direction and pattern of growth.

2.2.4 Guidelines for Resort Developments in the Western Cape

The term **resort** is understood to refer to holiday and recreational resorts which carry, or require, a **resort zoning** in terms of the relevant zoning scheme. (DEA&DP, 2005)

Hotels, guest houses, holiday apartments and bed-and-breakfast establishments in urban areas, such as could ordinarily be permitted under a business, general residential or other non-resort type zoning, are also not seen to be included in these guidelines.

Given the above it is generally used as a departure point that accommodation in resorts should be aimed at temporary occupation**,** to give more people access to the natural resources of the Western Cape. Care should therefore be taken that resort zone applications do not become vehicles for covert, permanently inhabited township establishments, which may often be described as "*exclusively elitist*". (DEA&DP, 2005)

As a general rule, the guidelines state, *freehold ownership associated with resort zoning* (that is, holiday housing, such consent use in a Resort Zone, or Resort Zone II, whether individual erf, sectional title, block sharing or other) *is not desirable in any area outside the Urban Edge*. (DEA&DP, 2005)

The following are the most important criteria for the location of a resort:

- **Planning Policies**

The planning policies include non-spatial policies such as IDP's as well as spatial policies such as WC-PSDF, Urban Edge Guidelines, SDF's, Urban Edges, Bioregional Planning policies, etc.

- **Availability of a Resource**

Resort applications outside urban areas can only be considered for approval if linked to a distinct resource (unless the area in question has already been demarcated for, amongst others, resort development in terms of an officially approved SDF or SDP). This mentioned resource relates to any amenity that results in recreation, that is, an area with special recreational attributes:

- Usually a natural feature that includes physical amenities such as a hot water spring, sandy beach, lake, lagoon or river. The latter may nevertheless, for example, only become relevant as a resource;
- Occasionally, an already existing, established, man-made feature, either within Urban Edges or in rural areas;
- Of such nature that it makes the subject property particularly favourable overall above any other in the area. (This means that it must be advantageously comparably distinguishable from surrounding properties) (ref: DEADP, 2005);
- Of high enough value for many holidaymakers to want to travel thereto from afar and spend more than one day there
- Accessible for the benefit of the general public, and
- Inseparable from the proposed resort to the extent that the permanence of access from the resort to the resource can be guaranteed. (DEA&DP, 2005)

Lastly, it must be a unique resource and the carrying capacity of the resources and surroundings must be taken into consideration. The guideline further proposes densities and floor areas:

- Small: 1-10 units - floor area not being more than 120m² per unit
- Medium: 11-30 units - floor area not being more than 120m² (or up to 175m² in sensitive natural/cultural heritage areas within the Urban Edge) per unit and total floor area of all buildings not being more than 3 600m²
- Large: 30-50 units, or, should there be less than 30 units, but the total floor area of all buildings still exceeds 3 600m² (approval of a resort of more than 50 units, though not impossible, is not considered to be the norm)

In terms of area densities the following are proposed:

		Maximum permitted number of units	
Generalized visual carrying capacity	Landscape type	Short term rental accommodation units	Units that can be individually alienated / separately allotted to individuals
High and medium	Mountains & hills	1 unit per 10ha	1 unit per 20ha
Low	Plains	1 unit per 50ha	1 unit per 100ha

Note: Local Municipalities, as part of their SDFs, or on a project basis funded by applicants, should determine and map landscape types.

Table 2.2.4.1 Area Densities (DEA&DP, 2005)

The maximum floor areas recommended for other buildings that may be found in resorts are as follows:

- Bed and breakfast 350m² (maximum 5 bedrooms per unit) establishments (/guesthouses)
- Farmstalls 100m²
- Businesses 150m² (shops)
  250m² (restaurants)

The following unit sizes are proposed:

	Resort Zone without holiday housing consent[8]	Resort Zone outside urban edges	Resort Zone with holiday housing consent[9] within urban edges (but still within natural, relatively sensitive areas)
Maximum unit size floor space (m²)	**120m²**	**120m²**	**175m²**
Maximum number of storeys	**Single storey only**	**Single storey only**	**Single storey, and possible expansion of habitable space into loft**
Building height	**6,5m**	**6,5m**	**6,5m**
Individual exclusive use area	**n/a**	**250m²**	**300m²**

Table 2.2.4.2 Unit Sizes (DEA&DP, 2005)

- **Environmental Opportunities and Constraints**

When considering the environmental opportunities and constraints the guidelines suggest that a "resort should not be permitted in a particular location if its establishment will lead to damage or destruction of the environment. The concept of resort zone was, from the outset, based on the premise to give access to a greater number of people to areas of natural or cultural amenity value not otherwise available to them, without the potential destruction that may be associated with more formal development." (DEA&DP, 2005)

Implications for the Beaufort West Municipality

- Identify areas which can potentially be developed as resorts, for example the Beaufort West "Waterval".

2.2.5 Guidelines for Golf Courses, Golf Estates, Polo Fields and Polo Estates in the Western Cape

The guidelines have been produced to help decision-makers when dealing with applications for golf courses, golf estates, polo fields, polo estates and other developments of similar scale and/or complexity and as a reference for formulating SDF's and IDP's. (DEA&DP, 2005)
The objectives of the guidelines are:

- To promote responsible development, taking into consideration the imperative for transformation;
- To protect, enhance and maintain the natural resources and unique biodiversity of the Western Cape;
- To support the implementation of sustainable development principles;
- To support and enhance the implementation of bioregional planning in the Province;
- To promote well-functioning, integrated urban settlements, and to prevent urban sprawl;
- To inform decision-making with respect to golf courses, golf estates, polo fields and polo estates in all spheres of government, based on the principle of cooperative governance;
- To provide clarity into the application and assessment process, by clarifying requirements without creating expectations; and
- To improve the effectiveness of public participation. (DEA&DP, 2005)

The purpose of the location principles is to facilitate the appropriate siting or placement of development on the landscape.

- **Urban Areas**

The term "Urban Areas" refers to all land designated for urban development purposes within a demarcated Urban Edge. Developments that include golf and polo could be considered when:

- "In or immediately adjacent to the urban area, where it assists in defining an Urban Edge;
- It forms part of the municipal open space system (to be read in conjunction with the following bullet point); and,
- Where residential components are added to existing amenities in urban areas, as a form of general/overarching densification, on condition that the recreational and open space/green lung function of such amenities is not compromised and provided that:
  - The site does not fall within an area that has been identified by the relevant Municipality concerned for urban densification;
  - If the site is located within the open space system/network, access to public amenities and open spaces is not disrupted;
  - The site has not been designated as being of sufficient cultural significance by heritage authorities to warrant it a "no-go" area for development;
  - The site does not fall within an area that has been identified as being of conservation significance, within the urban context;
  - The site does not negatively affect the role, function, public enjoyment and status of open space systems/networks, designated sites of cultural significance and/or sites identified as being of conservation significance;
  - The development or part thereof will not be located within the 30m development restriction area measured from the bank of a river, stream, wetland or any other natural surface water feature or within the following 1:50 year or 1:100 year flood lines, whichever is the most restrictive;
  - The water demand for the development is in accordance with the municipality's water services plan and that there is no risk of stress being placed on the municipal water supply;
  - Where water resources are required to supply the development, that these are not considered as being stressed by DWAF and other relevant authorities;
  - The area does not fall within the coastal zone as defined by relevant legislation, policies or plans, or within 30m of the edge of a cliff located on the coastline, or within 30m of the high water mark, or on primary dunes or on dune systems that are mobile (the most restrictive criteria will apply);
  - The development will not result in the removal of traditional access used by local communities;
  - The development will not result in existing public and/or traditional access to and along the coastline being disrupted (unless acceptable alternative access has been provided);
  - The development will not result in or contribute to visually obtrusive or ribbon development along the coastline or along cliffs and ridges." (DEA&DP, 2005)

- **Core Areas**

Core areas include officially proclaimed nature reserves, ecological

corridors, critically endangered habitats and river corridors. No golf courses, golf estates, polo fields and polo estates should be located in core areas, as identified through the WCPSDF's broad spatial planning categories.

- **Buffer Areas**

Buffer Areas include remaining natural habitat in endangered and vulnerable ecosystems, including remnants, natural habitat in less threatened ecosystems and extensive agricultural areas.

Development that includes a golf course or polo field component could occur on the border between Buffer and Urban Areas provided it:

- Results in long term Biodiversity offsets and / or heritage goals;
- Result in securing the viability of a significant agricultural unit or contribute significantly to land reform objectives;
- Limits the number of units so that secondary developments (shops, service stations, etc.) are not promoted;
- Does not entail any form of township development outside the Urban Edge;
- Is not a significant heritage area;
- Does not contribute to urban sprawl and or leapfrogging;
- Is not in an area of medium or high value agricultural land;
- Is not in an area designated for emerging farmers;
- Does not use water resources (surface and ground) that are considered stressed by DWAF and other authorities and does not pollute the natural water resource by fertilizer or treated effluent;
- Does not negatively affect the open space network;
- Is not in the coastal zone, within 30m of the edge of a cliff located on the coastline or within 30m of the high water mark, or on the primary dunes or dune systems that are mobile;
- Does not impact on habitats / ecosystems that are defined as Critically Endangered in terms of SANBI's vegetation classification system;
- Does not disrupt ecological corridors;
- Does not fall within 30m of bank of river or 1:100 year flood line;
- Does not negatively affect river, natural spring or the catchments of a dam;
- Does not derive water from rivers determined as being pristine / near pristine or stressed by DWAF and authorities;
- Does not remove traditional access, commonage etc.;
- Does not result in the inappropriate alteration of the landform (e.g. cut and fill); and
- Does not result in / contribute to visually obtrusive / ribbon development.

The following aspects must be considered in formulating development applications:

- Alternatives
- Spatial planning – compliance
- Land use – undertake a land use impact assessment
- Cultural heritage and VIA
- Biodiversity – how all biodiversity plans must be consulted
- Water resources
- Infrastructure and services
- Social impacts
- Employment and skills development
- Economic impact
- Management of planning, design, implementation and operational activities
- Social costs
- Urban Edge principles

- **Intensive agricultural areas**

These are areas with either agricultural potential or that are being cultivated. They are considered an important resource for food security and the agricultural economy.

No golf courses, golf estates, polo fields and polo estates should be allowed in Intensive Agricultural areas.

The SDF needs to indicate Urban Edge proposals, and should make policies to guide potential proposals for development outside the Urban Edge that could be seen as leapfrogging or urban sprawl.

Implications for the Beaufort West Municipality

- The Beaufort West SDF must clearly demarcate areas that can be developed as golf courses and those that may not, based on the above criteria, for example the golf course located in Beaufort West.
- Potential golf courses should ideally use recycled water for irrigation purposes and should be located close to settlements.
- Given the low population and low income levels, golf courses may not be available in the remaining settlements in the Municipality.

2.2.6 Provincial Strategic Objectives (PSO), 2010

The Western Cape Government has identified the following strategic objectives:

PSO1 Creating opportunities for growth and jobs by reducing red tape for businesses who want to invest and to regenerate certain areas.

PSO2 Improving education outcomes by working towards the distribution of text books to schools and to provide management training and in-school support to school management members.

PSO3 Increasing access to safe and efficient transport by improving rural transport and to shift freight cargo from road to railways.

PSO4 Increasing wellness by providing quality care to patients and to concentrate on reducing substance and alcohol abuse.

PSO5 Increasing safety by focussing on making our roads safer and to make safety everyone's responsibility.

PSO6 Developing integrated and sustainable human settlements by allocating and delivering housing fairly.

PSO7 Mainstreaming sustainability and optimising resource efficiency by improving the management of water, pollution and waste.

PSO8 and 9 Promoting social inclusion by focussing on programmes that reduce child poverty and which prevent children from falling into a life of crime and reducing poverty through the introduction of skills training and employment opportunities in the private sector.

PSO10 Integrating service delivery for maximum impact by concentrating on better departmental communication.

PSO11 Creating opportunities for growth and development in rural areas by improving health, education, sanitation and electricity in rural areas.

PSO12 Building the best-run regional government in the world through constant innovation, citizens who have face to face access to the government, strong leadership, efficient and consistently high service delivery standards, a commitment to openness and accountability and by having highly capable and skilled people who deliver services.

2.2.7 Rural Land Use Planning and Management Guidelines, May 2009

These guidelines were prepared with the purpose of complementing the Guidelines for Rural Resorts, Golf Estates, Polo Fields and Polo Estates (DEA&DP, 2009).

The objectives of the guidelines are:

- To promote sustainable development in appropriate rural locations while ensuring that the poor share in the growth of the rural economy;
- To safeguard the functionality of life supporting ecosystem services;
- To maintain the integrity, authenticity and accessibility of farming, ecological, cultural and scenic rural landscapes and natural resources;
- To assist municipalities with the management of rural areas;
- To provide clarity on the type of development that is appropriate beyond the urban edge, as well as the scale and form of such development (DEA&DP, 2009)

The purpose of this document is to serve as a logical planning and management guideline for all types of rural land uses.

The Rural Settlement patterns in the Western Cape include:

- The farm homestead and associated outbuildings, historically enclosing a farmyard or werf;
- Workers accommodation (on-farm) i.e. labourers cottages located away from the werf;
- Villages and off-farm hamlets located along main movement routes;
- Rural residential sprawl usually located along the outskirts of urban centres;
- The change of working farms to weekend leisure destinations.

Guidelines on Managing Rural Land Use Change

- Decisions in terms of Rural Land Use applications are to be based on the following sustainable land use principles:
  - social inclusion;
  - effective protection and enhancement of the environment;
  - prudent use of natural resources;
  - the maintenance of high and stable levels of economic growth;
- Good quality and carefully sited development should be encouraged in existing settlements;
- Accessibility should be a key consideration in development decisions;
- New development in the countryside should be strictly controlled in terms of scale, height, colour, roof profile etc.;
- Prioritise the re-use of previously developed sites in preference to Greenfield sites;
- All development should be well developed and inclusive, in keeping and in scale with its surroundings, sensitive to the character of the landscape.

Rural Land Use Management Guidelines: Holiday Accommodation

- Avoid fragmentation of the cadastral unit, instead use leasehold for 3rd party ownership for holiday accommodation;
- Land for holiday accommodation should be non-alienable (i.e. rental, time-share, share block, fractional ownership);
- Resort development outside Urban Edge to not include individually alienable units;
- Precinct plans are to be provided and address the impact on agricultural activities and/or conservation and the impact of agricultural activities on the proposal;
- Development proposals to be considered on marginal farming land and land of low environmental sensitivity and significance;
- Municipalities should solicit comments of surrounding properties and consider impact on rural landscape;
- Municipalities to ensure approved precinct development plans are adhered to and enforce the building regulations;
- EIA regulations and flood line restrictions are to be enforced.

Rural Land Use Management Guidelines: "On-Farm" Settlement of Farm Workers

- Farms are to be subdivided in order to balance the interests of the farm workers and its owners;
- Subdivided portions are required to be affordable and sustainable to their beneficiaries;
- All dwellings (proposed, new and existing) are to comply with building and engineering standards;
- If right of way servitudes are required, they are to be entrenched in the title deed of the parent farm.

Rural Land Use Management Guidelines: Tourist and Recreational Facilities

- Development applications are to include:
  - tenure arrangements, with leasehold used for 3rd party operators or

owners of facilities;
- buildings, landscaping and infrastructure provision;
- access and parking arrangements;
- nature and position of all proposed signage;
- Business Plan specifying BEE arrangements;
- Environmental, agricultural and visual impact assessments;
- Environmental Management Plan;
- Disaster Management Plan detailing search and rescues procedures.

- Consent use applications to be advertised for comment by interested and affected parties and adjoining property owner's;
- Applicable EIA regulations to be enforced by the local authorities and compliance with the approved EMP;
- Local authority to apply building regulations and ensure conditions of approval is adhered to.

Implications for the Beaufort West Municipality

- Prepare policies to manage appropriate rural land use change in regard to holiday accommodation, on-farm settlements, residential and tourist and recreational facilities, where needed.

2.2.8 Settlement Restructuring: An Explanatory Manual (March, 2009)

The Settlement Restructuring Manual was approved as a Structure Plan in terms of Section 4(6) of the Land Use Planning Ordinance (Ordinance 15 of 1985) on the 24th of June 2009. The purpose of this document is to guide government, labour, business and civil society order to create human settlements that are dignified and sustainable.

The document consists of the following:
- Land use management tools for:
  1) auditing vacant and underutilised land;
  2) Strategies for densification; and
  3) Toolkits for applying tools and strategies;
- Strategies for urban integration;
- Toolkits for applying tools and strategies.

Vacant and underutilised land audit:

- The purpose of a vacant and underutilised land audit it to provide municipalities with a record of all the usable land parcels located within the urban edge. By having access to this information, a municipality is able to understand its future land use and urban restructuring opportunities;
- Land is considered vacant and underutilised if:
  - it has no identifiable land use;
  - there are no building or improvements;
  - its previous productive usage has ceased;
  - it would benefit from improvement and development.
- The following exclusion criteria is applicable to land audits:
  - high potential agricultural land and productive agricultural land;
  - land with a high biodiversity and conservation value;
  - road reserves;
  - protected nature areas;
  - 30m river corridors and 1:50 year floodplains;
  - land high in scenic value or that is visually sensitive;
  - buffer areas from hazardous services.

Densification Strategy:

- The purpose of the densification strategy is contain urban sprawl and fragmentation in order to achieve efficient, integrated and sustainable human settlements;

- Densification should be encouraged in the following manner:
  - within areas with high economic potential (provincial, district and local scale);
  - along mobility routes in order to support public transport routes;
  - along the periphery of open spaces in order to increase their surveillance;
  - within areas that have been identified as public-sector investment areas;
  - in selected areas of high private sector investment;

- The following should be mapped per settlement for which an urban edge is to be demarcated:
  - agricultural land and agricultural processing around urban areas;
  - smallholdings, rural land and small farms;
  - urban and regional open spaces and natural areas;
  - rivers and floodplains;
  - coastal zones (i.e. sea level rise);
  - landscapes that are considered to be high in value.

Strategies for Urban Integration:

- Integration is the mix of various land uses and/or income groups in specific areas which contributes to creating a whole functioning urban area;
- Physical integration includes well designed dense development which are linked to pedestrian friendly streets and a horizontal and vertical mix of uses (which includes residential, non-polluting industrial services, commercial and institutional uses);
- Integration is encouraged in 1) spaces where social integration can occur, 2) along public transport routes in order to improve access to opportunities, services and facilities and 3) where concentrations of major urban functions occur.
- Beaufort West's urban settlements, Beaufort West, Murraysburg, Nelspoort and Merweville should be:
  - analysed to see whether they are performing satisfactorily in terms of efficiency, equity and quality of place;
  - the relevant guidelines from these reports should be applied depending on the results of this analysis.

Implications for the Beaufort West Municipality

- Ensure that proposals are prepared in accordance with the guidelines and support the aims of the restructuring guidelines.
- Establish appropriate densification targets and broadly identify areas suitable for densification.
- Prepare proposals for strategically located suitable land.
- Utilize land and its development to help achieve national policy directives, e.g. integration and restructuring.

2.2.9 The Provincial Land Transport Framework, Provincial Government: Western Cape Department of Transport and Public Works, April 2011

The Provincial Land Transport Framework (PLTF) sets out the longer term vision (20-30 years) for transport for the Western Cape Province in line with the directives of the WC- PSDF. The long term vision for transport is intended to support:

- A fully Integrated Rapid Public Transport Network (IRPTN) in higher order urban regions through access to opportunity, equity, sustainability, safety and multi-modal interchange;
- A fully integrated rural Integrated Rural Transport Network (IRTN);
- A safe public transport system;
- A well maintained road network;
- A sustainable, efficient high speed rail long distance public and freight transport network;
- An efficient international airport that links the rest of the world to the choice gateway of the African Continent;
- International – standard posts and logistics system;
- A transport system that is resilient to peak oil; and
- A transport system that is fully integrated with land us.

The PLTF goals and objectives are:

1. An efficient, accessible and integrated multi-modal public transport system managed by capacitated and equipped municipal authorities
   - Develop a framework for the development of safe and accessible IPTNs in district by 2014
   - Establish land-use incentives and NMT improvements around 10 underdeveloped public transport nodes of provincial significance by 2014 (Provincial Key Projects).
   - Fully implement a universally accessible and multimodal IRT Phase 1a by 2014.
   - Increase user satisfaction of public transport facilities by 25% by 2014.
   - Organise courses and seminars dealing with infrastructure management, transport planning and land-use planning for district municipalities by 2014.
   - Bring minibus taxi recapitalization rate on national level by 2016.
   - Influencing parties in order to achieve a shift in contestable freight haulage from road to rail freight by 10% by 2014.

2. NMT as a pivotal part of all forms of transport planning in urban and rural areas
   - Dedicated NMT Expanded Public Works Program projects by 2014.
   - Every provincial road project in the province must include a NMT component.
   - NMT Plans must be developed and implemented for each local municipality or the Province, as a part of the mobility strategy and IPTN roll-out by 2014.
   - Dedicated cycle lanes in the Western Cape must be doubled by 2014.

3. A well maintained and preserved transport system
   - Reduce the road transport infrastructure backlog by 16% by 2014.
   - Bring commuter rail network from D+ to a C maintenance level on A corridors by 2016
   - Introduce economic decisions support tools to facilitate decision making with regard to road investment by 2014

4. A sustainable transport system
   - Shift in contestable freight haulage from road to rail by 10% by 2014.

5. A safe transport system
   - Reduction of the number of fatalities on the Western Cape roads by 50% by 2014.
   - The provincial and the Cape metro incident management plan will be expanded to include lower roads by 2014.
   - Implementation of an integrated transport safety management system by 2014.
   - Note: The Beaufort West – Laingsburg N1 section experiences high numbers of traffic accidents and fatalities.

6. A transport system that supports the province as a leading tourist destination
   - Introduce economic decision support tools to facilitate decision making with regard to road investment by 2014.

The Beaufort West municipal settlements are strategically located at the broad macro-level to benefit from a major national transport corridor, i.e. the N1.

However, care must be taken at the micro level, with regards to the detailed links between the settlements and these transport facilities that they do not cause unsafe barriers or by-pass situations whereby potential economic opportunities become inaccessible.

Implications for the Beaufort West Municipality

- Ensure that there is sufficient capacity (human resources) within the municipality to manage transport requirements within the municipal area.
- Promote Non-Motorised Transport (NMT) in and between settlements.
- Ensure commuter safety on the various modes of transport within the municipality.
- Invest in transport infrastructure as a means of promoting economic growth and tourism.
- The road and railway routes especially between Cape Town and Gauteng provide significant economic opportunities for the settlements along it, i.e. Beaufort West. Increasing benefits to Beaufort West from this traffic should be explored.
- Shifting the haulage from road to rail could improve (reduce) the through traffic flows, e.g. reduce congestion through Beaufort West, but may have a negative impact on the economy of the town.
- Beaufort West Municipality should support the implementation of the Central Karoo Mobility Strategy.
- Beaufort West should position itself as a key station in the proposed high speed rail link between Cape Town and JHB, as per the PRASA Strategic Plan (2012).

2.3 DISTRICT POLICY

2.3.1 Central Karoo District Municipality Spatial Development Framework (2008)

The Central Karoo District SDF states that the future spatial vision for the region is based on the mission and objectives provided for in the District Integrated Development Plan. Figure 2.3.1.1 depicts the SDF the district.

The spatial framework planning for the district is structured as follows:

- Rural areas including:
  - Areas used for agricultural and tourism purposes;
  - Natural areas, some statutory protected and others not; and,
  - Areas used for infrastructure purposes, i.e. roads, electrical infrastructure, dams, etc. outside urbanised areas or settlements
- The main town of Beaufort West serving as the "administrative capital" of the Central Karoo;
- Merweville Rural Settlement;
- Nelspoort Institutional Settlement;
- Laingsburg Main Local Town;
- Maitjiesfontein Rural Settlement;
- Prince Albert Main Local Town;
- Leeu Gamka Local Town;
- Prince Albert Rural Settlement;
- Klaarstroom Rural Settlement; and,
- Murraysburg Local Town.

The towns of Beaufort West, Murraysburg, Merweville and Nelspoort are located in the Beaufort West Local Municipality.

Implications for Beaufort West Municipality:

- The DMA (Murraysburg) area has subsequently been incorporated as part of the Beaufort Municipal region. Murraysburg now requires planning attention in the updated SDF;
- Beaufort West is identified as the Local Principal Town and the administrative hub of the Central Karoo District. Beaufort West should be promoted as the main driver of the Beaufort West Municipal economy.
- Merweville is identified as a rural settlement. Densification is to be encouraged. The outward expansion of the town is not promoted.
- Nelspoort is identified as an institutional settlement. Densification and infill development is to be encouraged. The outward expansion of the town is not promoted
- The SDF proposes an alternative alignment of the N1 as it traverses Beaufort West. No detail of this proposed alternative is noted in the SDF.
- Wind energy projects are promoted at Beaufort West. No proposals or guidelines are provided for in the SDF. It is proposed that any wind and solar energy projects adhere to the guidelines noted in Section 3.2.2.4.
- Economy activity at Nelspoort is to be promoted. No specific proposals are noted in the SDF.
- A gateway development project is proposed at Beaufort West. No specific detail with respect to this proposal is noted in the SDF.
- Hydroponics projects (a method of growing plants using mineral nutrients solutions in water, without soil) are proposed south of Beaufort West. No specific detail is noted in the SDF. Note: These projects have subsequently been abandoned.
- Uranium mining is proposed south of Beaufort West. Mining activity should not lead to a loss of agricultural land. This activity will need to be properly managed and rehabilitated when operations have ceased.
- The route between Merweville and Sutherland is proposed as a tourism route. No specific detail is noted in the SDF.

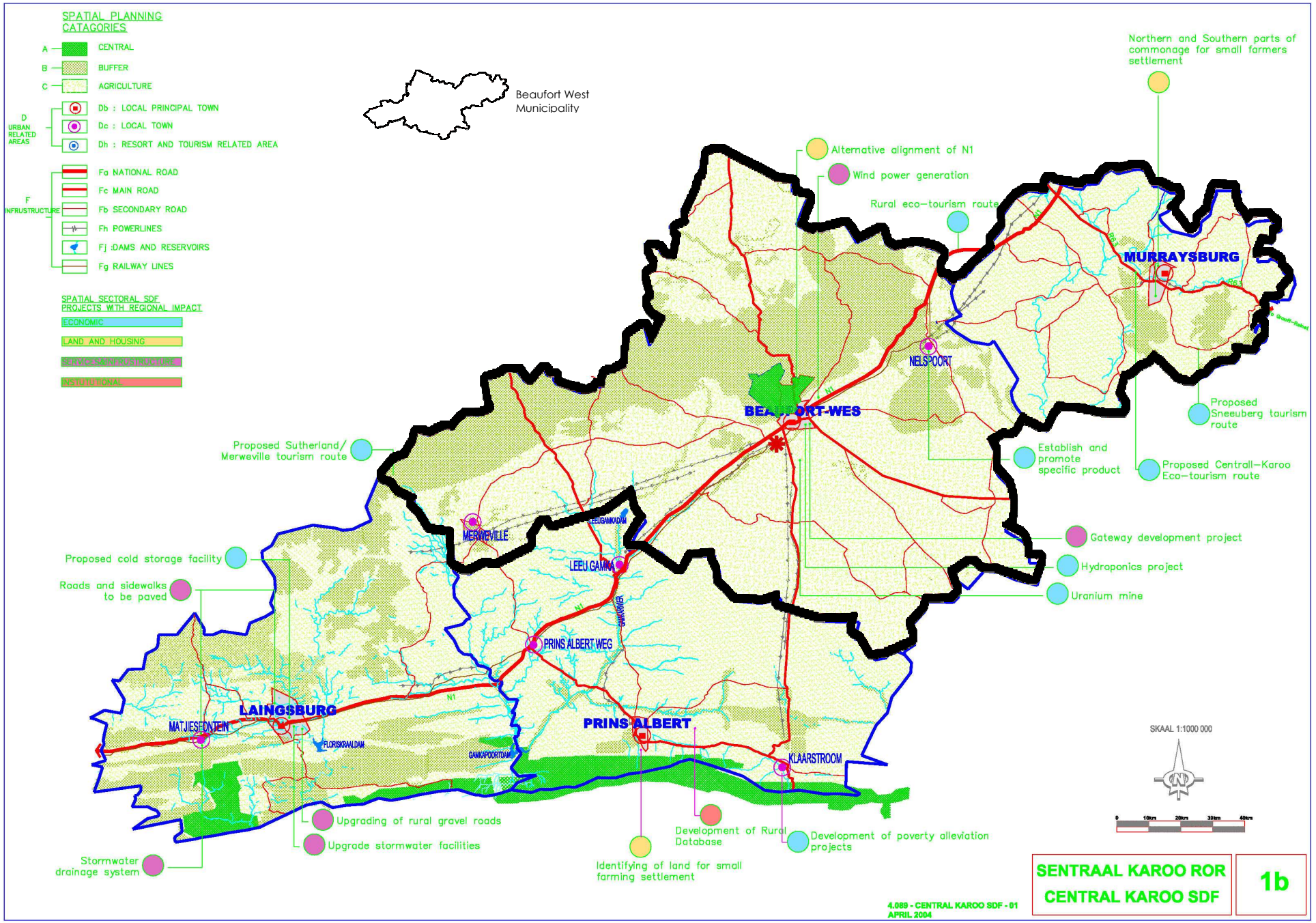


Figure 2.3.1.1 Central Karoo District SDF (Source: BKS, 2008)

2.3.2 Mobility Strategy for the Central Karoo District Municipality 2013

The Mobility Strategy for the Central Karoo District Municipality was prepared by ITS Engineers in 2012/2013.

The objective of this study is to prepare a Mobility Strategy for the Central Karoo District Municipality (CKDM), align it as an Integrated Public Transport Network (IPTN), develop a cost model and provide greater clarity on the responsibility and legal implications of providing municipal public transport services within the context of the National Land Transport Act (NLTA).

According to the National Household Travel Survey (NHTS), only 4.5% of the people in the CKDM use public transport as their main mode of travelling. More people rely on private transport (32.2%) and walking (51.4%) (ITS, 2013)

This trend is underpinned by the low level of income of the CKDM population. The higher income communities can afford to own multiple private vehicles while the poorer communities are too poor to even afford public transport. The NHTS results also show that learners in the CKDM are highly dependent on NMT as a preferred mode of transport to access educational facilities. Approximately 83% of learners use NMT as a means to go to school (ITS, 2013).

The provision of public transport services is also limited:

- De Klerk Bus Service is the only local bus operator in Beaufort West LM. The service consists of 1 bus which operates a regular service for passengers commuting between Beaufort West's residential areas and the CBD. The bus service is a commercial service and the operator does not receive a subsidy.
- The CPTR11 reports that 4 national operators (TransLux (which includes City to City)), Intercape, Greyhound and SA Road Link) have scheduled services that stop at selected towns in the Central Karoo DM.
- The long distance rail service is provided by Shosholoza Meyl which currently operates on daily basis as well as on weekends. Shosholoza Meyl passes through CKDM en-route to Johannesburg. Approximately 26 096 rail passenger trips originated from the CKDM during this period of which 73% of the rail passenger movement is towards Cape Town and only 27% of rail passengers travelling in the direction of Johannesburg. Beaufort West Station had the highest number of passengers when compared to other stations in the CKDM.
- Taxi operators in Beaufort West have formed the Beaufort West Taxi Association (BWTA). The taxi fleet in Beaufort West consists mainly of sedan taxis. According to the registered routes at the office of the PRE, 19 operating licenses exist for routes which have their origins within the CKDM. These routes are Beaufort West – Beaufort West (radial), Murraysberg – Hutchinson (route), Murraysberg – Graaff- Reinet (route) and Beaufort West – George (route).

Based on the various desire lines for travel identified as part of this process public transport services (routes, stops and a timetable) are proposed that responds to the travel needs of learners to and from hostels, general transport service for people to do shopping, commute, access civic amenities, etc., services that integrates with the rail timetable and on-demand services. The services are illustrated in Figure 2.3.2.1.

Based on the proposed operational design depots are proposed in Klaarstroom, Prince Albert, Nelspoort and Laingsburg with a main office in Beaufort West. Based on the operational needs various infrastructure (NMT facilities and bus stops) were also proposed. The cost estimates for infrastructure amounts to R5.5 million.

Implications for Beaufort West Municipality:

- The following public transport services are proposed for Beaufort West Municipality:
  - Laingsburg to Beaufort west;
  - Beaufort West to Oudsthoorn;
  - Nelspoort to Beaufort West;
  - Murraysburg to Beaufort West;
  - Rietbron to Beaufort West;
  - Beaufort West to Hutchinson via Loxton (round trip);
  - Beaufort West to Fraserberg via Leeu-Gamka;
  - Murraysberg to Hutchinson
- The proposed public transport services is one of the most strategic projects that would improve mobility, access to opportunities and facilities and relieve poverty in the region. Implementation of it is therefore critical.

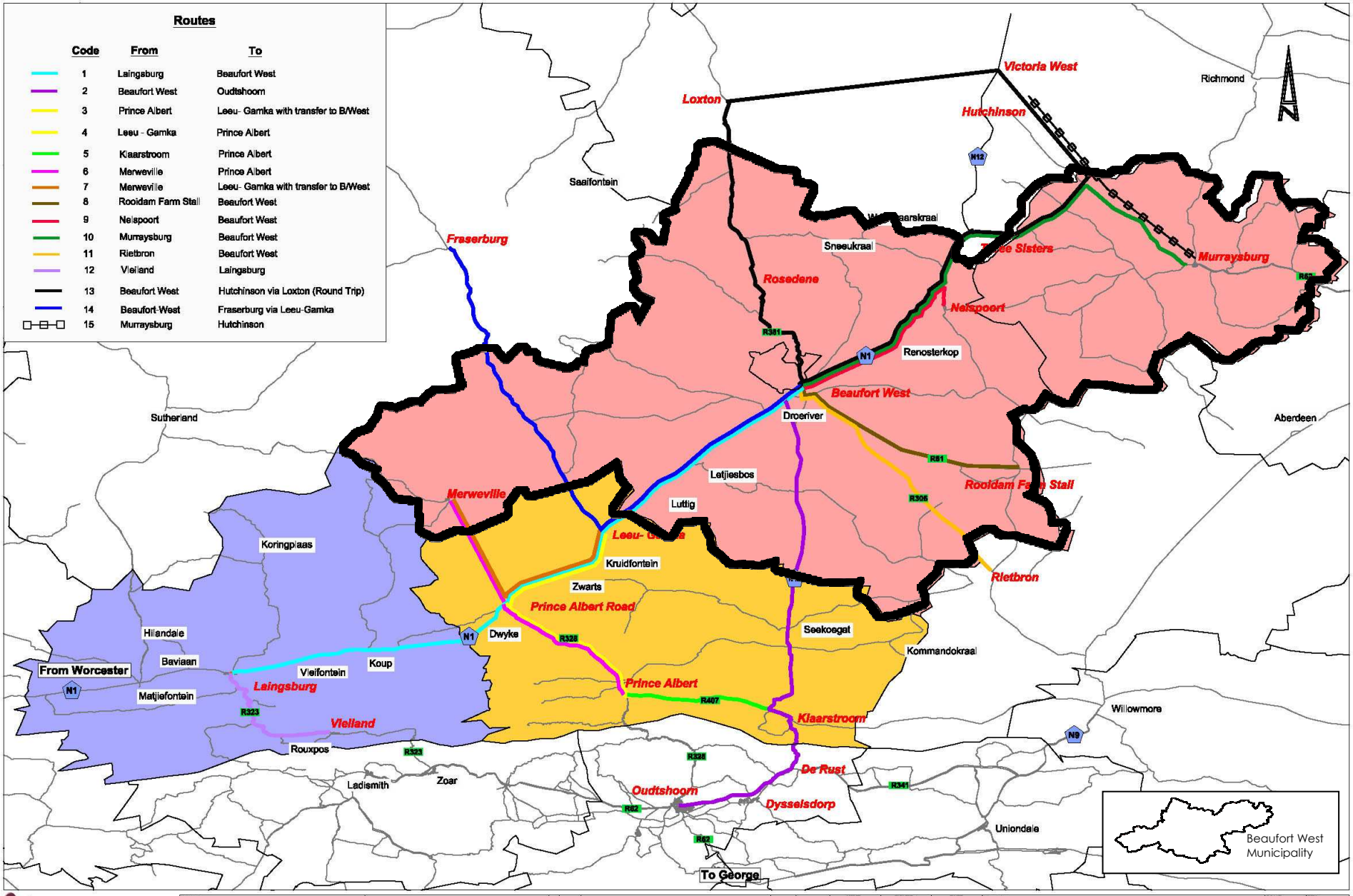


Figure 2.3.2.1 Mobility Strategy for Central Karoo District Municipality (Source: ITS, 2013)

2.4 MUNICIPAL POLICY

2.4.1 Beaufort West Municipality Integrated Development Plan (2012-2017)

The Integrated Development Plan (IDP) has the following vision and objectives for the municipality:

- "To reflect the will of the South African people as reflected in the Constitution and by Parliament;
- An effective municipal system, maintained at the highest standard;
- To create affordable and sustainable infrastructure for all residents and tourists;
- Business initiatives and the optimalisation of tourism (local and foreign);
- Empowerment of personnel, management and council members for effective service delivery;
- Creating and maintaining an effective financial management system;
- To develop the region as the sport and recreational mecca of the Karoo;
- To create a crime-free, safe and healthy environment;
- Agricultural business to improve the potential for job creation;
- Creation of employment to reduce unemployment to acceptable levels;
- To reduce poverty and promote the empowerment of women; and,
- To involve HIV/Aids sufferers in economic and household responsibilities."

In addition the Key Performance Areas (KPAs) of the IDP are:

"1. Basic service delivery and infrastructure development;
2. Institutional development and municipal transformation;
3. Financial viability and management;
4. To develop a local economic development strategy that responds to food security, social infrastructure, health environment, education and skills development and the gender balances in society; and,
5. To promote good governance through ongoing communication between the council and citizens through community participation, effective information dissemination and communication and ward-based consultation."

Table 2.4.1.1 indicates the IDP service delivery and infrastructure projects for the period 2012-2017. (Beaufort West Municipal IDP 2012-2017, Sec 6)

Water and Sewerage Distribution				
No	**Town**	**Project**	**Cost**	**Funding Source**
1	Municipal	Pressure release valves	600 000	MIG
		Pressure release valves	1 400 000	MIG
		New Water Resevoir	1 000 000	RBIG
	Sub-Total		**3 000 000**	-
2	Beaufort-West	Upgrading existing WWTW – Beaufort West	8 000 000	MIG
		Upgrading existing WWTW – Beaufort West	5 000 000	MIG
		New prepaid water meters Phase 1 – Prince Valley	1 000 000	MIG
		Realign bulk water – Rustdene	636 690	MIG
		New Sewerage Pipeline next to Buitekant Street	500 000	MIG
	Sub-Total		**15 136 690**	-
3	Murraysburg	Investigation of Murraysburg WWTW	500 000	MIG
		Upgrading of Murraysburg WWTW	6 000 000	MIG
		Upgrade Water Supply – Murraysburg	1 400 000	MIG
	Sub-Total		**7 900 000**	-
4	Nelspoort	Bulk water supply – Nelspoort	2 602 038	MIG
		Upgrading of Nelspoort WWTW	2 000 000	MIG
		Bulk Water supply – Nelspoort	1 314 512	MIG
	Sub-Total		**5 916 550**	-
TOTAL			**31 953 240**	-
Sports and Recreation Facilities				
No	**Town**	**Project**	**Cost**	**Funding Source**
5	Beaufort-West	Upgrading of Rustdene sport facilities	350 000	MIG
		Upgrading Rustdene sport field	1 000 000	MIG
		Upgrading of Voortrekker Street tennis courts	500 000	MIG
		Upgrading of Kwa-Mandlenkosi sport field	3 000 000	MIG
		Upgrading town rugby field	3 000 000	MIG
		Kwa-Mandlenkosi – neighbourhood development	5 500 000	MIG
		Prince Valley: Community Hall	10 000 000	Unfunded
		Hillside II: Community Hall	10 000 000	Unfunded
		One administration office B/West	200 000 000	Unfunded
		One Stop Youth Centre: Kwa-Mandlenkosi	15 000 000	Unfunded
		Maintenance of buildings and community facilities	19 000 000	Unfunded
	Sub-Total		**267 350 000**	**-**
6	Merweville	Upgrading of Merweville sport field	3 000 000	MIG
		Merweville: Community Hall	10 000 000	Unfunded
		Maintenance of buildings and community facilities	6 000 000	Unfunded
	Sub-Total		**19 000 000**	Unfunded

Table 2.4.1.1 IDP Budget 2012-2017 (Source: IDP 2012-2017)

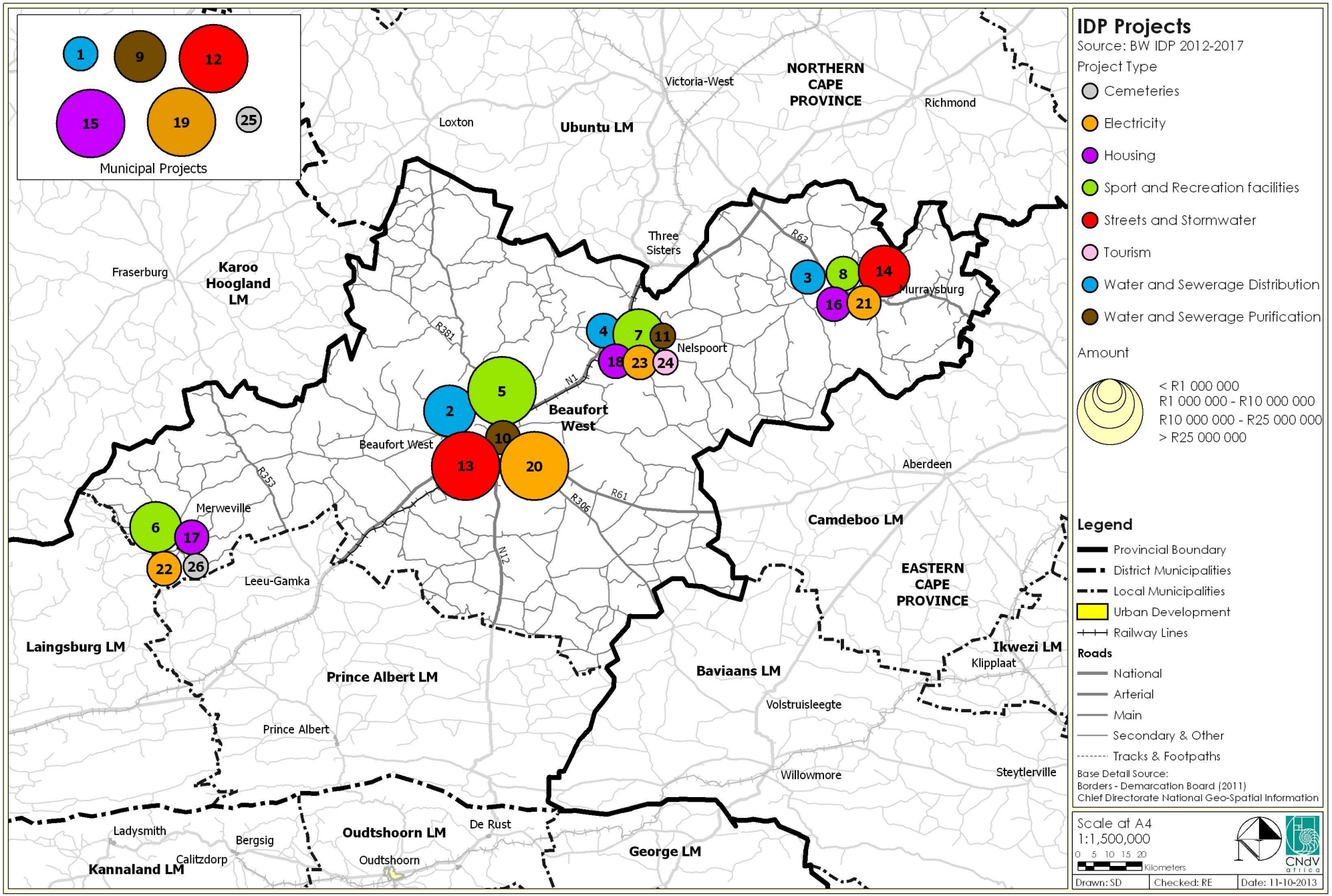


Figure 2.4.1.1 IDP Budget 2012-2017

Sports and Recreation Facilities				
No	**Town**	**Project**	**Cost**	**Funding Source**
7	Nelspoort	Upgrading Nelspoort sport field	3 000 000	MIG
		Maintenance of buildings and community facilities	8 000 000	Unfunded
	Sub-Total		**11 000 000**	**-**
8	Murraysburg	Maintenance of buildings and community facilities	7 000 000	Unfunded
	Sub-Total		**7 000 000**	**-**
TOTAL			**304 350 000**	**-**

Water and Sewerage Purification				
No	**Town**	**Project**	**Cost**	**Funding Source**
9	Municipal	Development of Aquifers	5 000 000	Unfunded
		Development of Aquifers	5 000 000	Unfunded
		Upgrading of existing pump stations	4 500 000	Unfunded
		Upgrade a water network: all towns	2 000 000	Unfunded
	Sub-Total		**16 500 000**	-
10	Beaufort-West	Installation of Archimedean Screw Pump	500 000	Unfunded
		Upgrading of existing chlorination room	100 000	Unfunded
		Upgrading of existing Telemetry System	400 000	Unfunded
		Upgrade of fencing at Beaufort West WWTW	250 000	Unfunded
		Repair of existing Aeration Basin	350 000	Unfunded
	Sub-Total		**1 600 000**	-
11	Nelspoort	Investigation of Nelspoort WWTW, capacity	100 000	Unfunded
	Sub-Total		**100 000**	-
TOTAL			**18 200 000**	-

Roads and Storm Water				
No	**Town**	**Project**	**Cost**	**Funding Source**
12	Municipal	Retention dam	9 160 000	MIG
		Retention dam	5 000 000	MIG
		Gravel roads	9 000 000	MIG
		Gravel roads	9 000 000	MIG
		Storm Water N1	5 000 000	
		Rehabilitate gravel roads – Phase II	1 258 509	MIG
	Sub-Total		**38 418 509**	-
13	Beaufort-West	Roads Kwa-Mandlenkosi	843 396	MIG
		Rehabilitate gravel roads Kwa-Mandlenkosi	2 494 916	MIG
		Storm water retention dam – Hillside II	4 426 294	MIG
		New storm water channel – Hillside II	77 265	MIG
		Rehabilitate gravel roads - Rustdene	360 000	MIG
		Rehabilitate gravel roads – Hillside II	6 176 482	MIG
		Upgrade gravel roads – Beaufort West	2 463 406	MIG
		Rehabilitate gravel roads – Beaufort West	9 000 000	MIG
	Sub-Total		**25 841 759**	-
14	Murraysburg	Rehab roads and storm water–Murraysburg	3 400 000	MIG
		Rehabilitate gravel roads – Murraysburg	6 170 195	MIG
		Storm water – Murraysburg	1 620 000	MIG
		Upgrade gravel roads – Murraysburg	3 972 545	MIG
	Sub-Total		**15 162 740**	-
TOTAL			**79 423 008**	-

Table 2.4.1.1 IDP Budget 2012-2017 cont. (Source: IDP 2012-2017)

Housing				
No	**Town**	**Project**	**Cost**	**Funding Source**
15	Municipal	Consolidation project: 95 units Kwa-Mandlenkosi	7 403 170	DoHS
		Emergency housing: Upgrade 10 houses damaged by fire or other natural causes	750 000	DoHS
		Greening Project	3 500 000	DEA
		Material Recovery Facility (Waste Recycling)	800 000	MIG
		XHOXHA – 65 units	6 500 000	Unfunded
		Planned: New Housing Development	40 000 000	Unfunded
		GAP Housing +/- 200 Units	90 000 000	Unfunded
	Sub-Total		**148 953 170**	-
16	Murraysburg	RDP Housing 100 units	6 800 000	Unfunded
	Sub-Total		**6 800 000**	-
17	Merweville	RDP Housing 50 units	3 400 000	Unfunded
	Sub-Total		**3 400 000**	-
18	Nelspoort	RDP Housing 50 units	3 400 000	Unfunded
	Sub-Total		**3 400 000**	-
TOTAL			**162 553 170**	-

Electricity				
No	**Town**	**Project**	**Cost**	**Funding Source**
19	Municipal	132kV Substation	8 000 000	DoE
		132kV Substation	1 400 000	DoE
		Electrification Central Karoo	12 000 000	DoE
		132kV Substation	12 000 000	DoE
		Housing electrification 367 erven	3 000 000	DoE
		Housing electrification 367 houses	1 500 000	DoE
		Upgrading main substation 22/11kV	5 000 000	Unfunded
		Load control 132/22kV Substation	5 000 000	Unfunded
		11kV Network new Industrial area	2 000 000	Unfunded
		Auto Recloser 11kV Plotte	250 000	Unfunded
		Isolator and Switchgear 22kV lines	250 000	Unfunded
		Telemetrie 11kV Substations	1 000 000	Unfunded
	Sub-Total		**51 400 000**	-
20	Beaufort-West	High mast lighting Hooyvlakte	501 600	MIG
		Upgrading 11kV Switchgear Beaufort West	15 000 000	Unfunded
		Upgrading 11kV Switchgear Rustdene	30 000 000	Unfunded
		Upgrading 11kV Switchgear Kwa-Mandlenkosi	5 000 000	Unfunded
		Upgrading overhead lines Rustdene	1 000 000	Unfunded
		Upgrading overhead lines Hillside	3 000 000	Unfunded
		Upgrading overhead lines Beaufort West	1 000 000	Unfunded
		Upgrading mini substation Bastiaanse school	650 000	Unfunded
		Upgrading mini substation Botha Street	650 000	Unfunded

		Upgrading transformer Truter substation	350 000	Unfunded
		Flood lighting sport ground Rustdene	1 200 000	Unfunded
		Flood lighting sport ground Rugby field	1 200 000	Unfunded
		High mast lighting Rustdene	1 381 862	MIG
		High mast lighting Hillside I	552 745	MIG
		High mast lighting Hillside II	276 372	MIG
	Sub-Total		**61 762 579**	-
21	Murraysburg	High mast lighting Murraysburg	552 745	MIG
		Upgrading electrical network Murrasyburg	700 000	Unfunded
	Sub-Total		**1 252 745**	-
22	Merweville	High mast lighting Merweville	829 117	MIG
		Flood lighting sport ground Merweville	1 200 000	Unfunded
		High mast lighting Merweville	250 800	Unfunded
	Sub-Total		**2 279 917**	-
23	Nelspoort	Flood lighting sport ground Nelspoort	1 200 000	Unfunded
	Sub-Total		**1 200 000**	-
TOTAL			**66 495 241**	-
Tourism				
No	**Town**	**Project**	**Cost**	
24	Nelspoort	Nelspoort Rock Art Site Development	289 000	CKDM
	Sub-Total		289 000	Unfunded
TOTAL			**289 000**	-
Cemeteries				
No	**Town**	**Project**	**Cost**	**Funding Source**
25	Municipal	Upgrading of Cemeteries – Municipal wide	500 000	Unfunded
	Sub-Total		**500 000**	-
26	Merweville	Upgrading of Merweville morgue	250 000	Unfunded
	Sub-Total		**250 000**	-
TOTAL			**750 000**	-
GRAND TOTAL			**664 013 659**	-

Table 2.4.1.1 IDP Budget 2012-2017 cont. (Source: IDP 2012-2017)

Figure 2.4.1.1 graphically depicts the location of the IDP projects and the extent of the budget being allocated.

The proposed Beaufort West expenditure amounts to over R600 million over a 5 year period. The total budget of the Municipality (including opex and capex) amounted to R211 million in 2011/12 and R207 million in 2012/13. Therefore, there is a gap between the IDP 'wish list' and the actual municipal budget.

2.4.2 Beaufort West Municipality Spatial Development Framework, 2008

A Spatial Development Framework (SDF) was prepared by BKS Consulting Civil Engineers in August 2008.

The spatial framework planning for the Municipality is structured as follows:

- Rural areas including:
  - Areas used for agricultural and tourism purposes;
  - Natural areas, some statutory protected and others not; and,
  - Areas used for infrastructure purposes, i.e. roads, electrical infrastructure, dams, etc. outside urbanised areas or settlements
- The main town of Beaufort West serving as the "administrative capital" of the Central Karoo;
- Merweville Rural Settlement;
- Nelspoort Institutional Settlement.

Figure 2.4.2.1 indicates the SDF plan for the region.

The formulation of the SDF is guided by the Bioregional Planning Framework. The Beaufort West Municipal area is classified based on the Bioregional Planning Framework Spatial Planning Categories (SPCs), each SPC having its own set of land use management guidelines.

The following general land use management guidelines are proposed for rural areas:

- The scale of development should not be too large when compared to the rural character of the environment;
- The subdivision of agricultural land should be based on the principle of sustainable development, and should provide for the development of alternative agricultural use;
- Development should be aesthetically adapted to the natural environment in respect to design, materials and colour;
- Low densities should be maintained and should be determined according to site specific carrying capacity of the natural environment;
- No development is to be permitted above skylines or escarpments.
- The impact on sensitive areas should be minimised and if damaged / negatively impacted on, be rehabilitated.
- Planning of all hiking routes and 4 x 4 trails should be in accordance with best conservation practices.

The following general land use management guidelines are proposed for the urban areas:

- Densification should be promoted to reduce urban sprawl;
- Urban densification should occur through infill development, higher density residential development and by maximizing the use of existing land-use opportunities;
- Conservation focus areas or green belts should be protected and development limited;
- Economic development should be optimised through nodal development. The clustering of supporting uses should be promoted;
- Developments with steep gradients (1:4) in 1:50 year floodlines and within ecologically sensitive areas should be avoided;
- Development should promote the social and economic integration of the town;
- Green energy initiatives should be promoted.

Implications for Beaufort West Municipality:

- The 2008 SDF did not include the DMA area (Murraysburg). The DMA area has subsequently been incorporated and Murraysburg now requires planning attention in the updated SDF;
- The BESP Gap Analysis of the SDF identified the following aspects that should receive attention in the updating of the SDF:
  - Status quo & baseline information to be updated
  - Incorporation of DMA area (Murraysburg) to be reflected.
  - Water availability implications to be explored
  - Heritage & cultural features to be mapped;
  - Include a chapter on climate change;
  - Add section on capacity of the Municipality to implement the SDF.
  - Formulate an Implementation Plan with phasing, resource availability and budget implications.

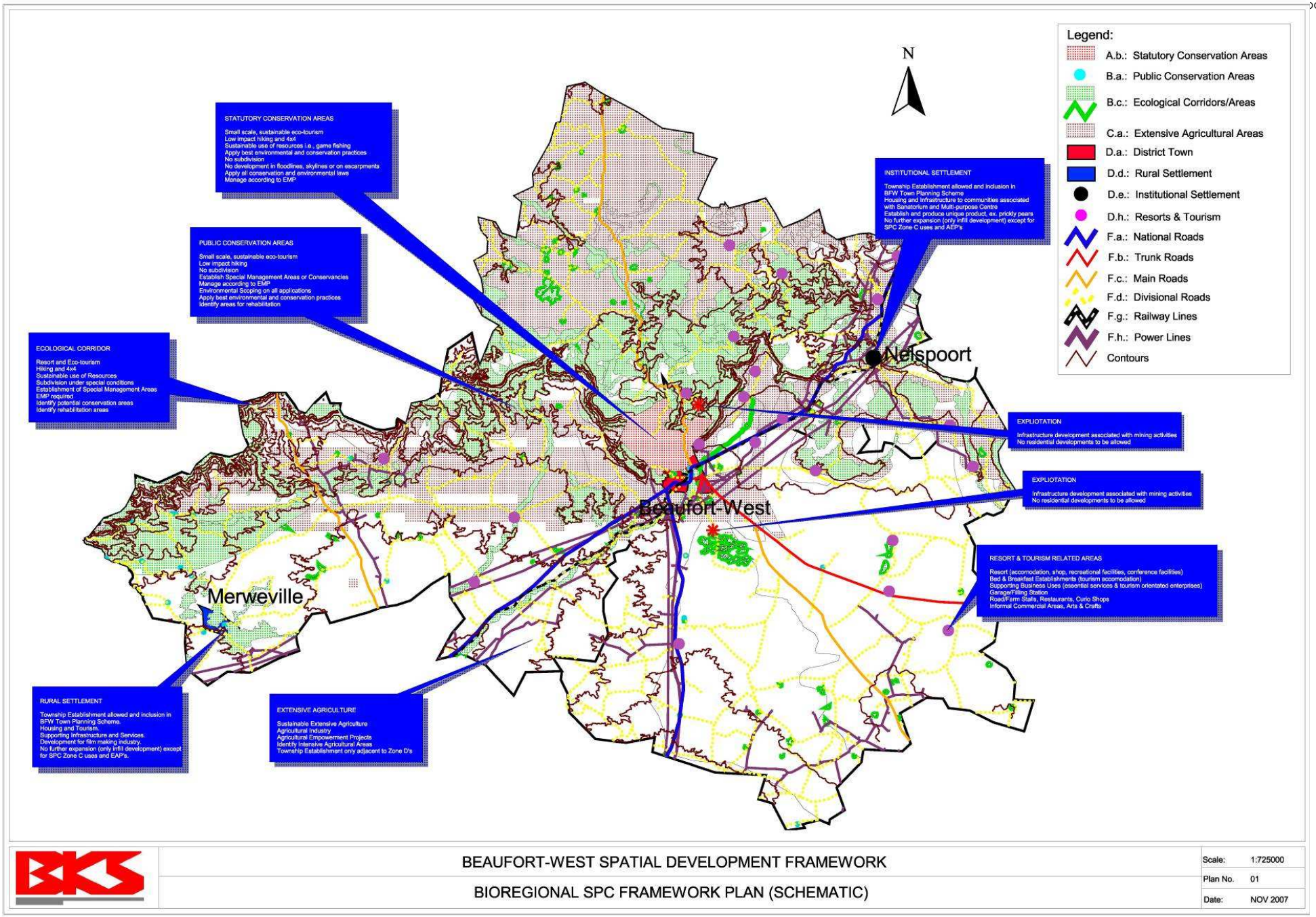


Figure 2.4.2.1 Beaufort West Municipality SDF (BKS Consulting Engineers, August 2008)

2.4.3 Beaufort West Urban Restructuring Framework, 2011

The Urban Restructuring Framework was prepared in 2011 by W M de Kock Associates for the towns of Beaufort West, Nelspoort and Merweville.

The study notes that the following spatial structural elements will have to be applied in the existing settlements:

- Mixed uses;
- Living places closer to work;
- Open space system;
- Densification;
- Physical and socio-economic integration;
- Major and local activity nodes; and,
- Activity corridors, activity spines and activity streets.

Figures 2.4.3.1 to 2.4.3.3 indicate the proposed urban structure for Beaufort West, Merweville and Nelspoort respectively.

A. Beaufort West:
The study states that the Urban Edge in Beaufort West is based on the following features:

- The Sanparks land to the north-west;
- The ridge, koppie and dam on the northern side of the town;
- The position of the N1 and proposed new bypass route;
- Several furrows and streams through the town and open spaces that need to be retained for storm water run-off.

A large portion of land (in the west) has been provided for the further expansion of the town in order to allocate residential opportunities in closer proximity to work opportunities.

A high priority (i.e. cannot be amended) Urban Edge is delineated to the north and east of the town. The remainder of the Urban Edge is proposed as a low priority edge (i.e. could be changed subject to due cognizance of the objectives of restructuring and to what measure that has been achieved at that stage).

B. Merweville

According to the study there are limited opportunities for expansion in Merweville. A tight Urban Edge is delineated around the town with a low priority edge towards the west, should expansion be required in the future. There are limited opportunities for infill in the town and on the edges where low densities uses exist.

A low priority Urban Edge is provided towards the west, south and east should expansion be required in the future.

C. Nelspoort

Provision is made within the Urban Edge proposed for Nelspoort should it be necessary to provide more housing and facilities.

Implications for Beaufort West Municipality:
- The study did not include the town of Murraysburg.
- Approximately 512ha of land is available in Beaufort West within the Urban Edge while the 291ha of land is required for residential purposes (based on a housing need and projection of 4270 units).
- Approximately 6ha of land is available in Merweville within the Urban Edge for residential opportunities.
- Approximately 12ha of land is available in Merweville within the Urban Edge for residential opportunities.

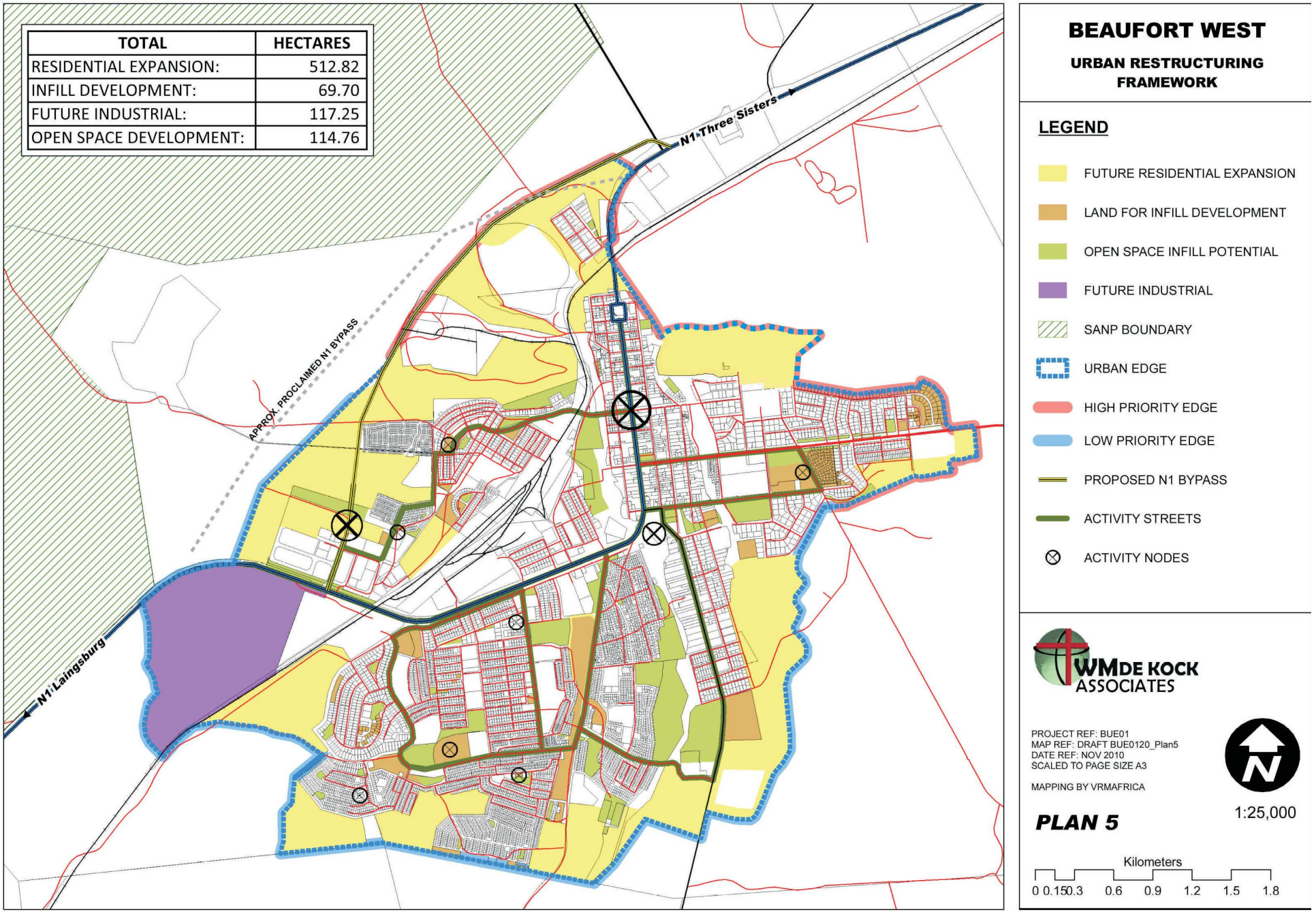


Figure 2.4.3.1 Urban Restructuring Framework: Beaufort West (Source: W M de Kock Associates)

Figure 2.4.3.2 Urban Restructuring Framework: Merweville (Source: W M de Kock Associates)

Figure 2.4.3.3 Urban Restructuring Framework: Nelspoort (Source: W M de Kock Associates)

2.4.4 Beaufort West Municipal Gap Analysis and Project Plan, 2012

The Gap Analysis and Project Plan report prepared in May 2012 identified the following gaps that have to be addressed in the next revision of the SDF in order to improve its credibility.

Gap	Objective	Required Content & Format of Product
SDF Interventions		
1.1 SDF Spatial Concept	i) Update Status Quo data ii) Formulate spatial vision for the municipal area; iii) Develop a spatial concept/strategic argument for the entire municipal area (urban and rural); iv) Formulate spatial development and conservation strategies v) Identify and prioritise SDF implementation measures in light of municipal capacity vi) Provide strategic direction to LUMS	• Short overall spatial vision statement for the municipality with an outline of agreed implications for the IDP, IHSP and sector plans • Spatial concept for the municipality comprising spatial diagrams for the major components of the vision and supporting statements. The concept and diagrams should apply to the municipality as a whole but also contain sufficient information to provide a clear direction for the IDP and sector plans. Specific areas that should be covered include: a. Clarify the spatial principles and integration and sustainability indicators informing the SDF b. Explore economic development potential of the rural / agricultural aspects of the Municipality c. Identify the role of towns within the municipality d. Highlight areas requiring protection (biodiversity, agriculture, heritage, visually sensitive landscapes etc) e. Highlight growth/ development potential and constraints (ecological, economic, infrastructural, access) f. Highlight opportunities for inclusion, integration and restructuring • A high level brief for including the spatial concept into the next revision of the IDP, SDF and HSP <u>Product Format</u>: Short report containing diagrams and explanatory text in hard copy and electronic copy including an editable version of the spatial concept diagrams in Illustrator or CorelDraw. An annexure providing an overview of the workshop process, main agreements or areas of disagreement
1.2 Updated vacant land audit and assessment	• To identify and assess vacant land within Beaufort West for its potential to meet sustainable development and integrated settlement objectives in terms of the PSDF, BESP, SO6 and SO7 aims. • To inform settlement spatial concepts and urban edges. • To inform the next HSP and SDF reviews. • To assess social facilities • To guide council decision making regarding the disposal or acquisition of land	• Explanation of the objectives of the audit. • Setting assessment criteria informed by objectives. • Data sourcing and desk-top scrutiny (e.g. SG records, ownership, zoning, pending applications, etc.) to identify "potential" erven/sites. • In-field assessment and data recording/mapping of potential erven/sites per ward for Beaufort West. • Assessment of vacant erven/ sites i.t.o. potential for integrated development (i.e. accessibility, sustainability, affordability), including engineering feasibility and environmental performance. • Compiling a summary matrix (data base) of GIS referenced individual vacant erven/sites in terms of suitability and availability for development. • Input to sector plans (SDF and HSP reviews) and land use management decision-making. • Identification of priority social facilities. <u>Product Format</u>: Hard and electronic report copy. GIS-based survey matrix of vacant erven/sites.
1.3 Heritage Survey and Heritage Management Framework for Urban & Rural Areas	i) To put in place urban and rural heritage data to inform the protection of cultural/heritage assets in terms of NHRACT requirements.	i) Legal context and compliance with Provincial and National heritage statutory frameworks. ii) Desk-top study of existing studies and data. iii) Setting assessment criteria and categories of heritage and grading

Gap	Objective	Required Content & Format of Product
	ii) To inform both local and municipal-wide protected sites and landscapes, as well as to integrate heritage informants into the SDF. iii) To identify/highlight the key protection and management issues. • To inform next HSP and SDF reviews.	significance. iv) Regional landscape overview. v) Detail landscape character assessment (natural features, built form, scenic resources) and mapping. vi) Local area analysis (i.e. per ward), including the assessment and grading of structures older than 60 years. vii) Database/spreadsheet of individual resources per local area (compatible with Municipal GIS System, if applicable) viii) Heritage management framework. ix) Conservation and development guidelines for Beaufort West Municipality. x) Input to sector plans. Survey to include required public participatory process. <u>Product Format:</u> Hard and electronic report copy. Database/ spreadsheet of heritage resources.
1.4 Prepare credible SDF	• To incorporate the inputs emanating from the BESP into Beaufort West SDF • To include the DMA in Beaufort West's SDF • To obtain approval for the updated SDF i.t.o. both LUPO and the MSA	SDF report contents and maps as per Provincial SDF Guidelines and BESP recommendations <u>Product Format:</u> Hard and electronic report copy Record of Consultation

Table 2.4.4.1 Beaufort West SDF Project Plan (source: City Think Space Consortium, 2012)

2.5 ABUTTING SPATIAL DEVELOPMENT FRAMEWORKS

Six local Municipalities abut the Beaufort West Municipality, namely the Laingsburg, Karoo Hoogland, Ubuntu, Camdeboo, Bavians, Prince Albert municipalities.

2.5.1 LAINGSBURG SPATIAL DEVELOPMENT FRAMEWORK, DECEMBER 2011

The Laingsburg Spatial Development Framework was prepared in December 2011 and proposed the following objectives for the municipality:

- Integrate and break down sharp sense of difference between town and township.
- Increase thresholds for the support of business and community facilities in the township and town.
- Improve attractiveness of settlements, Laingsburg town and Matjiesfontein to attract people in the category LSM 7 – 10 to reside there, thereby increasing local demand, employment creation and, therefore, the size of the local economy.
- Ensure all urban residents have appropriate access to Municipal services.
- Sustain long term carrying capacity of the land and water.
- Ensure adequate infrastructure support for economy Increase access to economic activities for Historically Disadvantaged Individuals (HDI's); and,
- Promote urban and rural linkages via the local economy.

A portion of the south western border of the Beaufort West municipality abuts Laingsburg Municipality.

The SDF has proposed that this area abutting the Beaufort West be designated as Extensive Agriculture and Critical Biodiversity areas (Buffer 1).

The policy document states that all land outside of Core, Intensive Agriculture and Urban Development SPCs should be used for Extensive Agriculture in terms of the Rural Land Use Planning and Management Guidelines (RLUPMG) Buffer 1 designation as this land does not occur in a matrix of patches of Intensive Agriculture but rather comprises vast unbroken expanses of Karoo veld interspersed with Extensive Agriculture. There is considerable opportunity for biodiversity conservation if proper Veld Management and appropriate Rotational Grazing methods to improve veld carrying capacity are used.

Implications for Beaufort West Municipality:

- The Laingsburg SDF was approved by Council on 20 September 2012.
- The SDF proposed a Core 2: Conservation Corridor which includes the Karoo National Park located in the Beaufort West Municipality.
- If the SDF were to include and incorporate this proposal, the following should be noted:
  - Core areas are primarily "no-go" areas for urban development;
  - Conservation management activities including alien clearing, research and environmental education (EE) are permitted;
  - Non-consumptive low impact eco-tourism including visitor overnight accommodation is permitted;
  - Harvesting of natural resources subject to EMP is permitted;
  - Buildings cannot be located in adjacent buffer areas they should be located in existing disturbed areas and "touch the earth lightly;
  - No ploughing or urban development is to be allowed within river eco-corridors.

2.5.2 KAROO HOOGLAND SPATIAL DEVELOPMENT FRAMEWORK (2010)

The spatial goal for the municipality is to "optimally develop our inherent economic opportunities such as our natural beauty and clear night skies, to protect and utilise our rich and diverse natural and cultural heritage for the enjoyment of all and to develop sustainable settlements where residents can lead enriched, healthy and convenient lives".

The SDF proposed the following spatial strategies:

- **Exploit economic opportunities by:**
  - Strengthening mobility & economic links between Sutherland, Fraserburg and Williston;
  - Development of cross border Tourism Corridors;
  - Promote development of Sutherland astronomy tourism hub;
  - Supporting sustainable mining exploration;
  - Promoting renewable energy generation.

- **Create sustainable urban and rural settlements by:**
  - Strengthening hierarchy of activity nodes;
  - Eradicating basic services backlogs;
  - Conservation of ground water as raw water supply

- **Protect the natural and built environment:**
  - Conservation of natural environment;
  - Protection of heritage features.

A portion of the western border of the Beaufort West municipality abuts the Karoo Hoogland Municipality.

The Macro SDF for the municipality includes the following proposals:

Astronomy centre – Sutherland:
- Focus on tourism by providing sufficient tourist facilities and accommodation;
- Restrict noxious developments in terms of light and air pollution;
- Attract private and public investments;
- Protect the heritage significance of Sutherland;
- Promote urban renewal strategies;
- Increase economic and social opportunities;
- Focus development within urban edge.

Administrative centre – Williston:
- Improve the provision of basic engineering services;
- Encourage tourism development;
- Restrict further growth and development within urban edge;
- Improve main road sections through town.

Heritage centre – Fraserburg:
- Protect the heritage significance of Fraserburg;
- Encourage tourism development;
- Restrict growth and development within urban edge;
- Improve main road in town.

Tourism nodes:
- Opportunities exist for tourism facilities and should be developed as such.

Transportation corridors:
- Calvinia-Williston-Carnarvon corridor consisting of the R63 tar road and railway link between Carnarvon, Williston, Calvinia and to the N7;
- Sutherland-Matjiesfontein-N1 corridor consisting of the R354 tar road linking Sutherland with the N1 highway via Matjiesfontein, which is the main link between Karoo Hoogland and Cape Town.

Tourism corridors/routes:
- Sutherland - Calvinia - Nieuwoudtville and Sutherland - Fraserburg - Williston. It is essential that promoting the unique features of the different towns be combined into one strategy. Tourism corridors should focus on supporting the hospitality and tourism industry along it. The tourism of Karoo Hoogland should be promoted and marketed through a well-developed tourism strategy.

Implications for Beaufort West Municipality:

- The SDF proposed the area abutting the Beaufort West Municipality as an Environmental Conservation Corridor.
- The development of a conservation zone between the Tankwa Karoo Park (in the Karoo Hoogland Municipality) and the Karoo National Park (in the Beaufort West Municipality) is proposed.
- Environmental conservation zones should include all ecologically sensitive natural open spaces with conservation value i.e. mountain ranges, proclaimed nature reserves, conservancies, river environments, wetlands, biodiversity corridors etc.
- The portion of the R353 that traverses the Beaufort West Municipality between Fraserburg and Leeu-Gamka is proposed to be upgraded to improve the linkage to the N1. The N1 traverses Beaufort West Municipality. Improving this linkage can increase the number of visitors as well as economic activity to the region.
- A portion of the Karoo Central Radio astronomy advantage area 1 traverses the municipality in the north western region.

2.5.3 UBUNTU SPATIAL DEVELOPMENT FRAMEWORK, 2007

The Ubuntu Spatial Development Framework was prepared in April 2007 by Stabilis.

The SDF notes the following policy guidelines to guide development in the municipality:

- Bioregional policy guideline:
  - The carrying capacity of land should not be exceeded;
  - Toilets and stock water points are to be located away from groundwater resources;;
  - Development should not be permitted if the municipality is unable to assure water supply to its users.

- Spatial growth management policy guideline:
  - Encourage compact settlements;
  - Land uses are to be integrated and mixed land uses encouraged;
  - Urban sprawl should be discouraged by promoting compaction.

- Urban Land Use Guidelines:
  - Land uses in towns should include light industrial zones;
  - Mixed land uses should be promoted.

- Rural Land Use Guidelines:
  - Mobile clinics must be established to provide health care;
  - Rural roads need to be upgraded;
  - Housing and social services of rural communities needs attention.

The southern boundary of the Ubuntu Municipality abuts the Beaufort West Municipality.

Implications for Beaufort West Municipality:

- The SDF did not prepare a proposal plan at the Municipal scale.
- No proposals are made for the areas outside of the main towns.

2.5.4 CAMDEBOO SPATIAL DEVELOPMENT FRAMEWORK, 2012

The Camdeboo Spatial Development Framework (a local municipality located in the neighbouring Eastern Cape Province) was prepared by Setplan in June 2012.

The SDF notes that economic development needs to be achieved without negatively impacting on the long term sustainability of the natural resources.

Focused infrastructure investment needs to be undertaken in areas of economic and social potential while providing basic services to the rural and small settlements and implements the following development principles:

Principle One: Resource Protection - Natural resources (Biodiversity, landscapes, views, agricultural potential, forestry, water catchments etc.) need to be protected and enhanced.

Principle Two: Human Settlements - Human settlements need to be improved to meet the needs of all the residents and particularly the poor

by the provision of basic services and access to social facilities, economic opportunities and various forms of housing.

Principle Three: Settlement Structure - Establish a human settlement structure which is interdependent, sustainable from a service provision perspective and which takes advantage of the unique economic opportunities.

Principle Four: Institutional Capacity - Ensure that the municipality has capacity to implement the spatial development planning framework principles and proposals effectively.

The northern boundary of the Camdeboo Municipality abuts the Beaufort West Municipality.

This area that abuts Beaufort West Municipality is identified for Game Farming, Low to Moderate Agricultural Potential and Conservancies.

Implications for Beaufort West Municipality:

- It is proposed that proper Veld Management and appropriate Rotational Grazing methods be implemented in order to improve veld carrying capacity in areas identified for extensive agriculture.
- Land identified for conservation purposes should be conserved and maintained as such.

2.5.5 PRINCE ALBERT SDF

The Prince Albert Local Municipality is situated to the south west of the Beaufort West Municipality. Towns within this municipality include:

- Prince Albert
- Leeu-Gamka
- Klaarstroom
- Prince Albert Road

The purpose of the Prince Albert Spatial Development Framework is to ensure sustainability and conservation.

The spatial development framework has the following goals:

- Recognise the functionality and dynamics of towns within the municipality.
- Encourage the intensification and diversify certain land uses (tourism, agri- and eco tourism).
- Identify opportunities and problems and solve these in a sustainable manner.
- Promote integration.
- Thoroughly consider the principles of bioregional planning.

The spatial development framework provides spatial development strategies for the municipal area as a whole and for each individual town. The strategies proposed are as follows:

<u>Economic Growth Strategies:</u>

- Develop a holistic economic management plan for the Prince Albert Municipality
- Focus on developing agri-tourism and the establishment of small farming and community farming projects.

<u>Tourism</u>

- Expand the existing tourism management plan in conjunction with the economic management plan.
- Increase involvement of the Gamkaskloof Advice Committee when developing the tourism opportunities of the Gamkaskloof.
- Potentially establish a special management area to enable landowners to work with the local authority to ensure sustainable tourism opportunities.
- Offer alternative tourism attractions.
- Establish a working group to research alternative funding sources.

<u>Land Reform</u>

- District offices and government institutions to conduct an increased number of workshops to inform landowners, labourers and entrepreneurs of processes and funding options.
- Establish mentor and training programmes to transfer agricultural skills.
- Allocation of land for small farmers could be an on going project.

- Develop plans where land can be identified for small farmers and where these land portions can be evaluated in terms of a spatial development framework.

Housing
- Housing for farm workers is required.
- Workshops and meetings with agricultural departments are required to establish the procedures for establishing housing for farm labourers on farms.
- The Transnet land at Leeu-Gamka and Prince Albert Road could be transferred to the municipality.

Natural Environment
- Complete a heritage study and implement the findings of the study.
- Establish an action group to develop conservation and management plans.
- Notify farmers of undesirable agricultural practices.
- Develop an effective agricultural practices management plan.
- Promote and manage the proposed ecological corridors.
- A proper vegetation status and ecological condition map should be prepared.
- Ensure the protection of open spaces by means of proper zoning scheme regulations.

Infrastructure
- Address the need for improved services at the Transnet stations.
- Develop improved information leaflets for the ESKOM self help schemes.
- Develop a maintenance plan for the repair of roads in poor condition.
- Prevent stormwater from entering the Gamka River.

In addition to the above strategies the SDF contained various proposals for the specific urban areas within the municipality.

No overall spatial development framework plan was prepared which could directly illustrate implications for the Beaufort West Municipality.

Implications for Beaufort West Municipality:

- No overall spatial proposals plan was prepared for the Prince Albert Municipal SDF nor was there any spatial proposals made which could impact on the Beaufort West Municipality.

2.5.6 BAVIAANS SPATIAL DEVELOPMENT FRAMEWORK, 2007

The Baviaans Spatial Development Framework was prepared by Setplan in 2007.

The SDF is based on the following spatial planning objectives:
- Mutually supportive and integrated land development in the rural and urban areas;
- Providing residential and employment opportunities in close proximity to one another;
- Maintaining the balance between existing and scarce resources;
- Creating compact and integrated towns where historically distorted patterns have been eradicated;
- The eradication of the housing backlog;
- Providing for various land tenure options;
- Promoting sustainable development; and,
- Providing access to residents for social, recreational and institutional services.

The south eastern boundary of the Beaufort west Municipality abuts the Beaufort West Municipality.

The key components of the SDF are based on ecological structure, transportation linkages, primary tourism linkages and the settlement hierarchy.

Implications for Beaufort West Municipality:

- The area within the Baviaans Local Municipality abutting the Beaufort West Municipality was previously a DMA.
- No spatial proposals were formulated for this area at the time.

2.6 ALIGNMENTS

The vertical and horizontal alignment between the Beaufort West Local Municipality SDF and the other planning policies affecting and affected by this SDF are illustrated below.

2.6.1 Vertical Alignment

The vertical alignment shows the relationship and alignment between the proposals and policies of the Western Cape PSDF, Western Cape Growth and Development Strategy and the Central Karoo District SDF.

Of importance are the following:

- Encourage development of the identified towns with high development potential (Beaufort West).
- Identified ecological corridors (located along the southern and northern region of the Municipality) are to be ensured.
- Promote transport corridors along existing railway lines and the N1 national road.
- Promote and manage proposed mining activity (south of Beaufort West).

2.6.2 Horizontal Alignment

The horizontal alignments of the relationship between the Beaufort West Municipality and the abutting municipal SDF's are shown on Figure 2.6.1.

The main abutting proposals that could influence the formulation of a spatial development plan for the Beaufort West Municipality are:

- Promote mobility along the N1 national road.
- Link environmental corridors from the surrounding SDF's.
- Land identified for conservation purposes should be conserved and maintained as such.

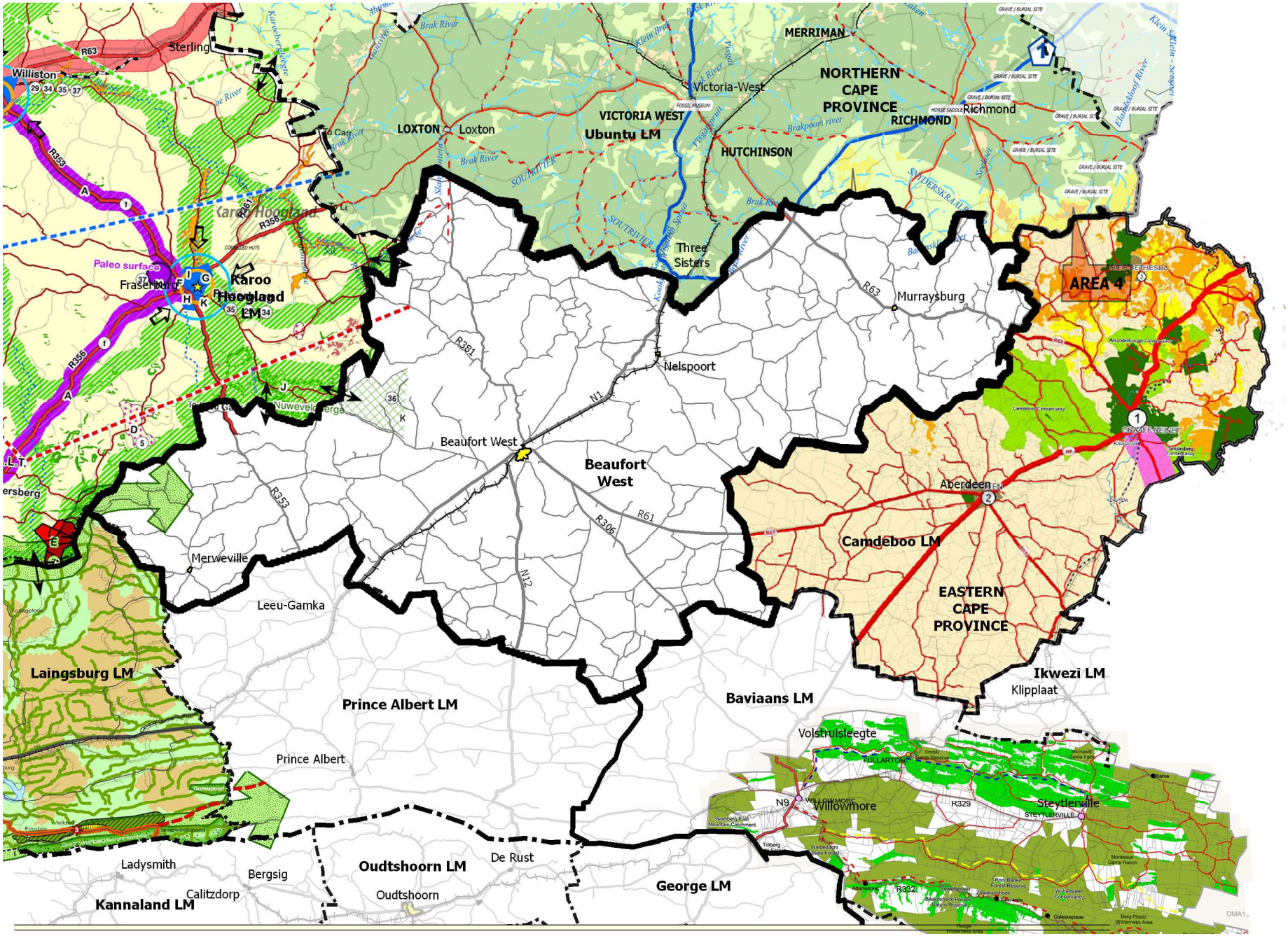


Figure 2.6.1 Beaufort West Conceptual SDF showing alignment with surrounding SDFs

4. PUBLIC PARTICIPATION

4.1 INTRODUCTION

4.1.1 PURPOSE OF THIS CHAPTER

The Guidelines for the Formulation of SDF's (January 2011) have been applied in the process of drafting a Local Spatial Development Framework for the Beaufort West Municipality. The guidelines prescribe 7 phases, of which 2 phases involve public participation. The purpose of this chapter is to serve as record of the public participation phases undertaken during the Beaufort West Local SDF process.

4.1.2 GUIDELINES FOR THE FORMULATION OF SDF's (January 2011)

These guidelines comply with the Municipal Systems Act (MSA), 2000 (Act 32 of 2000), the National Environmental Management Act (NEMA), 1998 (Act 67 of 1998) and the principles of the Development Facilitation Act (DFA), 1995 (Act 67 of 1995). The following section briefly describes where public participation fits in this process.

4.1.3 PUBLIC PARTICIPATION PHASES

The SDF guidelines (referred to in 4.1.1, above) stipulate a total of seven phases of which public engagement (or public participation) forms part of in order to:

- Identify strategic issues;
- Create awareness of the process;
- Stimulate future thinking; and,
- Provide valuable information for analysing the status quo.

The guidelines make provision for two public participation phases, Phase 2 and 5 (refer to Figure 4.1.3).

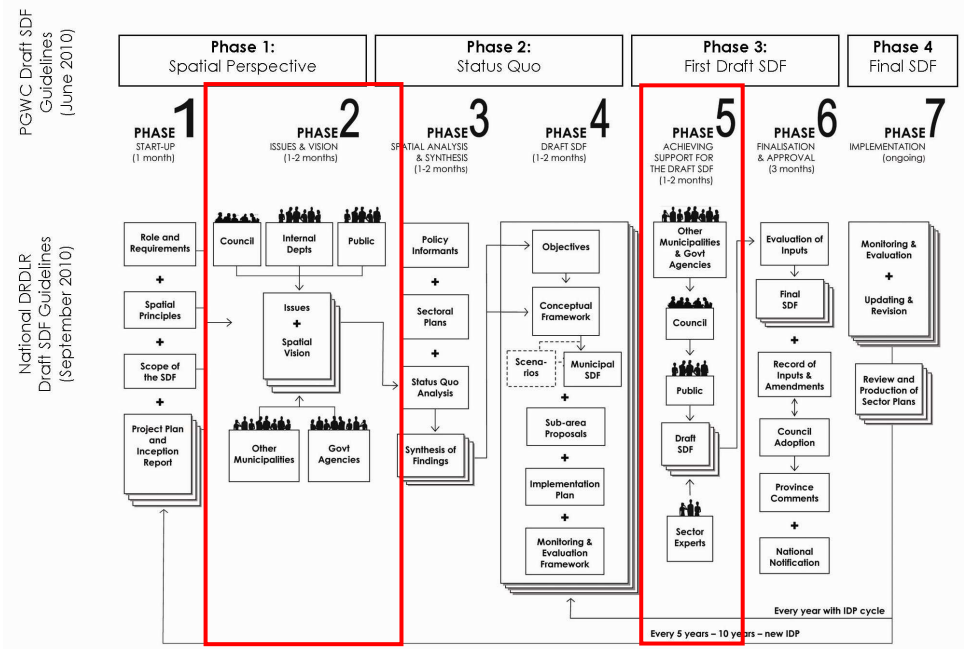


Figure 4.1.3 **Public participation phases as part of the overall SDF process**

Phase 2 involves consultation with Council (local or district), internal departments, the public, other municipalities/districts and government agencies. The main purpose of this phase is to gain an understanding of the current issues within the municipality/district and to formulate a spatial vision or desired future scenario for the study area.

Phase 5 again involves public consultation. The purpose is to achieve support for the draft SDF by consulting with municipalities/districts, government agencies, local councils, the public and various sector experts. Inputs from this phase will be evaluated and incorporated into the draft SDF in order to produce a final SDF which would then be presented for Council adoption.

4.2 PHASE 2 REPORT BACK: MEETINGS AND WORKSHOPS

4.2.1 PUBLIC PARTICIPATION PROCESS PLANNING

The initial phase of the consultation process involved the confirmation of suitable dates for conducting the various consultative meetings. Suitable dates were discussed with the municipality and the following dates and venues were confirmed:

Date	Venue	Time
21 January 2013	Rustdene Hall, De Vries, Beaufort West	18h00
22 January 2013	Town Hall, Beaufort Street, Murraysburg	18h00
23 January 2013	George Fredericks Primary School, Merweville	18h00
24 January 2013	Council Line Departments, Municipal office	10h00
24 January 2013	Restvale Primary School, Nelspoort	18h00

The methodology followed at each of the Issues meeting/workshop involved the following agenda items which were presented by CNdV africa:

1. Welcome and Introduction
2. Background to Spatial Development Frameworks (SDF's)
3. Discussion 1: Questions and Problems
4. Small Group Break Away and Report Back Session
5. Discussion 2: Vision for your municipality
6. Small Group Break Away and Report Back Session
7. Summary and Way Forward.

Where the groups were too small, break away sessions were not used as a means to facilitate discussion. Plenary discussions were conducted.

4.2.2 NEEDS, ISSUES AND PROBLEMS

The following needs, issues and problems were raised at the various meetings/workshops and are listed here per respective meeting:

A. Meeting with Ward Committees and public, Rustdene Hall, De Vries, Beaufort West

	Infrastructure
1	The road from Nelspoort to Beaufort West is in need of upgrading
2	Road between Beaufort West and Merweville to be upgraded.
3	Bulk retention dams are inadequate resulting in insufficient water supply.
4	Electricity supply is not upgraded to keep up with development.
5	In Mandlenkosi road have the same names causing confusion, especially during emergencies.
6	Streets in the vicinity of Barakke Street, north of the railway line in New Town should be tarred. These roads are in a very poor state.
7	Sewerage drains located in private residential yards are flooding, especially in Rustdene and Mandlenkosi. The municipality takes a long time to repair these.
8	Municipality encouraged communities to install water meters. The meters cause on going problems. Meters are cheap and do not work properly
9	In Mandlenkosi pre-paid electricity is not available to purchase 24 hours leading to residents being without electricity until the municipal offices open.
10	The town's infrastructure is old, especially pipes. Municipality constantly fixing failing infrastructure
11	The strom water systems are not adequate, especially in Pieter Street, Mandlenkosi
12	RDP houses have poor services connections.
13	At Mandlenkosi and "Die Laning" the construction of a bridge over the river is required. Money for the bridge has been allocated but is being spent elsewhere.
14	The communal toilets are unsafe for women especially during the evenings.
15	Roads have been graded with lime. These might have health problems when the wind blows and people inhale the lime dust.

	Facilities
1	Upgrading of old derelict government buildings could be done in order for these to serve a purpose in the communities.
2	Mobile clinics are required.
3	Clinics are not open 24 hours a day.
4	A skills training centre is required.
5	The town could develop as a distribution centre where goods from Cape Town are brought and distributed to the north and goods from Johannesburg are brought and distributed further south.

	Housing
1	Housing is located further and further away from town centre.
2	Hillside was poorly planned. People here are unemployed, there are no recreational facilities and no shopping opportunities
3	RDP Housing should be livable and a convenient size. The current houses are too small.
4	No room for expansion in existing new housing developments.
5	RDP houses are being rented out and beneficiaries live somewhere else.

	Other
1	Communities don't know what is being planned in their towns. Members of the community would like to be consulted prior to developments being approved in their area.
2	No grazing land is available for small farmers.
3	Developments are taking place in the river flood plain.
4	The community to be consulted in the exploitation of minerals
5	A hail storm in December 2012 caused property damage. The municipality has done nothing to assist communities.
6	There is a dangerous alleyway in Watsonia Street, Mandlenkosi. Even during the day time it is unsafe here.

Meeting 1: Beaufort West (21 January 2013)

B. Meeting with Ward Committees and public, Town Hall, Murraysburg

	Infrastructure
1	Water furrows need upgrading. New bridges are needed in town.
2	Municipality's tractors are constantly broken and old.
3	Municipality is to blame for poor lighting and infrastructure. Street lights don't work.
4	Pre-paid electricity is not available to purchase 24 hours a day leaving residents without electricity until the municipal offices reopen in the mornings.
5	Some houses have no municipal connections to water. Residents are charged large amounts to have these connections installed.
6	Road surfacing has been done cheaply leading to huge potholes.
7	The Municipality is not delivering services.
8	In Wes Street rubbish is being dumped and not cleaned.
9	There are two boreholes in town that constant overflow and water is being wasted.

	Employment
1	The dairy industry employed many people. This industry is no longer in operation.
2	Many foreigners settling here adding to the unemployment problems.
3	The town needs a shopping centre to support job creation
4	Job creation could be improved by establishing factories (e.g. motor factories for parts).
5	The wool industry could be expanded to support job creation.
6	Buildings are required where residents can operate business from (i.e. factories).
7	Available jobs in the Beaufort West Municipality should be advertised in Murraysburg first. Coordinated means of notifying the community should be developed.

	Housing
1	No new houses have been built in Murraysburg since 1994.

	Facilities
1	Sportsfields and facilities are poorly maintained.
2	The park and "Wandeldam" (no water) are severely neglected. Visitors only pass through town and don't spend time here anymore.

	Other
1	Too much of a power struggle within the municipality which limits development in Murraysburg.
2	The municipality is bankrupt.
3	More attention should be given to the rural areas.
4	The town needs help from the municipality.
5	Murraysburg used to be its own municipality. Today the Beaufort West municipality is not visible here and Murraysburg is treated like an island.
6	There are no jobs and no houses are available. Multiple families live together in one house.
7	Beaufort West is too far away. They do not know what is going on in Murraysburg.
8	There is a permanent oil spill in Marino Street. Is there oil available?

Meeting 2: Murraysburg (22 January 2013)

C. Meeting with Ward Committees and public, Merweville

	Infrastructure
1	Service delivery in the Municipality is inadequate, e.g. more refuse removal, are vehicles not available or are broken, shortage of staff etc. (The tractor is more often broken than in operation)
2	The Municipality must pay more attention to the area. There is too much work for the single tractor. There are three drivers and one tractor. The tractor must do refuse removal and septic tank clearance.
3	The lower income areas do not receive any attention. The main focus is the old town in terms of municipal service delivery.
4	There is no water at the graveyard.
5	The quality of the potable water (i.e. connection at home) is poor. Water needs to be boiled. There are many problems with the water meters. Meters block regularly. Access to buy pre-paid water is only on Saturdays and Sunday between 10am to 12 midday and during municipal office hours during the week.
6	During heavy rains water remain stagnant in people's properties.

7	There are lots of outside toilets which older members of the community cannot use due to poor stormwater drainage. This is most prevalent in the older parts of the low income areas.
8	Stormwater system is in a terrible state. Sudden storms will leave a number of people in trouble. There is no bridge over the rivers running through the town. This causes problems when emergencies arise.
9	Heavy winds disrupt the Eskom power supply.

Land	
1	Land is required for emerging farmers, especially livestock farmers. Farming operations cannot grow beyond 30-40 sheep due to a lack of space.
2	There are only three pig farmers using the "hokke". Other emerging farmers struggle. All community members should be permitted to farm the same number of pigs.
3	Residents want to buy land to build a house. Residents don't want to tender for land. They would rather prefer to know a fixed price and purchase the land directly.
4	There is no need for an industrial area. Industrial land has been bought by individuals for housing
5	The land next to George Fredericks Primary School hall needs to be used for offices and shops.

Facilities	
1	There is no community hall in town. Residents have to share a hall with the school. On many occasions the school hall is occupied and residents have no where to congregate. The VGK hall could potentially be used in this regard.
2	The mortuary urgently needs upgrading. This was promised in 2011 already but nothing has been done to date.
3	The park is a "white elephant". Since 2009 nothing has happened there.
4	There is one clinic which is open only two days per week (Tuesday and Thursday). A doctor is sometimes on duty on a Tuesday. The remainder of the week the nurse visits nearby farms. A staff nurse is present everyday but she is unable to prescribe medication. When an ambulance is required it comes from Leeu Gamka (more than an hours drive). The nearest hospitals are in Prins Albert and Beaufort West.
5	The town currently has two primary schools of which one has only about 100 pupils. The community requires a secondary school as transport costs to secondary schools in Prins Albert and Beaufort West are too costly for parents. This leads to a high learner drop out rate.
6	Space is needed for various government facilities. If all departments come together at the same time it becomes problematic as there is no venue big enough to house all at the same time.

Housing	
1	The town needs more housing to accommodate those residing in the squatter area. The latest housing was built in 2011. The squatters are building clay houses. Promises were made to supply housing in 2014.
2	Residents complain that the existing housing units are too small and provide no room for extensions.

Other	
1	There is no big shop in the town offering a variety of goods. Only small shops exist who have a price monopoly. This has lead to exorbitant food prices in Merweville. In Beaufort West one can purchase 1.5kg of Rama margarine for R20. In Merweville one can only buy 500g of Rama for R20. It is expensive to travel to Beaufort West for grocery shopping but items are less expensive there.
2	The municipality is short staffed. There are only four permanent workers at the municipality. They are responsible for undertaking all municipal tasks. In Merweville there are more than 1000 residents needing municipal services.
3	Most people are employed as farm workers, livestock and seasonal workers, (Olives. Granates all seasonal).
4	People live on "Allpay" and other grants.
6	There is little communication between the different races in the town. The town does not operate uniformly.
7	The White people in the community have not been informed of this SDF workshop.
8	There is no community forum for sharing ideas between the communities.

Meeting 3: Merweville (23 January 2013)

D. Meeting with Council Line Departments

	Housing
1	Housing needs to be addressed. Nelspoort residents want GAP housing for teachers.
2	The housing waiting list should indicate income levels of beneficiaries as an indication of types of housing required.
3	Houses are being transferred to beneficiaries but they don't have the financial ability to maintain the house. There is a need for consumer education, which is currently being done but without follow-up or incentives for people following this programme.
4	The Department of Human Settlements has an insurance programme where houses are repaired if damaged.
5	Rental options might be explored if individuals can't afford their units.
6	Housing for farm workers should be addressed.
7	Emergency housing cannot be done for one house. Houses are only built when a larger group requires housing. This leads to people having to wait for emergency housing for a long time.

	Mining / Fracking
1	Nothing has been done for mining uranium.
2	Fracking could potentially be undertaken but no planning is done if and when this should occur.
3	Uranium will do nothing for Beaufort West town as the resources are located too far away.
4	The richest pockets of uranium are in the north west of the municipality but these are not economically viable. The only economically viable sources of uranium are found at Rietbron (Baviaans Municipality).

	Infrastructure - General
1	The SDF should prevent hap-hazard development. Development should occur where infrastructure, facilities, etc are co-ordinated.
2	There is MIG funding provided for bulk services provision but this is not enough.
3	Municipality has cash flow problems to provide services/infrastructure.
4	Applications have been made for MIG funding for all small towns, but not Beaufort West.
5	Great emphasis needs to be put on sewerage and water shortages in the towns in the HSP and SDF.

	Infrastructure – Sewer
1	Beaufort West has about 30% capacity left at sewerage works. The internal infrastructure is not coping. R6mil is to be spent in new housing areas on infrastructure. If all the housing projects are to be implemented significant upgrading would be required with respect to sewerage.
2	Merweville's sewerage works has been upgraded. It has sufficient capacity exists to accommodate development.
3	Nelspoort has no sewerage capacity but no overflow is experienced. There is no capacity exists for additional development.

4	The sewerage works in Murraysburg requires urgent upgrading as no capacity exists. Sewerage spillage is being experienced on a daily basis.

Infrastructure – Water	
1	Murraysburg has water quality problems.
2	The water network in Murraysburg, Merweville and Nelspoort is acceptable. Beaufort West has network quality problems, the infrastructure is very old. As an interim measure the water pressure has been reduced in some areas. The water system has enough capacity till 2020 – 2025.
3	Merweville only access borehole water.
4	The water purification plant in Beaufort West should be upgraded (approximate cost is R10mil – 15mil). This is not hampering development.
5	Water connections could be linked with municipalities in the Northern Cape.
6	Additional housing developments in Beaufort West are subject to water availability. Sufficient water supply is available for the currently planned housing projects. Reclaimed sewerage water might be an option to alleviate shortages.
7	Nelspoort received MIG funding to upgrade water quality.
8	Bulk water infrastructure could be upgraded if funding comes through from Department of Water Affairs.

Infrastructure – Stormwater	
1	When the river in Merweville overflows, it splits the town in two.
2	Nelspoort – the biggest stormwater problems are caused by the river, but the system is sufficient most of the times.
3	In Murraysburg extensive studies were done on stormwater. The old town has stormwater problems due to ageing infrastructure.

Infrastructure – Transport	
1	Additional pedestrian bridge is necessary across the Gamka River in Beaufort West
2	A pedestrian link is required in Beaufort West over N1 (estimated cost ±R9mil) linking with the pedestrian bridge over the railway line.
3	R80mil is required for freight bypass (municipality to supply 20% of this). This could possibly affect S8 housing site (layout to be checked).
4	The CSIR have been appointed to prepare an integrated Transport Plan for the municipality.

Infrastructure – Solid Waste	
1	Beaufort West Landfill sites have a remaining lifespan of 2 years.
2	Murraysburg landfill sites need to be relocated (currently in the middle of an aquifer). No new site has been identified.
3	Nelspoort landfill site has ±10 year life span available.
4	Merweville landfill site has ±5 years life span available.

Infrastructure – Electricity	
1	Electricity supply in Murraysburg can't support existing development. Small section is supplied directly from Eskom.
2	Beaufort West has an old electrical system. It can handle the currently planned projects. New projects would require new network upgrades. A new bulk point is being provided (20MPA). 11kv medium voltage network is very old but still in good working order.
3	Merweville electrical supply is the sole responsibility of Eskom. The nearest Eskom office is in Beaufort West.
4	The Municipality is planning to have prepaid electricity available 24 hours a day not just at the municipal office.

Facilities	
1	There are two primary schools in Merweville. No progress has been made with regards to establishing a high school here with the Department of Education.

Other	
1	The Municipality has no long term vision or plan.
2	Two malls were constructed and both are only 50% occupied.
3	30000km of airspace is available for aviation training. This is an opportunity which should be exploited.
4	Organisations in provincial and national government could be used to capacitate the communities. This can address capacity and financial problems.
5	Disaster management is managed at district level. Aurecon were appointed to do a risk assessment analysis. The local municipality

	do not have the capacity to manage disaster management.
6	There is no LED department in municipality has lead to poor economic strategy.

E. Meeting with Ward Committees and public, Nelspoort

Beaufort West	
1	There is an FET College but no accommodation for students.
2	There is no Youth Centre for children and no skills development centre for youth.
3	There are government buildings that are not being used and are being vandalised. These could be used for accommodation, etc.
4	There is a need for private medical services. There are no specialist services available in the Beaufort West Municipality, the closest private hospitals are in George and Worcester.
5	The N1 was bumper to bumper over Christmas. Consider need to divert the trucks to alleviate this problem.

Infrastructure (Nelspoort)	
1	Power failures take about 3-4 hours to be resolved from Beaufort West. There is no person in Nelspoort qualified to undertake infrastructure repairs.
2	The town requires funding to help with instillation of solar panels and gas. This will assist in reducing the costly reliance on electricity.
3	Quality of the water is putrid. The water smells and bleaches the clothes, etc.
4	Invasive trees affect the electricity network.
5	6kL of free water, is not available.
6	Free water is available to all in Murraysburg but not in Nelspoort.
7	Some geysers are problematic. Geysers were provided through the municipality and they should follow up on this.
8	The large Blue Gum trees in the town soak up all the water and damage infrastructure. These should be phased out.
9	When the N1 becomes congested drivers use the road past Nelspoort. Donkeys, etc cause traffic problems/ accidents.
10	A boom is needed for the level crossing.
11	The entrance to town should be tarred.
12	The Murraysburg Road should be tarred.
13	There are loose rocks on the road towards the station which could cause serious accidents.

Housing (Nelspoort)	
1	Farm workers are settling in the town and families are growing which leads to additional backyard structures.
2	Housing is required for approximately 100 middle income residents.
3	The upgrading / maintenance of houses was not well executed.
4	Subsidy housing suffers from poor craftsmanship (ASLA) – 2009.
5	Some people do not have ownership of state houses yet and need to make high additional payments.
6	A hail storm in December 2012 caused significant damage (roofs came off, windows broke, etc.). The municipality did nothing to assist those affected.
7	Animals roam freely throughout the town. This is problematic.

Facilities (Nelspoort)	
1	There is no trained paramedic at the hospital. The ambulance needs to travel from Beaufort West which is a problem for pregnant women as the medical facility cannot even deal with births.
2	The sports grounds of the schools are used as grazing fields for donkeys, goats and horses.
3	Nelspoort has a primary school which goes up to Grade 9. A higher education can only be obtained in Beaufort West. Transport to Beaufort West is expensive and leads to high drop outs. Should affordable leaner transport be available this problem could be alleviated.
4	The school has ±290 learners with a low number of teachers. The school can not afford additional teachers.
5	The town has an existing recreation hall. Residents were enquiring if this building could not be used for housing.
6	The boarding house in town is not optimally used.
7	The community needs Adult Basic Education and Training (ABET) facilities.
8	The crèche needs to be located where the majority of residents are. Currently the only crèche is on the other side of the railway line. This is dangerous for the children.
9	The town needs to be beautified. This can generate employment in the town.
10	Project and opportunity notice boards could be erected to assist with employment generation.
11	A Red and White meat abattoir exists. More grazing land is

	required (to accommodate ±1000 sheep) to optimally utilise the abattoirs.
12	5 year community projects will not be sufficient to address the needs of the community. Longer term projects with a future vision are required. A strong mentorship element should be incorporated to facilitate capacity building to ensure longevity of the projects.

Station Community	
13	A community (±20 families) is situated west of Nelspoort on Transnet land. They rent the houses there. These families interact with Nelspoort residents and their children attend school here. The municipality has stated that they can not deliver services to this community.

Other	
1	There are no seasonal workers.
2	Job creation is needed.
3	The sanatorium is the biggest employer, others are employed as teachers, others are employed at the municipality and Ultra Shell. Most people are unemployed. People assist on ad- hoc construction projects.
4	There are few house shops in existence and others are employed at Trust Klipkraal farm (farming with sheep, cattle and chickens. They employ approximately 5 people.
5	The community requires a business hive consisting of hairdressers, mechanical engineering workshops, sewing projects, etc.
6	The town had a bakery but it closed down due to high electricity costs.
7	The only means of transport to Beaufort West is a R100 return trip with a private vehicle of one of the community members.
8	Shopping and banking take place in Beaufort West.
9	The Commonage is not ample for grazing.
10	Most skilled artisans such as electricians are located in Beaufort West.
11	Two emerging farmers do not use the land reform farm land for grazing etc. Instead their animals graze throughout the settlement.
12	A property adjacent to the hospital is heavily overgrown with vegetation. This has become an unsafe area and should possibly be cleared.
13	The town requires a marketing strategy.

Meeting 4: Nelspoort (24 January 2013)

4.2.3 VISION

The following elements were regarded as unique to the municipality and need to be collectively strengthened to formulate a vision for the municipality.

4.2.3.1 Beaufort West

- Beaufort West lies in the middle of the Karoo. It is a "half way" between Cape Town and Johannesburg.
- Beaufort West was a caring town where people cared for each other with a strong sense of community.
- The farming and natural areas make Beaufort West unique.
- Beaufort West was a small and compact town.
- Chris Barnard (world's first heart transplant) was born here.

- The town is safe and calm with little crime.
- The air is clear and there is lots of space.
- Kids can play freely in a safe environment.
- Property prices are still low.
- Beaufort West is famous for its Karoo lamb
- Beaufort West Municipality is the oldest municipality in South Africa and was originally called Rooivlakte Municipality.
- Beaufort West town has beautiful guesthouses.
- The people are honest.
- The night skies are particularly clear.

4.2.3.2 Murraysburg

- The town has water and fertile soil.
- Livestock farming takes place.
- The town has many resources - oil, gas and coal.
- Welcoming town with fresh air.
- People are friendly.
- Coal reserves in Murraysburg Kop.
- Potentially link Beaufort West, via Murraysburg to Richmond.
- Town should be developed as a fully functioning urban settlement.

4.2.3.3 Nelspoort

- Tourism should be promoted e.g. the Bushman paintings.
- Nelspoort to function independently and be self sustaining.
- Nelspoort to be beautified with landscaping.
- The town contains lots of infrastructure from the Department of Health which can be used to the benefit of the community.
- TB patients treated at the hospital received therapy entailing pottery, spinning and weaving. This is no longer being used but the infrastructure could possibly still be used by residents to generate employment. Weekend tourism courses in these could also be offered.
- A property on the opposite side to the entrance of Nelspoort could be developed as a road stall and potentially entice travelers to enter the town.
- The area has very clean air. For this reason this was a popular place for treating TB patients.
- The area is safe and ideal for retirement.
- Hospital was the reason for the establishment of the settlement mainly due to the clean air.
- There are places/opportunities for camping,

4.2.3.4 Merweville

- Retain the current character of the town especially the tranquility and peacefulness.
- The town is clean and welcoming.
- The town is currently not densely built up and should remain like this.
- Maintain the rural character.
- Bikers frequent the town and stay for a few nights. Promotion of tourism to accommodate these bikers should be encouraged.

5.12 NELSPOORT (population: ± 1 600)

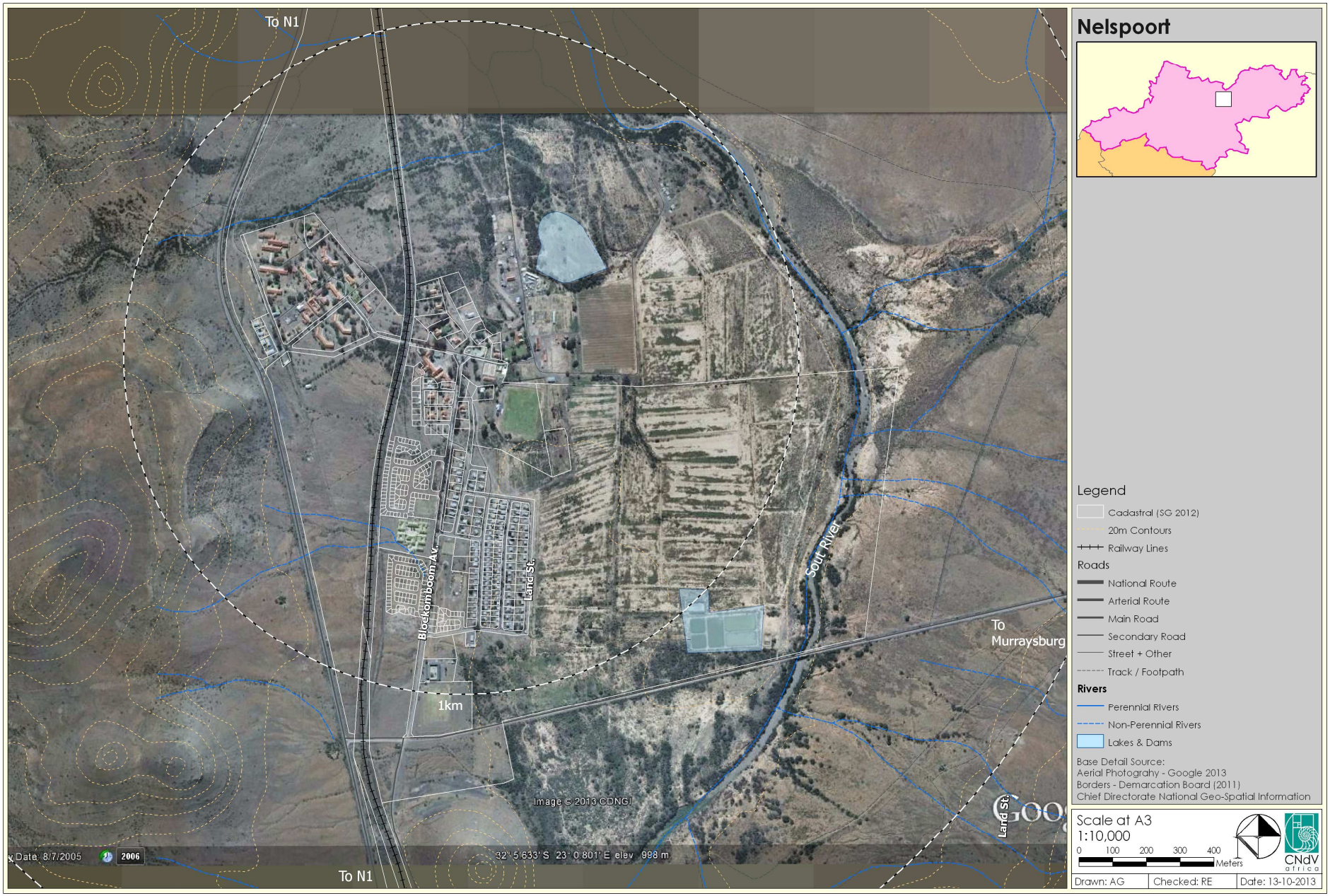


Figure 5.12.1.1 Nelspoort: Aerial photograph

5.12.1 SPATIAL ANALYSIS, see Figures 5.12.1.2

Sub-regional location

- Located on the old N1 that deviates from the current route following the Cape Town- Gauteng rail line;
- 50kms from Beaufort West, 520kms from Cape Town and 880kms from Johannesburg;
- Original locational determinants included the very clean air in this region (tuberculosis convalescence centre before cure was discovered in late 1950s) and presence of road and rail station (2kms south) on mainline;
- Although the attributes of the site were identified in 1880 the centre only opened in 1924 after a large donation from the Garlick family; and,
- It was also very good farming country with the area being less drought prone than areas further to the south. The Sout River and surrounding veld is certainly in much better conditions here than it is to the south.

Layout pattern

- Comprises four components:
  - Original sanatorium complex between rail line and road linked to remainder of settlement by a road underpass taking direct access off old N1 ;
  - Recreation, management housing and community facility node around a T-junction;
  - Farm buildings and agricultural lands to the east;
  - Residential areas and schools abutting a long avenue comprising mature blue gum trees. It comprises the original settlement plus two recently completely BNG housing schemes. This area also takes access off the old N1 via a level crossing; and,
- There is also a small community living in houses around the station some 2kms to the south.

Urban quality

- The original institutional buildings were constructed on a grand scale facing north/north east in the Edwardian colonial style with large wrap around verandahs well suited to the Karoo heat in summer and prominent chimneys arising out of large double pitched roofs;
- The older parts of the settlement are well treed and the main spine avenue creates a strong sense of place with its boulevard of mature gum trees;
- Original staff housing takes the form of small cottages with chimneys; and,
- Recently built BNG housing lack tree planting and detracts from the architectural integrity of the rest of the buildings.

Challenges and potential

- With the scaling down of the heath and farming activities the population is likely to be mainly economically sustained by social grants;
- Although the many Blue Gum trees in the settlement give it an oasis like sense of place these damage infrastructure and soak up large volumes of water;
- Nelspoort is becoming a settlement refuge for farmworkers displaced from surrounding farms;
- There are many large buildings, increasingly falling into disrepair, which could be used for institutional purposes. (Originally facilities for ± 500 patients plus staff) There is a great need for training and rehabilitation facilities in the province to address various social issues which require candidates to spend some time out of their current context, for example, like the Chrysalis Academy in Cape Town. Nelspoort would appear to be best suited for such a role as it already has the necessary facilities for this including buildings and facilities and agricultural land – although many of these are currently little used and/or are in disrepair; and,
- There are a large number of developed agricultural lands currently lying fallow which should be brought into production.

Main Entrance to Nelspoort off old N1


Example of numerous well built but little used institutional buildings on site requiring maintenance


Recently constructed BNG housing

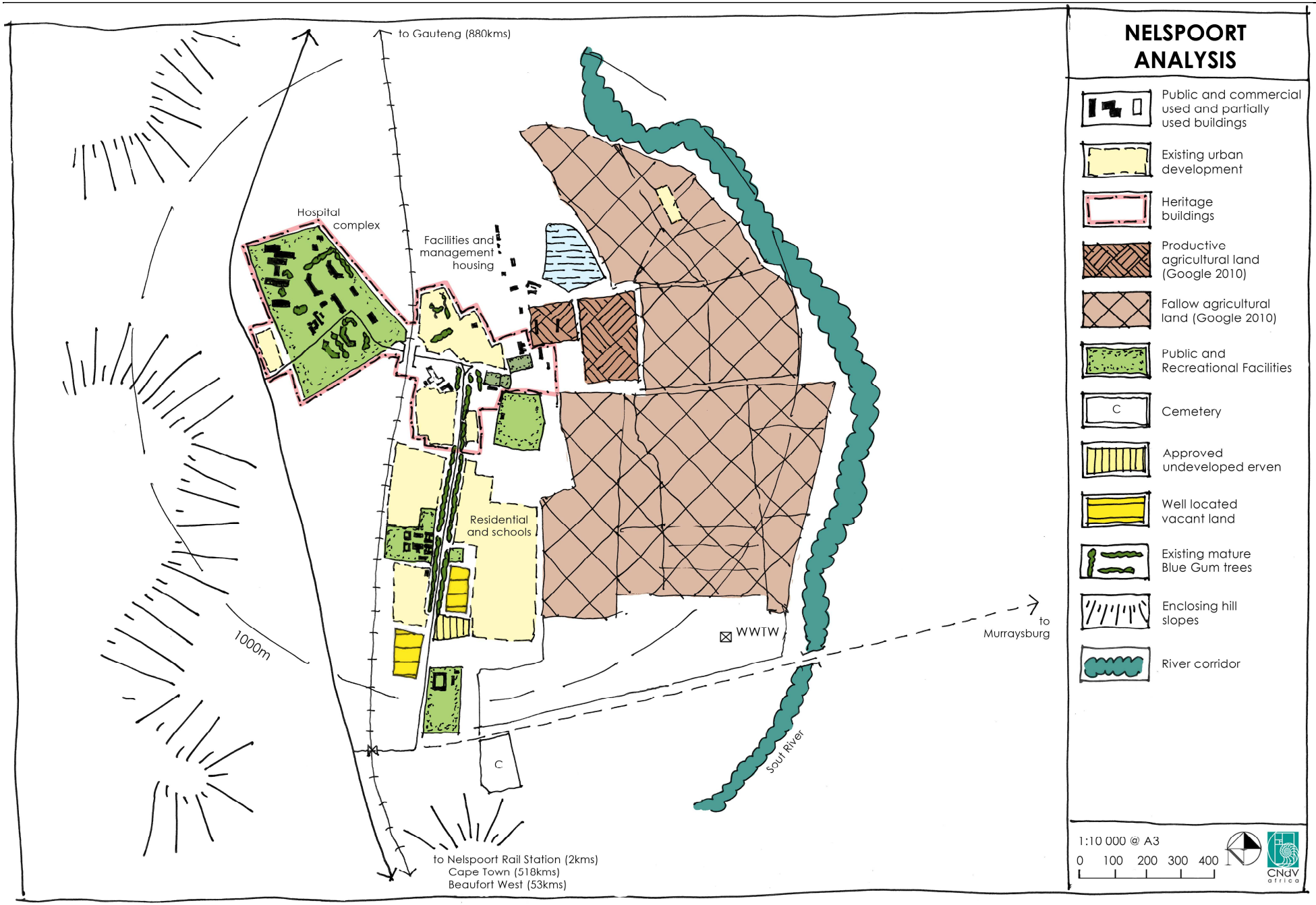


Figure 5.12.1.2 Nelspoort: Analysis

5.12.2 NELSPOORT: DRAFT SPATIAL DEVELOPMENT FRAMEWORK, see Figure 5.12.2.1

General: Although the hospital was once a national facility currently it only serves the Central Karoo District for TB patients and psychiatry patients and is managed by a Matron.

Nelspoort has four assets to build on:

- The health facilities and institutional buildings ,although many are in a poor state of repair and under used, have potential as a large heritage precinct;
- Excellent climate;
- Relatively good agricultural land which is also currently underutilized; and,
- Remote location which nevertheless is served by good road and rail infrastructure not too far from the N1.

This suggests that, in addition to the proposed hospital extension program underway (noted in IDP 2007-2012) it would be a good location for a large leadership academy/rehabilitation centre that could address the various social problems increasingly affecting communities in the large cities as well as the platteland. The sub-regional location makes the settlement suitable for offering tourist opportunities that could include the Khoi and Bushman history of the area (rock bells, paintings and engravings) Anglo Boer War as well as the sanatorium's history. The farming operations should be restored and this could also form the basis of a local value chain via an on-site farmers market and supplying Beaufort West.

5.12.2.1 Core landscape areas

- Nelspoort should retain its heavily treed character which forms a strong part of its sense of place but begin to replace the current Blue Gum trees with suitable indigenous water wise species; and,
- Restore farming to the large area of prepared lands currently lying fallow.

5.12.2.2 Urban Development

- The settlement is exceptionally well endowed with various education and community facilities and all that is generally required is their restoration rather than the construction of new facilities; and,
- In general no new housing should be provided for as a large number of units have been recently built, there is suitable land if needed along the main entrance road and the short to medium term focus should be on promoting economic activity and job creation rather than more residential opportunities.

5.12.2.3 Heritage Areas

- The northern part of the settlement should be restored as a heritage precinct. This could be coupled with history tours through the hospital grounds and farming area and a coffee shop and B&B facilities operating somewhere out of the large stock of currently underused buildings.

5.12.2.4 Urban Restructuring

- Create continuous link avenue between the two main entrances to the settlement including the hospital, facilities and residential areas; and,
- All gateways into town should be enhanced to improve its sense of arrival.

Replace existing blue gums with indigenous trees on a phased basis so as to retain visual quality

Restore heritage buildings to their original use as well as to serve as tourism attraction (walking tours)

Bring agricultural land to full production

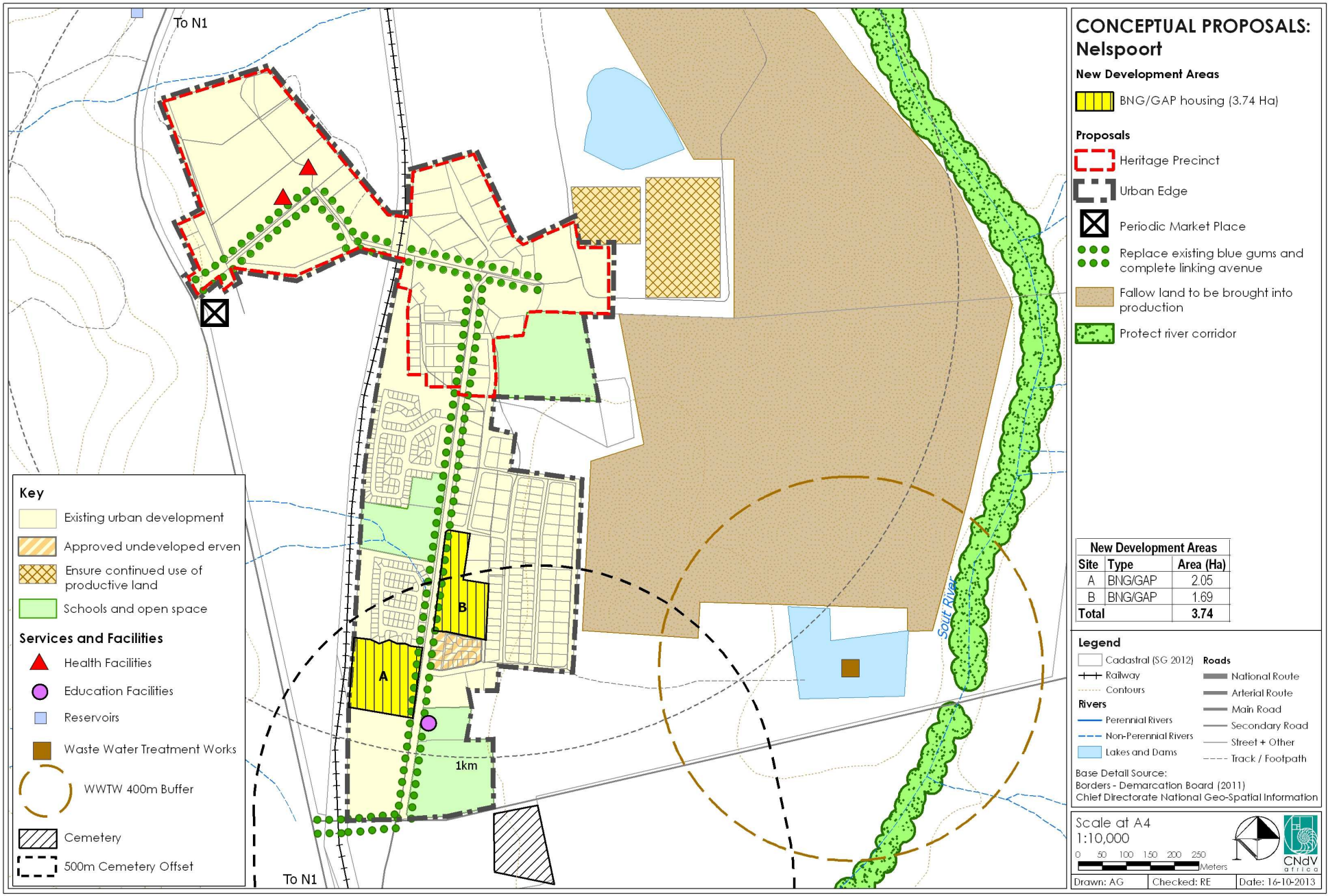


Figure 5.12.2.1 Nelspoort: Spatial Development Framework

5. CONCEPTUAL DEVELOPMENT FRAMEWORK

5.1 SPATIAL VISION

This section sets out the Vision for the SDF.

5.1.1 SPATIAL VISION AND CORE IDEAS

The Vision for the Municipality is as follows:

- "***Wilderness tourism and transport gateway to the people, mountains and plains of the Central Karoo"***

  The implications of this vision are as follows:

- Beaufort West town has a responsibility to present itself as a welcoming and convenient centre for catering for the needs of through travelers as well as to attract visitors to spend time in the sub-region;
- An important aspect of improving the presentation of the town is constructing the proposed bypass to remove heavy truck traffic from the main street. It is important to note the following:
  - The proposal should be implemented in a manner so that is does not detract from the economic activity that supports the town – namely fuel and refreshment purchases which are a result of private cars, buses, taxis and freight trucks stopping to refuel;
  - Cars, taxis and buses bypassing the town is not desirable and should be prevented; and,
  - It is envisaged that facilities for cars, taxis and buses not be permitted along the proposed freight route.
- Promoting urban tourism opportunities in the municipality's settlements will require upgrading their main streets, the creation and management of heritage precincts where appropriate and considerable effort into creating a town and township tourism culture based on B&Bs, restaurants and cultural activities such as the music for which the region has become well known (Karoo Kitaar Blues);
- Beaufort West should position itself as a tourist destination due to its expansiveness and desolation, particularly the areas north of the town in the Karoo National Park and the surrounding mountain regions;
- The main rural economic resource outside of eco-tourism is extensive agriculture. The growth of this resource depends on improving the carrying capacity of the land through good veld management practices;
- Wildlife preservation continues to be an issue in the Karoo. The preservation of biodiversity will require 'Fair Game' practices to be employed in sheep farming. 'Karoo Lamb' must become a trademark geographic indicator to increase its value and contribution to the economy;
- Accessibility and mobility issues, which are dire, can only be addressed if a Rural Integrated Public Transport Network is implemented, which provides periodic, affordable, reliable and safe services. Current costs of transport are affecting the poor;
- Intensive engagement should continue with the shale gas exploration open cast uranium mining proponents to successfully resolve the following issues to protect the long term interests of the municipality and its residents:
  - Maximizing job opportunities for locals and identify what skills training will be required so that they, and not outsiders, receive job benefits;
  - Ensuring that the nature and location of any infrastructure maximizes long term benefits – e.g. staff housing should be located in existing settlements;
  - Rehabilitation plans, including proper top soil stock piling, are prepared and implemented on a phased basis as extraction proceeds and not left until all extraction is completed. Mines should be prevented from starting further production phases until rehabilitation milestones of open cast pits or well head pads have been achieved;
  - Key areas such as CBAs, conservancies and stewardship areas and visually sensitive landscapes contributing to long term heritage and tourism opportunities should be off limits to mining and shale gas exploration;
  - As can be seen from Figures 5.1.1 (Wyoming) and 5.1.2 (New Mexico) the visual impact on the Karoo landscapes could be severe considerably diminishing their long term tourism appeal unless they are properly rehabilitated;
  - One of the potential impacts of shale gas exploration is the anthropogenic contamination of underground water aquifers;
  - It should be noted that both Beaufort West and Nelspoort are in a state of potential and, from time to time, actual crisis regarding their water supplies. These are increasingly dependent on groundwater as surface water sources have been inadequate for a number of years in spite of wide ranging water demand management efforts although there is not much evidence of rainwater harvesting, especially in new low income housing areas;
  - However, in recent years water demand has increased while recharge has decreased due in part to below average rainfall (<250mm p.a.) Beaufort West's boreholes have experienced a one metre per annum

drop in the water table; (Water Services Development Plan 2011/2012, p 28);

- Nelspoort is reliant on the Sout River aquifer whose recharge is considerably weakened by the highly degraded soil and vegetation conditions in the basin above. This is an important motivating factor for the biodiversity restoration of this bio-region;
- Beaufort West is exploring aquifers such as Rytkuil to the south of the town. However, this also underlies a potential open cast uranium mine;
- Clearly if the water supplies of these settlements is undermined or compromised their future will be in question; and,
- Short term impacts of shale gas extraction will include transport and traffic and issues around accommodating mining crews (roughnecks), physically (housing) and socially (employment, recreation, entertainment. schooling, health– HIV, alcohol, drugs; crime and prostitution).

Figure 5.1.1 Fracking in Pinedale, Wyoming (www.empowernetwork.com)

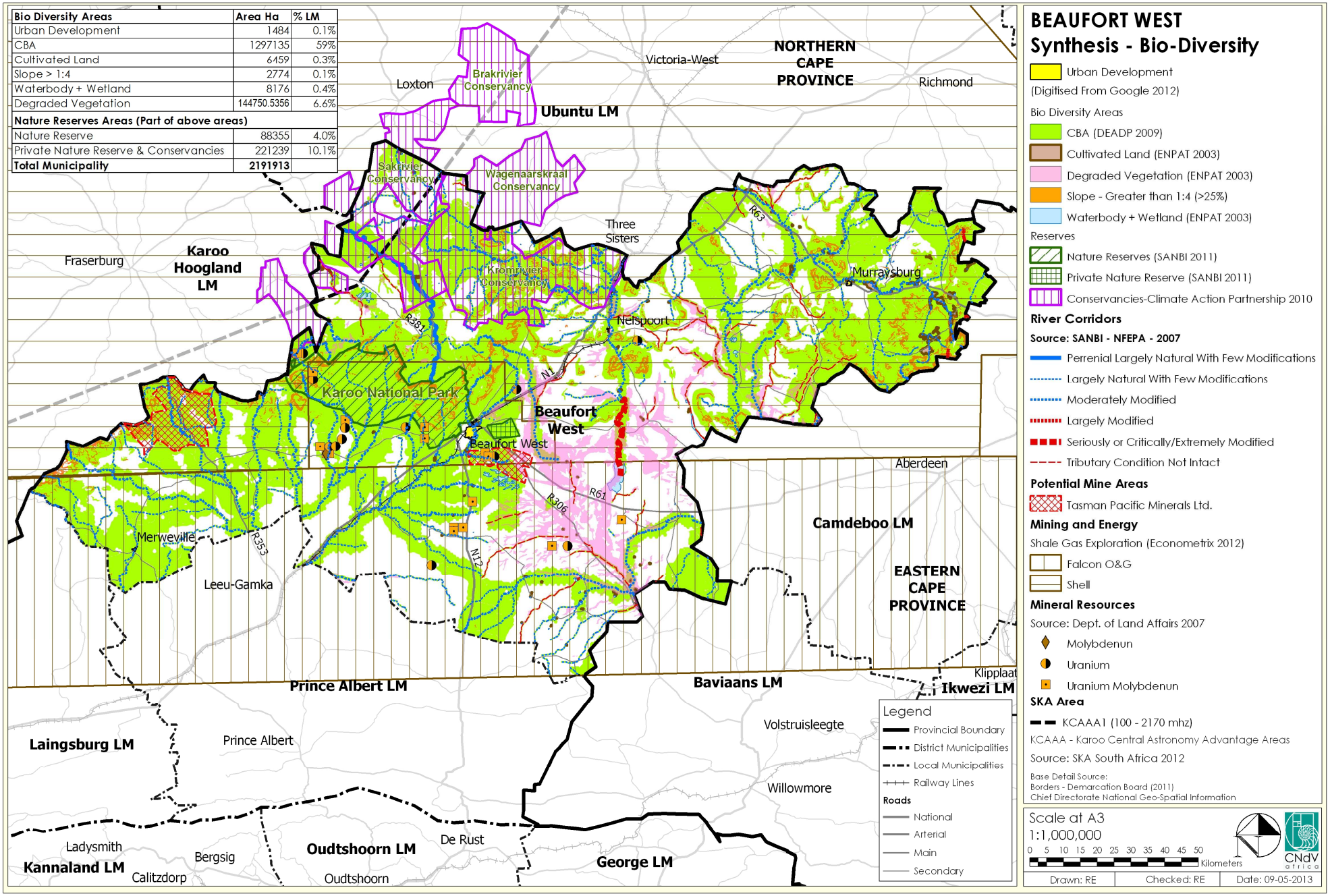
Figure 5.1.2 Fracking near Aztec Ruins and Mesa Verde, New Mexico
(Google Earth, 2009)

5.2 MACRO-CONCEPTUAL FRAMEWORK

5.2.1 NATURAL SYSTEMS SYNTHESIS, see Figure 5.2.1.1

Figure 5.2.1.1 indicates four distinct natural systems arising out of the synthesis of the natural systems found in the municipality. Issues identified include:

- Relatively dry with rainfall in the south approx. 100 – 200mm, Nuweveld mountains to the north approx. 200 – 300mm and highest rainfall in the east near Murraysburg in the Sneeuberg mountains, 300 – 600mm;
- Geologically part of the Karoo Basin which has been identified as having shale gas potential. The entire municipality falls under either the Shell (north of Beaufort West) or Falcon O&G (south of Beaufort West) exploration areas , with the exception of an area that appears to exclude the Karoo National Park;
- Two large areas in the municipality under investigation for open cast uranium mining potential; around the R353 between Leeu Gamka and Fraserburg and just south of Beaufort West near the R61 to Aberdeen;
- Annual Horizontal Solar Radiation is fairly high – 2000 – 2100 KWh/m^2 increasing towards the north. Similarly wind speeds of 6 – 8m/s are also fairly high. Both these sources could be potential energy generators;
- The landscape comprises a backdrop of the Nuweveld Mountains fringing the northern border of the municipality at which Beaufort West is located at the southern tip and a large flat plain containing the Gamka and Sout River valleys. The topography around Murraysburg is distinctly different containing foothills rising to the Sneeuberg range in the south;
- The rivers are almost all non-perennial and are generally classified as largely to moderately modified, i.e. their quality and quantity in relation to their original status is largely satisfactory. However, the rivers in the Sout River catchment are in a highly modified and poor state, in keeping with the generally highly degraded state of this area;
- Most of the vegetation falls under the Nama Karoo biome comprising Upper and Lower Karoo vegetation types with some Dry Highveld Grassland west of Beaufort West;
- Critical Biodiversity Areas (CBAs) comprise mainly the Upper and Lower Karoo vegetation types;
- The highly degraded Sout River basin comprises almost all this Grassland as well as large expanses Lower Karoo Vegetation.
- However, because there is so much of these vegetation types elsewhere, presumably because of their highly degraded state in this area and their prevalence elsewhere the Grassland areas are not considered CBAs nor Critically Endangered nor Endangered;
- In the instance of the highly degraded Sout River basin these classifications are considered problematic as they do not highlight the serious need for veld rehabilitation in this area which could become a dustbowl;
- The CBAs in the northern areas already enjoy significant protection with 88 000 ha (4% of municipality) in the Karoo National Park and 221 000 ha (10%) under private conservation;
- This contribution by the private sector to bio-diversity conservation goals can be considered a significant success of the stewardship and conservancy policies as it has saved considerable public resources;
- As well as a bio-diversity resource, extending the conservation of these CBAs will also contribute to increasing opportunities in the eco-tourism sector;
- Not surprisingly, in view of its geology and climate, agriculture comprises mainly extensive stock farming with some R50m p.a. derived from mainly from sheep and some cattle farming and R7m p.a. from crop farming, mainly maize; and,
- There is only approx. 6 500 ha of cultivated land of which only 1 000 ha is irrigated, mostly around Murraysburg.



Bio Diversity Areas	Area Ha	% LM
Urban Development	1484	0.1%
CBA	1297135	59%
Cultivated Land	6459	0.3%
Slope > 1:4	2774	0.1%
Waterbody + Wetland	8176	0.4%
Degraded Vegetation	144750.5356	6.6%
Nature Reserves Areas (Part of above areas)		
Nature Reserve	88355	4.0%
Private Nature Reserve & Conservancies	221239	10.1%
Total Municipality	**2191913**	

Figure 5.2.1.1 Beaufort West Municipality: Natural Systems Synthesis

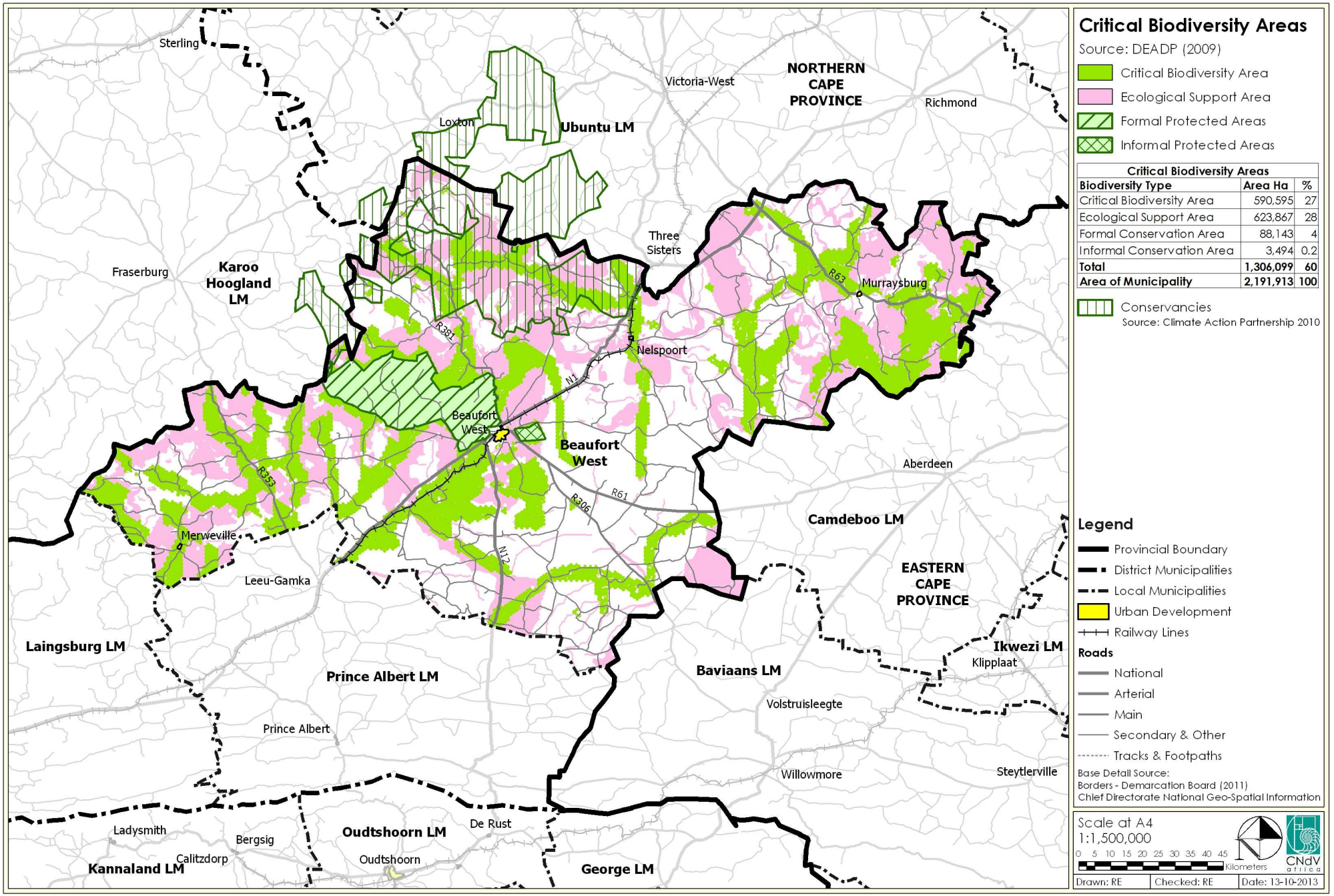


Figure 5.2.1.2 Critical Biodiversity Areas (DEA&DP, 2011)

5.2.2 SOCIO-ECONOMY AND BUILT ENVIRONMENT SYNTHESIS, see Figure 5.2.2.1

- The municipal population seems to have seen significant growth from 2001 (±43 000) to 2011 (±50 000);
- This 'growth' may largely be attributed to the inclusion of the DMA into Beaufort West Local Municipality in 2009/10, which includes Murraysburg and surrounding farms, and not necessarily natural or in-migratory growth;
- Agricultural employment appears to have declined from ±1 400 in 2001 to ± 700 in 2011. This decline is likely to resulted in migration from the rural areas to Beaufort West town;
- The share of population as per Census 2011 is thus:
  - Rural areas 7 141
  - Merweville 1 592
  - Murraysburg 5 069
  - Nelspoort 1 696
  - Beaufort West 34 069
- Beaufort West town is by far the most important settlement in the municipality. It also plays a sub-regional role serving other small towns beyond its boundaries, particularly to the west, e.g. Victoria West, Fraserburg, and Loxton. People living in settlements to the east, e.g. Willowmore, Prince Albert, are more likely to use Oudtshoorn and George.
- It is also a major refueling and service stop on the N1 highway for trucks and is an important station on the national rail route between Cape Town and Gauteng;
- The activation and reinvigoration of the rail network is seen as central to reviving the economy and the vitality of the Karoo towns;
- The municipality is well served by hospitals with one in Beaufort West, Murraysburg and Nelspoort (district TB and psychiatric hospital);
- There are also clinic facilities in these centres as well as in Merweville and there is a rural clinic on the N12 towards De Rust;
- Beaufort West and Murraysburg have high schools and there are intermediate schools in Merweville and Nelspoort;
- The municipal employment structure is undergoing structural change mainly as a result of changes in its historical main economic resource, agriculture, and the rise in importance of Beaufort West town as a regional economic service centre.
- Agriculture, previously (2001 2nd highest employer has now slipped to 5th place, and manufacturing, financial services and households (domestic work) have overtaken it. Government services, already previously the most important employer. has increased even more;
- These employment changes have mainly occurred in Beaufort West and reflect its increasing importance as a wholesale and retail centre; two shopping centres have been constructed and it serves as a tourism gateway to the sub-region and a government services centre;
- There is also increasing manufacturing employment, also largely reflecting the demand for repairs and maintenance of surrounding tourism enterprises and, most significantly, the N1 road and rail traffic;
- Although there are significant pockets of poverty particularly in Beaufort West Town and, to a much smaller extent in the other settlements, and unemployment levels remain high, (25.5%) they appear to have declined from an all time high of 39% in 2001;
- There are 14 land reform projects in the area. However, they are almost all situated in the degraded land to the south of the R61, an area identified in the previous section as requiring extensive rehabilitation of its rivers and bio-diversity. Overcoming this extreme degradation imposes an additional burden on emergent farmers;
- One area of potential opportunity is that both urban and rural properties are reasonably priced compared to other parts of South Africa although this does also reflect low demand;
- Beaufort West town and Murraysburg, to a lesser extent, have significant concentrations of potentially heritage worthy buildings which, if conserved and their surrounding precincts properly managed, can create the basis of a tourism industry based on this resource. There are also a number of historic homesteads in the municipality whose use for tourism purposes should be encouraged. Merweville also has a few heritage worthy buildings including the church and some residential dwellings. The older buildings in Nelspoort were built in the 1920s and there are a large number older than 60 years;
- Beaufort West town has a small airport which received scheduled air services from the 1940s to the 1960s at which point land based transport services improved to the extent that this level of service was no longer viable. However, the airport remains an important resource to serve both the business and tourism should these two sectors develop. The mining industry, particularly with regards to shale gas extraction, and uranium mining, if their various challenges regarding visual impact, bio-diversity rehabilitation, water resource protection and social impact can be resolved, may also become an important user of air travel; and,
- Major infrastructure passes through or near Beaufort West town including:
  - N1 highway between Gauteng and Cape Town, a major national freight route;
  - Cape Town – Gauteng freight and passenger rail link which has been losing traffic to road;
  - 132kv electricity power lines transmitting electricity from the north to the Cape; and,
  - Cape Town – Gauteng fibre optic cable currently under construction.

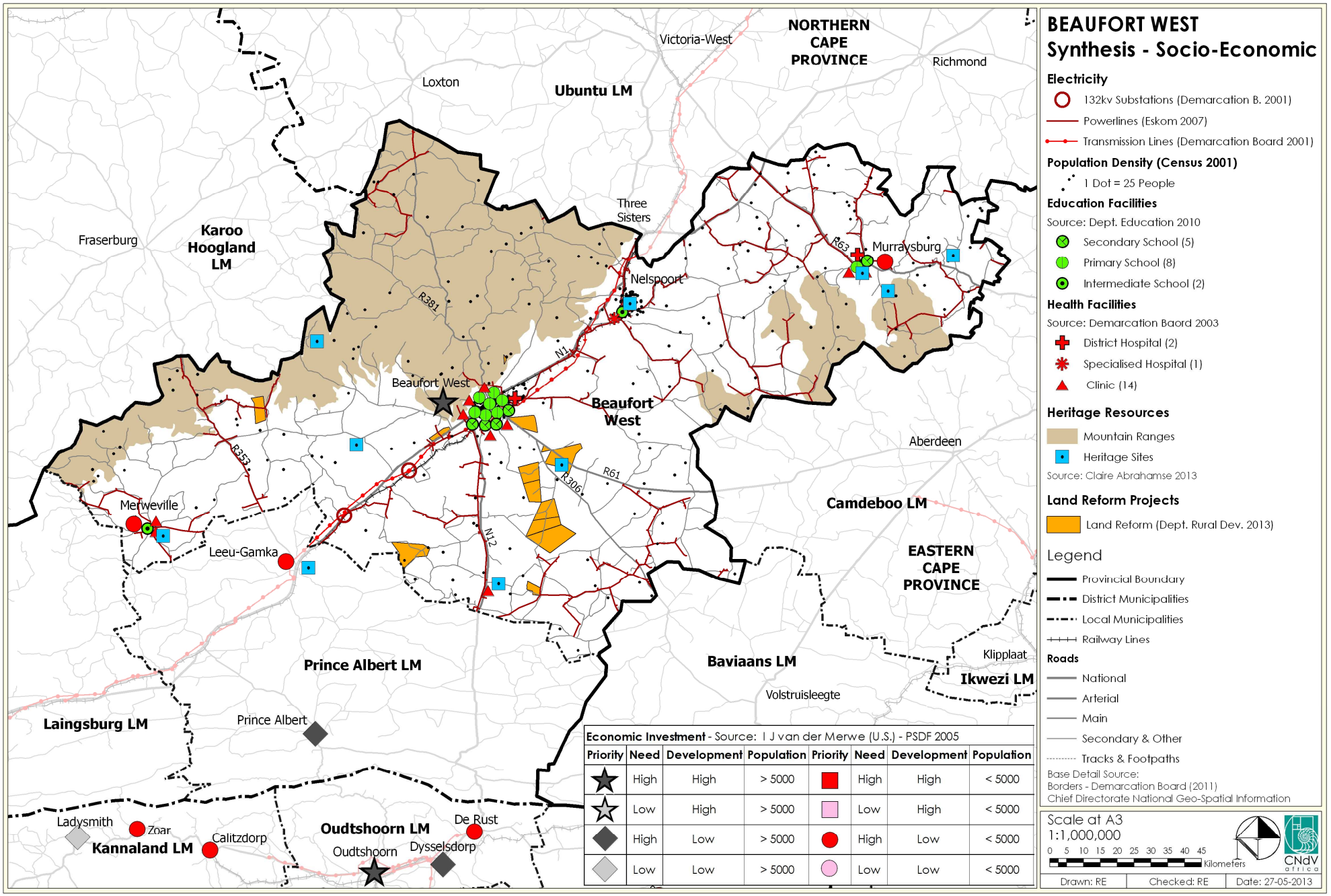
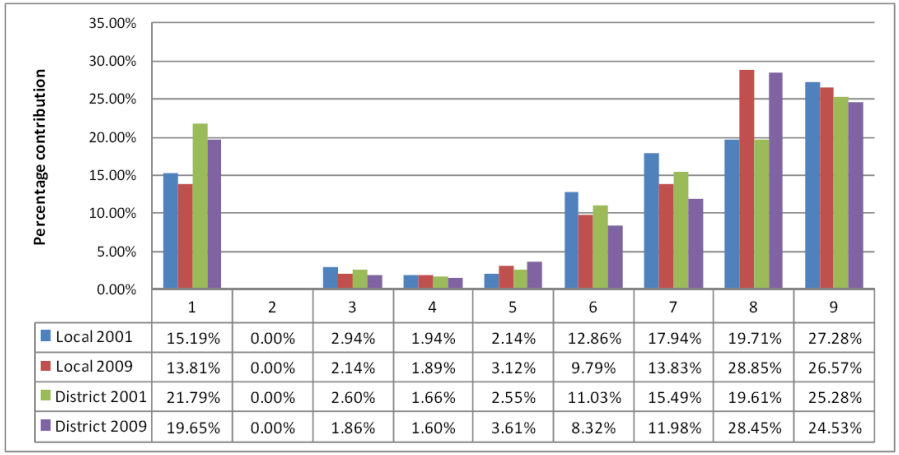


Figure 5.2.2.1 Beaufort West Municipality: Socio-economic Synthesis

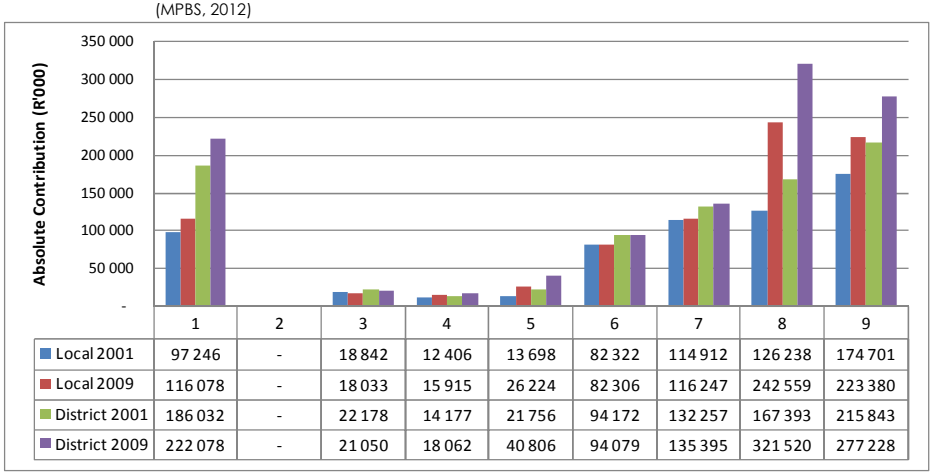
5.2.3 SECTOR GVA CONTRIBUTIONS, Graph 5.2.3.1 and 5.2.3.2

- This information, taken from Western Cape Provincial Treasury data (2010) indicates a decline in most economic sectors with the exception of financial services;
- A slight increase is also indicated in construction but this is likely to be related to the boom of 2002 – 2007. As construction's demand is derived from activities in other sectors it is likely to have subsequently declined as well;
- It can be seen that there is no mining at present. However, this could change significantly in the time period of the SDF, namely 5 to 10 years, if current investigations into shale gas extraction and uranium mining prove successful. It will be important to keep a close watch on developments in this sector;
- There should be a focus on improving opportunities in the wholesale and retail, transport, storage and communication and financial services sectors. Mining may or may not provide a silver bullet to give significant impetus to the development of these sectors. This possibility should not distract from the need to continuously make improvements to existing operation in these sectors. for instance;
  - Enhancing eco, agri and heritage tourism opportunities by increasing the land under conservancies, creating well managed and maintained heritage precincts in the settlements that attract visitors and even permanent residents, and improving human resource skills to serve this industry;
  - Improving veld carrying capacity and therefore the numbers of stock that can be carried in the farming areas through veld management practices such as rotational grazing;
  - The possibility of attracting middle and upper income permanent residents either as retirees or as business entrepreneurs wanting to escape from the city should also be pursued. For instance Murraysburg's hospital, if properly staffed and managed and if the town was well maintained, could attract such residents wishing to retreat from the cities.
- Opportunities for improving urban quality should also be explored in Beaufort West town particularly along the main street. Building the long awaited freight route could create important opportunities in this regard.



	1	2	3	4	5	6	7	8	9
Local 2001	15.19%	0.00%	2.94%	1.94%	2.14%	12.86%	17.94%	19.71%	27.28%
Local 2009	13.81%	0.00%	2.14%	1.89%	3.12%	9.79%	13.83%	28.85%	26.57%
District 2001	21.79%	0.00%	2.60%	1.66%	2.55%	11.03%	15.49%	19.61%	25.28%
District 2009	19.65%	0.00%	1.86%	1.60%	3.61%	8.32%	11.98%	28.45%	24.53%

Graph 5.2.3.1 Sector contributions to GVA for the local and district municipal areas in 2001 and 2009 (MPBS, 2012)



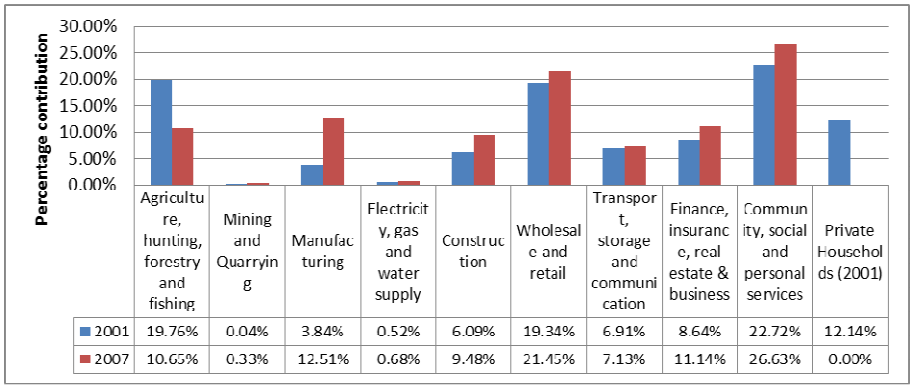
	1	2	3	4	5	6	7	8	9
Local 2001	97 246	-	18 842	12 406	13 698	82 322	114 912	126 238	174 701
Local 2009	116 078	-	18 033	15 915	26 224	82 306	116 247	242 559	223 380
District 2001	186 032	-	22 178	14 177	21 756	94 172	132 257	167 393	215 843
District 2009	222 078	-	21 050	18 062	40 806	94 079	135 395	321 520	277 228

Graph 5.2.3.2 Sector contributions to GVA in Rand terms for the local and district municipal areas in 2001 and 2009 (MPBS, 2012)

Legend:
1 Agriculture, hunting, forestry and fishing
2 Mining and quarrying
3 Manufacturing
4 Electricity, gas and water supply
5 Construction
6 Wholesale and retail
7 Transport, storage and communication
8 Finance, insurance, real estate and business services
9 Community, social and personal services
Note: Mining and quarrying at the local level registered no activity in 2001 and 2009
Source: Adapted from Western Cape Provincial Treasury (2010)

5.2.4 SECTOR EMPLOYMENT CONTRIBUTIONS, Graph 5.2.4.1

- It is interesting to note there are more sectors where employment is increasing than GVA;
- While there is concern that this pattern suggests declining incomes, because the social cohesion of a municipality lies with the extent to which its population has access to economic opportunities and therefore employment, this pattern should generally be regarded as good news. This is because it would seem that there is a greater propensity to employment than GVA contribution in all sectors except agriculture;
- This is not to say that all is well and good as it is seen that unemployment is still around 25% although some of the negative impacts of this are likely to be alleviated by social grants;
- However, this also means that particularly Beaufort West town is likely to attract a significant amount of in-migration attracted by the greater **possibility** of finding work, not necessarily because there are actual jobs available. As this in-migration is likely to happen at a faster rate than the infrastructure of the town can develop informal settlements are likely to increase and grow;
- Notwithstanding this concern, the following areas of focus can be identified in which the municipality has significant advantages:
  - Manufacturing – repairs and maintenance to the agriculture, transport and tourism industries;
  - Construction – derived from growth in the other sectors;
  - Wholesale and retail – servicing mainly N1 road traffic and the needs of surrounding rural settlements and communities, particularly in the tourism industry;
  - Transport, storage and communication – taking advantage of Beaufort West town's strategic location on national road and rail transport, fibre optics and electricity transmission line routes;
  - Finance, insurance and real estate – as the secondary sectors grow and become more sophisticated they will require increasing support from this sector;
  - This sector also contains much of the tourism industry which has significant resources in the municipality which can be increased over time;
  - Community services – due to Beaufort West town's central location on the N1 and in the region, demand for these services is likely to grow over time.



Graph 5.2.4.1 **Sector contribution to Employment** (MPBS, 2012)

5.2.5 BROAD SPATIAL CONCEPT

Figure 5.2.5.1 shows the broad Conceptual Spatial Development Framework for the Municipality.

There are five main structuring elements:

- The N1 road and adjacent rail route is the main transport and socio-economic artery through the municipality, significantly increasing its opportunities compared to other similar sized municipalities not enjoying such access.

- The Nuweveld Mountains to the north form an impressive scenic backdrop to the municipality. They contain large areas of significant CBAs and most of the formal and informal conservation areas – 14% of the total area are found here;

- The Gamka river basin contains the settlements of Beaufort West town and Merweville and is mostly used for extensive farming – small stock grazing;

- South of Beaufort West is a large area of significantly degraded land in the Sout River basin with extremely low stock carrying capacity and low concentrations of people. It can be clearly seen on Figure 5.3.1.2. This area requires extensive rehabilitation if it is not to become a dustbowl;

- To the west Murraysburg forms an almost separate eco and social system. It is not directly linked to Beaufort West but is accessed off the R63 between Graaff Reinet and Victoria West. It is the highest, wettest and most fertile part of the municipality where most of the small areas of intensive farming are found, particularly in the west. In the south the landscape rises up to the Sneeuberg. It is 91kms from Graaff Reinet in the Eastern Cape and 158kms from Beaufort West. This remote location creates a significant challenge as it depends on services delivered from Beaufort West.

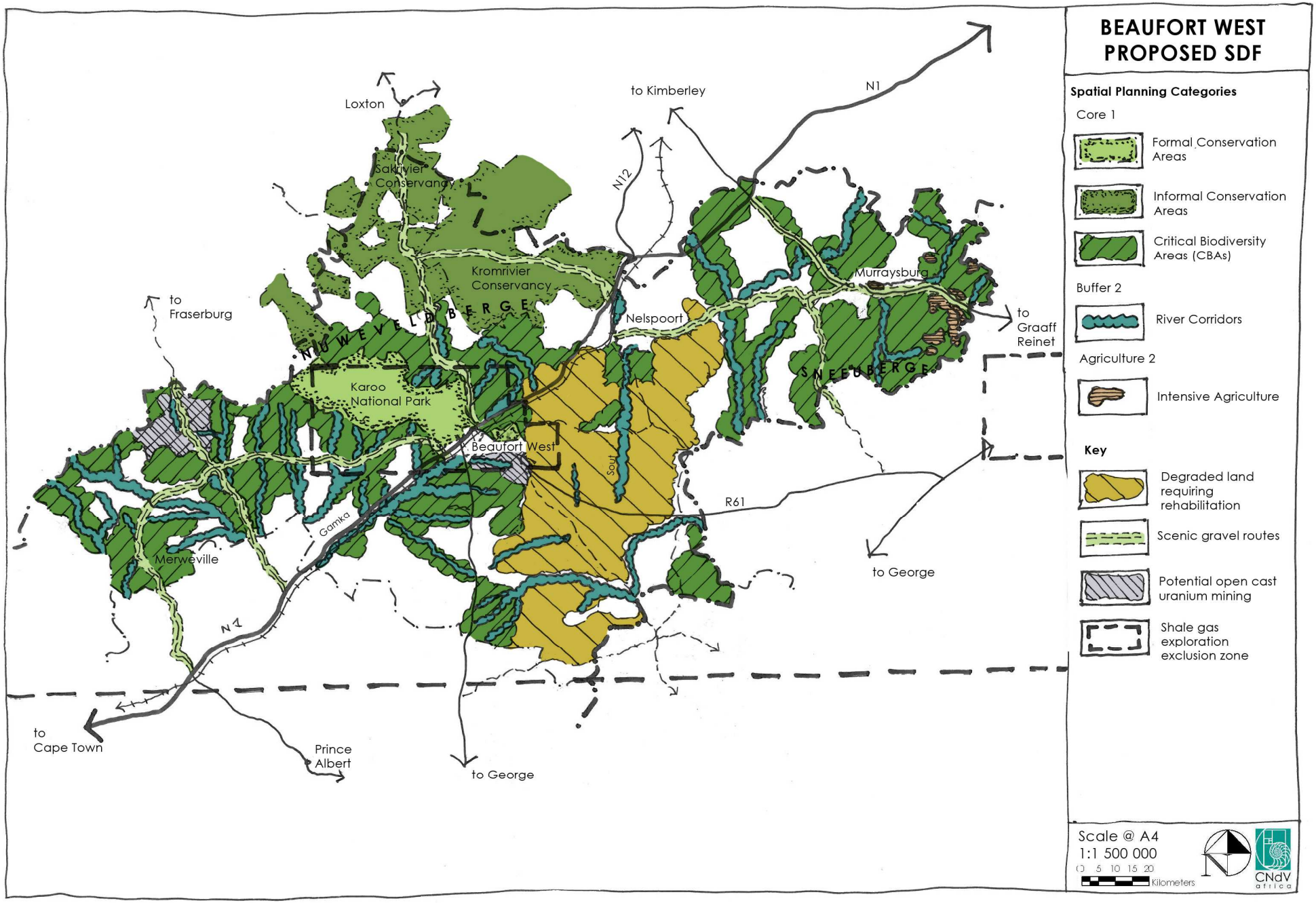


Figure 5.2.5.1 Beaufort West Municipality: Broad SDF Concept

5.3 MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK

The spatial development framework for the municipality comprises the following elements:

- Bio-regions;
- Spatial Planning Categories (SPCs);
- Sustaining the Economy
- Major Infrastructure Projects;
- Major Tourism Destinations;
- Land Reform;
- Urban Related Development;
- Urban Design Guidelines;
- Potential Rural Nodes and Periodic Rural Markets; and,
- Settlement Hierarchy;

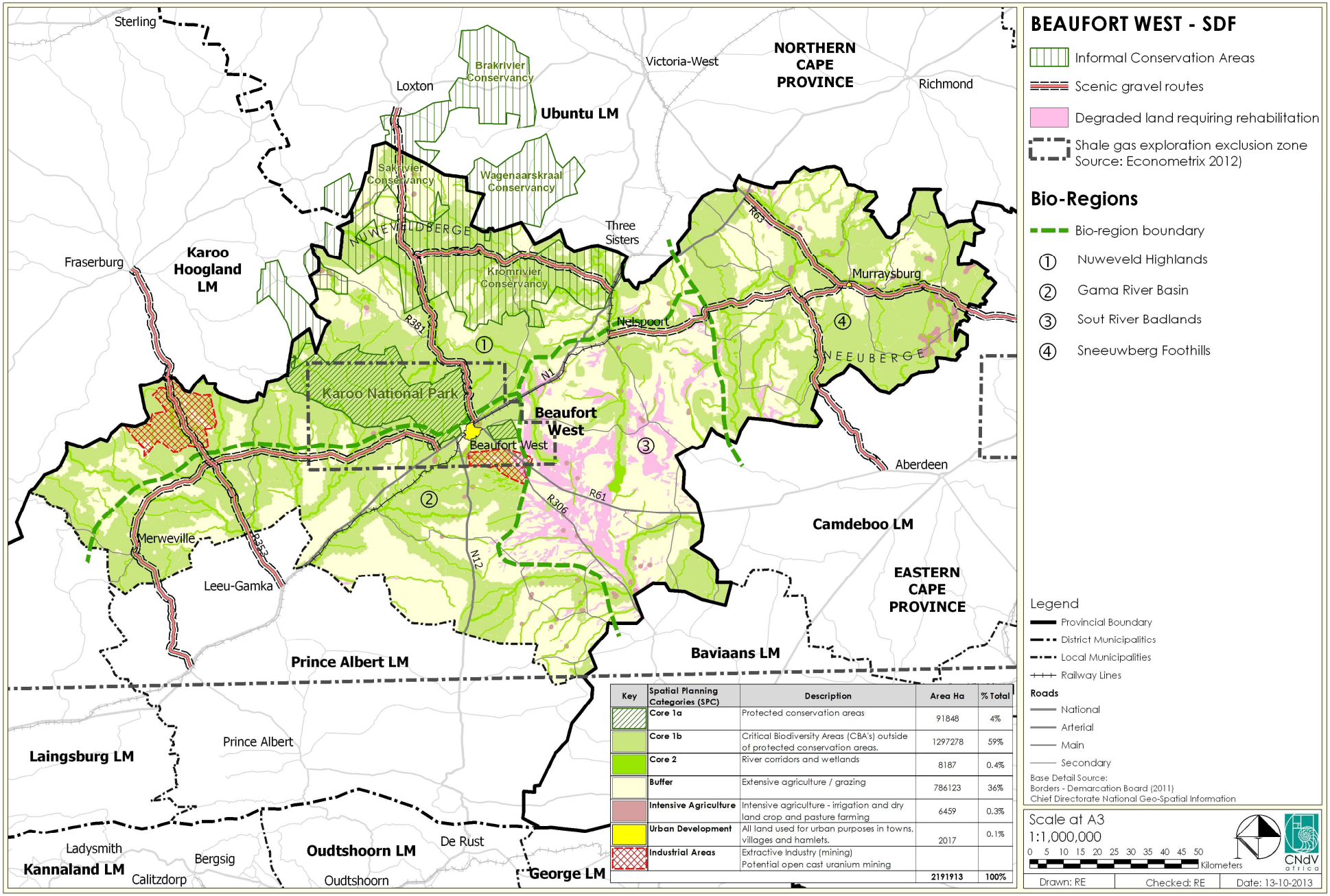


Figure 5.3.1 **Beaufort West Municipality: Spatial Development Framework**

5.3.1 BIO-REGIONS

Section 5.2.1 identified four bio-regions that can be distinguished in terms of the natural environment and economy as shown in Table 5.3.1.1. They are shown on Figure 5.3.1.1.

The bio- regions are:

- Nuweveld Highlands;
- Gamka River Basin;
- Sout River Badlands; and,
- Sneeuwberg Foothills.

Table 5.3.1.1 shows the characteristics of the four bio-regions.

General: Investigate the removal of conservancies and stewardship areas as well as formally protected land like National Parks from the shale gas exploration areas.

5.3.1.1 Nuweveld Highlands

NH1 Promote this area as a bio-diversity and eco-tourism sub-region and encourage the extension of the Karoo National Park and the existing conservancies including accommodation opportunities focusing on Critical Biodiversity Areas (CBAs);

NH2 In extensive farming areas outside of formal and informal conservation areas and including CBAs improve the overall bio-diversity through good veld management practices and rotational grazing methods such as Acocks or Savoury;

NH3 Focus on the rehabilitation of river corridors as the first step in this process;

NH4 Encourage use of rural roads as scenic self-drive and MTB routes; and,

NH5 Ensure proper mine rehabilitation plans including top soil stockpiling are in place before mining commences and that mines are prevented from future phases of mining until agreed rehabilitation milestones are achieved.

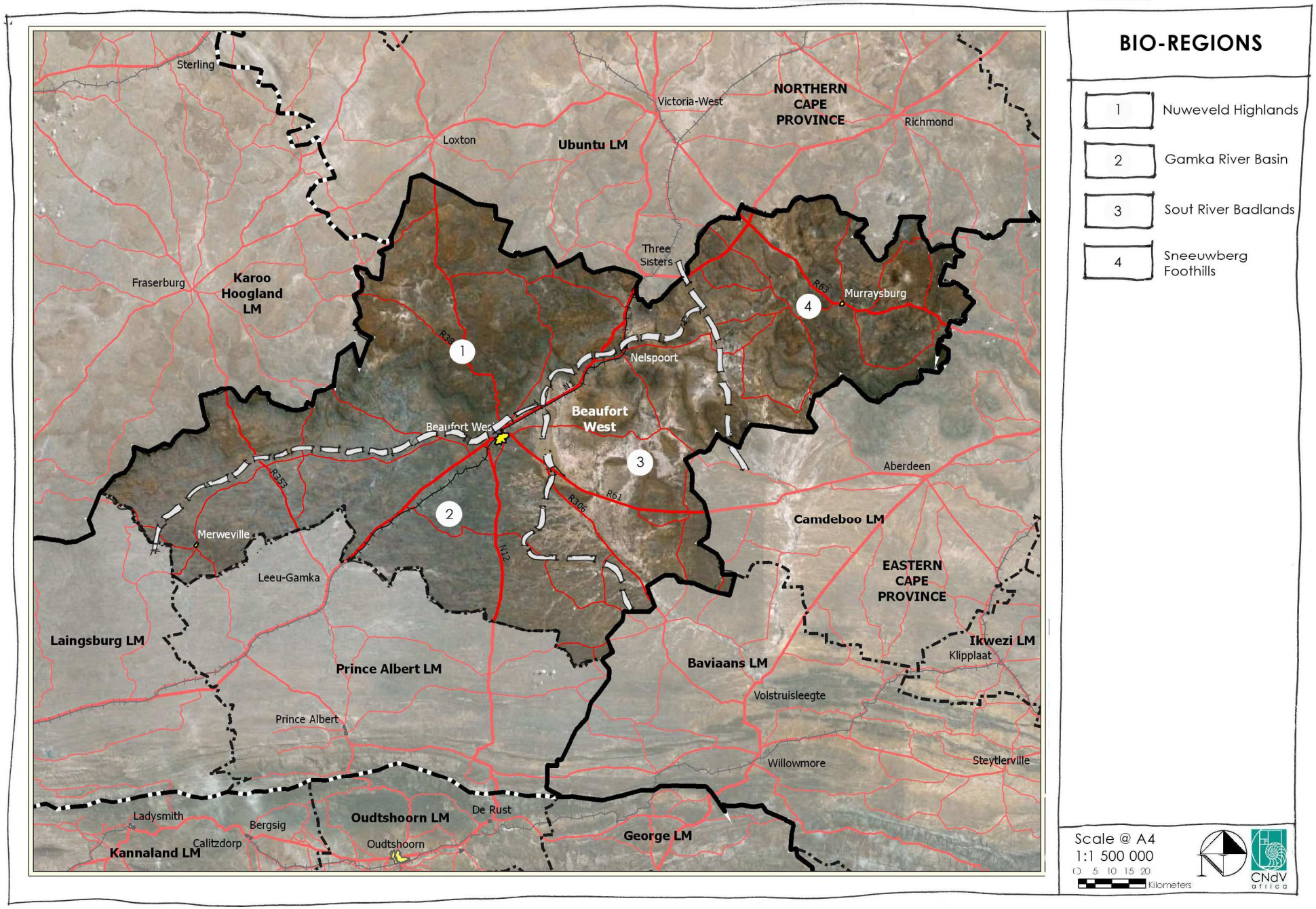


Figure 5.3.1.1 Beaufort West Bio-regions

5.3.1.2 Gamka River Basin

GR1 **Promote bio-diversity conservation of CBAs and river corridors well as land to be retained for extensive agriculture through the creation of conservancies and good veld management practices and rotational grazing methods such as Acocks or Savoury.**

5.3.1.3 Sout River "Badlands"

SRB1 **Implement extensive veld rehabilitation programs to restore the Nama Karoo and Dry Karoo Grasslands and water courses as a matter of urgency.**

5.3.1.3 Sneeuwberg Foothills

SF1 **Protect all potential and existing arable land (intensive agriculture) as the most important economic rural land from other uses;**

SF2 **Promote bio-diversity conservation of CBAs and river corridors well as land to be retained for extensive agriculture through the creation of conservancies and good veld management practices and rotational grazing methods such as Acocks or Savoury;**

SF3 **Encourage use of rural roads as scenic self-drive and MTB routes.**

	Nuweveld Highlands	Gamka River Basin	Sout River Badlands	Sneeuwberg Foothills
Altitude (m)	1250-1750	750 - 1250	750 – 1250	1250 - 2000
Population distribution	Very few rural - few – isolated farmsteads and conservation areas	Beaufort W. 34 000 Merweville 1500	Nelspoort 1600	Murraysburg 5000 Rural areas – ± 7 000
Agriculture	Stock farming	Stock farming – better quality veld	Stock farming – low carrying capacity	Mainly extensive, some dryland crops– 5 000 ha Irrigation 1000 ha
Mining	Potential open cast uranium mine on R353 Shale gas exploration except Karoo National Park	Potential open cast uranium mine on R61 Shale gas exploration	Shale gas exploration	Shale gas exploration
Bio-diversity	Extensive CBAs Nama Karoo	Some CBAs Nama Karoo	Excessive degradation Nama Karoo and Dry Karoo Grassland	Extensive CBAs Nama Karoo
Tertiary	Eco and agri-tourism - hunting	Eco and agri – tourism – hunting, Transport, wholesale, retail and services – Beaufort West town	Possibly some eco-tourism - hunting	Eco and agri-tourism - hunting
Renewable energy potential	Fairly good solar Fairly good wind	Fairly good solar Fairly good wind	Fairly good solar Fairly good wind	Fairly good solar Fairly good wind
Hydrology	Source of numerous non-perennial in relatively undisturbed state	Gamka river basin with rivers in relatively undisturbed to disturbed state	Sout River in extremely disturbed state needing significant rehabilitation including many other non-perennial rivers in bio-region	Numerous perennial and non-perennial rivers in good condition
Landscape character	Classical steep mountain ranges forming impressive backdrop to whole municipality westwards from N1	Flat cosmic plains flowing to the south framed by Nuweberg to the north	Flat desert-like cosmic plain inclining to the south	Romantic landscape of rolling hills rising to the Sneeuwberg in south

Table 5.3.1.1 Sub-regions and characteristics

5.3.2 SPATIAL PLANNING CATEGORIES FOR LAND USE MANAGEMENT

The Spatial Planning Categories provide the basis for managing rural land uses. The general conditions guiding what activities may occur within each category are generally in accordance with those set out in Table 5.3.2.1.

	SPC	Description	Policies	Notes	Responsibility
	Core 1a	Formally protected conservation areas	Formally protected areas, including those under SANParks and CapeNature control, should continue to enjoy the highest levels of protection. Further continuous corridors between the mountain and the sea should be promoted. The municipality should engage with the conservation authorities to ensure that economic growth and employment opportunities from these areas are maximized.		Municipality SANParks CapeNature Tourism organisations
	Core 1b	Critical Biodiversity Areas (CBAs) outside of formally protected conservation areas	Conservation of endangered vegetation areas shall be encouraged through the promotion of conservancies and stewardship projects with limited eco-tourism development rights and/or donations to formal conservation agencies. All CBAs should be ground-truthed before they are finalized. Conservation of CBAs should be incentivized through the granting of limited development rights as per the rural Land Use Planning and Management Guidelines for Holiday Accommodation, low density rural housing, low impact tourist and recreational facilities (CapeNature 2010).		Municipality CapeNature Dept of Tourism SANBI
	Core 2	River corridors and wetlands (Ecological Support Areas)	River corridors and wetlands, including ephemeral pans, must be protected from urban, agricultural and mining activities to a distance of at least 32 metres from their banks unless closer setback lines have been determined by a geohydrologist and freshwater ecologist.		Municipality, DWAF, Dept of Agriculture, SANBI
	Buffer	Extensive agriculture / grazing	Rotational grazing and other veld management best practices shall be promoted livestock grazing so as to improve biodiversity and stocking rates		Municipality Dept of Agric
	Intensive Agriculture	Irrigation and dry land crop and pasture farming	All existing and potential land suitable for intensive agriculture shall be protected from conversion to other uses including conservation. Agriculture water demand management must be practiced and intensive agriculture water supplies shall be protected and not diverted to other uses. Investigate methods to bring the agricultural land currently lying fallow back into production if possible.		Municipality Dept of Agric Consultant
	Urban Settlement	All land used for urban purposes in towns, villages and hamlets.	Urban development shall be promoted within urban settlements according to the settlement planning principles, see Section 5.4.		Municipality
	Urban Edge	Outer boundary of urban settlement aligned to protect natural and agricultural resources and to promote more compact settlements	No urban development shall be permitted outside of Urban Edges.		Municipality Dept of Agric

Table 5.3.2.1 Spatial Planning Categories

5.3.3 SUSTAINING THE ECONOMY

- Beaufort West town's strategic location on the N1 means that it is central to a number of strategies to sustain the economy. They include:
  - i. **Servicing road and rail transport, mainly freight and some passenger along the N1** - This is likely to increase as international trade increases after the recession ends and local eco- agricultural (farm stay) and heritage tourism markets increase;
  - ii. **Presenting itself as the tourism gateway to the Central Karoo** - It already occupies a strategic position at the intersection of a number of sub-regional routes from surrounding towns;
    - It is also well placed to service these sub-regional tourism operations as well as self-drive and coach visitors to the SKA as this develops over the next decade;
    - However, it will be important that Beaufort West town significantly improves its appearance and deals with grime and petty crime issues;
  - iii. **Building a freight route and proclaiming and managing the centre of town as a heritage area** – These will be key local strategies to unlock this potential;
- Improving agricultural carrying capacity throughout the municipality using rotational grazing and other strategies will be key to maintaining and increasing GVA and employment as well as upstream agri-industries;
- Implementing these strategies will create a virtuous overlap with achieving bio-diversity conservation goals as improving veld carrying capacity means increasing climax vegetation species;
- An important focus of improved veld management will be addressing the rehabilitation of the Sout River "Badlands" in order to prevent this area turning into a dustbowl with negative agricultural and bio-diversity consequences;
- Maintaining and enhancing the bio-diversity of the river corridors is seen as a key first action in this process. This can be achieved by declaring river set back lines of at least 32 m in which alien vegetation should be eradicated, there should be no ploughing or urban development and where practicable stock grazing should be prevented so as to allow indigenous riparian vegetation to recover and erosion of water courses to be slowed and managed; and,
- The intensification of development along the identified activity routes per settlement can assist with economic stimulation at the local level.

5.3.4 MAJOR INFRASTRUCTURE PROJECTS

The following projects should be considered:

- Implement a multi-pronged water management strategy:
  - o Rainwater harvesting
  - o Grey water recycling
  - o Reducing unaccounted for water
  - o Extension of regional water service delivery
  - o Water demand management for large users.

- Promote domestic and large wind and solar energy projects subject to appropriate guidelines and siting principles.

Figure 5.3.4.1 shows the infrastructure projects per town as listed in the IDP.

The following major projects are included in the budget:

1. Provision of a new administration office in Beaufort West (R200m);
2. Provision of a new 132kV substations (R12m);
3. The upgrading of the 11kV switchgears at Mandlenkhosi, Rustdene and Beaufort West (R50m);
4. The upgrading of the WWTWs for Nelspoort, Beaufort West, Murraysburg and Nelspoort (R15,5m);
5. New Community halls at Prince Valley and Merweville (R20m);
6. New One-Stop-Youth Centre at Kwa-Mandlenkhosi (R15m);
7. Upgrading of sport field and courts at Rustdene, Voortrekker Street, Kwa-Mandlenkhosi, Merweville and Nelspoort (R13,85m);
8. New housing developments (R143m)

Table 5.3.4.1 below sets out the various IDP Infrastructure Projects.

Water and Sewerage Distribution				
No	**Town**	**Project**	**Cost**	**Funding Source**
1	Municipal	Pressure release valves	600 000	MIG
		Pressure release valves	1 400 000	MIG
		New Water Reservoir	1 000 000	RBIG
	Sub-Total		**3 000 000**	-
2	Beaufort-West	Upgrading existing WWTW – Beaufort West	8 000 000	MIG
		Upgrading existing WWTW – Beaufort West	5 000 000	MIG
		New prepaid water meters Phase 1 – Prince Valley	1 000 000	MIG
		Realign bulk water – Rustdene	636 690	MIG
		New Sewerage Pipeline next to Buitekant Street	500 000	MIG
	Sub-Total		**15 136 690**	-
3	Murraysburg	Investigation of Murraysburg WWTW	500 000	MIG
		Upgrading of Murraysburg WWTW	6 000 000	MIG

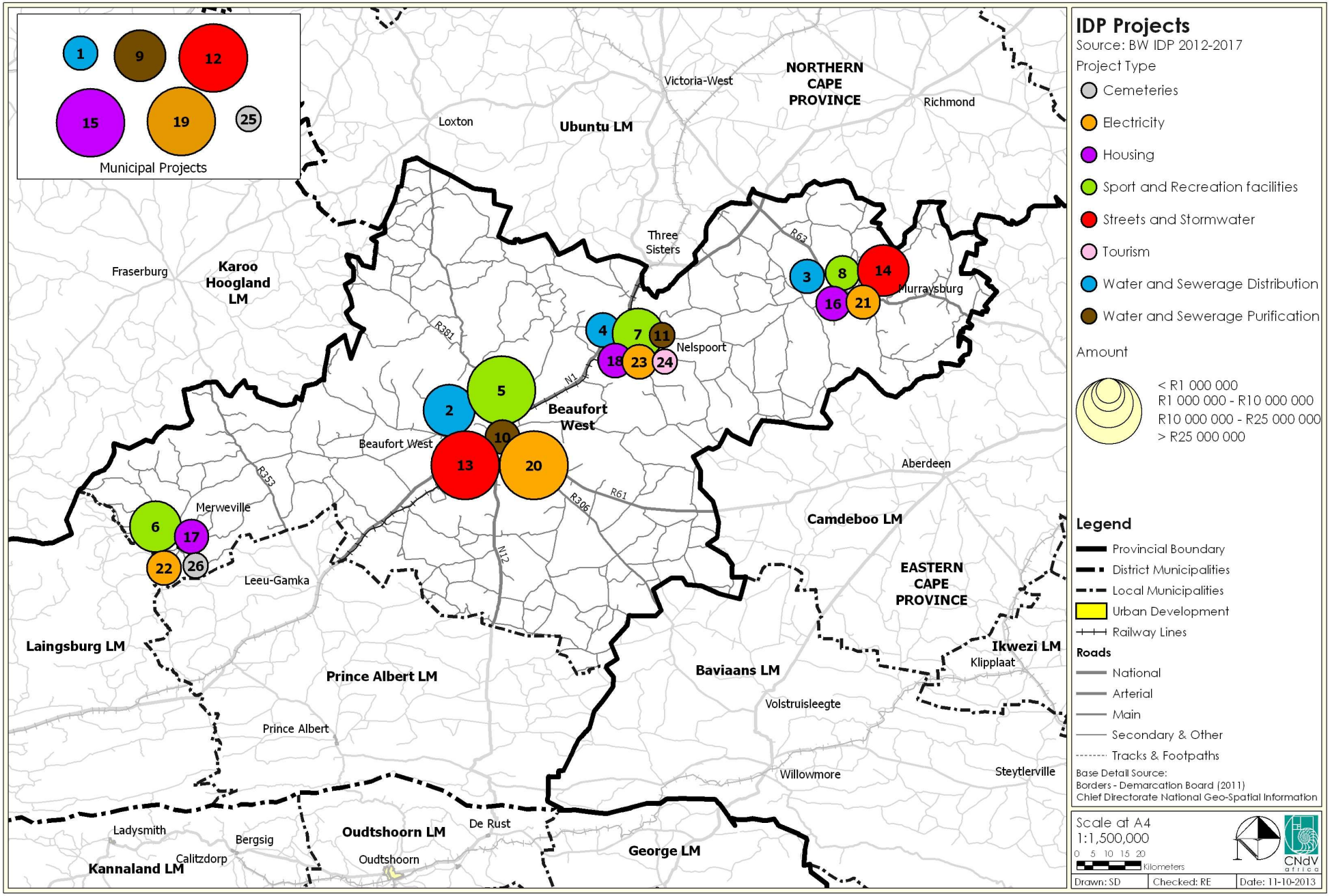


Figure 5.3.4.1 Major Infrastructure Projects

Water and Sewerage Distribution				
No	**Town**	**Project**	**Cost**	**Funding Source**
		Upgrade Water Supply – Murraysburg	1 400 000	MIG
	Sub-Total		**7 900 000**	-
4	Nelspoort	Bulk water supply – Nelspoort	2 602 038	MIG
		Upgrading of Nelspoort WWTW	2 000 000	MIG
		Bulk Water supply – Nelspoort	1 314 512	MIG
	Sub-Total		**5 916 550**	-
TOTAL			**31 953 240**	-

Sports and Recreation Facilities				
No	**Town**	**Project**	**Cost**	**Funding Source**
5	Beaufort-West	Upgrading of Rustdene sport facilities	350 000	MIG
		Upgrading Rustdene sport field	1 000 000	MIG
		Upgrading of Voortrekker Street tennis courts	500 000	MIG
		Upgrading of Kwa-Mandlenkosi sport field	3 000 000	MIG
		Upgrading town rugby field	3 000 000	MIG
		Kwa-Mandlenkosi – neighbourhood development	5 500 000	MIG
		Prince Valley: Community Hall	10 000 000	Unfunded
		Hillside II: Community Hall	10 000 000	Unfunded
		One administration office B/West	200 000 000	Unfunded
		One Stop Youth Centre: Kwa-Mandlenkosi	15 000 000	Unfunded
		Maintenance of buildings and community facilities	19 000 000	Unfunded
	Sub-Total		**267 350 000**	**-**
6	Merweville	Upgrading of Merweville sport field	3 000 000	MIG
		Merweville: Community Hall	10 000 000	Unfunded
		Maintenance of buildings and community facilities	6 000 000	Unfunded
	Sub-Total		**19 000 000**	Unfunded
7	Nelspoort	Upgrading Nelspoort sport field	3 000 000	MIG
		Maintenance of buildings and community facilities	8 000 000	Unfunded
	Sub-Total		**3 000 000**	**-**
8	Murraysburg	Maintenance of buildings and community facilities	7 000 000	Unfunded
	Sub-Total		**7 000 000**	**-**
TOTAL			**296 350 000**	**-**

Water and Sewerage Purification				
No	**Town**	**Project**	**Cost**	**Funding Source**
9	Municipal	Development of Aquifers	5 000 000	Unfunded
		Development of Aquifers	5 000 000	Unfunded
		Upgrading of existing pump stations	4 500 000	Unfunded
		Upgrade a water network: all towns	2 000 000	Unfunded
	Sub-Total		**16 500 000**	-
10	Beaufort-West	Installation of Archimedean Screw Pump	500 000	Unfunded
		Upgrading of existing chlorination room	100 000	Unfunded
		Upgrading of existing Telemetry System	400 000	Unfunded
		Upgrade of fencing at Beaufort West WWTW	250 000	Unfunded
		Repair of existing Aeration Basin	350 000	Unfunded
	Sub-Total		**1 600 000**	-
11	Nelspoort	Investigation of Nelspoort WWTW, capacity	100 000	Unfunded
	Sub-Total		**100 000**	-
TOTAL			**18 200 000**	-

Roads and Storm Water				
No	**Town**	**Project**	**Cost**	**Funding Source**
12	Municipal	Retention dam	9 160 000	MIG
		Retention dam	5 000 000	MIG
		Gravel roads	9 000 000	MIG
		Gravel roads	9 000 000	MIG
		Storm Water N1	5 000 000	
		Rehabilitate gravel roads – Phase II	1 258 509	MIG
	Sub-Total		**38 418 509**	-
13	Beaufort-West	Roads Kwa-Mandlenkosi	843 396	MIG
		Rehabilitate gravel roads Kwa-Mandlenkosi	2 494 916	MIG
		Storm water retention dam – Hillside II	4 426 294	MIG
		New storm water channel – Hillside II	77 265	MIG
		Rehabilitate gravel roads - Rustdene	360 000	MIG
		Rehabilitate gravel roads – Hillside II	6 176 482	MIG
		Upgrade gravel roads – Beaufort West	2 463 406	MIG
		Rehabilitate gravel roads – Beaufort West	9 000 000	MIG
	Sub-Total		**25 841 759**	-
14	Murraysburg	Rehab roads and storm water–Murraysburg	3 400 000	MIG
		Rehabilitate gravel roads – Murraysburg	6 170 195	MIG
		Storm water – Murraysburg	1 620 000	MIG
		Upgrade gravel roads – Murraysburg	3 972 545	MIG
	Sub-Total		**15 162 740**	-
TOTAL			**79 423 008**	-

Housing				
No	**Town**	**Project**	**Cost**	**Funding Source**
15	Municipal	Consolidation project: 95 units Kwa-Mandlenkosi	7 403 170	DoHS
		Emergency housing: Upgrade 10 houses damaged by fire or other natural causes	750 000	DoHS
		Greening Project	3 500 000	DEA
		Material Recovery Facility (Waste Recycling)	800 000	MIG
		XHOXHA – 65 units	6 500 000	Unfunded
		Planned: New Housing Development	40 000 000	Unfunded
		GAP Housing +/- 200 Units	90 000 000	Unfunded
	Sub-Total		**148 953 170**	-
16	Murraysburg	RDP Housing 100 units	6 800 000	Unfunded
	Sub-Total		**6 800 000**	-
17	Merweville	RDP Housing 50 units	3 400 000	Unfunded
	Sub-Total		**3 400 000**	-
18	Nelspoort	RDP Housing 50 units	3 400 000	Unfunded
	Sub-Total		**3 400 000**	-
TOTAL			**162 553 170**	-

Electricity				
No	**Town**	**Project**	**Cost**	**Funding Source**
19	Municipal	132kV Substation	8 000 000	DoE
		132kV Substation	1 400 000	DoE
		Electrification Central Karoo	12 000 000	DoE
		132kV Substation	12 000 000	DoE
		Housing electrification 367 erven	3 000 000	DoE
		Housing electrification 367 houses	1 500 000	DoE
		Upgrading main substation 22/11kV	5 000 000	Unfunded

		Load control 132/22kV Substation	5 000 000	Unfunded
		11kV Network new Industrial area	2 000 000	Unfunded
		Auto Recloser 11kV Plotte	250 000	Unfunded
		Isolator and Switchgear 22kV lines	250 000	Unfunded
		Telemetrie 11kV Substations	1 000 000	Unfunded
	Sub-Total		**51 400 000**	-
20	Beaufort-West	High mast lighting Hooyvlakte	501 600	MIG
		Upgrading 11kV Switchgear Beaufort West	15 000 000	Unfunded
		Upgrading 11kV Switchgear Rustdene	30 000 000	Unfunded
		Upgrading 11kV Switchgear Kwa-Mandlenkosi	5 000 000	Unfunded
		Upgrading overhead lines Rustdene	1 000 000	Unfunded
		Upgrading overhead lines Hillside	3 000 000	Unfunded
		Upgrading overhead lines Beaufort West	1 000 000	Unfunded
		Upgrading mini substation Bastiaanse school	650 000	Unfunded
		Upgrading mini substation Botha Street	650 000	Unfunded
		Upgrading transformer Truter substation	350 000	Unfunded
		Flood lighting sport ground Rustdene	1 200 000	Unfunded
		Flood lighting sport ground Rugby field	1 200 000	Unfunded
		High mast lighting Rustdene	1 381 862	MIG
		High mast lighting Hillside I	552 745	MIG
		High mast lighting Hillside II	276 372	MIG
	Sub-Total		**61 762 579**	-
21	Murraysburg	High mast lighting Murraysburg	552 745	MIG
		Upgrading electrical network Murrasyburg	700 000	Unfunded
	Sub-Total		**1 252 745**	-
22	Merweville	High mast lighting Merweville	829 117	MIG
		Flood lighting sport ground Merweville	1 200 000	Unfunded
		High mast lighting Merweville	250 800	Unfunded
	Sub-Total		**2 279 917**	-
23	Nelspoort	Flood lighting sport ground Nelspoort	1 200 000	Unfunded
	Sub-Total		**1 200 000**	-
	TOTAL		**66 495 241**	-
		Tourism		
No	**Town**	**Project**	**Cost**	
24	Nelspoort	Nelspoort Rock Art Site Development	289 000	CKDM
	Sub-Total		289 000	Unfunded
	TOTAL		**289 000**	-
			Cemeteries	
No	**Town**	**Project**	**Cost**	**Funding Source**
25	Municipal	Upgrading of Cemeteries – Municipal wide	500 000	Unfunded
	Sub-Total		**500 000**	-
26	Merweville	Upgrading of Merweville morgue	250 000	Unfunded
	Sub-Total		**250 000**	-
	TOTAL		**750 000**	-
	GRAND TOTAL		**656 013 659**	-

Table 5.3.4.1 **IDP Budget 2012-2017** (source: IDP 2012-2017)

5.3.4.1 Tree Planting and Paving

Tree planting is one of the cheapest forms of urban upgrading with the greatest positive visual impact.

If this is coupled with the paving of one or two strategic squares and streets, the overall impression of a settlement can be considerably improved. This will improve its chances of attracting visitors and investment.

These projects can form part of an Extended Public Works Program (EPWP). They are labour intensive and cost effective. For example, broken bricks can be used for paving or pavers can be made on site. Suitable shady tree species include:

- Celtis sinensis - deciduous – exotic
- Ceratonia siliqua - evergreen – exotic
- Celtis Africana
- Combretum erythrophyllum

Celtis sinensis

Celtis Africana

Combretum erythrophyllum

Ceratonia siliqua

Public road works in Vredendal North

5.3.5 MAJOR TOURISM DESTINATIONS

The following main tourism destinations with major related attractions are identified, see Figure 5.3.5.1:

- Karoo National Park and existing and future Nuweberg conservancies open to the public;
- Pre-colonial rock art near Nelspoort to be protected;
- Urban heritage precincts in the main settlements and associated overnight and refreshment facilities. Ensure that new development responds positively to the layout of historic settlements;
- Mountain passes and 'poorts' of scenic and heritage significance include the Swartberg Pass (Provincial Heritage Site), Gamkaskloof Pass, Meiringspoort, Seweweekspoort (all in the Swartberg range), as well as Molteno Pass in the Nuweveld range. The Karoo National Park near Beaufort West is a protected landscape incorporating the Great Escarpment. The Department of Environmental Affairs and Development (DEA&DP) should ensure the protection of these cultural and scenic landscapes through the preparation of design guidelines for new development; and,
- Karoo farm stays throughout the municipality, particularly heritage properties.

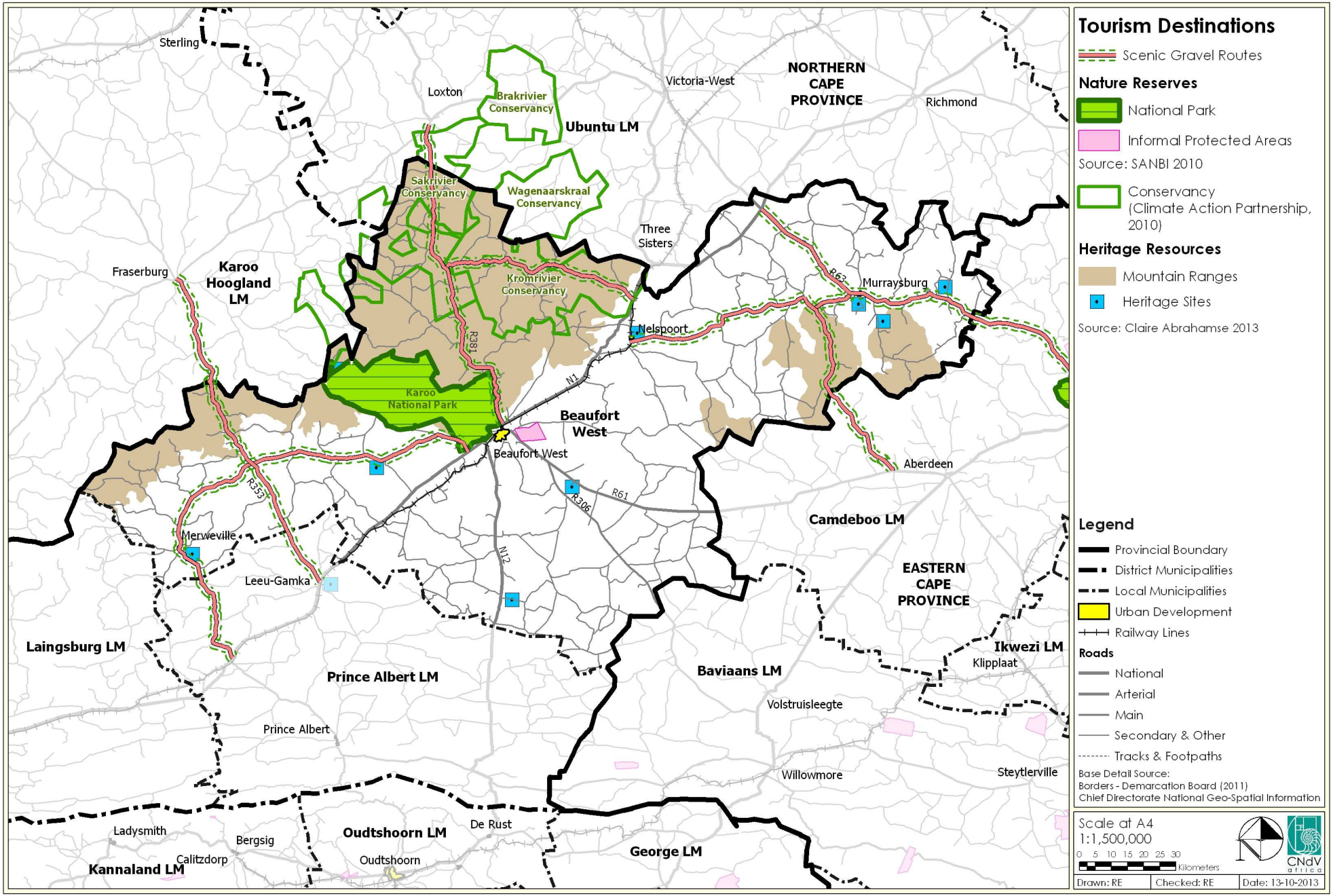


Figure 5.3.5.1 Major Tourism Destinations

5.3.6 LAND REFORM

- Land reform opportunities should not be targeted only at agricultural operations although this will always be the major activity;

- Bio-diversity conservation and eco and agri-tourism operations should also be considered;

- Thus, land reform projects located in the Nuweberg, for instance, between the Karoo National Park and the Krom and Sak River conservancies should also explore eco-tourism and bio-diversity conservation opportunities;

- The majority of the land reform projects are located on the degraded soils of the Sout River "badlands" where intensive conservation measures will be required to improve the stock and therefore livelihood carrying capacity of this region; and,

- Future land reform projects should carefully consider the context in which they are located and then seek to take advantage of that area's opportunities, not only in agriculture.

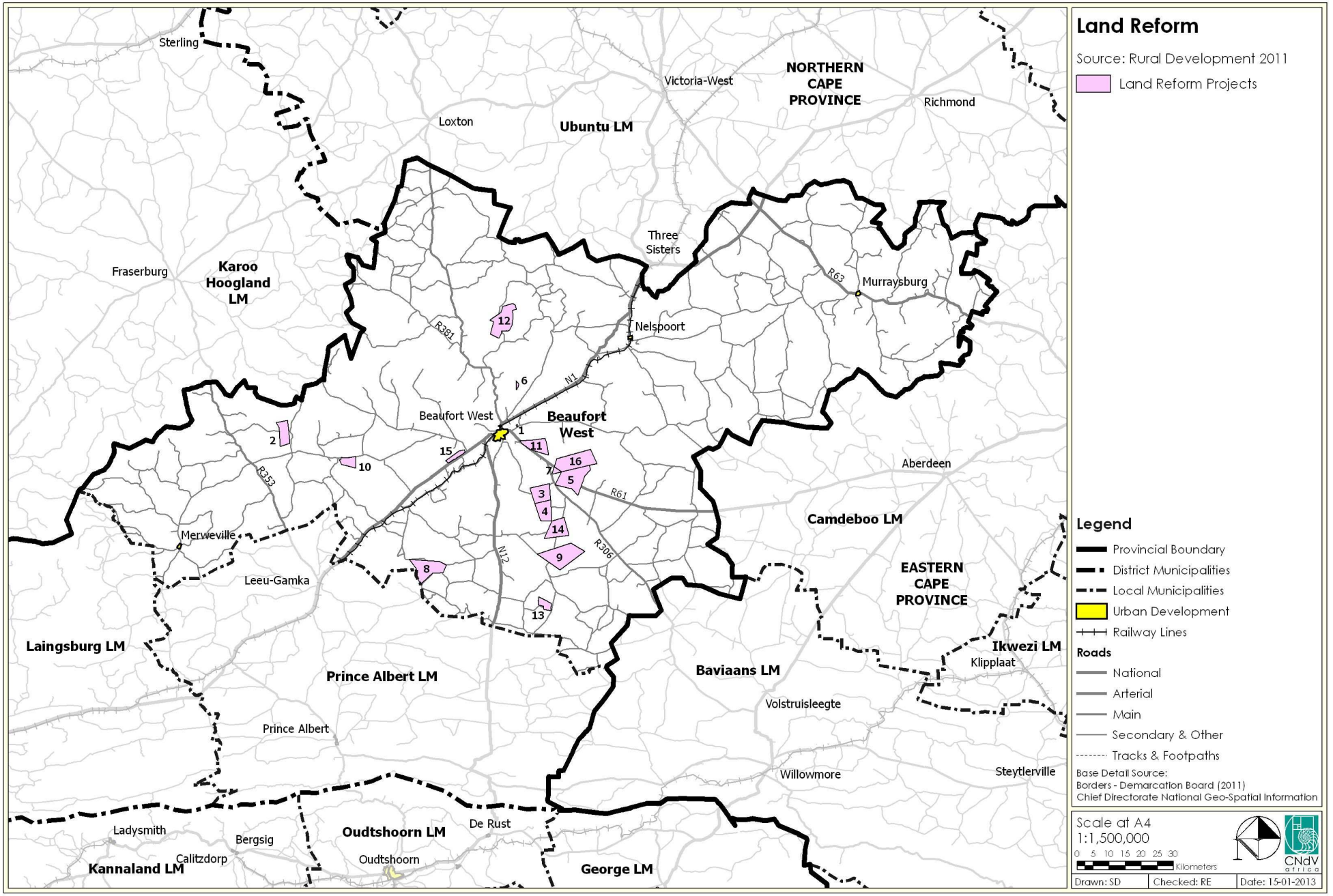


Figure 5.3.6.1 Land Reform Projects (Rural Development, 2011)

5.4 URBAN RELATED DEVELOPMENT

5.4.1 SETTLEMENT GUIDELINES

General principles to "aspire" to:

5.4.1.1 Walking Distance as the Primary Measure of Access

The need to ensure that people have access to a variety of opportunities is implied in a number of the DFA principles (S3(c)(i), (iii)). This requires an understanding of the relationships between different activities in terms of spatial proximity (close and far), access and time.

In the past accessibility has usually been considered in terms of travel time in private vehicles, however, this measurement is not only environmentally unsustainable, as it is mostly dependent on access to private motor vehicles but also reflects a denial of the reality that the majority of our citizens do not have private vehicles, may not always be able to afford public transport and thus have to spend significant time and energy walking to fulfil their needs.

Thus appropriate **walking distance** should always be used as the measure for accessibility. 20 minutes or 1km is regarded as an acceptable distance to walk and should be used as a basis of settlement design, see Figure 5.4.1.1.

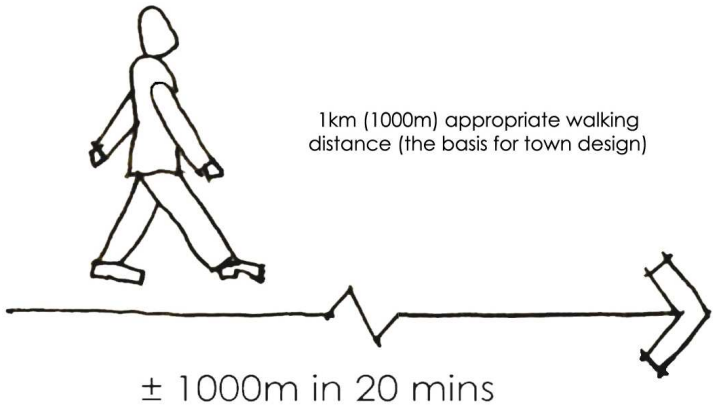


Figure 5.4.1.1 Walking distance

5.4.1.2 Land use integration and interface

The implementation of the walking distance principle to promote greater access to opportunities for all people, will require the functional integration (DFA principles S3 (c)(i),(iii),(v)) of urban activities. At least **50% of urban activities** should be **within walking distance** of where people live, see Figure 5.4.1.2.

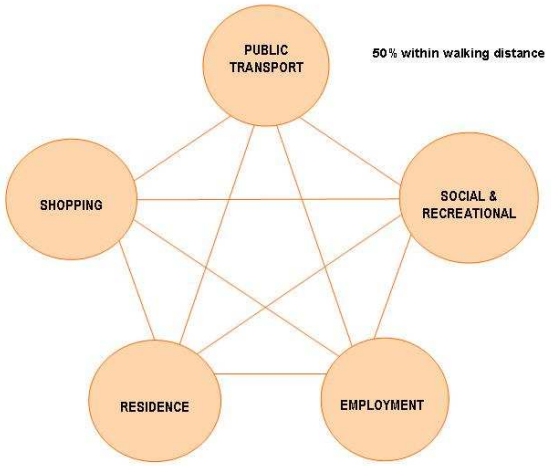


Figure 5.4.1.2 Integration of Urban Activities

The intensification areas are seen as the prime instruments for promoting integration between the towns and townships of the urban settlements.

Principles:

- **Locate activities (residential, transport, work, recreation, etc.) so that at least 50% of them are in walking distance;**
- **Locate most frequented activities in the most central / accessible localities, e.g. industrial and commercial;**
- **Use all well located vacant land, i.e. within 1 to 2kms of urban centres;**
- **Locate all future residential areas within walking distance of urban centres where space permits; and,**

Interface principles:

- **The change between different housing typologies must happen along the midblock and not across the street;**

- **Residents must be given freehold tenure, i.e. title deeds immediately so that shack upgrading will commence as soon as possible; and**

- **The more formal the units the closer they should be to the main public thoroughfare or adjacent upmarket housing.**

5.4.1.3 Socio-Economic Integration

The principle of access and integration, also requires socio-economic integration (DFA principle S3(c)(i),(vii)). Little progress has been made in this regard since the advent of democracy. In reality there is often community resistance to integration of poor, middle and high income communities, and bank valuers often downgrade property values where informal settlements or low income housing is provided in close proximity to middle and high income housing. The use of a **socio-economic gradient** with relatively small differences in income and property value between adjacent communities can help mediate this problem.

Figure 5.4.1.3 illustrates how a high level of socio-economic integration can be achieved in a 1km radius, applying this principle.

In particular efforts should be made to locate low income neighbourhoods nearer to the core or nodes of settlements and away from the periphery.

Principles:

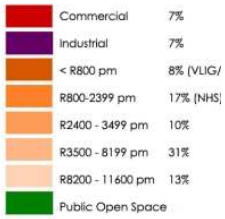
- **Sensitively locate the income groups within the 1km radius : e.g. very low not right next to the very high income;**

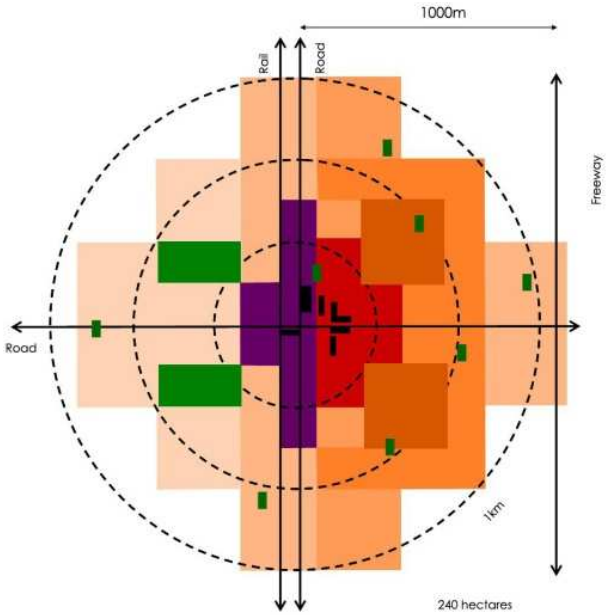
- **The arrangement of the housing for the various income groups should be according to the principle of the socio-economic gradient with the higher end of the market closest to the main thoroughfare, see Figure 5.4.1.3;**

- **As a general rule Human Settlement schemes should not be targeted at a single income group exclusively, usually subsidy or Site and Service, but should always include at least a GAP housing and top structure subsidy component even if only comprising 10% or 20% of the units;**

- **Locate all future subsidy housing within walking distance of nodal centre where space permits.**

Well-located BNG housing project in Langebaan surrounded by up-market housing





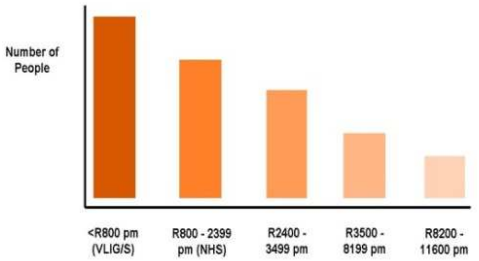


Figure 5.4.1.3 Socio-economic integration and Interface Treatment

5.4.1.4 Intensification Corridors and Linkages, see Figure 5.4.1.4

Principles:

- **Sensitive infill and redevelopment of major arterial axis in clearly defined precincts;**

- **Corridors to concentrate activities and support its speedy initiation especially in more rural areas, should be delineated to include one erf on either side of the identified street, otherwise called the spine of the corridor;**

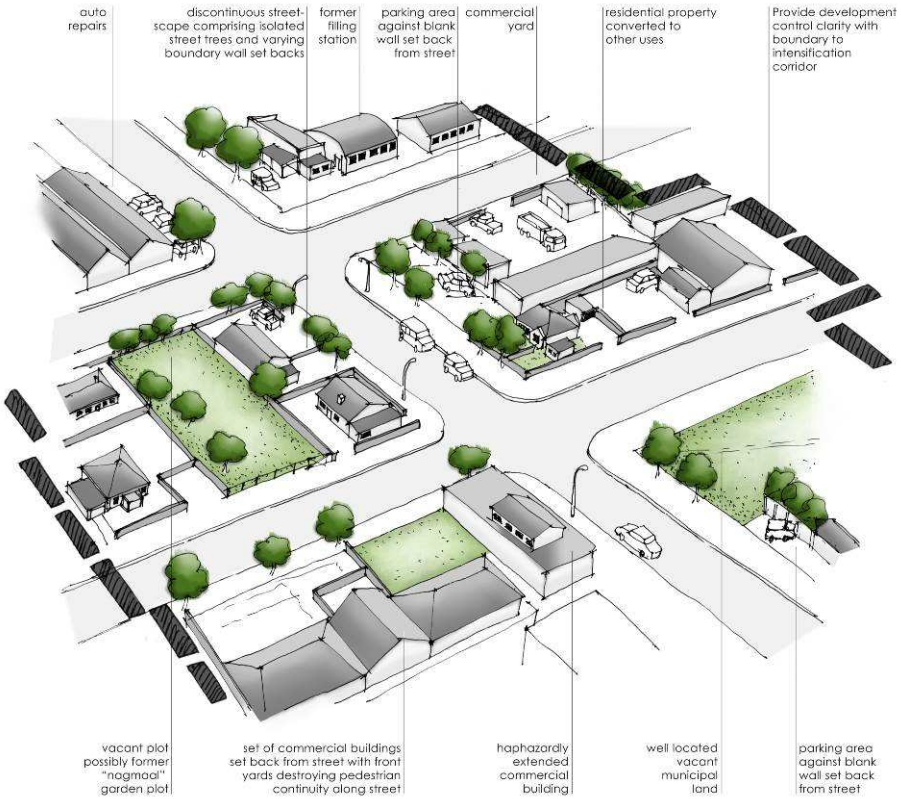
- **Show sensitivity towards existing heritage buildings;**

- **Enhancing the street experience through landscaping and guiding the architecture of new developments;**

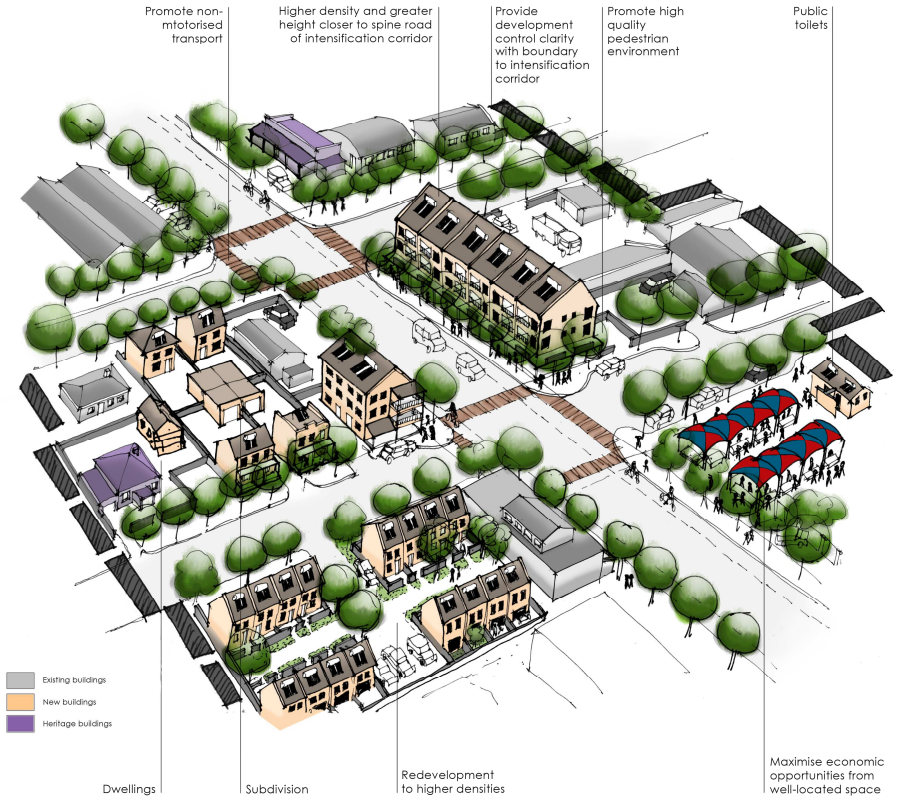
- **Encourage a multiple level of entry into the economic market and enhance job creation, the intensification corridors should be limited to residential, office and retail uses and only compatible light industrial uses, e.g. non-nuisance manufacturing or craft activities that may require a retail outlet on the same premises.**

- **Define a single uniting structure of intensification corridors, nodes and linkages between town and township; and,**

- **Encourage supporting densification pattern and infrastructure provision.**



Before Development



After Development

Figure 5.4.1.4 **Intensification Corridors**

5.4.1.5 Sub-centre Nodes

This will be shown at town level.

Three levels of hierarchy of urban nodes containing business and community facilities shall be clustered together as far as possible to provide satisfactory access and clustering of activities, see Figure 5.4.1.5:

- Tertiary: technikons, hospitals, courts, multi-purpose centres, regional or metropolitan transport interchanges, museums, art galleries, indoor sports complexes, regional shopping centres;

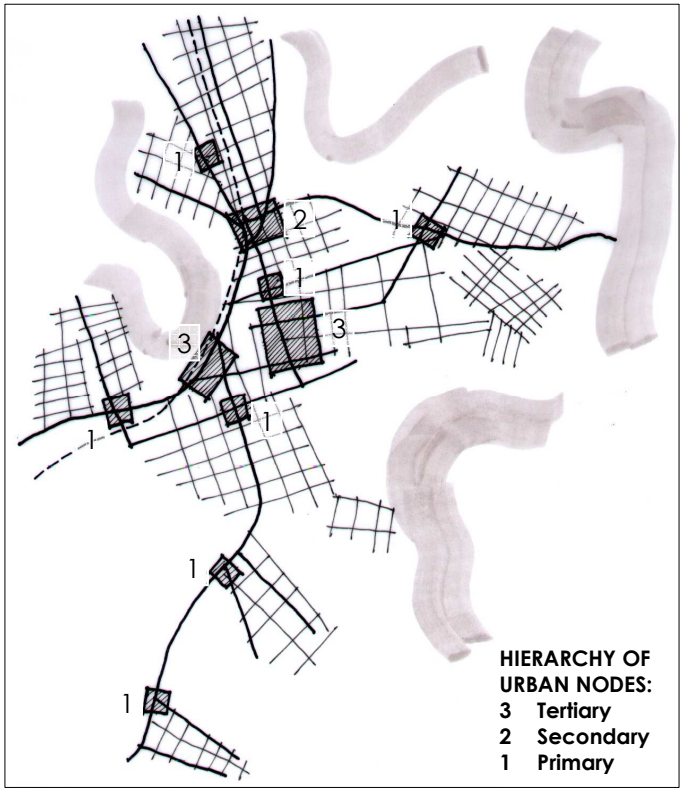
- Secondary: high schools, day care centres, hospitals, libraries, sports and community halls, sports fields;

- Primary: primary schools, crèches, clinics, bus and mini-bus taxi stops; and

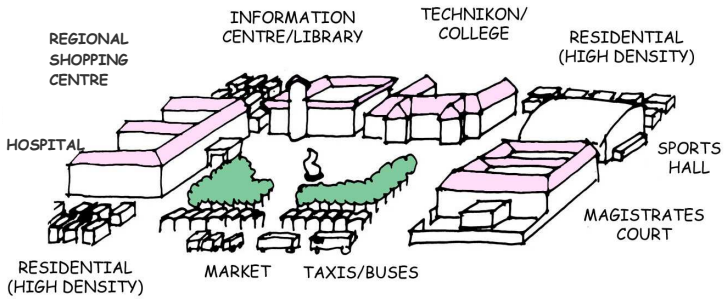
- Nodes should be managed to concentrate the business therein and where growth is required, the node should be encouraged to grow along the corridor towards each other. This is to manage and prioritise in a strategic manner, the implementation of needed infrastructure and to provide the greatest opportunity of success of these business.

Principles

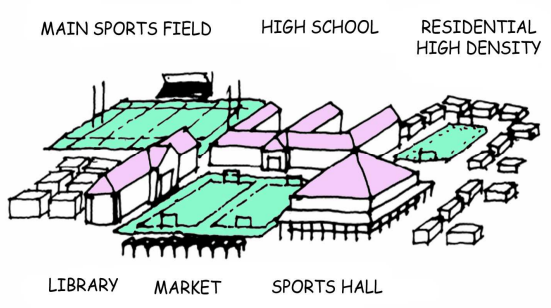
- ***Implement projects on a focused, strategic and hierarchical basis with the largest investments for higher order facilities that will be enjoyed by the greatest number of people.***



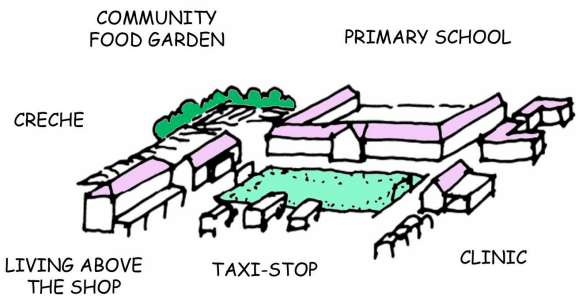
Clustering Civic, Commercial and Residential Activities



Tertiary Cluster of Facilities



Secondary Cluster of Facilities



Primary Cluster of Facilities

Figure 5.4.1.5 Sub-Centre Nodes

5.4.1.6 Urban Edge

These should be reviewed to ensure that:

- Sufficient protection is given to land requiring protection, inter alia, the agricultural land currently under cultivation and CBAs;
- That compaction rather than expansion of urban settlements is encouraged to promote non-motorised transport modes where appropriate;
- Urban Edges which provide sufficient land for the development of the needs of the area for about 20 years, given the current growth rate, is proposed around the exiting urban footprint; and,
- It is proposed that these urban edge only be realigned based on actual need and once all the existing under or unutilized vacant land has been developed.

5.4.1.7 Infill, Densification and the Suburbs

It is clear that significant infill and densification is required in order to restructure the settlements in the Municipality.

Further development in the settlements must respect and continue the layout and design features of the historical settlement, such as the continuation of the grid layout, as well as following architecturally similar buildings, landscaping and urban design. Well located land has been identified to contribute to this important goal.

Guidelines for the settlements will be given.

5.4.1.8 Wind and Solar Farm Siting Principles

The following wind farm siting principles are proposed to be used as a first set of questions to guide potential developers of wind and solar farms. Terrain suitability need to be investigated and should include the following typical aspects in the design process:

- Slopes by gradient classes
- Rocky areas
- Soil type and permeability
- Natural watercourses and areas with high water table, Rainfall data; and,
- Vegetation.

- **Slope**
  - Wind Potential – slopes up to a certain gradient orientated towards prevailing wind directions tend to augment average wind speed;
  - Visibility – wind farms on slopes have increased visibility;
  - Road layout and design – slopes to be considered in road layout to reduce erosion potential of road run-off, rock-fall and landslide potential;
  - Tower foundation design – need to consider falls across the platforms; and,
  - Re-vegetation – steep road verges and cuts require re-vegetation to reduce sedimentation from run-off.

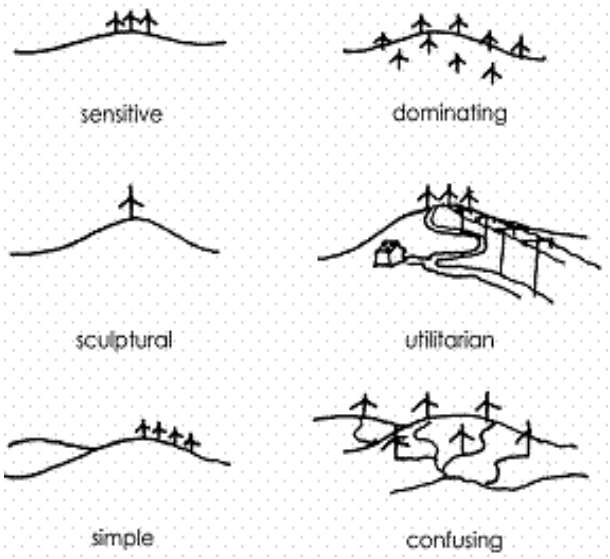


Figure 5.4.1.8a Location options for wind turbines

- **Geology**
  - Need highly stable underlying geology for heavy wind turbines; and,
  - Investigate existence of bedrock, subterranean voids and possible seismic activity
- **Soils**
  - Potential for erosion; and,
  - Soil types influence road construction and re-vegetation.

- **Surface Hydrology & Groundwater**
  - Design of roads and treatment of runoff from roads and disturbed surfaces to reduce sedimentation and eliminate erosion.

Figure 5.4.1.8b Wind farm near Klipheuwel outside Durbanville, Western Cape

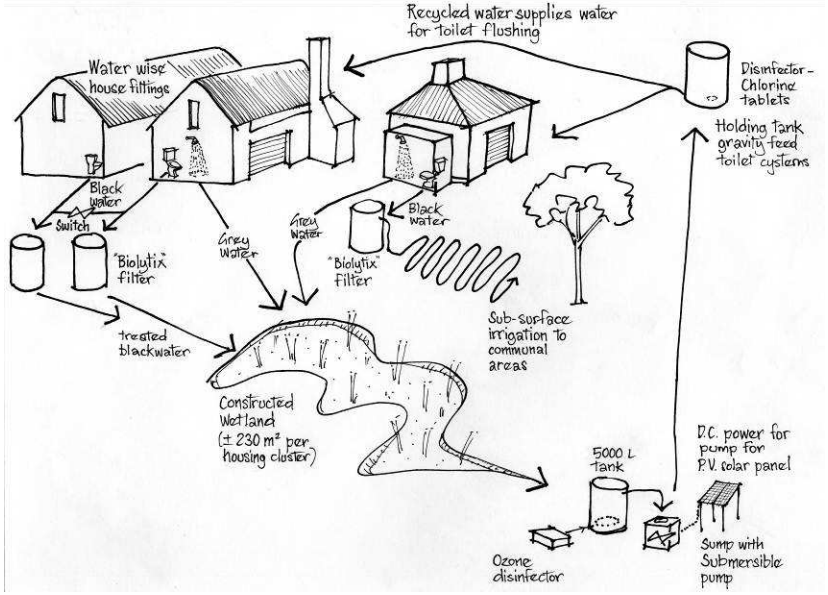
Figure 5.4.1.8c Visual simulation of wind turbines, Western Cape

- **Vegetation**
  - Detailed vegetation assessment if the proposal is not in an agriculturally disturbed area;
  - Assessment should include location and condition of:
    - Extent of disturbed or alien vegetation;
    - Extent of any natural vegetation;
    - Indigenous and endemic species; and,
    - Rare and threatened species;
    - If the site is affected by CBAs.

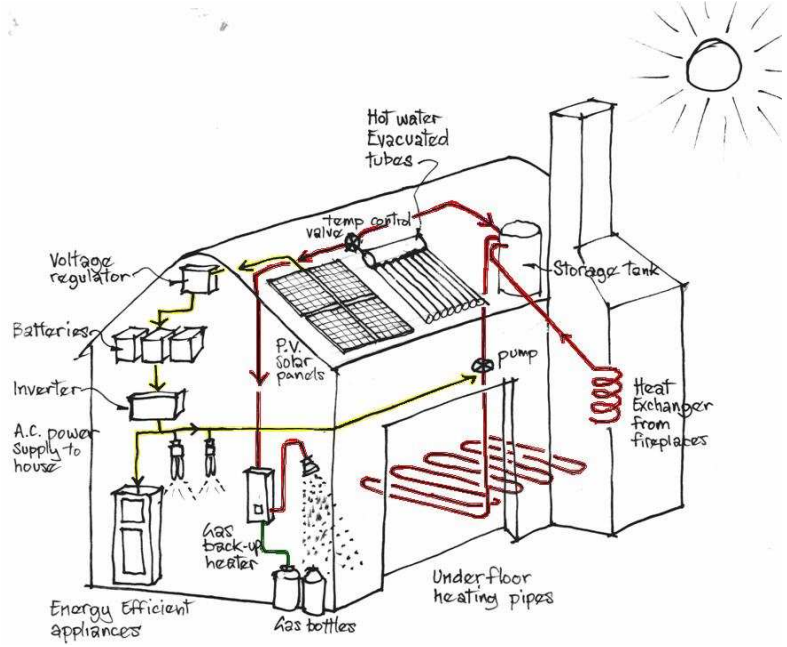
5.4.1.9 Infrastructure

The following principles shall apply:

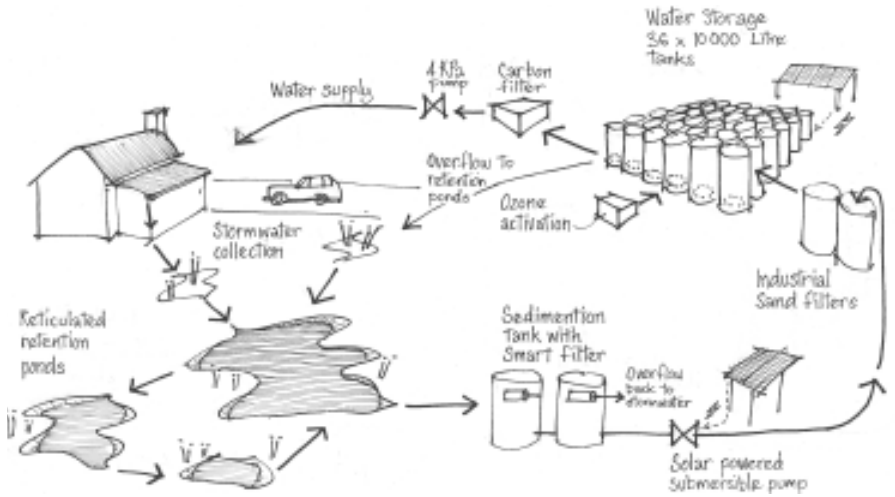
- Ensure a base level of services only is available for all residents in the Municipality including those households qualifying for indigent grants;
- Where possible implement GAP housing schemes as part of subsidy projects so as to help cross-subsidise required infrastructure projects;
- For low density settlements, where the high cost of conventional grid services are prohibited and not preferred and to promote sustainable use of natural resources reduce dependency on conventional grid services, the following are proposed:
  - Promote the use of solar hot water projects so as to help cross-subsidise infrastructure costs;
  - Promote use of solar of water heaters, PV panels, grey-water recycling, waste separation at source, and passive building design to as to minimize energy, solid waste and water demand, see Figures (a) and (b); and,
  - Encourage rainwater harvesting and grey water (water from hand basins and kitchen sinks) recycling, see Figure (c).



(a) Sanitation System based on sustainable principles



(b) Solar Energy Generation for off-grid energy generation



(c) Rainwater harvesting for sustainable use of water

Figure 5.4.1.9 Off-grid infrastructure options

5.5 CLIMATE CHANGE

5.5.1 Landscapes that provide resilience to climate change need to be protected. In this regard the following areas are important, see Figure 5.5.1:

- Kloofs, which provide important connectivity and provide both temperature and moisture refuges;
- Topographically diverse areas, which contain important altitudinal and climatic gradients which are important for climate change adaptation as well as ensuring a range of micro-climates are protected;
- Riverine corridors, which provide important connectivity in extensive arid environments; and,
- South facing slopes which provide refuge habitats.

5.5.2 Protect urban development from climate change high risk areas through determining a coastal setback line and increased setbacks from river corridors. Sea level rise and increased flooding, as a result of climate change, could have a more significant impact on urban development in these areas.

5.5.3 Promote solar and wind generation projects, to reduce the need for coal and the generation of greenhouse gasses, for the generation of renewable energy in the south west of the municipality with due consideration of the following design and layout aspects as per the PC 20/2012 (23 November 2012):

- Land use restrictions:
  - Height:
    - A maximum height of 200m for a wind turbine, measured from the mean ground level of the footprint of each structure to the highest point of the blade.
    - The height of a structure for solar generation facilities will be technology-dependent.
    - The height of buildings is restricted to a maximum of 8.5m and is measured from the mean ground level of the footprint of the building to the highest point of the roof.
  - Setback
    In the case of a wind turbine, a distance equal to 1,5 times the overall blade tip height of the turbine, measured from:
    - the nearest residential, commercial or critical agricultural structures such as animal housing, outbuildings, store rooms, excluding structures such as water troughs, feed dispensers, and windmills;
    - the cadastral boundary of the land unit;
    - any public road or private or public right of way; and,
    - (iv) any electrical infrastructure.

- Additional requirements:
  - Site Development Plan (SDP)
    - As part of the application or as a condition of approval, a SDP must be submitted to the competent authority. The site must be surveyed and the exact delineation of the construction footprint must be shown in the SDP;
    - To the extent necessary, any relevant measures contained in these regulations must be incorporated into an SDP; and,
    - Initial measure in the event of failure.

  - Visual and environmental impact
    - Visual and environmental impacts must be taken into account for height determination and in general, to the satisfaction of the competent authority.

  - Finishing and Colour
    - A wind turbine structure must be treated with a neutral, non-reflective exterior colour designed to blend with the surrounding natural environment, to the satisfaction of the competent authority; and,
    - A solar structure may not cause any adverse effects due to its reflective nature and must be designed and erected accordingly, as required by the competent authority.

  - Areas of the Central Karoo have been identified as proposed Renewable Energy Development Zones (REDZ) as part of the National Strategic Environmental Assessment for Renewable Energy. The intention of the project is to identify REDZ that will be delisted in terms of the Environmental Impact Assessment (EIA) regulations, thereby promoting renewable energy activities in specific areas across the country;

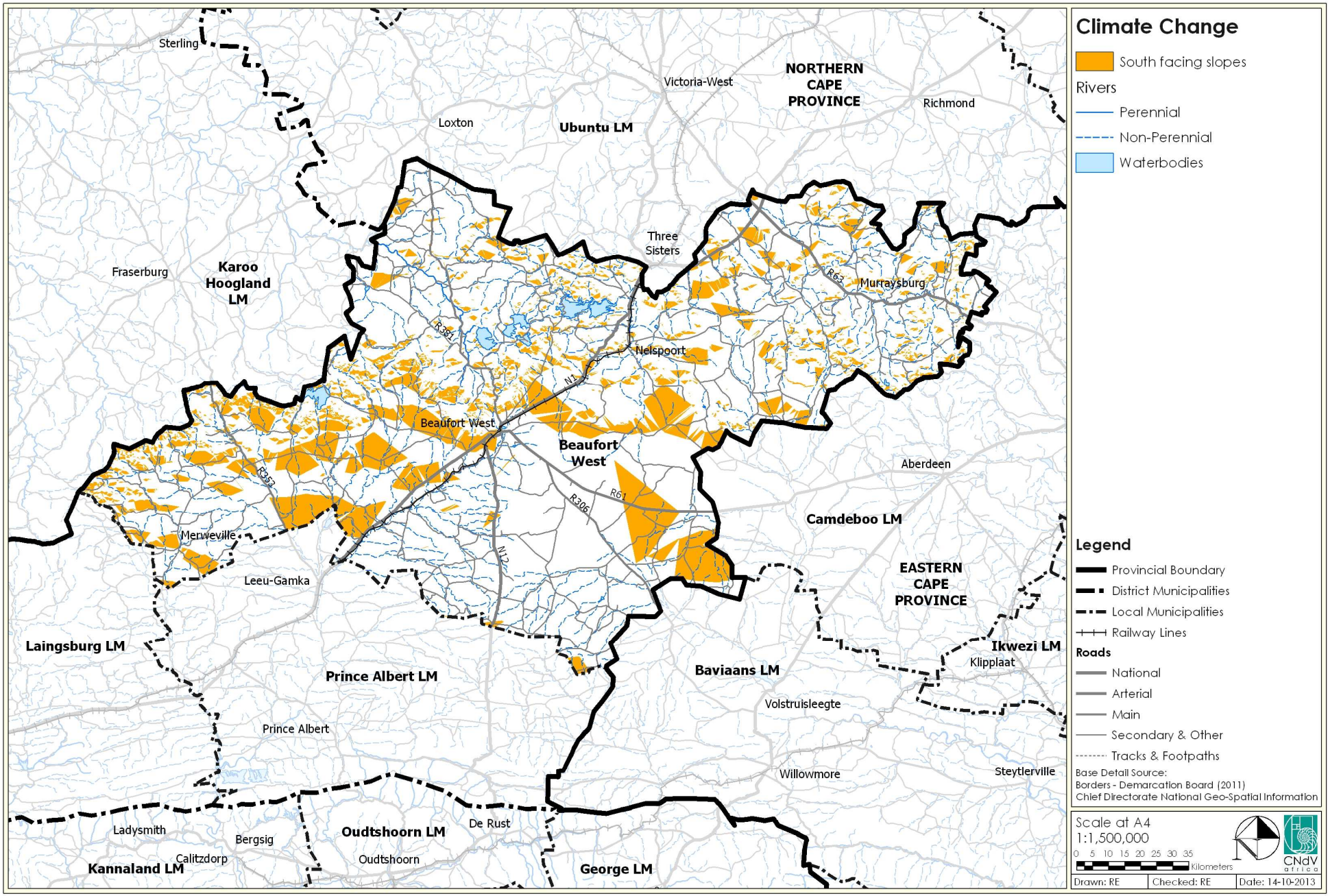


Figure 5.5.1 Climate Change

5.6 URBAN DESIGN GUIDELINES

UD1 Create open space systems that integrate the elements of a settlement to contribute to a meaningful urban structure. This can be done by:

- Providing connectivity between open spaces;
- Establishing linkages between open spaces;
- Aligning the open space system with public buildings; and
- Ensuring an improved quality of linkages through the continuation of special activities or functions along major routes.

UD2 Link symbolic elements (statues) or public facilities (library, clinic, etc.) to open spaces in relation to their importance and character.

UD3 Ensure the definition of the public spaces through the effective design of an interface between public and private domains.

UD4 Create visual recognition and surveillance along open spaces and public routes. This can be achieved through:

- Locating buildings around open spaces and streets so that sufficient enclosure is created;
- The appropriate height of buildings; and
- Locating the highest buildings to the southern side of the open space, with lower buildings or trees on the northern side.

UD5 Markets should be permitted at highly accessible locations in terms of the movement network and urban structure to ensure the greatest viability possible. These locations could be modal interchanges and intersections.

UD6 As a general rule the erection of shopping centres on the periphery of settlements should be discouraged. This should only be permitted if the intention is to initiate a new urban node at the specific location and the proposed shopping centre development is in line with the growth direction of the settlement.

The impact of a proposed shopping centre on the current main road or retail 'high' street must be assessed before it is approved.

UD7 Accommodate a variety of users in and uses along the streets by doing the following:

- Concentrate intensive activities along major vehicular and public-transport routes;
- Locate majority of public buildings and increase densities along these routes; and
- Locate buildings closer rather than further from the streets to increase pedestrian activity, a sense of enclosure and surveillance.

UD8 Create appropriate road cross-section widths that can provide for vehicle traffic, parking, pedestrian movement, cycling and landscaping.

UD9 Urban block length should promote access (penetration) and encourage economic activity by orientating the short side of blocks to major streets wherever possible.

UD10 Space buildings from each other to provide adequate solar access to buildings. In this regard the roof pitch of buildings should be orientated so that roof solar panels have a maximum continuous direct access to the sun.

UD11 Any proposals for the redevelopment of existing buildings should consider their heritage value, elements of the vernacular architecture and, where possible, retain these important elements. Similarly, the historical characteristics of existing buildings should be considered to draw from their elements that could be integrated into the design and construction of new buildings close by.

UD12 The use of local materials should be encouraged in the construction of new buildings.

UD13 Encourage appropriate water-wise landscaping.

UD14 Ensure that the main streets of the urban areas are appropriately landscaped to encourage a pleasant gateway treatment into the settlements.

UD15 Each development action undertaken in each settlement of the Municipality must be viewed and assessed in terms of the degree to which it either contributes or detracts from the heritage and tourism potential of the Municipality.

5.7 POTENTIAL RURAL NODES AND PERIODIC RURAL MARKETS

The potential of rural nodes is derived from the rural economic opportunities that are generated by their location and "attracting force". However, in some nodes these forces are so small that permanent infrastructure or services cannot justify permanent buildings or staff.

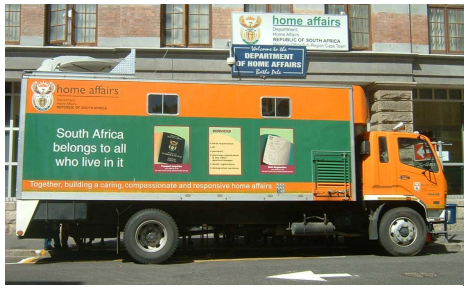
Initially, these nodes, can be supported through periodic markets at which mobile services, for instance, home affairs, pension pay outs, clinics, libraries can be dispensed.

This approach could be applied at settlements with low threshold populations to ensure that the necessary services can be provided.

Library bus

Where such facilities do not exist, periodic service centres should be established for co-ordinated use by a wide variety of government, non-government and private organisations.

These periodic service centres should be located at points of highest access according to the same principles.

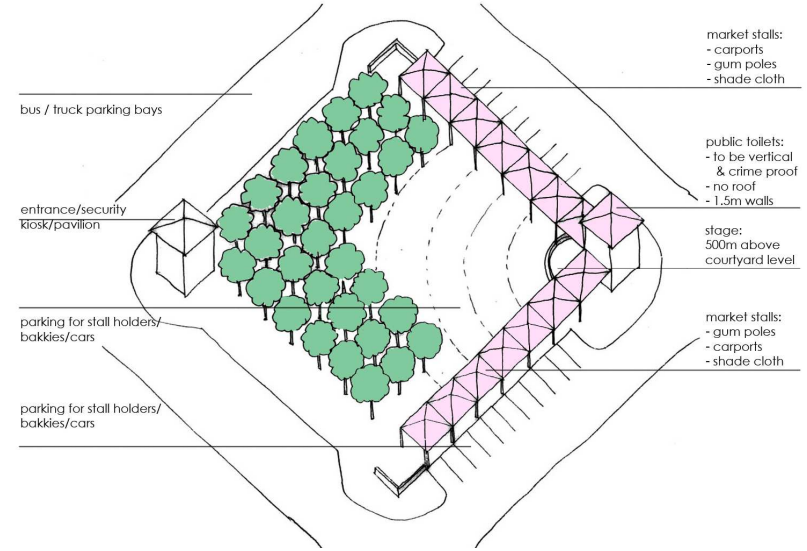


Home Affairs bus

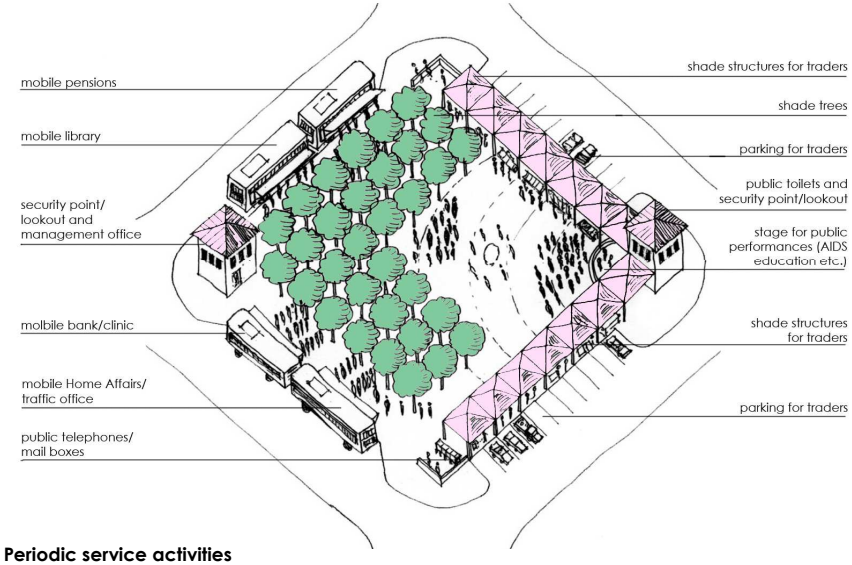
The services of various government departments and private sector organisations should be co-ordinated into a mobile caravan of dedicated buses and vans which travels from periodic service centre to periodic service centre stopping for morning or afternoon sessions as appropriate.

Local arts and crafts people and business people should be encouraged to trade in the stop-over periods of the mobile service caravans at the periodic service centre. The location of shops and abattoirs should also be encouraged here.

Mobile clinic



Periodic service concept



Periodic service activities

5.8 SETTLEMENT HIERARCHY AND STRUCTURE

Beaufort West Municipality's settlement hierarchy and structure comprises the following system:

- N1 corridor – comprises Beaufort West town as the primary settlement in the municipality;
- It has the highest priority in terms of infrastructure investment ranking in the Growth Potential Study as being a settlement with high social needs and high economic development potential with a population of over 5 000 people;
- The primacy of Beaufort West town is likely to increase over time as the various economic sectors it currently serves continue to grow at whatever rate, even if only because of its strategic location. If the settlement's maintenance and management improves it is likely to improve even faster;
- If the various potential mining activities take off in the next decade Beaufort West town's growth could rapidly accelerate. In this case it will be extremely important to ensure that the correct planning and management policies and activities are in place to avoid the unplanned and unmanaged growth currently being experienced by towns under this kind of pressure in the northern cape and elsewhere;
- Merweville and Murraysburg are two remote outlying settlements in the municipal periphery off the N1. They are both ranked much lower in terms of their settlement growth potential as having high social need but low economic development potential;
- Murraysburg, owing to its more fertile agricultural hinterland and its strategic location on the minor link road R63 between Victoria West and N1 and Graaff Reinet sustains a greater urban and rural population than Merweville.
- Murraysburg has far stronger functional linkages to Graaff Reinet in the Eastern Cape than to any of the other towns in the Municipality primarily due to its distance from Beaufort West.
- Merweville is located on a gravel link road to the N1 and is not really on the route to anywhere else. There is a potential scenic gravel route leading directly to Beaufort West town but this would not be used by business traffic wishing to get there as quickly as possible;
- Nelspoort used to be located on the N1 when it followed the rail line but this section has now been bypassed. This has left the village on a crescent route that functions as more of a backwater; and,
- It was not rated in the Growth Potential Study.

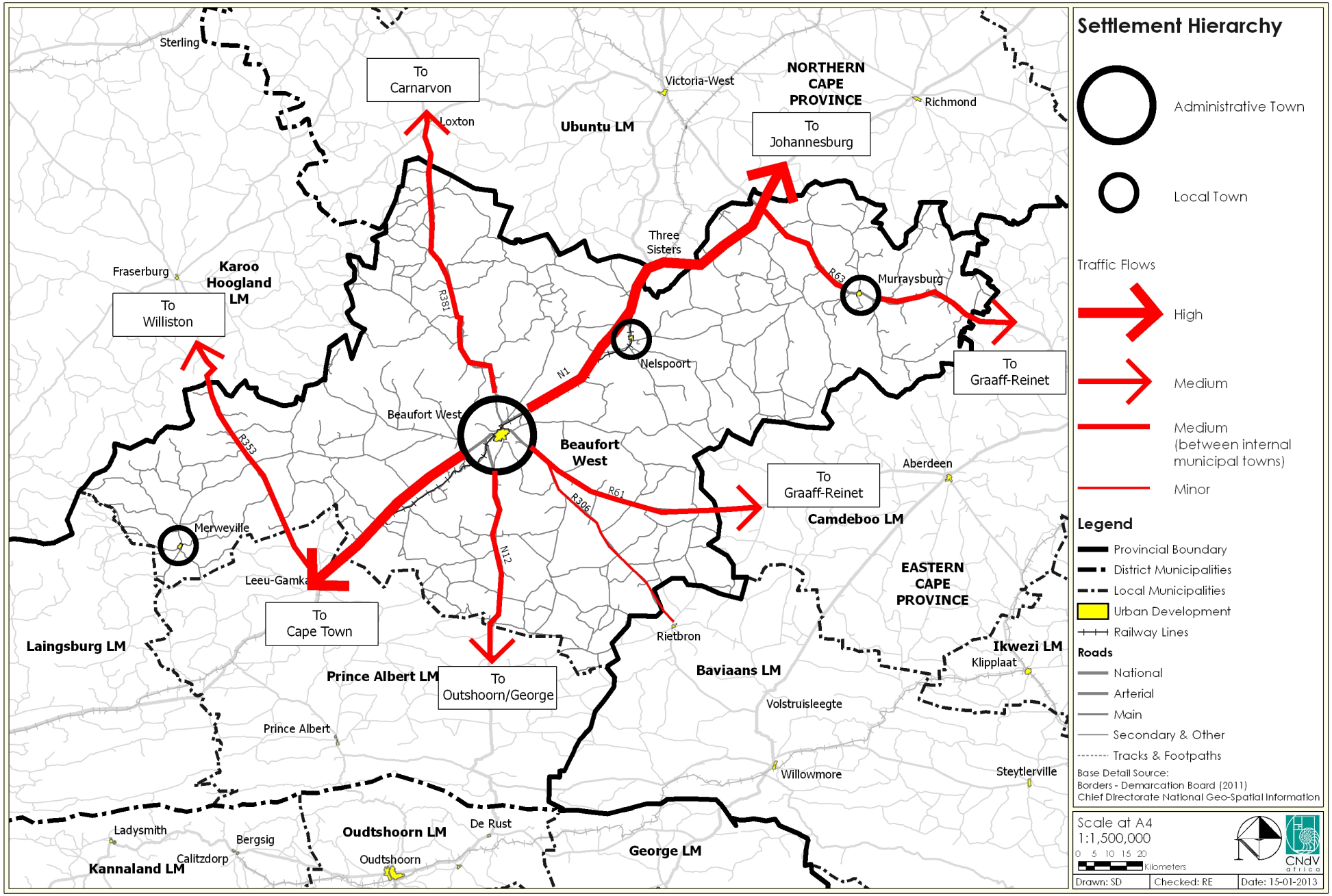


Figure 5.8.1 **Settlement Hierarchy**

3. THE CURRENT STATE OF THE MUNICIPALITY

3.1 A FRAMEWORK OF INTERRELATED SYSTEMS

There is always tension between the reality that life and all of its components function and are experienced as a single interrelated system, and the need to disaggregate these components for the purpose of research and teaching (hence the divisions at school into subjects and at university into faculties) and administration (compartmentalisation of government into departments and ministries). The last three to four decades have seen this tension emphasise separation to the extent that governments and educational institutions have become increasingly unable to address, cohesively, the various demands made of them.

However, an holistic approach can only be effective if it is carried as a golden thread through all the activities of government including background research, proposal formulation and implementation. This places a considerable challenge on the Breede Valley SDF to go beyond the traditional rational comprehensive approach to spatial planning in order to avoid compartmentalisation and to support the achievement of holistic governance. This is done in the Breede Valley SDF through the use of a "framework of interrelated systems", which recognises that activities in the Municipality occur as a multi-layered matrix in a single space - the geographical extent of the Municipality. Although there is clearly exchange outside the boundaries, e.g. imports and exports, fiscal transfers, energy transmission and cyclical and permanent migration, ultimately the Municipality depends on the resources within its boundaries.

Figure 3.1 illustrates this relationship by showing how the 26 layers of the matrix of the Municipal's analysis are all interrelated within the spatial extent of the Municipality, even though they may be separated for the purposes of research, implementation and management. At the macro level the layers can be grouped into three categories.

Bio-physical
Natural systems are the primary or foundational layer on which all of the others rest, acknowledging the natural capital base on which the other two set of layers must feed, in a sustainable way. Thus, geology, soils and climate form the basic geomorphological relationship which gives rise to hydrological, topographical and biodiversity patterns. Agriculture and mining are included in this sub-set due to their close relationship with the natural environment.

Socio-economic
Previous research (Gasson, 1998) shows a primary correlation between population distribution and the underlying resource pattern of natural environmental distribution, rather than with the pattern of the built environment. The pattern of the built environment is a derived rather than primary relationship. It is nothing more than a reflection of how the relationship between population requirements and natural resources is resolved. Therefore, the next set of layers resting on top of the natural systems layers relates to socio-economic trends.

Built
The final set of layers deal with the built environment, and the analysis that follows will show that it is with these layers and the patterns they follow that most problems with resource sustainability occur.

Planning, heritage and environmental policy are seen as three golden threads that have a transverse relationship with all the layers of the framework.

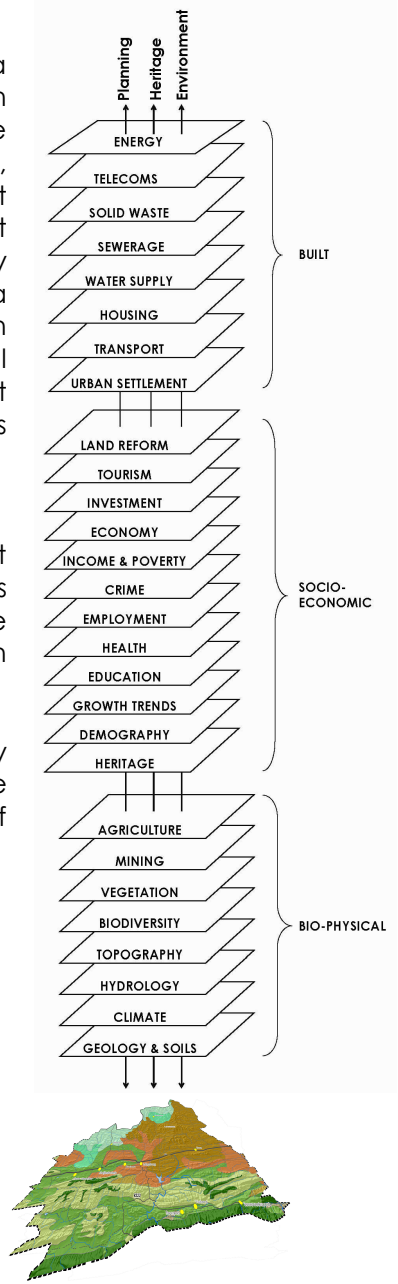


Figure 3.1.1 A Framework of Interrelated Systems

3.2 LAND

3.2.1 Geology and Soils

3.2.1.1 Geology

Figure 3.2.1.1 indicates the general pattern of the geology and soils within Beaufort West Municipality. The municipality comprises of three types of geological formations: Dolerite, Sedimentary and Mudstone deposits.

The majority of the municipality comprises of Mudstone (located mainly in the western, southern and eastern parts) and Sedimentary (located in the central and southern parts).

Dolerite is volcanic rock which pushes between sedimentary rocks. The majority of Dolerite is located around Murraysburg, Nelspoort and Rosedene. Dolerite mostly forms in shallow intrusions such as dykes.

A small percentage of Sedimentary deposits and rock types are located east of Beaufort West. Sediment consists of deposits of minerals and organic materials which are transported through wind, water mass movement or glaciers.

Mudstone (also called mudrock) is a fine grained sedimentary rock whose original constituents were clays or muds. Mudstone looks like hardened clay and, depending upon circumstances under which it was formed, it may show cracks or fissures, like a sun-baked clay deposit.

3.2.1.2 Soil and Soils Depth

Figure 3.2.1.2 shows the various soil depths in the Beaufort West Municipality. The central parts of the municipality, as well as the areas around Rosedene, Sneeukraal, Merweville and Murraysburg, have soil depths ranging from 450mm to 750mm. A small area south east of Beaufort West has depths greater than 750mm. The majority of the municipality has shallower soil depths (less than 450mm deep).

3.2.1.3 Percentage Clay

Figure 3.2.1.3 shows the percentage of clay in the soil throughout the municipal area.

The soil in the most northern and eastern parts of the municipality contains approximately 15% clay. The central of the Municipality around Beaufort West consist of soils with a clay content of 15% to 35%.

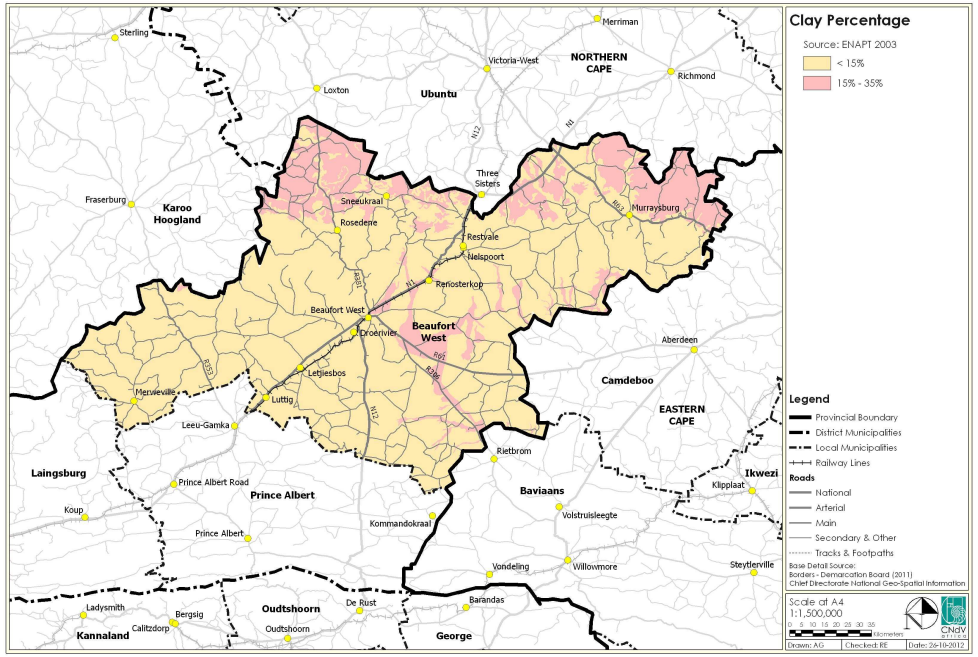


Figure 3.2.1.3 Percentage of Clay

Implications for Beaufort West Municipality

- None of the areas have a clay content higher than 35% and thus a geotechnical study in this regard is generally not required where development is planned.
- The identified dolerite areas (mainly north of Beaufort West) should be treated with special care and detailed geotechnical investigation of urban development is intended in these areas as these formations hamper development.
- Those areas with greater soil depths south east of Beaufort West have high potential for arable agriculture and should be protected accordingly. It is important from an agricultural use perspective that these soils with the greatest agricultural potential be protected from being converted to non-agricultural land uses.

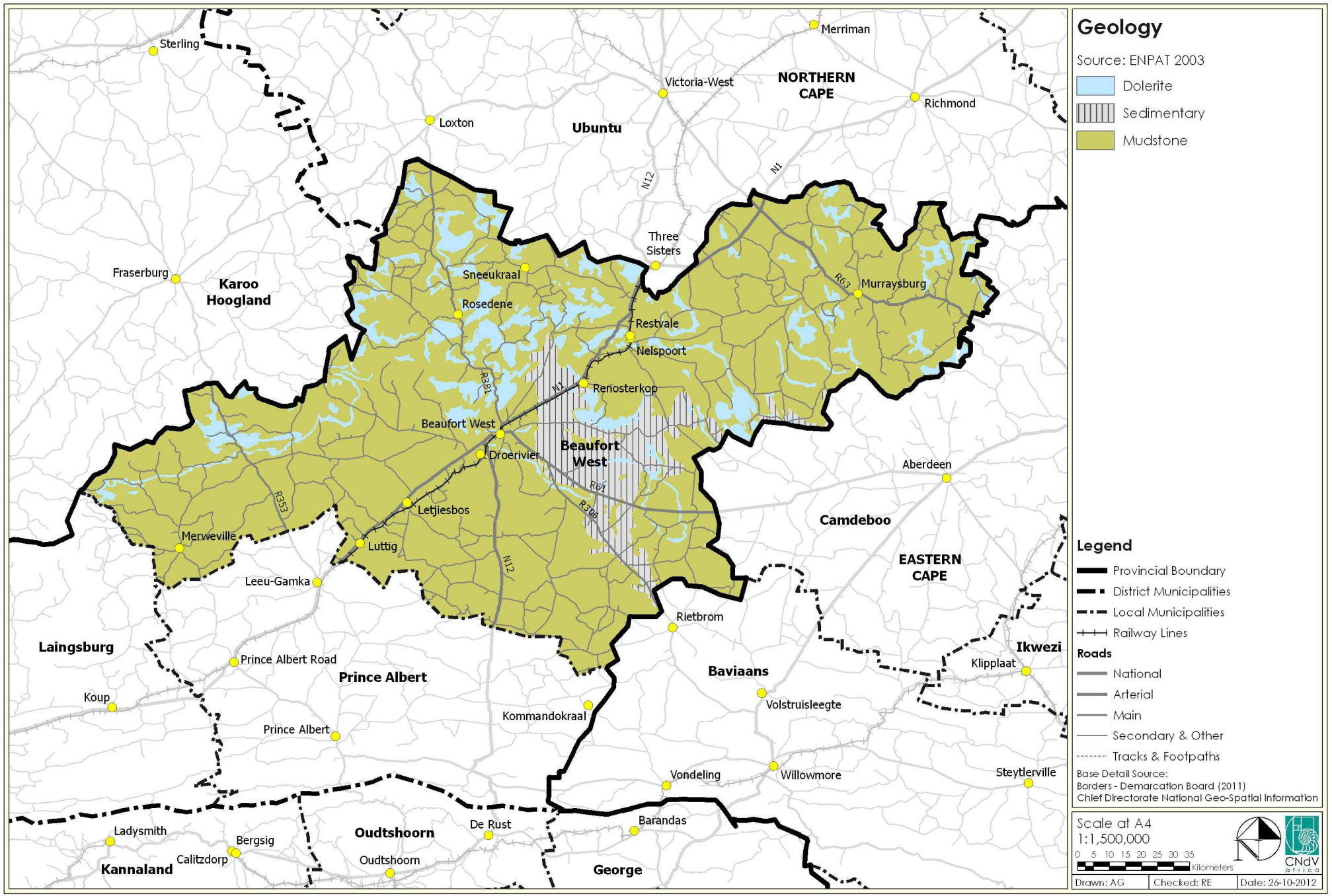


Figure 3.2.1.1 Geology (ENPAT)

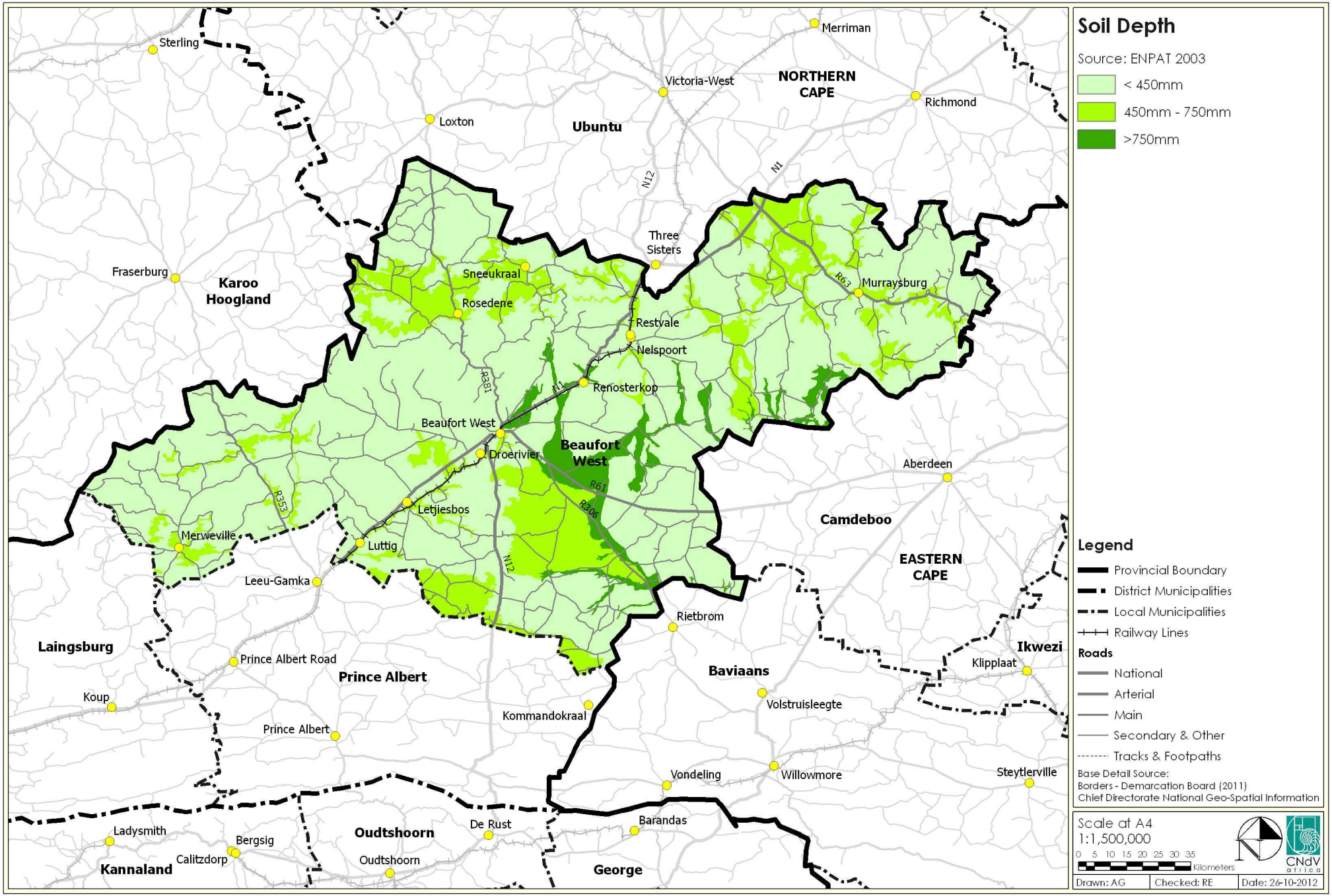


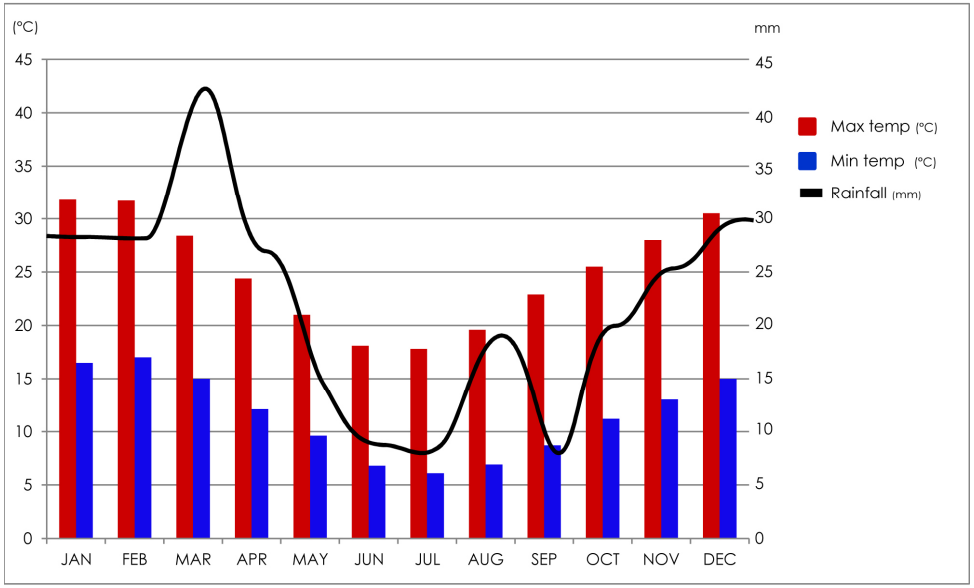
Figure 3.2.1.2 Soil Depth

3.2.2 Climate

The average annual weather data for the Beaufort West Municipality is obtained from a weather station in the town of Beaufort West.

3.2.2.1 Temperature

The average monthly temperature and precipitation for Beaufort West between 1993 and 2011 is shown in Graph 3.2.2.1. The highest annual temperatures are experienced between December and February when average temperatures exceed 30°C. The lowest temperatures are experienced between June and August when the lowest annual temperatures are around 7°C.



Graph 3.2.2.1 **Average Annual Temperature and Precipitation** (source: Weather SA, 2012)

Figure 3.2.2.1a indicates the mean annual temperature across the Beaufort West Municipality. The lowest annual temperatures are experienced in the northern parts of the municipality and the highest annual temperatures in the south. The lowest annual temperatures in the north range between 11-15°C and the highest annual temperatures in the south range between 16-20°C.

Figure 3.2.2.1b below indicates the annual sum of the global horizontal irradiation (1994-2010) for South Africa. The irradiation levels indicate possibilities for solar energy generation. The Beaufort West Municipality falls within an area with intermediate radiation levels estimated at between 2000-2100 kWh/m² (Solargis, 2012). The highest radiation levels exist along the northern municipal boundary.

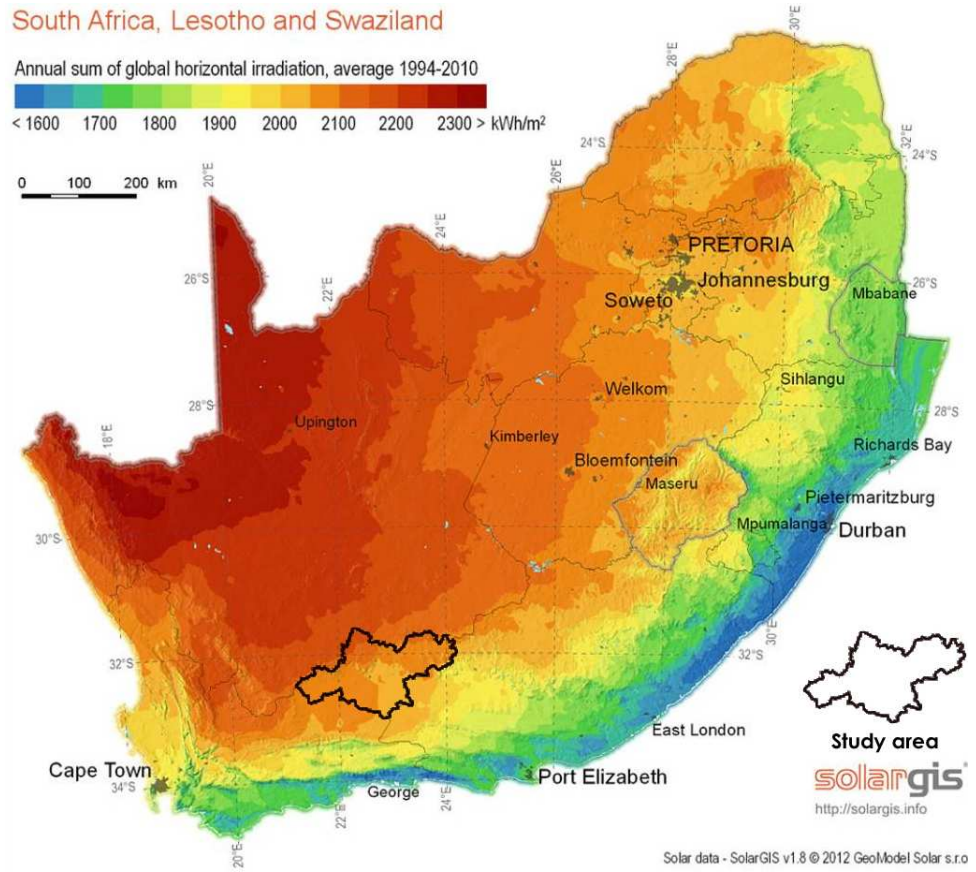


Figure 3.2.2.1b **Solar radiation map for South Africa** (source: Solargis, 2012)

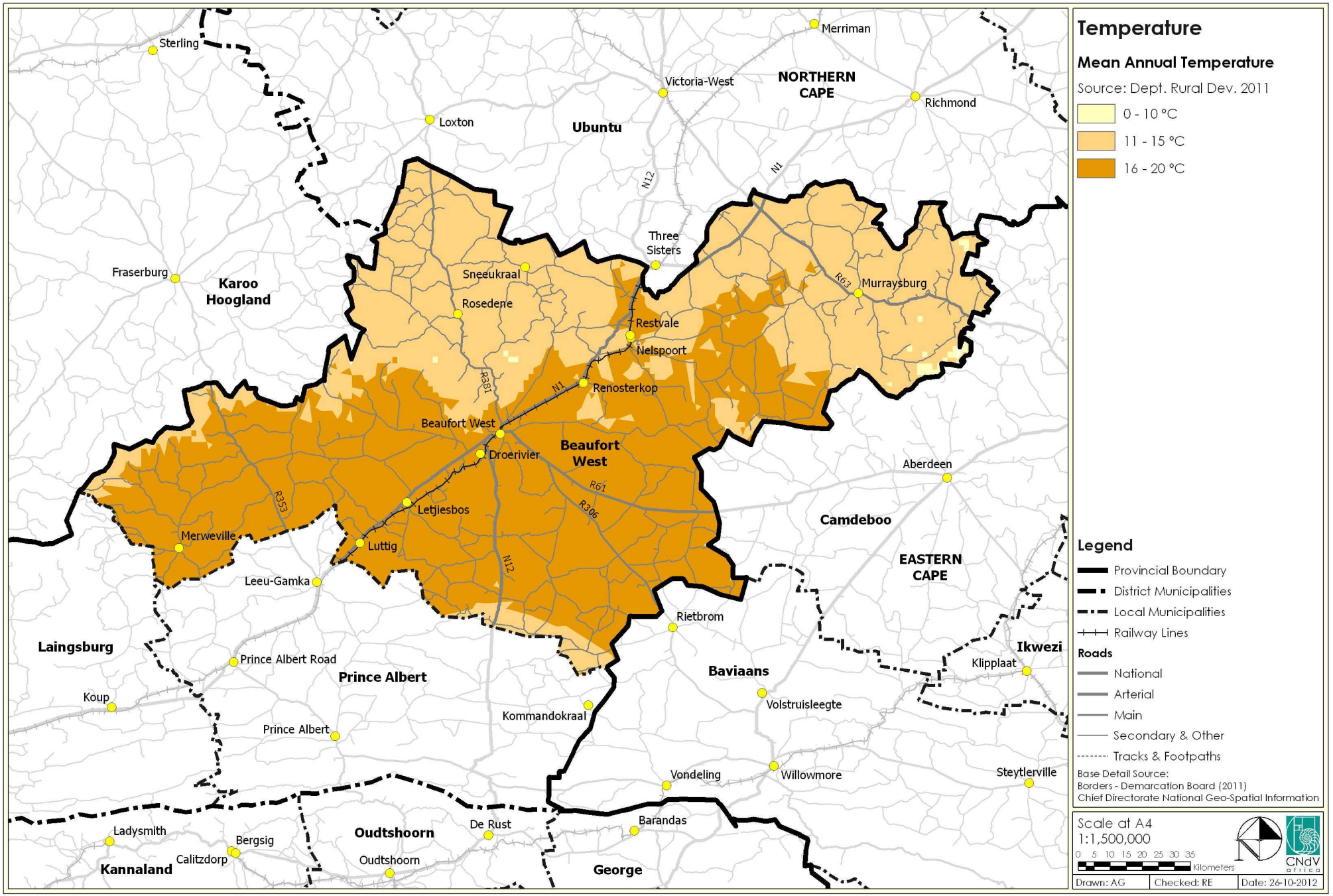


Figure 3.2.2.1a Climate: Temperature

3.2.2.2 Rainfall

Graph 3.2.2.1 indicates the average annual rainfall for the municipality. The highest average rainfall was recorded during February, March and April when figures of 30mm to 43mm were recorded. During the months of June and July the lowest average annual rainfall was recorded. During this time rainfall drops to less than 10mm per month.

Figure 3.2.2.2 shows the distribution of mean annual rainfall across the municipality. The figure indicates that the highest rainfall is experienced north of the town of Beaufort West and in the east of the municipality in vicinity of Murraysburg. In these areas rainfall of between 300mm and 600mm has been recorded.

The lower rainfall areas are situated in the south of the municipality. Rainfall of between 100mm and 200mm has been recorded here.

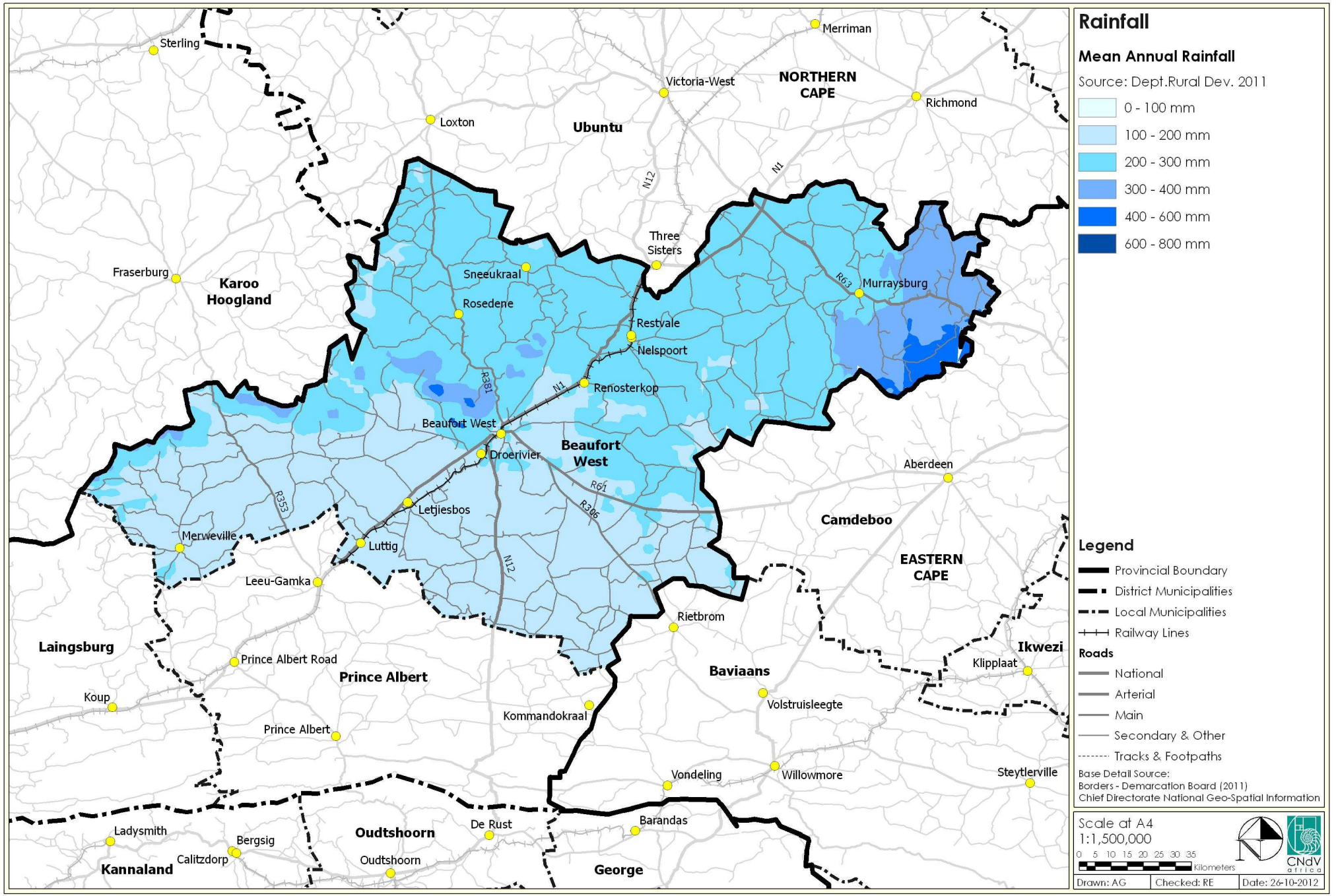


Figure 3.2.2.2 Climate: Rainfall

3.2.2.3 Wind

Figure 3.2.2.3a shows the average annual wind speed and direction for Beaufort West. This figure shows that the dominant wind direction is east, followed by east-north-east and north east. This figure also shows that no wind can be expected for 2.1% of the year.

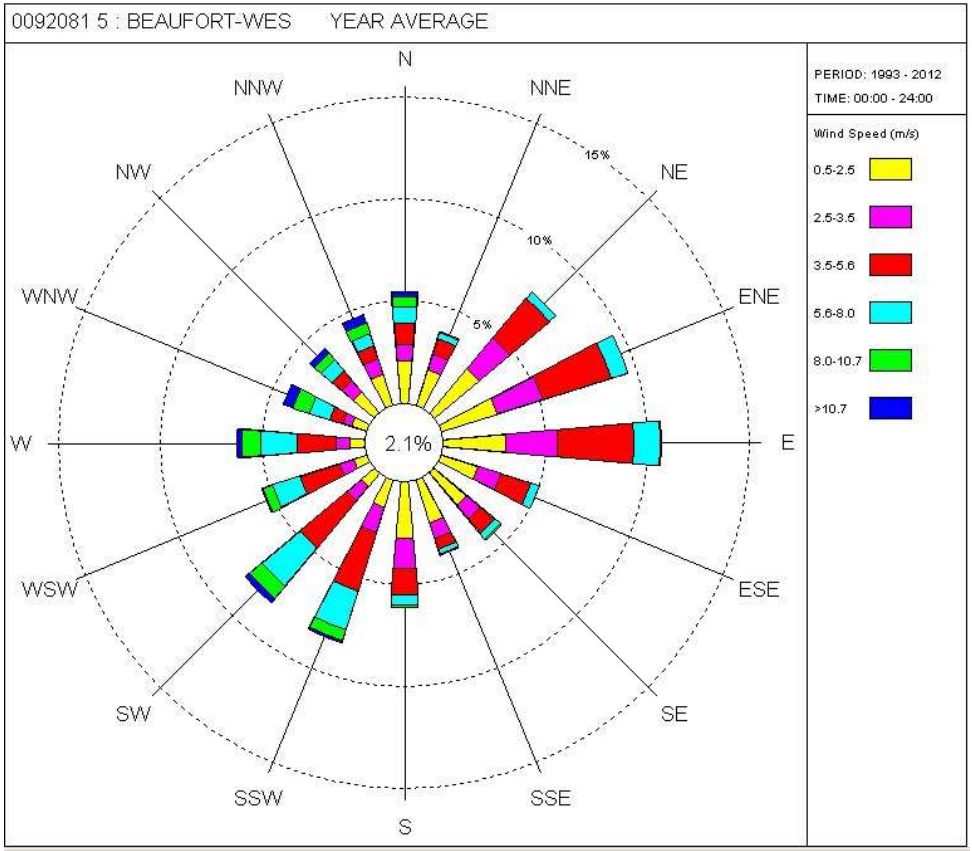


Figure 3.2.2.3a **Average annual wind speed and direction for Beaufort West** (source: Weather SA, 2012)

Figure 3.2.2.3b indicates the summer wind speed and direction. During the summer months the dominant wind direction is in an easterly direction. Figure 3.2.2.3c shows the average annual wind speed and direction for the winter months when the dominant wind direction is westerly.

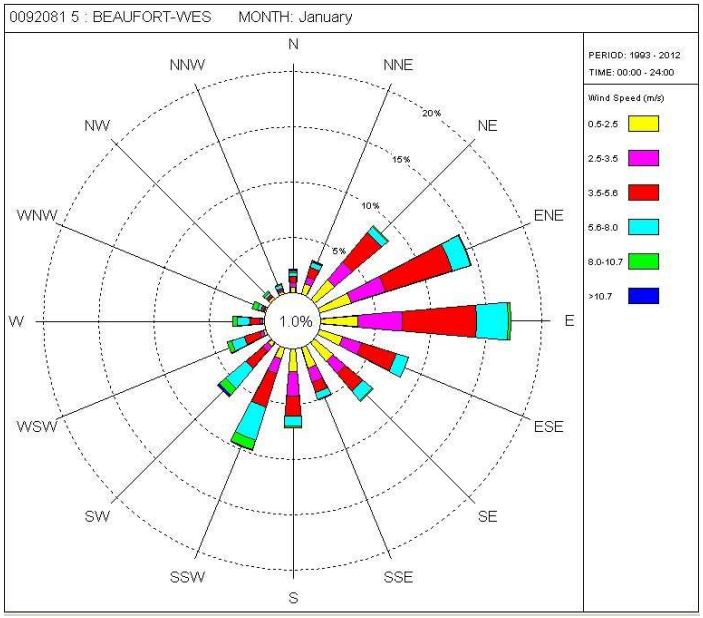


Figure 3.2.2.3b **Summer wind speed and direction for Beaufort West** (source: Weather SA, 2012)

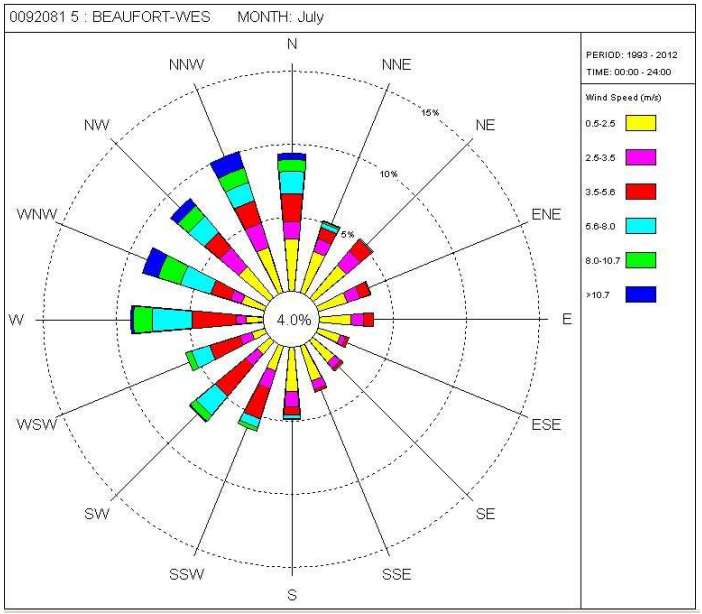
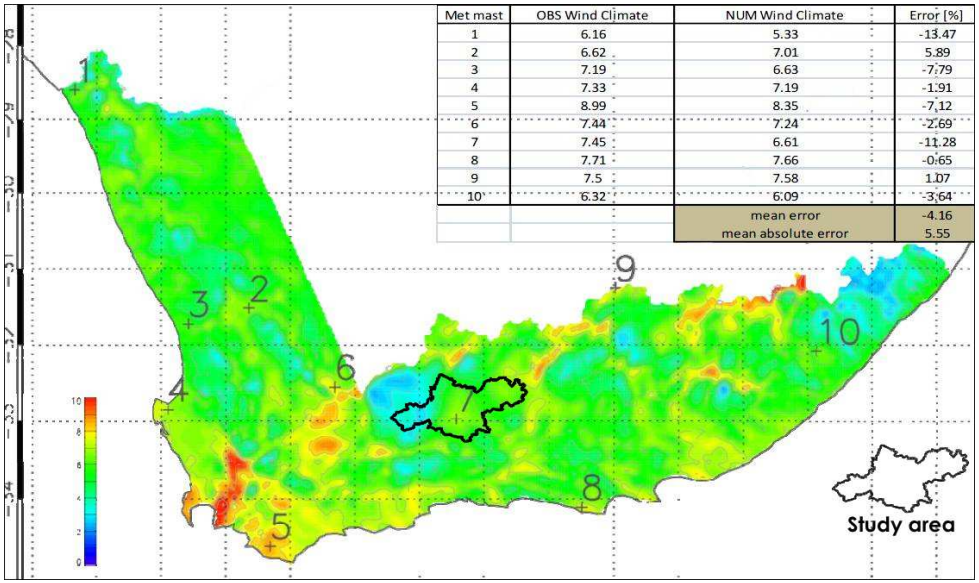


Figure 3.2.2.3c **Winter wind speed and direction for Beaufort West** (source: Weather SA, 2012)

Figure 3.2.2.3d indicates the estimated wind speeds for South Africa and provides an indication of the potential for generation of wind energy. The central and eastern parts of the municipality have the highest wind speeds (6 – 8m/s). This indicates that potential for wind energy generation exists in this area of the municipality.



Met mast	OBS Wind Climate	NUM Wind Climate	Error [%]
1	6.16	5.33	-13.47
2	6.62	7.01	5.89
3	7.19	6.63	-7.79
4	7.33	7.19	-1.91
5	8.99	8.35	-7.12
6	7.44	7.24	-2.69
7	7.45	6.61	-11.28
8	7.71	7.66	-0.65
9	7.5	7.58	1.07
10	6.32	6.09	-3.64
		mean error	-4.16
		mean absolute error	5.55

Figure 3.2.2.3d **Estimated wind speeds for South Africa** (source: Wind Atlas for South Africa, 2012)

3.2.2.4 Wind and Solar Farm Siting Principles

CNdV africa prepared a Strategic Initiative to introduce Commercial Land based Wind Energy Development to the Western Cape in May 2006. The purpose of this study was to develop a regional methodology for wind energy site selection. The study provided a number of site factors for locating wind energy projects. Even though no specific reference was made to solar farm siting some of the factors could be applied to solar farms.

The report highlighted the following site factors as being important:

- **Slope**

Slope is a critical factor that influences numerous aspects of the design of wind farms. These include:

i. Wind Potential – slopes up to a certain gradient that are orientated towards prevailing wind directions tend to augment average wind speeds
ii. Visibility – wind farms on slopes will have increased visibility
iii. Road layout and design – slopes need to be considered in road layout to reduce the erosion potential of road run-off and rockfall and landslide potential
iv. Tower foundation design – this needs to consider falls across the tower platform
v. Revegetation – steep road verges and cuts will require revegetation to reduce sedimentation from run-off

- **Geology**

Wind turbines impose large loads on tower foundations and hence highly stable underlying geology is essential. The existence of bedrock, subterranean voids and possible seismic activity needs to be investigated.

- **Soils**

The erosion potential of wind farms sites is determined by the combination of soils and climatic factors. Soil types need to be considered as these influence road construction and re-vegetation.

- **Rainfall**

Rainfall is a further factor that influences erosion and sedimentation that result in possible habitat and vegetation degradation. The rainfall of a specific site has a direct bearing on the road runoff, and runoff from steep slopes.

- **Surface Hydrology and Groundwater**

The hydrology of specific sites is influenced by all the factors set out above. Hydrology must be dealt with in detail as it is a critical determinant of ecosystem health. The design of roads and the treatment of runoff from

roads and disturbed surfaces must consider the reduction of sedimentation and elimination of erosion potential into any river, stream or wetland systems on the project site. Geohydrology (groundwater) is an aspect of the hydrology of a site. It influences foundation design and the retention of wetland integrity if any are associated with the site.

- **Vegetation**

At the Regional Wind Plan level, sensitive vegetation types linked to valuable landscape types should ideally have been eliminated. However, at the site level, a detailed vegetation assessment should be carried out if the proposal is not in an agriculturally disturbed area (either crops or pasture land) to ensure that no rare species exist on the project site.

The vegetation assessment should include location and condition of:

- Extent of disturbed or alien vegetation
- Extent of any natural vegetation
- Indigenous and endemic species
- Rare and threatened species

- **Terrain Stability**

Terrain stability is an important design determinant that is a function of slope, underlying geology, soil type and rainfall and usually requires specialist inputs. The design process typically has the following stages:

i. Determination of rainfall data for the site (including extreme weather conditions)
ii. Determination of slopes by gradient classes
iii. Determination of natural watercourses
iv. Determination of rocky areas
v. Determination of soil type and permeability
vi. Determination of areas of potential erosion
vii. Determination of areas with high water table
viii. Terrain stability directly influences the design of tower and transmission pylon foundations and the design of service roads. (see Figure 3.2.2.4c)

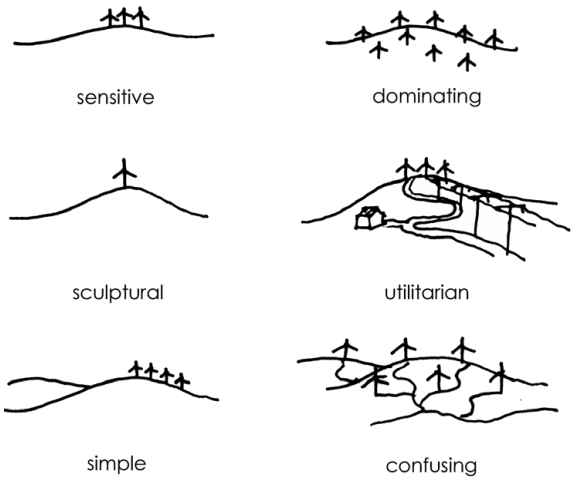


Figure 3.2.2.4 **Wind and Solar Farm Siting Principles** (source: Strategic Initiative to introduce Commercial Land based Wind Energy Development to the Western Cape, May 2006)

Implications for Beaufort West Municipality

- The rainfall distribution map shows that the southern areas are the drier areas.
- The Beaufort West Municipality falls in a late summer rainfall regime.
- Given the above, substantial efforts, should be made to implement rainwater harvesting not only in new development but also in existing buildings. This could help reduce water demand especially in the winter.
- The municipality has good potential for the implementation of renewable energy products, i.e. wind and solar energy, see Section 3.2.2.4.
- The following design and layout aspects should be applicable to wind energy generation projects:
  - Wind turbine layout: minimum placement distance of twice the tower height plus half the rotor diameter, with a similar hub height and a regular spacing;
  - Roads: minimum overall road lengths, minimum road widths specific to the turbines used, gentle gradients to reduce run-off velocity and terrain stability, avoid crossing steep areas, i.e. slopes >40%, hard surfacing to be avoided;
  - Substations and powerlines within the site should be buried and follow road alignments wherever possible.

Implications for Beaufort West Municipality

- The landscapes that provide resilience to climate change need to be identified and protected these are:
- Kloofs, which provide important connectivity and provide both temperature and moisture refuges.
- Topographically diverse areas, which contain important altitudinal and climatic gradients which are important for climate change adaptation as well as ensuring a range of micro-climates are protected.

- Riverine corridors, which provide important connectivity in extensive arid environments, are also important.

3.2.3 Climate change

The vision for Sustainable Energy Use in the Western Cape is for the province to have a "secure supply of quality, reliable, clean and safe energy, which delivers social, economic and environmental benefits to the Province's citizens, while also addressing the climate change challenges facing the region and the eradication of energy poverty" (White Paper for Sustainable Energy Use in the Western Cape, 2010).

The White Paper for Sustainable Energy Use in the Western Cape (2010) sets targets in respect of sustainable energy use for the province. It stipulates that 15% of electricity consumed in the Western Cape Province is to be sourced from renewable energy sources by 2014 – this has been measured against the 2006 Provincial consumption.

The policy framework recognises that in order to fulfill international commitments to sustainable development and climate change, the use of renewable energy as a source of electricity is to be promoted.

The Western Cape Climate Change Strategy (2008) identified a number of possible likely stress factors in the period 2030 – 2045 that could affect the province:

- An increase in the annual average temperature of at least 1 °C by 2050 (the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report released in February this year shows an expected increase of between 3 and 5 °C by 2100);
- Possible increase in the frequency and intensity of extreme events;
- An increase in conditions conducive to wildfires (higher temperatures and increased wind velocity);
- Reduced rainfall in the western parts of the Western Cape;
- Decreased water resources;
- Reduced soil moisture from an increase in temperature coupled with a decrease in average precipitation;
- Temperature impacts on crop activities – crop burn, drought, pests and microbes resulting in yield reductions, and loss of rural livelihoods.

The goals and objectives of this strategy, with specific reference to energy is to reduce the Provincial carbon footprint by means of air quality management; household fuel replacement; cleaner fuels for transport;

energy efficiency and renewable energy – maximizing benefits through stimulating and subsidizing innovation in clean and renewable technologies.

Four vulnerable systems were identified:

- Natural systems – water, biodiversity, and coastal and marine systems and resources
- Economic sectors – agriculture, tourism and fisheries
- Economic resources and infrastructure – energy, transport, health and air quality
- The built environment, livelihoods and disasters – social systems, extreme events (floods, fires).

As the rate of climate change accelerates it is expected that Beaufort West will experience an increase in temperatures and a reduction in rainfall. It is therefore important that the Municipality contributes to the efforts to reduce the emission of greenhouse gasses and thereby delay the impact of climate change. New urban development needs to be planned with this in mind. The changes in the climate along with aspects such as the prevailing wind direction requires that new buildings, be they for offices, commercial or especially residential use, be designed with a view to ameliorate these impacts.

Appropriate thermal treatment of buildings need to be applied to ensure they maximise the use of natural energy and minimise the use of electricity. Appropriate treatment could for example include:

- Insulating outer walls, ceilings and windows to prevent heat/cool air loss.
- Constructing buildings with lighter coloured reflective roofs to reduce heat absorption in summer which will reduce reliance on air-conditioning.
- Insulating geysers with thermal blankets; and
- Installing energy efficient lighting and appliances.

Climate change refuge areas, i.e. areas with moderate climates that provide cooler habitats where species under threat from changing climates can colonise, are:

- Mountain Kloofs, which provide important connectivity and provide both temperature and moisture refuges.
- Topographically diverse areas, which contain important altitudinal and climatic gradients which are important for climate change adaptation as well as ensuring a range of micro-climates are protected.
- Riverine corridors, which provide important connectivity in extensive arid environments. (BOTSOC, 2008)

Implications for Beaufort West Municipality

- Building orientations, architecture and materials need to sensitively respond to the aspects, below, relating to the climate in the Municipality.
- Mukbeibir suggests the following strategies: (2007)
  - artificial groundwater recharge;
  - conjunctive use of surface and ground water;
  - desalination of groundwater;
  - type relief and aid funding from RSA National Treasury;
  - dry sanitation systems such as the pit latrines and urine diversion toilets;
  - dual flush toilets;
  - education programs on water saving measures;
  - local water resource management and monitoring;
  - rainfall enhancement such as cloud seeding;
  - rainwater harvesting at the household level;
  - the use of grey water;
  - reduction of leaks programmes both at household and distribution levels;
  - regional water resource
  - saline water for toilets;
  - standby relief and critical conditions, in other words disaster planning;
  - delivery of water by tanker;
  - tariff Structures to reduce water demand; and
  - water restrictions under used to reduce water demand.
- Mukbeibir (2007) recommends the following:
  - emphasis should be placed on demand side management;
  - strict ground water management systems should be put in place;
  - a climate change awareness programme should be developed;
  - the climate induced impact on water resources should be integrated into the IDPs
  - climate refuge areas need to be protected for the colonisation of threatened species as these have more moderate climates.

3.2.4 Topography and Landscape Character, Slopes and Aspect

3.2.4.1 Topography and Landscape Character

Figure 3.2.4.1 shows the topography of the study area.

The topography of the Beaufort West Municipality gradually rises from the south west to the north and north east. The topography in the south west is between 500 and 1000m above mean sea level which rises to between 1500 and 2000m above mean sea level in the north (Nuweveld Mountains) and the east (Sneeuberge).

On the outskirts of Beaufort West town there are low lying plains to the south with higher lying areas and the Nuweveld Mountains in the north. Murraysburg is surrounded by the Sneeuberge to the east and is also the highest lying settlement in the municipality. Nelspoort is situated in a lower lying area surrounded by hills and "koppies". Merweville is situated in a lower lying area with topography varying between 500 and 1000m above mean sea level. To the north of Merweville lie the Nuweveld Mountains, providing a scenic backdrop to the town.

Three different landscape character types, based on the elevation of the landscapes, are identifiable. These are cosmic, romantic and classic landscapes.

Within the Beaufort West Municipality Romantic and Cosmic landscapes were identified.

Cosmic landscapes are created by the vast open areas are found in the southern parts of the municipality. Romantic landscapes with rolling hills and mountains (Nuweveld Mountains and Sneeuberge) are found in the north of the municipality, see Figure 3.2.4.1.

Figure 3.2.4.1a Example of a cosmic landscape along the N1 national road, south of Beaufort West.

Figure 3.2.4.1b Example of a romantic landscape between Beaufort West and Nelspoort. .

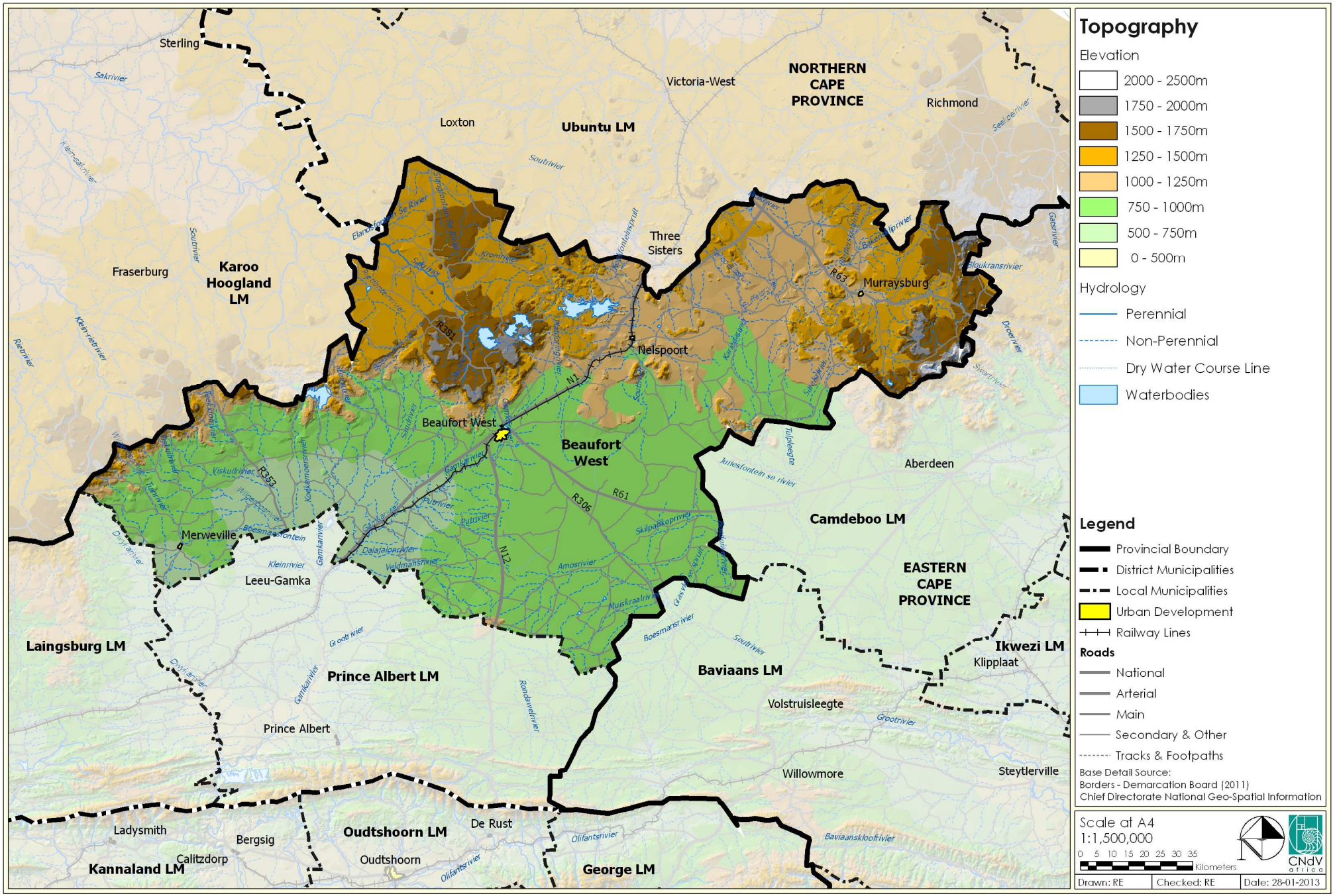


Figure 3.2.4.1 Topography

3.2.4.2 *Slopes*

Figure 3.2.4.2 shows that the majority of the municipality is largely flat (0 – 5%).

The steeper slopes can be found along the southern edge of the Nuweveld Mountains, north of Beaufort West. Here slopes of 20% to more than 25% are found. The areas surrounding Nelspoort and Murraysburg also have slopes greater than 25%.

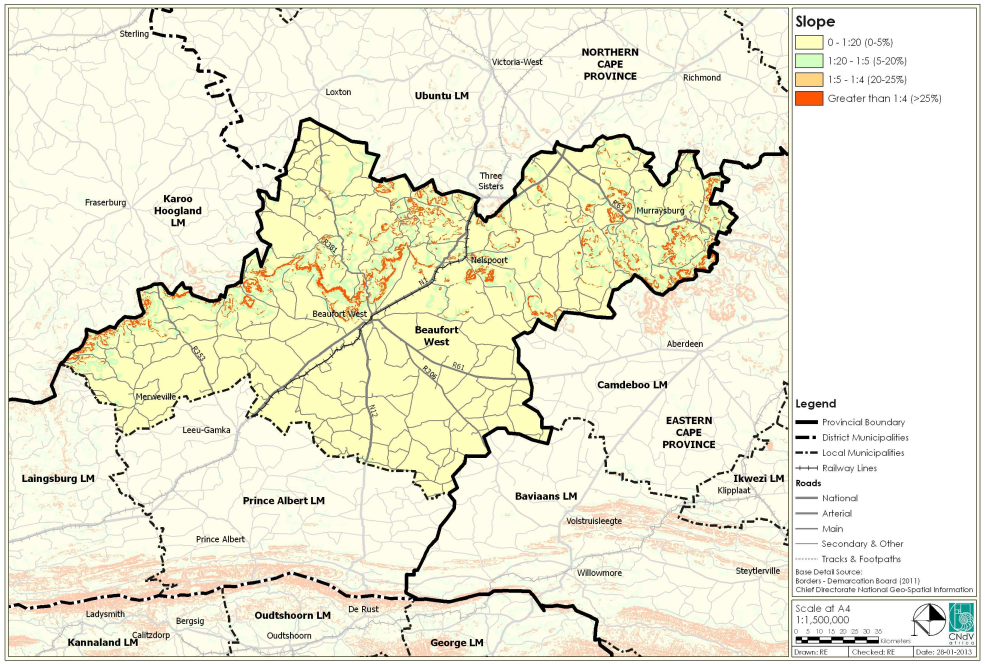


Figure 3.2.4.2 Slope

3.2.4.3 *Aspect*

Figure 3.2.4.3 shows the general aspects found within the municipality. In terms of aspect the majority of the municipality is flat with no prominent aspect. A large number of south facing slopes are also found throughout the municipality.

Implications for Beaufort West Municipality

- Given the steep slopes of some mountain ranges in the north- and north east, settlement opportunities in the municipality should be diverted to the more level areas within the valleys, those areas with slopes of less than 1:4 as shown on Figure 3.2.4.2.
- Future urban development, particularly those for conventional Breaking New Ground, housing - subsidy/lower income housing, should preferably be located on north facing slopes. North facing slopes provide more exposure to sunlight as appose to south facing slopes (refer to figure 3.2.4.3).
- It is also important from visual founding condition and building costs perspectives that no new developments be permitted on the steep slopes (>1:4) and on the ridges of mountains.
- Care should be taken to also reduce the potential negative impact of urban development along the scenic corridors. It will be important to determine the non-negotiable scenic routes or corridors.
- Ensure that changes in land use maintain the integrity, authenticity and accessibility of significant cultural landscapes (WCPSDF, 2009).
- Integrate development within the urban area to combat urban sprawl and reduce negative visual impact on the cultural landscape (SRK Consulting, 2011).

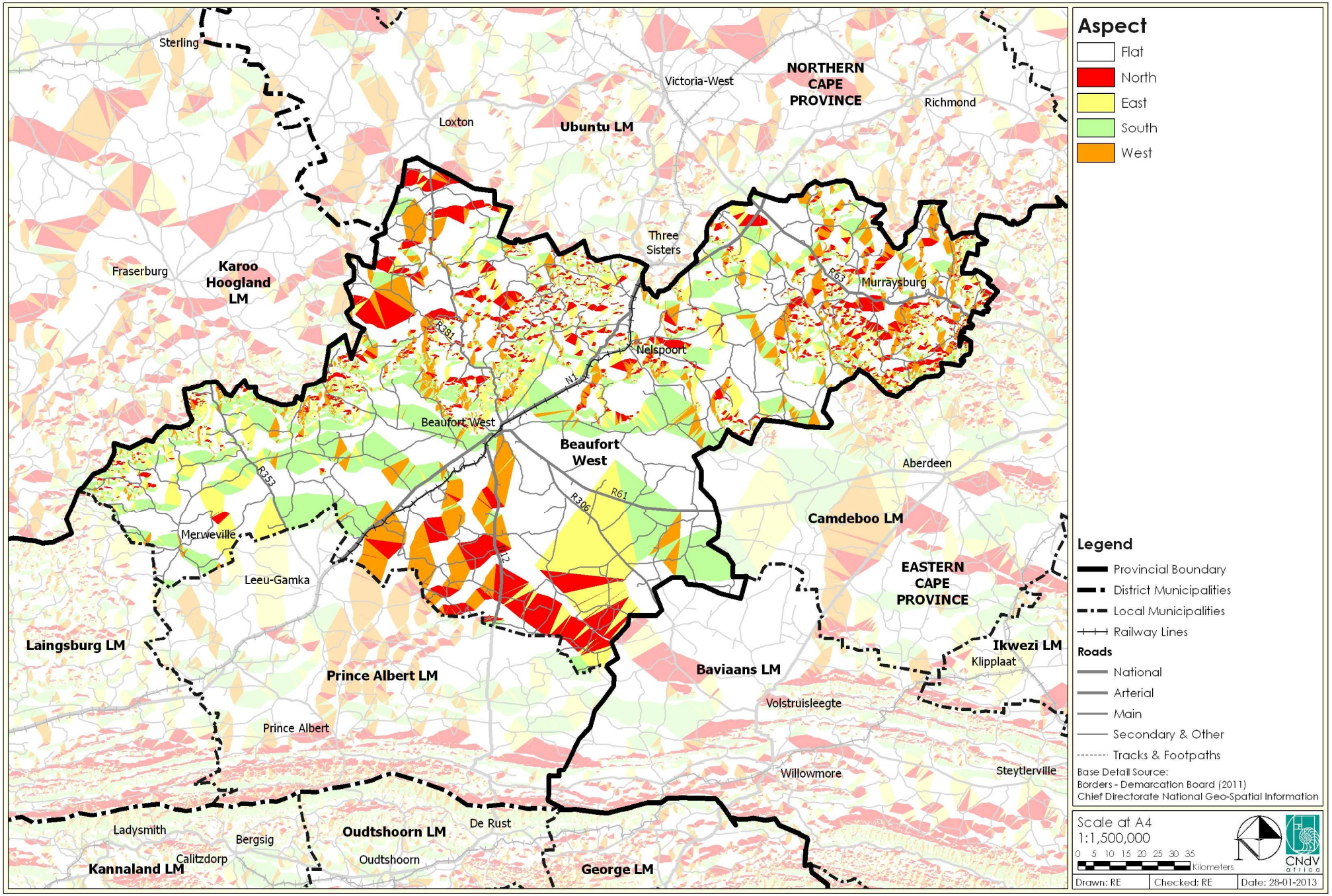


Figure 3.2.4.3 Aspect

3.2.5 Water Resources (Hydrology)

3.2.5.1 River networks

Figure 3.2.5.1 shows the distribution of the rivers and tributaries through the study area.

There is one major river which affects the municipality, the Sout River.

The Sout River flows from north to south through the northern boundary of the municipality.

A number of waterbodies are located in the northern parts of the municipality in the area around Rosedene.

3.2.5.2 Water quality status of the rivers

The NFPA (Kleynhans, 2000) defines rivers based on whether their natural conditions have been modified and their ability to contribute to the river ecosystem. Rivers that are classified Unmodified, Natural or Largely Natural with Few Modifications are considered intact and able to contribute towards river ecosystems. Previously these rivers would have been classified as Least Threatened. Modified Rivers would have been classified as Vulnerable and Largely Modified would have been Endangered. Rivers that are classified as Seriously Modified or Critically/ Extremely Modified would have been previously classified as Critically Endangered.

Figure 3.2.5.2 shows the SANBI river conservation status of the rivers in the Beaufort West Municipality.

In terms of the SANBI: National Freshwater Ecosystem Priority Areas (2007) the Sak River is classified as Largely Natural with Few Modifications.

This indicates that the rivers are in an acceptable condition but that attention should be given to prevent the rivers from further modification and degradation.

Implications for Beaufort West Municipality

- The majority of the rivers in the municipality are in an acceptable state.
- Intensive agricultural production is occurring along the banks of the Sout River. The condition of the Sout River should be improved and further modification and degradation should be prohibited.
- Appropriate policies should be formulated to achieve the above goal that specifically addresses urban and agricultural development.
- The Sout River is a key determinant of the water availability for the Municipality.

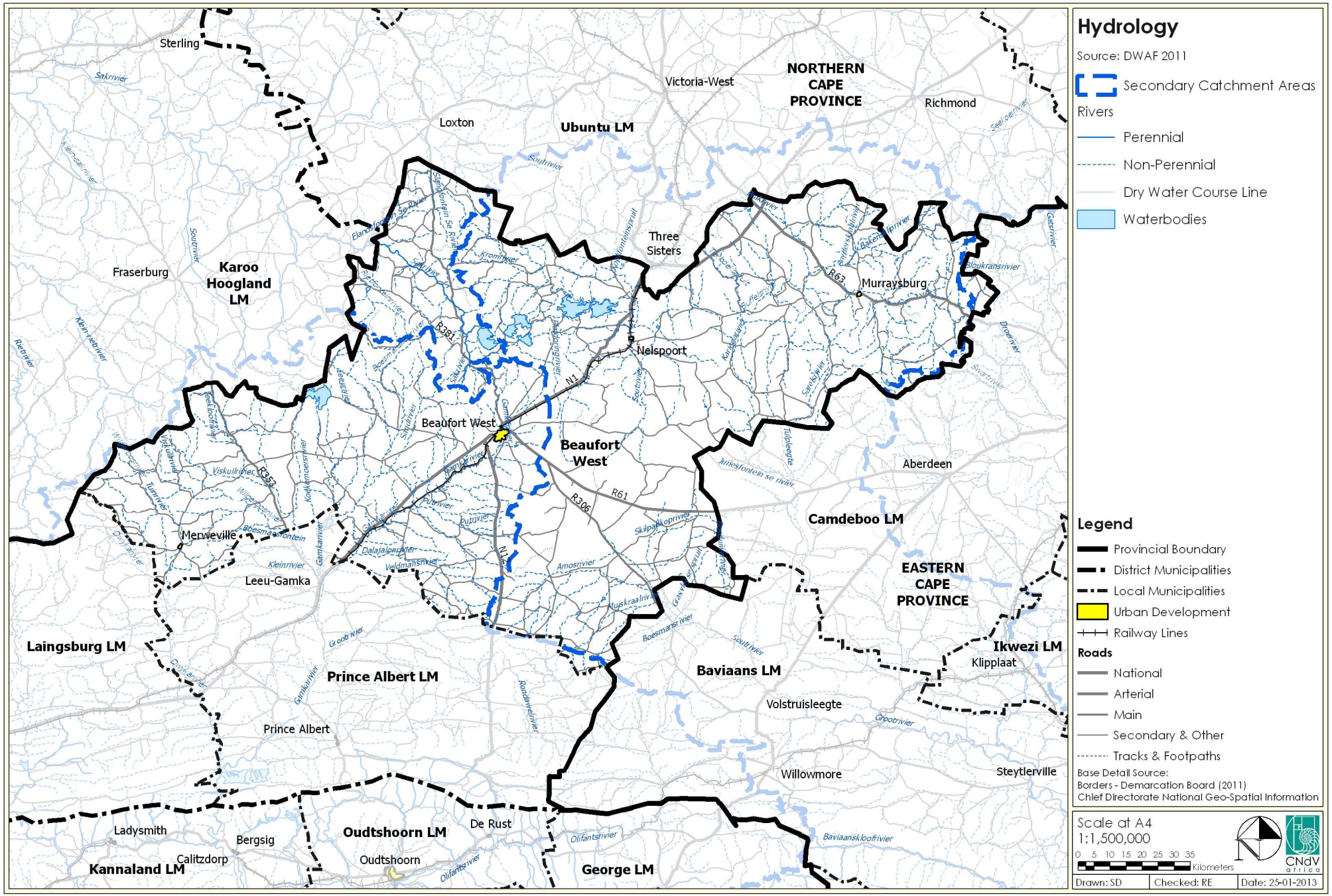


Figure 3.2.5.1 Hydrology: River Systems and Major Dams

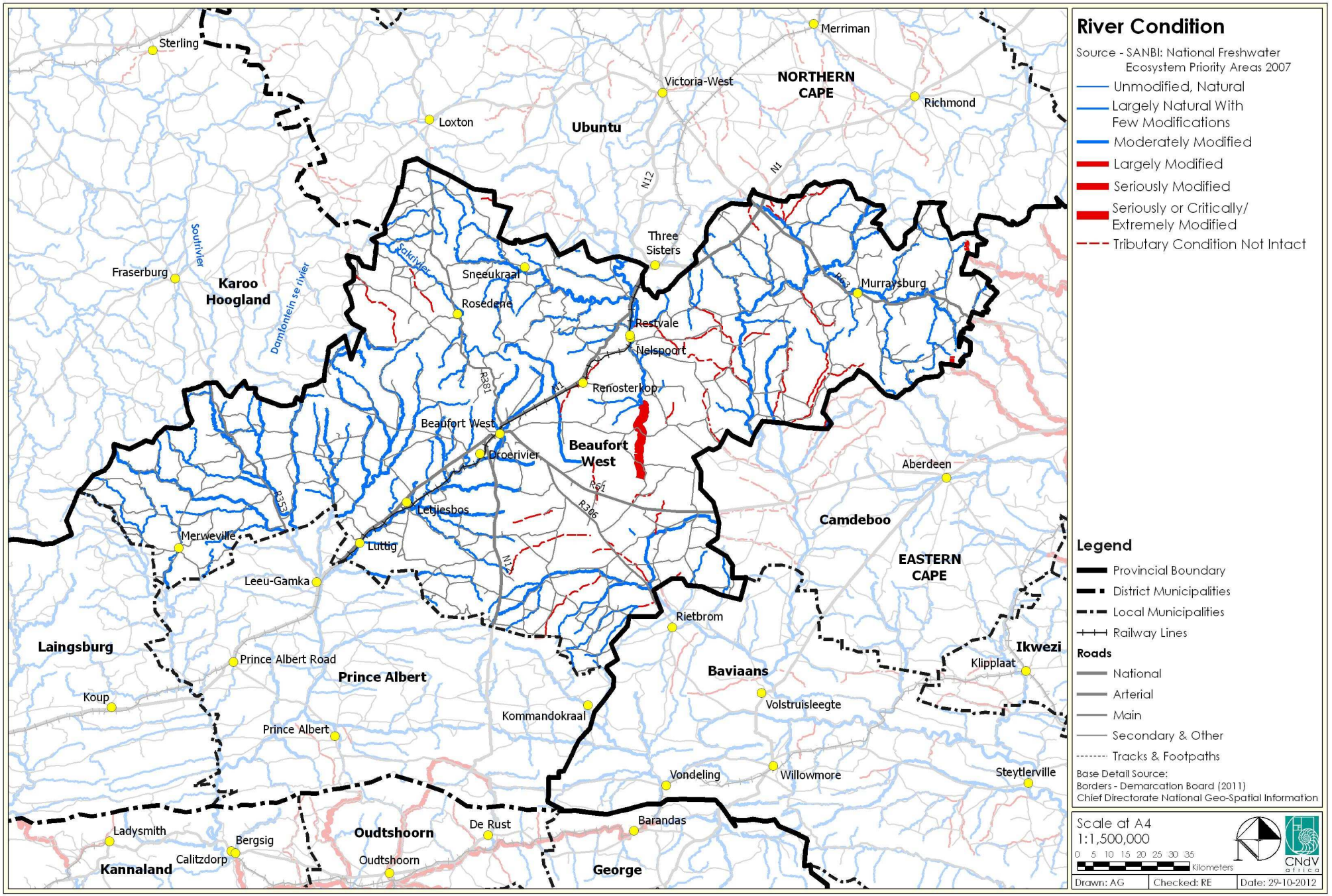


Figure 3.2.5.2 River Conservation Status

3.2.6 Biodiversity

3.2.6.1 Biomes

Figure 3.2.6.1 shows the different biomes that are present in the municipality. These biomes are in order of magnitude of land cover:

- Nama-Karoo Biome (91.51%);
- Azonal vegetation (7.56%);
- Grassland Biome (0.67%);
- Fynbos Biome (0.25%).

Nama-Karoo Biome makes up the largest area of the municipality. It is the third largest biome in South Africa. Its dominant vegetation is a grassy, dwarf shrub land. Grasses tend to be more common in depressions and on sandy soils, and less abundant on clay soils.

Azonal vegetation is located along the rivers and at the wetlands located throughout the municipality.

Grassland biome, mostly containing Vaal-Vet Sandy Grassland, is found around small isolated area south of Rosedene.

Fynbos biome, small pockets of which are located along the western boundary of the municipality has the greatest number of plant species of any biome in the country. It includes both Fynbos and Renosterveld vegetation. Fynbos tends to grow on poor soil and is extremely rich in plant species. Renosterveld grows on richer soil and can support more animals.

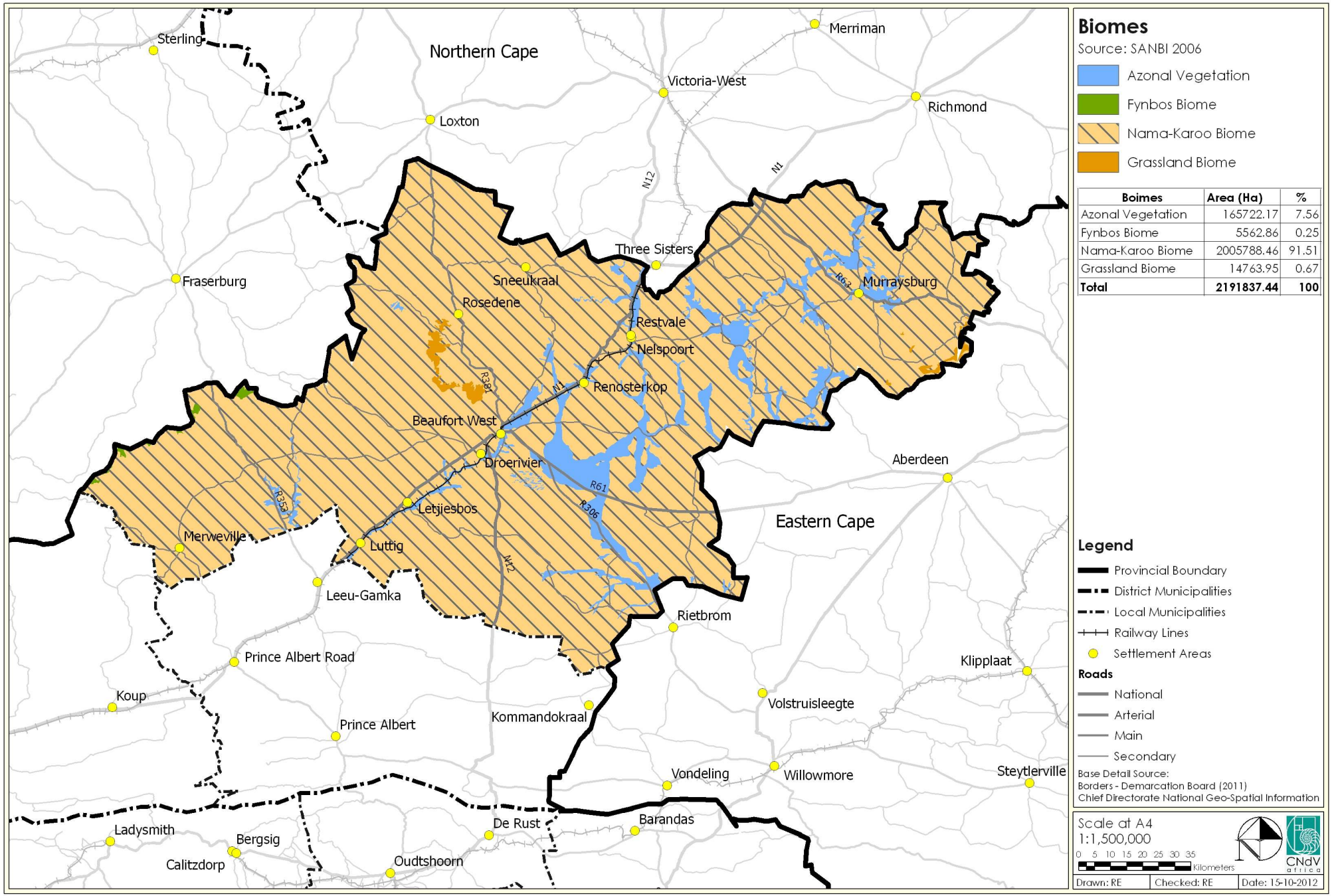


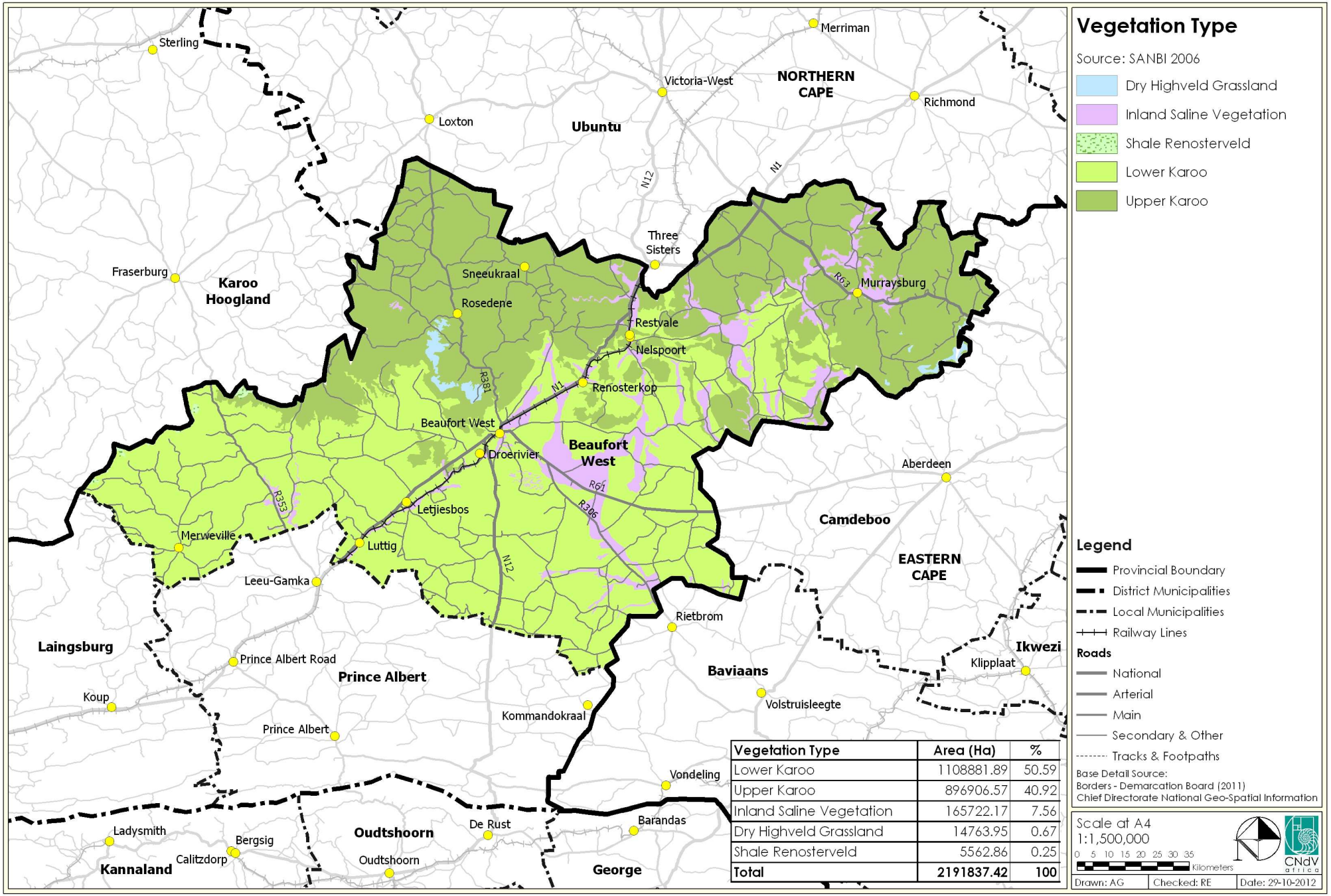
Figure 3.2.6.1 Vegetation: Biomes

3.2.6.2 Vegetation Types

Figure 3.2.6.2 shows the dominant vegetation types in the municipality:

- Lower Karoo (50.59%);
- Upper Karoo (40.92%);
- Inland Saline Vegetation (7.56%);
- Dry Highveld Grassland (0.67%);
- Shale Renosterveld (0.25%).

The southern and eastern parts of the Municipality contain the Lower Karoo vegetation type, while the northern areas contain the Upper Karoo vegetation type.



Vegetation Type	Area (Ha)	%
Lower Karoo	1108881.89	50.59
Upper Karoo	896906.57	40.92
Inland Saline Vegetation	165722.17	7.56
Dry Highveld Grassland	14763.95	0.67
Shale Renosterveld	5562.86	0.25
Total	**2191837.42**	**100**

Figure 3.2.6.2 Vegetation Type

3.2.6.3 Vegetation status

Figure 3.2.6.3 indicates the Vegetation status of the Municipality.

The figure shows than none of the vegetation within the Municipality is vulnerable, endangered or critically endangered.

Implications for the Beaufort West Municipality

- Appropriate grazing systems should be implemented on veld areas so as to improve biodiversity and stock carrying capacity.
- Appropriate management of vegetation types in the municipality should be encouraged as a high priority.
- Agricultural activities should be managed to not negatively impact on natural vegetation.

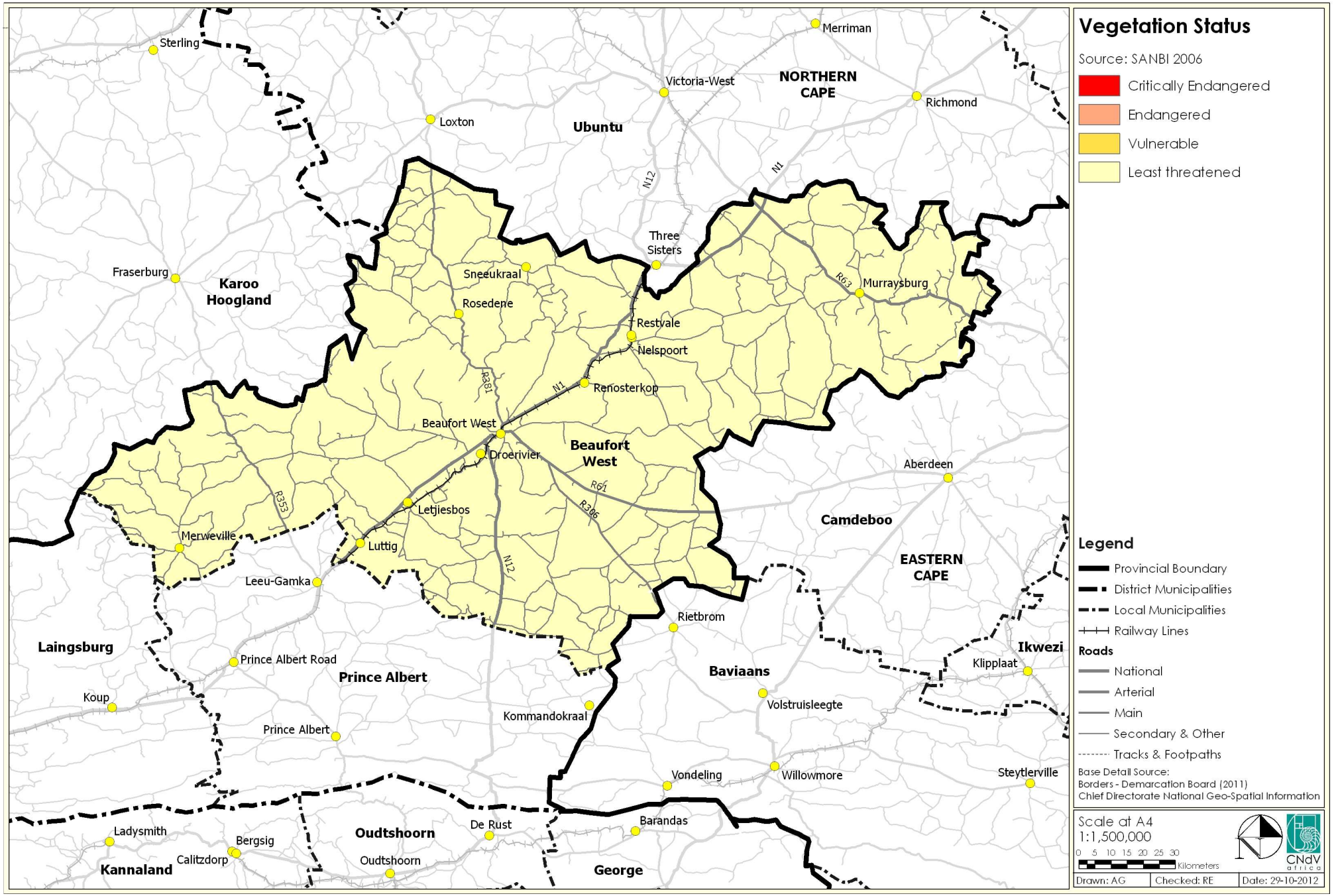


Figure 3.2.6.3 Vegetation Status

3.2.6.4 Critical biodiversity areas

Figure 3.2.6.4a shows the critical biodiversity areas in the Beaufort West Municipality. These areas include the critical terrestrial areas. See Figure 3.2.6.4a and Table 3.2.6.4a.

Critical Biodiversity Areas		
Biodiversity Type	**Area Ha**	**% LM**
Critical Terrestrial Areas	1306099	60%
Sub Total	**1306099**	**60%**
Protected Areas		
Formal Protected Areas	88354	4%
Sub Total	**88354**	**4%**
Area of Municipality	**2191912**	

Table 3.2.6.4a Critical Biodiversity Areas

A Central Karoo Biodiversity Assessment was prepared in 2009 for the Western Cape Department of Environmental Affairs and Development Planning. The identified Critical Biodiversity Areas as per this assessment are illustrated in Figure 3.2.6.4b.

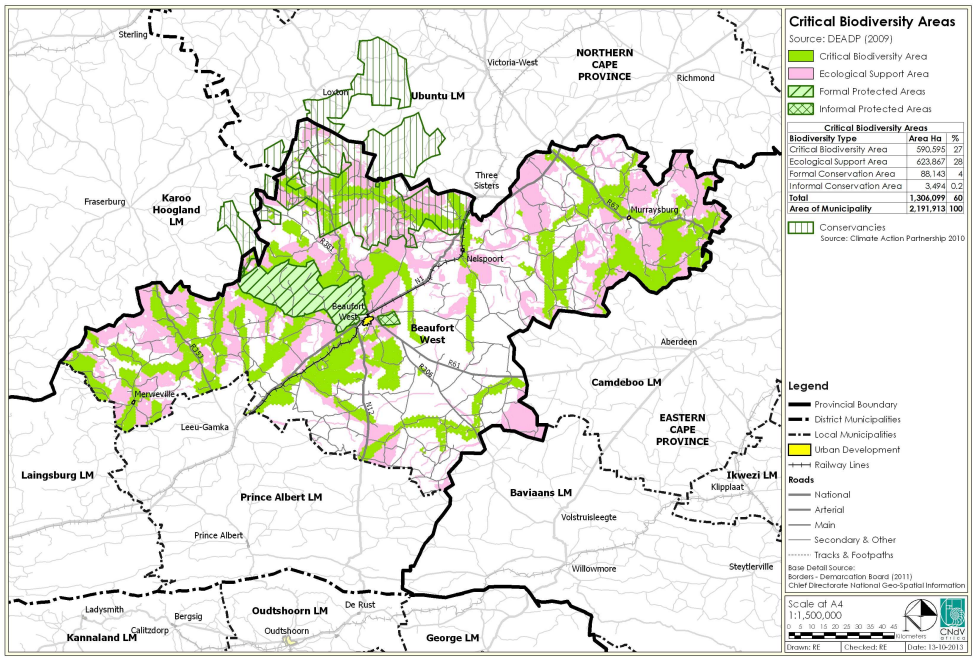


Figure 3.2.6.4a Critical Biodiversity Areas

The assessment concluded with the following management objectives for each identified Critical Biodiversity Area (CBA), refer to Table 3.2.6.4b.

CBA Map Category:	Formal Protected Areas and Informal Conservation Areas	Critical Biodiversity Areas	Ecological Support Areas	Other Natural Areas	No Natural Areas Remaining
Desired Management Objective:	Maintain natural land. Rehabilitate degraded to natural or near natural and manage for no further degradation.		Maintain ecological processes	Sustainable Management within general rural land use principles	Favoured areas for development. Sustainable Management within general rural land use principles

Table 3.2.6.4b Desired Management Objectives per mapped CBA (source: Central Karoo Biodiversity Assessment, 2009)

Implications for Beaufort West Municipality

- Development in close proximity or within endangered plant species areas must be avoided and discouraged, see Figure 3.2.6.4a.
- Strategies and management guidelines are to be developed as a priority to protect Critical Biodiversity Areas, see Figure 3.2.6.4b, which receive no formal protection.
- For all types of development, footprints should be minimised. The focus should be on selecting alternatives that maximise the retention of indigenous habitats, species and ecological processes.
- Search and rescue is important for all development, especially when this may result in the irreversible loss of rare or threatened plant populations.
- If development is proposed in degraded examples of vegetation types, biodiversity offsets should be investigated where equal-sized or larger areas of the same vegetation type are secured for conservation by funding from the developers.
- Appropriate management of vegetation types in the municipality should be encouraged as a high priority.
- Agricultural activities should be managed to not negatively impact on natural vegetation.
- Care should be taken over critically endangered areas located within the municipality.

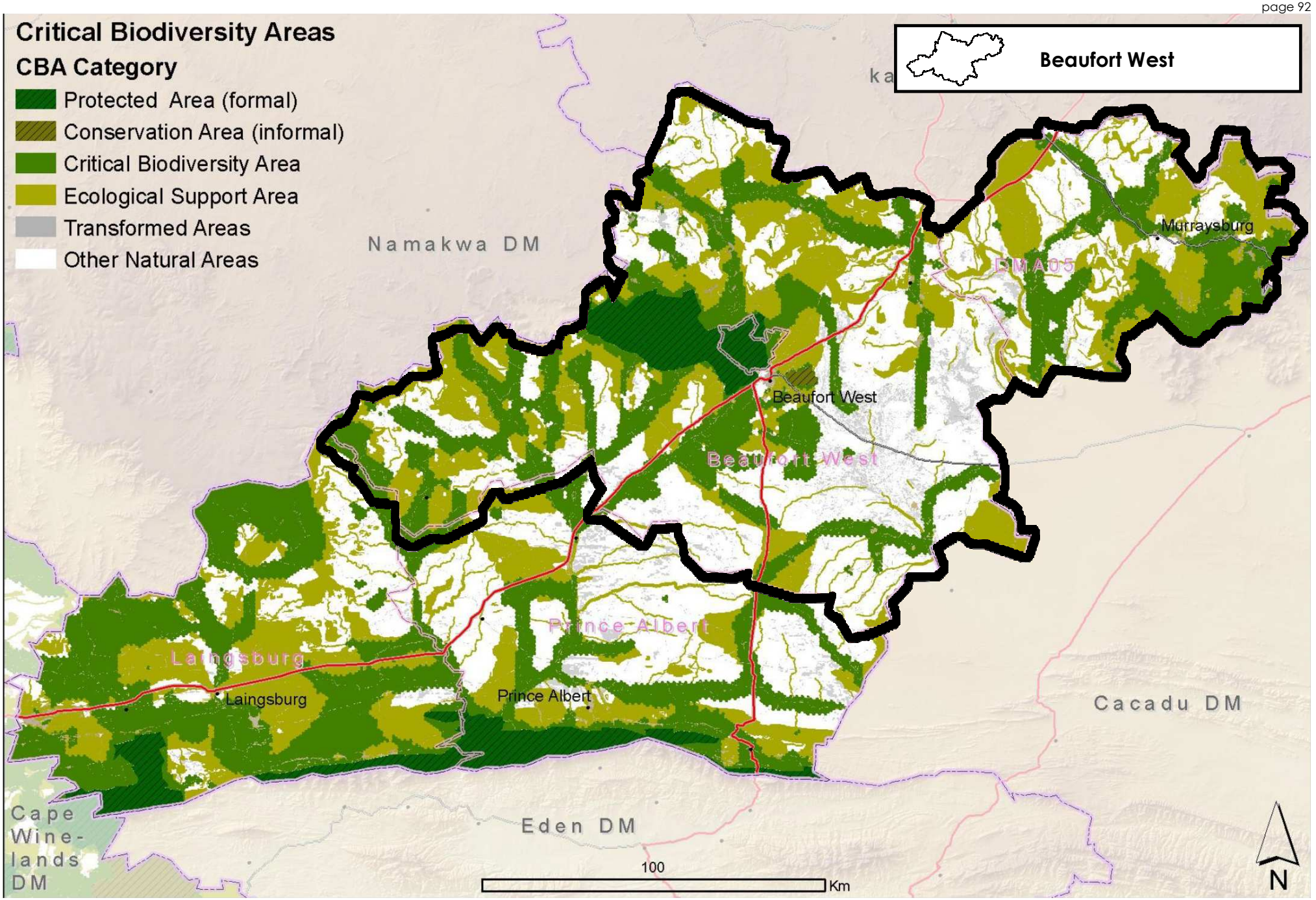


Figure 3.2.6.4b **Critical Biodiversity Areas CBA Categories** (source: Central Karoo Biodiversity Assessment, 2009)

3.2.7 Biodiversity Conservation

3.2.7.1 Conservation

Figure 3.2.7.1 shows that 4.2% of the Municipality is protected through mechanisms such as:

- National Parks: 96%;
- Informal protected areas: 4%.

The Karoo National Park is located in the central area of the Municipality, west of Beaufort West.

One private nature reserve (informal protected area) is located in the central area of the Municipality, west of Beaufort West.

A Riparian Habitat Rehabilitation Project is underway in and around the municipality. The purpose of the rehabilitation project is to repair river systems. These rivers have been damaged by poor farming practices and other human activities and has lead to the Riverine Rabbit (an important biological indicator species) becoming endangered. The project consists of four conservancies of which the Sakriver Conservancy and the Kromriver Conservancy fall within the Beaufort West Municipality. Refer to Figure 3.2.7.1 for the location of these conservancies.

Implications for Beaufort West Municipality

- Vegetation within the municipality is classified as Least Threatened. Proper management and policies should be ensured to maintain this status.
- No urban development should be permitted in the areas identified as CBAs or the Protected Areas, see Figure 3.2.6.4a.
- Promote and encourage the actions taken to improve riverine environments, especially the Riparian Habitat Rehabilitation Project undertaken by the Climate Action Partnership.

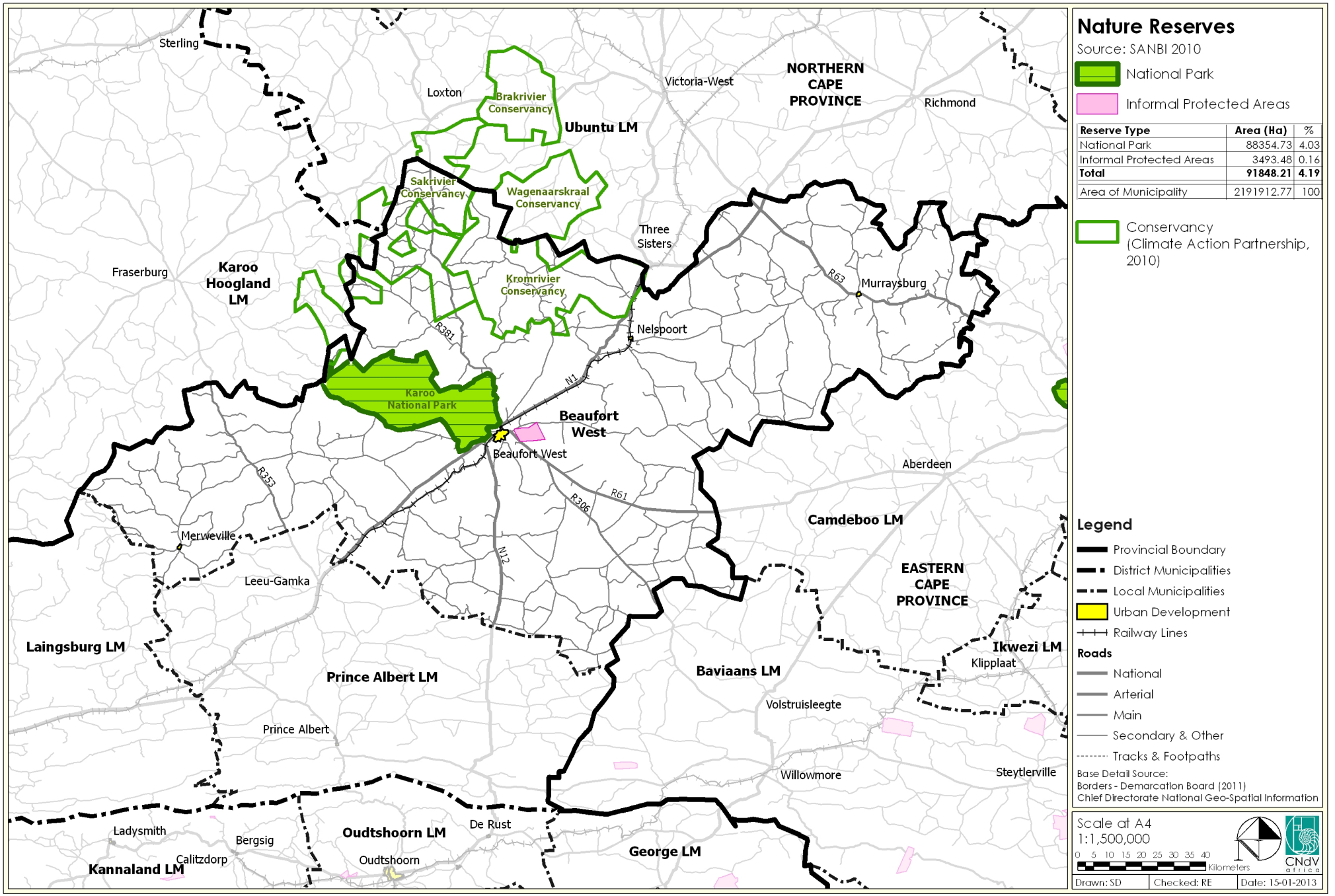


Figure 3.2.7.1 Reserves, Protected Areas and Conservancies

3.2.8 Agriculture

This section of the report focuses on the role of the agricultural sector in the economy of Beaufort West Municipality. It provides an overview of the trends in agriculture and establishes the economic value of agriculture in the municipality, particularly with regard to the pressure of an urban edge.

3.2.8.1 Land Capability

Figure 3.2.8.1 shows the land capability based on the soil classification only (this does not consider water availability). This shows that soil suitable for arable agriculture are mostly located in the western (near Merweville) and eastern areas (near Murraysburg) of the municipality. The majority of the municipality is suitable for grazing of livestock.

3.2.8.2 Agricultural Land Use Pattern

Figure 3.2.8.2 shows the different types of agricultural/farming practices in the municipality. This map shows that there are very few areas of cultivated land. Cultivated land can mainly be found in patches near Murraysburg. Cultivated land only amounts to 6459ha or 0.30% of the total municipal area. The majority, 92.75%, of the municipality is covered with grass and shrubs.

The nature of the agricultural activities in the Beaufort West municipal district is directly derived from the type of soils in the area and the water availability, in essence the associate natural resource endowment. Mainly two types of agricultural activities take place, lucerne and feed-grain production (on the ± 1000 ha irrigation land available) and livestock production mainly small stock (sheep) with livestock farming being the biggest.

3.2.8.3 Water Requirements for Agriculture

Figure 3.2.8.2 indicates the extent of cultivated land in the municipality. Only 0.3% of the municipal land is cultivated.

There is thus a very insignificant requirement for water in the Beaufort West Municipality.

3.2.8.4 Agriculture's contribution to GVA

Central Karoo District contributes 2.36% to Provincial total and 0.56% to National total GVA for the "Agriculture, hunting, forestry and fishing"-sector. Beaufort West local municipal area's contribution is respectively 1.25% and 0.30% for Provincial and National for the said sector.

Figure 3.2.8.4 indicates the sectors contributing to the GVA of the Beaufort West Municipality.

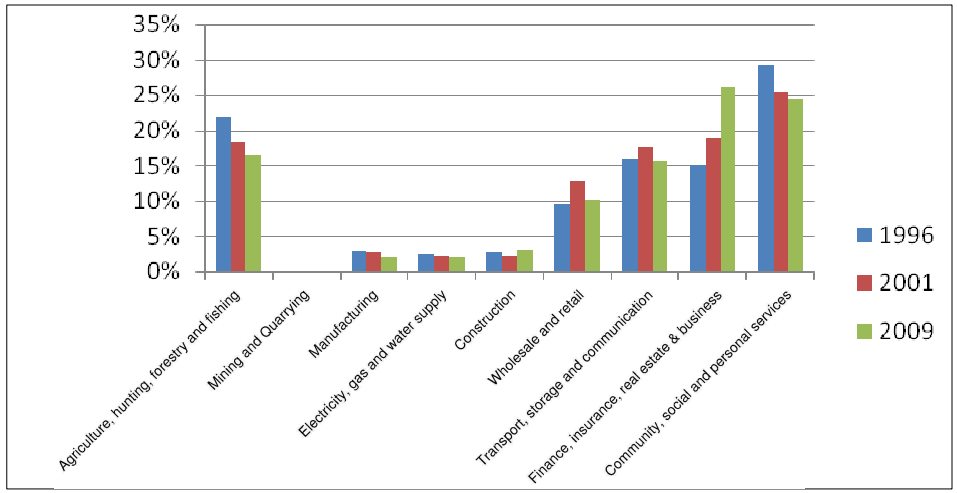


Figure 3.2.8.4 GVA composition for Beaufort West Municipality (source: OABS, 2013)

Although the contribution of the "Agriculture, hunting, forestry and fishing"-sector to total GVA for Beaufort West Local Municipal area declined for the period 1996 to 2009 from 22% to 17%, it still seems to be a the third most important contributor to the local economy and remains one of the main drivers.

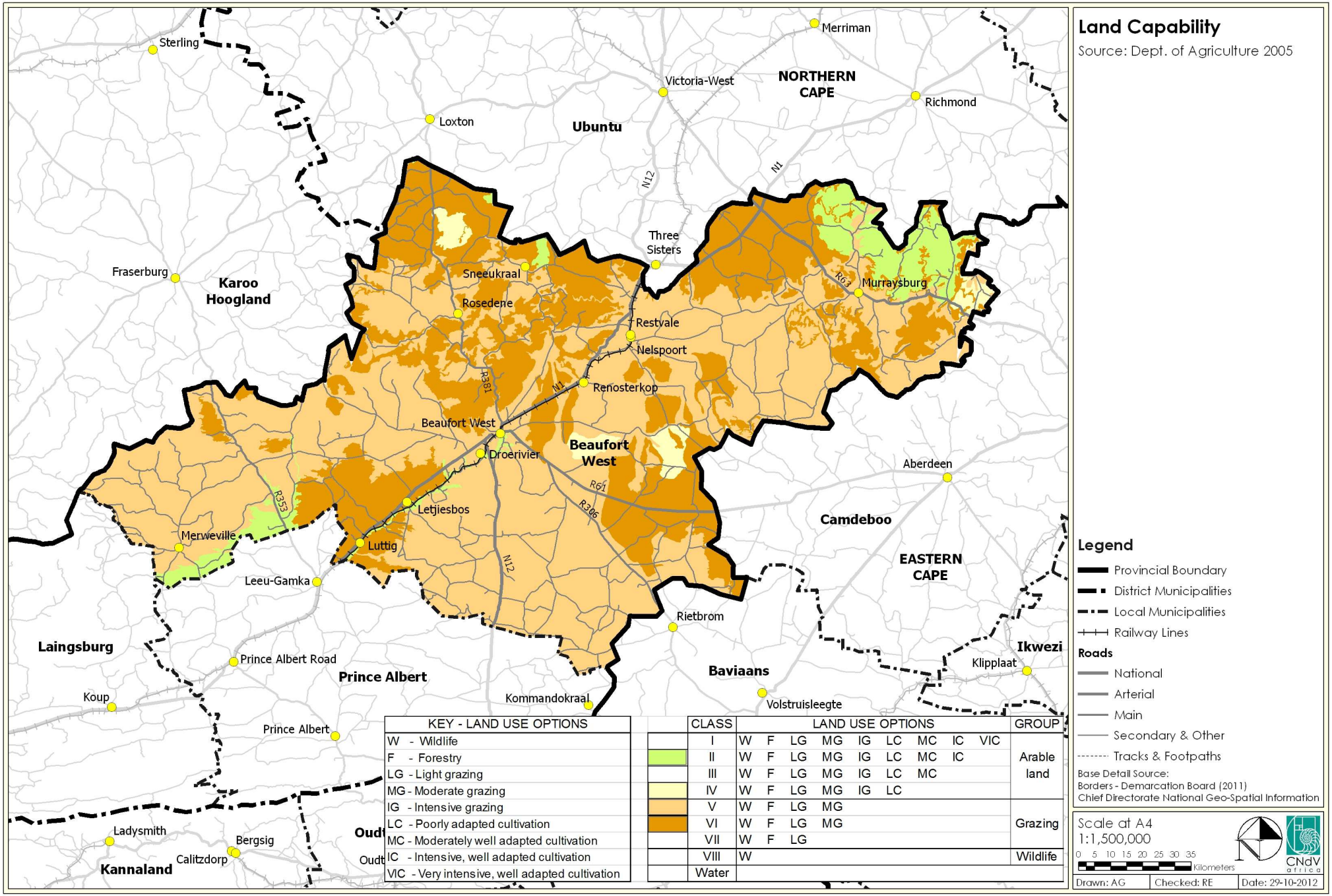


Figure 3.2.8.1 Land Capability

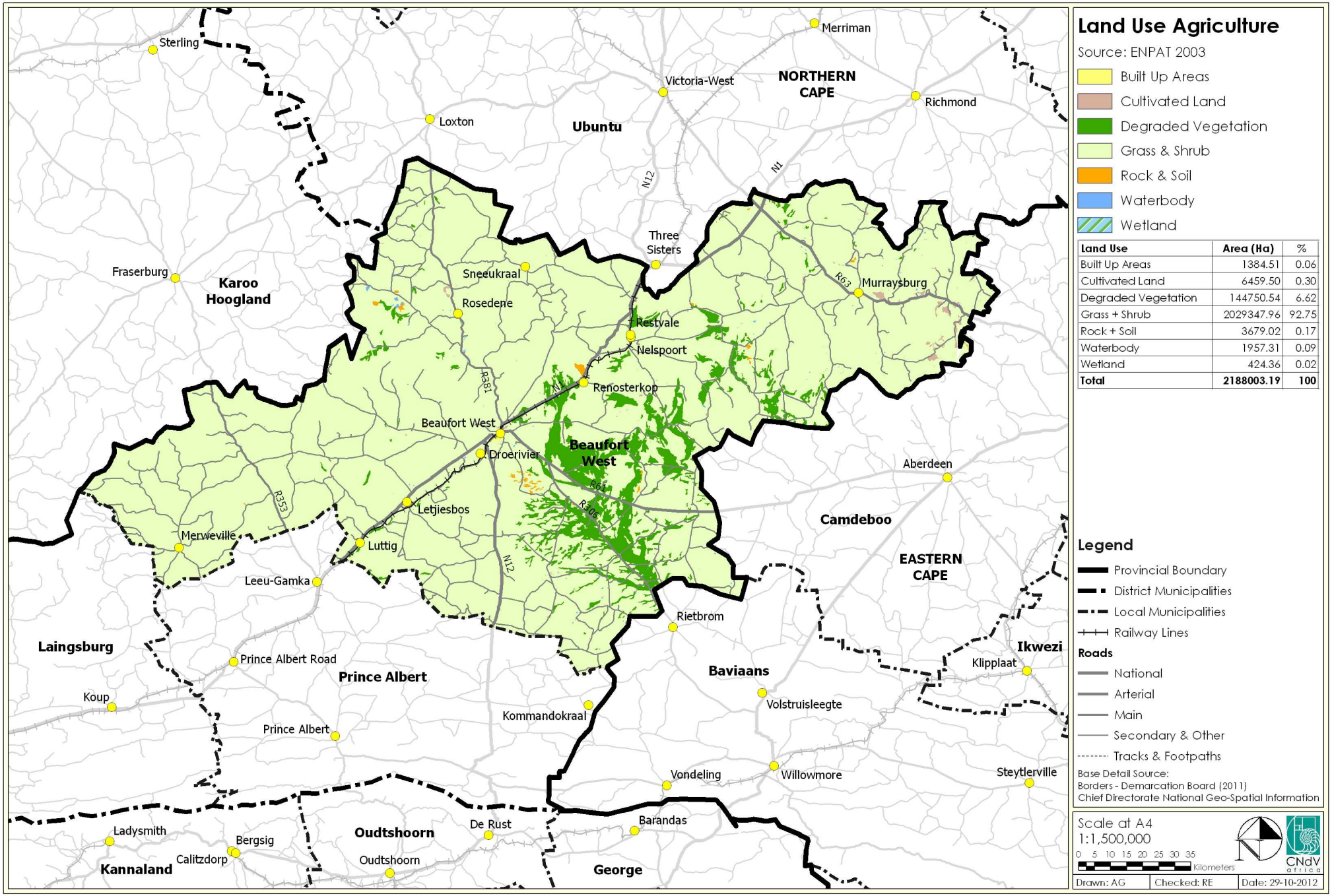


Figure 3.2.8.2 Agricultural Land Uses

3.2.8.5 Types of agricultural businesses

The following is a list of the most significant agri-businesses operating in the Beaufort West Municipality:

- BKB (farmers supplies)
- Beaufort Melkery (diary)
- Beaufort Netwerk/Karoo Netwerk (dairy products)
- Beaufort West Verspreiders (building, farmers supplies)
- Landbank

Karoo Lamb as a brand and geographical indicator is currently being established, which holds potential for growth in the agricultural sector, as the lamb is well-known. Springbok ranching is beginning to be used as an alternative to sheep farming in some areas of the Karoo, which is to a small degree replacing sheep.

Increasingly, farmers are being pressurised by lobby groups and consumers to commit to 'Fair Game' practices in animal husbandry, particularly because of the violent and cruel manner in which traditional predators (jackals, leopards) are being killed with 'gin traps'.

This shift requires new farming practices, and has implications for the carrying capacity of the land.

3.2.8.6 Enterprise contribution to agricultural production

Table 3.2.8.6a indicates a breakdown of the enterprises contributing to the agricultural sector of Beaufort West. The table indicates that the largest income was generated from animals and animal products.

District	Field crops	Horticulture	Animals	Animal products	Other products
	R '000				
Beaufort West	7 433	1 045	35 221	13 811	7
Western Cape	**1 295 835**	**5 976 340**	**1 581 884**	**1 713 253**	**562 646**

Table 3.2.8.6a Gross farming income by main division (source: OABS, 2013)

Figure 3.2.8.6b indicates gross farming income earned from field crops. Maize for grain is the biggest enterprise in this regard.

District	Total	Summer cereals			Winter cereals			Fodder crops			
		Maize for grain	Grain sorghum	Other	Wheat	Barley	Other	Lucerne	Maize for silage	Teff	Other
	R '000										
Beaufort West	7 433	5 837	0	0	127	20	0	1 293	132	0	26
Western Cape	**1 243 910**	**36 621**	**9 350**	**512**	**983 339**	**99 774**	**30 058**	**47 554**	**2 466**	**2 801**	**31 435**

Table 3.2.8.6b Gross farming income from field crops (source: OABS, 2013)

Table 3.2.8.6c indicates gross income earned from horticultural products. In this regard deciduous fruit is the largest.

District	Total	Vegetables						Fruit	Other Horticulture	
		Green mealies and sweet	Tomatoes	Carrots	Cabbage and red cabbage	Green beans	Other	Deciduous	Tea	Other
	R '000									
Beaufort West	1 045	7	20	1	1	11	2	664	74	265
Western Cape	**4 851 160**	**24 707**	**93 615**	**39 805**	**31 800**	**8 435**	**26 180**	**4 352 090**	**65 764**	**208 764**

table 3.2.8.6c Gross farming income from horticultural products (source: OABS, 2013)

Table 3.2.8.6d indicates that sheep farming is the biggest enterprise within livestock farming. Wool and mohair are the biggest income generators in terms of livestock product sales.

District	Total	Livestock sales						Livestock product sales			
		Dairy cattle	Beef cattle	Sheep	Angora goats	Boer goats	Pigs	Milk and cream	Wool	Mohair	Hides and skins
	R '000										
Beaufort West	49 032	22	2 628	28 716	1 477	160	150	20	6 646	6 088	1 057
Western Cape	**3 295 137**	**86 360**	**172 570**	**355 419**	**9 978**	**5 011**	**123 571**	**838 035**	**128 861**	**18 937**	**7 163**

District	Poultry sales		Poultry product sales			Game farming	Other animals and animal products
	Chickens	Ostriches	Chicken eggs	Ostrich skins	Ostrich feathers		
	R '000						
Beaufort West	0	1 773	0	0	0	295	0
Western Cape	**379 836**	**442 476**	**309 074**	**72 113**	**21 246**	**6 663**	**317 824**

Table 3.2.8.6d Gross farming income from animals and animal products (source: OABS, 2013)

Table 3.2.8.6e shows an average contribution obtainable from a typical farm.

	Total District	Average Farm
Number of farms (commercial)	197	1
Total agricultural (ha)	1 651 894	8 385
Total arable (ha)	1 013	5
Jobs	449	2
GDP contribution	R 57 517 000	R 291 964
Export	R 1 218 500	R 6 185

Table 3.2.8.6e Average Farm Contribution (source: OABS, 2013)

3.2.8.7 Farmworkers

There are about 591 farm employees who are employed in the Beaufort West agricultural sector, of which 307 are employed full-time and 284 part-time, see Table 3.2.8.7a. Of the total number of employees, approximately 77% (457 individuals) are male.

District	Paid employees							
	Total		Farm managers / Farm foremen		Full-time employees		Casual and seasonal workers	
	Male	Female	Male	Female	Male	Female	Male	Female
	Number							
Beaufort West	457	134	40	3	253	11	164	120
Western Cape	**126 999**	**96 176**	**5 133**	**708**	**63 472**	**28 894**	**58 394**	**66 574**

Table 3.2.8.7a Paid employees according to occupation

Table 3.2.8.7b reflects the minimum wages for farm workers since 2003. Area A refers to a more urban area and Area B a more rural environment.

YEAR	Area A			Area B		
	Rand/hr	Rand/mnth	Annual Remuneration	Rand/hr	Rand/mnth	Annual Remuneration
1/03/2003	R 4.10	R 800	R 9,600	R 3.33	R 650	R 7,800
1/03/2004	R 4.47	R 871	R 10,455	R 3.66	R 714	R 8,564
1/03/2005	R 4.87	R 950	R 11,395	R 4.03	R 786	R 9,429
1/03/2006	R 5.10	R 994	R 11,928	R 4.54	R 885	R 10,620
1/03/2007	R 5.34	R 1,041	R 12,492	R 5.07	R 989	R 11,868
1/03/2008	R 5.59	R 1,090	R 13,080	R 5.59	R 1,090	R 13,080
1/03/2009	R 6.31	R 1,232	R 14,780			
1/03/2010	R 6.74	R 1,317	R 15,800			
1/03/2011	R 7.51	R 1,376	R 16,512			
1/03/2012	R 7.71	R 1,503	R 18,036			
1/03/2013	R 11.66	R 2,275	R 27,298			

Table 3.2.8.7b Minimum wages for farm labourers (OABS, 2012)

It should be highlighted that, although the agricultural sector only contributes between 5%-10% of total Provincial GVA the associated job opportunities it creates should not be underestimated along with its forward and backward economic linkages which creates further spin-offs in both the primary and secondary economy.

3.2.8.8 Food security

The Beaufort West local municipal area is well endowed in terms of its natural resources for the production of a number of agricultural produce and livestock farming. In terms of food security this area is a contributor not only in terms of the local supply within Beaufort West but as national and international supply base.

- **Food and fibre sources – farm gate to shop**
  - The United Nations Food and Agriculture Organisation (FAO) have determined daily dietary requirements of approximately 2000 plant calories and 500 animal calories per day;
  - Upper income diets can increase this intake to 7 500 to 8000 plant and 2 500 animal calories per day;
  - 2 500 calories per day is adequate for a vegetarian diet.
  - Land requirements for plant and animal calories are 2000 calories per m² per annum for plant foods and only 200 calories per m² per annum for animal foods, i.e. producing animal protein requirements (10 times as much land as plant protein);
  - A community of 49586 (Census, 2011) requires the following land for its food and fibre needs depending on its diet and income status, see Table 3.2.8.8.

Land required for food security					
	Diet	**C/day**	**People**	**C/m²/year**	**Total Ha**
Upper Income	Plant	8000		2000	580
	Animal	2500		200	1810
	Number of People		**3967**	**Sub-total**	**2390**
Lower Income	Plant	2000		2000	1665
	Animal	1000		200	8325
	Number of People		**45619**	**Sub-total**	**9990**
		Total	**49586**	**Total**	**12380**
All Vegetarian		2500	49586	2000	**2262**

Table 3.2.8.8 Land required for food security: Beaufort West Municipality (source: Kilimakore Synergetics. A Study on the Revitalisation of Rural Towns in South Africa, May 2010)

Note: the impact of animal and plant food consumption vs an all vegetarian diet can be seen on the demand for agricultural land (± 32700ha's vs ± 3000 ha's).

- Approximately 0.3% of the land in the municipality, i.e. 6459ha is cultivated. There is also 2029347 ha of grass and scrubland in the municipality, parts of which are being used for livestock farming.

- It is estimated that 12380ha of land is required for food security, see Table 3.2.8.8, in the Beaufort West Municipality. In terms of dietary requirements for plants, 2245ha is required and 10135ha is required for animal foods. There is thus sufficient land available to supply for the needs of the current population of the municipality.

- There are indications that the current formal food and grocery distribution network, mainly in the form of corner shops, supermarkets and shopping centres, will come under increasing pressure as a result of food inflation and decreasing purchasing power among most income groups but particularly the poor.

- A separate informal marketing channel should be developed in the form of a network of farmers' markets which could allow prices at the farm gate to increase but retail prices to drop by circumventing the agents and middlemen and formal retailers in the distribution channels, see box below indicating distribution chain issues for small growers.

CASE STUDY: Lettuce Value Chain : Stellenbosch

Organic lettuce grown on Stellenbosch commonage:

Sold to packer at R7.15/kg
Packer sells lettuce to retailers (28/3/2008 prices)
Retailers sell lettuce at R68/kg

Grower now sells direct at Stellenbosch market at R40/kg

Kelly C, 2008. Value Chain in Agriculture Service Industry

3.2.8.9 Impact of Climate Change

It is important to determine the extent to which adapting/adjusting to the predictable climate variability reduces the adverse impacts of climate change and the economic value of these climate change damages.

Global warming has taken centre stage in the international arena over the past decade. The Global warming phenomenon presents us as human society with a unique mix of challenges that arise from the fact that global warming is a global public concern. The associated cost of preventing or slowing down has overwhelming scientific and economic uncertainties and sheds a shadow of uncertainty for decades, perhaps even centuries to come (OABS, 2013). Along with the current globalisation, politic-, technology-, legislation-, environmental etc. issues, the current and futuristic climate changes faced, in the light of global warming, could be argued as one of the most threatening challenges facing the world today (OABS, 2013). The unimpeded growth of greenhouse gas emissions across the globe is raising the earth's temperature, with potentially severe climatic and environmental effects. The consequences include melting glaciers, higher precipitation levels, more and more extreme weather events and shifting seasons as highlighted by IFPRI (2009). Human society across the world would need to alter their current "lifestyle" to adapt accordingly; these alterations include "where we live, how we produce, how we earn our daily livings" etc. (OABS, 2013). Although, climate change in itself is an extremely complex issue, other elements such as global population- and income growth further threatens food security across the world.

The agricultural sector is a critical mainstay of local livelihoods and national GDP in some countries in Africa. Agriculture contributions to GDP vary across countries, but assessments suggest an average contribution of 21% (ranging from 10% to 70%), (OABS, 2013). Even where the contribution of agriculture to GDP is low, the sector may still support the livelihoods of very large sections of the population, so that any reduction in output will have impacts on poverty and food security. This sector is particularly sensitive to climate, including periods of climate variability. In many parts of Africa, farmers and pastoralists also have to contend with other extreme natural resource challenges and constraints such as poor soil fertility, pests, crop diseases and a lack of access to inputs and improved seeds. These challenges are usually aggravated by periods of prolonged droughts and floods (OABS, 2013).

The main expected features of climate change is the raise in temperature, variability in precipitation, changes in precipitation patterns, changes in the growing season, changes in rainfall pattern, etc. Therefore, the aforementioned variables will definitely impact on the availability of water, for both rain-fed and irrigated agricultural production. Water availability is the most important limiting factor for crop production in the Beaufort West area. Furthermore, animal production will also be adversely affected in the light of dryer periods throughout the year. Given the extent of production in this area it could have implications in terms of food security.

Implications for Beaufort West Municipality

The following implications were derived from the Beaufort West Agricultural Sector Overview report prepared by OABS Development (2013):

- Increased summer temperatures results in crop damage.
- A loss of biodiversity and resultant loss of ecosystem services (a 30% loss of species is projected in a worst case scenario);
- Increased fire (due to increased temperature, likely spread of alien vegetation and loss of biodiversity) and flood (rainfall events is likely to be fewer but heavier) risks, impacting on crops, livestock, and settlements.
- Regulating water demand especially for agricultural purposes.
- Protecting ecological water reserves.
- Monitoring biodiversity closely and eradicating alien vegetation.
- Evaluating livelihoods based on threatened resources.

3.2.9 Building Materials and Mining

Figure 3.2.9.1 shows the location of mineral deposits throughout the municipality. There are currently no mining activities within the municipality.

The minerals deposits found within the municipality include (DRDLR, 2007):

- Molybdenun
- Uranium
- Uranium Molybdenun

The majority of mineral deposits occur in the central western parts of the municipality.

The South African economy is highly dependent on electricity for industrial, commercial and domestic energy needs (Econometrix, 2012). Future economic growth is thus closely related to the availability of sustainable sources of energy. In this regard the Department of Energy intends to shift the balance of the primary energy supply inputs to include 48% from coal, 14% from nuclear, 16% from renewable energy and 9% from open cycle gas turbines by 2030.

Shale gas reserves have been identified in the Karoo and could hold a transformational opportunity for providing energy to support the continual growth of the South African economy. In order to determine the viability of the resources a proper assessment is required. Desktop estimates predict that the shale gas resources of the Southern Karoo area could be a reserve of 450 trillion cubic foot (TCF), believed to be the fifth largest reserve in the world (Econometrix, 2012).

To determine the viability of extracting the potential gas resources the Department of Energy has issued Technical Co-operations permits to a number of prospecting corporations, Falcon Oil and Gas Ltd., Shell, Sunset Energy, Sasol/Chesapeake/Statoil joint venture and Anglo Coal, refer to Figure 3.2.9.2 for details on the areas of the permits.

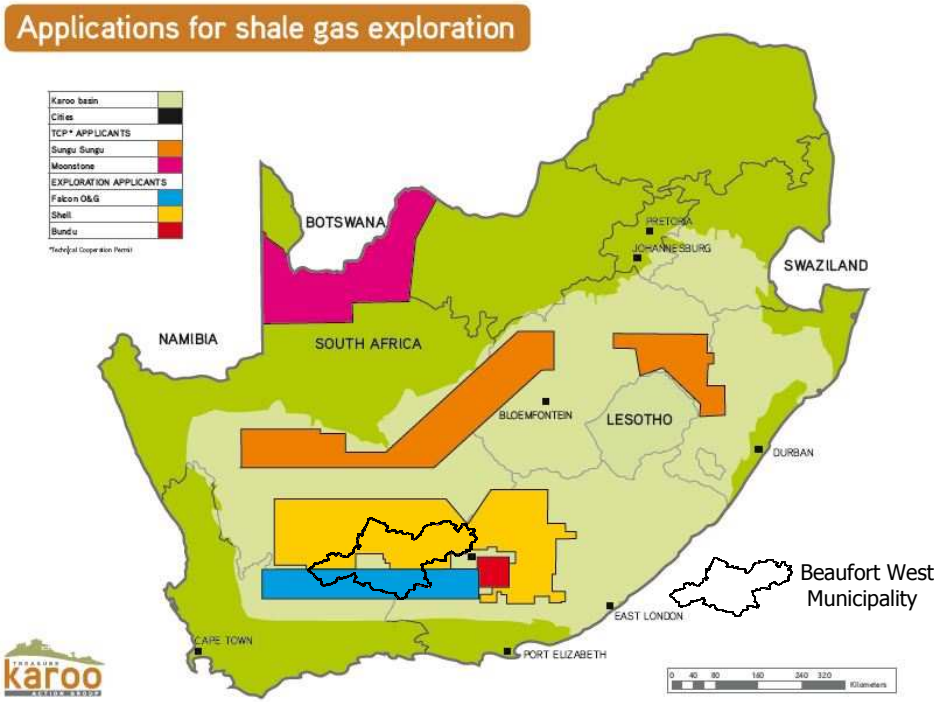


Figure 3.2.9.2 **Applications for shale gas exploration** (source: Econometrix, 2012)

Econometrix were commissioned by Shell to conduct an economic study on the benefits for South Africa of extracting the shale gas resources of the Karoo. The study considered two resource assumptions, a 20 TCF (Scenario A) and a 50 TCF (Scenario B) resource, refer to Table 3.2.9.

The study concluded that the economic benefits of exploiting the shale gas resources could have significant benefits for South Africa. Not only will it provide a secure source of energy, it will also produce a significant amount of employment in upstream and downstream production, estimated to be 854757 jobs. The findings of the report are however controversial given that the study was completed for Shell, one of the prospecting corporations.

Scenario Label	A	B
Upstream Production		
Resource Assumption TCF	20	50
Production Years	25	25
Project Value added Rm	759512	2142212
Project Employment - Man years	1377495	3885241
Maximum Employment	67278	189758
Downstream Production		
Project Value added Rm	1246535	2872904
Project Employment - Man years	5951114	13715606
Maximum Employment	288539	664999
Combined Upstream and Downstream		
Project Value Added Rm	2006046	5015116
Project Employment - Man Years	7328608	17600846
Maximum Employment	355817	854757

Table 3.2.9 **Test scenario summary of macro economic model output** (source: Econometrix, 2012)

Figure 3.2.9.3 **Fracking in Pinedale, Wyoming** (www.empowernetwork.com)

Figure 3.2.9.4 **Fracking near Aztec Ruins and Mesa Verde, New Mexico** (Google Earth, 2009)

Uranium Mining

Tasman Pacific Minerals Ltd. Holds prospecting rights to two areas in the Beaufort West Municipality, Areas 1 and 2 as depicted on Figure 3.2.9.1. Drilling has occurred in these locations to determine the viability of mining the molybdenum and high-grade uranium. The findings thus far have been very positive and could lead to the extraction of these minerals through open pit mining, in the near future. Should mining commence at the two sites the intention would be to locate a central processing facility near Area 1, south of Beaufort West.

Implications for Beaufort West Municipality

- The municipality should develop adequate measures for protecting the natural environment against any negative impacts as a result of shale gas extraction.
- The municipality should ensure that the maximum economic benefits are derived from the potential shale gas resources.
- The viability of extracting the mineral resources located within the boundaries of the municipality should be investigated as this could have valuable economic benefits, especially the two potential mining sites south-east and north-west of Beaufort West town.

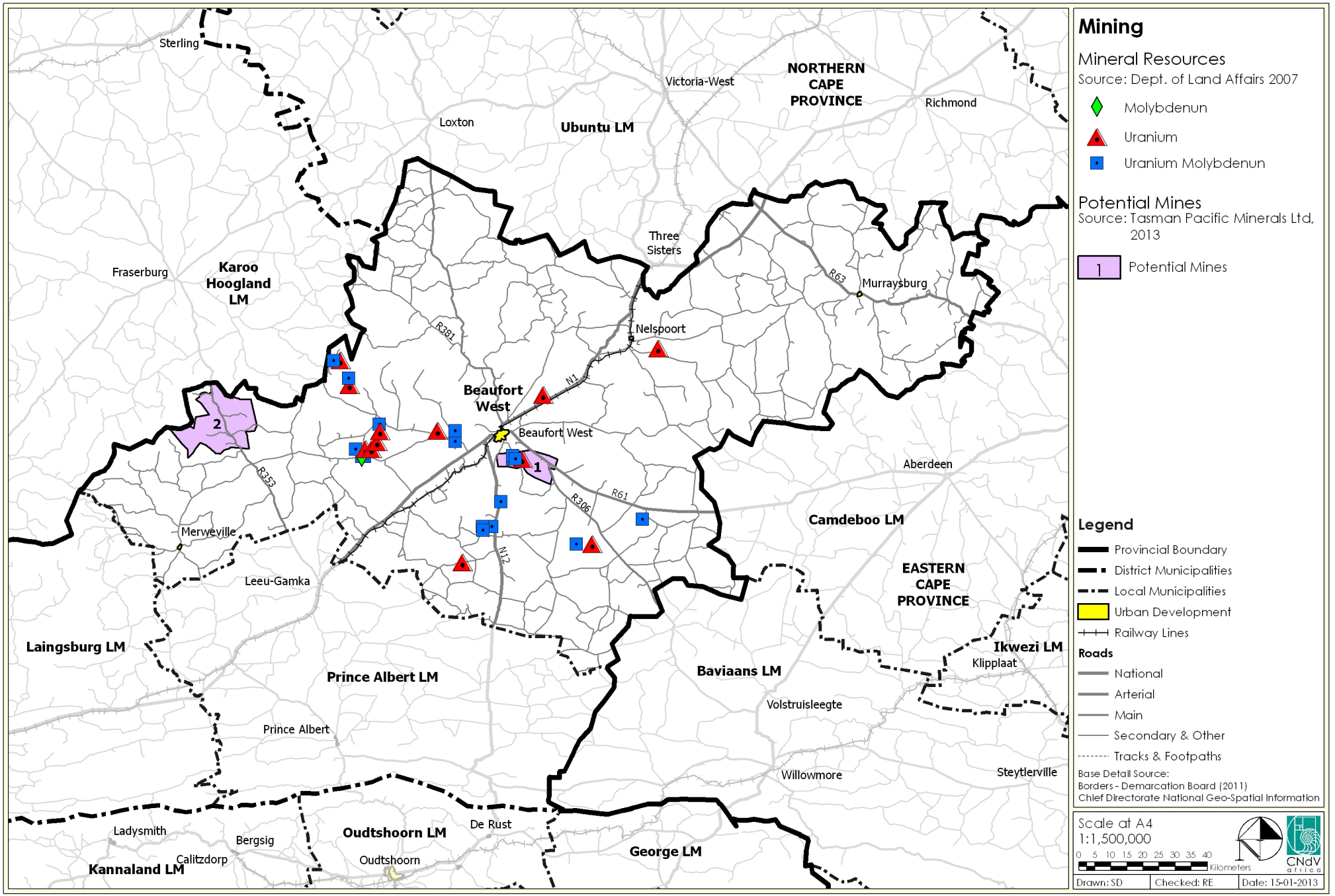


Figure 3.2.9.1 Mining

6. IMPLEMENTATION FRAMEWORK

6.1 IMPLEMENTATION

6.1.1 MUNICIPAL SDF POLICY/ PROJECT LIST

The following table of projects is compiled from the various projects from the SDF proposals:

No.	Policy /Projects Name/ Ref	Project / Policy Description	Cost Estimate (Rs)	Implementing Agent
SHORT TERM				
SDF 1	Urban Design and Landscaping Frameworks	Prepare detailed urban design and landscaping frameworks for settlements	R 400 000	Beaufort West Municipality and Consultants
SDF 2	Main Road Interface Guidelines Study	Prepare detailed Main Road Interface Guidelines Study for the Main Roads in the main settlements	R 400 000	Beaufort West Municipality and Consultants
SDF 3	Precinct Plans	Prepare precinct plans for all proposed urban nodes, new development areas larger than 5ha and future rural nodes.	R 300 000	Beaufort West Municipality
SDF 4	Public Transport Network	Implement the Central Karoo Rural Integrated Public Transport Network	To be determined	Central Karoo District Municipality, Beaufort West Municipality and Consultants
MEDIUM TERM				
SDF 5	Tourism Plan	Investigate adventure, eco- and agri- tourism opportunities and the development of existing tourism opportunities/facilities	R 400 000	Beaufort West Municipality, Department of Economic Development and Tourism and Consultants
SDF 6	Land Reform: Development plans for commonages	Development plans to indicate which commonage land should be conserved and where agriculture can occur.	R 200 000	Beaufort West Municipality Department of Rural Development and Land Reform
SDF 7	Renewable Technologies Strategy	Prepare a municipal renewable technology strategy focusing on implementation options for water management and energy generation in projects and developments	R 250 000	Beaufort West Municipality
SDF 8	Scenic tourism routes policy	Study to be prepared for the management and promotion of Scenic Tourism Routes	R 300 000	Beaufort West Municipality
SDF 9	Signage Policy	Preparation of a Signage Policy	R 500 000	Beaufort West Municipality and Consultants

No.	Policy /Projects Name/ Ref	Project / Policy Description	Cost Estimate (Rs)	Implementing Agent
SDF 10	Feasibility Study Multi Purpose Centre	Prepare a feasibility study for a Multi Purpose Centre (community hall / resource centre) as a social upliftment initiative project in Merweville	R 500 000	Beaufort West Municipality and Consultants
SDF 11	Destination Marketing Plan	Develop a destination a marketing plan	R 350 000	Beaufort West Municipality Department of Economic Development and Tourism
LONG TERM				
SDF 12	Cross Border Tourism Plan	Prepare a cross-boarder tourism plan with the neighbouring Central Karoo District Municipality, i.e. Karoo Hoogland Local Municipality, Laingsburg Local Municipality and Prince Albert Local Municipality	R 500 000	Beaufort West Municipality and Consultants
SDF 13	Fracking & Environmental Information Centre	Establish a fracking & environmental centre to inform public about fracking and environmental issues	R 400 000	Central Karoo District Municipality, Beaufort West Municipality
SDF 14	Aviation School feasibility Study	Prepare Feasibility Study for the establishment of a world class Aviation School	R 400 000	Beaufort West Municipality Department of Economic Development and Tourism
SDF 15	Gariep Dam	Prepare a Feasibility study for drawings water from the Gariep Dam	R 350 000	Beaufort West Municipality and Consultants

Table 6.1.1 Municipal SDF Policy / Project List

6.1.2 MUNICIPAL IDP POLICY/ PROJECT LIST

The following table of projects is compiled from the various projects from the IDP 2012-2017.

No.	Policy /Projects Name/ Ref	Project / Policy Description	Project Location	Cost Estimate (Rs)	Implementing Agent
IDP 1	Pressure release valves	Water reticulation	Municipal	R 600 000	Beaufort West Municipality
IDP 2	Pressure release valves	Water reticulation	Municipal	R 1 400 000	Beaufort West Municipality
IDP 3	New Water Reservoir	Water reticulation	Municipal	R 1 000 000	Beaufort West Municipality
IDP 4	Upgrading existing WWTWs	Improve Waste Water reticulation	Beaufort West	R 8 000 000	Beaufort West Municipality
IDP 5	Upgrading existing WWTWs	Improve Waste Water reticulation	Beaufort West	R 5 000 000	Beaufort West Municipality
IDP 6	New prepaid water meters Phase 1 – Prince Valley	Water reticulation	Beaufort West	R 1 000 000	Beaufort West Municipality
IDP 7	Realign bulk water – Rustdene	Water reticulation	Beaufort West	R 636 690	Beaufort West Municipality
IDP 8	New Sewerage Pipeline, Buitekant Street	Improve Waste Water reticulation	Beaufort West	R 500 000	Beaufort West Municipality
IDP 9	Investigation of WWTW	Improve Waste Water reticulation	Murraysburg	R 500 000	Beaufort West Municipality
IDP 10	Upgrading of WWTW	Improve Waste Water reticulation	Murraysburg	R 6 000 000	Beaufort West Municipality
IDP 11	Upgrade Water Supply	Water reticulation	Murraysburg	R 1 400 000	Beaufort West Municipality
IDP 12	Bulk water supply	Water reticulation	Nelspoort	R 2 602 038	Beaufort West Municipality
IDP 13	Upgrading of WWTW	Improve Waste Water reticulation	Nelspoort	R 2 000 000	Beaufort West Municipality
IDP 14	Bulk Water supply	Water reticulation	Nelspoort	R 1 314 512	Beaufort West Municipality
IDP 15	Upgrading of Rustdene sport facilities	Improvements to sports facilities	Beaufort West	R 350 000	Beaufort West Municipality
IDP 16	Upgrading Rustdene sport field	Improvements to sports facilities	Beaufort West	R 1 000 000	Beaufort West Municipality
IDP 17	Upgrading of Voortrekker Street tennis courts	Improvements to sports facilities	Beaufort West	R 500 000	Beaufort West Municipality
IDP 18	Upgrading of Kwa-Mandlenkosi sport field	Improvements to sports facilities	Beaufort West	R 3 000 000	Beaufort West Municipality
IDP 19	Upgrading town rugby field	Improvements to sports facilities	Beaufort West	R 3 000 000	Beaufort West Municipality
IDP 20	Kwa-Mandlenkosi – neighbourhood development	Improvements to sports facilities	Beaufort West	R 5 500 000	Beaufort West Municipality
IDP 21	Prince Valley: Community Hall	Provision of Community Hall	Beaufort West	R 10 000 000	Beaufort West Municipality
IDP 22	Hillside II: Community Hall	Provision of Community Hall	Beaufort West	R 10 000 000	Beaufort West Municipality
IDP 23	One administration office B/West	Provision of administrative office	Beaufort West	R 200 000 000	Beaufort West Municipality
IDP 24	One Stop Youth Centre: Kwa-Mandlenkosi	Provision of Community Facilities	Beaufort West	R 15 000 000	Beaufort West Municipality
IDP 25	Maintenance of buildings and community facilities	Upgrades to Community Facilities	Beaufort West	R 19 000 000	Beaufort West Municipality
IDP 26	Upgrading of sport field	Improvements to sports facilities	Merweville	R 3 000 000	Beaufort West Municipality

No.	Policy /Projects Name/ Ref	Project / Policy Description	Project Location	Cost Estimate (Rs)	Implementing Agent
IDP 27	Community Hall	Provision of Community Hall	Merweville	R 10 000 000	Beaufort West Municipality
IDP 28	Maintenance of buildings and community facilities	Improvements to community facilities	Merweville	R 6 000 000	Beaufort West Municipality
IDP 29	Upgrading sports field	Improvements to sports facilities	Nelspoort	R 3 000 000	Beaufort West Municipality
IDP 30	Maintenance of buildings and community facilities	Improvements to community facilities	Nelspoort	R 8 000 000	Beaufort West Municipality
IDP 31	Maintenance of buildings and community facilities	Improvements to community facilities	Murraysburg	R 7 000 000	Beaufort West Municipality
IDP 32	Development of Aquifers	Water reticulation and provision	Municipal	R 10 000 000	Beaufort West Municipality
IDP 33	Upgrading of existing pump stations	Improve Waste Water reticulation	Municipal	R 4 500 000	Beaufort West Municipality
IDP 34	Upgrade a water network	Water reticulation	Municipal	R 2 000 000	Beaufort West Municipality
IDP 35	Installation of Archimedean Screw Pump	Improve Waste Water reticulation	Beaufort West	R 500 000	Beaufort West Municipality
IDP 36	Upgrading of existing chlorination room	Improve Water reticulation	Beaufort West	R 100 000	Beaufort West Municipality
IDP 37	Upgrading of existing Telemetry System	Improve Waste Water reticulation	Beaufort West	R 400 000	Beaufort West Municipality
IDP 38	Upgrade of fencing at Beaufort West WWTWs	Improve Waste Water reticulation	Beaufort West	R 250 000	Beaufort West Municipality
IDP 39	Repair of existing Aeration Basin	Improve Waste Water reticulation	Beaufort West	R350 000	Beaufort West Municipality
IDP 40	Investigation of WWTWs	Increase capacity of WWTWs	Nelspoort	R 100 000	Beaufort West Municipality
IDP 41	Retention dams	Provision of Retention Dams	Municipal	R 5 000 000	Beaufort West Municipality
IDP 42	Gravel roads	Improvement to road infrastructure	Municipal	R 18 000 000	Beaufort West Municipality
IDP 43	Storm Water N1	Improvements to storm water infrastructure	Municipal	R 5 000 000	Beaufort West Municipality
IDP 44	Rehabilitate gravel roads – Phase II	Improvement to road infrastructure	Municipal	R 1 258 509	Beaufort West Municipality
IDP 45	Roads Kwa-Mandlenkosi	Improvement to road infrastructure	Beaufort West	R 843 396	Beaufort West Municipality
IDP 46	Rehabilitate gravel roads Kwa-Mandlenkosi	Improvement to road infrastructure	Beaufort West	R 2 494 916	Beaufort West Municipality
IDP 47	Storm water retention dam – Hillside II	Improvements to storm water infrastructure	Beaufort West	R 4 426 294	Beaufort West Municipality
IDP 48	New storm water channel – Hillside II	Improvements to storm water infrastructure	Beaufort West	R 77 265	Beaufort West Municipality
IDP 49	Rehabilitate gravel roads - Rustdene	Improvement to road infrastructure	Beaufort West	R 360 000	Beaufort West Municipality
IDP 50	Rehabilitate gravel roads – Hillside II	Improvement to road infrastructure	Beaufort West	R 6 176 482	Beaufort West Municipality
IDP 51	Upgrade gravel roads	Improvement to road infrastructure	Beaufort West	R 2 463 406	Beaufort West Municipality
IDP 52	Rehabilitate gravel roads	Improvement to road infrastructure	Beaufort West	R 9 000 000	Beaufort West Municipality
IDP 53	Rehab roads and storm water	Improvement to road and storm water infrastructure	Murraysburg	R 3 400 000	Beaufort West Municipality
IDP 54	Rehabilitate gravel roads	Improvement to road infrastructure	Murraysburg	R 6 170 195	Beaufort West Municipality
IDP 55	Storm water	Improvements to storm water infrastructure	Murraysburg	R 1 620 000	Beaufort West Municipality

No.	Policy /Projects Name/ Ref	Project / Policy Description	Project Location	Cost Estimate (Rs)	Implementing Agent
IDP 56	Upgrade gravel roads	Improvement to road infrastructure	Murraysburg	T 3 972 545	Beaufort West Municipality
IDP 57	Consolidation project: 95 units Kwa-Mandlenkosi	Housing provision	Municipal	R 7 403 170	Beaufort West Municipality
IDP 58	Emergency housing: Upgrade 10 houses damaged by fire or other natural causes	Housing provision	Municipal	R 750 000	Beaufort West Municipality
IDP 59	Greening Project	Housing provision	Municipal	R 3 500 000	Beaufort West Municipality
IDP 60	Material Recovery Facility (Waste Recycling)	Improvements to solid waste infrastructure	Municipal	R 800 000	Beaufort West Municipality
IDP 61	XHOXHA – 65 units	Housing provision	Municipal	R 6 500 000	Beaufort West Municipality
IDP 62	Planned: New Housing Development	Housing provision	Municipal	R 40 000 000	Beaufort West Municipality
IDP 63	GAP Housing +/- 200 Units	Housing provision	Municipal	R 90 000 000	Beaufort West Municipality
IDP 64	RDP Housing 100 units	Housing provision	Murraysburg	R 6 800 000	Beaufort West Municipality
IDP 65	RDP Housing 50 units	Housing provision	Merweville	R 3 400 000	Beaufort West Municipality
IDP 66	RDP Housing 50 units	Housing provision	Nelspoort	R 3 400 000	Beaufort West Municipality
IDP 67	132kV Substation	Improvements to electrical network supply	Municipal	R 9 400 000	Beaufort West Municipality
IDP 68	Electrification Central Karoo	Improvements to electrical network supply	Municipal	R 12 000 000	Beaufort West Municipality
IDP 69	Housing electrification 367 erven	Improvements to electrical network supply	Municipal	R 4 500 000	Beaufort West Municipality
IDP 70	Upgrading main substation 22/11kV	Improvements to electrical network supply	Municipal	R 5 000 000	Beaufort West Municipality
IDP 71	Load control 132/22kV Substation	Improvements to electrical network supply	Municipal	R 5 000 000	Beaufort West Municipality
IDP 72	11kV Network new Industrial area	Improvements to electrical network supply	Municipal	R 2 000 000	Beaufort West Municipality
IDP 73	Auto Recloser 11kV Plotte	Improvements to electrical network supply	Municipal	R 250 000	Beaufort West Municipality
IDP 74	Isolator and Switchgear 22kV lines	Improvements to electrical network supply	Municipal	R 250 000	Beaufort West Municipality
IDP 75	Telemetrie 11kV Substations	Improvements to electrical network supply	Municipal	R 1 000 000	Beaufort West Municipality
IDP 76	High mast lighting Hooyvlakte	Improvements to electrical network supply	Beaufort West	R 501 600	Beaufort West Municipality
IDP 77	Upgrading 11kV Switchgear Beaufort West	Improvements to electrical network supply	Beaufort West	R 15 000 000	Beaufort West Municipality
IDP 78	Upgrading 11kV Switchgear Rustdene	Improvements to electrical network supply	Beaufort West	R 30 000 000	Beaufort West Municipality
IDP 79	Upgrading 11kV Switchgear Kwa-Mandlenkosi	Improvements to electrical network supply	Beaufort West	R 5 000 000	Beaufort West Municipality
IDP 80	Upgrading overhead lines Rustdene	Improvements to electrical network supply	Beaufort West	R 1 000 000	Beaufort West Municipality
IDP 81	Upgrading overhead lines Hillside	Improvements to electrical network supply	Beaufort West	R 3 000 000	Beaufort West Municipality
IDP 82	Upgrading overhead lines Beaufort West	Improvements to electrical network supply	Beaufort West	R 1 000 000	Beaufort West Municipality
IDP 83	Upgrading mini substation Bastiaanse school	Improvements to electrical network supply	Beaufort West	R 650 000	Beaufort West Municipality
IDP 84	Upgrading mini substation Botha Street	Improvements to electrical network supply	Beaufort West	R 650 000	Beaufort West Municipality

No.	Policy /Projects Name/ Ref	Project / Policy Description	Project Location	Cost Estimate (Rs)	Implementing Agent
IDP 85	Upgrading transformer Truter substation	Improvements to electrical network supply	Beaufort West	R 350 000	Beaufort West Municipality
IDP 86	Flood lighting sport ground Rustdene	Improvements to electrical network supply	Beaufort West	R 1 200 000	Beaufort West Municipality
IDP 87	Flood lighting sport ground Rugby field	Improvements to electrical network supply	Beaufort West	R 1 200 000	Beaufort West Municipality
IDP 88	High mast lighting Rustdene	Improvements to electrical network supply	Beaufort West	R 1 381 862	Beaufort West Municipality
IDP 89	High mast lighting Hillside I	Improvements to electrical network supply	Beaufort West	R 552 745	Beaufort West Municipality
IDP 90	High mast lighting Hillside II	Improvements to electrical network supply	Beaufort West	R 276 372	Beaufort West Municipality
IDP 91	High mast lighting	Improvements to electrical network supply	Murraysburg	R 552 745	Beaufort West Municipality
IDP 92	Upgrading electrical network	Improvements to electrical network supply	Murraysburg	R 700 000	Beaufort West Municipality
IDP 93	High mast lighting	Improvements to electrical network supply	Merweville	R 829 117	Beaufort West Municipality
IDP 94	Flood lighting sport ground	Improvements to sports facilities	Merweville	R 1 200 000	Beaufort West Municipality
IDP 95	High mast lighting	Improvements to electrical network supply	Merweville	R 250 800	Beaufort West Municipality
IDP 96	Flood lighting sport ground	Improvements to sports facilities	Nelspoort	R 1 200 000	Beaufort West Municipality
IDP 97	Nelspoort Rock Art Site Development	Provision of tourist sites	Nelspoort	R 289 000	Beaufort West Municipality
IDP 98	Upgrading of Cemeteries	Improvement to infrastructure	Municipal	R 500 000	Beaufort West Municipality
IDP 99	Upgrading of morgue	Improvement to infrastructure	Merweville	R 250 000	Beaufort West Municipality

Table 6.1.2 Municipal IDP Policy / Project List

6.1.3 MUNICIPAL POLICY / PROJECT PRIORITISATION

The SDF and IDP projects as per section 6.1.1 and 6.1.2 are to be prioritized by the relevant Council Officials and Ward Committees as part of the IDP process.

Project Priority No.	Proposal No.	Policy /Projects Name/ Ref	Project / Policy Description	Cost Est. (Rs)	Rating Matrix (5: most important, 1: least important)													Total
					Alignment			Sustainability					Project Implementation					
					NSDP	FS-PSDF	District SDF	Improves Employment	Improves Economic Empowerment	Improves Economic Diversification	Improves Empowerment	Positive Environmental Impact	Critical Path for other projects	Cost of Impl.	Ease of Impl.	Improves Access to Infrastructure	Improves Settlement Restructuring	
1	SDF 15																	
2	SDF 7																	
3	SDF 16																	
4	SDF 3																	
5	SDF 6																	
6	SDF 2																	
7	SDF 5																	
8	IDP 2																	
9	IDP 14																	
10	SDF 18																	

Table 6.1.3 Municipal Policy / Project Prioritisation

6.2 MONITORING AND REVISION FRAMEWORK

Phase 7 of reviewing the SDF, Monitoring and Evaluation, will only occur after the SDF is approved. It should take place as follows:

6.2.1 REVIEW PROGRESS IN IDP

The annual review of the IDP should include a review of progress on the policy amendments and project implementation of the SDF according to the priority listings and expenditure programs of the various sector departments' budgets.

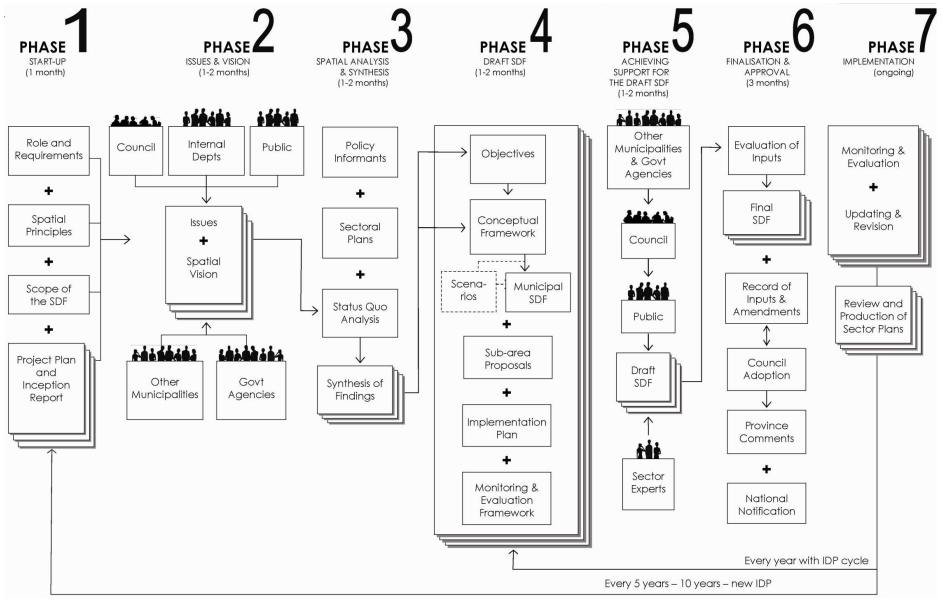


Figure 6.2.1 **Phases in the process of completing and SDF** (source: CNdV, 2010)

Figure 6.2.1 above shows that after the completion of the SDF in Phase 6, the SDF will be implemented through the various sectoral plans during Phase 7, see Figure 6.2.2. During this phase the implementation of the SDF should be monitored on at least a 2 month basis by the IDP's annual reporting on the progress of the various implementation/ sectoral plans. This review should also comment on the SDF. This is shown in Figure 6.2.1.

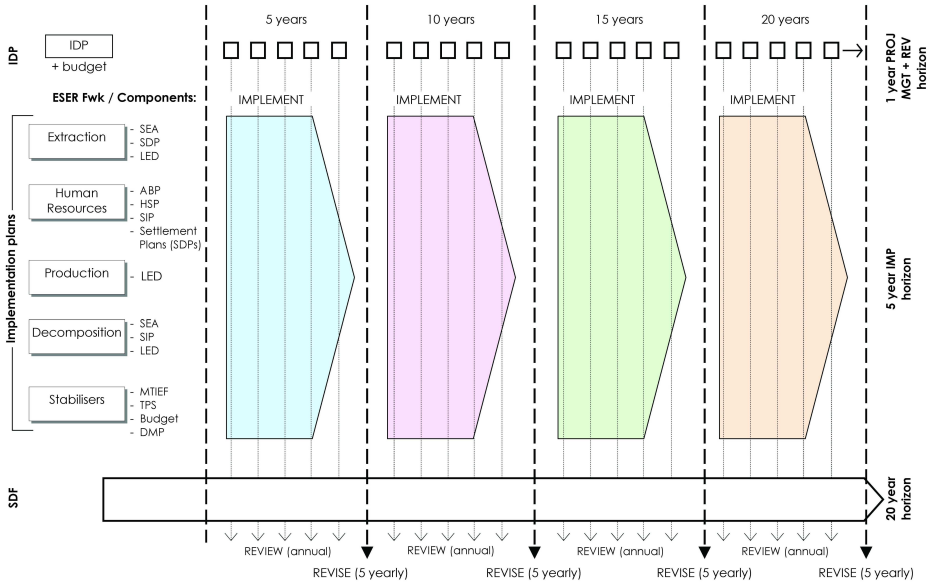


Figure 6.2.2 **Proposed Relationship between IDPs, Implementation Plans, including HSPs and SDFs** (source: CNdV, 2010)

Figure 6.2.2 further shows that the SDF is the common spatial base on which all the implementation plans should be executed.

Figure 6.2.2 also shows that the SDF should be revised and updated at least every each 5 years in parallel with the IDP and Implementation Plans. Ideally, the Sector Implementation Plans and the IDP should start and end on the same 5 year cycle.

Although the SDF is reviewed every year in the IDP and is revised every 5 years it needs to take a longer term view. The SDF should take a 20 to 30 year perspective on the growth direction of a municipality and settlements. It will be the only plan in the municipality taking such a long term view.

6.2.2 PROJECTS/ POLICIES TO BE REPORTED IN THE IDP

The following table of projects is an example of a monitoring / progress report through which the projects can be monitored. This table should be completed indicating each policy or project and reported in each year's IDP.

Project / Policy		Progress	Quality	Econ	Eng	B…	Comments						
							Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
SDF 7	Street trader policy												
SDF 3	Enlarged Conservation Areas												
SDF 6	Detailed Public Open Space and Densification Policy												
SDF 2	Tourism Plan												
SDF 5	Renewable Technologies Strategy												
IDP 14	Infrastructure - Sewerage												
SDF 4	Mining Rehabilitation												
IDP 6	Infrastructure - Water												
SDF 1	Urban Design and Landscaping Frameworks												
IDP 12	Infrastructure - Sewerage												
IDP 7	Infrastructure - Facilities												
IDP 10	Infrastructure – Solid Waste												
SDF 7	Street trader policy												
SDF 3	Enlarged Conservation Areas												
SDF 6	Detailed Public Open Space and Densification Policy												
SDF 2	Tourism Plan												

Table 6.2.2 Projects Evaluation and Report Framework

6.3 CONFIGURE SECTOR PLANS

The sector plans should contain the SDF plans for the municipality and two urban centres as their primary spatial informant.

They should take the SDF proposals into account as follows (see facing page as well):

MUNICIPAL SDF	WASTE MANAGEMENT (DWA)	WATER SERVICES (DWA)	HOUSING SECTOR (Human Settlements)	SERVICES AND INFRASTRUCTURE
SPCs				
Core: • Wetlands • Rivers systems	• N/A	• Ensure protection of ecological corridors around wetlands and rivers	• N/A	• Minimize disturbance of protected areas by infrastructure crossings and alignments and efficient quality.
Buffer: (Extensive Agriculture)	• N/A	• N/A	• N/A	• N/A
Intensive agriculture: **1.** Irrigation Scheme	• N/A	• Encourage water demand management and enhanced irrigation efficiencies • Monitor water quality • Promote bio-farming and other techniques to reduce nutrient loads in hydrological systems • Supply water rights for land reform projects	• N/A	• Ensure balance between water supply infrastructure for agriculture and urban development
2. Dryland and Borehole Crop Farming	• N/A	• Monitor borehole abstraction water and ground water levels and recharge rates	• N/A	• N/A
3. Commonage	• N/A	• Provide irrigation for small scale crop farming on commonage	• No residential accommodation to be provided on commonage	• Supply irrigation infrastructure to crop farming on commonage
Urban development:				

Table 6.3.1 SDF Relationship with Sector Plans

PUBLIC TRANSPORT AND NMT (Dept of Transport)	ENVIRONMENTAL MANAGEMENT (Dept of Environment) Dept of Agriculture	LAND REFORM (Dept Rural Development & Land Reform)	DISASTER MANAGEMENT
• N/A	• Ensure protection of ecological corridors around wetlands and rivers	• N/A	• N/A
• N/A	• Promote veld rehabilitation and rotational grazing to enhance bio-diversity	• Ensure livestock farming does not damage bio-diversity through poor grazing methods	• Ensure adequate fire protection and burn management
• N/A	• Monitor water quality • Promote bio-farming • Ensure water	• Ensure water rights for land reform projects	• N/A
• N/A	• Monitor borehole abstraction water and ground water levels and recharge rates • Provide extension services to emerging farmers	• N/A	• N/A
• N/A	• Promote bio-farming on commonage • Provide extension services to emerging farmers	• Promote bio-farming on commonage • Draw up commonage development plan	• N/A

PROPOSALS	WASTE MANAGEMENT (DWA)	WATER SERVICES (DWA)	HOUSING SECTOR (Human Settlements)	SERVICES AND INFRASTRUCTURE
• Intensification Areas	• Ensure sufficient supply • Transfer stations to be accessibly located in corridors	• Ensure sufficient supply	• Promote higher density mixed use housing within the intensification area boundaries	• Ensure sufficient infrastructure to support higher levels of development
• General	• Promote waste separation at source throughout urban settlements	• Promote rainwater harvesting and grey water recycling	• N/A	• N/A
• Residential	• Promote waste separation at source throughout urban settlements	• Ensure access to basic water and sanitation • Allow for communal service centres to address heath issues for non-qualifiers	• All projects to include range of housing, laid out according to socio-economic gradient	• Provide minimum basic services to proposed new housing areas
• Industrial	• Industrial and toxic waste to be properly managed and disposed of	• N/A	• N/A	• Ensure infrastructure in serviced but undeveloped residential areas properly maintained
• Community facilities	• N/A	• N/A	• Include proposals for necessary community facilities into Human Settlement Plans (HSP)	• N/A
• Recreational areas	• N/A	• N/A	• Include proposals for recreational areas into HSP • Housing layouts to face onto recreational areas and not turn their back	• N/A
• Ecological corridors	• Landfill sites can be located in ecological corridors providing they • are managed to best practice standards	• N/A	• Include proposals for recreational areas into HSP • Housing layouts to face onto recreational areas and not turn their back	• Where possible services and infrastructure alignments should not disrupt river channels and wetlands

Table 6.3.1 SDF Relationship with Sector Plans cont.

PUBLIC TRANSPORT AND NMT (Dept of Transport)	ENVIRONMENTAL MANAGEMENT (Dept of Environment) Dept of Agriculture	LAND REFORM (Dept Rural Development & Land Reform)	DISASTER MANAGEMENT
Provide road network to • commonage farms and promote • animal traction, cycling and • walking Main routes / spines through • development corridors to be • designed with cycle lanes and • pedestrian footways Should be declared public • transport routes (with embayments etc.)	• Promote indigenous or fruit trees for use in the landscaping of development corridors	• N/A	• N/A
Urban settlements should be • designed to minimize the need to • travel and avoid costs of public • transport	• Promote integrated stormwater design including the use of permeable paving and swales in urban development areas	• N/A	• Ensure residential development not located below 1:50 floodlines
Ensure high densities of urban • development coincide with main • non-motorised routes	• Promote off-grid sustainable technologies and passive building design	• N/A	• Ensure adequate fire protection: • Building setbacks • Electrical compliance • Careful use of combustible materials
Ensure industrial areas provided with • cycle and pedestrian routes	• Industrial and toxic waste to property managed and disposed of	• N/A	• N/A
Community facilities should be • located on public transport and • NMT routes to promote • convenience and security	• N/A	• N/A	• N/A
Non-motorised transport networks • should pass through recreational • areas	• N/A	• N/A	• N/A
Non-motorised transport networks • should pass through ecological • corridor areas	• Ensure continuity between connected rural and urban ecological corridor areas • Provide highest level of protection in ecological corridor areas	• N/A	• N/A

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5.11 MURRAYSBURG (population: ± 5 000)

Figure 5.11.1.1 Murraysburg: Aerial photograph

5.11.1 SPATIAL ANALYSIS, see Figures 5.11.1.2

Sub-regional location

- Enjoys good tar road access on the R 63 between Victoria West (90kms) and Graaff Reinet (92kms), Cape Town (650kms) and Johannesburg (860kms), are the nearest large towns and the N1 is 43kms away. The municipal headquarters are at Beaufort West (158kms);
- Similar to Merweville, although much older, (± 1850), Murraysburg, was established because it was too far to either Richmond (± 90kms) or Graaff Reinet to attend church services and register births and deaths;
- It is located in the wettest and most fertile part of the municipality and has performed relatively well compared especially to Laingsburg and Prince Albert municipalities with regards to agricultural GVA and employment, i.e. it has performed less badly (MERO, Provincial Dept of Treasury 2012, p25);
- There have been significant declines in agricultural employment although there has been less of an impact in Murraysburg, and the town is serving as a refuge for ex farmworkers; and,
- There seems to have been an increase in manufacturing but the exact nature of this is not known.

Layout pattern

- In general the town is fairly compact with most people living with in a 1km radius from the town centre;
- From its layout Murraysburg appears much larger than it actually is because the northern part of the town, comprising agricultural allotments on the same grid as the three rows of urban blocks between Sir George Grey and Location Street, remain hardly developed to this day. Thus, in actual fact, its original built up area is not much larger than Merweville;
- However, the low income section of the town is substantially bigger than that of Merweville;
- There are large amounts of vacant land between Angelier and Location Streets;
- The new township extension comprises ever decreasing smaller blocks with the smallest in the extreme west. Units in this extension have all been built on the back boundaries leaving very little private space; and,
- As happens with many Karoo towns, the various sports codes' facilities, instead of being concentrated in a single complex where some level of viable threshold facility can be achieved, especially for social activities, are scattered across the northern part of the town.

Urban quality

- The original part of Murraysburg presents a contradictory quality of a number of vacant but neat shop fronts with a small core of operating shops and attractive, restored historic buildings set within shady treed avenues; and,
- Moving southwards the denser residential areas, largely devoid of trees, are cut off from the CBD area by a range of wind swept open spaces including the cemeteries at the entrance to the town, and vacant and undeveloped land around the schools and institutions between Location and Angelier Streets.

Challenges and potential

- The town is dependent on ground water and any potential threats to this, such as fracking, are of concern;
- There is a small but vibrant tourism industry and the town is located midway between Victoria West and Graaff Reinet, both tourism and heritage hubs;
- The future of the town's low income and low skilled unemployed would seem to lie more in the agri and eco-tourism industries; and,
- ± 570 (352 backlog – 220 future need) households on waiting list. 64% BNG, 31% GAP and 4% market.

Empty shop fronts along Sir George Grey Street

Residential cottages along Beaufort Street

New Houses in Murraysburg south near Hope Street

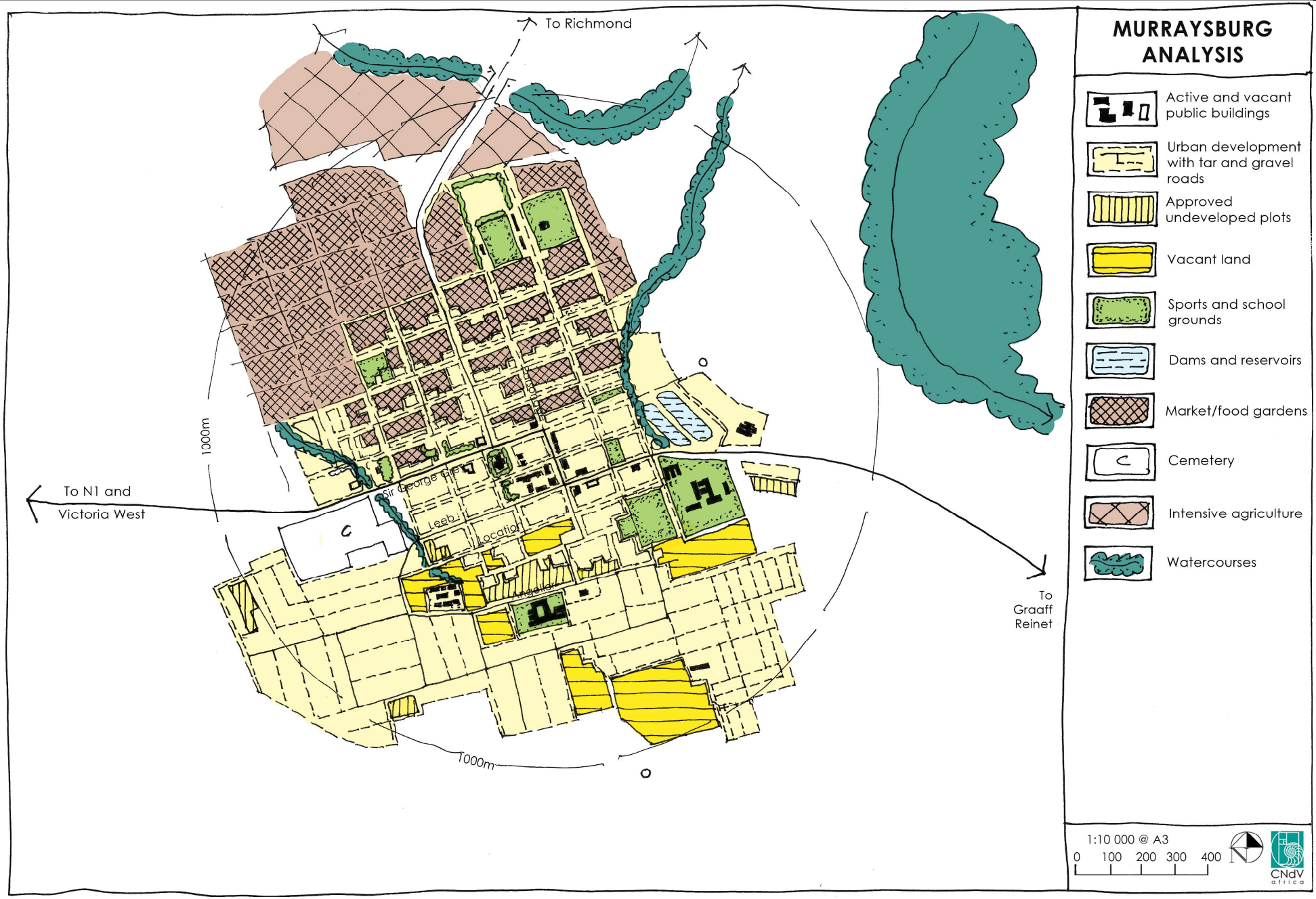


Figure 5.11.1.2 Murraysburg: Analysis

5.11.2 MURRAYSBURG: DRAFT SPATIAL DEVELOPMENT FRAMEWORK, see Figure 5.11.2.1

5.11.2.1 Core landscape areas

- Encourage market and food gardening on the large blocks to the north of the town generally north of Hoffmeyer Street. Depending on their ownership they should be available to all who wish to use them for food or market gardening;
- Determine river corridor set back lines from which intensive agriculture (plowing) and urban development are prohibited. In the interim they should be set back 32 m from the banks; and,
- Plant or infill a tree lined street network linking Sir George Grey and Leeb Street including Parsonage and Church streets to create a pinwheel around the Church that also integrates the southern part of the town along a new road, Church street extension linking to the school on Angelier Street.

5.11.2.2 Urban Development

- Incentivise development of approved vacant plots for GAP housing, particularly those closest to Church Street Extension;
- Encourage all new BNG (to be appropriately designed) and GAP housing to be located on vacant land with the centre of the town first so as to promote integration before using peripherally located land

5.11.2.3 Heritage Areas

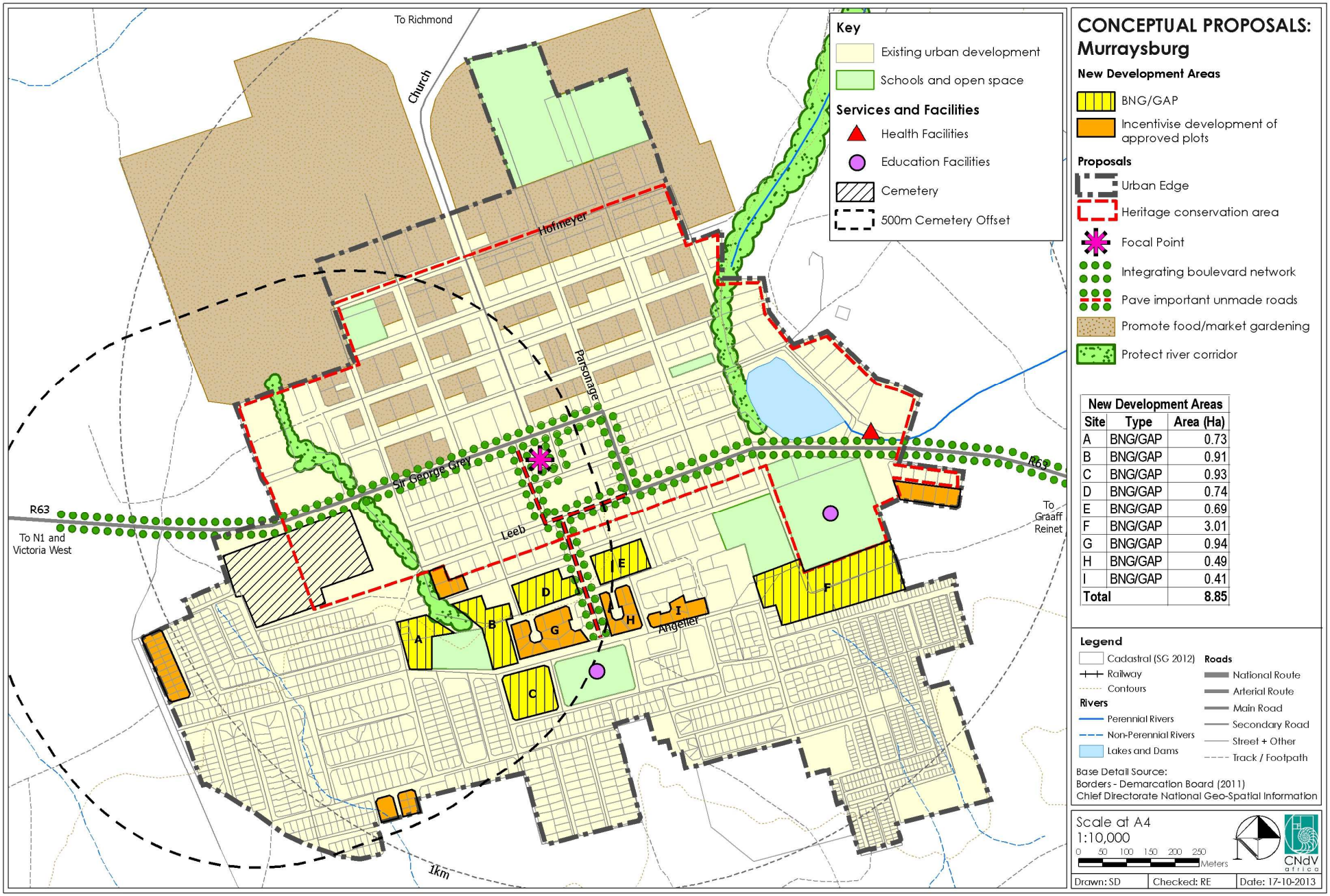
- Investigate declaring the centre of the town from midblock between Location and Leeb Streets to the south to midblock above Hoffmeyer Street in the north as a heritage conservation area with guidelines to assist the renovation and restoration of existing buildings and the design of new buildings within this precinct;

5.11.2.4 Urban Restructuring

- All gateways into town should be enhanced to improve its sense of arrival;
- Upgrade the road pavement and plant trees along the street network as described in section 5.11.2.1 above, focusing around the Church as a focal point to integrate and link the northern and southern parts of the town;
- Extending Church street southwards to the school on Angelier Street is critical to successfully achieving this link;
- This will entail paving the unmade section of Church street south between Leeb and St Andrew's Streets and then creating a new road, Church Street Extension, through the undeveloped plots between St Andrews and Angelier Streets; and,
- Concentrating all new housing developments on the vacant or undeveloped land in this vicinity rather than constructing large new townships on the periphery will also assist urban restructuring. However, this implies projects of a much smaller number of units in each phase. Although this may not be as financially viable for housing developers in the short term, it will contribute to a more sustainable and better integrated urban fabric in the long term.

View from school on Angelier Street across undeveloped plots along axis of proposed Church street extension showing visual link to church and well located land to be used for GAP and BNG housing according to the principle of the socio-economic gradient

Former building on corner Parsonage and Sir George Grey Streets previously in poor condition when used as a shop (Google Street view 2010). Now restored and used for its original purpose



New Development Areas		
Site	Type	Area (Ha)
A	BNG/GAP	0.73
B	BNG/GAP	0.91
C	BNG/GAP	0.93
D	BNG/GAP	0.74
E	BNG/GAP	0.69
F	BNG/GAP	3.01
G	BNG/GAP	0.94
H	BNG/GAP	0.49
I	BNG/GAP	0.41
Total		8.85

Figure 5.11.2.1 Murraysburg: Spatial Development Framework

3.3 SOCIO-ECONOMIC CONDITIONS

3.3.1 DEMOGRAPHIC PROFILE

3.3.1.1 Overall Population

Table 3.3.1.1 indicates that in 2001 there was a total population of 37111 and in 2011 there was a total population of 49586 (Census 2011). This indicates an increase of 12475 individuals.

	Census 2001	Census 2011
Population	43291*	49586

* New municipal boundaries

Table 3.3.1.1 Summary of population data 2001 – 2011 (source: Census 2001, 2011)

3.3.1.2 Population distribution

Figure 3.3.1.1 shows the distribution of the population throughout the Beaufort West Municipality, based on 2001 Census data. From this figure it is evident that the majority of the population is located in the central region of the municipality in the main administrative centre, Beaufort-West. Higher concentrations of the population are also located in the settlements of Merweville, Nelspoort and Murraysburg, see Table 3.3.1.2 for a population breakdown.

Town	Population (2001)	Population (2011)
Beaufort West	31353 [1]	34069
Merweville	1142 [1]	1592
Nelspoort	1287 [1]	5069
Murraysburg	4409 [1]	1696
Rural	5100	7160
TOTAL	**43291** [1]	**49586**[2]

1. Census 2001
2. Census 2011

Table 3.3.1.2 Population per main settlement (source: Census 2001, 2011)

3.3.1.3 Growth Rate

The annual growth rate of the population between 2001 and 2011 was 1.45% per annum, based on 2001 and 2011 Census data.

The population grew 14.54% during the 10 year period between 2001 and 2011, or at an average of 1.45% per annum (1.36% compound per annum).

This population growth can be attributed to the inclusion of the Murraysburg DMA into Beaufort West, which was previously managed by the District Municipality in addition to natural growth.

Careful planning and budgeting should be done to ensure sustainable urban settlements within this growing municipality.

3.3.1.4 Age Structure

Table 3.3.1.4 indicates the age structure of the population within the municipality. The majority of the population (62.62%) is between the ages of 15 and 65, which is the economically active population.

Beaufort-West Municipality	AGE					
	0-4	5-14	15-34	35-64	>65	Total
2011	5564	10036	15277	15776	2936	49589
% of Total	11.22%	20.24%	30.81%	31.81%	5.92%	100%

Table 3.3.1.4 Age Structure (2011) (source: Census, 2011)

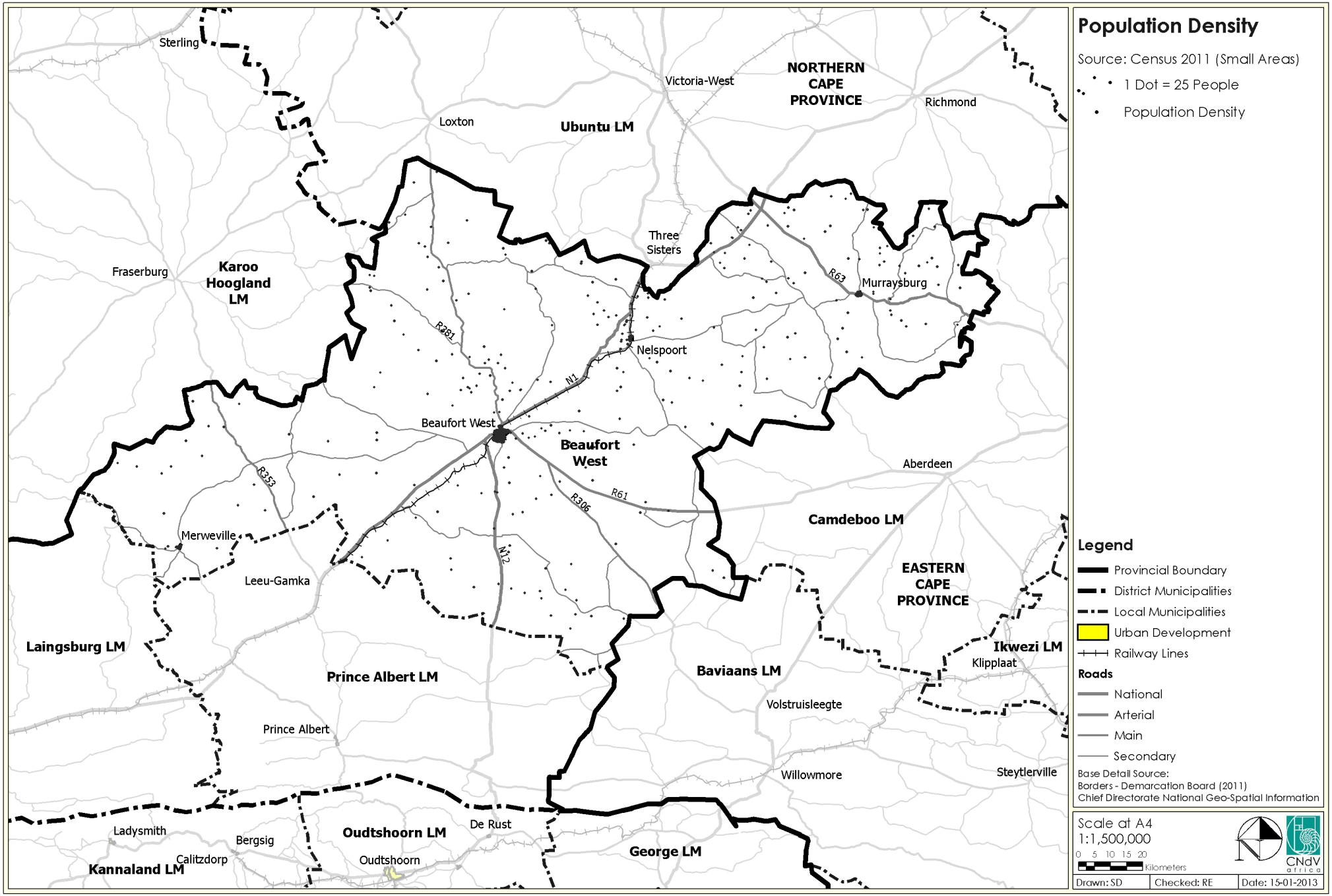
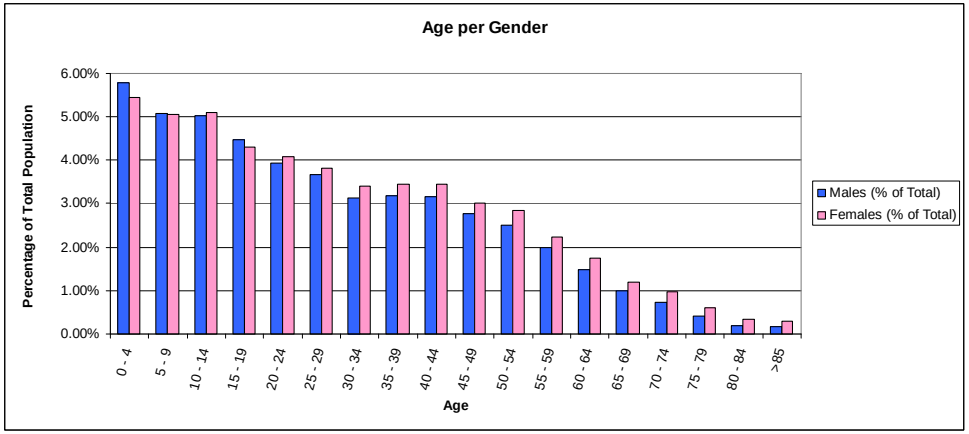


Figure 3.3.1.1 Population Density

3.3.1.5 Gender

Graph 3.3.1.5 indicates the gender and age of the population of the municipality (Census, 2011). The majority of the Beaufort West Municipality has a young population. Throughout most of the age categories there are more females than males.



Graph 3.3.1.5 **Beaufort West Gender Split** (source: Census, 2011)

3.3.1.6 Ethnic Groupings

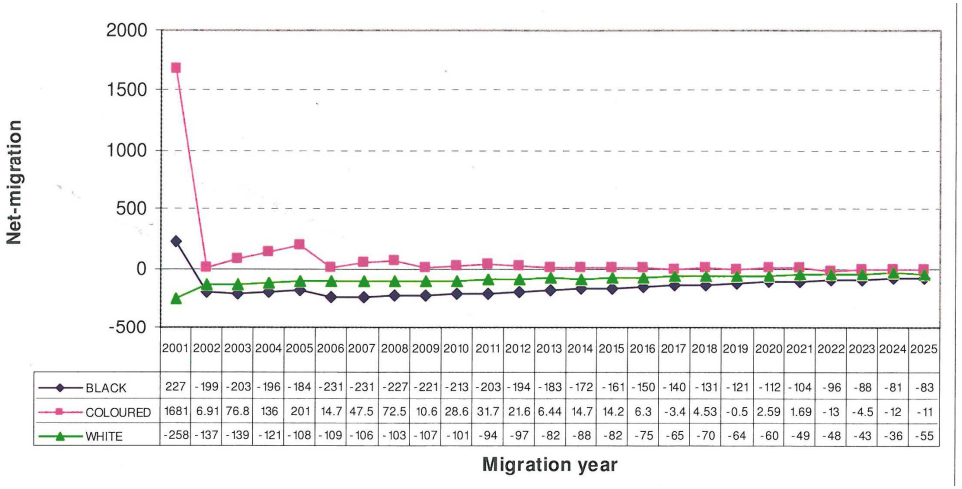
Table 3.3.1.6 indicates the ethnic make up of the population. The coloured communities make up almost 75% of the population of the municipality. Only a small number of Asian and Indian people reside in the municipality.

Matzikama Municipality	RACE (source: Census 2011)					Total
	Black	Coloured	Indian/Asian	White	Other	
2011	8104	36433	239	4540	273	49589
% of Total	16.34%	73.47%	0.48%	9.16%	0.55%	100%

Table 3.3.1.6 **Population** (sources: Census 2011)

3.3.1.7 Migration

Graph 3.3.1.7 indicates the projected migration for the municipality between 2001 and 2025



Graph 3.3.1.7 **Projected net migration, 2001 – 2025** (source: Socio-Economic Profile: Central Karoo District, 2006)

In 2001 there was a significant amount of in-migration amongst Coloureds, see Graph 3.3.1.7. A drastic reduction in migration levels occurred in 2002 amongst Coloureds.

It was furthermore projected that Black and White individuals would be out-migrating from 2002 until 2025.

Implications for Beaufort West Municipality

- The overall population is growing which necessitates the need for increased service delivery and the provision of sustainable settlements with opportunities to cater for the needs of the population.
- The municipality has a relatively young population. Municipal initiatives should be directed at this age group.
- Migration into the municipality will have an impact on the existing urban areas in the municipality which should be managed in a sustainable manner.
- Most of this growth is concentrated in Beaufort West town with very little occurring in Merweville, Nelspoort and Murraysburg.

3.3.2 HEALTH

Figure 3.3.2.1 shows the distribution of health facilities within the municipality. Two district hospital are located in the municipality, one in Beaufort West and one in Murraysburg. One Specialised Hospital is located in Nelspoort. Clinics are located in Beaufort West, Nelspoort, Murraysburg, Merweville and south of Beaufort West along the N12.

Table 3.3.2.1 indicates the health care conditions in the municipality (Socio-Economic Profile: West Coast District, 2006).

Year	New born babies under 2.5kg	TB prevalence (per 100, 000 people)	TB cure rate	Nurse Patient Ratio	Under 1 year olds with 1st measles immunization	HIV/Aids prevalence rate	HIV/Aids related deaths
2005	21%	950	74%	31	93%	2.9%	43

Table 3.3.2.1 Health Conditions in the Beaufort-West Municipality (source: Socio-Economic Profile: Central Karoo District, 2006)

The table indicates the following:

- The national target for new born babies below 2.5kg is less than 10%. The current figure of 21% is thus much greater than the target.
- The TB cure rate is currently 74% which is lower than the national target of 85%.
- The nurse/patient ratio of 31 is slightly lower than the national target of 34.
- The national target for 1st measles immunization is at 93% in the municipality. The national target is 90%. The immunization rates are thus acceptable.
- The HIV prevalence rate was at 2.9% in 2005 and was expected to increase to 3.6% in 2010. The number of HIV/Aids related deaths were at 61 in 2005 and was expected to increase to 67 in 2010. Increased measures should be developed to reduce the growing impact of HIV/Aids on the population of the Beaufort West Municipality.

Implications for Beaufort West Municipality

- Initiatives are required to improve the following:
  - Reduction in the number of babies born weighing less than 2.5kg.
  - The TB cure rate.
  - Reduction in the HIV infection rate.
  - Nurse/patient ratio
- Ensure that new health facilities are erected in line with the NSDP principles, i.e. where there is economic growth potential and where people are located.
- According to HealthNet patient transport services:
  - patients have to travel long distances to access tertiary health facilities and the resultant early and late departure and arrival times, without adequate facilities for waiting for the service;
  - The cost of providing this service by the Department of Health is very high, due to no form of affordable public transport services in the area.

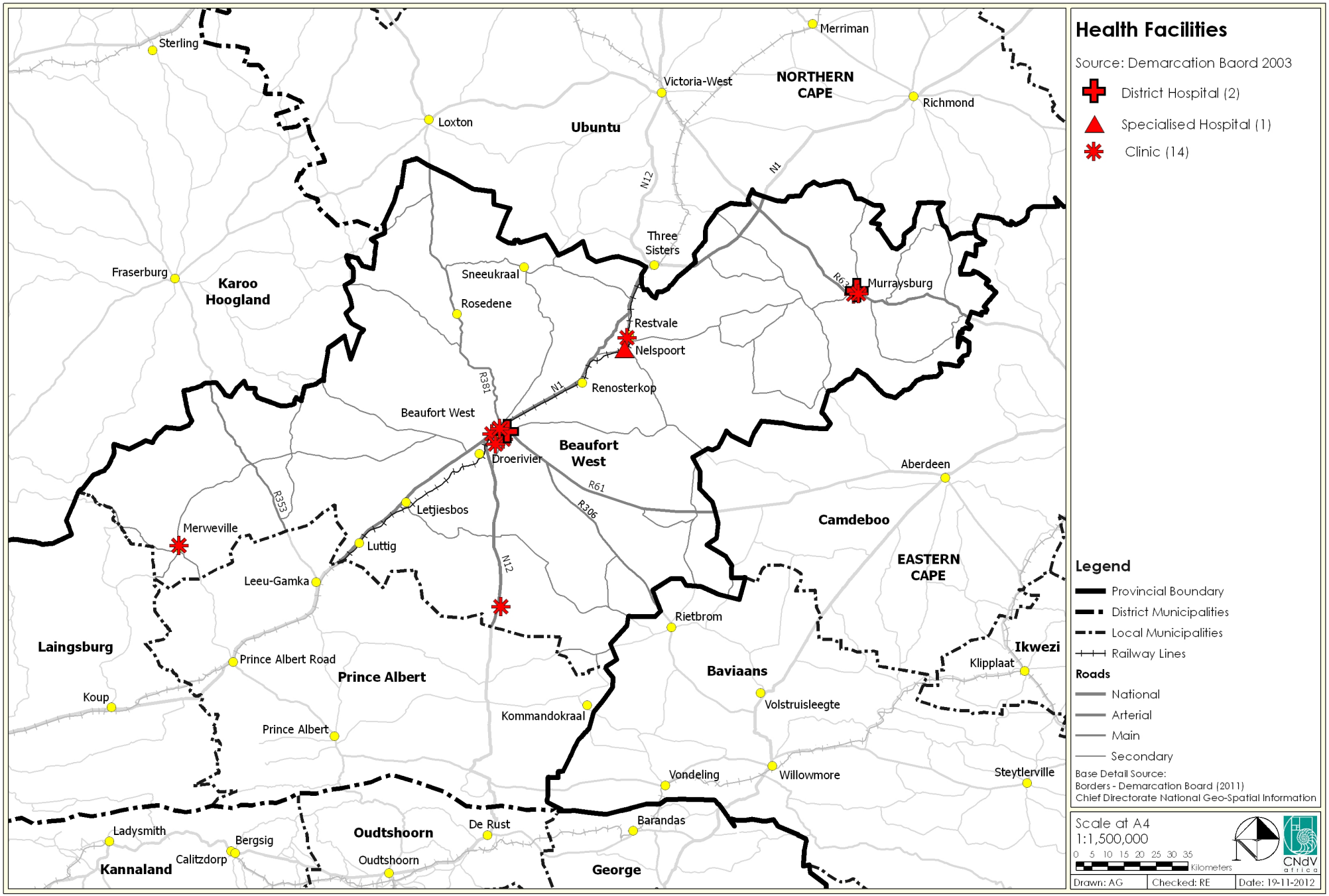


Figure 3.3.2.1 Health Facilities: Municipality

3.3.3 EDUCATION

Figure 3.3.3.1 indicates the educational facilities throughout the Beaufort West Municipality.

Education facilities are largely clustered around the settlements of Beaufort West, Merweville, Nelspoort and Murraysburg.

	2001	2011
No schooling	3109	3612
Some primary	4343	12864
Completed primary	1839	3245
Some secondary	7091	13579
Grade 12/Std 10	3712	7280
Higher	1122	1868

Table 3.3.3.1 Highest education level (source: Census 2001, 2011)

Table 3.3.3.1 shows the highest education level attained by the population. Between 2001 and 2011 improvements have been made in all categories. Those obtaining a Grade 12 certificate increased from 3712 (2001) to 7280 (2011) which amounts to 3568 more individuals. Individuals obtaining a secondary education increased by 66%. There is however still a significant amount (3612) of unschooled members of the population.

Within the municipality there are (Western Cape Department of Education, 2012):

- 8 primary schools
- 5 secondary schools
- 2 intermediate schools

Figure 3.3.3.2 indicates the location of those older than 20 years with no secondary education as a percentage (Census, 2001). This figure indicates that 60-95% of those aged more than 20 residing in central, northern and eastern parts of the municipality have no secondary education. In the south western part of the municipality 30-50% of the population over 20 have no secondary education.

Implications for Beaufort West Municipality

- An initiative is required to provide access to secondary educational facilities.
- Those members of the community with no schooling should be significantly reduced through a municipal wide initiative.
- There is a need to provide a secondary school in Nelspoort and Merweville as high school students are staying in hostels far from these towns and have no way to return home on the weekends.

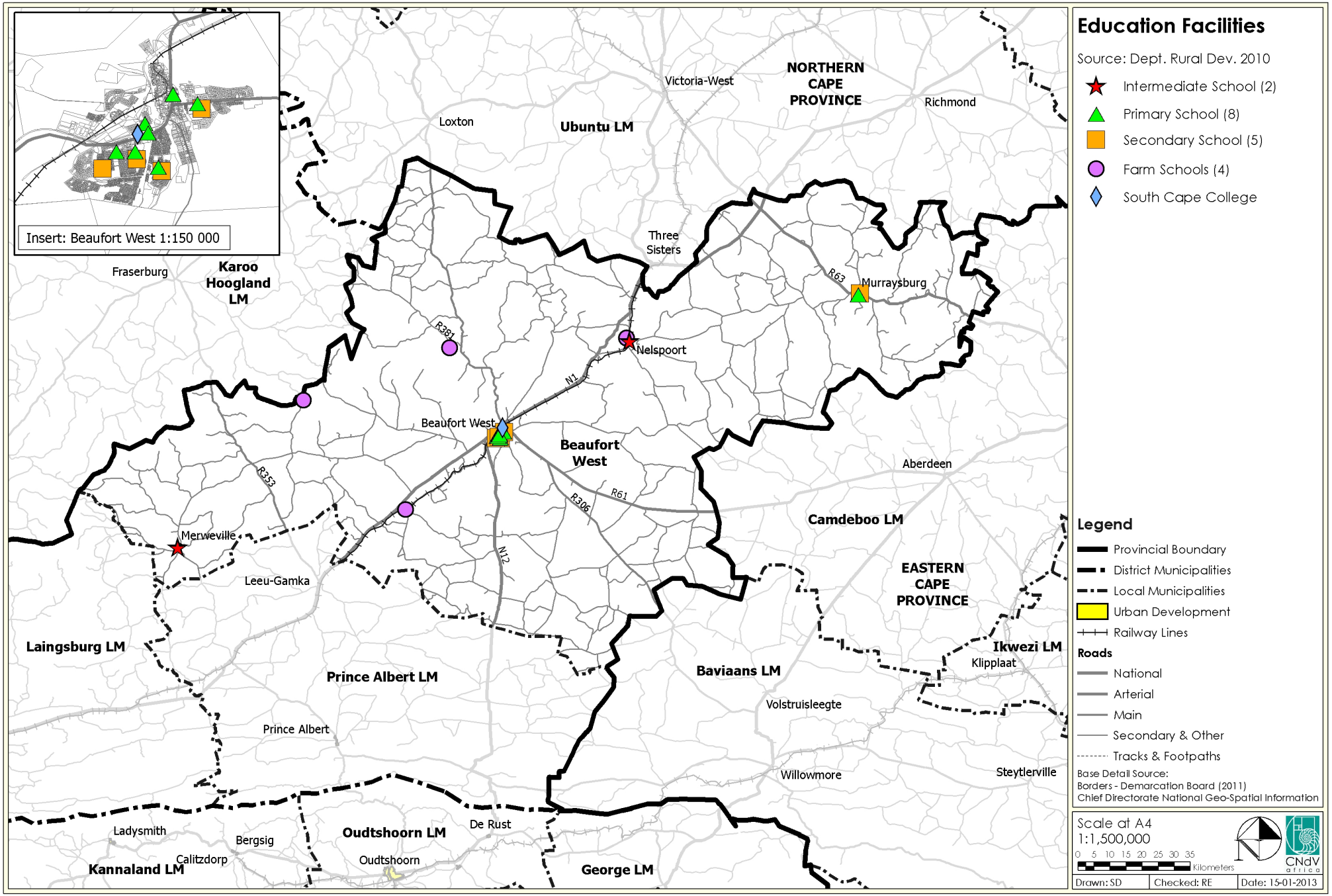


Figure 3.3.3.1 Education

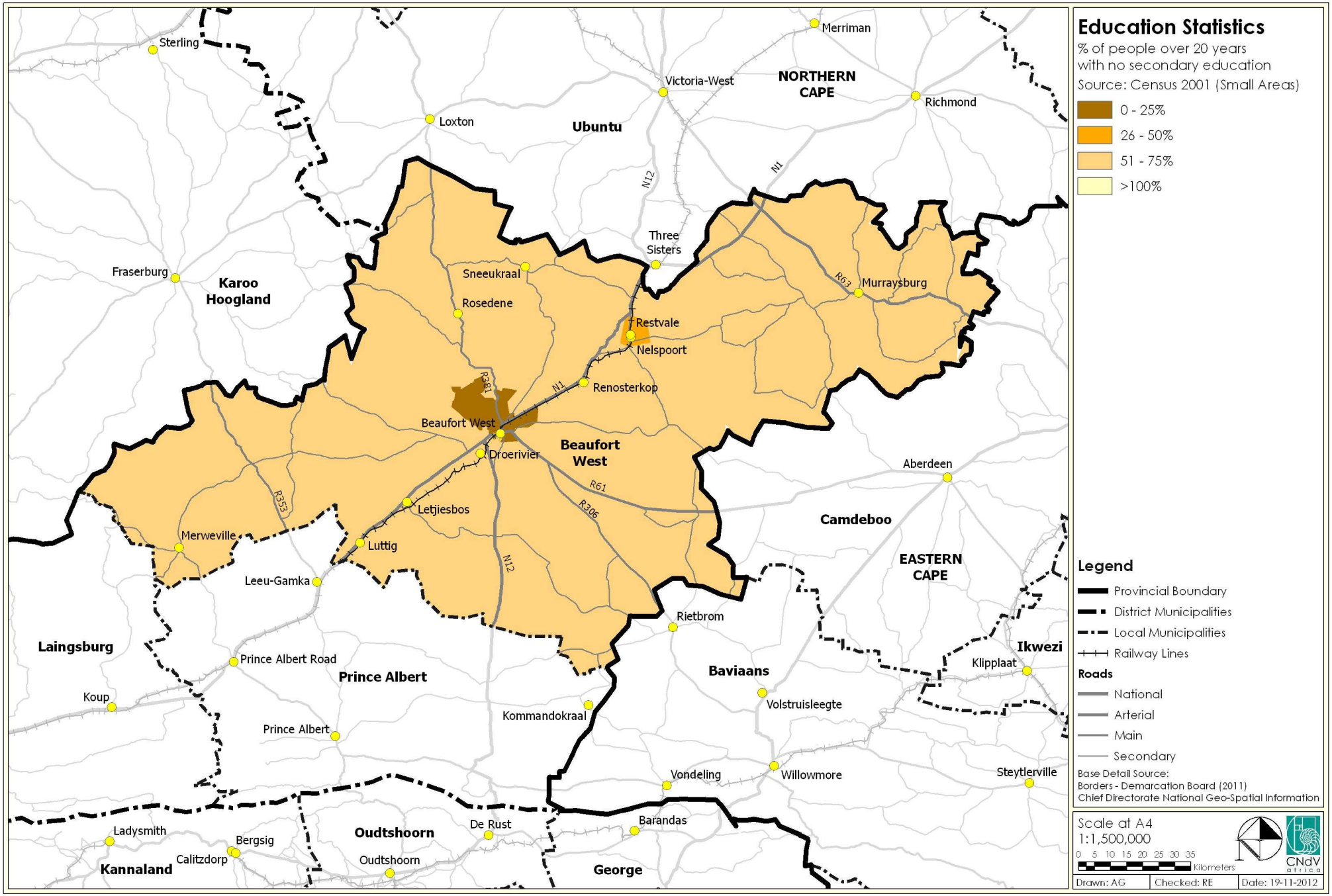


Figure 3.3.3.2 Census Education

3.3.4 EMPLOYMENT, OCCUPATION AND INCOME LEVELS

3.3.4.1 Labour Force

Table 3.3.4.1 indicates that there has been an increase in the labour force between 1996 and 2011 of 3756. The labour force participation rate remained stable at around 55% between 1996 and 2001 and then fell to around 47% in 2011. This indicates that approximately 47% of those between the ages of 15 and 65 are employed or actively seeking employment.

	Total Population aged 15 - 65	Labour force	LFPR%	Employed	Unemployed	Unemployment rate (%)
1996	20211	11028	54.6	8214	2814	25.5
2001	23293	12790	54.9	7786	5004	39.1
2011	31053	14784	47.6	11012	3772	25.5

Table 3.3.4.1 Beaufort West Municipality labour market information, 1996 - 2001 (source: Socio-Economic Profile: Central Karoo District, 2006, Census 2011)

Table 3.3.4.1 indicates that there were a total of 8214 people employed in 1996. This figure rose to 7786 in 2001 and to 11012 in 2011. This is significant given that the labour force also increased by 3756 people.

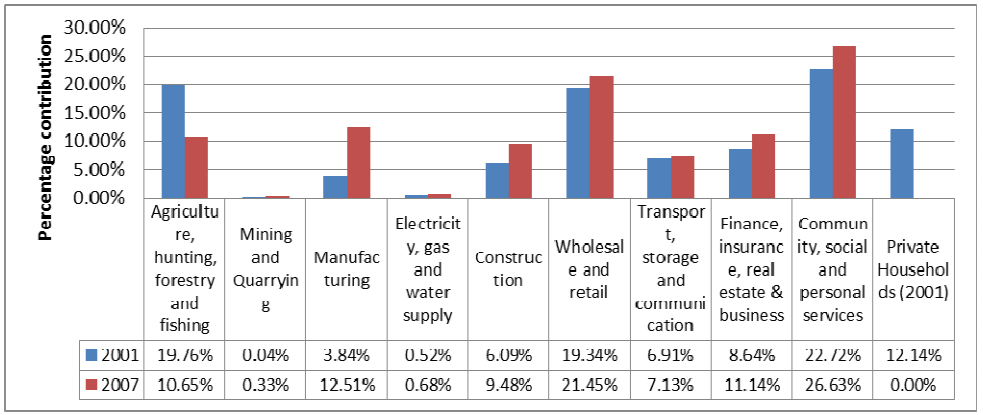
3.3.4.2 Employment

Table 3.3.4.1 indicates that there were a total of 8 214 were employed in 1996. This figure decreased to 7 786 in 2001 and increased rapidly in 2011 to 11 012. This represents an overall increase of 2 798 additional jobs. The labour force also increased by 3 756 people.

Sector	2001	% total	2007	% total
Agriculture, hunting, forestry and fishing	1375	19.76%	732	10.65%
Mining and Quarrying	3	0.04%	23	0.33%
Manufacturing	267	3.84%	860	12.51%
Electricity, gas and water supply	36	0.52%	47	0.68%
Construction	424	6.09%	652	9.48%
Wholesale and retail	1346	19.34%	1475	21.45%
Transport, storage and communication	481	6.91%	490	7.13%
Finance, insurance, real estate & business	601	8.64%	766	11.14%
Community, social and personal services	1581	22.72%	1831	26.63%
Private Households (2001)	845	12.14%	0	0.00%
Total	**6959**	**100.00%**	**6876**	**100.00%**

Table 3.3.4.2 Sector Contribution to employment in 2001 and 2007 (source: MPBS, 2012)

Figure 3.3.4.2 graphically depicts employment of the labour force within the municipality (Census, 2001). The figure indicates that generally 86 - 100% of the labour force is employed in the municipality. Due to the higher concentrations of people in the urban areas of the municipality, employment levels drop to about 61– 85% of the population in Beaufort West and Nelspoort.



Graph 3.3.4.2 Sector Contribution to employment in 2001 and 2007 (source: MPBS, 2012)

3.3.4.3 Unemployment

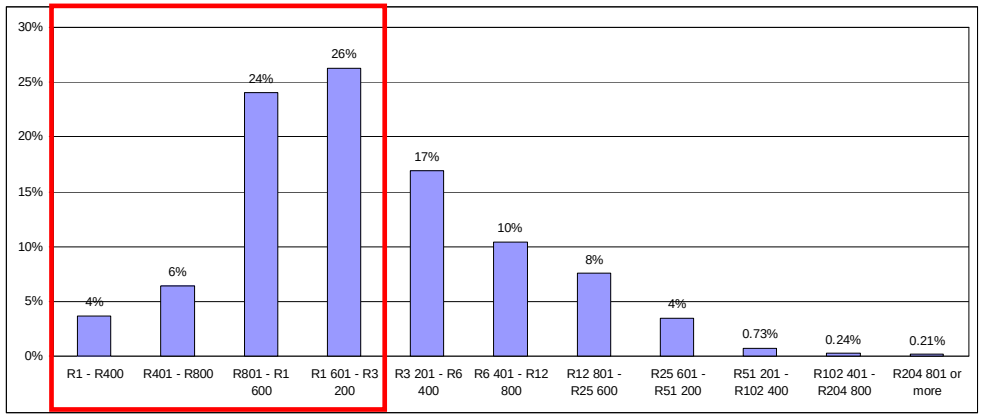
Table 3.3.4.1 indicates the unemployment rate and number of people employed from 1996 until 2011 (Census 1996, 2001 and 2011). The unemployment rate increased from 25.5% in 1996 to 39.1% in 2001 and slightly decreased again to 25.5% in 2011. More people were being employed even though the labour force increased over this period.

3.3.4.4 Individual and Household Income

Graph 3.3.4.4a below shows the household income per different income category. This graph shows that approximately 4% of households earned less than R4800 per annum in 2011.

Almost 67% of households in the municipality earned between R9 600 and R76 800 per annum in 2011. Approximately 10% of the households did not receive any form of income in 2011.

In general, the income levels of households are in the lower middle-income categories. The majority of households earn between R 801 and R12 800 per month.



Graph 3.3.4.4a **Income distribution by individual per month, 2011** (source: Census, 2011)

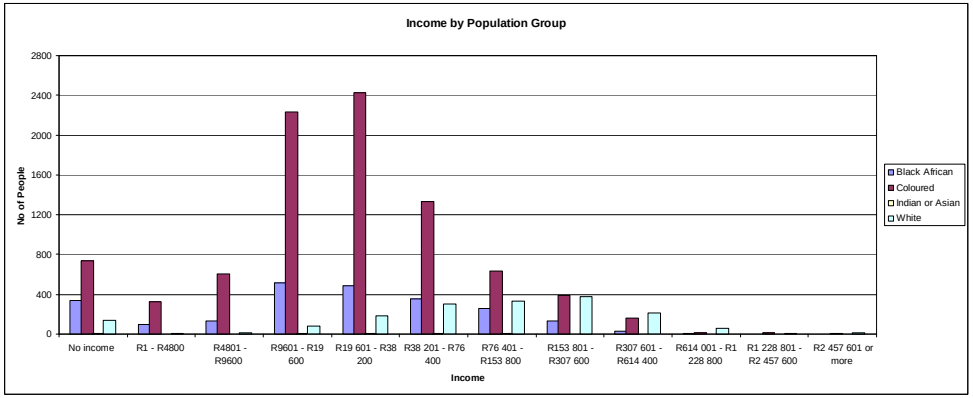
Figure 3.3.4.4 indicates that the higher income areas are located north, south and east of Beaufort West (Census, 2001). The lowest income levels are found east of Nelspoort.

Graph 3.3.4.4a indicates that in 2011:

- About 60% of individuals earned below R3200/month;
- About 17% of individuals earned between R3201 and R6400/month; and,
- About 8% earned between R12801 and R25600/month.

Graph 3.3.4.4b indicates the income per month of the different population groups in 2011. The graph indicates that the Coloured population groups make up the largest percentage of the population and they earn between R9601 to R153800.

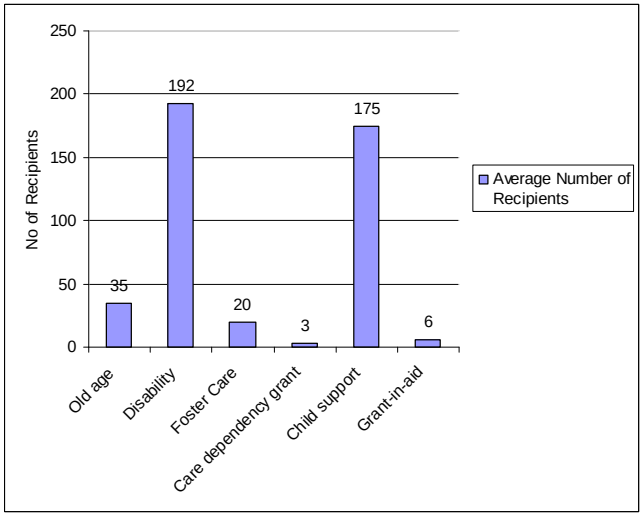
The Black African population earns less, with the majority earning between around R9601 to 76400 per annum and the White population earn the most, between R38201 and R614400 per annum.



Graph 3.3.4.4b **Income (per annum) distribution by population group** (source: Census, 2011)

3.3.4.5 Social Grants

Graph 3.3.4.5 shows the average number of social grants paid out in 2005 in the municipality. The largest numbers of social grants were paid out as disability grants.



Graph 3.3.4.5 **Social grant data** (source: Socio Economic Profile, 2006)

In 2005 about 1.1% of the population of Beaufort West Municipality obtained some form of grant (Socio Economic Profile, 2006).

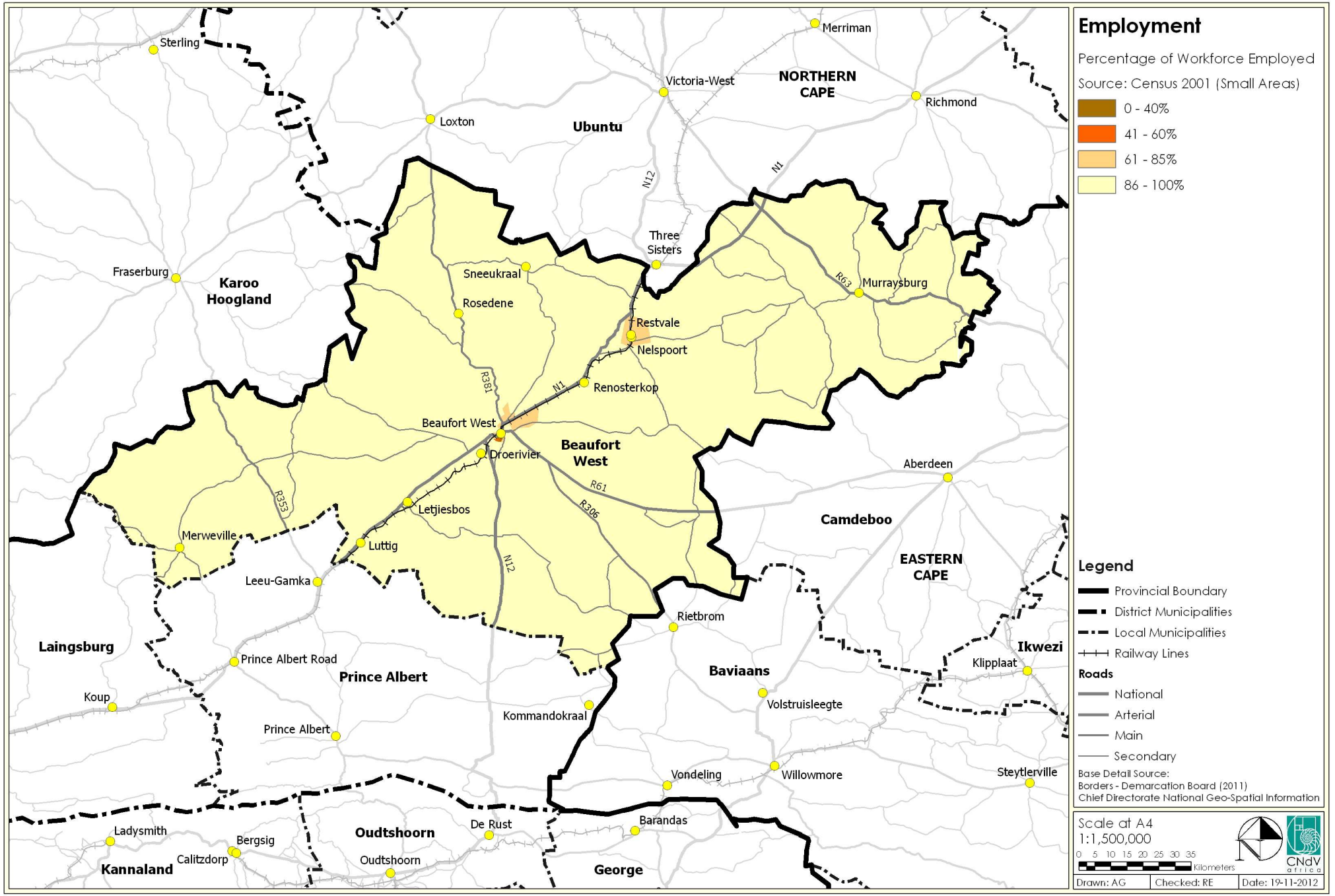


Figure 3.3.4.2 Employment

Implications for Beaufort West Municipality

- Initiatives are required to increase the labour force participation rate (LFPR) which was at 47.6% in 2011 (Census, 2011).
- Employment generation should be prioritised throughout the municipality.
- Growth took place in predominantly skilled employment sectors such as manufacturing, wholesale, trade and finance.
- An absolute and relative decline in agricultural employment occurred in the municipality.
- Initiatives should therefore focus on, firstly, improving peoples skills in the growing sectors of the economy, and secondly, on arresting the decline in the agricultural sector.

3.3.4.6 Local Economic Development

The Beaufort West Local Economic Development Strategy highlighted the economic difficulties within the municipality. The difficulties were mainly attributed to:

- low levels of human development;
- distances from large markets; and
- the arid climate.

The LED strategy specifically emphasised the importance of providing mechanisms that would encourage marginalised communities to participate in the economy. In so doing the economy could grow for the benefit of all.

The following objectives are proposed to ensure sustainable economic growth within the Beaufort West Municipality:

- Focus on the comparative advantages of Beaufort West to ensure sustainable economic growth.
- Create meaningful, sustainable and long-term employment.
- Encourage human resource development (skills training) linked to growth sectors in the economy.
- Reduce poverty by focusing on access to basic services, social and economic opportunities and educational, health and welfare equity.
- Broad Based Black Economic Empowerment

To achieve economic growth the following focus areas were identified which require public sector intervention:

i. **Growing Sector Strategy:** Diversify the economy with new sectors with growth potential. Sectors with growth potential were identified as:

   <u>Agriculture and Agri-processing</u>
   Opportunities within this sector were identified as the following:
   - Hides, milk, meat, wool and mohair,
   - Hydroponic cultivation of crops such as herbs and cut flowers,
   - Breeding indigenous pigs,
   - Dairy product production (cheese, yoghurt and ice cream),

Objectives:
- Maintain and enhance current agricultural practices.
- Ensure previously disadvantaged individuals have an opportunity to participate in this sector.
- Establish product beneficiation projects to alleviate unemployment, especially for women.
- Ensure that synergies are created between the agricultural and tourism sectors.

Tourism

The LED Strategy stated that the length of stay and expenditure per day of tourist within the municipality is significantly lower when compared with the Western Cape Province. Beaufort West is only used as stop over on route the N1. Initiatives are thus required to significantly lengthen the time tourists spend within the municipality. The Karoo National Park was identified as the most important tourist attraction to achieve this.

Objectives:
- Develop a sustainable tourism sector,
- Create employment opportunities through tourism, especially for unemployed females, and
- Involve previously disadvantaged communities as much as possible.

Transport

Transport is a significant contributor to the economy of the Beaufort West Municipality mainly due to the N1 freeway that traverses the municipality. Employment creation derived from this sector can however be significantly grown.

Objectives:
- Grow the transport sector to ensure greater economic spin-offs,
- Create employment through the transport sector,
- Create the opportunity for the previously disadvantaged communities of the region to participate in the transport sector.

ii. **Human Resource Development Strategy:** Provide the necessary infrastructure and support (early childhood development, formal schooling, tertiary education, skills development and adult basic education, etc.) to ensure a higher human development index through the following:

Objectives:
- Ensure high quality early childhood development programmes,
- Ensure access to quality education for learners and job seekers,
- Empower all residents within the municipality to enable them to participate in the Beaufort West Municipal economy.

iii. **SMME Support Strategy:** Provide support for the development of small, medium and macro enterprises and the contribution which this sector makes to the municipal economy by means of the following objectives:

Objectives:
- Improve the success rate of businesses,
- Clarify and minimise the regulatory requirements impacting on business development,
- Reduce the cost of conducting business within the municipality.

iv. **Poverty Reduction Strategy:** Reduce poverty by addressing unemployment, low income levels, a lack of valuable assets, health and nutrition shortages and low levels of education through the following objectives:

Objectives:
- Increase the resources of the poor,
- Reduce the cost of living of the poor, and
- Build assets for the poor.

v. **Restructuring the Space Economy/Asset Building:** Create integrated settlements through the following objectives:

Objectives:
- Protect a unique sense of place in the municipality,
- Provide high levels of access to economic and social opportunities to the poor,
- Ensure that housing becomes assets of the poor,
- Promote integration within communities.

The Karoo Participatory Appraisal Competitive LED Strategy outline for Beaufort West (2013) proposed the following prioritised initiatives:

- Energy and Mining:
  - Promotion and facilitation of investment;
  - Fracking and Environmental Information Centre;
  - Environmental Monitoring Group.
- Tourism:
  - Develop more tourism attractions, products and package;
  - Aviation School;
  - Destination Marketing Campaign;
  - Marketing website: SEDA grant.
- Agriculture:
  - Reduce stock losses;
  - Outsourcing of hydroponics.
- Retail and Services:
  - Improvement of appearance in CBD;
  - Skills development geared towards SKA and other investors.
- Infrastructure linked to economic development:
  - Pipe water from Gariep Dam or Lesotho;
  - Rerouting of trucks through town;
  - Airport extended runway and tarring;
  - Waterfront: Koppie and Dam Properties.
- Institutional Capacity:
  - Establish effective economic development co-operation;
  - Establish effective ED facilitation capacity;
  - Support EDA to apply good LED practises;
  - LED, SDF and IDP alignment.

Implications for Beaufort West Municipality

The LED strategy proposed that the municipality undertake the following:

- Support land reform and small scale farming initiatives,
- Support existing farming,
- Support agri-processing and related activities,
- Assist in the establishment of a Regional Tourism Board specifically focusing on a branding and marketing campaign,
- Sharing relevant tourism information with the Regional Tourism Office,
- Actively and visibly promote the region,
- Improve existing tourism attractions and develop new tourism attractions,
- Maintain scenic corridors,
- Develop design guidelines, building guidelines, landscaping and urban design plans to protect the historical parts of towns and to enhance their tourism quality,
- Make municipal resources available and provide infrastructure to support the transport sector,
- Develop technical skills (e.g. diesel mechanics) within Beaufort West Municipality that can contribute to the transport sector.
- Ensure that safety of traveling along the N1 is significantly improved in order to increase the amount of road users (inputs/discussions to be undertaken with CKDM, PGWC and SANRAL),
- Develop and implement early childhood and school development programmes, worker skills development and training programmes.
- Provide the necessary support to small business and their continued development;
- Review existing regulations and by-laws and their impact on small business,
- Support SMME's through procurement practices,
- Improve access to government poverty relief programmes,
- Address housing and other services backlogs,
- Improve social and natural capital,
- Ensure sustainable and integrated settlements within the municipality,
- Enhance the asset value of low-income housing,
- Maintain the historical character and the unique sense of place of the towns.

3.3.5 THE ECONOMY

3.3.5.1 Income

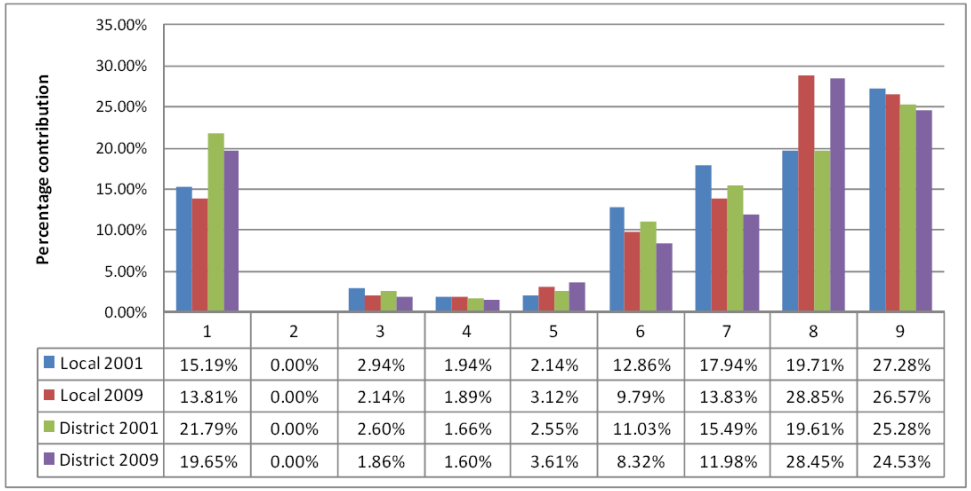
The Beaufort West economy contributed approximately 74,39% to the economy of the Central Karoo District Municipality in 2009. In terms of absolute numbers, the economy of Beaufort West generated R840,7 million of Gross Value Added (GVA)[1], when compared to R 1 130,2 million for the Central Karoo District. The GVA contribution of the Beaufort West economy to the Central Karoo District decreased slightly from 75,00% in 2001 to 74,39% in 2009. Notwithstanding, the Beaufort West economy grew by 3,46% per annum from 2001 to 2009 or 31,29% over the period. Figure 1 indicates the sector contributions to the GVA of the Beaufort West economy for 2001 and 2009.

The largest sectors of the Beaufort West economy are Finance, Insurance, Real Estate and Business Services followed by Community, Social and Personal Services and Transport, Storage and Communication. These three sectors combined contributed almost 70% of the total GVA generated by the Beaufort West economy in 2009.

The combined contribution of these sectors increased from 64,94% in 2001. The increase in the GVA is attributed to a sharp increase in the contribution of 46,35% by Finance, Insurance, Real estate and Business Services to GVA from 2001 to 2009. Over the same period, the contribution of the Transport, Storage and Communication sector to GVA decreased from 17,94% to 13,83%. A sharp decrease in Wholesale and Retail activity emerged over the period with the contribution of the sector decreasing from 12,86% in 2001 to 9,79% in 2009. The latter represented a decrease of 3,35% per annum from 2001 to 2009. Agriculture, Hunting, Forestry and Fishing activity also made a smaller contribution to the GVA of the local economy in 2009 when compared to 2001 with a decline in the contribution to GVA of 9,08%.

An assessment of the larger sectors suggests that the Finance, Insurance, Real Estate and Business Services sector, which contributes 28,85% to the GVA of the local economy, grew by 8,51% per annum over the period 2001 to 2009. The Transport, Storage and Communication sector with a 13,83% contribution to the GVA in 2009, grew at a nominal rate of 0,14% per annum over the period 2001 to 2009. The Construction sector which contributed 3,12% to the local GVA in 2009 grew at a nominal growth rate of 8,46% per annum over the period 2001 to 2009 although off a low base.

Graph 3.3.5.1 indicates the contribution of each economic sector to the GVA of the Beaufort West and the Central Karoo District economy for 2001 and 2009.



	1	2	3	4	5	6	7	8	9
Local 2001	15.19%	0.00%	2.94%	1.94%	2.14%	12.86%	17.94%	19.71%	27.28%
Local 2009	13.81%	0.00%	2.14%	1.89%	3.12%	9.79%	13.83%	28.85%	26.57%
District 2001	21.79%	0.00%	2.60%	1.66%	2.55%	11.03%	15.49%	19.61%	25.28%
District 2009	19.65%	0.00%	1.86%	1.60%	3.61%	8.32%	11.98%	28.45%	24.53%

Legend:
1 Agriculture, hunting, forestry and fishing
2 Mining and quarrying
3 Manufacturing
4 Electricity, gas and water supply
5 Construction
6 Wholesale and retail
7 Transport, storage and communication
8 Finance, insurance, real estate and business services
9 Community, social and personal services
Note: Mining and quarrying at the local level registered no activity in 2001 and 2009
Source: Adapted from Western Cape Provincial Treasury (2010)

Graph 3.3.5.1 Sector contributions to GVA for the local and district municipal areas in 2001 and 2009

An assessment of the information presented in Figure 3 suggests that the Community, Social and Personal Services sector showed growth that is similar to the local economy at a nominal rate of 3,12% per annum from 2001 to 2009, but contributes more than a quarter (26,57%) to the total GVA of the local economy. The contribution of the sector to the District

GVA is slightly lower than the local economy contribution due to lower levels of demand elsewhere in the District (excluding Beaufort West).

The contribution of the Manufacturing sector to the local economy decreased by 27,10% from 2001 to 2009, while a decrease of 28,29% in the sector's contribution to GVA was achieved in the District municipal area over the same period. The contribution of the Agriculture, Hunting Forestry and Fishing sector to the GVA of the local economy declined by 9,08% from 2001 to 2009, while the same figure for the District indicates a slightly higher decline of 9,81%.

3.3.5.2 Sector Contribution to the Economy

The assessment of GVA sector contributions together with the annual and period growth rates for 2001 and 2009 are indicated in Table 3.3.5.2.

Economic sector	Gross Value Added				Growth for	Annual	Direction
(R'000)	2001	% of total	2009	% of total	Period	growth	of growth
Agriculture, hunting, forestry and fishing	97 246	15.19%	116 078	13.81%	19.37%	2.24%	↑
Mining and Quarrying	-	0.00%	-	0.00%	0.00%	0.00%	N/A
Manufacturing	18 842	2.94%	18 033	2.14%	-4.29%	-0.55%	↓
Electricity, gas and water supply	12 406	1.94%	15 915	1.89%	28.28%	3.16%	↑
Construction	13 698	2.14%	26 224	3.12%	91.44%	8.46%	↑
Wholesale and retail	82 322	12.86%	82 306	9.79%	-0.02%	0.00%	↑
Transport, storage and communication	114 912	17.94%	116 247	13.83%	1.16%	0.14%	↑
Finance, insurance, real estate and business	126 238	19.71%	242 559	28.85%	92.14%	8.51%	↑
Community, social and personal services	174 701	27.28%	223 380	26.57%	27.86%	3.12%	↑
Total	640 365	100.00%	840 742	100.00%	31.29%	3.46%	↑

Note: No Mining and Quarrying activity is recorded in the local municipal area in 2001 or in 2009.
Sources: Western Cape Provincial Treasury (2010)

Table 3.3.5.2 An assessment of sector contributions to GVA in 2001 and 2009 and employment per sector in 2001 and 2007 for the Beaufort West economy (source: MPBS, 2012)

Among the nine classified sectors, eight recorded an annual increase in economic activity with the Construction and Transport, Storage and Communication sector achieving strong performance on an annual basis, although the former is off an extremely low base. Manufacturing activity has declined over the period of the review. This is concerning due to the labour intensive nature of various manufacturing processes. It also may allude to raw materials and products produced by the Agriculture sector being processed elsewhere and not within the boundaries of the Beaufort West local economy.

Primary sector
The primary sector of the Beaufort West economy includes Agriculture, Hunting, Forestry and Fishing activity.

As stated above, it is estimated that sector contributed 13,81% to the GVA of the municipal area in 2009. A decline in the contribution of primary economic activity to the total GVA of the Municipal area from 15,19% in 2001 is recorded. No mining activities occur in this area, and therefore no contribution is made by this subsector to the local economy.

Secondary sector
The secondary sector of the Beaufort West economy includes some Manufacturing, Construction and Electricity, Gas and Water Supply. The secondary sector contributed 7,02% to the GVA of the Beaufort West economy in 2001, while the contribution to GVA increased to 7,16% in 2009. The slight increase is essentially attributed to the Construction sector that increased its contribution to GVA from 30,47% in 2001 to 43,58% in 2009. In current terms it is likely that the construction sector experienced a significant decline in activity thereafter and this would cause a significant slowdown in growth rates and the contribution of the secondary sector to the economy in general.

Tertiary sector
The Tertiary Sector of the Beaufort West economy includes Trade, Repairs and Hospitality, Financial Institutions, Real Estate and Business Services; Community, Social and Personal Services; and Government Services. The Tertiary Sector contributed 77,80% to the GVA of the local economy in 2001, which increased to 79,04% in 2009. In other words, almost 80c in each rand contributed to the local economy is attributable to tertiary sector activity. The largest contribution to Tertiary Sector activity is the Finance, Insurance, Real Estate and Business Services sector increasing its contribution from 25,34% in 2001 to 36,50% in 2009.

The contribution of government services to the local economy is unknown, but it is possible to postulate that it contributes a sizable portion to the overall GVA of the local municipality and makes a relative contribution to the Tertiary Sector.

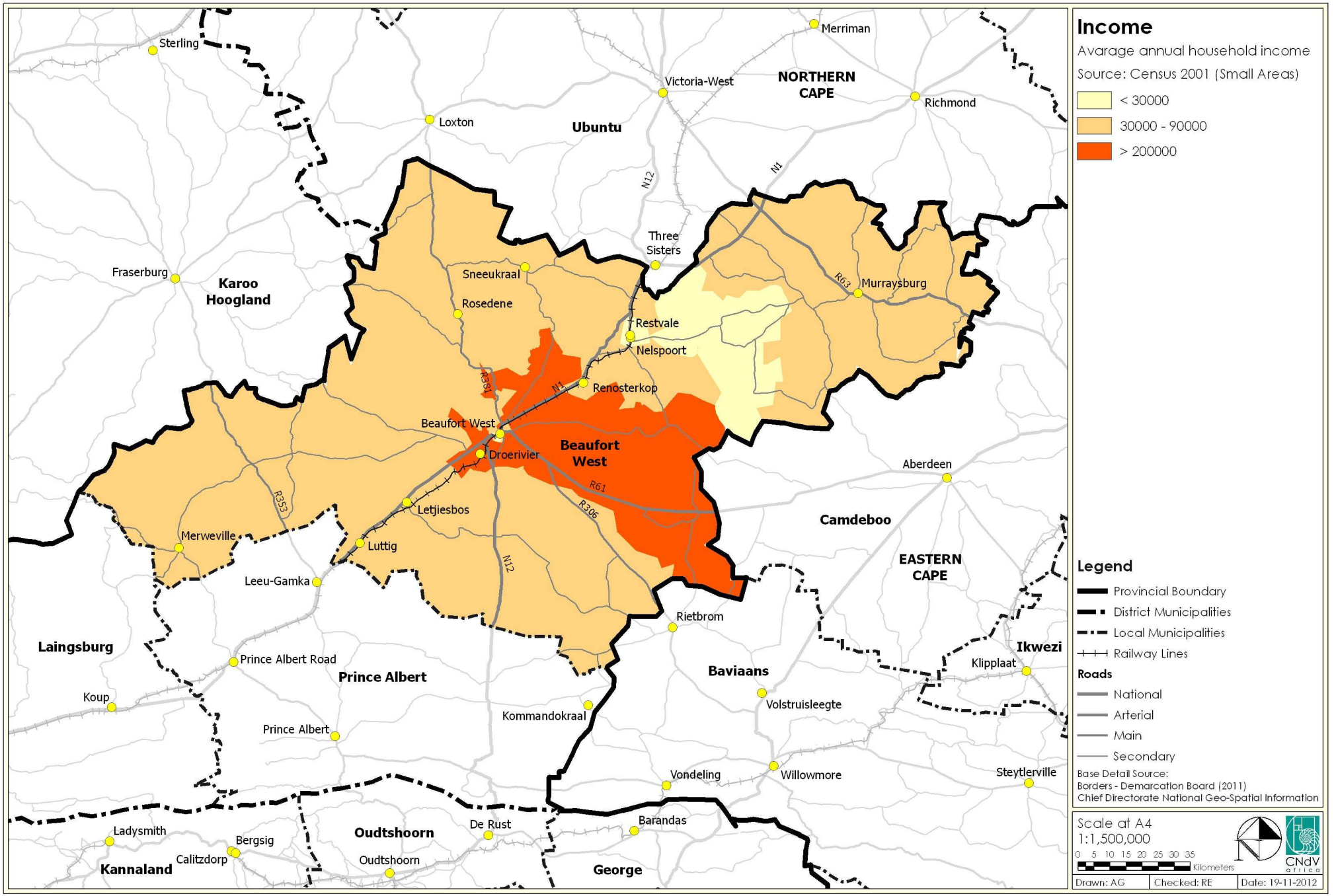


Figure 3.3.5.1 Income

3.3.5.3 Input-Output Analysis

An input-output analysis is an evaluation of the economy that supports an understanding of the interaction that exists between supply and demand of commodities for each sector necessary to generate a certain level of output. This allows for an assessment of the multiplied impacts of future growth and the quantification of the input required to achieve the envisaged growth.

The economic profile of the local economy (Quantec Research, 2011 – the latest data available) is summarised in Table 3.3.5.3a below. That profile must be "translated" into an input□output (or nowadays called supply-use) framework.

Industry/Sector	GVAR 2011 Rm	% Contribution per sector 2011	Average annual % Growth 2001-2011	% Contribution to WC sectors 2011
Agriculture, forestry and fishing	55.60	5.29	-1.52	0.586
Mining	1.30	0.12	15.79	0.339
Manufacturing	106.40	10.13	10.06	0.247
Electricity and water	7.80	0.74	-3.11	0.217
Construction	46.30	4.41	10.67	0.416
Wholesale & retail trade; catering and accommodation	154.50	14.71	3.18	0.404
Transport & communication	155.30	14.78	2.25	0.609
Finance and business services	290.20	27.62	5.44	0.348
Government, Community, social and other personal services	233.10	22.19	4.15	0.602
Total	1050.50	100.00	4.19	0.414

Source: Quantec Research

Table 3.3.5.3a **Sector contribution to GVAR in 2011 for the Beaufort West local area** (source: MPBS, 2012)

Due to a limitation of sector data for the Beaufort West economy, certain sectors are combined and Table 3.3.5.3a is restructured as follows: Rows 6 and 7 are combined to form "Trade, Transport and Accommodation", and rows 8, and 9 are combined to form a category "Services".

The adjusted Table 3.3.5.3a is now referred to as Table 3.3.5.3b.

	Industry/Sector	GDPR 2011 Rm	% Contribution per sector 2011
1	Agriculture, forestry and fishing	55.60	5.29
2	Mining	1.30	0.12
3	Manufacturing	106.40	10.13
4	Electricity and water	7.80	0.74
5	Construction	46.30	4.41
6	Trade transport and accommodation	309.80	29.49
7	Services	523.30	49.81
	Total	**1050.50**	100.00

Source: Quantec Research

Table 3.3.5.3b **Sector contribution to GVAR for the Beaufort West economy in 2011** (source: MPBS, 2012)

- ***Illustration and description of linkages between key sectors***

An understanding of the linkages between the sectors is required from a supply and demand side referred to receipts and expenditure respectively. The illustration provided below are provided for the key sectors of the Beaufort West Economy, i.e. Figures 3.3.5.3a, 3.3.5.3b and 3.3.5.3c illustrate the linkages between the key receipts and expenditures related to the Trade, Transport and Accommodation; Services, and Agriculture, Forestry and Fishing to the sectors.

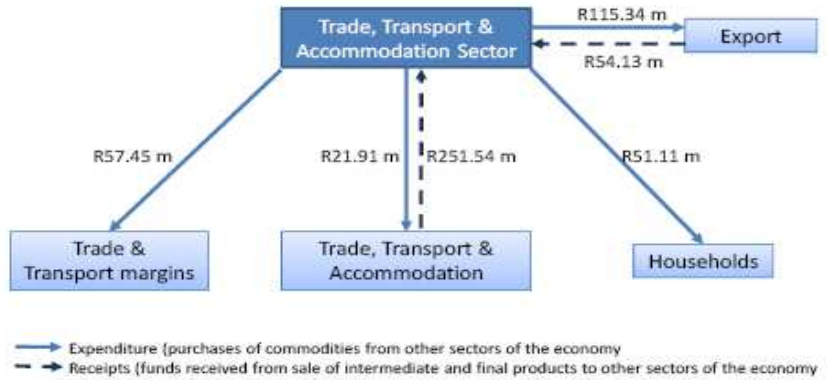


Figure 3.3.5.3a **An illustration of the linkages between key sector contributions to income (receipts-supply) and the expenditure (demand) of the Trade, Transport and Accommodation sector (Source: MPBS, 2012)**

An interpretation of the data illustrated in Figure 3.3.5.3a suggests that in terms of the receipts (supply of products and services), the Trade, Transport and Accommodation sector supplies R251.54 million to various industries within the sector.

Exports generated R54.13 million in receipts for the sector. In terms of expenditure (demand), Trade and Transport Margins make up R57.45 million of expenditure. Also note that Trade and Transport Margins is not a sector per se, but reflects the mark□ups on Trade together with Transport costs paid by the sector to other sectors in the local economy.

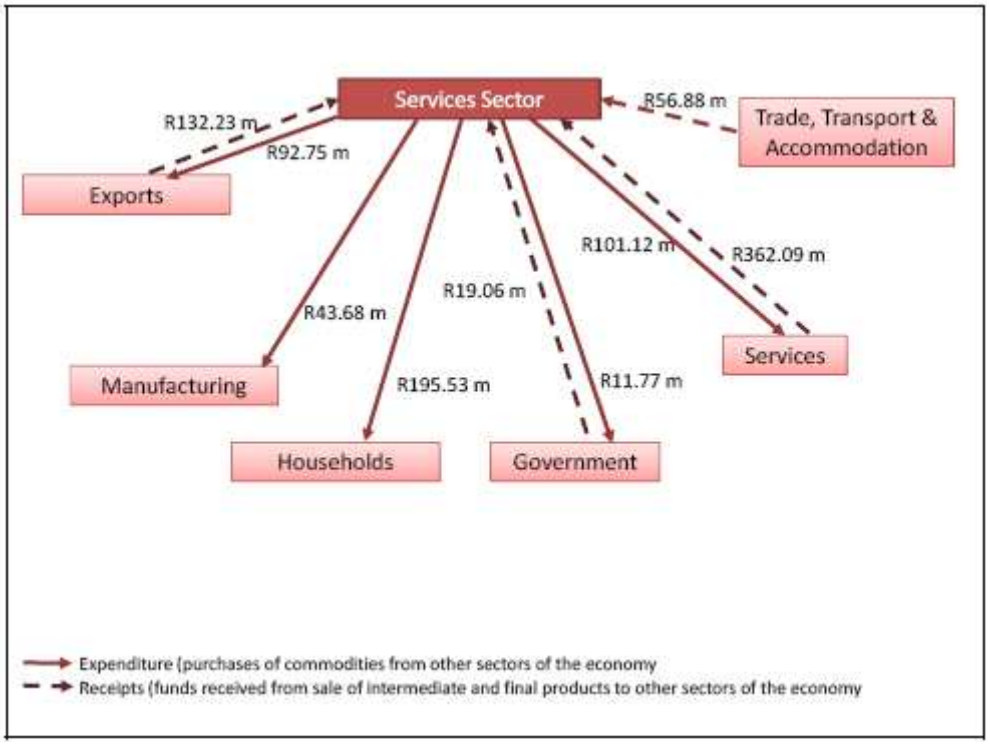


Figure 3.3.5.3b An illustration of the linkages between key sector contributions to income (receipts-supply) and the expenditure (demand) of the Services sector

An interpretation of the data illustrated in Figure 3.3.5.3b suggests that in terms of the receipts (supply of products and services), the Services sector supplies R132.23 million to Exports, R56.88 million to Trade, Transport and Accommodation, R362.09 million to industries in the sector itself. In terms of expenditure (demand) R195.53 million is demanded from Households, R11.77 million from Government, R101.12 million from the sector itself and R92.75 million from Exports (value of goods and services leaving the municipal area).

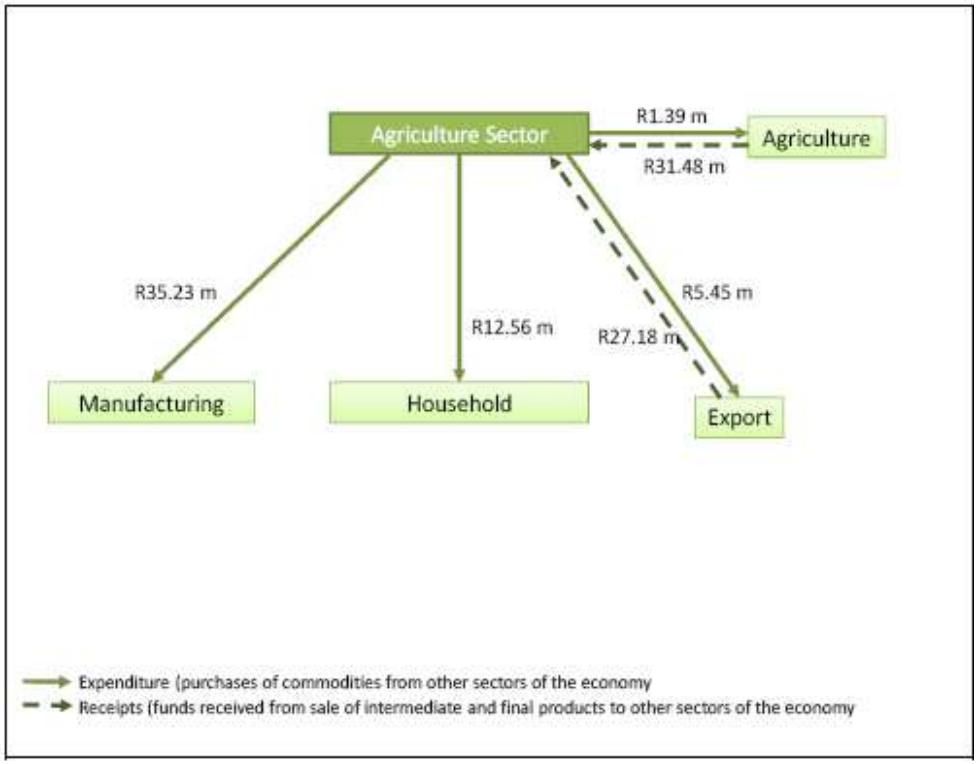


Figure 3.3.5.3c An illustration of the linkages between key sector contributions to income (receipts-supply) and the expenditure (demand) of the Agriculture sector

An interpretation of the data illustrated in Figure 3.3.5.3c suggests that in terms of the receipts (supply of products and services), the Agriculture sector supplies R31.48 million to the industries within the sector itself and R27.18 million to Exports. In terms of expenditure (demand), R35.23 million is demanded from Manufacturing, R12.56 million from Households, R5.45 million from exports (value of goods and services leaving the municipal area) and R1.39 million from the sector itself.

- ***Input Requirements to Achieve the Level of GRP***

In order to obtain some indication of the input required to generate the output, an initial calculation is provided for the purposes of clarity. Table 3.3.5.3c should be considered as a preliminary indication of the sector

inputs required to achieve the GGP (value added) indicated for the Beaufort West economy in 2011.

In order to derive the input the cost to produce products and services was taken as all costs excluding Gross Operating Surplus (profit) and savings and stock changes. The latter refer specifically to the value addition and also include trade and transport margins as a cost.

	Industry/Sector	GDPR 2011 Rm	Conversion factor	Inputs required Rm
1	Agriculture, forestry and fishing	55.60	1.0061	55.27
2	Mining	1.30	1.1784	1.10
3	Manufacturing	106.40	1.1038	96.40
4	Electricity and water	7.80	1.0000	7.80
5	Construction	46.30	1.7274	26.80
6	Trade transport and accommodation	309.80	1.0050	308.27
7	Services	523.30	1.0040	521.20
	Total	**1050.50**	1.0331	**1016.84**

Note: Conversion factor refers to the value addition added to input of a sector to achieve an output
Source: Multi-Purpose Business Solutions

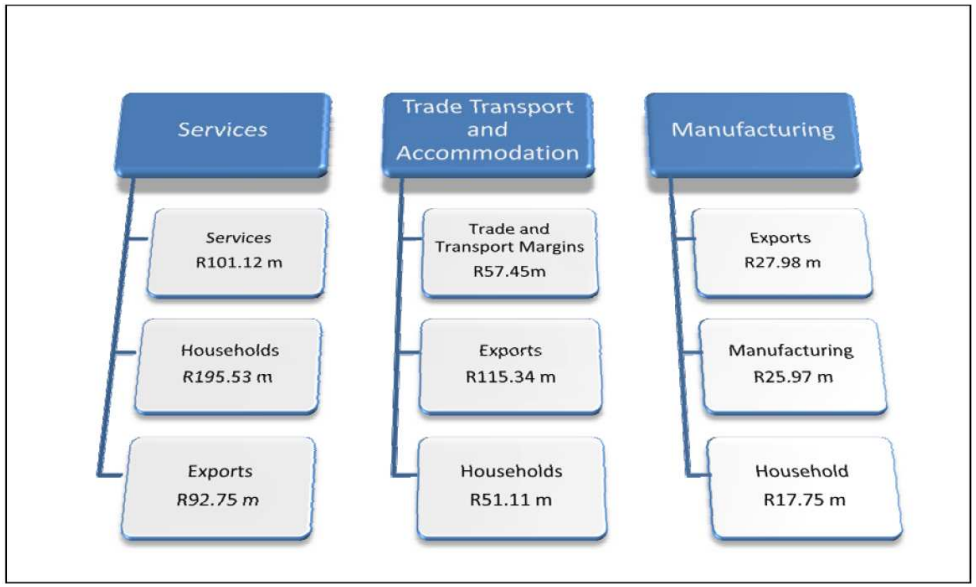
Table 3.3.5.3c Input values required to generate the level of GRP achieved in 2011 per sector

The assessment provided in this report aims to provide an understanding of the linkages between sectors of the Beaufort West economy. The linkages could reflect either a receipt (funds obtained for the sector from the sale (supply) of goods and services) or an expenditure, which refers to the purchase of products and services required by the sector from other sectors in the economy, i.e. the demand.

The three main sectors of the Beaufort West economy in terms of GRP contributions are:

- Services
- Trade, Transport and Accommodation,
- Manufacturing

The three sectors mentioned above have the following expenditure (demand) linkages with other sectors of the Beaufort West economy:



Note: Refer to the analysis provided for each sector in Section 3.3.

Inputs refer to the requirements of a process to produce an output (product or services). The higher the conversion factor the more value is added to the product. The assessment suggests that most of the value is added to inputs by the Services sector followed by Trade Transport and Accommodation and Manufacturing.

The focus on the development of the Beaufort West economy should be informed by the platform provided by an understanding of the linkages between the sectors. Identification of key sectors is important, but not only in terms of its contribution to the GRP of the Municipal economy. A need exists to inform economic policy and strategy by developing sectors that support the key sectors and thereby limit the leakages that current exist through the export of goods and services (through expenditure – demand).

3.3.6 LAND REFORM

Figure 3.3.6.1 shows the location of completed land reform projects in the municipality. Table 3.3.6.1 shows a description of each land reform project contained in Figure 3.3.6.1. Large scale projects are located south of Beaufort West.

No	Project Name	Property Description	Value
1	Acacia	Portion 12 (a portion of Portion 6) of Kuils Poort No. 161, Portion 13 (a portion of Portion 12) of Kuilspoort No. 161, Portion 20 (a portion of Portion 12) of Kuils Poort No. 161, Remainder Portion 41 of South Lemoenfontein No. 162, Portion 45 (a portion of Portion 41) of South Lemoenfontein No. 162, Portion 46 (a portion of Portion 41) of South Lemoenfontein No. 162	17507
2	Vleiland	Farm 225, Buffelsrivier	300000
3	Long Tom Trust	Rem ptn 1 of Schiet Kop 354	792000
4	Robenson Family Trust	Farm 354/3	/
5	Bo-Plaas Farmers Trust	Farm Vetkuil 332/2 and 332/3	963840
6	Voorsieningslaagte	Lemoensfontein 162/12	70000
7	Klaaste Family Trust	Vetkuil 332/3	770000
8	Beaufort West Kleinboere	Vlakfontein 325/1	70000
9	Ngondo Mono and Sons	Katdoornkuil 359	915000
10	Hoekskuil Boerdery	Hoekskuil 358	858995
11	Beaufort West Commonag	Bulskop 423	2737638
12	Makwena Family Trust	Erf 8463	75000
13	Nieuveldt Farm Workers	Vaalkuil 368/4	/
14	Maritz Family Trust	Erf 7581	447700
15	Bel Farmers	Ptn B and C of Klipbanksfontein 173	/
16	Saamstaan Groente Tuin	Kaffirs Kraal 380/3	/
17	David Japhta Family Trust	Erf 8, Murraysburg	/

Table 3.3.6.1 **Land reform projects in the Beaufort West Municipality** (Department of Land Reform, 2011)

An Area Based Plan (ABP) was prepared for the Central Karoo District Municipality in June 2008. The ABP aimed to be a plan for ensuring a coordinated process of land acquisition and support in entrepreneurial development for farmers and other land users. The plan aims to take into account the harsh environment and extremely poor population. The plan gives direction to a comprehensive land and agrarian reform plan relevant to the conditions in the area.

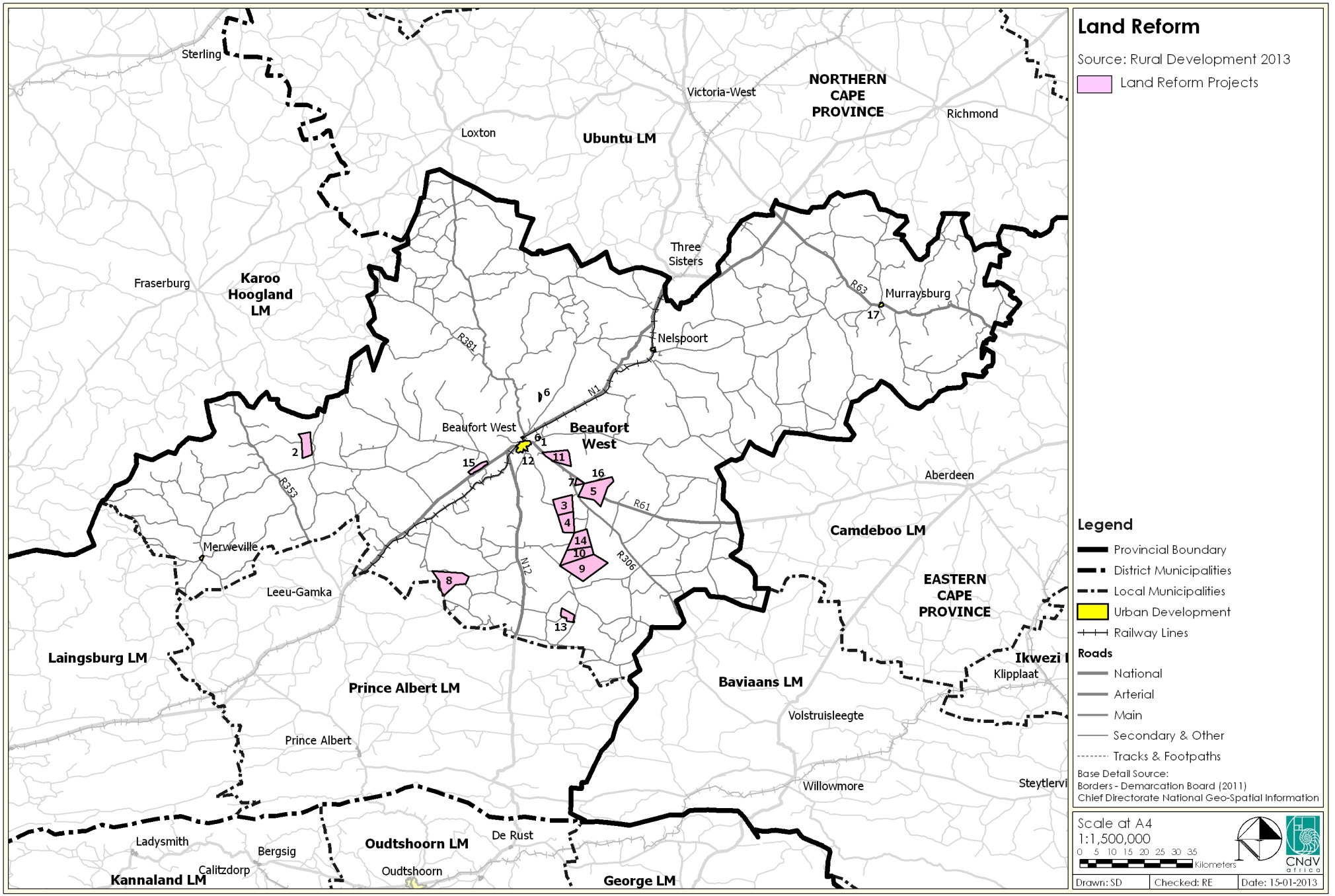


Figure 3.3.6.1 Land Reform Projects (Rural Development, 2013)

3.3.7 CEMETERIES

Figure 3.3.7.1 indicates the location of cemeteries throughout the municipality. Cemeteries are located in the towns of Beaufort West, Merweville, Nelspoort, Murraysburg and north of Rosedene.

No	Location	Total Area (ha)	Available Area (ha)	No of graves available
1	Beaufort West	5.60	1.34	2700
2	Nelspoort	1.30	0.7	1750
3	Merweville	0.64	0.24	600
4	Murraysburg	3.17	2.00	5000

Table 3.3.7.1 Cemeteries in Beaufort West Municipality (source: Beaufort West Municipality, Technical Services, 2013)

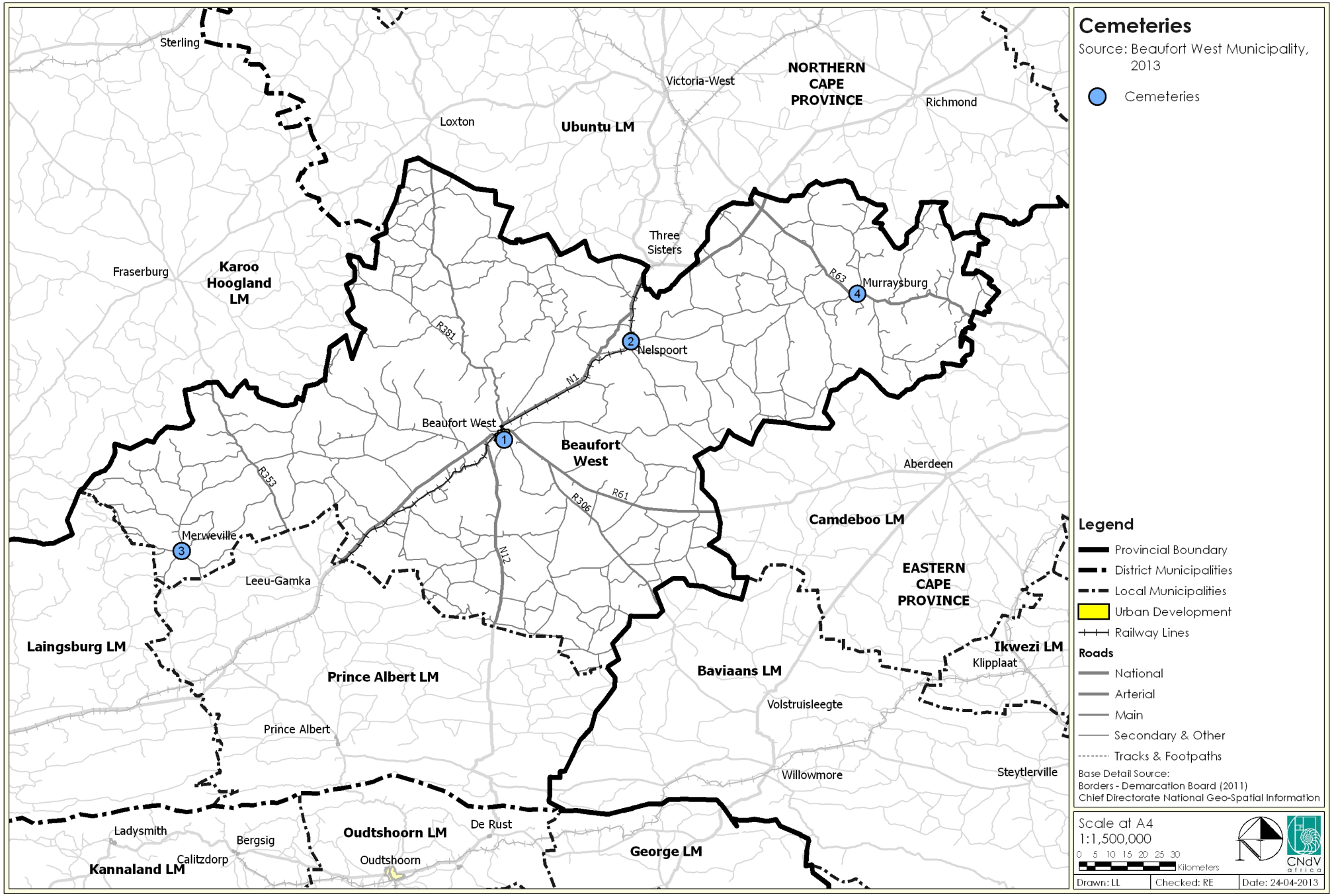
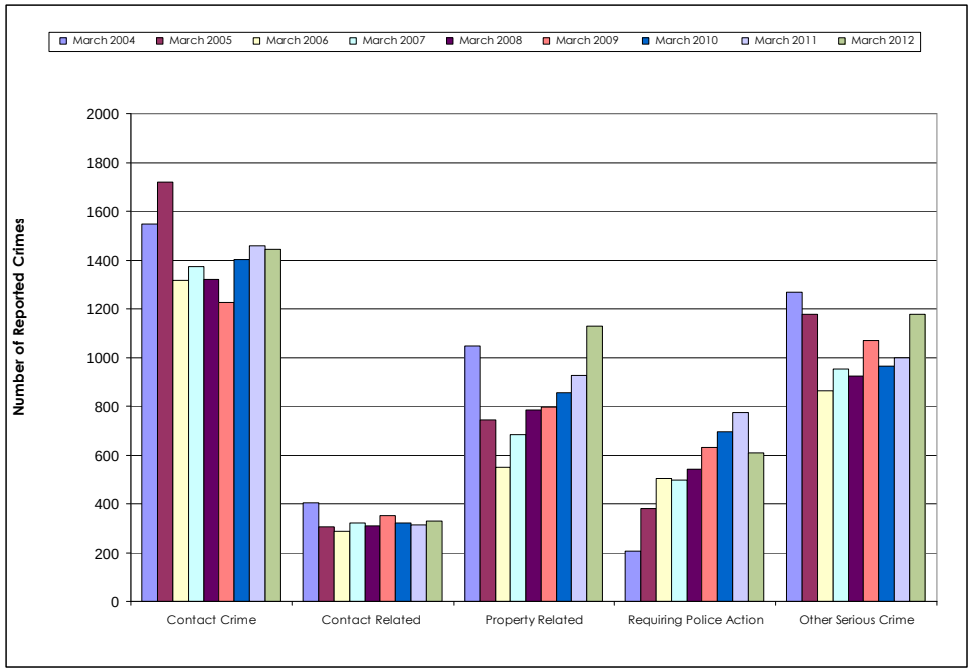


Figure 3.3.7.1 Cemeteries

3.3.8 CRIME



Graph 3.3.8.1 Reported crime statistics for Beaufort West Municipality (Source: SAPS, 2012)

Graph 3.3.8.1 indicates the crime statistics for the Beaufort West Municipality. Information was only available for the towns of Beaufort West and Murraysburg. The most prevalent crime is contact related crime (murder, sexual crimes, attempted murder, common assault, assault to inflict grievous bodily harm, common robbery and robbery with aggravating circumstances). There has been a rise in contact related crime incidences since 2010 but the number is still less than the number of incidences recorded in 2005. Beaufort West has much greater reported crime levels than Murraysburg.

Contact related crimes are very serious in nature and need to be significantly reduced to improve the quality of life in these towns and the Beaufort West Municipality as whole.

Implications for Beaufort West Municipality

- Crime is generally a reflection of socio-economic conditions. The high contact related crime rate indicates poor socio-economic conditions.
- Drastic interventions are required to reduce the crime rate in the municipality, especially in the town of Beaufort West.

3.3.9 PROPERTY MARKET PATTERNS AND GROWTH PRESSURES

From the building statistics provided by STATS SA for the Beaufort West Municipality, it can be observed from Table 2 that a decrease of 99,65% occurred in the number of new residential buildings over the period 2007 to 2010. This sharp decrease is primarily attributable to the completion of low cost housing projects (dwellings smaller than 80 square metres) during 2007 and 2008. A decrease in non-residential building activity is observed in the total value of buildings completed in the Municipal area (refer to Table 2). Non-residential buildings completed over the period refers more specifically to retail (shopping) space, churches, sport and recreational clubs, office and banking space as well as industrial and warehouse space.

The total value of buildings (irrespective of the nature and scope) completed over the period 2008 to 2010, totalled R93,4 million. The split between residential buildings and non□residential buildings is 69% and 31% respectively. The value of buildings completed for residential and non□residential is represented by 1 184 and 14 building projects, respectively. The policy of local procurement and content also assists with job creation among local residents. The changes in the residential and non□residential building activity are best considered by assessing the number of building projects in relation to the value of building activity. The findings are indicated in Table 3.3.9.

Number of projects	2007		2008		2009		2010	
Residential	576	99%	602	100%	4	67%	2	25%
Non-residential	4	1%	2	0%	2	33%	6	75%
Total	580	100%	604	100%	6	100%	8	100%
Value of projects								
Residential	R 35 661 000	61%	R 26 763 000	92%	R 1 872 000	65%	R 569 000	16%
Non-residential	R 22 397 000	39%	R 2 253 000	8%	R 1 009 000	35%	R 2 970 000	84%
Total	R 58 058 000	100%	R 29 016 000	100%	R 2 881 000	100%	R 3 539 000	100%

Note: No weighting of larger vs. smaller building projects are applied to the calculation of the value
Source: Prepared from data provided by STATS SA (2012) (Building Statistics, Report No. 50-11-01)

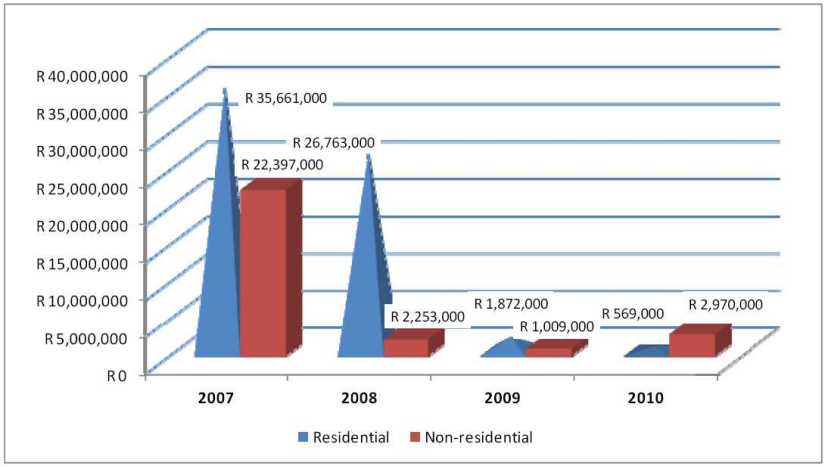
Table 3.3.9 **Breakdown of the number and value of new residential and non-residential building projects per year from 2007 to 2010** (source: MPBS, 2012)

The breakdown between the building types over the period 2007 to 2010 suggests that the value of residential building projects has decreased by 98,4% or 64,46% per annum on average. The number of projects has decreased by 75,73% per annum on average over the period 2007 to 2010. Non□residential building activity has shown signs of a decrease over the period although off a low base. The value per project of non□residential buildings decreased by 39,65% per annum on average from R22,39m to R2,97m. The number of projects decreased from four in 2007 to two in 2008 and 2009 respectively, but increased to six in 2010.

3.3.9.1 Annual value assessment for residential and non residential building activity

Residential building activity reached a pinnacle in 2007. This could be attributed to the lag in the completion of buildings started before 2007 during the upswing. The value of new and renovated residential buildings in the Beaufort West municipal area totalled R35,66 million in 2007 while the value dropped to R0,56 million in 2010.

This represents a reduction of 98,4% in value over the period. The highest annual value for non□residential building activity was achieved in 2007 with R22,39 million and the lowest annual value was R1m in 2009. The value of non-residential building activity decreases by 86,74% from 2007 to 2010 or on a compounded basis by 39,65% per annum on average. In addition, the value of residential building activity decreased by an average of 64,46% per annum over the same period. The value of residential and non-residential building activity on an annual basis is illustrated in Graph 3.3.9.1



Source: Prepared from data provided by STATS SA for Beaufort West Municipality (2012) (Building Statistics, Report No. 50-11-01)

Figure 3.3.9.1 **A breakdown of the total value of residential and non-residential building activity on an annual basis for the period 2007 to 2010** (source: MPBS, 2012)

3.3.9.2 Urban Property Market

Table 3.3.9.2 indicates details pertaining to the properties for sale in the urban areas of the Beaufort West Municipality.

From the information the following can be observed:

- There are 3 properties for sale with average asking prices ranging from R495,000 to R920, 000 in the urban areas of the Beaufort West Municipality;
- The town of Beaufort West has the highest average asking price, R920, 000; and
- No properties are for sale in Nelspoort.

Urban Properties						
No	**Settlement**	**No of Properties**	**Size m²**	**Ave Plot Size (m²)**	**Total Asking Price**	**Average Asking price**
1	Beaufort West	1	586	586	R 920,000	R 920,000
2	Murraysburg	1	2855	2855	R 495,000	R 495,000
3	Merweville	1	2737	2737	R 550,000	R 550,000
	Total	**3**	**6178**		**R 1,965,000**	

Table 3.3.9.2 **Property Sales (Urban)** (source: Property 24, pamgolding.co.za, seeff.co.za)

3.3.9.3 Rural Property Market

Table 3.3.9.3 indicates details of the rural property market in the Beaufort West Municipality. Information was only available for rural land outside Beaufort West town. From the information the following can be observed:

- There are a total of 17 rural properties for sale with an average asking price of R 7,079,706;

Rural Properties							
No	**Settlement**	**No of Properties**	**Size (Ha)**	**Ave Plot Size (Ha)**	**Total Asking Price**	**Average Asking price**	**R/Ha**
4	Beaufort West	17	59566	3504	R 120,355,000	R 7,079,706	R 2,021
	Total	**17**	**59566**	**3504**	**R 120,355,000**	**R 7,079,706**	**R 2,021**

Table 3.3.9.3 **Property Sales (Rural)** (source: Property 24, pamgolding.co.za, seeff.co.za)

Implications for Beaufort West Municipality

- A significant decline in economic growth occurred in not only South Africa but also across the world, which resulted in a reduction in capital available for investment. This slow down in the economy also resulted in the contraction of economic activity across the entire economy.
- Access to funding also became problematic due to the significant increase of thresholds and the introduction of other factors that limited the ability of business and individuals to obtain loans and other debt for development and investment.
- As a consequence of the economic contraction and limited access to capital, a decrease in demand for building in both the residential and non□residential market occurred. Businesses were under pressure due to lower consumer spending and this affected the supply of new commercial property. In the same context, less capital and access thereto, for funding residential building activity also became an observable trend.

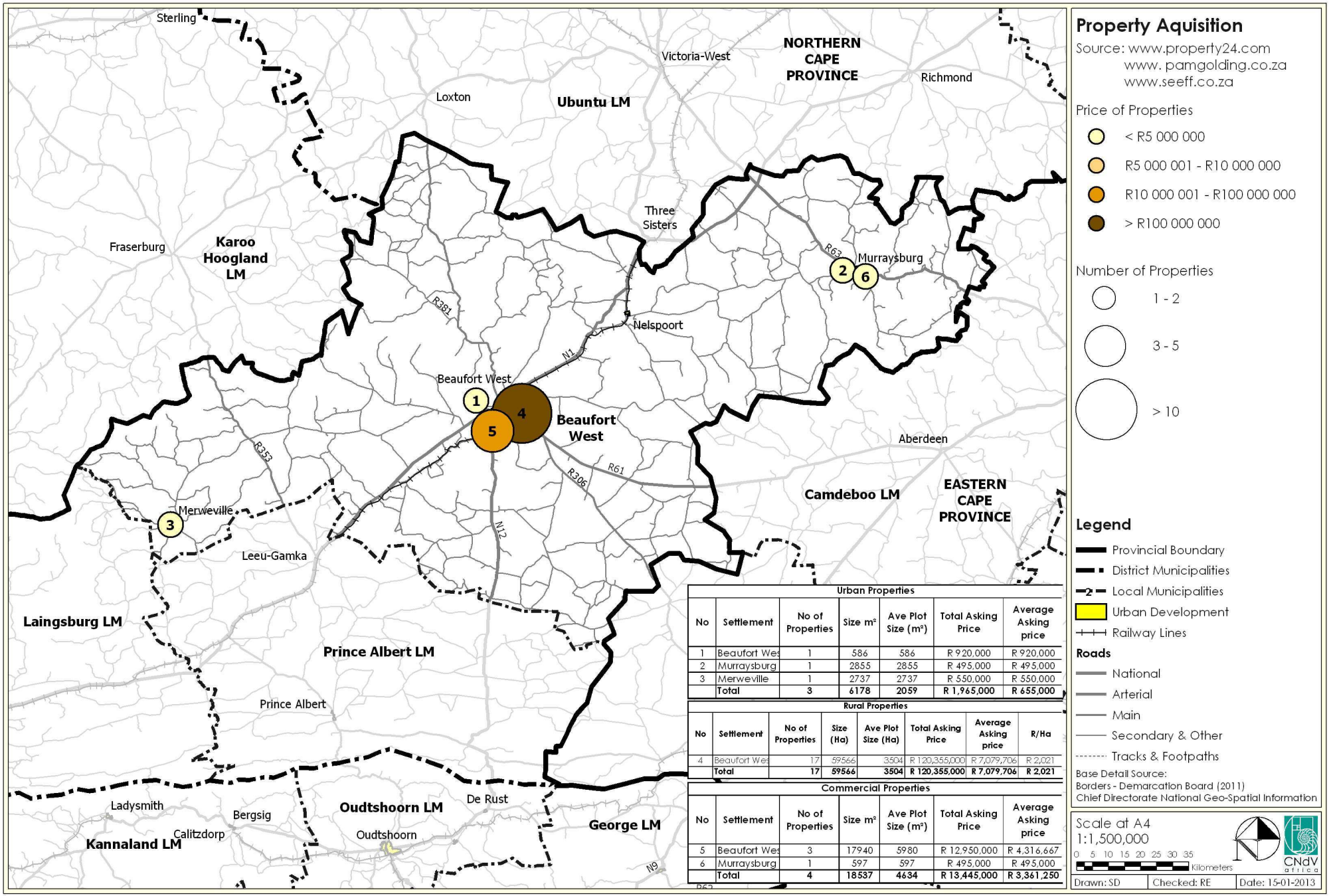


Figure 3.3.9.2 Properties for Sale

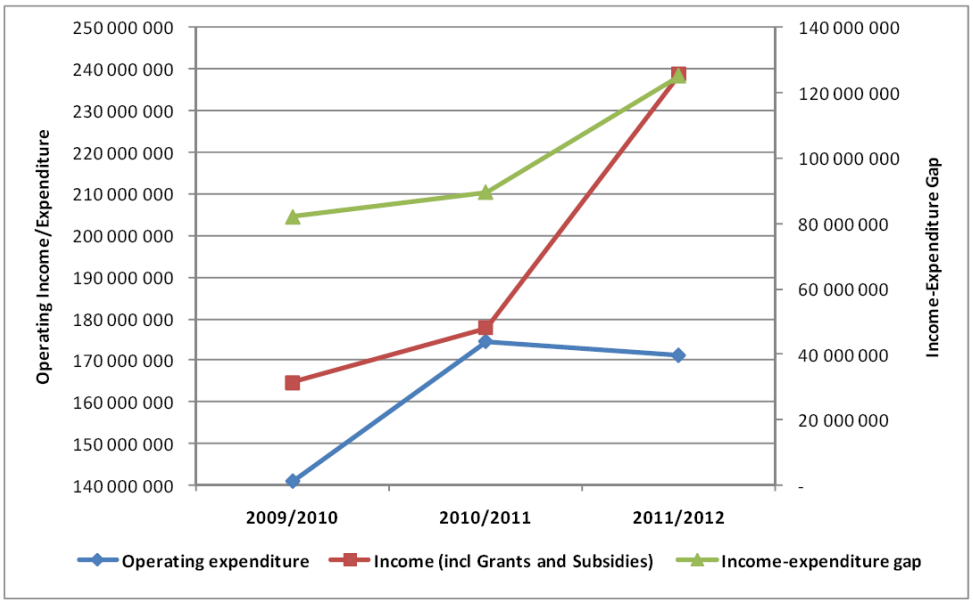
3.3.10 MUNICIPAL FINANCES

3.3.10.1 Income and Expenditure Pattern

The financial position of the Beaufort West Municipality is represented by income and expenditure of an operating and capital nature.

Information was provided by the Beaufort West Municipality for the 2010/2011 and 2011/2012 financial years. From the Annual Report it is also possible to obtain information for the 2009/2010 financial year due to the inclusion of the comparative financial information for the previous financial year.

Graph 3.3.10.1 represents an illustration of the total operating income and expenditure together with the grants and subsidies for the Beaufort West Municipality over the period 2009/2010 to 2011/2012.



Source: Adapted from financial information provided by the Beaufort West Municipality (2012)

Graph 3.3.10.1 An illustration of the operating income and expenditure for the Beaufort West Municipality together with the difference between income with and without grants and subsidies over the period 2009/2010 to 2011/2012 (source: MPBS, 2012)

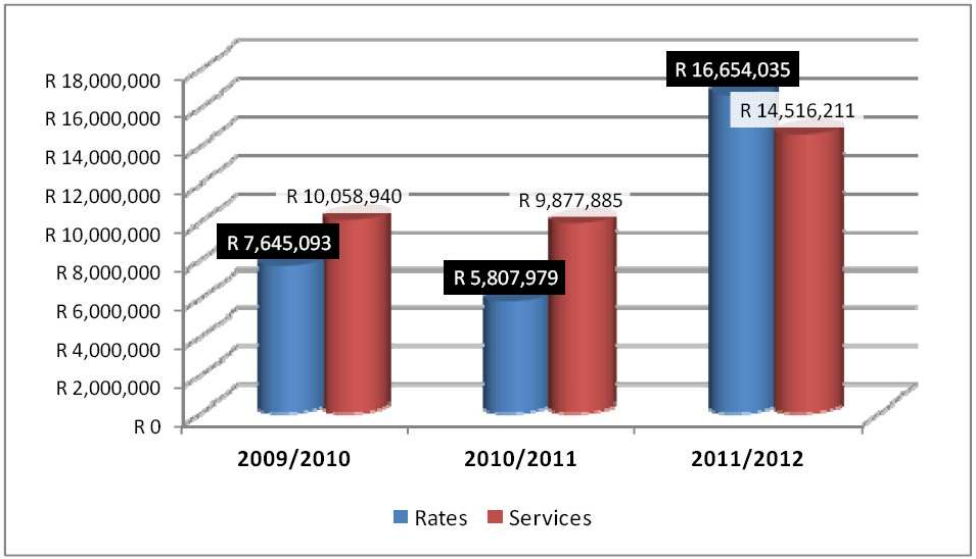
The assessment also indicates the increase in reliance on grants and subsidies to fund operating expenditure. Grants and subsidies increased by 52,64% from 2009/2010 to 2011/2012, although off a low base. Alternatively, grants and subsidies as a percentage of total operating revenue (excluding grants and subsidies), increased from 49,82% in 2009/2010 to 52,44% in 2011/2012. The latter indicates that grants and subsidies received do not exceed the operating income generated by the Municipality from its own activities, but this suggests that the reliance on grants and subsidies will probably increase further should the emerging trend continue.

The operating income (including grants and subsidies) of the Beaufort West Municipality increased by 37,42% from 2009/2010 to 2011/2012 or 11,18% on average per annum over the period. Operating expenditure increased by 21,4% over the period or 6,68% per annum on average from 2009/2010 to 2011/2012. The need for additional funding in the form of grants and subsidies is clearly illustrated and is required to cover the shortfall.

3.3.10.2 Outstanding Rates and Services

The municipality experienced a general increase in outstanding consumer debt between 2009/2010 and 2011/2012 across all service delivery and rates categories. The largest increase accrued to rates. From 2009/2010, outstanding debt related to rates decreased by 24,03% from R7,64 million to R5,8 million. The following year the growth rate however increased substantially to 186,74% or outstanding debt of R16,6 million. A decrease in outstanding services of 1,8% was also recorded from 2009/2010 to 2010/2011, with an increase from 2010/2011 to 2011/2012 of 46,96%.

Overall outstanding debt increased by 76,06% from 2009/2010 to 2011/2012. Outstanding rates increased from R7,64 million to R16,6 million over the period, an increase of 117,84%. Outstanding fees for services increased by 44,31% over the period or from R10 million to R14,51 million. The findings are presented in Graph 3.3.10.2. The per capita debt outstanding for the purposes of the analysis is based on the economically active population, which was 26 646 and 26 631 in 2001 and 2007, respectively (Beaufort West Municipality IDP 2010□2011, 2011). The outstanding debt per capita based on the 2001 Population census was R1 169.80 and based on the population in 2007, R1 170.43 per capita (as defined).



Graph 3.3.10.2 **An illustration of outstanding debt in terms of rates and services from 2009/2010 to 2011/2012** (source: MPBS, 2012)

The movement in outstanding debt is best considered from a base year. This type of analysis offers an indication of the relative movement of different items over a period of time by assuming all the items have a basis of 100, which represents a base year. Figure 9 indicates the relative movement of rates and services together with a total for the two items over the period 2009/2010 and 2011/2012.

Beaufort West Municipality 2011□2012 financial year with comparisons where applicable to the previous

(2010/2011) financial year

Total Income for the Municipality for 2011/2012: R238,7m (2010/2011 = R177,8m)
Total Operating expenditure for 2011/2012: R171m (2010/2011 = R174,4 m)
Capital Expenditure represented by MIG funding in 2011/2012: R17,9 m (2010/2011 = R5 m)

Breakdown of Operating Income

Actual Operating Income[4]	**Rates & General Services**	**Grants/subsidies**	
2011/2012	R106,4 m	R91,13 m (85,65%)	R125,2 m (117,67%)
2010/2011	R83,9 m	R75,37 m (89,83%)	R89,5 m (106,67%)

Rates and general services income represent 85,65% of Actual Operating Income (excluding grants and subsidies) in 2011/2012, which decreased slightly from 89,83% in 2010/2011. Grants and subsidies received as a percentage of Actual Operating Income grew from 106,67% in 2010/2011 to 117,67% in 2011/2012.

Equitable share:

2011/2012 R28,9 m (represents an increase of 29% over the previous year)
2010/2011 R22,4 m

Arrears in rates and services

	Total	**Rates and taxes**
2011/2012	R31,2 m	R31,1 m (99,68%)
2010/2011	R16,5 m	R15,6 m (94,55%)

Total outstanding debtors represent 29,32% (2011/2012) and 19,67% (2010/2011) of the Actual Operating Income (as defined). The gross amount owed by debtors increased by 89% from 2010/2011 to 2011/2012.

Cash flow: Cash and cash equivalents

2011/2012 R14,2 m (decrease of 5,96% from the previous year)
2010/2011 R15,1 m

Financial performance ratios

i) Cost Coverage (Actual Operating Income (as defined) / operating expenditure)

2011/2012 62,22%
2010/2011 48,11%

A figure above 100% would indicate operating income from own sources would be sufficient to cover operating expenditure, hence no need for grant and subsidy funding. The coverage of costs (operating expenditure) increased from 2010/2011 to 2011/2012.

The increase in the ratio from 2010/2011 to 2011/2012 indicates that operating expenditure increased at a slower rate than the increase in operating income.

ii) Liquidity: Net Current Assets: Net Current Liabilities

2011/2012 1,07 : 1
2010/2011 1,01 : 1

An increase in the ratio by R0,06 of current assets for each R1 of current liabilities (or 5,94% from 2010/2011 to 2011/2012) is a positive as this indicator highlights the ability of the Municipality to meet its short-term obligations. That being said, the current ratio is below the safer margin of 2:1. This trend must be monitored and corrective measures taken on a proactive basis should any further decline in the ratio occur.

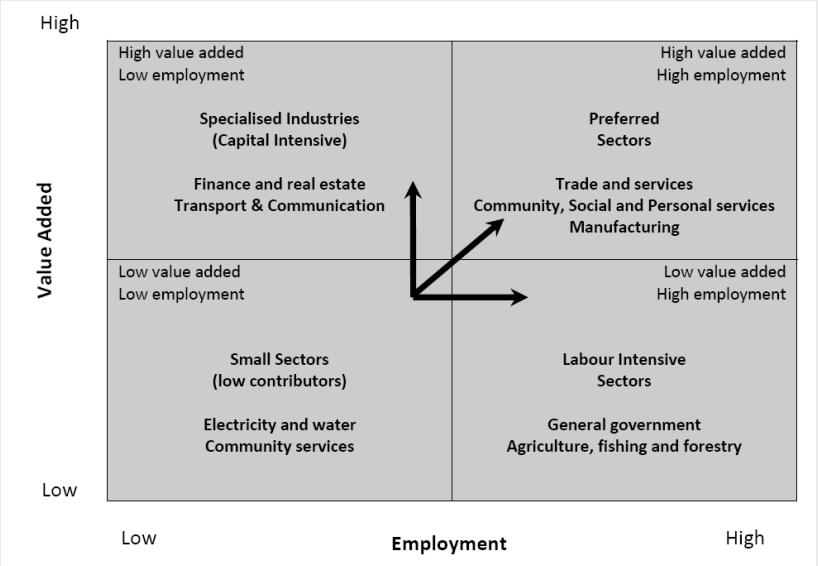
iii) Solvency: Total Liabilities to Total Assets

2011/2012	24,27%
2010/2011	26,19%

The solvency indicator offers an indication of the ability of the Municipality to meet its longer term obligations. The weaker solvency ratio is attributed to a R4 million increase in the Municipalities non-current employee benefits obligation.

Implications for Beaufort West Municipality

- A need exists to stimulate the local economy and build on the strength of core growing sectors that deliver gross value added and employment by introduce strategies that will reduce the decline in employment and migration. In this context the assessment provided in this report could be conceptualized in terms of the following qualitative assessment.
- The most important contributors to the economy of the Beaufort West area, which are also aligned with a high value added and high employment focus, are Wholesale and Retail, Community, Social and Personal Services and Agriculture (although agriculture is not considered as a high value added economic activity). Transport, Storage and Communication is a sector with high value addition, but lower employment.



Economic sector performance profile of the Beaufort West economy for value added relative to employment

- The figure above indicates the importance of Trade and Services and Community, Social and Personal Services as economic activity that provides a high value addition and employment.

Implications for Beaufort West Municipality

- There are improving levels of operating income. There is however still a dependency on grant and subsidy funding.
- An increase in operating expenditure has occurred as well as the emergence of declining (negative) trends related to non-payment of service fees which must be addressed in a proactive manner and positive payment trends should be re□enforced;
- The reliance on grants and subsidies increased to 50,38% from 2009/2010 to 2010/2011, and increased again to 52,44% from 2010/2011 to 2011/2012 while actual operating income (as defined) only increased by 26,82% over the same term;
- Staff vacancy levels are at 8,48% of total staff at the end of 2012. None of these vacancies are in key positions although several managerial positions remain unfilled;
- Minimal resources in terms of capacity and finances are available to fund growth initiatives;
- Notwithstanding, high leakage factors are prevalent in economies with narrow economic bases and therefore income leakage will erode to a certain extent the indirect and induced value added to the Beaufort West economy by the need to "import" various products and services.
- The emphasis of the Beaufort West economy on trade and other services is aligned with the need to focus on economic activities that provides high value addition and employment opportunities in the area. Together with manufacturing and construction, which could be considered as sectors to stimulate growth in the Beaufort West economy, could benefit by harnessing the potential that exists in the development of these activities. The basis provided by agriculture, forestry and fishing also alludes to a labour intensive focus, which could contribute to the alleviation of unemployment in the area.

3.3.11 HERITAGE

A desktop heritage survey was prepared for the Beaufort West Municipality by Claire Abrahamse in February 2013. A basic overview of this report is presented here.

The Beaufort West Municipality falls into the Great Karoo area – an arid semi-desert landscape that was once a prehistoric swampland. The name "Karoo" comes from the San word for "dry", indicating that water has been scarce in this region for many centuries. This arid region cannot therefore support large and intensive farming operations, nor can it sustain large urban settlements.

The municipality is therefore not strongly characterised by urbanization. Instead, the most significant aspects of this region – situated in the heart of the Great Karoo – are related to its landscape and land formations. The aridity of the area is due to its central location within the Southern African landmass, being enclosed on all sides by mountain ranges that prevent precipitation from occurring within the interior, as well as the ancient rock layers that have been exposed over millions of years to create the dramatic but rather barren landscape so characteristic of the area.

Significant features and characteristics of this landscape include:

- The magnificent natural setting, compromising mountain backdrops and desert plains,
- Karroo succulent flora and fauna, particularly seen within the nature reserves;
- Some of the world's most important, geological, archaeological and paleontological sites are located between Beaufort West and Nelspoort, and include stone-age sites, petroglyphs, rock engravings, ancient rock formations and fossils;
- Evidence of human landscape modifications and patterns of land use over millennia, including seasonal grazing and pastoral uses;
- Remnants of pioneer transport and communication networks, as well as sites of frontier conflict between the trek boers and indigenous Khoi and San;
- Significant Cape farmsteads, including Amandelhoogte and Vlieefontein;
- Towns and settlements with dwellings, civic buildings and streetscapes typical of the 19th Century, particularly Beaufort West;
- Relics, ruins and war graves related to the Anglo-Boer War;
- Social history of the area, from the early Khoi pastoralists to the trekboers, colonists and post-apartheid societies;
- Associations with important individuals in the history of the country, including Dr. Christiaan Barnard, the surgeon responsible for the first human heart transplant.

The towns and settlements of the Beaufort West Municipality have several structuring elements in common which seem to persist throughout the region:

- They are sited along water courses, where water either flows for most of the year, or flows cyclically but with groundwater supply for the rest of the year;
- They are sited along major roads and railway lines, often laid over old wagon routes into the hinterland that were established during the 1700s.
- At least two towns are "kerk dorpe" – towns established by far-flung settler communities in order to have a church centre nearer to home.

3.3.11.1 Local Area Analysis

<u>Beaufort West</u>

At this stage, only Beaufort West can be said with any degree of certainty to have a significant enough density of heritage sites to be worthy of an urban conservation area overlay. This is because it includes some of the oldest fabric in the region, has a high density of Victorian domestic buildings and much of its civic and religious architecture is of high architectural and historic significance. The suggested urban conservation area as per Figure 3.3.11.1a has been determined by consulting 1945 aerial photography of the town as well as existing maps and other heritage documentation, and identifying graded or grade-able sites within the town through engagement with local historians and research into the town's history.

The list is by no means comprehensive and the Grade III A, B or C status is only suggested and contingent upon a proper, "on-the-ground" survey of the town being undertaken.

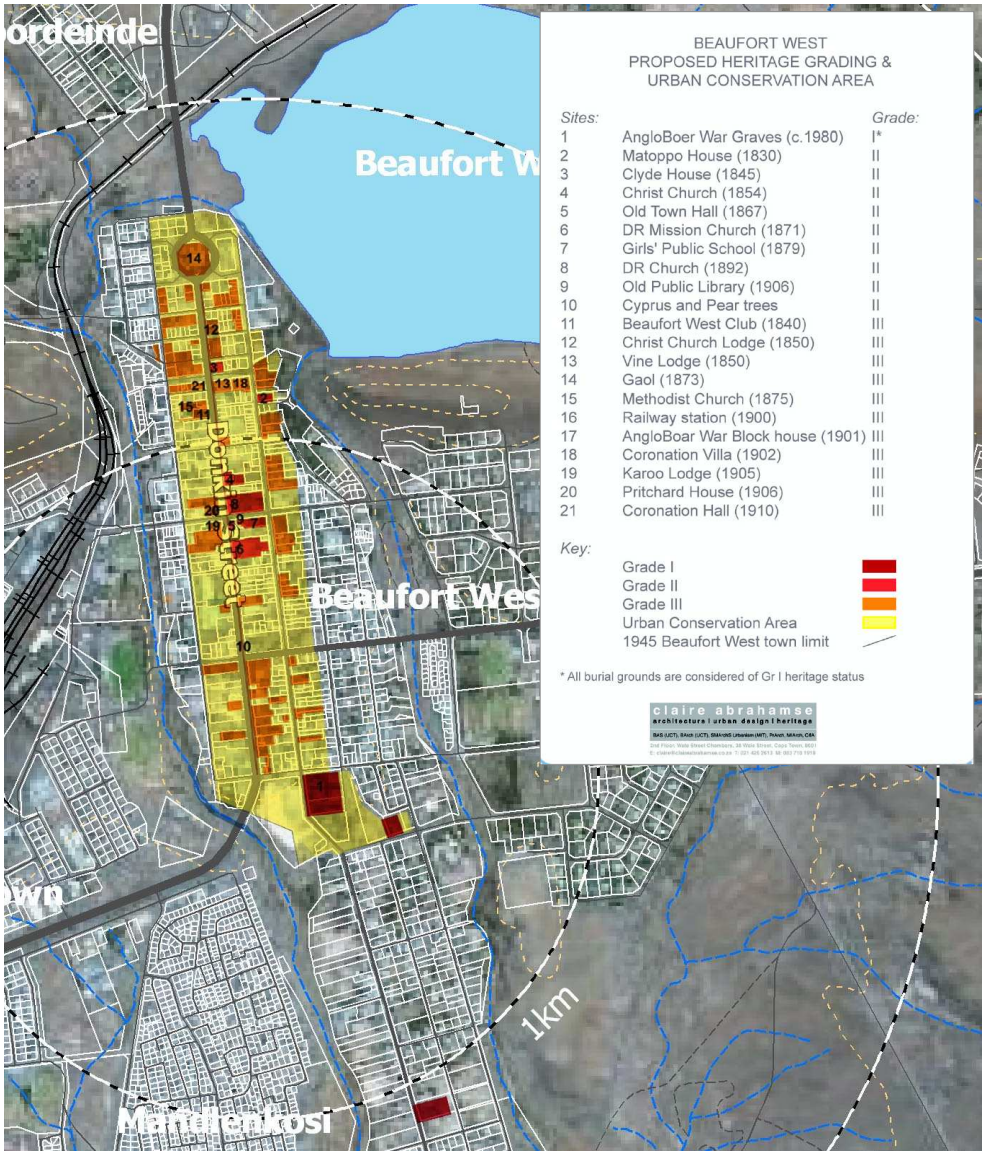


Figure 3.3.11.1a Proposed Urban Conservation Area: Beaufort West
(Source: Claire Abrahamse, 2013)

Figure 3.3.11.1b The Dutch Reformed Mission Church and Parsonage, Donkin Street, Beaufort West

Merweville

- Dutch Reformed Church (c1905) – Proclaimed National Monument/Provincial Heritage Site (PHS)
- Lieutenant Walter Oliphant Arnot War Grave – Grade I

Nelspoort

- Nelspoort Sanatorium and Homestead – Grade III (A)
- Nelspoort Rock Art Sites – Archaeological Site, possibly Grade II/PHS

Both the above sites are recommended for further investigation as possible PHS's or Grade II heritage sites. The broader cultural landscape of these sites is an exemplar of the patterns and process of human adaptation that have formed the permanently settled landscape evident today.

Murraysburg

Murraysburg is certainly a possible candidate for an urban conservation area. The buildings outlined below would all fall within any proposed heritage overlay zone, and the historic town elements like the quince hedges would certainly be considered heritage-worthy, given their contribution to the character of the town. However, there was not enough information recoverable through this desktop study to ascertain with any certainty where such a heritage area would need to be located. It is therefore recommended that a heritage area be investigated for Murraysburg on the undertaking of an "on-the-ground" heritage survey.

- Powder Magazine (c1878) – Proclaimed National Monument/PHS
- 33 Darling Street – Proclaimed National Monument/PHS
- Dutch Reformed Church (c1907) – Grade III (A/B)
- Magistrate's Office (c1905) – Grade III (A/B)
- 15 Voortrekker Street (c1860) – Grade III (A/B)
- 21 Voortrekker Street (c1890) – Grade III(C)
- 23 Voortrekker Street (c1870) – Grade III (C)
- 2 Pastorie Street (c1890) – Grade III (C)
- Former church building, corner of Leeb and Church Street (c1880) – Grade III (C)

3.3.11.2 Single Point Heritage Resources

Figure 3.3.11.2 shows some of the single point heritage resources located in the region. It should be noted that this list of single-point heritage resources does include some known archaeological sites but that this region, rich in paleontological and archaeological heritage resources, requires a full professional paleontological and archaeological desktop and site survey be undertaken before anything like a comprehensive view of the single point heritage resources in the region can be obtained.

3.3.11.3 Broad Conservation Guidelines

In terms of the recommended heritage overlay zone area within Beaufort West, the following, broad conservation guidelines should be followed in order to ensure the retention of heritage significance into the future. These guidelines are adapted from the International Charter for the Conservation of Monuments and Sites, Venice (1964), The Burra Charter (c1999) and UNESCO's 2001 *Recommendation on the Historic Urban Landscape*.

Determining Significance:

- No planning or design work on heritage resources should be undertaken before an assessment of the heritage and cultural significance of the structure/site is undertaken and agreed upon by the appropriate authorities. The local community should be given a say in the determination of the cultural significance of any site.

Protective Measures should be Proportionate to Heritage Significance:

- Differently graded sites demand different protective measures, and where authenticity of fabric is not a key element and the building has changed several times over its lifespan, this change should be seen as significant in its own right and the structure should be appropriately managed to allow for future growth and change.
- However, compatible and appropriate uses should always be sought, that would minimize the extent of alteration and adaptation required.

Authenticity of Fabric and Change:

- The original plan and distinguishing original qualities of the structures should always be identified and preserved in some way or form in the new design.
- Deteriorated architectural features should be repaired with traditional materials wherever possible, and replaced only when necessary, also using traditional materials.
- All buildings are products of their own time, and alterations that have no historical basis or wish to create an earlier appearance should be avoided.

Significance and Appropriate Skill:

- Work on historical monuments/PHSs or any building of exceptional historic value should only be undertaken by conservators/restorers/heritage practitioners who are sufficiently trained and experienced.
- Contemporary Design within an Urban Conservation Area/Heritage

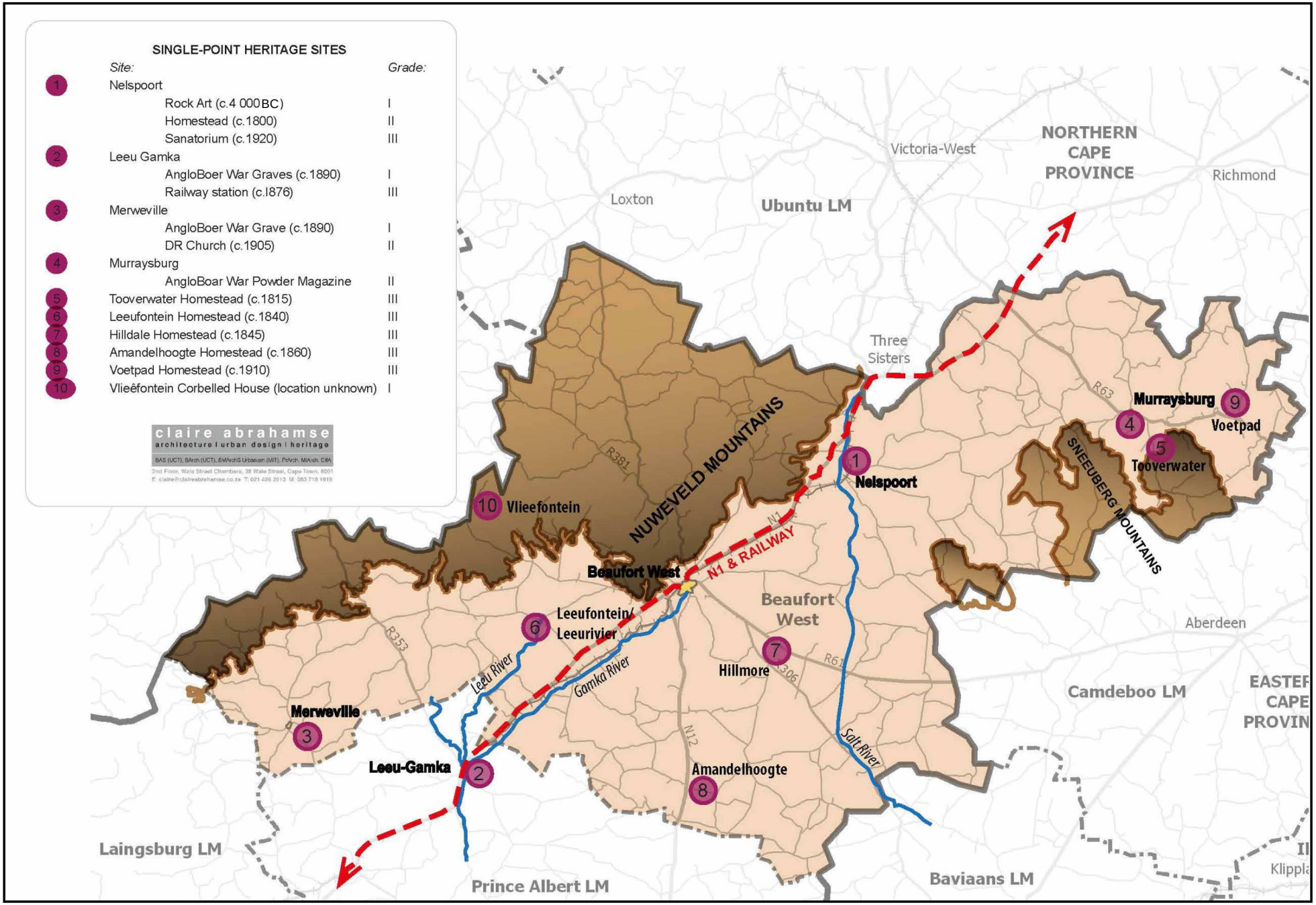


Figure 3.3.11.2 Single point heritage sites within the Beaufort West Municipality (Source: Claire Abrahamse, 2013)

Overlay Zone:

- Contemporary designs within the heritage overlay zone or within graded sites, should not be discouraged provided that they do not destroy original fabric, and are compatible with the size, scale, material and character of the property/surrounding graded properties.
- Wherever possible, new alterations to older structures should be done in such a way that, if they were to be removed in the future, the essential form and integrity of the original structure would remain unimpaired.

3.3.11.4 Detailed Conservation and Development Guidelines for Beaufort West Municipality

This report puts forward a suggested Heritage Area within Beaufort West, as well as a possible Grade II cultural landscape/site at Nelspoort, and therefore detailed heritage guidelines are included herewith in order to suggest how these areas, and others that may be identified once detailed surveys of the towns have been undertaken, might be sustainably and responsibly managed.

The spirit of the proposed Heritage Area is to encourage the maintenance of the building stock in the area, as well as the quality of the urban character that is defined by the relationship of buildings to one another and to other urban elements such as the streets, parks/squares, riverine corridors and so forth.

The following guidelines should be applied broadly when considering any proposals for construction, alteration or repair within the proposed Heritage Area. These guidelines apply to all construction within a demarcated Heritage Area, whether concerning repairs or restoration of existing buildings, demolition and replacement of existing buildings or additions and alterations to existing buildings, or new construction. t is intended that they provide the basis for decision-making on applications for permits to work on buildings within the Heritage Area and deviations from recommended courses of action will only in rare instances be considered and then only after more-than-adequate justification. Heritage Western Cape is able to provide expert advice on construction of any nature within sensitive heritage areas. It is advisable to seek such advice at the earliest possible stage within the planning process of new construction or changes to structures within a heritage area.

Alterations and Additions:

Alterations and additions to existing buildings should look to the existing materiality of the building to which they are being made for reference. Care should be taken to respect the following:

- The appearance of the building, particularly the elements that are visible from the street, should not be fundamentally changed.
- Materials used should echo those traditionally used within the existing heritage building.
- Wherever possible, an attempt should be made to remove later additions that conflict with the original pattern and appearance of buildings within the Heritage Area.
- Rooflines should not be fundamentally changed and the streetscape of the area should be retained to as far an extent as possible.
- Owners are encouraged to retain historical forms of fencing along the boundaries of their properties, but where this is not possible or practical alterative solutions may be considered, provided they are in keeping with the maintenance of the streetscape and do not obstruct the significant views towards the buildings from the street. Boundaries around properties than are residential or were originally residential should not exceed 1.8 metres in height.
- Parking areas, new garages and carports should not obstruct the views of the major facades of buildings and should be concealed from street view wherever possible

New Construction

Reference to the style, shape/form and materials used in the older buildings should inform new construction within a heritage area.

- The shape and positioning of the building on the site should echo those of the older buildings, particularly with reference to the roofline, position of the building on the property and form of the building as visible from the street. For instance, if most other buildings within the Heritage Area have gabled ends, new construction should follow suit.

- Materials used in new construction should be similar to those used on older, traditional buildings in the vicinity.
- Roofing materials should similarly echo those evident on the older buildings in the vicinity of the site.
- The streetscape of the block on which the building(s) is located should be retained and wherever possible enhanced. Building lines and setbacks from the street and side boundaries should respect and follow the patterns established in the original layout of the area in which construction is taking place. Where they are common, verandas of similar proportions to those of the original buildings in the area should be included in designs.
- While respecting the historical nature of the area within which it is located, new construction should not be historicist in approach. While following the basic guidelines outlined above, it should be clear that the new building is of the 21st Century rather than trying to blindly mimic buildings of the 19th and 20th Centuries.
- Owners are encouraged to retain historical forms of fencing along the boundaries of their properties, but where this is not possible or practical alterative solutions may be considered, provided they are in keeping with the maintenance of the streetscape and do not obstruct the significant views towards the buildings from the street. Boundaries around properties than are residential or were originally residential should not exceed 1.8 metres in height.
- In certain instances, for example where a historically significant property has been subdivided, new construction may be required to be set back far from the street edge or have a flat and contrasting roof in order to be subservient to the main, historically significant structure.

Restoration and technical work on historical buildings.

The towns of the Beaufort West Municipality have many structures that exhibit traditional construction methods. 19th and early 20th Century construction methods are often very different from thoseof the present day, and the use of contemporary construction methods and materials in conjunction with historic materials is often not advisable as it can cause damage to the older fabric. The following guidelines should be followed when working on historic structures:

- Expert advice should always be sought at the earliest time, and Heritage Western Cape would either be able to provide this advice or refer the applicant to suitable professionals in the heritage field. This need not add to costs, and where a cost is incurred for consultation with a professional in the short-term, this may save costs on future repairs and maintenance due to incorrect construction methods and materials being used.
- Historic structures have often stood for 100 years or more, and where they are well looked after they can easily stand for more than another century. Sensitive maintenance should always be favoured over re-working with modern materials and methods.
- Traditions materials should always be favoured over using newer materials. For instance, builders' lime should be used in the re-plastering of old structures, rather than cement plaster.
- Steps need to be taken to ensure proper drainage of rainwater and a barrier against damp, as water is the greatest destroyer of old buildings. Very often, newer damp-proofing methods are very destructive to historic buildings, and expert advice should be sought.
- The stripping of paint from historic woodwork, unless it was originally exposed, is severely discouraged, particularly on external woodwork. This is because woodwork used for carpentry that was intended to be painted is generally of a less durable quality than exposed timberwork, and the painting of these items is essential to their longevity.
- Similarly the plastering and painting of facebrick or stonework on historic buildings is discouraged. The use of cement is generally discouraged in making repairs to 19th and early 20th Century buildings.

Demolition

Demolition of historic structures should only be considered if convincing arguments can be made on the basis of one of the following points:

- The structure to be removed does not contribute in a positive way to the character of that part of the Heritage Area within which it is situated;
- The structure to be removed cannot be restored or repaired on an economical basis by the present owner and a buyer cannot be found who would be prepared to do so;
- The structure has outlived the purpose for which it was erected and cannot be economically converted or a suitable alterative use cannot be accommodated within it;

- The removal of the structure is necessary for purposes associated with development of municipal infrastructure and an alternative site cannot be found;
- The part of the Heritage Area in which the structure is located is already so degraded as to make its existence as an isolated entity among later structures of a different period and nature irrelevant as a factor contributing to the character of the Heritage Area.

In all instances of demolition where new construction is envisaged it must be shown that the structure that will replace the one to be removed will, from a heritage perspective, contribute positively to or even improve the general streetscape of the area within which it is located. It must also be demonstrated that the rules for new construction in heritage areas have been considered and diligently applied. In certain instances the developers may be required to provide guarantees that the proposed new construction will take place within a reasonable time period. Where no new construction is envisaged, reasons for this must be given along with a description as to how the property in question will be used, treated and maintained in the future. The impact of this proposed use on the character of the area must be taken into consideration when deciding whether to permit demolition without new construction.

Change of use, densification, subdivision, consolidation

It is understood that it is often in the interests of retention of historic building stock and the character of an area that the use of individual buildings and parcels of land should change as the area in which they are located develops and economic circumstances change.

However, in all instances the implications thereof must be assessed from the perspective of the implications for individual buildings and parcels of land and the integrity of the areas in which they are located. Applications therefore have to be made in each instance of proposed change of use/ subdivision/consolidation.

Compliance

Heritage Areas can be established in the municipality's Spatial Development Framework in terms of the National Heritage Resources Act (1999), and through co-operation with Heritage Western Cape. The intention of declaring and delineating such areas is to maintain the character of important historic areas within the municipality in order to show its past development, stimulate tourism and to maintain a quality of the environment that cannot be re-created in modern context and greatly contributes to people's experience of their town. In this regard:

Those wishing to embark on any form of construction within the Heritage Area, whether new, a repair or alteration, restoration or demolition must apply for a permit from Heritage Western Cape and thereafter have their plans passed by the Municipality.

Both authorities understand that it is not possible to retain the precise use, appearance and nature of buildings and neighbourhoods as they existed in the past, and hence try as far as possible to take a practical approach to conservation, understanding that it is in the interests of the conservation of heritage that buildings and neighbourhoods retain relevance for owners and residents. The purpose of these guidelines is to govern change and intervention, allowing for the needs of modern living while at the same time retaining the spirit of the past. Permit application forms and advice on their completion are readily available from Heritage Western Cape's website, or their public counter.

Implications for Beaufort West Municipality

- A team of heritage specialists to be commissioned to undertake detailed heritage studies of each area, including engagement with local interested and affected parties. This research should be formatted into a survey of a standard acceptable to Heritage Western Cape and submitted to Heritage Western Cape for official endorsement.
- As part of the endorsement of the surveys, the municipality and Heritage Western Cape should agree on the process of approval for any proposed alterations to the sites identified as grade-able heritage resources.
- On completion of the above survey, a second team of heritage specialists should begin work on compiling a Grade II cultural landscape nomination for the Nelspoort sites identified and any other sites identified as being worthy of Grade II nomination during the survey process. This nomination should then be submitted to HWC for endorsement.
- At the local level, each municipal office should use the local studies, endorsed by Heritage Western Cape, to control and manage changes to identified heritage structures and sites. This would allow for a level of certainty when dealing with historical sites, and may streamline some of the heritage approval processes currently required under Section 34 of the National Heritage Resources Act (1999), as certain structures would be exempt from this after the survey has been undertaken.
- The municipality should investigate the creation of zoning overlays within the town of Beaufort West, as suggested. This will afford additional protection to the historic core of the town, and ensure that new development in these areas does not degrade the historic character of the town, and is sensitive to the heritage resources in height and scale.

5.9 BEAUFORT WEST TOWN (population: ± 34 000)

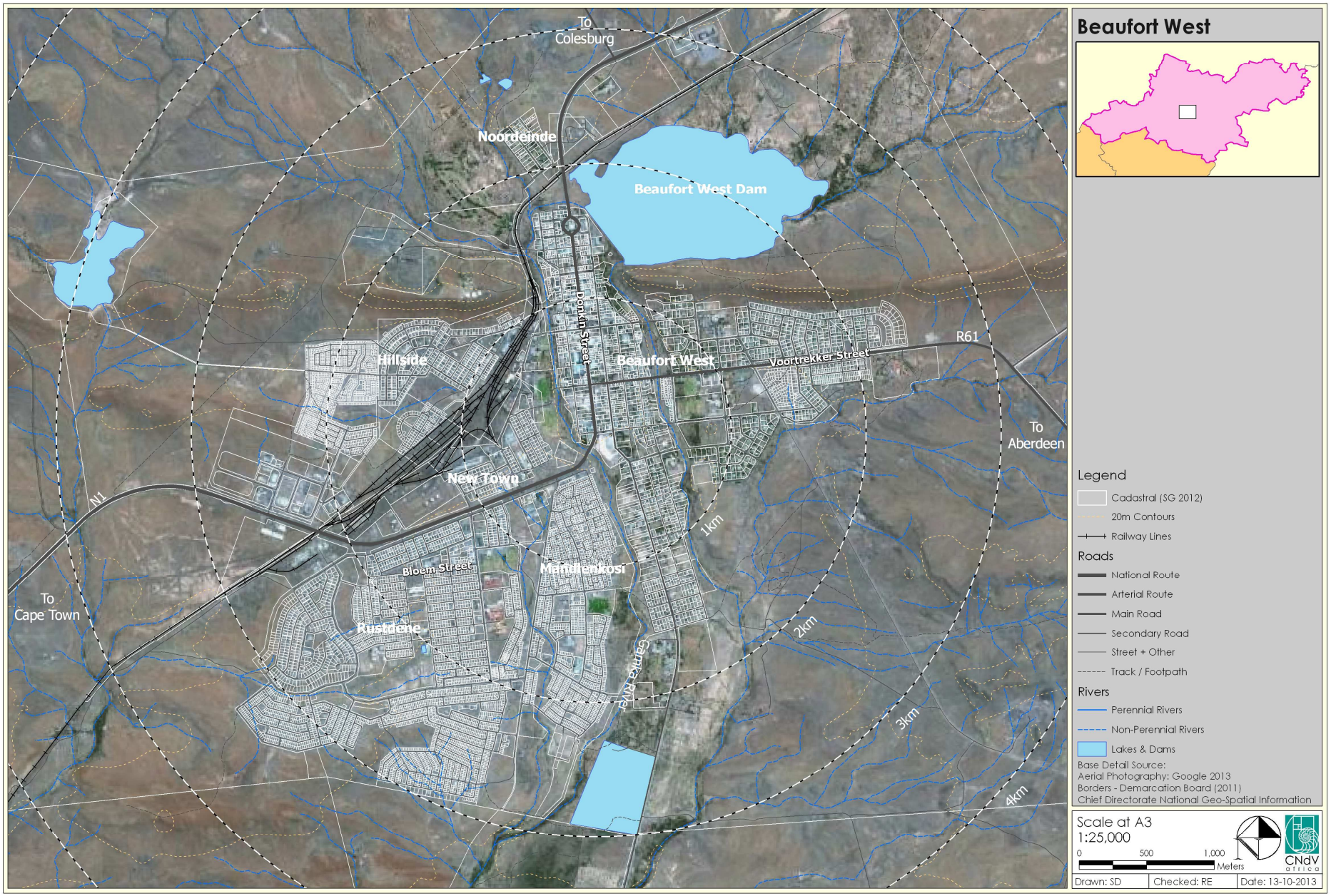


Figure 5.9.1.1 Beaufort West: Aerial photograph

5.9.1 SPATIAL ANALYSIS, see Figures 5.9.1.2

General: Beaufort West town faces severe challenges. Its water resources are stretched to the limit with the current population and ground water abstraction is one of its only solutions. Although the town has successfully implemented a number of water demand strategies would seem that domestic rainwater harvesting, grey water recycling and waterless toilet systems still require attention. Therefore, its protection of ground water resources from shale gas extraction is of paramount importance. Water resources will be brought under further pressure if; 1st supply of the current and future housing need of 6 700 units does not use alternative water supply technologies; and, 2nd, if the town does become a centre for shale gas extraction and uranium mining in the future.

Sub-regional location

- On N1 approximately midway between Cape Town (462km) and Bloemfontein (541km);
- Visible location from over 50kms away where the Nuweberg meets the Gamka River plain;
- Nuweberg forms a beacon from the R61 from Aberdeen and N12 from De Rust which appears as though historically it led straight into Beaufort West along Blyth street but then for some reason was diverted 7kms away to its current intersection on the N1; and,
- Situated next to a large pan, typical of many other Karoo and Kalahari towns, at a break in a long ridge where both the rail and road could pass through.

Layout pattern

- The original settlement comprised a Voortrekker rydorp with long streets laid perpendicularly to the contours along which water was led from the Gamka dam;
- There is a slight turn in this grid near the cemetery and shopping centre as it orientates itself parallel to slight bends in the two rivers abutting its west and east boundaries;
- The arrival of the rail way which had to approach from the west due to alignment requirements led to a loose wedge of development containing ad-hoc pockets of residential (New Town) railway shunting yards and some small industries. A railway village was established across the rail line along Kerk Street, Hillside.
- Large areas of vacant land separate the original railway town from new BNG housing extensions which link southwards to the partially developed industrial area;
- There are also large tracts of vacant land particularly on the west and south sides of the town;
- North facing land north of the long ridge around the golf course could have potential for upmarket housing;
- Some of the peripheral extensions of Rustdene are over 3kms from the centre of town;
- However, Mandlenkosi is only 250m from the centre of town at its closest point;
- The settlement's layout and dispersed pattern requires public transport and there is a proposed NMT network;
- Some of the vacant land identified for future housing is on the periphery and should be avoided;
- In order for more people to access better located land current densities will need to increase; and,
- In any event the 176 ha required for ± 6 700 units (draft HSP 2013) at ± 35 du/ha gross exceeds the land identified by the municipality (106 ha – BWM 2013?). In this SDF 229.51ha are identified.

Urban quality

- The town's southern entrance, through a partially developed industrial area, and from the north, past a very large weighbridge facility do little to enhance the sense of arrival in the town;
- There are an unexpected number of intact heritage buildings within the historic core among the increasingly dominant strip mall type shop frontages lining Donkin Street which diminish its heritage quality;
- Urban quality decreases in suburbs further from the CBD with street frontages comprising long rows of small buildings with wide side spaces and few trees, interspersed with large tracts of vacant land.
- Currently urban quality is further severely compromised by the large volumes of large freight trucks trundling through the heart of town and insufficient attention paid to the quality of new shop fronts and the intermittent nature of tree planting;
- The historic part of the town is relatively compact and has potential attraction for pedestrians, especially if the sidewalks are well maintained. There have been a number of pedestrian and cycle facilities installed; and,
- As one travels further from the historic core densities decline, houses become more isolated in the centre of their plots and tree planning and landscaping decline. Houses become smaller, there are fewer trees and public open spaces less landscaped. This is probably due not so much to neglect but as a result of the huge resources that necessary to keep such far flung areas green and well maintained.

Potential urban quality along Donkin Street

New Housing in Hillside

Supermarket in Bloem Street, Rustdene

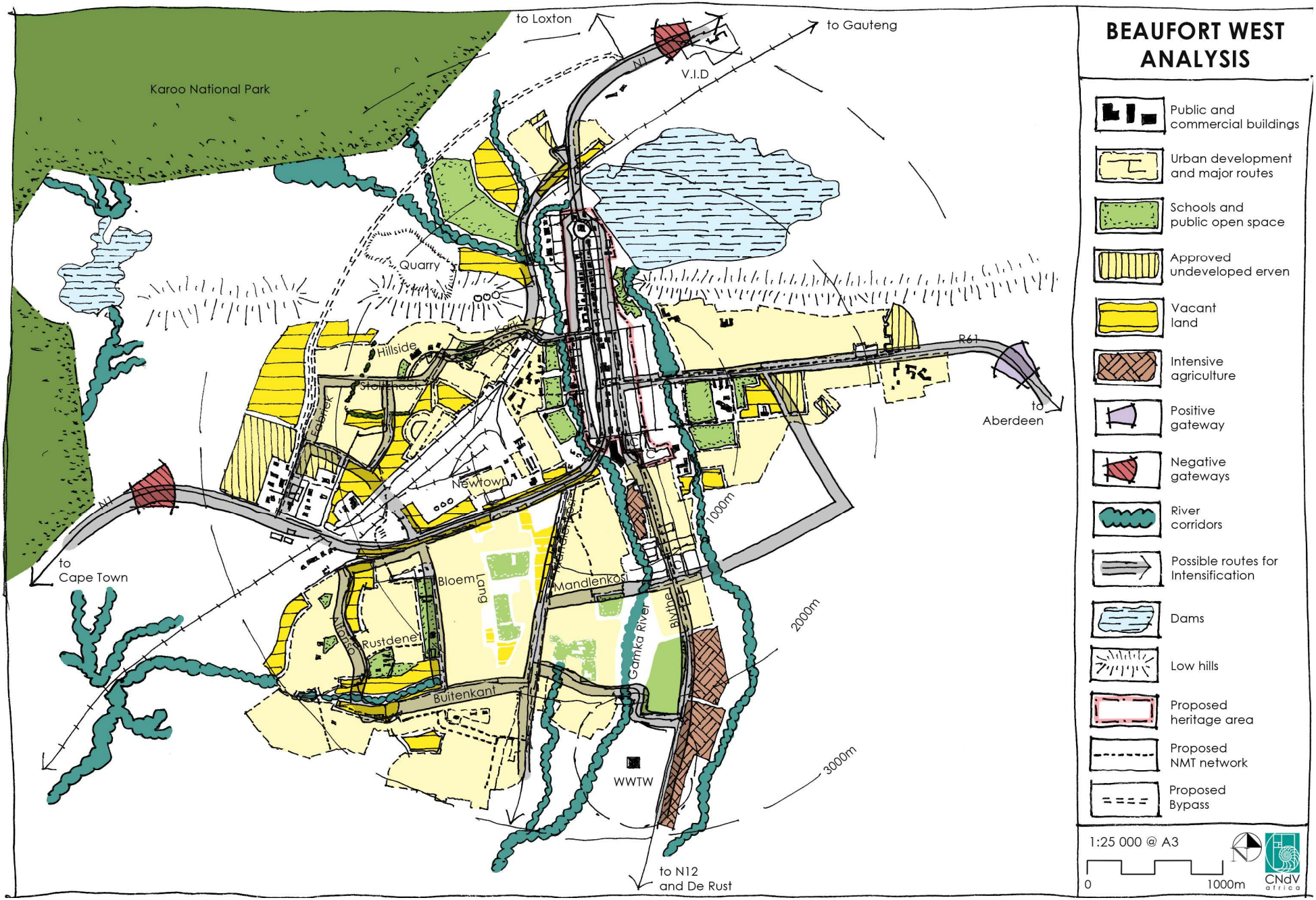


Figure 5.9.1.2 Beaufort West: Analysis

5.9.2 BEAUFORT WEST TOWN: DRAFT SPATIAL DEVELOPMENT FRAMEWORK, see Figure 5.9.2.1

General: In the normal run of events Beaufort West town is unlikely to see much growth other than from its rural hinterland which is already sparsely populated. Formal urban development will occur from housing the 6 200 households on the waiting list but they are already mostly present. However, should it become a uranium mining and shale gas extraction centre the population could increase considerably as miners and roughnecks (drill riggers) will require accommodation in the nearest large centre that offers a wide range of social and economic facilities.

5.9.2.1 Core landscape and agricultural areas

- A continuous boulevarded network of activity streets planted with water wise shade trees should integrate the town, see section 5.9.2.4 below;
- Trees are the cheapest way to make the biggest visual improvements on an urban settlement and lend themselves to EPWP programs. These can include in-situ brick paving where necessary a material also suitable for labour based construction;
- River corridors should be protected by setback lines at a standard 32 m from the banks or as determined by a fresh water ecologist must be defined in which there should be no plowing or urban development and the riparian vegetation restored;
- There is little intensive agriculture around the town and production on existing lands to the south must be encouraged and where possible fallow land brought back into production;
- The existing golf course should be retained as an important amenity to existing and future residents but water wise fairway and green management techniques should be employed; and,
- In view of the prevailing water supply issues no further green areas are proposed and existing ones should be managed according to water wise management principles.

5.9.2.2 Urban Development

- A 100 m noise buffer is strongly recommended along the eastern boundary of the proposed bypass in which only industrial activity, warehousing or tree planting and open space activities should occur. There should be no residential activities within;
- As far as possible new development areas should not extend beyond the current urban development periphery and or beyond a 2km radius from the centre of town;
- North facing land around the golf course could be suitable for upmarket residents but there are already a number of undeveloped plots here and the reasons for this should be understood;
- Large areas of infill are proposed in Hillside and Rusdene; and,
- Rather than extending westwards of the proposed N1 bypass a new development area in the eastern quadrant should be investigated bounded approximately by a 2km radius from the town centre.
- New development areas should continue the 'grid style' of the historical lay-out. Retrofitting the settlement in the long term to continue this style is recommended.

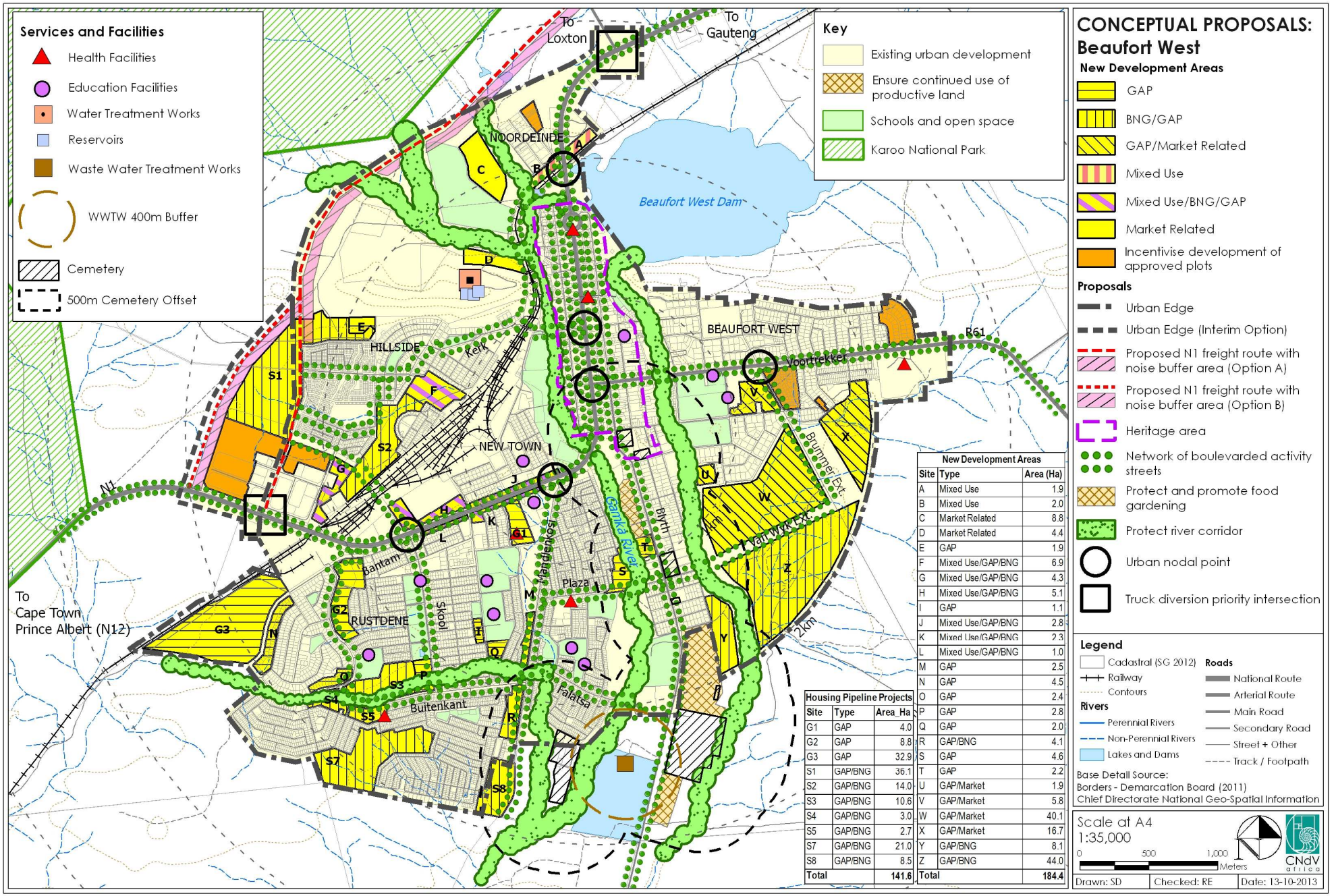
5.9.2.3 Heritage Areas

- The historic CBD should be declared a heritage area and land uses and building appearance on old and new buildings managed accordingly.

Vacant land and underused service road along southern boundary of N1 by Rustedene

Well located vacant land between industrial area and railway yard

Southern section of Donkin street requiring up grading



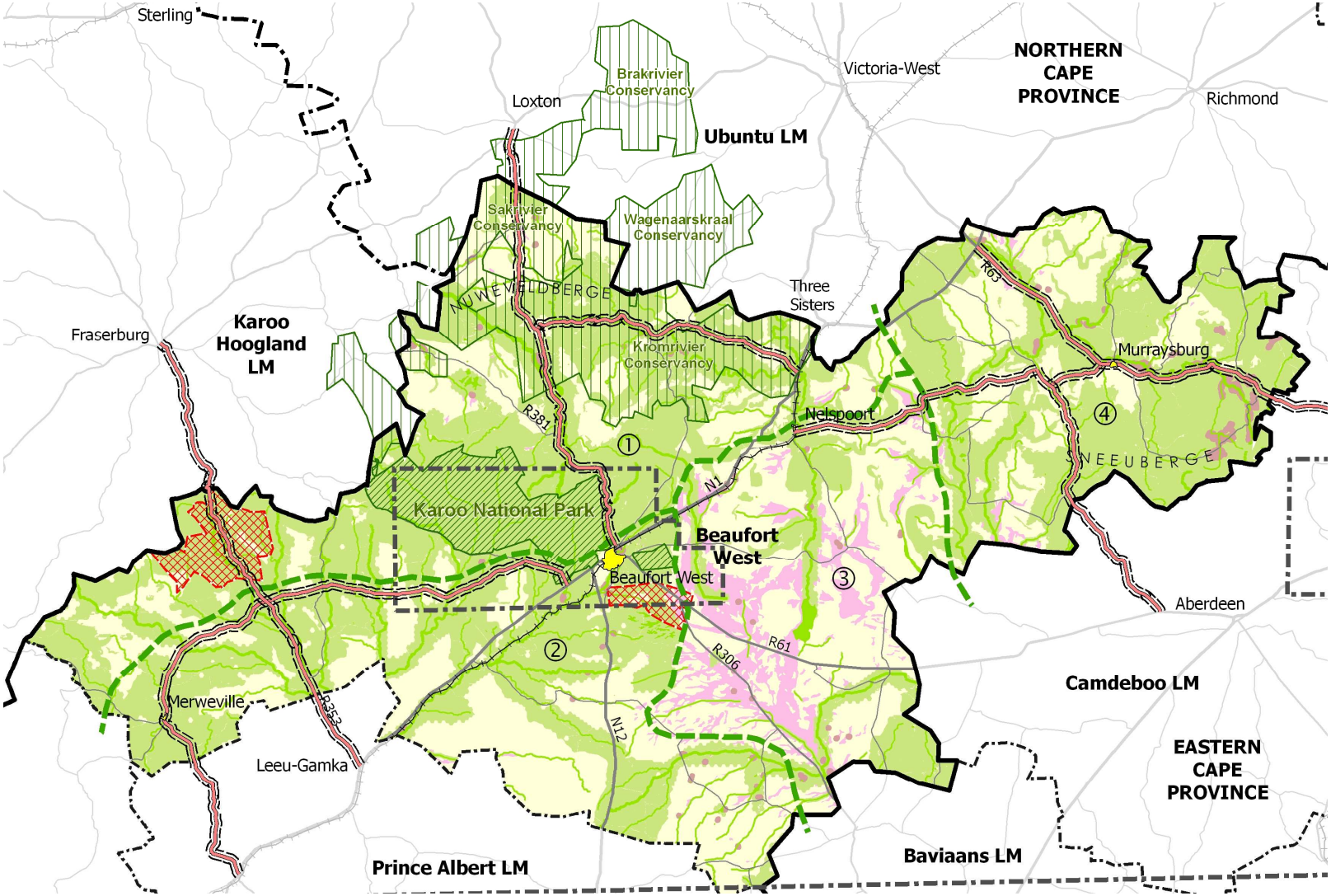
New Development Areas		
Site	Type	Area (Ha)
A	Mixed Use	1.9
B	Mixed Use	2.0
C	Market Related	8.8
D	Market Related	4.4
E	GAP	1.9
F	Mixed Use/GAP/BNG	6.9
G	Mixed Use/GAP/BNG	4.3
H	Mixed Use/GAP/BNG	5.1
I	GAP	1.1
J	Mixed Use/GAP/BNG	2.8
K	Mixed Use/GAP/BNG	2.3
L	Mixed Use/GAP/BNG	1.0
M	GAP	2.5
N	GAP	4.5
O	GAP	2.4
P	GAP	2.8
Q	GAP	2.0
R	GAP/BNG	4.1
S	GAP	4.6
T	GAP	2.2
U	GAP/Market	1.9
V	GAP/Market	5.8
W	GAP/Market	40.1
X	GAP/Market	16.7
Y	GAP/BNG	8.1
Z	GAP/BNG	44.0
Total		184.4

Housing Pipeline Projects		
Site	Type	Area_Ha
G1	GAP	4.0
G2	GAP	8.8
G3	GAP	32.9
S1	GAP/BNG	36.1
S2	GAP/BNG	14.0
S3	GAP/BNG	10.6
S4	GAP/BNG	3.0
S5	GAP/BNG	2.7
S7	GAP/BNG	21.0
S8	GAP/BNG	8.5
Total		141.6

Figure 5.9.2.1 Beaufort West: Spatial Development Framework

5.9.2.4 Urban Restructuring

- Rerouting the N1 around the town for road freight traffic only is seen as the most important action to enable development of other sustainable sectors in the town including retail, tourism and accommodation;
- Freight route Option A is intended to act as the Urban Edge for the town limiting development to the west of it. If the Department of Human Settlements considers the implementation of area S1, it is proposed that freight route Option B be implemented and no further development be permitted to the west of it;
- It is important that as far as possible only freight traffic use this route. Careful signposting of the two intersections as well as significantly upgrading the landscape and urban quality of Donkin Street between the two proposed access points in contrast to the freight bypass route, which should remain "unlandscaped", will help facilitate this priority;
- If the freight route goes ahead, the current N1 route in the town itself should be significantly redesigned to accommodate similar retail development that is occurring within the historical core of Beautiful West, abutting it on each side, between each end of the N1 which crosses the railway line. A slightly higher density, mixed use (including residential) component could be accommodated ensuring that heritage streetscapes are preserved and enhanced;
- All gateways into town should be enhanced to improve its sense of arrival;
- The currently separate sectors of the town should be integrated through a continuous network of activity streets that reinforce the NMT network and link suburbs across buffer strips and vacant ground as well as the large new development area proposed in the south eastern quadrant.
- This network should comprise the following routes:
  - **Hillside**: service road next to proposed N1 bypass along Faktor, Street; Ondermeyer Ext across rail yard to intersect with Oppeld Street (Rustdene) on Donkin Street (former N1 now bypassed), design continuity of Stolzhoek/7th Ave/Plein/Kerk/ link to Donkin Street;
  - **Rustdene**: Alfonso; Bantom; Skool; linking to N1 opposite proposed Ondermeyer Ext N1 intersection; Buitenkant linking to Mandlenkosi Street;
  - **Mandlenkosi**: Plaza Street to link across Gamka river to van Wyk Street (currently informal link to Du Toit Street); Falatsa Street to link across river to Blyth Street (existing);
  - **South west quadrant**: van Wyk Street Ext to intersect with Brummer Street; and,
  - **Town north**: extend golf course access road to Kerk Street.



BEAUFORT WEST MUNICIPAL SPATIAL DEVELOPMENT FRAMEWORK

SPATIAL DEVELOPMENT FRAMEWORK REPORT

30 October 2013

Western Cape Government
Environmental Affairs and Development Planning

CNdV africa

BEAUFORT WEST MUNICIPALITY

SPATIAL DEVELOPMENT FRAMEWORK

prepared for

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30 October 2013

5.10 MERWEVILLE (population: ± 1 500)

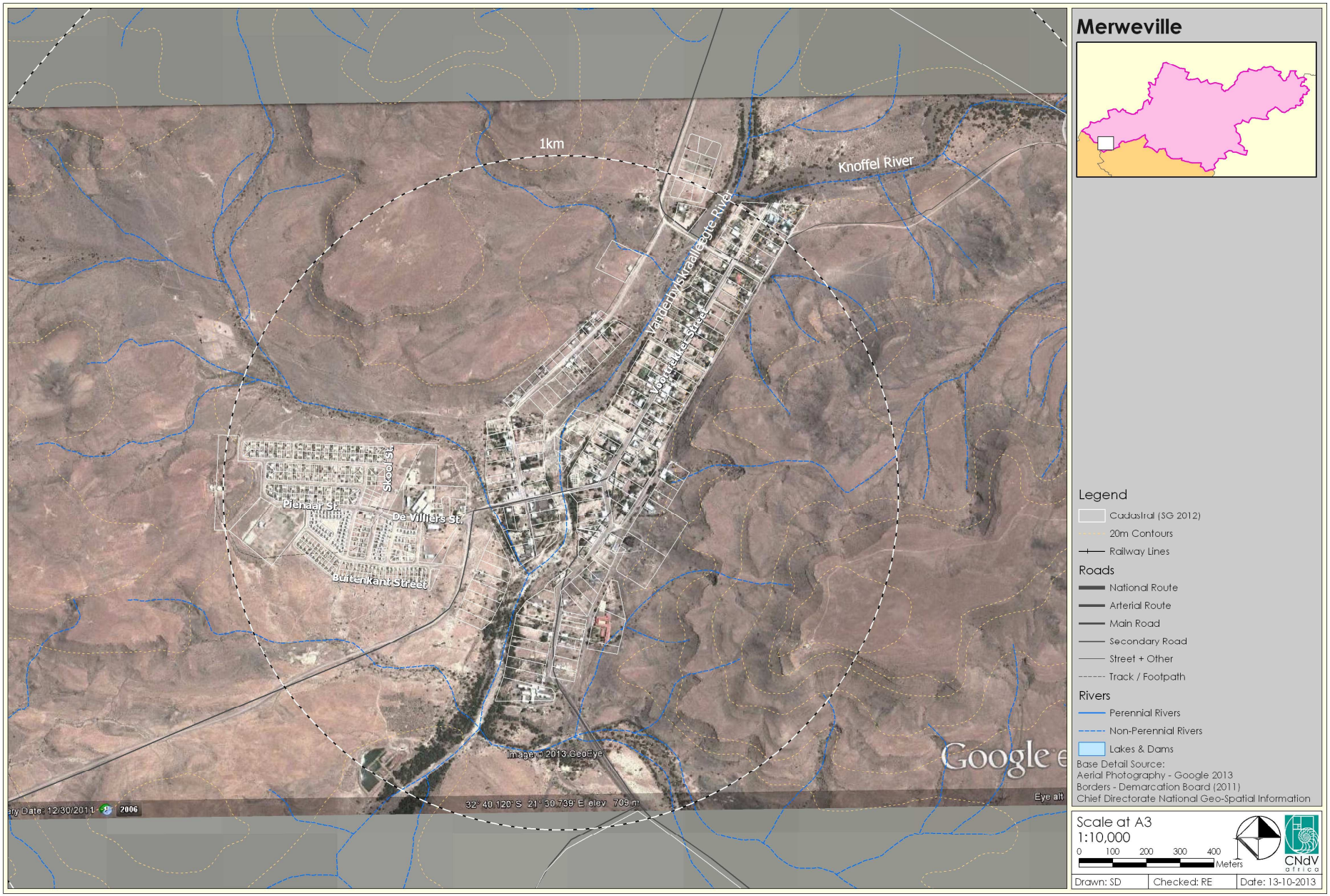

Figure 5.10.1.1 Merweville: Aerial photograph

5.10.1 SPATIAL ANALYSIS, see Figures 5.10.1.2

Sub-regional location

- Situated 46kms north of the N1 (Prince Albert Road) on a tar/gravel road in an arid sub-region known as the Koup;
- "Koup" refers to the fat and blood pattern around a sheep's liver which the vegetation resembles in winter;
- Prince Albert road is another 116kms from Beaufort west so Merweville is isolated from its nearest large town;
- Originally developed as a local agriculture (livestock grazing) service and religious centre as Beaufort West was too far to provide adequate services;
- Merweville continues to fulfill this role although the economic base of the sub-region has declined; and,
- Probably one of the most isolated locations of a small village of this size in the Cape. Most others are on at least a completely tarred regional road.

Layout pattern

- The majority of the old town is laid out along the southern bank of the Vanderbylskraalleegte River below its confluence with the Knoffel River;
- It comprised roughly six large blocks whose long streets are parallel to the river and along which water is led;
- There were also some blocks laid out along the northern bank but these are much less developed and there are a large number of approved but undeveloped erven here;
- The large plots in these blocks accommodated market gardening which still occurs, particularly on the lower plots nearest the river; and,
- West of the town, resulting from the Group Areas Act, are some newer extensions containing most of the settlement's poorer residents; The plots here are too small and not designed to be irrigated for food gardening.

Urban quality

- The main part of the settlement comprises old Victorian and Edwardian bungalows and cottages overlooked by a large grey/black stone church. Many of these properties are in original condition and some have been well maintained;
- There are few street trees although there are mature stands of trees on some of the older properties;
- The new extensions have few trees, although residential streets are tarred. Buildings comprise mainly larger subsidy houses from the 1960s and 1970s and more recent smaller BNG houses; and,
- Paved footpaths have been constructed between the newer and older parts of town.

Challenges and potential

- Some challenges are due to the long term decline in the hinterland's major local natural resources, namely extensive agriculture and its carrying capacity, and will be difficult to turn around. However there does seem to be some demand for agriculture from residents, e.g. requests for more space for pig farming;
- Development of the proposed uranium mine along the R353 to Fraserburg is likely to be too far away to benefit the village;
- The town's challenges could also be its potential. For instance, its remote location along gravel roads makes it expensive to travel to but also creates a strong sense of "getting away". This could be extended to the potential to create a self-sufficient settlement for both rich and poor; and,
- Its desert like landscape is apparently similar to that of Nevada and Arizona and it has been used as a film shoot location.

Restored Victorian residence with stoep overlooking paved pedestrian foot path

Trees and shop along DS de Villiers Street east

Market/food gardening on plots near river

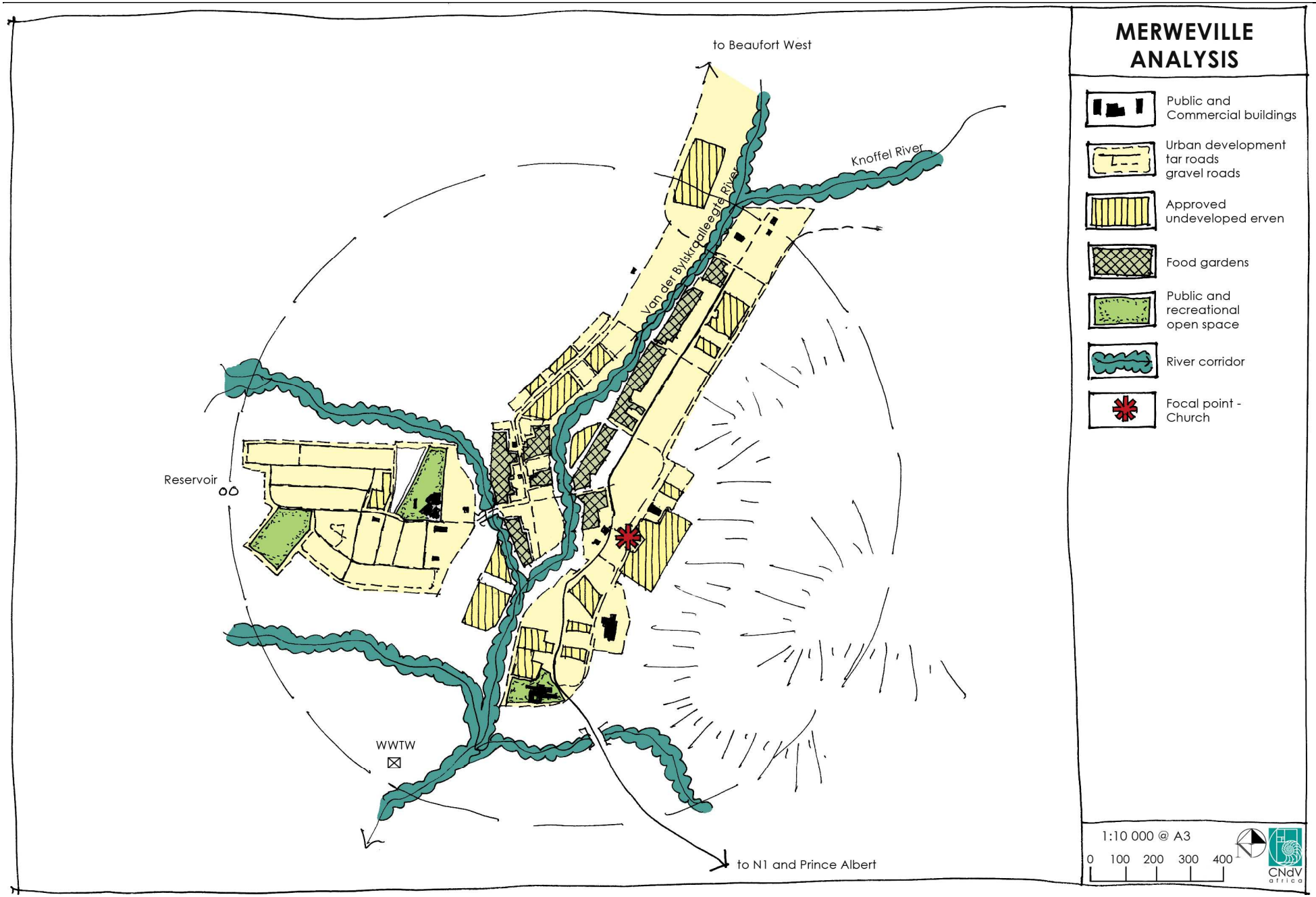

Figure 5.10.1.2 Merweville: Analysis

5.10.2 MERWEVILLE: DRAFT SPATIAL DEVELOPMENT FRAMEWORK, see Figure 5.10.2.1

General

Merweville probably epitomizes the challenge faced by an isolated small settlement with a declining natural resource base as to what its development future should be. Its low economic growth potential and social needs relative to places like Beaufort West means that it is likely to have far more chance of success if it can develop on its local attributes; e.g. it is likely to be difficult motivating completing tarring the road to Prince Albert Road given other higher priority road tarring project elsewhere in the province. Therefore, attributes to be built on include some land for grazing and food gardening, isolation and wilderness environments and historic very small town atmosphere.

5.10.2.1 Core landscape areas

- Proclaim river corridors, where possible at least 32 m from banks in which no intensive agriculture nor urban development is permitted;
- Support and encourage continued use of current market gardening plots;
- Investigate use of open land or undeveloped areas closest to river corridors for market gardening and livestock farming, (e.g. pigs); and,
- Plant trees along Pienaar and DS de Villers Streets to create an integrating main street network between all parts of the town, including paving the eastern extremity of these networks.

5.10.2.2 Urban Development

- Incentivise development of existing undeveloped plots furthest from the rivers. Those close to the rivers should be considered for market gardening or stock farming; and,
- Land for further BNG housing should consolidate existing settlement (portions (A), (B) and (C).

5.10.2.3 Heritage Conservation and Frontage Urban Design Control Areas

- One of Merweville's strongest and few selling points is the historic and original state of many of the buildings;
- The eastern side of the settlement should be declared a heritage precinct with guidelines to which renovations to existing and extensions and new buildings should comply so as to strengthen and not erode this important asset; and,
- Note: there is a comprehensive history of Merweville produced by the Cape Town Heritage Trust which provides a useful resource.

5.10.2.4 Urban Restructuring

- All gateways into town should be enhanced;
- Symbolically integrate the settlement by ensuring a uniform tree planting and road pavement treatment on the main route network linking all the urban areas comprising Pienaar, DS de Villiers west and DS de Villiers east streets; and,
- Land for any new urban development, for instance, BNG housing should be located on the land parcels identified that will consolidate rather than disperse the settlement.

Well located serviced undeveloped land corner of Pienaar and Skool Street

Upgraded sidewalk along DS de Villiers required tree planting

Heritage and tourism resources: water furrow, original Victorian/Edwardian style house, stone church

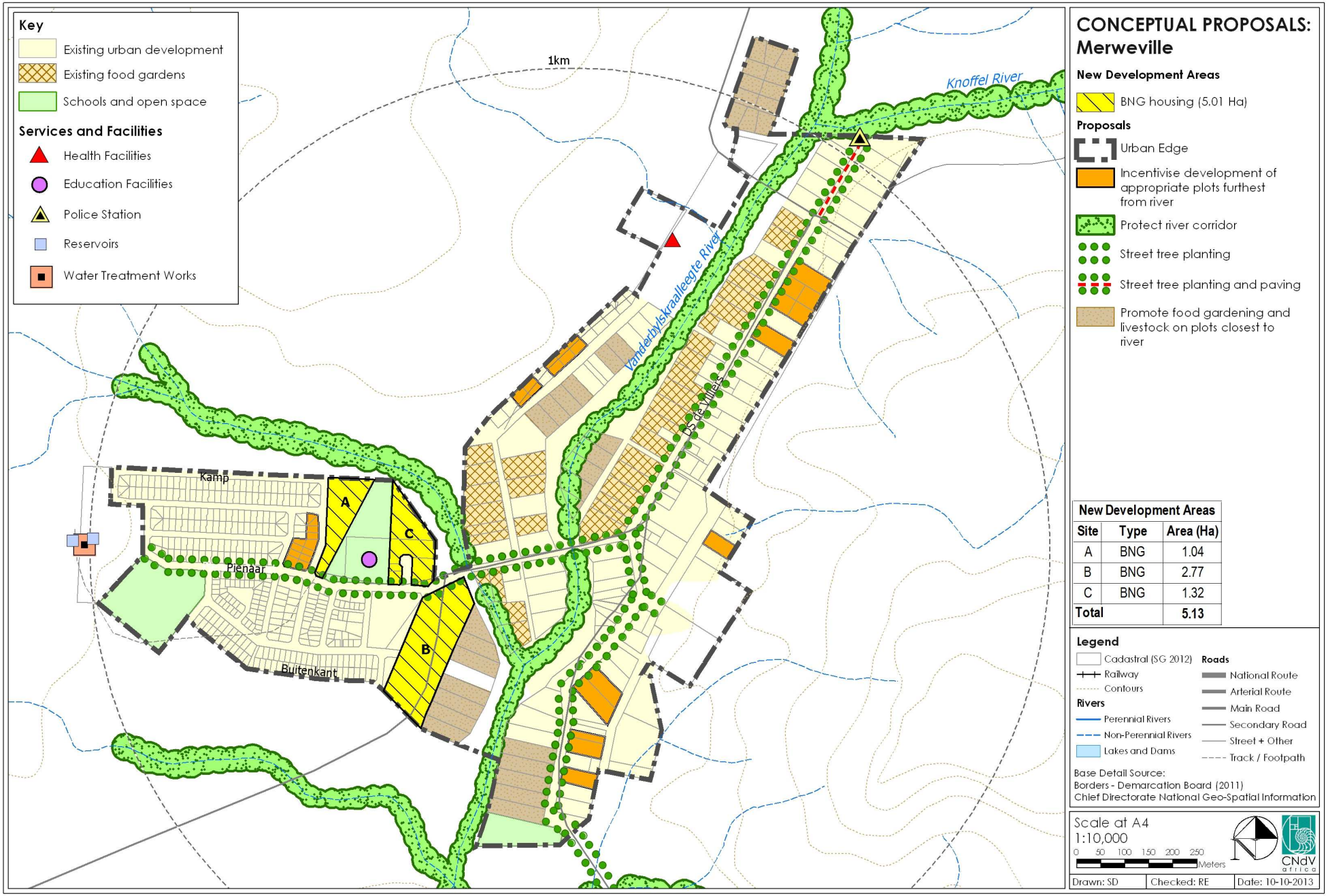

Figure 5.10.2.1 Merweville: Spatial Development Framework

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LIST OF FIGURES

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LIST OF GRAPHS

LIST AND EXPLANATION OF ACRONYMS

B&Bs	Bed and Breakfast establishments
BEE	Black Economic Empowerment
BNG	Breaking New Ground
CAPE	Cape Action for the People and the Environment
CARA	Conservation of Agricultural Resources Act
CBAs	Critical Biodiversity Areas
CBD	Central Business District
CPITR	Consumer Price Index for Total Rural Population
CRDP	Comprehensive Rural Development Programme
DEA&DP	Department of Environmental Affairs and Development Planning
DFA	Development Facilitation Act
DME	Department of Minerals and Energy
DRDLR	Department of Rural Development and Land Reform
DTI	Department of Trade and Industry
DWAF	Department of Water Affairs and Forestry
EMF	Environmental Management Framework
EPWP	Extended Public Works Program
GAP housing	The term that describes the shortfall, or 'gap' in the market between residential units supplied by the state and houses delivered by the private sector
GDP	Gross Domestic Product
GHG	Green House Gasses
GLA	Gross Leasable Area
GRP	Gross Regional Product, i.e. for district or local Municipality
GVA	Gross Value Added
Ha	Hectare
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HSP	Human Settlement Plan
I&APs	Interested and Affected Parties
IDP	Integrated Development Plan
IEMP	Integrated Environmental Management Plan
IRPTN	Integrated Rapid Public Transport Network
IRT	Integrated Rapid Transport
IRTN	Integrated Rural Transport Network
IT	Information and Technology
LEAP	Living Edge of Africa Project
LED	Local Economic Development
LUMS	Land Use Management Schemes
LUPO	Land Use Planning Ordinance (Ordinance 15 of 1985)
MEDS	Micro-Economic Development Strategy
MIG	Municipal Infrastructure Grant
MPCCs	Multi Purpose Community Centres, also currently known as Thusong Service Centres
MSA	Municipal Systems Act, 2000 (MSA: Act 32 of 2000)
MTAS	Municipal Turn Around Strategy
MTB	Mountain Bike routes / trails
NBSAP	National Biodiversity Strategy and Action Plan
NDAs	New Development Areas
NDPG	Neighbourhood Development Partnership Grant
NGOs	Non Governmental Organisations
NMT	Non-Motorised Transport
NPC	National Planning Commission
NPDG	Neighbourhood Development Program Grant
NSDP	National Spatial Development Perspective
OECD	Organisation for Economic Cooperation and Development
PGDS	Provincial Growth and Development Strategy
PHC	Primary Health Care
PLAS	Proactive Land Acquisition Strategy
PLTF	Provincial Land Transport Framework
PTP	Public Transport Plan
RIDS	Regional Industrial Development Strategy
SANBI	South African National Biodiversity Institute

3.4 URBAN SETTLEMENTS AND HIERARCHY

3.4.1 Hierarchy and Role of the Settlements

The Beaufort West Local Municipality is situated within the Central Karoo District Municipality. This local municipality is also the largest municipality within the district and home to the main administrative town in the district, Beaufort West. The Beaufort West Municipality was established in1837 and is consequently the oldest municipality in South Africa.

The main urban areas within the Beaufort West Municipality are:

- Beaufort West
  The town is the main/regional administrative centre for the district and local municipality. The town is centrally located within the Beaufort West Municipality along the N1 national road.
- Merweville
  The town used to be an agricultural service centre situated in the west of the municipality providing basic services to the surrounding rural and agricultural areas. This role has however significantly reduced resulting in the town being mostly a rural residential settlement with limited agricultural activities.
- Murraysburg
  The historical town of Murraysburg is situated in the east of the municipality and used to function as an agricultural service centre. This role has drastically decreased with the town currently only offering very limited activities and opportunities. The town has stronger functional linkages to Victoria West (some 90km north of it) and Graaff Reinet (some 90km east of it) than to any settlements in the municipality itself as it is located some 150km from Beaufort West.
- Nelspoort
  The town is situated along a loop road off the N1 national road north of Beaufort West. The town has very limited facilities and mainly functions as a rural residential settlement. A hospital, for the treatment of tuberculosis and later also psychiatric patients, was established here and was one of the main economic drivers in the town. Today the hospital is still in operation but with very low occupancy. At present there are limited agricultural activities on the outskirts of the town offering some economic opportunities.

The national and arterial movement routes through the municipality are:

- N1 national road – running diagonally through the municipality and the town of Beaufort West. This route is the main movement route between Cape Town and Johannesburg.
- N12 arterial – running in a southerly direction from Beaufort West to Oudtshoorn.

A number of main roads link with the N1 national road and facilitate movement to rural areas in the Beaufort West Municipality and nearby towns in adjacent municipalities. These main roads are as follows:

- R353 – cuts across the western corner of the municipality and the link between Leeu-Gamka and Fraserburg.
- R381 – between Beaufort West and Loxton in the north.
- R61 – between Beaufort West and Aberdeen in the east.
- R306 – between Beaufort West and Rietbron in the south east.
- R63 – link between the N1 and Murraysburg which further extends to Graaff-Reinet in the east.

The railway line between Cape Town and Johannesburg diagonally traverse the municipality and is used for the transportation of freight and passengers. Popular commuter services along this route are offered by the Shosholoza Meyl and Blue Train. Within the Beaufort West Municipality a number of railroad stations are located along this line (Luttig, Letjiesbos, Renosterkop).

The following sections provide a more detailed description of the main settlements in the municipality.

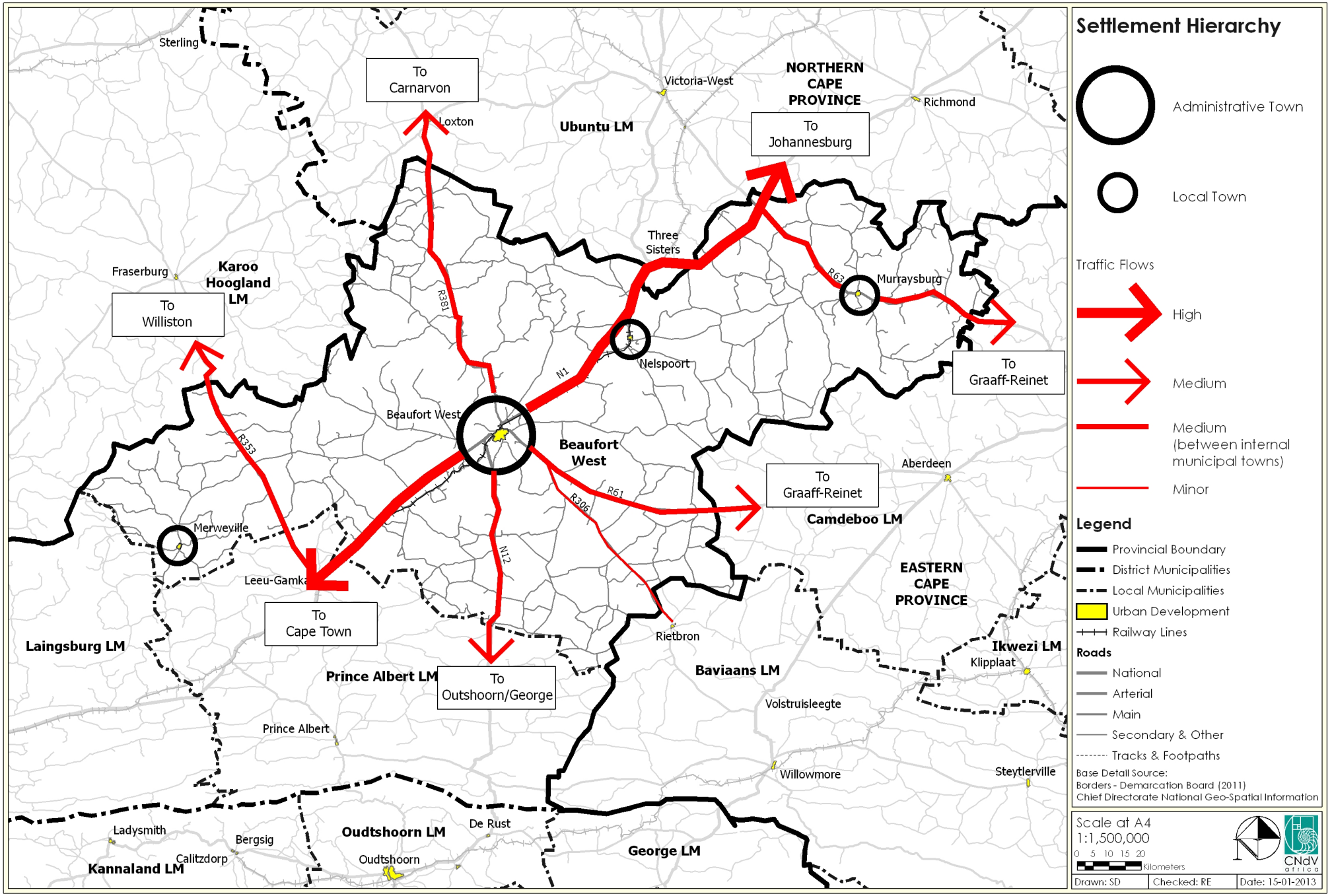


Figure 3.4.1 Hierarchy of Settlement, Linkages and investment priority

3.4.1.1 Beaufort West (± 34,069 people) *Census 2011*

- The town Beaufort West was founded in 1818 on the farm Hooyvlakte. This was seen as an ideal location due to the availability of water and it being close to the Nieweveld Mountains.
- The town was initially called Beaufort, so called by Lord Charles Somerset in honour of his father, the fifth duke of Beaufort. The name of the town was changed to Beaufort West in 1861 to eliminate confusion with Fort Beaufort and Port Beaufort
- The first town hall in South Africa, constructed in 1864, still stands here today.
- Many examples of old Karoo architecture are still found in the town today.
- Professor Chris Barnard who performed the world's first heart transplant was born here. He was the son of Reverend Adam Barnard who preached in the little church next to the town hall. The Barnard family lived in the house adjacent to the town hall. Both these buildings form part of the Beaufort West Museum.
- One of the main economic drivers for the town today is its location on the N1 national route between Cape Town and Johannesburg. Large amounts of trucks and motor cars travel through the town, along Donkin Road, on this route. A number of shops, restaurants and accommodation types have established in Beaufort West to serve the passing commuters.
- The town offers many business and shopping opportunities which include two shopping centres, one located in the south of the town and another in the centre of town. Beaufort West is also home to the Central Karoo District Municipal offices.
- Facilities offered here include: Primary and high schools, sports facilities, museums, a library, a hospital and a 9 hole golf course.
- The town serves as service centre for the surrounding sheep and Angora goat farming areas (famous for its mutton).
- Spatially two rivers, the Gamka River and Kuils River, and the railway line segregate the town.
- The historical town is located between the two rivers along Donkin Street. The higher income residential areas are situated to the east of the Gamka River, south of the Springfontein Dam. The lower income communities (Hillside, New Town, Rustdene and Mandlenkosi) are situated west of the Gamka River. Hillside is further segregated from the rest of Beaufort West by the railway line.
- 5km west of the town lies the Karoo National Park, an important tourist attraction, with economic benefits for Beaufort West.
- The town is a regional service centre with medium growth potential (stable settlement), a low economic base and with high social needs (University of Stellenbosch and CSIR, September 2010).

a. Beautifully restored buildings along Donkin Street in the centre of Beaufort West

d. Commercial uses along Bloem Street

b. View along Donkin Street indicating commercial uses

e. Pedestrian railway crossing

c. The Beaufort West Mall in the south of the CBD (Donkin Street and Danie Theron Street)

f. Cycle and pedestrian lanes along Mandlenkosi Street, Mandlenkosi

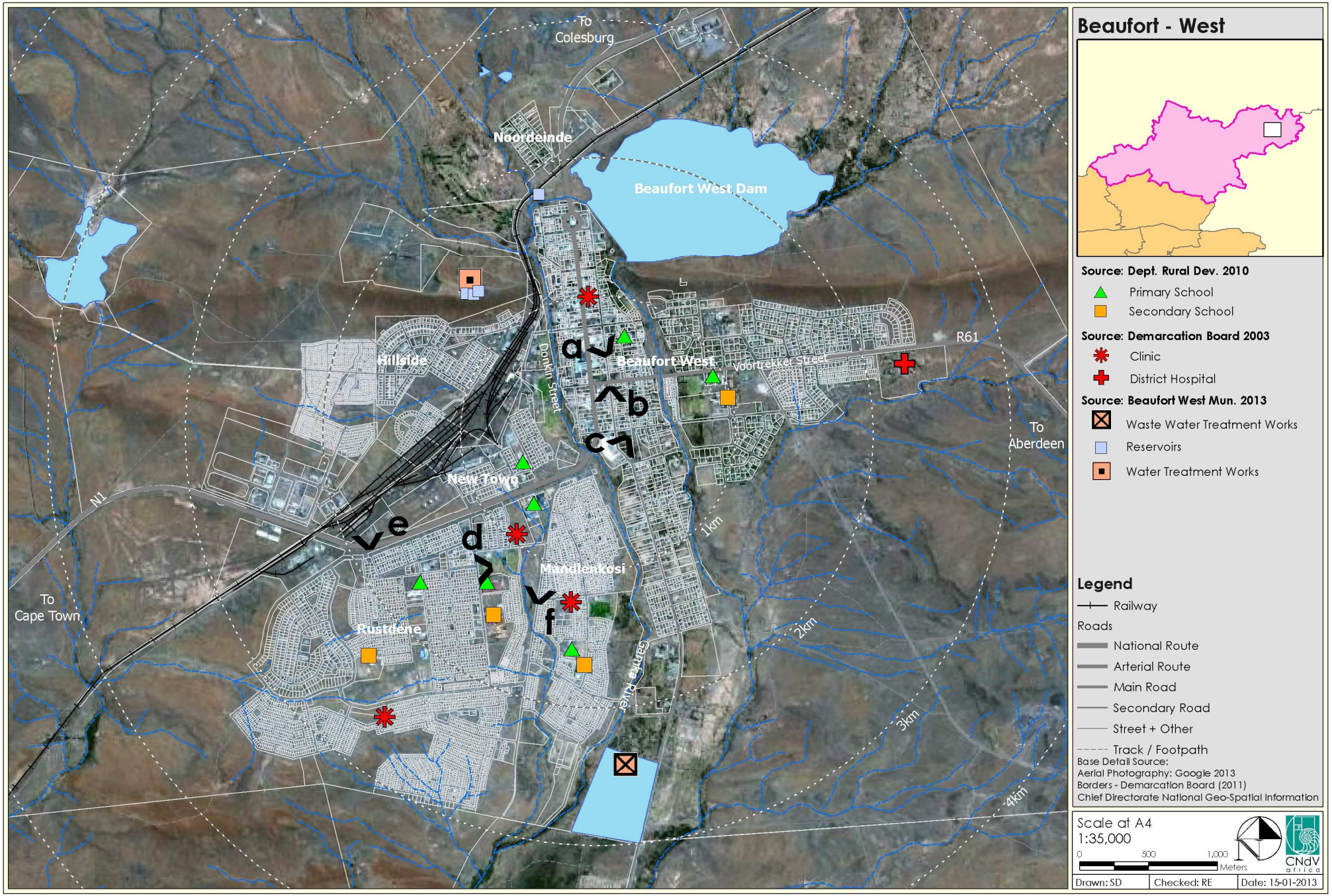


Figure 3.4.1.1 **Aerial Photograph: Beaufort West, with letters indicating where the photographs on the previous page were taken**

3.4.1.2 Merweville (± 1,592 people) *Census 2011*

- The small town of Merweville was established in 1904 on the farm Vanderbylskraal and was named after Reverend Van Der Merwe, the then minister of the Dutch Reformed Church in Beaufort West.
- The town served as service centre for the surrounding agricultural areas. This role has significantly dwindled and the town is left with very limited economic opportunities.
- Facilities offered in the town include: Primary schools, a clinic and a general dealer.
- The original town is characterised by some beautifully restored buildings, some of which have been turned into guest accommodation.
- The town is segregated by the Vanderbylskraalleegte River. The low income area lies to the west of the river and the main town to the east.
- The town has a low development potential (coping settlement) with very high social needs (University of Stellenbosch and CSIR, September 2010).

a. A restored house in the centre of town

d. Stone structures along Loop Street

b. Large residential properties in the east of Merweville utilising windmills and small retention dams

e. The Merweville NG Kerk

c. The Vanderbyls Kraalleegte River crossing (one of only two links across the river)

f. The low income area viewed down Loop Street

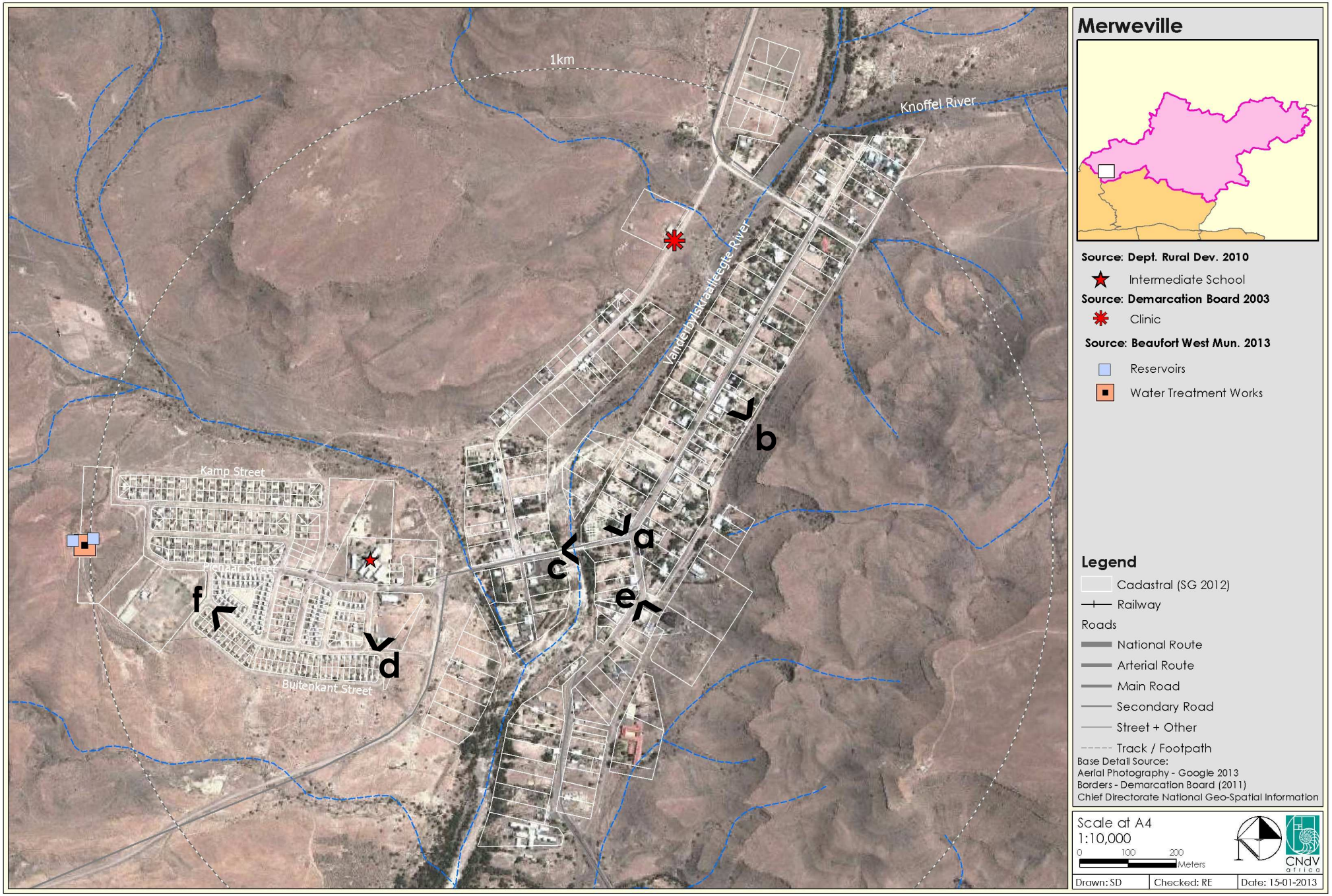


Figure 3.4.1.2 Aerial Photograph: Merweville, with letters indicating where the photographs on the previous page were taken

3.4.1.3 Murraysburg (± 5,069 people) *Census 2011*

- The town of Murraysburg was established on the Farm Eenzaamheid in 1855 as a "church town". The town was named after Rev. Andrew Murray, minister of the Dutch Reformed Church in Graaff-Reinet.
- The main source of income in the town is in the agricultural sector.
- The town has very limited economic activity and there is only a limited range of facilities. These include: schools, a clinic, a sports field and a few shops.
- The historical town has some beautifully restored old houses and a church dating back to 1856.
- Tourism activities offered in and around the town include: hunting, bird watching, stargazing, fly-fishing, hiking, fossil viewing, photography tours and donkey cart rides.
- The lower income, higher density neighbourhoods of the town are situated to the south of the main town. Large pieces of vacant land separate the two areas.
- Murraysburg has been identified as a settlement with very low development potential (struggling settlement) and very high social needs.

a. Entrance into Murraysburg

d. Architecture along Market Street

b. Lei-water system along Sir Geirge Grey Street

e. The church in Sir Geirge Grey Street

c. Mountain View Extension east of Endurance Street

f. Vacant land within the town viewed towards the old town centre

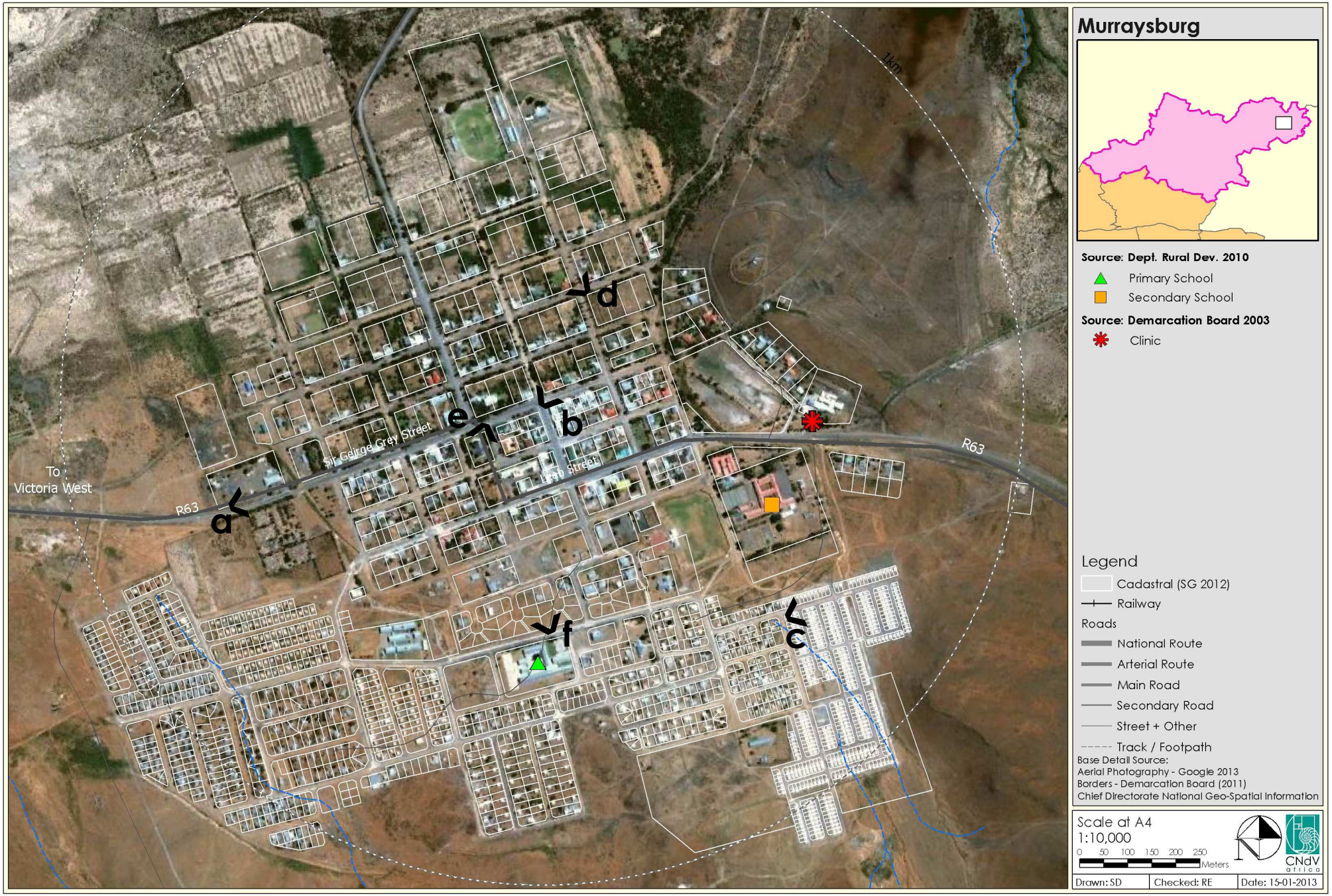


Figure 3.4.1.3 Aerial Photograph: Murraysburg, with letters indicating where the photographs on the previous page were taken

3.4.1.4 Nelspoort (±1,696 people) *Census 2011*

- The town of Nelspoort was established when number of farmers established their homes here.
- The town also became a haven for those with chest ailments and in 1924 the first "chest hospital" was established here mainly for the treatment of TB sufferers. In 1969 the first psychiatric patients were admitted to the hospital, mainly due to the decline of TB patients due to sufferers being able conduct home based treatment. Today the hospital is still in operation but with very low occupancy.
- The town offers extremely limited economic opportunities with no business or commercial areas.
- The town has a few facilities including: a police station, primary school and a hospital.
- The centre of the town is characterised by deserted buildings, some of which have become dilapidated.
- The railway line separates the hospital from the rest of the town. Access across the railway line is provided by means of a underpass.
- Between the town and the Sout River to the east there are some agricultural activities.
- Bushman and Khoi rock paintings and engravings are found throughout the "koppies" around Nelspoort.

a. Entrance into Nelspoort with the sanatorium in the foreground

d. View of the railway underpass

b. Large vacant property between the access road and railway line

e. Vacant / undeveloped properties within the town

c. One of the poorly maintained under-utilised buildings in the old part of town

f. Low income housing in the south of Nelspoort (note the broken windows from the hail storm – December 2012)

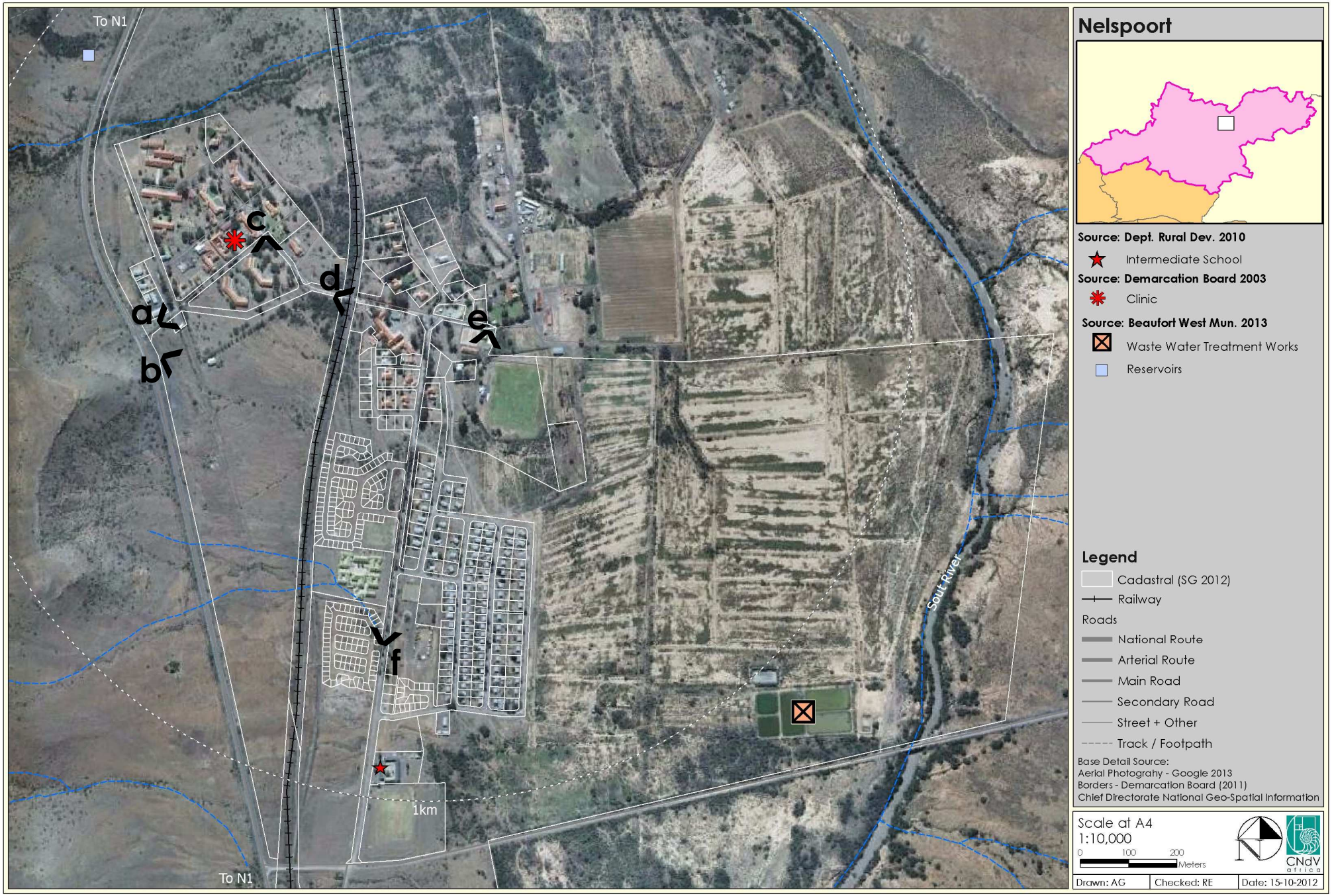


Figure 3.4.1.4 **Aerial Photograph: Nelspoort, with letters indicating where the photographs on the previous page were taken**

3.4.2 Transportation

3.4.2.1 Major Road and Rail Routes

The major roads in the Beaufort West Municipality are the N1 and N12. The N1 leads diagonally across the municipality in a south westerly/north easterly direction between Leeu-Gamka in the south and Three Sisters in the north through the town of Beaufort West. The N12 runs in a southerly direction from Beaufort West town to Oudtshoorn.

Other provincial roads of importance include:

- R353 that runs northwards to Fraserburg from Leeu-Gamka (in the west of the municipality);
- R381 that branches off the N1 at Beaufort West and runs northwards to Loxton;
- R61 that runs in an easterly direction from Beaufort West to Aberdeen;
- R306 that branches off the R61, running in a south westerly direction to Willowmore.
- R63 connecting Murraysburg in the east of the municipality with Victoria West in the north-west and Graaff-Reinet In the south east.

3.4.2.2 Public Transport

Beaufort West town is the only town with dedicated public transport which consists of a single bus, sedan taxis and minibus taxi's. Table 3.4.2.2 indicates the mini bus taxi services operating in the municipality.

Origin	Destination rank	Trip length	Operator
Beaufort West taxi rank	Beaufort West taxi rank (radial route)	0.9–4.9 km	Various operators
Nelspoort (not from a rank)	Beaufort West taxi rank	50 km	Wiegies Transport
Beaufort West bus stop	Beaufort West bus stop (fixed circular route)	11.38 km	De Klerk Busdiens

Table 3.4.2.2 **Minibus taxi services** (source: Beaufort West Municipal Integrated Transport Plan, 2009 – 2013).

The only minibus taxi rank is located in Beaufort West town. The municipality is responsible for maintaining the facility. The facility provides for 12 taxis. No improvement priorities were detailed in the Integrated Transport Plan, 2009 – 2013.

3.4.2.3 Non-Motorised Transport

Pedestrian and cycle paths have been provided for in Kwa-Madlenkosi. These paths don't extend past the bridge into town and don't provide access to the shopping mall. Integration of the paths with the sidewalks has also been noted as poor (Integrated Transport Plan, 2009-2013).

3.4.2.4 Air Transport

A privately owned airport is located outside the town of Beaufort West. The local authority is planning to facilitate the reconstruction of this facility (Integrated Transport Plan, 2009-2013).

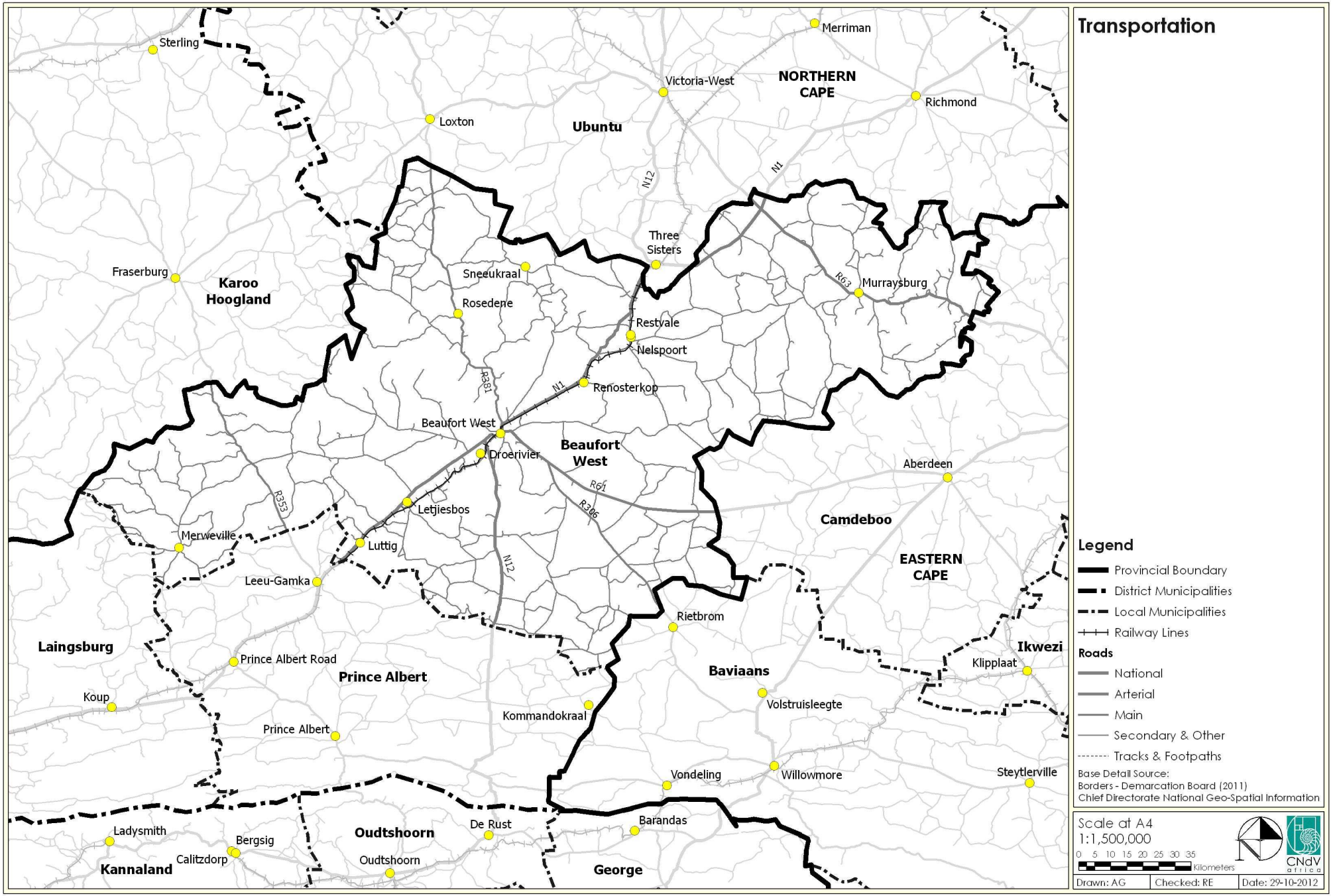


Figure 3.4.2.1 Transportation

3.4.2.5 Transport Improvement Proposals

A proposed phased implementation plan for NMT in Beaufort West is shown in Figure 3.4.2.5.

The proposal includes improvements to road infrastructure, public transport, planning and feasibility studies and pedestrian facilities in the town of Beaufort-West. The various proposed upgrading projects have been prioritized per identified improvement category.

Implications for Beaufort West Municipality

- An efficient road network is crucial in promoting the economy of a municipality. The required upgrades to roads and the construction of new roads and should be undertaken to not stifle ongoing economic growth.
- A public transport and non-motorised transport system focussed on integrating the main settlements should be implemented.
- The existing airport should be maintained and managed to ensure the maximum benefit of this facility.
- Developments close to the airfield or airport should not be allowed within the 55dBA and higher noise zones.

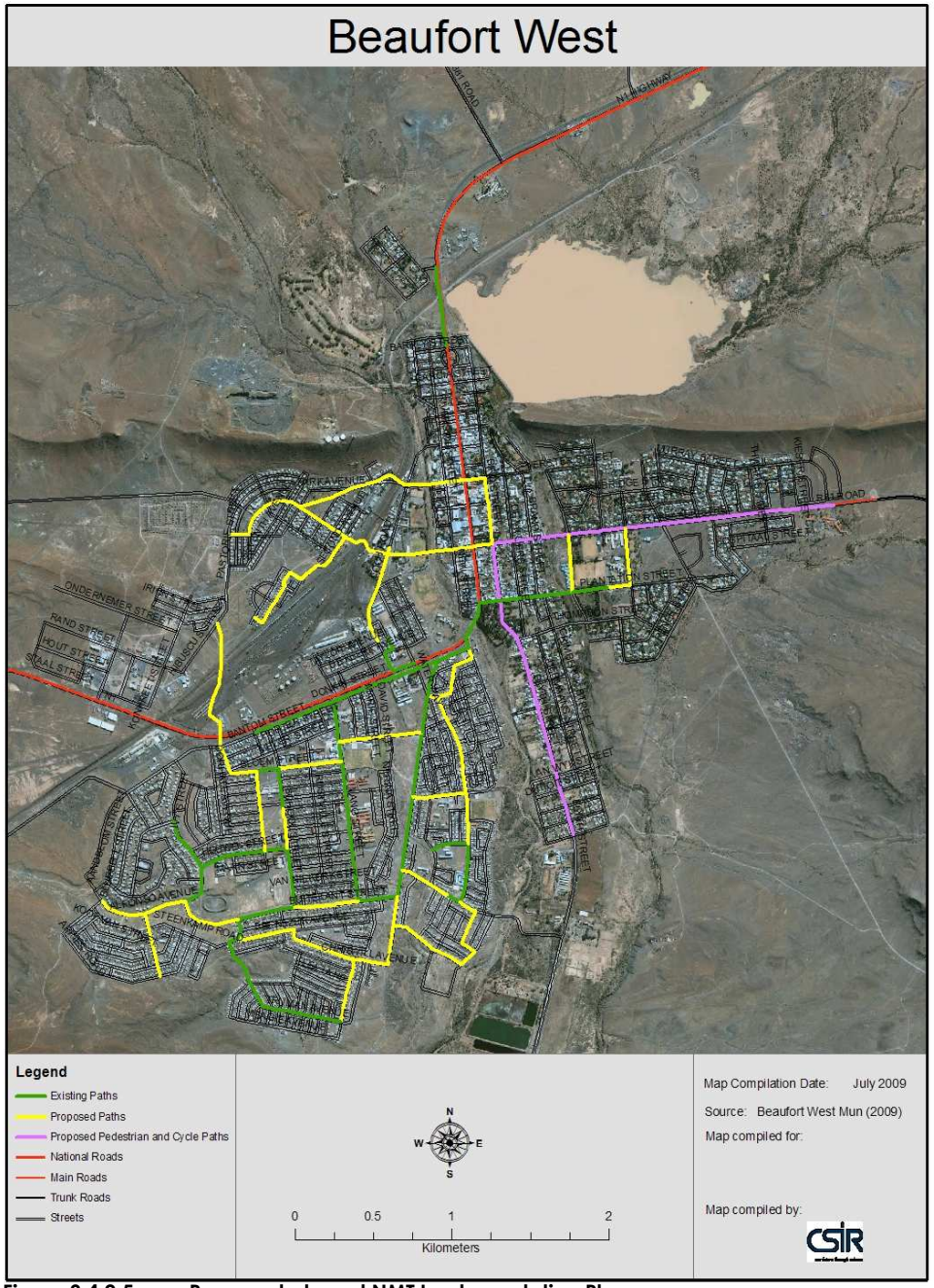


Figure 3.4.2.5 Proposed phased NMT Implementation Plan

3.4.3 Solid Waste Management

The solid waste disposal sites are shown on Figure 3.4.3.1.

According to the Beaufort-West Urban Restructuring Framework, the landfill site at Beaufort-West is of an adequate capacity, but is however in need of upgrading. The waste disposal site at Nelspoort needs to be relocated from the Salt River salt plains.

Key findings highlighted in the Integrated Waste Management Plan of 2005, is that there is a major lack in personnel and equipment. Another issue that was brought up is the licencing of the landfill sites in Merweville, Nelspoort and Murraysburg (BWM IDP, 2012-2017). Because the IWMP is outdated, a new plan should be developed and implemented.

Refuse Removal	**2007**	**2011**
Removed by local authority/private company at least once a week	8 476	10 960
Removed by local authority/private company less often	27	36
Communal refuse dump	15	148
Own refuse dump	596	1 777
No rubbish disposal	32	111
Other	0	58
Total	**9 146**	**13 090**

Table 3.4.3.1 Refuse removal 2007 and 2011 (Census 2011 and Community Survey 2007)

Table 3.4.3.1 shows that the majority of individuals have refuse collection services occurring once a week. An increase occurred with regards to no rubbish removal and communal refuse dumping between 2007 and 2011. However, the greatest increase took place with individuals using their own refuse dump.

All collected waste is disposed at the local waste disposal sites.

Implications for Beaufort West Municipality

- The Nelspoort waste site is undergoing a 24G application.
- The Merweville waste site is undergoing a Waste Management Licensing process.
- According to the Municipality, the Murraysburg waste site is not ideally located due to its proximity to an aquifer.
- According to the Department of Environmental Affairs (DEA), there is no waste management licence application in process for the Murraysburg waste disposal facility. The site is identified on the provincial list of 75 sites to be closed and rehabilitated (financed by DEA).
- An additional Waste Site for Murraysburg has not been identified which will replace the one that will be closed. This will have significant operational cost implications for the municipality if it needs to transfer waste a long distance each week to another waste site (i.e. 160km between Murraysburg and Beaufort West).
- The waste site in Beaufort West has a maximum of 2 years airspace remaining. An application for a Material Recovery Facility (MRF) at the Beaufort West waste site was submitted to the DEA&DP. If property managed, the MRF will extend the Beaufort West landfill airspace.
- Waste management strategies are to be developed and implemented throughout the municipality.
- Opportunities for waste separation and recycling at the existing land fill sites should be investigated. These can also assist with low skilled job creation.
- Any new development, including housing needs to consider and plan for the integrated management of the waste that will be generated during the development phase and the operational phase.

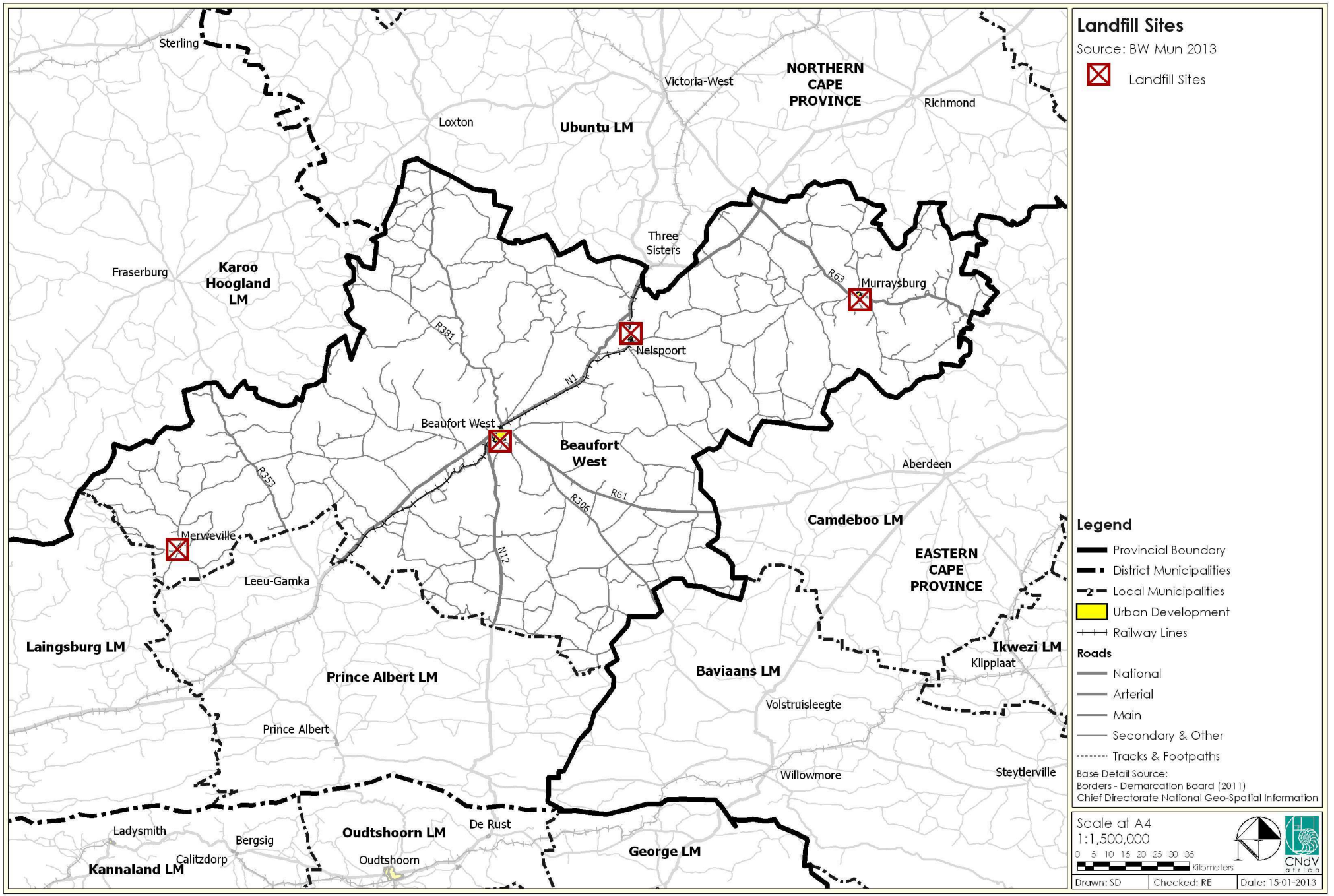


Figure 3.4.3.1 Landfill Sites: Beaufort West Municipality

3.4.4 Water Infrastructure

The Beaufort-West municipality receive most of its rainfall during summer months in the form of thunderstorms, but because of the general dry conditions of the area, the surface water run-off occur mainly in the forms of flash floods. Therefore, dams (Gamka and Springfontein dams) are only filled when these floods occur. Because of this, the area relies strongly on ground water sources for their water supply.

Figure 3.4.4.1 show the water infrastructure for the Beaufort-West municipality.

According to the municipal Infrastructure Plan 2011, the existing water storage capacity for Beaufort-West is 15 102kℓ, Merweville has 400kℓ storage capacity and Nelspoort 911kℓ. It is shown that only Beaufort-West has adequate water for short, medium and long term, however, Merweville and Nelspoort do not have adequate water for the short term.

Beaufort West receives bulk water from 38 boreholes and the Gamka Dam. The town relies heavily on the dam for water and has suffered water shortages due to drought periods causing the dam to dry up.

Merweville obtains bulk water from 7 boreholes. The boreholes are continually used below their yield and there is thus adequate supply for the future.

Bulk water to Nelspoort is sourced from 2 boreholes and a weir in the Sout River. The surface water from the weir in the Sout River regularly dries up in the summer months causing the town to only rely on ground water.

No bulk water information was included in the Comprehensive Infrastructure Plan, 2011 on Murraysburg.

A Comprehensive Infrastructure Plan was prepared for the Central Karoo District Municipality in 2011. According to this report the future water demand for the Beaufort West Municipality is as per Table 3.4.4.1.

Consumer			Beaufort West water demand projections			
			2010	2015	2020	2025
Domestic		AADD excluding UAW (kℓ/day)	3 537	3 620	3 705	3 791
		UAW	35.3%	15.0%	13.8%	12.5%
		AADD including UAW (kℓ/day)	5 467	4 259	4 298	4 333
		Peak day demand including UAW (kℓ/day)	9 574	7 458	7 527	7 589
Non-domestic	Business[1)]	AADD excluding UAW (kℓ/day)	776	857	946	1 045
		UAW	35.3%	15.0%	13.8%	12.5%
		AADD including UAW (kℓ/day)	1 200	1 008	1 098	1 194
		Peak day demand including UAW (kℓ/day)	2 101	1 766	1 922	2 091
	Other[2)]	AADD excluding UAW (kℓ/day)	174	193	213	235
		UAW	35.3%	15.0%	13.8%	12.5%
		AADD including UAW (kℓ/day)	270	227	247	268
		Peak day demand including UAW (kℓ/day)	472	397	432	470
Total AADD excluding UAW (kℓ/day)			4 488	4 669	4 864	5 071
Total AADD including UAW (kℓ/day)			6 936	5 493	5 642	5 795
Peak day demand including UAW (kℓ/day)			12 148	9 621	9 882	10 150

1) Business includes industrial and commercial consumers.
2) Other includes municipal consumption.
3) AADD – average annual daily demand.

Table 3.4.4.1 **Beaufort West water demand projections**
(Comprehensive Infrastructure Plan: Beaufort West, 2011)

Table 3.4.4.1 indicate the future bulk water infrastructure projects for the Beaufort-West municipal area. Majority of the funds will be spent in the main town of Beaufort-West

Project no	Description	Town	Estimated cost Rand (excluding VAT)
BWB.1	Water demand management and conservation project to reduce UAW.	Beaufort West	1 500 000
BWB.2	Long term bulk water provision.	Beaufort West	60 000 000
BWM.1	Water demand management and conservation project to reduce UAW.	Merweville	800 000
BWM.2	Replace existing 2 x 0.2Ml reservoirs (in poor condition) with a new 0.5Ml reservoir.	Merweville	1 900 000
BWN.1	Borehole development.	Nelspoort	5 000 000
BWN.3	Replace existing WTW with a new 500 kℓ/day WTW.	Nelspoort	5 000 000

Table 3.4.4.2 **Bulk Water Infrastructure Priority Projects** (Infrastructure Plan, 2011)

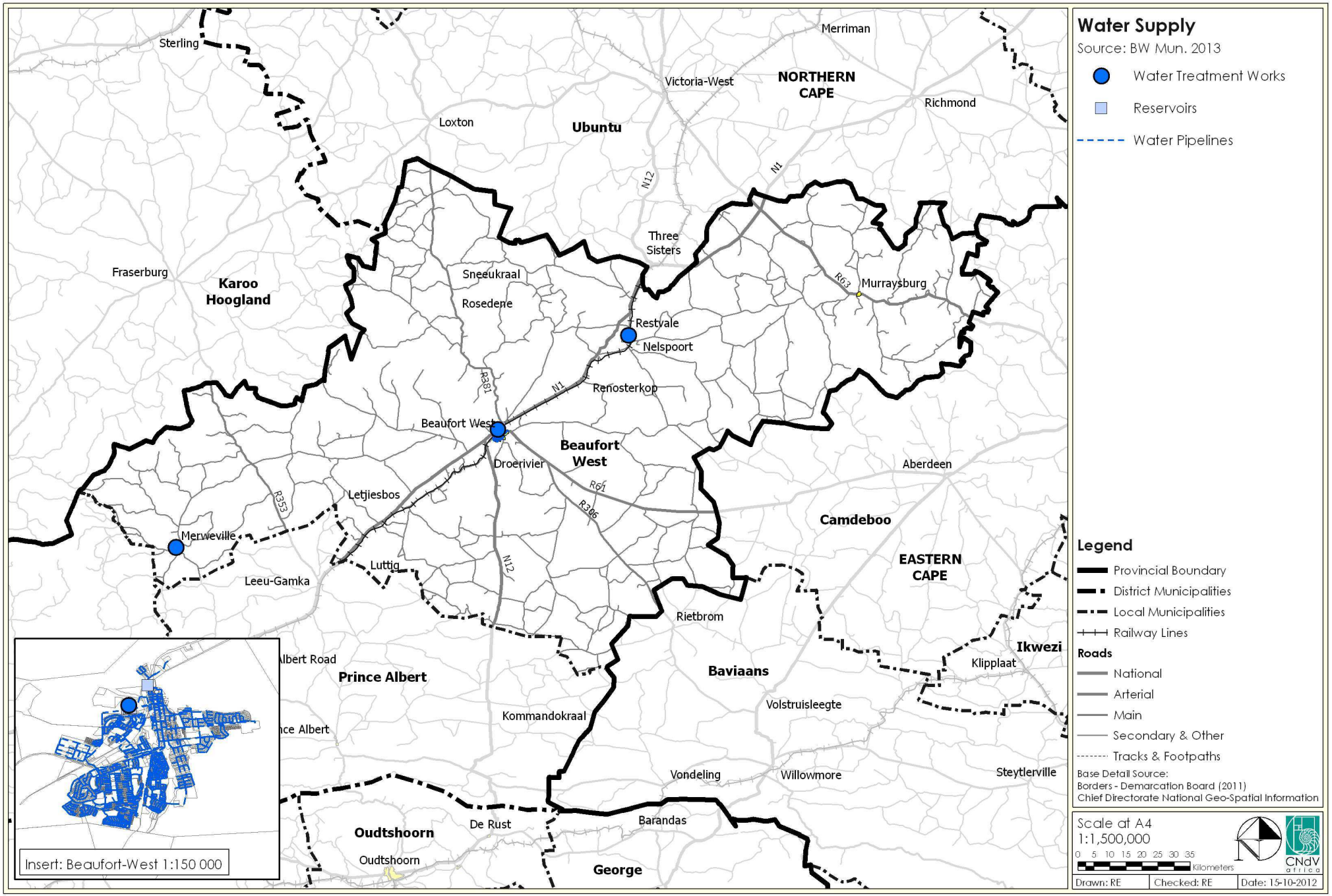


Figure 3.4.4.1 **Water Supply Infrastructure: Beaufort West Municipality**

Implications for Beaufort West Municipality

- Strict water demand and water conservation management measures should be implemented in the municipality, especially during the summer months.
- Ground water sources should be monitored to ensure adequate quantities are available and that the water quality remains high.
- Potential sources of pollution which could negatively impact on ground water sources should be identified and measures developed to prevent this from occurring. Particular attention should be give to the Vaalkoppies Landfill site.
- Educating consumers on water wise initiatives including gardening should be implemented across the municipality.
- A programme for providing piped water in the dwellings should be initiated to improve access to potable water.
- There has been a major improvement in providing piped water to either in the yard or dwelling between 2001 and 2007.
- Boreholes are current utilised to augment water provision.
-

3.4.5 Waste Water Treatment (Sanitation)

Figure 3.4.5.1 show the sanitation network for the municipality and the various settlements.

It appears from Figure 3.4.5.1 that the following areas do not have water borne sewerage:

- Merweville: eastern component;
- Nelspoort: south-western component;
- Murraysburg: entire town

Graph 3.4.5.1 shows that the majority of individual households flush toilets are connected to a sewerage system. There has been a significant increase in the number of households using the bucket system between 2007 and 2011, by approximately 31 households.

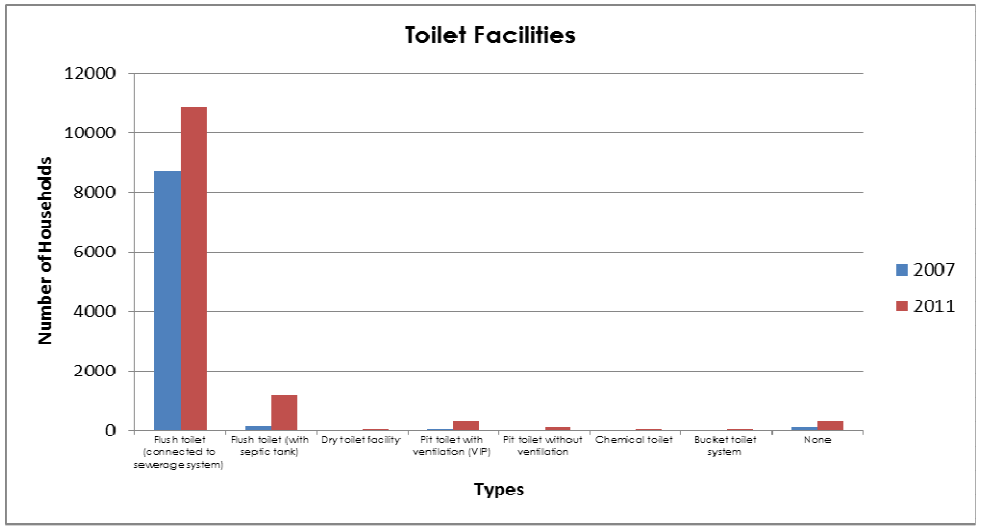
Only 8 728 households in 2007 and 10 887 in 2011 had access to flush toilets connected to a sewerage system. There has been a slight increase in this category.

Graph 3.4.5.1 also indicates that there was an alarming increase in the number of households that do not have ablution facilities, an increase of 222 households from 2007 to 2011, to a total 336 households.

Beaufort-West is the only town in the Central Karoo District which currently has a waste water reclamation plant, which is located at the waste water treatment site. This reclamation site will enable the following treatment processes (Comprehensive Infrastructure Plan, 2011):

- Sand filtration
- Ultra-filtration
- Reverse osmosis
- pH correction
- UV disinfection, and;
- Final chlorination

The WWTW found in Beaufort-West, Merweville and Nelspoort are of adequate capacity, however they are in need of higher maintenance levels as sludge has started to build up in many of the oxidation ponds. These WWTW did also not have permits or were unlicensed in 2011.



Graph 3.4.5.1 Toilet facilities 2007 and 2011 (Census 2011 and Community Survey 2007)

Table 3.4.5.1 indicate the future bulk waste water infrastructure priority projects, showing that concentration will be put on infrastructure in Nelspoort. According to the Infrastructure Plan 2011, Beaufort-West has 4 659 kℓ/day capacity, Merweville 111 kℓ/day and 434 kℓ/day.

Project no	Description	Town	Estimated cost Rand (excluding VAT)
BSN.1	Clean oxidation ponds and correct operation of the pond system.	Nelspoort	1 200 000
BSN.4	Construct an additional oxidation pond at the WWTW.	Nelspoort	3 000 000

Table 3.4.5.1 Bulk Waste Water Infrastructure Priority Projects (Infrastructure Plan, 2011)

Implications for Beaufort West Municipality

- Eradicate the bucket systems as far as possible.

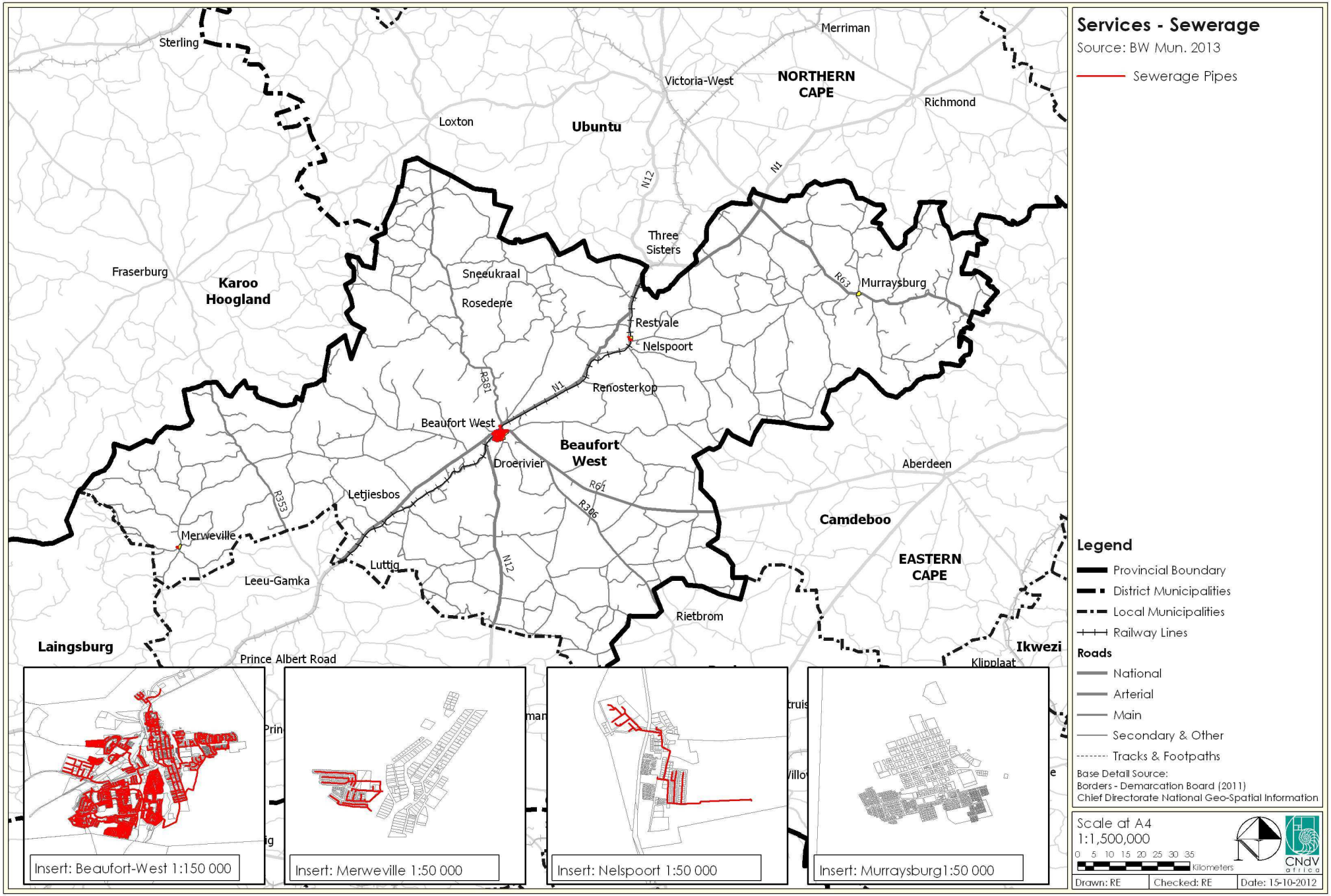


Figure 3.4.5.1 Waste Water Treatment: Beaufort West Municipality

3.4.6 Energy

Table 3.4.6.1 shows the methods of energy or fuel used for lighting in Beaufort-West municipality. This table indicates that a number of household do not have electrical supply but that the overwhelming majority, 92% have electricity supply.

Method	Number of Households	Percentage %
Electricity	12 045	92.0
Gas	39	0.3
Paraffin	47	0.4
Candles (not a valid option)	703	5.4
Solar	205	1.6
None	50	0.4
Total	**13 089**	**100**

Table 3.4.6.1 Energy/Fuel used for lighting of households (Census 2011)

An electricity master plan has not been prepared by the Municipality. Figure 3.4.6.1 indicates the electricity network plan for the Municipality.

Below is a brief summary of the current status of the electrical infrastructure in the four main towns in the municipality. This information was obtained from the electrical superintendent of the Beaufort West Municipality.

- **Beaufort-Wes**

The distribution of electricity in the town is the responsibility of the municipality. Currently the electricity supply of the town is limited to 13MVA resulting in very limited spare capacity. This is exasperated during the winter months when electricity use increases. This places a limit on future development in the town.

The 11kV and 400 V network is in a poor condition and requires upgrading. A new 20MWA substation and 22kV supply line is being installed for completion in June 2013. In terms of the 11kV and 400 V network, there are no funds available to undertake the necessary upgrading. Incremental repairs are undertaken to extend the lifespan of this network in the interim.

- **Nelspoort**

ESKOM is responsible for the medium voltage network (22kV) and the municipality for the low voltage network (400 V).

Approximately 30% of the town's low voltage network requires upgrading. Funding in this regard is required.

- **Merweville**

The entire network is the responsibility of EKSOM. No information could be obtained from ESKOM on the condition of the infrastructure.

- **Murraysburg**

Approximately 70% of the electrical network in Murraysburg is the responsibility of the municipality with ESKOM managing the remainder.

Currently the town is allowed 400kVA from ESKOM. The actual demand is between 550 kVA and 700 kVA.

The electrical infrastructure in the town is very old and on the verge of collapsing. Funding to upgrade and restore the system is desperately needed.

Implications for Beaufort West Municipality

- Obtain funding to upgrade the electrical networks in the towns of Beaufort West, Nelspoort and especially Murraysburg. This will ensure the current demand is met and that future development of the towns can occur.
- The use of renewable energy sources should be encouraged and implemented in all new developments.

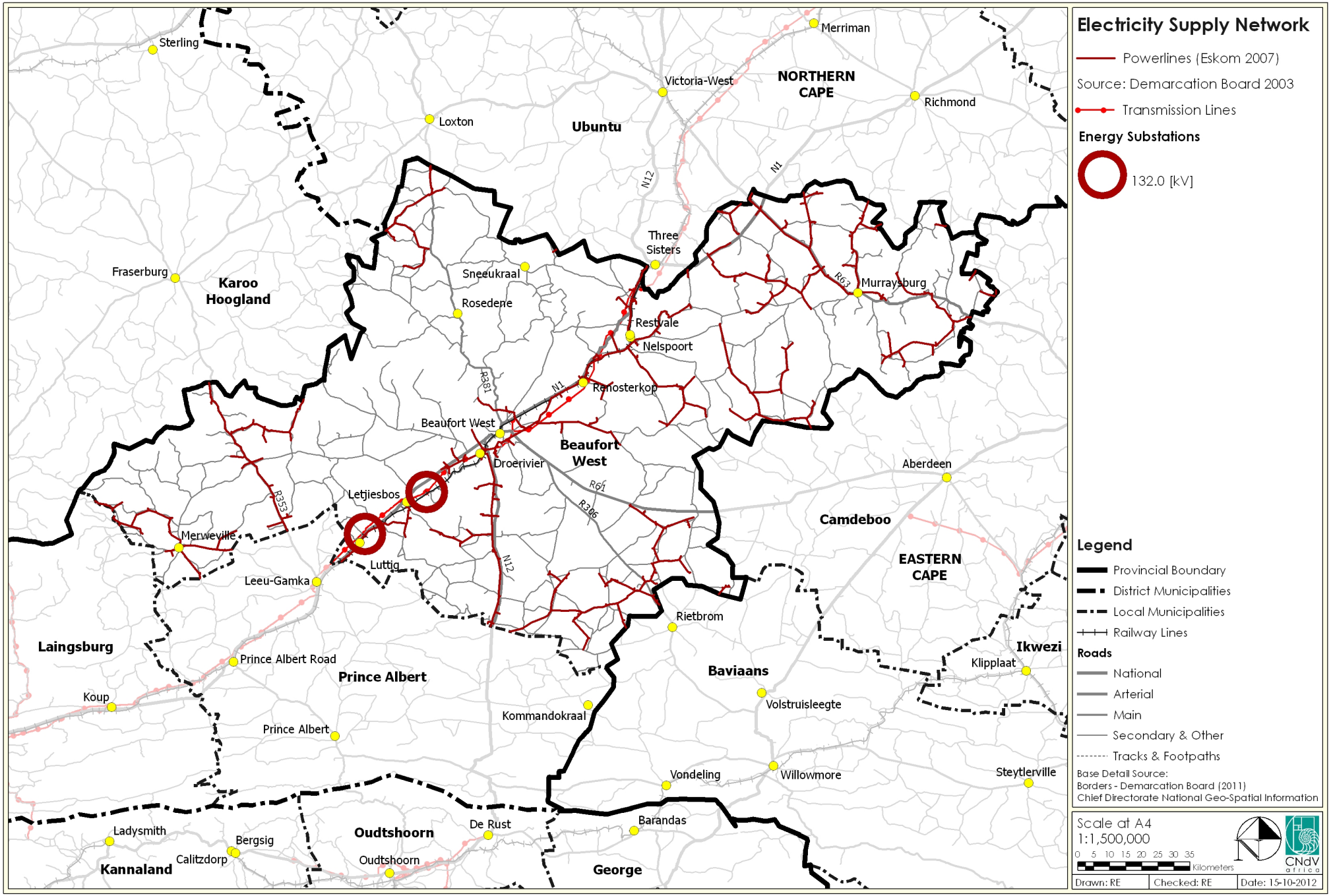


Figure 3.4.6.1 Energy: Beaufort West Municipality

3.4.7 Housing

Table 3.4.7.1 indicates that there has been a small increase in the amount of individuals living in formal housing. In 2007, 7 881 formal households and in 2011 a total of 11 262 households, a total increase of 3 381 formal houses were constructed. The mentioned figure represents a difference of 30%. The immense increase in town houses, flats and backyard rooms indicate the need for housing is provided for through densification.

Housing Types	2007	2011
House or brick/concrete block structure on a separate stand or yard or on a farm	7881	11,262
Traditional dwelling/hut/structure made of traditional materials	68	45
Flat or apartment in a block of flats	252	134
Cluster house in complex, Townhouse (semi-detached house in a complex), Semi-detached house	690	1106
House/flat/room in backyard	56	293
Informal dwelling (shack; in backyard)	86	96
Informal dwelling (shack; not in backyard; e.g. in an informal/squatter settlement or on a farm)	87	66
Room/flatlet on a property or larger dwelling/servants quarters/granny flat	19	16
Caravan/tent	0	12
Other	10	60
Total	**9149**	**13,090**

Table 3.4.7.1 Housing provision 2007 and 2011 (Census 2011 and Community Survey 2007)

According to the Integrated Development Plan, 2012-2017, there was an increase in people on the waiting list for housing. Approximately 4 855 people are currently on the list. Table 3.4.7.2 indicates the increase in the waiting list from 2007 to 2011, with a total increase of 1 589 people.

Year	Number of people on housing list	Percentage increase/decrease in housing waiting list
2007/08	3 272	5% increase
2008/09	4 079	10% increase
2009/10	4 718	8% increase
2010/11	4 861	2% increase

Table 3.4.7.2 Number of people on the waiting list in the Beaufort-West Municipality (Integrated Development Plan, 2012-2017)

Figure 3.4.7.1 indicates the current housing projects in the municipality. A total area of 106.1 Ha of land is being used for housing projects.

The construction of rural housing has also not received the needed support from government nor form farmers. Government is reluctant to construct rural housing on land which does not belong to the individual receiving the unit. Farmers on the other hand do not want to make on farm housing attractive as it could potentially lead to farm workers gaining full and permanent residential rights. Farmers have also raised security risks as a concern.

Table 3.4.7.3 below summarises the housing and land need for the municipality for the four main settlements and the rural areas. A projection was done to determine the extent of land which will be required to accommodate the current housing need (obtained from the Beaufort West Municipality) and the future housing need, assuming that population growth will occur. A projection was done up to the year 2030.

HOUSING AND LAND NEED							
Settlement	Current Housing Backlog (hh)	Future Need (no. of households)	Total Need (units)				Land Need (ha)
			BNG	GAP	Market	Total	
Beaufort West (Central, Hillside, Mandlenkosi, Rustdene, Barrake, Essopville, Die Lande, Newlands, Nieuveldtpark, Paradise Valley, Prince Valley)	4655	1563	3985	2060	174	6219	179.17
Murraysburg	352	220	367	181	24	572	16.71
Merweville	62	57	77	36	6	119	3.51
Nelspoort	72	64	87	42	7	136	4.02
Rural Areas	0	254	163	63	28	254	8.00
Total	**5141**	**2158**	**4679**	**2382**	**239**	**7300**	**211**

Table 3.4.7.3 Projected housing land need to 2030 (BWM, 2013)

Table 3.4.7.4 indicates the current pipeline as of October 2013 as received from the Department of Human Settlements.

Implications for Beaufort West Municipality

- Suitable land should be allocated for the provision of housing for the people on the housing waiting list.
- Additional funding for housing provision should be established as it was indicated that there are not sufficient subsidies available.
- Specific assistance should be given to household heads younger than 20 years.

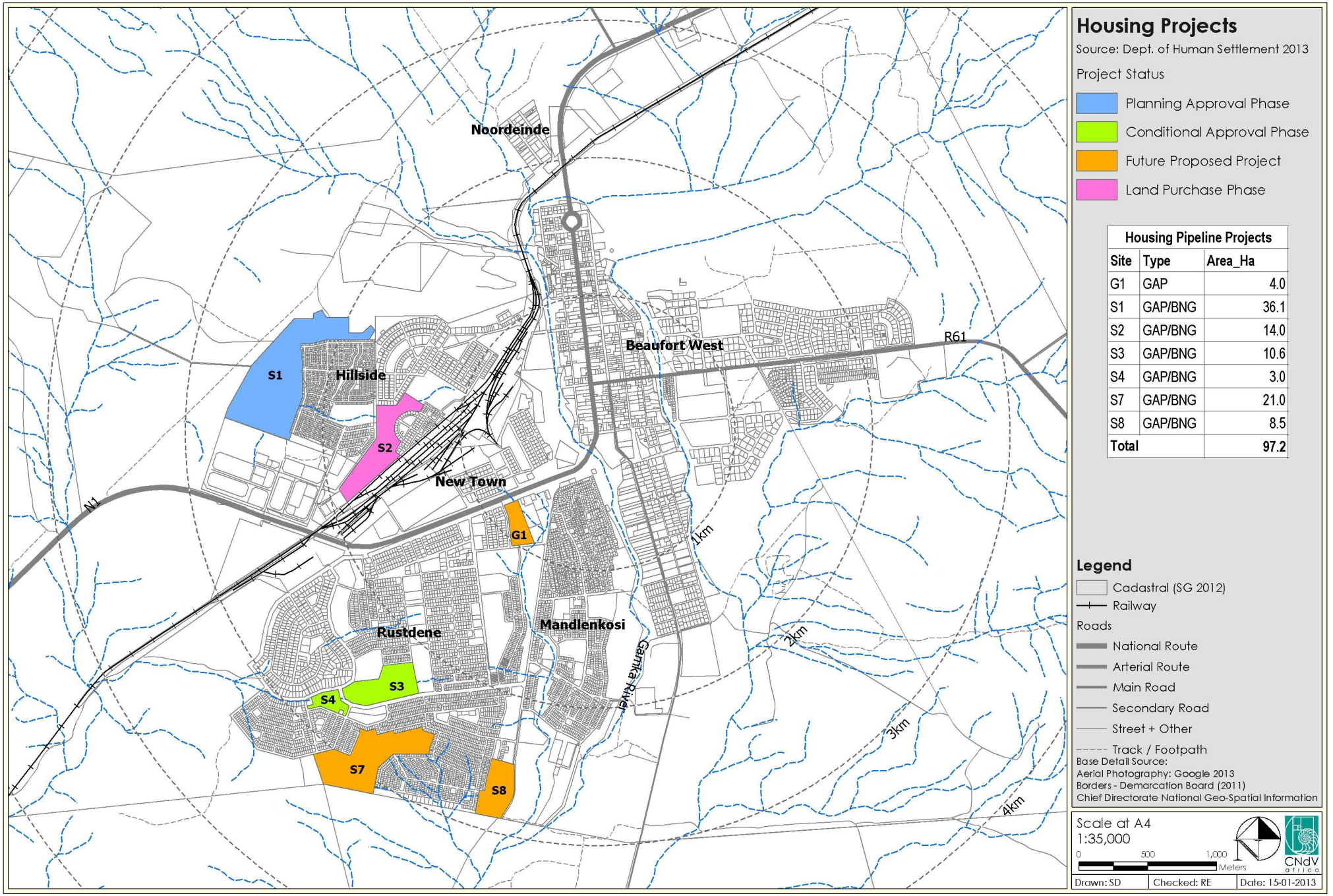


Figure 3.4.7.1 Housing Projects (Department of Human Settlements, Oct 2013)

BUSINESS PLAN TARGETS-13/14 READINESS & FUTURE PLANNED PROJECTS: AUGUST 2013	Programme	Town / Suburb	Municipal Priority	Proposed Implementation Year	Housing Opportunities				Project Readiness							
					Sites	Enhanced Sites	Units	Other	Land Obtained	EIA ROD	LUPO Approval	Bulk Capacity	DHS Approval	Council Approval	Risks / Issues	Readines
CENTRAL KAROO																
Beaufort West Municipality																
Beaufort West - Business Plan Projects for finacial year 2013/14																
2700/1070 : Beaufort West: Kwa-Mandlenkosi (96 units) Consolidation	IRDP	Kwa-Mandlenkosi	1	2013/14 (Current + 3 years)	0	0	0	0	Y	N/A	N/A	Y	Y	Y	None	Current Pro
2700/1132 : Beaufort West S3 Phase 1 (240 services & 235 units) IRDP	IRDP	Beaufort West	1	2013/14 (Current)	0	0	178	0	Y	Y	Y	Y	Y	Y	None	Current Pro
Beaufort WestIRDP 274 S3 Phase 2 &S4 (2700/132: Beaufort West IRDP 240 - Parent (2700/3081.1 and 3081.2)	IRDP	Beaufort West	1	2013/14 (Current) + 1 year	274	0	274	0	Y	Y	Y	Y	Y	Y	None	Current Pro
3159 : Beaufort West S8 IRDP 234 - Parent	IRDP	Beaufort West	1	2013/14 (Current + 1 year)	115	0	0	0	Y	Y	Y	Y	Conditional Approval received 12 March 2013	Y	None	Current Pro
3206: Beaufort West: Land Purchase Erf 1476 - Parent	IRDP	Beaufort West	1	2013/14 (Current + 3 years)	0	0	0	0	N	Process not begun	Process not begun	To be determined	N (No DHS Approval Application submitted as yet)	Y	No applications received as yet	60%
3206: Beaufort West: P - Erf 1476 - Parent	IRDP	Beaufort West	1	2015/146(+ 2 years)	396	0	396	0	N	N	N	To be determined	N (No DHS Approval Application submitted as yet)	Y	No applications received as yet	1%
Beaufort West - Municipal Proposed Housing Pipeline Projects for finacial year 2013/14																
3100 : Xhoxha: Repairs of Formal Houses - Parent	Rectification	Beaufort West	N/A	2013/14 (Current)	0	0	0	64	Y	N/A	N/A	N/A	Y	Y	None	Old Proje
Beaufort West (67) IRDP / FLISP Project (Site G2)	IRDP / FLISP	Essopville	2	2013/14 (Current + 1 year)	67	0	0	0	Y	Y	Submitted not yet approved	Y	Y (Conditional Approval received 10 July 2013)	Y	LUPO approval not yet received	80%
Beaufort West - Municipal Proposed Housing Pipeline Projects for finacial year 2014/15																
Murraysburg (100) IRDP	IRDP	Murraysburg	-	2014/15	100	0	100	0	N	N	N	Water and wastewater plants to be upgraded.MIG funds have been applied for - Availabilty of MIG funds expected by July 2014. Bulk services could be available by July 2015	N	-	Bulk service capacity and development in low growth town	1%
Nelspoort (100) IRDP	IRDP	Nelspoort	-	2014/15	100	0	100	0	N	N	N	Water and wastewater plants to be upgraded.MIG funds have been applied for - Availabilty of MIG funds expected by July 2014. Bulk services could be available by July 2015	N	-	Bulk service capacity and development in low growth town	1%
Nelspoort (20) IRDP / FLISP	IRDP / FLISP	Nelspoort	-	2014/15 (Current + 2 years)	20	0	0	0	N	N	N	Water and wastewater plants to be upgraded.MIG funds have been applied for - Availabilty of MIG funds expected by July 2014. Bulk services could be available by July 2015	N		Bulk service capacity and development in low growth town	1%
Beaufort West - Municipal Proposed Housing Pipeline Projects for finacial year 2015/16																
3083 : Beaufort West S1 - Erf 2848, 5372 & Farm 185 - Parent	IRDP	Beaufort West	3	2015/16 (Current + 3 years)	867	0	867	0	Y	N (In process)	N (Submitted awaiting approval)	Y (Bulk services limited but will be able to accommodate 800 housing units)	N (Planning Approval obtained, Conditional Approval submitted July 2013)	Y	EIA and LUPO process not yet complete. Bulk Infrastructure limited)	20% (EI LUPO ar DHS appr outstanin
Merweville (50) IRDP	IRDP	Merweville	-	2015/16	50	0	50	0	N	N	N	Y (Only connector services to be installed. Minimal MIG funds to be applied for. Should be OK.)	N	-	Bulk service capacity and development in low growth town	1%

Table 3.4.7.4 Current and Planned Municipal Projects: 10 Years HS (source: Beaufort West HSP, 2013)

3.4.8 Open Space and Commonages

According to the Beaufort-West Urban Restructuring Framework, open spaces in the municipality become underutilised because of the large plots people reside on. Therefore, these open spaces are not necessarily needed.

Therefore, it is suggested that the large open tracts of land should be subdivided into smaller plots and where open spaces is not needed, these plots should be used for infill projects.

The URF states that approximately 183 hectares of land owned by the municipality or state owned land is under-utilised or vacant. A further 250 erven are found to be vacant, which range in size. However, an estimated 189 of these erven are existing, vacant residential properties. These erven accumulate to approximately to 18 hectares of land.

Figures 3.4.8.1 to 3.4.8.4 shows the location of commonage and open space in the towns of Beaufort West, Nelspoort, Murraysburg and Merweville.

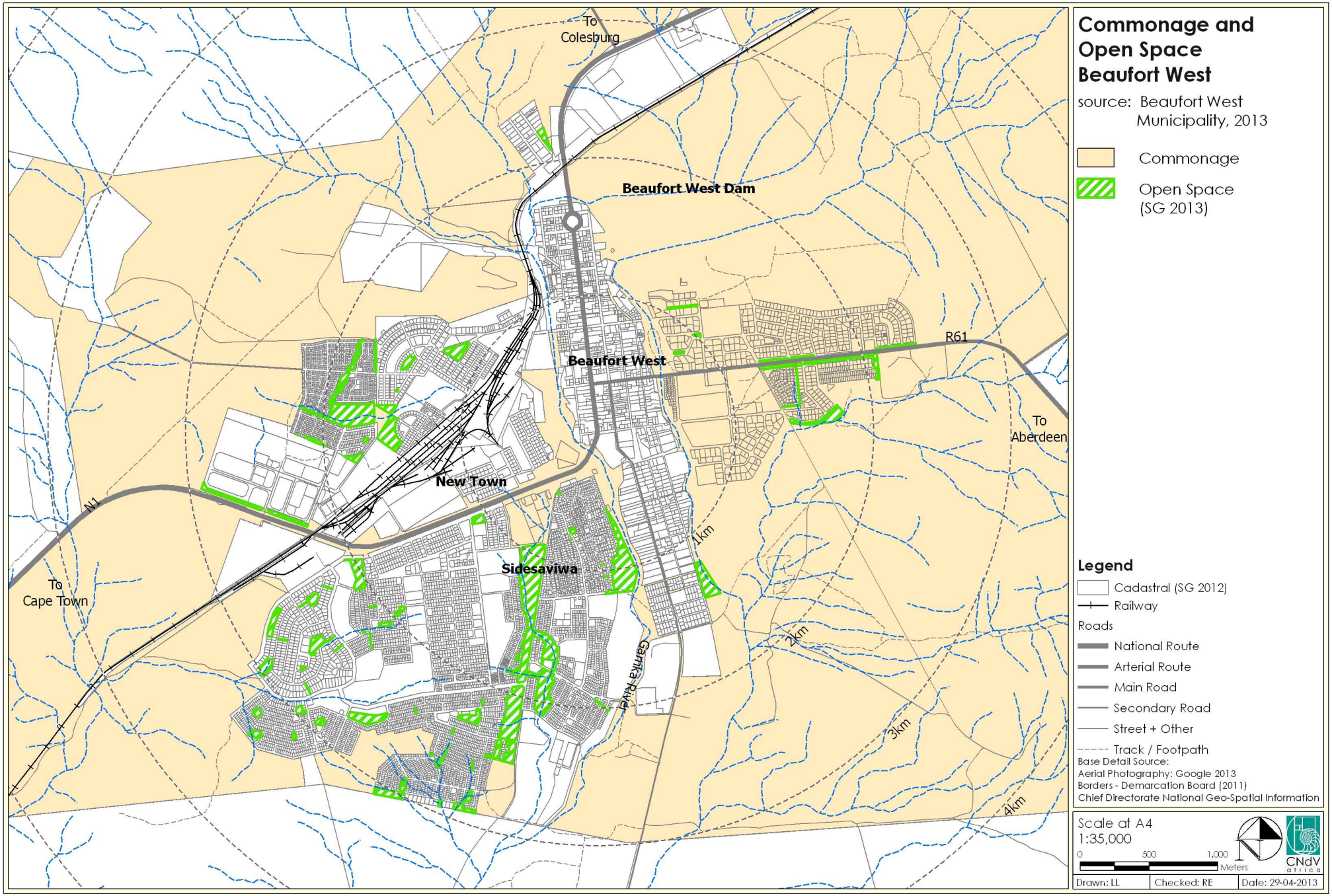


Figure 3.4.8.1 Beaufort West: Commonage and Open Spaces

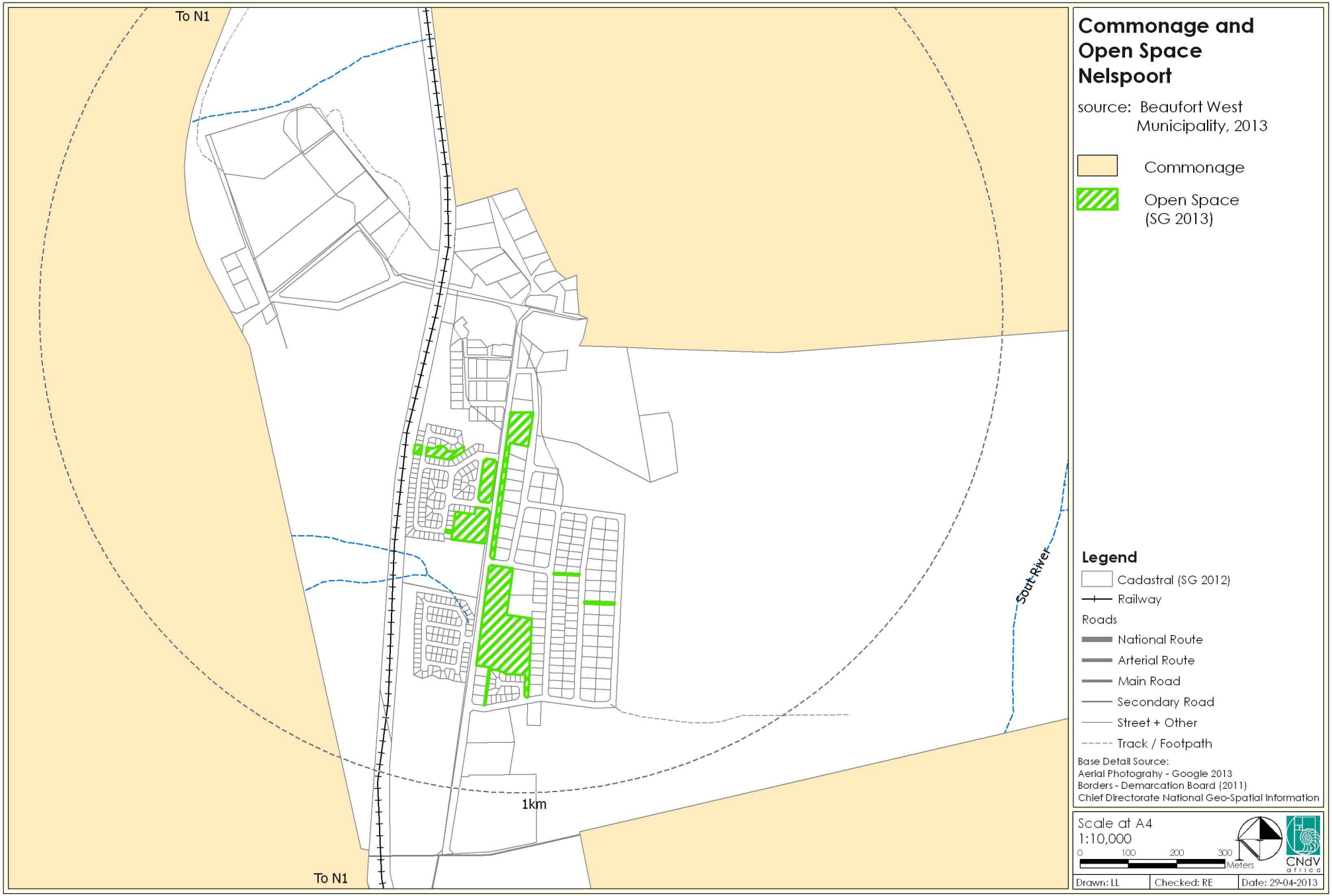
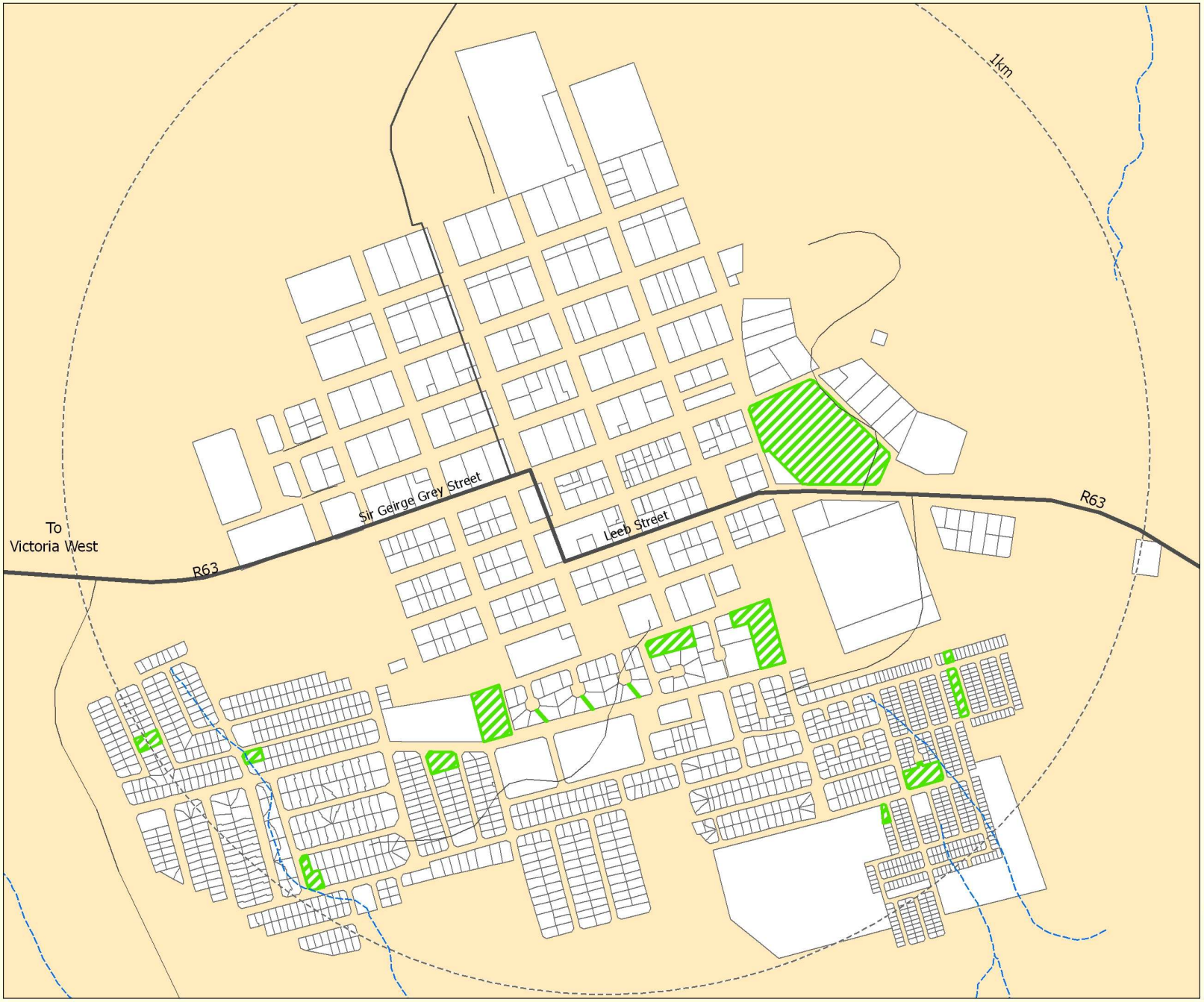


Figure 3.4.8.2 Nelspoort: Commonage and Open Space



Commonage and Open Space Murraysburg

source: Beaufort West Municipality, 2013

Commonage

Open Space (SG 2012)

Legend

Cadastral (SG 2012)

Railway

Roads

National Route

Arterial Route

Main Road

Secondary Road

Street + Other

Track / Footpath

Base Detail Source:
Aerial Photography - Google 2013
Borders - Demarcation Board (2011)
Chief Directorate National Geo-Spatial Information

Scale at A4
1:10,000
0 50 100 150 200 250 Meters

CNdV africa

Drawn: LL	Checked: RE	Date: 29-04-2013

Figure 3.4.8.3 Murraysburg: Commonage and Open Space

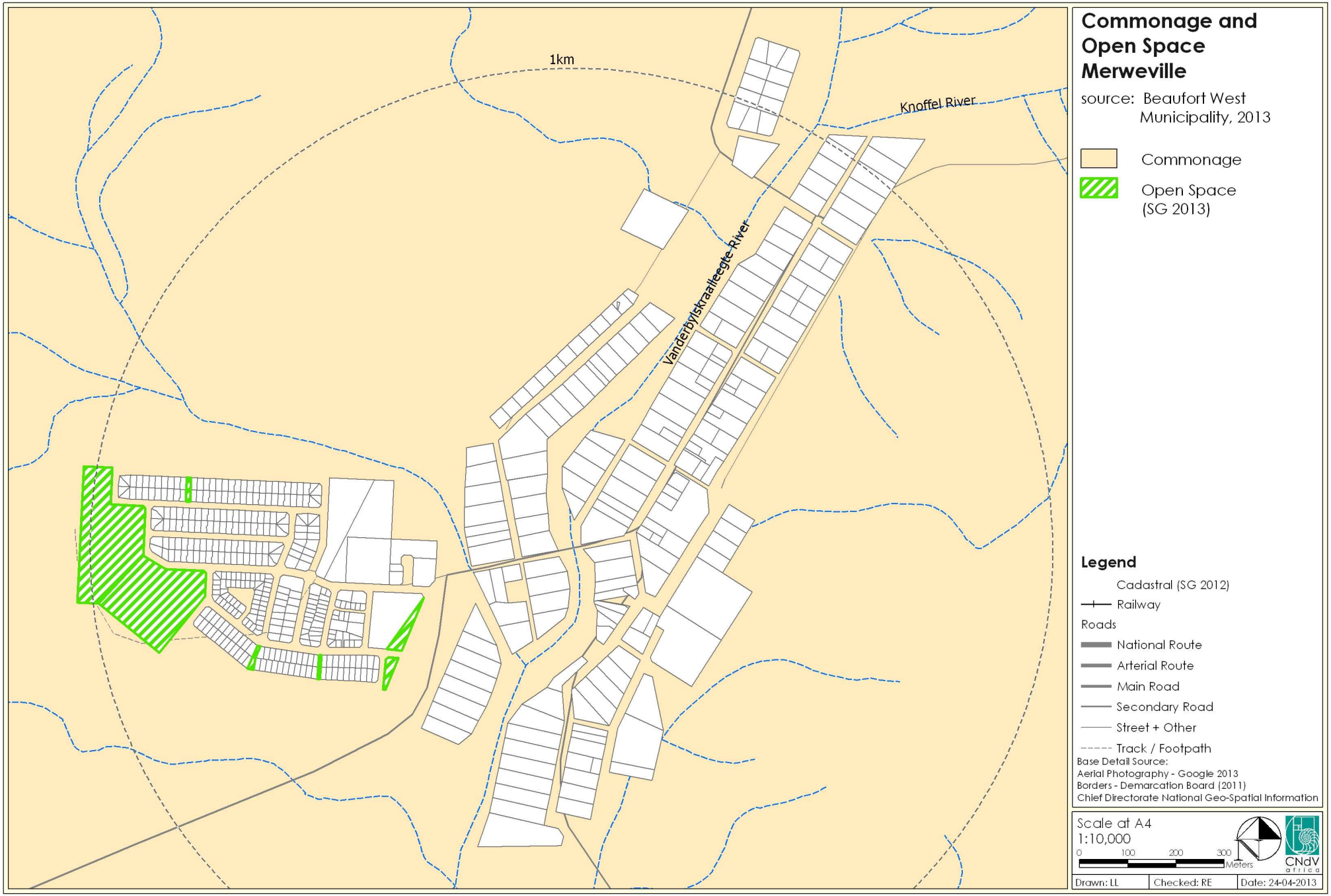


Figure 3.4.8.4 Merweville: Commonage and Open Space

3.4.9 Tourism

Beaufort-West is known as the heart of the Central Cape Karoo. This area is well-known for its indescribable natural beauty, with clear blue skies and the most amazing landscapes. The Beaufort-West region boasts a healthy climate and gorgeous weather throughout the year.

Scenic Beauty

The natural landscape is made up of mountain areas, rivers and dams and offers opportunities for a variety of recreational activities (cycling, hiking, 4X4 trails, etc.). In addition the following activities can be undertaken:

- Hiking, bike trips and viewing San Rock Art.
- Quad-biking, bird- and game viewing.
- Scenic drives, Donkey-Cart Trips
- Golfing

A tourism route runs through the municipal area which was affected by the Anglo Boer War which started on 11 October 1899. Mainly historical and memorial sites in honour of those who fought and died during this time are located in the Beaufort-West region.

Other Attractions

The Waterval Camping Resort can be found just north of the main town of Beaufort-West. This resort offers recreational activities including water sports and hiking trails in picturesque surroundings.

The Christiaan Barnard Museum found in Beaufort-West is the birth place of the famous heart surgeon who performed the world's first heart transplant. The museum, the former family home of the late doctor, showcases various memorabilia from his life and practise.

The Karoo National Park is also located within the municipality, attracting thousands of tourists for game-viewing and thereby creating job opportunities for the locals.

Figure 3.4.9.2 Christiaan Barnard Museum in Donkin Street, Beaufort-West

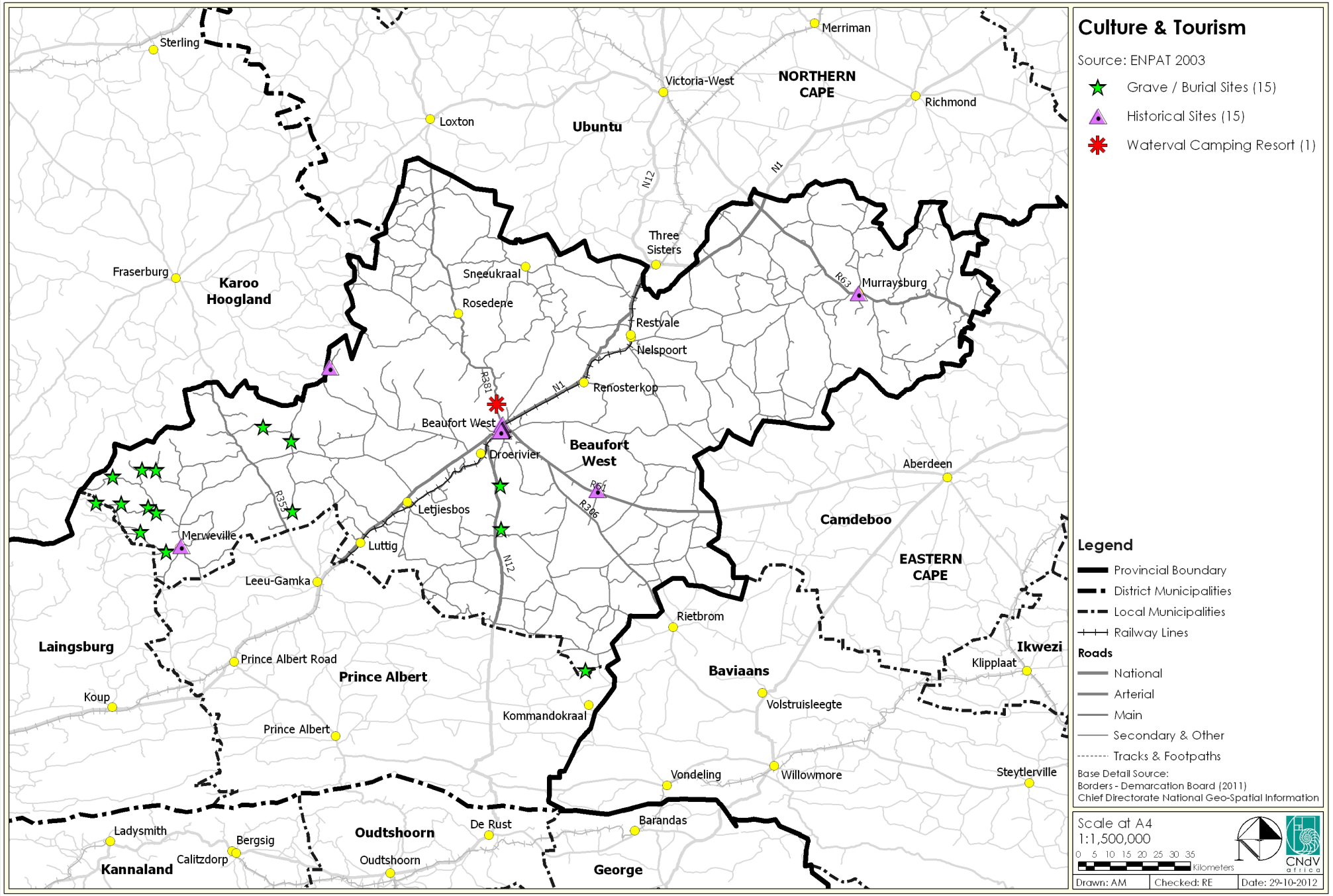


Figure 3.4.9.1 Tourism in Beaufort West Municipality