

**KAMIESBERG LOCAL MUNICIPALITY  
SPATIAL DEVELOPMENT FRAMEWORK  
LAND DEVELOPMENT PLAN**

**2010 - 2015**





## APPROVAL PAGE

Approved by the Kamiesberg Local Municipality on : Date:

By virtue of Council Resolution : No.:

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Northern Cape Planning and Development Act (No.  
7 of 1998)

Signed

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# THIS DOCUMENT IS COMPRISED OF FOUR VOLUMES

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## List of Acronyms and Abbreviations

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AIDS	Acquired Immune Deficiency Syndrome
ALRRD	Northern Cape Department of Agriculture, Land Reform & Rural Development
CBD	Central Business District
CBO	Community Based Organisation
CHC	Community Health Centre
COGHSTA	Corporate Governance, Human Settlement and Traditional Affairs
CRA	Coloured Rural Area
CRDPI	Comprehensive Rural Development Programme Initiative
CSIR	Council for Scientific and Industrial Research
DE	National Department of Energy
DF	Development fundamental
DGDS	District Growth and Development Strategy
DM	District Municipality
DME	Department of Minerals and Energy
DOH	Department of Health
DWA	Department of Water Affairs
E	Northern Cape Department of Education
EANC	Northern Cape Department Of Environmental Affairs Nature & Conservation
EDT	Northern Cape Department of Economic Development And Tourism
EIA	Environmental Impact Assessment
FT	Northern Cape Department of Finance & Treasury
FAMDA	Fishing and Mariculture Development Agency
GAM	Goal Achievement Matrix
GCIS	Northern Cape Department Of Government Communication & Information System
GDP	Gross Domestic Product
GRAP	Generally Recognised Accounting Practices
H	Northern Cape Department of Health
ha	Hectare
HDI	Historically Disadvantaged individual
HIV	Human Immunodeficiency Virus
HV	High voltage
HR	Human Resources
I&AP	Interested and Affected Party
IDP	Integrated Development Plan
IEMP	Integrated Environmental Management Plan
IGR	Inter-governmental Relations
JTG	John Taolo Gaetsewe District Municipality
kl/d	Kilolitres per day
kVA	Kilo Volt Ampere
l/s	Litres per second

LDA	Leliefontein Development Area
LEAP	Living Edge of Africa Project
LED	Local Economic Development
LGTAS	Local Government Turn Around Strategy
LM	Local Municipality
LOFLOS	Low flow on site latrines
LOS	Levels of service
MEC	Member of the Executive Council
ml/d	Mega litres per day
MSA	Municipal Systems Act, 2000 (Act 32 of 2000)
MV	Medium Voltage
MW	Mega Watts
NCP	Northern Cape Province
NCPCMP	Northern Cape Province Coastal Management Plan
NCPGDS	Northern Cape Province Growth and Development Strategy
NERSA	National Energy Regulator of South Africa
NGO	Non-Governmental organisation
NSDP	National Spatial Development Perspective
O&M	Operational & Maintenance
NNP	Namaqua National Park
PGDS	Provincial Growth and Development Strategy
PMS	Performance Measurement System
RDP	Reconstruction and Development Programme
SA	South Africa
SAC	Northern Cape Department of Sport, Arts And Culture
SALGA	South African Local Government Association
SANBI	South African National Biodiversity Institute
SANPARKS	South African National Parks
SANRAL	South African National Roads Agency Limited
SDF	Spatial Development Framework
SF	Spatial Fundamental
SKEP	Succulent Karoo Ecosystem Programme
SLA	Services Level Agreement
SMME	Small, Micro, Medium Enterprises
SSPD	Northern Cape Department of Social Services & Population Development
StatsSA	Statistics South Africa
SWOT	Strengths, Weaknesses, Opportunities and Threats
TB	Tuberculosis
TRANCRAA	Transformation of Certain Rural Areas Act of 1998
TRPW	Northern Cape Department Of Transport, Roads And Public Works
TSL	Northern Cape Department Transport, Safety And Liaison
UDS	Urine Diversion System
VIP	Ventilated Improved Pit
WSA	Water Services Authority

WSDP	Water Services Development Plan
WSSD	World Summit on Sustainable Development
WWTW	Waste Water Treatment Works



**KAMIESBERG LOCAL MUNICIPALITY  
SPATIAL DEVELOPMENT FRAMEWORK  
LAND DEVELOPMENT PLAN**

**2010 - 2015**



**VOLUME 1**

**IDP ASSESSMENT**

# **VOLUME 1. IDP ASSESSMENT**

## **1/1. INTRODUCTION**

The Kamiesberg Municipality adopted a five year Integrated Development Plan (IDP), IDP 2006-2011, which is reviewed on an annual basis. This Spatial Development Framework (SDF) must take into account the vision, mission and key implementation programmes of the IDP in an attempt to assess spatial implications and generate appropriate spatial development principles.

## **1/2. RELATIONSHIP BETWEEN THE SDF AND IDP**

The Spatial Development Framework (SDF) is one of many components of the Municipality's Integrated Development Plan (IDP), and in essence, is the picture of the IDP – that is, it illustrates the form and extent of development that the Kamiesberg Municipality wishes to promote, within the strategic approach adopted by the IDP.

This document, when adopted by the Kamiesberg Municipality, will have the status of a statutory/legal plan and will guide and inform all decisions on spatial development and land use management in the area to which it applies.

## **1/3. SPATIAL DEVELOPMENT FRAMEWORK (SDF) = LAND DEVELOPMENT PLAN (LDP)**

A Spatial Development Framework as required by the Municipal Systems Act (Act No. 32 of 2000) is for all intents and purposes the same as a Local and Representative Council Land Development Plan as required by Section 29 of the Northern Cape Planning and Development Act, (Act No. 7 of 1998).

The basic purpose of the SDF is to lay down strategies, proposals and guidelines for the future spatial development of the area to which it relates. This includes, without being limited to, development objectives, proposals for land reform, urban renewal, reconstruction, integration, environmental planning, transport planning, infrastructure planning, and urban design so that the general well-being of the particular community and order in the area are promoted in the most effective manner. Section 26 of the Municipal Systems Act, 2000 (Act No. 32 of 2000) read together with Section 29 of the Northern Cape Planning and Development Act, requires an SDF or LDP to contain the following broad functions and characteristics:

- It spatially reflects the vision of how the municipal area should develop in the broad sense.
- It reflects the needs identified in the first stages of the IDP process.
- Spatially integrates the strategies of the various sectors (such as the Water Plan, Transport Plan, Department of Agriculture's Area - Wide Conservation Planning, etc.).
- Provides a legally binding spatial framework, which promotes sustainable, environmental, economic and social development in a municipality.
- Sets out the objectives that reflect the desired spatial form of the area.
- Serve as an information source and guide to inform and direct land use management.
- It expresses government policy and the views and aspirations of all interested and affected parties.
- Government departments, and other authorities and institutions involved in future development and land use planning in the municipal area, will be bound by the SDF proposals.
- It provides certainty to the affected communities regarding future socio-economic and spatial development in the area.



- It provides a basis for co-ordinated decision-making and policy formulation related to future land use.
- It creates opportunities for preparing development and action plans to which financial budgets can be linked.

The SDF/LDA is to be used as a tool to adjudicate and guide social and economic investment within the Kamiesberg Local Municipality. It has “legal” status in that it is compulsory for a municipality to align all their actions to enable the fruition of the SDF.

***The LDA will henceforth be referred to as the SDF and is adopted by the Municipality in terms of Section 26 of the Municipal Systems Act as well as Section 27 of the Northern Cape Planning and Development Act.***

## **1/4. SPATIAL IMPLICATION OF VISION AND MISSION**

### **1.4.1 Vision and Mission of the Kamiesberg IDP**

The Kamiesberg IDP (IDP: 2010-2011) identified certain areas of concern. To address this, strategies had to be developed. These strategies incorporated the vision of the Municipality, the mission, values and the strategic objectives, in order to attend to the challenges.

The IDP has as its **VISION** for the Kamiesberg Municipality, ***“To better the guiding of life for all its inhabitants.”***

The **MISSION** of the Municipality is:

- Enforcing the code of conduct for councillors and officials
- Revitalizing the Batho Pele campaign
- Socio-economic development
- Provisions and maintenance of affordable services
- Effective public participation
- Accountable government
- Sustainable management and use of operational and natural resources

The Kamiesberg Municipality adopted **VALUES** that should be reflected in the daily behaviour of all its employees. The following values were identified as important for the functionality of the Municipality:

- Honesty
- Teamwork
- Loyalty
- Commitment
- Trustworthiness

The IDP targets, for the next five years, for achieving the above **VISION** are reflected in the table overleaf:

**Table 1-1: IDP Targets and Vision**

Target	Description
Meeting Basic Needs	<ul style="list-style-type: none"> <li>Everybody will have access to adequate sanitation</li> <li>Everybody will have clean water</li> <li>Everybody will have shelter</li> <li>The bucket system will be eradicated</li> <li>Some areas will be conserved and protected for their vulnerable biodiversity</li> </ul>
Stimulating the Economy	<ul style="list-style-type: none"> <li>Skill of labour force will be improved to increase economic productivity</li> <li>Unemployment will be halved</li> </ul>
Improving Service Delivery	<ul style="list-style-type: none"> <li>Sound financial administration</li> <li>Payment level of 80%</li> </ul>
Capacitating Local Government	<ul style="list-style-type: none"> <li>Skilled staff</li> <li>Effective community participation</li> <li>Good effective administration</li> </ul>

In order to guide formulation of the Kamiesberg SDF, the adopted development objectives have been grouped under the following Spatial Themes:

**Table 1-2: Development Objectives and Spatial Themes**

IDP Objective	Spatial Theme
<b>Meeting Basic Needs</b> <ul style="list-style-type: none"> <li>A diverse level of services to suit affordability by users;</li> <li>Planning and development to facilitate social integration;</li> <li>Recognising and catering for a diverse range of social and economic affordability;</li> <li>Environmentally friendly developments;</li> <li>Achieve social integration;</li> <li>Dispersed settlements to be linked to economic wellbeing.</li> </ul>	<ul style="list-style-type: none"> <li>Basic needs focus</li> <li>Environmental management</li> <li>Spatial fragmentation</li> <li>Linkages and access</li> </ul>
<b>Stimulating the Economy</b> <ul style="list-style-type: none"> <li>The economy is directly related and dependant on the movement of goods and people, thus requiring a: <ul style="list-style-type: none"> <li><i>High level of accessibility</i></li> <li><i>High convenience level.</i></li> </ul> </li> <li>Low income settlements must be linked to economic well-being.</li> <li>Concentrating on social and economic opportunities.</li> <li>Promote the tourism industry as a means of job creation.</li> <li>Promote the regional economic hub called The Living Edge to promote job creation.</li> <li>Promote SMME development.</li> <li>Promote agricultural livestock farming for upcoming farmers to become commercial farmers.</li> <li>Identify role-players and stakeholders related to the identified key tourism experiences.</li> </ul>	<ul style="list-style-type: none"> <li>Basic needs focus</li> <li>Land use management</li> <li>Linkages and access</li> </ul>

IDP Objective	Spatial Theme
<b>Improving Service Delivery</b> <ul style="list-style-type: none"> <li>• Achieve social integration;</li> <li>• Create equal opportunities (but still recognise diverse range of social and economic affordability);</li> <li>• Formulating and applying policy and regulations that will protect and enhance the quality of life and investment;</li> <li>• Adherence to the fixed development priorities in accordance with approved budgets.</li> </ul>	<ul style="list-style-type: none"> <li>• Basic needs focus</li> <li>• Spatial fragmentation</li> </ul>
<b>Capacitating Local Government &amp; Good Governance</b> <ul style="list-style-type: none"> <li>• Being consistent in the application of policy, particularly the IDP and SDF;</li> <li>• High levels of service delivery;</li> <li>• The pursuit of efficient and cooperative governance;</li> <li>• Countering the fragmentation in planning and investment;</li> <li>• The deepening of participatory democracy which entails intergovernmental partnerships and citizenships.</li> </ul>	<ul style="list-style-type: none"> <li>• Land use management</li> <li>• Basic needs focus</li> </ul>

## 1/5. SPATIAL DEVELOPMENT IMPLICATION OF THE VISION

### 1.5.1 Basic Needs Focus

The sectors identified by the IDP as having economic growth and investment potential are:

- Livestock grazing,
- Mining and
- Tourism

Additionally, two emerging sectors are developing, namely:

- Aquaculture and
- Conservation and Ecological Restoration

These sectors can, however, not provide enough employment to address the level of unemployment in the area. The Municipality also does not have the necessary components or characteristics to be developed into an economic powerhouse. This is due to the many challenges that face the Kamiesberg Municipality, of which includes the following:

- The scarcity of water in the area is one of the biggest concerns.
- Roads are a major concern; all roads in the area are gravel, except for the N7 from Cape Town to Namibia.
- There are no railways, harbours and airports.
- Low education levels resulting in the lack of skills and qualifications.
- Majority of the population live in dispersed settlements, approximately 80 km from each other and connected with gravel roads.
- Downscaling of the mining industry of which this is the core employment source in the area.

Accordingly, the Municipality should focus on its strengths, that being, the ability to ***improve the quality of life of its residents by providing the necessary basic services and infrastructure***. The spatial consideration necessary to improve the basic essential services and infrastructure delivery are:

1. To identify the areas in greatest need of basic essential services.
2. To ensure equitable distribution of infrastructure and services.
3. For scarce higher order resources such as hospitals, it is important that these resources are situated where there will be optimum usage and accessibility.
4. To provide affordable and sustainable level of housing, services and infrastructure.
5. To ensure that environmental factors and constraints are taken into account in the delivery of services.
6. To establish and maintain clear communication channels and the involvement of all relevant stakeholders and organizations.

### **1.5.2 Linkages and Access**

In order to achieve this IDP objective, efficient and effective linkages and good accessibility are essential for there to be:

- Growth in the tourism industry;
- Accessibility to the tourism products;
- Linkages to other regions;
- Affective service delivery;
- Access to internal and external markets for the Agriculture industry;
- Access to external markets for the Mining industry.

Spatially it is important to:

1. Create good links between major towns and external markets.
2. Have sufficient road networks surrounding major service and retail centres, allowing accessibility from surrounding settlements.
3. Create priority areas where there is a need to upgrade access in order to provide basic infrastructure and services.
4. Create consolidation and integration of spatial development.
5. Identify products, nodes and facilities that require linkage.

### **1.5.3 Spatial Fragmentation**

Spatially fragmented settlement patterns, as clearly in the case of the Kamiesberg Municipality, often consist of low density, sprawling settlement areas that are costly and difficult to service. Land use management is especially important to restrict settlement sprawl.

The spatial considerations necessary to prevent further spatial fragmented settlement patterns are:

1. Establish development edges around settlements.
2. Create urban efficiency and social integration.
3. Promote the efficient use of existing infrastructure.
4. Protect certain naturally sensitive areas.

#### **1.5.4 Land Use Management**

Kamiesberg is situated in the Succulent Karoo, one of South Africa's three biodiversity hotspots and the only arid hotspot in the world. Two of the priority areas in the SA National Biodiversity Institute Plan are located in this Municipality. Conservation International is willing to conserve the areas and contribute to tourism development in the area. The land use management system should thus make provision for the conservation of these identified areas.

The Land Tenure System influences the type and extent of development in certain areas and therefore impacts spatially on the Municipality. In the Kamiesberg Municipality land tenure in the communal areas is being addressed through the *Transformation of Certain Rural Areas Act of 1998* (TRANCRAA). Land acquisition is further undertaken through the Municipal Commonage Programme, which is one of a number of redistribution options available through the National Land Reform Programme. This type of municipal commonage acquisition requires appropriate land use management systems.

Livestock farming has been targeted, as a sector for economic growth and therefore, areas identified as suitable for livestock farming must, if at all possible, be used for this purpose.

Land use and land management should strive to:

1. Protect and enhance current investment.
2. Promote sustainable livelihoods.
3. Facilitate the activation of economic multipliers.

#### **1.5.5 Environmental Management**

Land Use Planning and Development in the Kamiesberg Municipality should strive to protect the existing natural, environmental and cultural resources. Environmental management principles dictate that development must be sustainable, and not to the detriment of future prospects for development. This places great emphasis on the linkage between sound land use management and environmental management.

### **1/6. COMPETITIVE ADVANTAGES**

The following competitive advantages were identified in the Kamiesberg IDP (IDP 2010-2011):

- The surface of Kamiesberg is 1.3% of Northern Cape, making it suitable for farming with livestock on huge areas.
- Situated along the western part of Atlantic Ocean. The nutrient rich Benguela current that runs along the coast sustains an abundance of marine life that give rise to enormous potential for the development of fishing and mariculture industries. We have the most potential out of any area along the South Africa coast and indicators show that mariculture offers sufficient growth potential to replace diamond mining. Hence we engaged with the Provincial Government and FAMDA to develop new mariculture ventures in area.
- Kamiesberg is hot to many different deposits of minerals and mining will play an important part in our economy whilst minerals are depleted in our neighbouring municipalities and elsewhere in the Province.
- Kamiesberg Municipality is situated in the Succulent Karoo, one of South Africa's three biodiversity hotspots and the only arid hotspot in the world. Two of the priority areas in the South African National Biodiversity Institute Plan are located in Kamiesberg Municipality. Conservation International and other

conservation donor groups are willing to conserve the areas and contribute to tourism development in our area. That opens the door for a conservation based economy.

- The Namaqua National Park lies within the Kamiesberg Municipality and is expanding to the Atlantic Ocean till the Groenriver Mouth. It is a national tourism asset and attraction which boosts tourism and the creation of jobs.
- Kamiesberg has an abundance of consistent strong wind especially along the coast, which makes wind energy a possibility. We have already engaged with an American entrepreneur and he put up test masks along the coast to research the viability of wind energy.
- As well as an abundance of sunshine and hot temperatures which can also open up a new industry namely solar heating. Kamiesberg is the place for alternative energy.

Opportunities for investors lie in mariculture, alternative energy as an industry, tourism, mining, livestock and conservation based economy.

## 1/7.SPATIAL REPRESENTATION OF MAIN RELEVANT PRINCIPLES AND STRATEGIES

The following key focus areas, drawn from the 2006-2010 IDP, will become the basis for the structuring of the proposals section of the Municipal SDF.

**Table 1-3: Sectors and Strategies**

Sector	Strategy
Housing	<ul style="list-style-type: none"> <li>• Township establishment in Koiingnaas</li> <li>• Infill areas at Lepelsfontein (60 erven) and Klipfontein (120 erven)</li> <li>• Housing provision plan</li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li>• Upgrade gravel roads</li> <li>• Upgrade access roads to towns</li> <li>• Alternative water sources (bulk water pipelines)</li> <li>• Electricity provision</li> </ul>
Economic	<ul style="list-style-type: none"> <li>• Community conservation at Rooiberg, Weeskind and Eselskop</li> <li>• Tourism as meaning of job creation</li> <li>• Hondeklipbaai - potential to resurrect the fishing industry, notably in mariculture, does exist</li> <li>• Establish Boerbok companies</li> <li>• Process essential oils</li> <li>• Municipal commonage programme (grazing)</li> <li>• Develop abalone project in Hondeklipbaai</li> <li>• N7 Cape Town to Namibia tourism &amp; economic link</li> </ul>
Mining	<ul style="list-style-type: none"> <li>• Wollastonite plant in Garies</li> <li>• Supply alternative energy</li> <li>• Plant for manufacturing of solar heating equipment</li> <li>• Wind energy</li> </ul>
Tourism	<ul style="list-style-type: none"> <li>• Upgrade tourism routes</li> <li>• Hiking trails on Roodebergkloof conservation farm</li> <li>• Waterfront development in Hondeklipbaai</li> <li>• Hondeklipbaai to cater for increasing numbers of holidaymakers, both campers and those who have bought plots for holiday homes</li> </ul>
Conservation	<ul style="list-style-type: none"> <li>• Living Edge project</li> <li>• Hiking trails in Roodebergkloof conservation farm</li> <li>• Develop camping sites in along the coast</li> </ul>

Sector	Strategy
	<ul style="list-style-type: none"> <li>• Manage grazing</li> </ul>
Social Development and Poverty Relief, Health and Safety	<ul style="list-style-type: none"> <li>• Access to job opportunities, especially women</li> <li>• Crime prevention &amp; combat substance abuse</li> <li>• Sport &amp; recreation development</li> <li>• Facilitate land claims</li> </ul>
Sustainable Municipal Services/Good governance	<ul style="list-style-type: none"> <li>• Human resource development strategy</li> <li>• Free basic services policy</li> <li>• Better payment culture</li> <li>• Develop and implement anti-corruption strategy</li> <li>• Communication and public participation</li> </ul>

The above strategies are spatially represented in the figure following:

**Figure 1-1: Main Principles and Strategies as per IDP**

**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 1-1 MAIN PRINCIPLES AND**  
**STRATEGIES AS PER IDP**

**Namakwa DMA**  
**NORTHERN CAPE**  
**PROVINCE**

**Legend**

**INFRASTRUCTURE**

Bulk water (Existing)

Bulk water (Future)

**ECONOMIC**

Economic Opportunities



Municipal Commonage Programme (grazing)



**MINING**

Diamond (Alluvial)

Wollastonite

Mines & Quarries

CRA Area

Nuclear Waste Site

**TOURISM**

Tourism Routes (seasonal flour tourism)

**CONSERVATION**

Conservation Areas

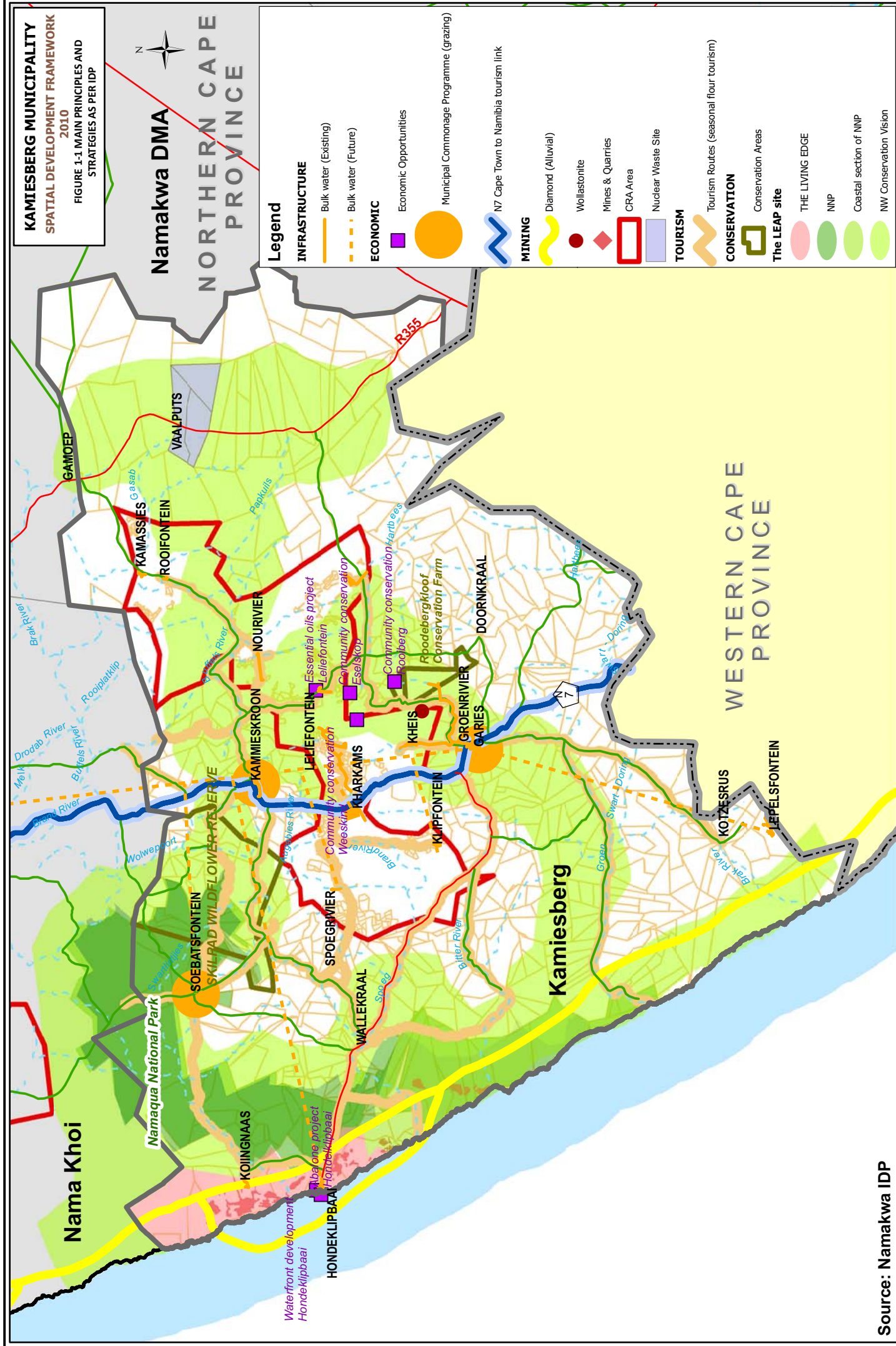
**The LEAP site**

THE LIVING EDGE

NNP

Coastal section of NNP

NW Conservation Vision



Towns/Settlements

Kamiesberg

National Road (tarr)

District Road (gravel)

Main Road (gravel)

Perennial River

Non-Perennial River

Railways

Source: Namakwa IDP

**aurecon**

0 10 20 40  
 Kilometers



## 1/8. THE KAMIESBERG MUNICIPAL TURN-AROUND STRATEGY: PRIORITY AREAS

The rollout of the Local Government Turn Around Strategy (LGTAS), which aims to speed up and improve service delivery, has kicked off. The turnaround strategy was developed following last years' service delivery protests where communities were demanding infrastructure, housing, electricity and water, among other essentials.

The LGTAS was approved by Cabinet on 2 December 2009. This process, which is driven by the Department of Co-operative Governance and Traditional Affairs (COGTA), has started end of January 2010.

The process is currently in phase 2 which entails the consolidation of the municipal turnaround strategies priorities with the IDPs and budgets of municipalities.

The table below lists the Kamiesberg Municipality Turn Around pre-2011 priority areas. The priority focal areas that can be linked to the current development strategies contained in the Kamiesberg IDP are basic service delivery and local economic development. The Municipality is currently lacking an economic development strategy, and it is envisaged that a draft strategy will be in place by June 2010.

**Table 1-4: Priorities and Targets**

No.	Priority Turn Around Focal Area	January 2010 (Current Situation/ Baseline)	Target for December 2010 (Changed Situation)
<b>1.</b>	<b>Basic Service Delivery</b>		
1.1	Access to water, management and maintenance	<ul style="list-style-type: none"> <li>Water supply dependant on boreholes.</li> <li>Water supply problematic.</li> <li>90% of Households have access to water in home.</li> <li>Access to water in Lepelsfontein up to RDP standards.</li> </ul>	<ul style="list-style-type: none"> <li>100% households access to water, including Lepelsfontein.</li> </ul>
1.2	Access to sanitation, management and maintenance	<ul style="list-style-type: none"> <li>100% access to sanitation.</li> <li>Only residents of Garies and Kamieskroon have access to sewerage, the rest have access to VIP toilets.</li> <li>Waterborne sewerage hampered due to water scarcity.</li> </ul>	<ul style="list-style-type: none"> <li>100 % access (non-waterborne)</li> </ul>
1.3	Access to electricity, management and maintenance	<ul style="list-style-type: none"> <li>All households in municipal area have access to electricity except in Lepelsfontein.</li> </ul>	<ul style="list-style-type: none"> <li>100% access to electricity by providing all households in Lepelsfontein with electricity.</li> </ul>
1.5	Access and maintenance of municipal roads	<ul style="list-style-type: none"> <li>Municipal roads in a very bad condition.</li> <li>No funds, equipment or staff to maintain / upgrade roads.</li> <li>District and Provincial roads all in a bad condition.</li> <li>Municipality has applied for MIG funding to address roads.</li> </ul>	<ul style="list-style-type: none"> <li>56 km of gravel roads upgraded by December 2010.</li> </ul>
1.6	Formalisation of informal	<ul style="list-style-type: none"> <li>No informal settlements.</li> </ul>	<ul style="list-style-type: none"> <li>No informal settlements</li> <li>Re-negotiate SLP's with</li> </ul>

No.	Priority Turn Around Focal Area	January 2010 (Current Situation/ Baseline)	Target for December 2010
	settlements	<ul style="list-style-type: none"> <li>Township establishment underway in Koiingnaas (De Beers). Transfer of Koiingnaas to Kamiesberg will however have severe financial implications.</li> </ul>	<ul style="list-style-type: none"> <li>mining houses.</li> <li>SPL's should be linked to capital expenditure mining houses.</li> </ul>
1.7	Infill areas	<ul style="list-style-type: none"> <li>Lepelsfontein (60 erven) and Klipfontein (120 erven) have infill areas. Business plans for the building of houses submitted to COGHSTA.</li> </ul>	<ul style="list-style-type: none"> <li>Completion of 30 houses in Lepelsfontein and 60 houses in Klipfontein.</li> </ul>
<b>2.</b>	<b>Local Economic Development</b>		
2.1	LED Strategy adopted by Council	<ul style="list-style-type: none"> <li>No strategy in place.</li> </ul>	<ul style="list-style-type: none"> <li>Draft LED strategy developed by June 2010.</li> </ul>
2.2	LED plan aligned to the PGDS and adopted by Council	<ul style="list-style-type: none"> <li>No strategy in place to align to PGDS.</li> </ul>	<ul style="list-style-type: none"> <li>Draft LED strategy developed by June 2010.</li> </ul>
2.3	LED Manager appointed	<ul style="list-style-type: none"> <li>No</li> </ul>	<ul style="list-style-type: none"> <li>Appointing LED Manager.</li> </ul>

## 1/9. ALIGNMENT OF MUNICIPAL VISION WITH THAT OF THE DISTRICT

The issues identified by the municipality are not in conflict with District wide IDP issues and priorities. It is essential that the vision of the Kamiesberg Municipality be aligned with that of the Namakwa District to ensure alignment with other planning initiatives.

The developmental focus in the Namakwa District shifted during the last couple of years from infrastructure development to economic development. This is also reflected in the Namakwa District Growth and Development Strategy. There are, however, certain infrastructure necessary for development to take place namely the provision of roads and maintenance thereof, the provision of bulk water supply and as one of the social socio-economic components the supply of housing. (Namakwa District IDP 2006-2011, First Revision 2008-2009).

The present **Vision** of the Namakwa District is, **“The establishment of a development-orientated and economically viable region to ensure sustainable growth in order to establish, improve and promote committed, strong local structures, within the Namakwa Region.”**<sup>1</sup>

Certain goals were set and various strategies developed for the realisation of the vision. A mission was prepared to comply with this vision, i.e.

- Economic development
- Development, upgrading and maintenance of basic infrastructure
- Development of human resources
- Sustainable management and optimal utilisation of operational and natural resources
- Creating of a safe, healthy and investment friendly environment
- Ensuring friendly, credible and transparent services and client satisfaction.

It should be the priority of the Namakwa District Municipality to provide and develop “shared services” by providing the necessary capacity to undertake and/or manage proper spatial planning and land use

<sup>1</sup> (Namakwa District IDP, 2006-2011, adopted August 2006)

management within each of the local municipal areas. This will ensure that each local Municipality has adequate access to sound technical skills relating to forward planning and land use management (overseeing planning permissions, rezoning, subdivisions, and consolidations and building plan approvals).

## **1/10.DELINEATION OF THE MUNICIPAL BOUNDARY, SETTLEMENTS, FARMS AND WARDS**

Kamiesberg Municipality is a category B Municipality (NC064), established in 2001 in accordance with the demarcation process. The Municipality is located within the extreme western parts of the Northern Cape Province, and falls within the boundaries of the Namakwa District. The Municipality provides services to the towns and settlements of Garies, Hondeklipbaai, Kamassies, Kamieskroon, Kharkams, Kheis, Klipfontein, Leliefontein, Lepelsfontein, Nourivier, Paulshoek, Rooifontein, Soebatsfontein, Spoegrivier, and Tweerivier. The nearest business centre is Springbok, which is about 150km away.

The Kamiesberg Municipality serves a geographical area of 11,742km<sup>2</sup> and is divided into four municipal wards. The Municipality provides services to the towns and settlements mentioned above, and although there are in excess of 150 farms within the area, the Municipality does not provide any services to farms.

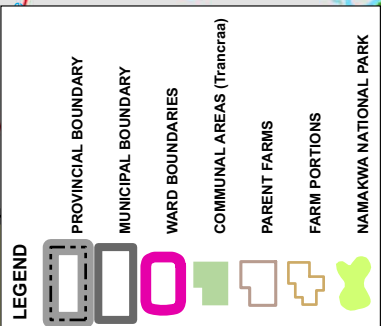
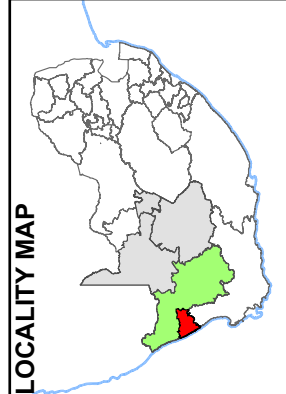
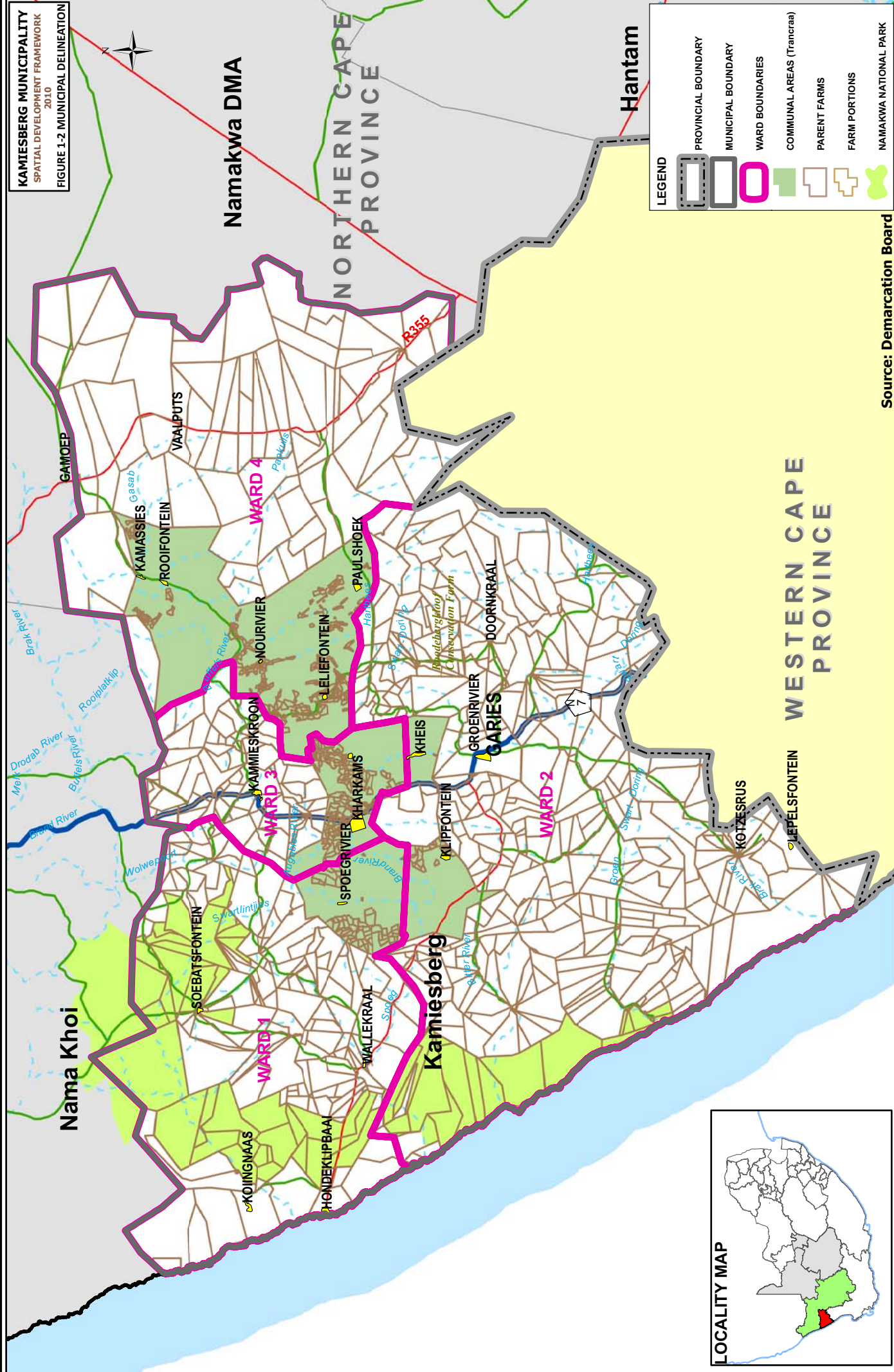
The table below provides the demographic figures of the area:

**Table 1-5: Demographics**

Community Survey 2007							
Northern Cape		Namakwa DC		Kamiesberg LM		Northern Cape/District	
Population	Households	Population	Households	Population	Households	% of NC Population	% of District Population
1 058 057	264 657	126 498	36 435	12 117	3 881	1%	10%

The municipal delineation is illustrated in the figure following:

**Figure 1-2: Municipal Delineation**



Source: Demarcation Board



## 1/11.SPATIAL REPRESENTATION OF NEEDS AND MULTI SECTOR PROJECTS

The Namaqualand economy is clearly in crisis. The mining industry is on the decline and the fishing industry is vulnerable to changes in fish stocks and quotas. While agriculture in the region has apparently demonstrated some comparative advantages, it is vulnerable too, and constrained by the availability of water. Apart from tourism, which has been providing some boost to the area (particularly in scenic coastal areas and during the wild flower season) there are few signs of dynamic development. One potential area of growth, however, is aquaculture.

The following lead sectors in the regeneration of the Namaqualand economy have been identified:<sup>2</sup>

- Macro projects linked to the mining-manufacturing complex;
- Small Scale Mining;
- Fisheries, Mariculture and Agriculture; and,
- Tourism.

### 1.11.1 Five Year Implementation Plan

No municipal projects were listed for the Kamiesberg Municipality in the IDP 2006-2011, 3<sup>rd</sup> Revision 2010-2011, but the following needs were listed under the Five Year Implementation Plan (2006-2011):

**Table 1-6: Needs Listed in the Five Year Implementation Plan**

Need	Priorities	
Service Delivery and Infrastructure Development	<ul style="list-style-type: none"> <li>• Upgrading of access roads</li> <li>• Paving of main streets in towns</li> <li>• Flexibility on alternative water sources</li> <li>• Investigate gaps in water systems and write funding business plans</li> <li>• Upgrading of water networks in Kamassies</li> <li>• Upgrading of water networks in Spoegrivier</li> <li>• Upgrading of water networks in Lepelsfontein</li> <li>• Electrification of Soebatsfontein town</li> <li>• Electrification of Lepelsfontein town</li> <li>• Refurbish electrical networks in Hondeklipbaai</li> </ul>	<ul style="list-style-type: none"> <li>• Build community hall in Lepelsfontein</li> <li>• Build community hall in Kamassies</li> <li>• Develop sports grounds in Spoegrivier</li> <li>• Build 34 houses in Nourivier</li> <li>• Build 30 houses in Paulshoek</li> <li>• Build 53 houses in Spoegrivier</li> <li>• Build 42 houses in Hondeklipbaai</li> <li>• Build 40 houses in Garies</li> <li>• Build 40 houses in Kharkams</li> <li>• Build 120 houses in other towns</li> </ul>
Local Economic Development	<ul style="list-style-type: none"> <li>• Establish private and community conservation areas</li> <li>• Apply for land under land reform programme</li> <li>• Develop spatial development plan</li> <li>• Waterfront development in Hondeklipbaai</li> <li>• Empower women in mining</li> </ul>	<ul style="list-style-type: none"> <li>• Upgrading of Garies caravan park and information centre</li> <li>• Establish Kharkams cultural centre</li> <li>• Building “kookskerms” in communities</li> <li>• Home stays/guest accommodation</li> <li>• Design detailed tourist map</li> <li>• Calendar of cultural activities</li> </ul>

<sup>2</sup> Final Draft Conceptual Economic Plan - Namaqualand



Need	Priorities	
	<ul style="list-style-type: none"> <li>Fabrication of granite products locally</li> <li>Complete Living Edge project</li> <li>Roodebergskloof guest farm</li> <li>Hiking trails on Roodeberg</li> <li>Upgrading of tourist roads</li> <li>Upgrading of MPRC and Hondeklipbaai caravan park</li> </ul>	<ul style="list-style-type: none"> <li>Develop tour guide business</li> <li>Restructure Kamiesberg Tourist Association</li> <li>Abalone project in Hondeklipbaai</li> <li>Tourism Experience Development – Kamiesberg Route</li> </ul>
Municipal Transformation and Institutional Development	<ul style="list-style-type: none"> <li>Develop and implement anti-corruption strategy</li> <li>Town proclamation of Koiingnaas</li> <li>Crime prevention plan</li> <li>Set up and implement new education roll</li> </ul>	<ul style="list-style-type: none"> <li>Facilitate land claims</li> <li>Implement credible integrated development plan</li> <li>Implement effective performance</li> </ul>
Good Governance and Public Participation	<ul style="list-style-type: none"> <li>Accept and implement anti-corruption strategy</li> <li>Establish Communication Forum in municipal area</li> <li>Develop communication strategy and implement it</li> <li>Accept policy on community participation and implement it</li> <li>Appoint and train ward committees in all wards</li> <li>CDW's appointed and functional</li> </ul>	<ul style="list-style-type: none"> <li>Train community members and involve them in budgeting, performance management and integrated development planning</li> <li>management system</li> <li>Fill vacant posts an organogram</li> <li>Buy new fire fighting equipment and provide training</li> <li>Revitalize Batho Pele campaign and customer care service</li> </ul>
Financial Viability	<ul style="list-style-type: none"> <li>Set financial viable indicators and get targets</li> <li>Better payment culture to 85%</li> </ul>	<ul style="list-style-type: none"> <li>Unqualified audit report</li> <li>Sound financial administration</li> </ul>

### 1.11.2 Three Year Implementation Plan

Table 1-7: Three Year Implementation Plan

PROJ No.	Project Description	Human Resources	2009/10	2010/11	2011/12
	<b>INEP</b>				
3-1	Electrification of Lepelsfontein bulk	Technical dept.	R2 000 000		
3-2	Lepelsfontein household electrical connections	Technical dept.		R700 000	R1000 000
3-3	Refurbish electricity network HKB	Technical dept.			R1500 000
3-4	Upgrading of Garies bulk supply	Technical dept.		R700 000	
3-5	Connect electricity to 195 houses	Technical dept.	R200 000		
3-6	Spoegrivier household connection	Technical dept.		R300 000	
	<b>MIG</b>				
3-7	Upgrade water network Spoegrivier	Technical dept.	R 1 100 000		
3-8	Upgrade desalination plant Kheis	Technical dept.	R 950 000		
3-9	Upgrade desalination plant Klipfontein	Technical dept.	R 950 000		
3-10	Upgrade desalination plant Spoegrivier	Technical dept.	R 950 000		

PROJ No.	Project Description	Human Resources	2009/10	2010/11	2011/12
3-11	Upgrade desalination plant Lepelsfontein	Technical dept.	R 950 000		
3-12	Upgrade desalination plant Soebatsfontein	Technical dept.	R 950 000		
3-13	Bulk supply of water to Lepelsfontein	Technical dept.	R1600 000		
3-14	Install prepaid meters in Tweerivier, Leliefontein en Kharkams	Technical dept.		R3 100 000	
3-15	Bulk supply of water to Lepelsfontein	Technical dept.	R 1 500 000	R 1500 000	
3-16	Build new reservoir in Garies and Kheis and installation of telemetry system	Technical dept.		R 3 800 000	
3-17	Build desalination plant in Hondekliptbaai	Technical dept.		R 2 000 000	R6 000 000
3-18	Kharkams upgrading of sport facilities				R 5 000 000
<b>Other Funding Projects</b>					
3-19	Upgrade HKB beachfront	Economic dept.	R890 000		
3-20	Roodebergkloof guest farm	Economic dept.	R4 000 000		
3-21	Upgrade roads	Technical dept.		R650 000	
3-22	Tar Garies circle road	Technical dept.	R2000 000		
3-23	Coast Care	Economic dept.	R800 000	R500 000	
3-24	MPRC	Economic dept.			
3-25	Caravan park Hondekliptbaai	Economic dept.	R400 000		
3-26	Paulshoek guesthouse	Economic dept.			
3-27	Hiking trail on Weeskind	Economic dept.			
3-28	Develop Website	Economic dept.	R 50 000		
3-29	Clock-in system	Corporate dept.	R 20 000		
3-30	Upgrade telephone system	Corporate dept.	R 300 000		
3-31	Upgrade archive system	Corporate dept.	R 200 000		
3-32	Fire fighting	Technical dept.	R 102 445		
3-32	Abalone farming	Economic dept.	R17 000 000		
3-33	Drop Inn Centre	Economic dept.		R300 000	
3-34	Tweerivier Vegetable garden	Economic dept.	R 0.00		
3-35	Housing – land survey				
3-36	40 Erf sewerage connections Garies		R 467 828		
3-37	100 Erf electricity connections			R 460 000	
3-38	Tourism Experience Development – Kamiesberg Route	Economic dept.	R 100 000		
3-39	NDM Infrastructure Project	Technical dept.	R 500 000		
3-40	Lepelsfontein MPRC	Technical dept.	R 450 000		
3-41	Storm water and Kerbs	Technical dept.	R 250 000		
3-42	Installation of electricity equipment	Technical dept.	R 250 000		

PROJ No.	Project Description	Human Resources	2009/10	2010/11	2011/12
3-43	Hondeklipbaai Empowerment and Livelihood project	Economic dept.			
3-44	Rooifontein, Kamassies soup kitchen	Economic dept.			
3-45	Leliefontein soup kitchen	Economic dept.			
3-46	Garies Youth service centre	Economic dept.			
3-47	Kamieskroon Clothing and textile	Economic dept.			
	<b>Housing</b>				
3-49	Build 60 houses in Klipfontein	Technical dept.			
3-50	Build 30 houses in Lepelsfontein	Technical dept.			
	<b>Social Labour Plans</b>				
3-51	Finstone- Kamiesberg Cultural Centre	Economic dept.	R170 000		
3-52	Transhex – Hondeklipbaai Electricity Refurbishment	Economic dept.	R200 000		
<b>3-53</b>	<b>De Beers</b>				
3-54	Build access road: Paulshoek	Technical dept.		R0.00	
3-55	Build access road : Kamieskroon	Technical dept.		R0.00	
3-56	Build access road: Kharkams	Technical dept.		R0.00	
3-57	Build access road: Klipfontein	Technical dept.		R0.00	
3-58	Build access road: Kheis	Technical dept.		R0.00	
3-59	Build 30 subsidy houses in Lepelsfontein	Technical dept.		R1 840 000	
3-60	Build 60 subsidy houses in Klipfontein	Technical dept.		R 3 660 000	

### 1.11.3 Namaqua National Park: Three Year Implementation Plan

Table 1-8: National Park Three Year Implementation Plan

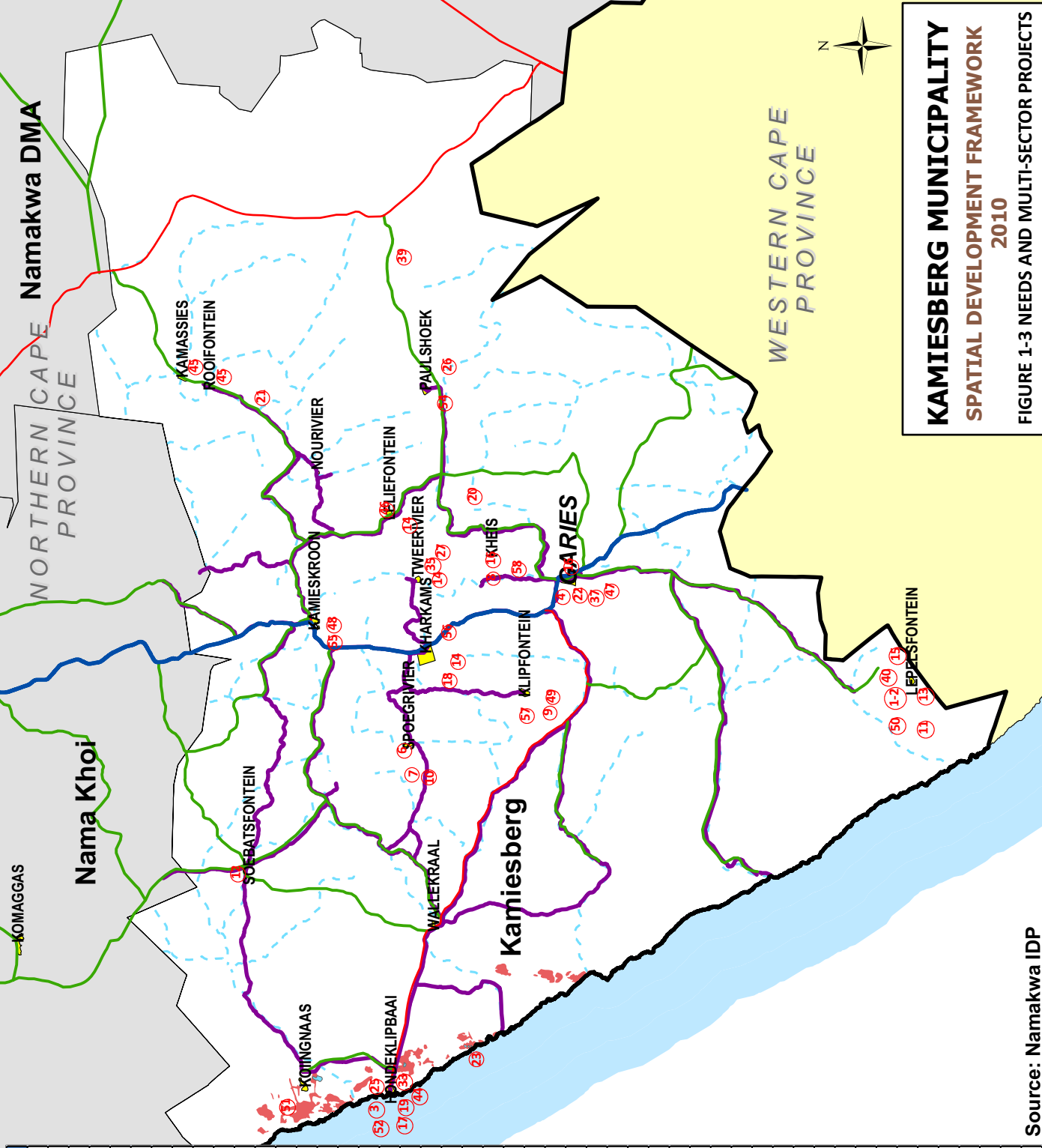
No.	Deliverable Name	Activity	Activity Name	Distance / Unit	Repe-titions	Start Date	End Date	MTEF Budget
1	Coastal clean up	1	Coastal clean up	50km	4 per annum	01/07/2008	31/03/2011	
2	Construction and maintenance of boardwalks		Construction and maintenance of boardwalks			01/07/2008	31/03/2011	
		1	Construction of boardwalks	500m				
		2	Maintenance of boardwalks	500m				
3	Establishment and maintenance of hiking		Establishment and maintenance of hiking trails			01/07/2008	31/03/2011	



No.	Deliverable Name	Activity	Activity Name	Distance / Unit	Repetitions	Start Date	End Date	MTEF Budget
	trails							
		1	Establishment of hiking trails	10km				
		2	Maintenance of hiking trails	10km				
4	Rehabilitation		Rehabilitation			01/07/2008	31/03/2011	
		1	Rehabilitation of Dunes	5 ha				
		2	Rehabilitation of Mines	5 units				
		3	Rehabilitation of disturbed area	6 ha				
5	Marine monitoring		Marine Monitoring	260	260			
6	Upgrade of recreational / camp areas		Upgrade of recreational / camp areas	5 units		01/07/2008	31/03/2011	
7	Non accredited and essential training, and social days		Non accredited and essential training and social days			01/07/2008	31/03/2011	
8	Project Management and community facilitation		Project Management and community facilitation	33		01/07/2008	31/03/2011	
Total								R8,075,000.00
12	Working for Wetlands		Rehabilitation of Wetlands	40		01/04/09	31/03/10	R1, 500 000

**Figure 1-3: Needs and Multi-Sector Projects**

PROJ.NR:	PROJECT DESCRIPTION
INEP	
1	Electrification of Lepelfontein bulk
2	Lepelfontein household electricity connections
3	Refurbish electricity network HKB
4	Upgrading of Garies bulk supply
6	Spoegrivier household connection
MIG	
7	Upgrade water network Spoegrivier
8	Upgrade desalination plant Kheis
9	Upgrade desalination plant Klipfontein
10	Upgrade desalination plant Spoegrivier
11	Upgrade desalination plant Lepelfontein
12	Upgrade desalination plant Sebatfontein
13	Bulk supply of water to Lepelfontein
14	Install prepaid meters in Tweerivier, Lepelfontein en Kharkams
15	Bulk supply of water to Lepelfontein
17	Build desalination plant in Hondeklipbaai
18	Kharkams upgrading of sport facilities
OTHER FUNDED PROJECTS	
19	Upgrade HKB beachfront
20	Rodebergkloof guestar
21	Upgrade roads
22	Tar Garies circle road
23	Coast Care
25	Caravan park Hondeklipbaai
26	Paulshoek guesthouse
27	Hiking trail on Weeskind
33	Abalone farming
35	Tweerivier Vegetable garden
37	40 Erf sewerage connections Garies
39	Tourism Experience Development – Kamiesberg Route
40	NDM Infrastructure Project
41	Lepelfontein MPRC
44	Hondeklipbaai Empowerment and Livelihood project
45	Rooifontein, Kamassies soupkitchen
46	Lepelfontein soupkitchen
47	Garies Youth service centre
48	Kamieskroon Clothing and textile
HOUSING	
49	Build 60 houses in Klipfontein
50	Build 30 houses in Lepelfontein
SOCIAL LABOUR PLANS	
51	Finstone- Kamiesberg Cultural Centre
52	Transhex – Hondeklipbaai Electricity Refurbishment
54	Build access road: Paulshoek
55	Build access road : Kamieskroon
56	Build access road: Kharkams
57	Build access road: Klipfontein
58	Build access road: Kheis



**KAMIESBERG LOCAL MUNICIPALITY  
SPATIAL DEVELOPMENT FRAMEWORK**

**LAND DEVELOPMENT PLAN**

**2010 - 2015**



**VOLUME 2**

**STATUS QUO ASSESSMENT**

# VOLUME 2. STATUS QUO ASSESSMENT

## 2/1. EXECUTIVE SUMMARY

This section of the spatial development framework aims to check whether the environment is spatially conducive and finds as follows:

**Table 2-1: Is the Environment Spatially Conducive**

The Question	The Finding
Whether there are any municipal-wide rural spatial issues.	<ul style="list-style-type: none"> <li>The Kamiesberg Municipal area is an area of 11 742km<sup>2</sup>, with 16 small non-functional villages scattered with distances of ± 100km between them.</li> <li>The environment is extremely arid and hostile and is subject to the environmental degradation processes of mining and overgrazing particularly in the communal farm land areas.</li> <li>This area is the home of the infamous area known as “Namakwa”. The Northern Cape Tourism Authority, reports that Namakwa, as part of the Succulent Karoo, is the only arid biodiversity hotspot in the world. It contains more than 6 000 plant species, 250 species of birds, 78 species of mammals, 132 species of reptiles and amphibians and an unknown number of insects, making it the world's most diverse, arid environment. More than 40% of these species are found nowhere else on Earth<sup>3</sup>. (Northern Cape Tourism Authority, 2010)</li> <li>Transportation infrastructure is limited to poorly maintained gravel roads which in turn limits accessibility and economic development.</li> </ul>
Whether the investments and spending patterns of the Municipality are equitable and fair.	<ul style="list-style-type: none"> <li>It is found that the Municipality is not biased towards the urban areas and applied its funding equitably and fairly across the Municipality.</li> </ul>
Whether a comprehensive rural development programme initiative (CRDPI) exists.	<ul style="list-style-type: none"> <li>At present the Municipality does not possess a CRDPI. The principles of rural development programme must be encapsulated in the development vision and development strategy of the SDF.</li> </ul>
Whether existing policies, plans, resolutions and by-laws are in support of the Municipal spatial planning.	<ul style="list-style-type: none"> <li>The current policies and plans are stand-alone initiatives; however the possibility of adapting and integrating these policies into the eventual spatial emanating from the SDF is possible. None of the existing policies and plans is construed as being in conflict with one another.</li> </ul>
Whether applicable provincial and national policies and legislation have an impact on the municipal area.	<ul style="list-style-type: none"> <li>The national policy framework encapsulated by the National Spatial Development Perspective the Provincial Growth and Development Strategy, the Northern Cape Province Coastal management Plan, the Namakwa District Integrated Development Plan, read together with the Namakwa district Provincial Growth and Development Strategy, all advocate and direct the following spatial planning fundamentals : <ul style="list-style-type: none"> <li>Development should be focused and catalyst orientated which can instigate the necessary multiplier effect accelerating sustainable development.</li> </ul> </li> </ul>

<sup>3</sup> Northern Cape Tourism Authority, 2010

The Question	The Finding
	<ul style="list-style-type: none"> <li>○ The on-going implementation of the basic housing and water services program in a sustainable manner requiring thus that the fragmentation of settlements be avoided in support of integrated and compact development.</li> <li>○ Reiterates the sentiment in Principle 1 from a spatial perspective adding to that, that growth and development should be long term orientated.</li> <li>○ Requires the correction of the spatial landscape to ensure an integrated development for the benefit of all and not for segments of the population only.</li> </ul>
Whether the settlement spatial pattern is dysfunctional	<ul style="list-style-type: none"> <li>• The spatial pattern of the 16 settlements in the Kamiesberg Municipality is highly dysfunctional as : <ul style="list-style-type: none"> <li>• They are situated ±100 km apart from one another;</li> <li>• They are extremely small, most having 100 – 200 households;</li> <li>• No economic multiplier can be generated due to their limited size.</li> <li>• They play a large social and economic burden on the municipality in terms of the provision of services and infrastructure.</li> <li>• The income stream generated from these villages is minimal as the majority of the population within the Municipality is unemployed and live in very poor economic circumstances.</li> </ul> </li> </ul>
Whether there are any economically viable nodal points exist	<ul style="list-style-type: none"> <li>• There are no viable economic nodal points. There is however the potential to make a region, being the Namakwa National Park (NNP), a nodal point and Hondeklipbaai has the potential to become a coastal hotspot for mariculture, desalination plants and coastal tourism.</li> </ul>
Whether there is promising developable vacant land within the Municipal area	<ul style="list-style-type: none"> <li>• Being an extremely arid area, there is no vacant land which has a high developmental quality. However, with the provision of infrastructure the coastal zone can be considered as the area of the highest developmental qualities. It is unfortunately also the area which has been severely degraded by past mining activities.</li> </ul>
Whether there are major structuring elements, urbanisation trends which have a spatial implication.	<ul style="list-style-type: none"> <li>• Within the Kamiesberg Municipal area there are a number of structuring elements which guide and impact on the development realm within the Municipality, namely : <ul style="list-style-type: none"> <li>○ The coastal mining zone, requiring huge intervention in terms of rehabilitation and redevelopment;</li> <li>○ The NNP with its flower reserves and possible expansion of the park;</li> <li>○ The nuclear waste facility at Vaalputs;</li> <li>○ The dysfunctional settlement pattern.</li> <li>○ The road system which is inadequately developed to facilitate sustainable economic development.</li> <li>○ The absence of suitable quantum's of potable water to drive and sustain livelihoods and development.</li> </ul> </li> </ul>
Whether a systematically and functional strategic roads and transportation system exists.	<p>Apart from the N7, all other roads within the municipal area are local gravel roads of poor quality. These roads cannot sustain and boost economic growth within the municipal area.</p>
Whether basic services and infrastructure is suitable and congruent to the relevant sectors of the economy.	<ul style="list-style-type: none"> <li>• Within this area all the settlements are provided with a basic level of service however, water is so scarce that the municipality cannot adhere to National Policy of providing inhabitants with 6kl of free water. The municipality strives to provide 2kl of free water only to registered indigents. There are no fully functional water borne sewer systems and plants. Sewerage is mainly dealt with by means of VIP</li> </ul>



The Question	The Finding
	latrines.
Whether low income housing is viability located from an economic and access point of view.	<ul style="list-style-type: none"> <li>There are no specific demarcated low income areas in the Kamiesberg municipal area, all settlements are considered as being low income areas. With the exception of Garies and Hondeklipbaai, none of the settlements are situated in such a manner that they can be construed to be economically viable or have the potential to become economically viable.</li> </ul>
Whether environmental degradation, conservation and sensitive areas and the impact of development thereupon have been acknowledged.	<ul style="list-style-type: none"> <li>The entire area is considered to be environmentally sensitive, requiring major investment in the rehabilitation in the degraded mined coastal shores. The on-going protection and development of the national parks and the flower paradise within the area. The protection of the arid natural environment against farming malpractices (particularly over grazing), and harvesting of natural fauna for medicinal and other purposes is required.</li> </ul>
Whether there are agricultural potential land and land currently affected by land claims.	<ul style="list-style-type: none"> <li>Within this area agricultural potential land is envisaged as a parcel of land which can sustain at least 600 sheep or goats, thus requiring a land parcel of at least 5400 ha. Due to the rocky granite formations towards the east of the area, a viable farm increases to at least 10 000 ha. Land in this municipal area is not construed to fulfil the aspirations of the national land programme as such a vast area can only sustain one household.</li> </ul>
Whether there any major sporting nodes which are also supported by the relevant infrastructure.	<ul style="list-style-type: none"> <li>There are no sporting nodes within the area.</li> </ul>
Determining the way forward from a spatial perspective	<ul style="list-style-type: none"> <li>The current reality within the Kamiesberg Municipal area is directing development towards : <ul style="list-style-type: none"> <li>Focusing and enhancing the national parks and the tourism opportunities emanating there from.</li> <li>The catalytic redevelopment of the coastal shores to provide much needed economic opportunities. At present the first catalyst seems to be Hondeklipbaai.</li> <li>Focusing development and support on priority investment areas rather than adopting a “spread the butter” approach.</li> <li>Attempting to diversify the economy away from mining to tourism, mariculture, and associated value adding enterprises.</li> </ul> </li> </ul>

## 2/2. INTRODUCTION

### 2.2.1 Background

Section 26(c) of the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000) (MSA) requires all municipalities to compile Spatial Development Frameworks (SDF) as a core component of Integrated Development Plans (IDP). A spatial development framework is strategic and indicative in nature and is prepared on a broad scale. A SDF is meant to guide and inform land development and land use management. It should contain the following four components:

- Policy for land use management;
- Guidelines for land use management;
- A capital expenditure framework showing where the municipality intends spending its capital budget; and
- A strategic environmental assessment.

One of the most important priorities of a SDF is to focus on the existing situation or the status quo of the municipality to ensure that decisions on strategies and projects will be based on:

- Qualitative priority needs and challenges on local residents;
- Proper quantitative information on all those priority issues;
- Clear knowledge of the availability of local resources; and
- A holistic understanding of the dynamics or key issues determining the various development priorities within the municipality.

The status quo analysis is to determine the current conditions under which the municipality operates and delivers services. Deciding on the mechanism to deliver these services requires the assessment of the current situation and comparing this with future requirements.

### **2.2.2 The Context of a Spatial Development Framework**

The aim of a Spatial Development Framework is to give direction to development and take into account the need for and compatibility of land uses. The purpose of a SDF as a land use management tool is to plan, direct and control development but it does not provide land use rights. An SDF forms part of the existing land use management process and provide the necessary policies at local level to ensure the application of the development principles of sustainability, integration, equality, efficiency and fair and good governance in order to create quality of living, investors' confidence and security of tenure. The underlying philosophy of the SDF is to create a better life for all.

The SDF is a critical element of a municipal's Integrated Development Plan. The purpose of a SDF is to guide spatial planning, land development and land use management in the municipality within the framework of national and provincial spatial plan. The SDF should align and co-ordinate planning initiatives of the district.

### **2.2.3 Compilation Process and Methodology**

Based on legal requirements it is clear that the critical elements of a SDF should be a written document and a map(s) which indicate the following:

- Preferential and focus areas for certain types of land uses;
- The location of projects identified as part of the IDP planning process;
- Indicate the desired direction of urban expansion and the most appropriate use of vacant land where appropriate and desirable;
- A business plan for implementation of the SDF.

The status quo component of the 2010 SDF was compiled by:

- The assessment of all existing documentation made available by the local authority;
- Interviews with the head of Departments and or their authorized representatives;
- A workshop with the Municipality's IDP committee on 7 July 2010, where the initial findings were debated, enhanced and endorsed.

Based on the legal requirements, it is clear that the critical elements of a SDF should be a written document and a map(s) which indicates the following:

- ***Preferential and focus areas for certain types of land uses;***
- ***The location of projects identified as part of the integrated development planning process;***
- ***Reflect the spatial objectives and strategies contained in the IDP;***
- ***Indicate the desired direction of urban expansion and the most appropriate use of vacant land where appropriate and desirable; and***
- ***A business plan for implementation of the spatial development framework.***

The SDF is a legally binding document and should therefore be very specific and indicate the appropriate level of detail. The Local Municipality SDF must be integrated and aligned with the national, provincial and district frameworks as well as those of the adjacent local municipalities.

The SDF should highlight the vision and mission of the IDP and its spatial implication. It should confirm the interrelationship of the municipality's vision and that of the district from a spatial manifestation point of view. It should identify main relevant principles and strategies as contained in the IDP and how they translate spatially. It should delineate the municipal boundary, settlements, farms and wards. Map the area where the main pressing needs and the proposed multi-sector projects are located.

## **2/3. THE CONTEXT OF THE KAMIESBERG LOCAL MUNICIPALITY**

### **2.3.1 National and Regional Context**

With reference to the figure following, the Kamiesberg Local Municipality is situated in the western parts of the Northern Cape, along the Atlantic Ocean and falls within Namakwa District Municipality.

The municipality is located in the south western part of Namakwa District Municipality. This District Municipality is bounded in the east by Siyanda District Municipal Area (DMA) and Pixley ka Seme District Municipal Area (DMA). The district consists of a number of small towns and settlements. Springbok is the administrative head for the Namakwa District. The district municipality shares its boundary with the Western Cape in the south and Namibia in the north and the Atlantic Ocean in the west.

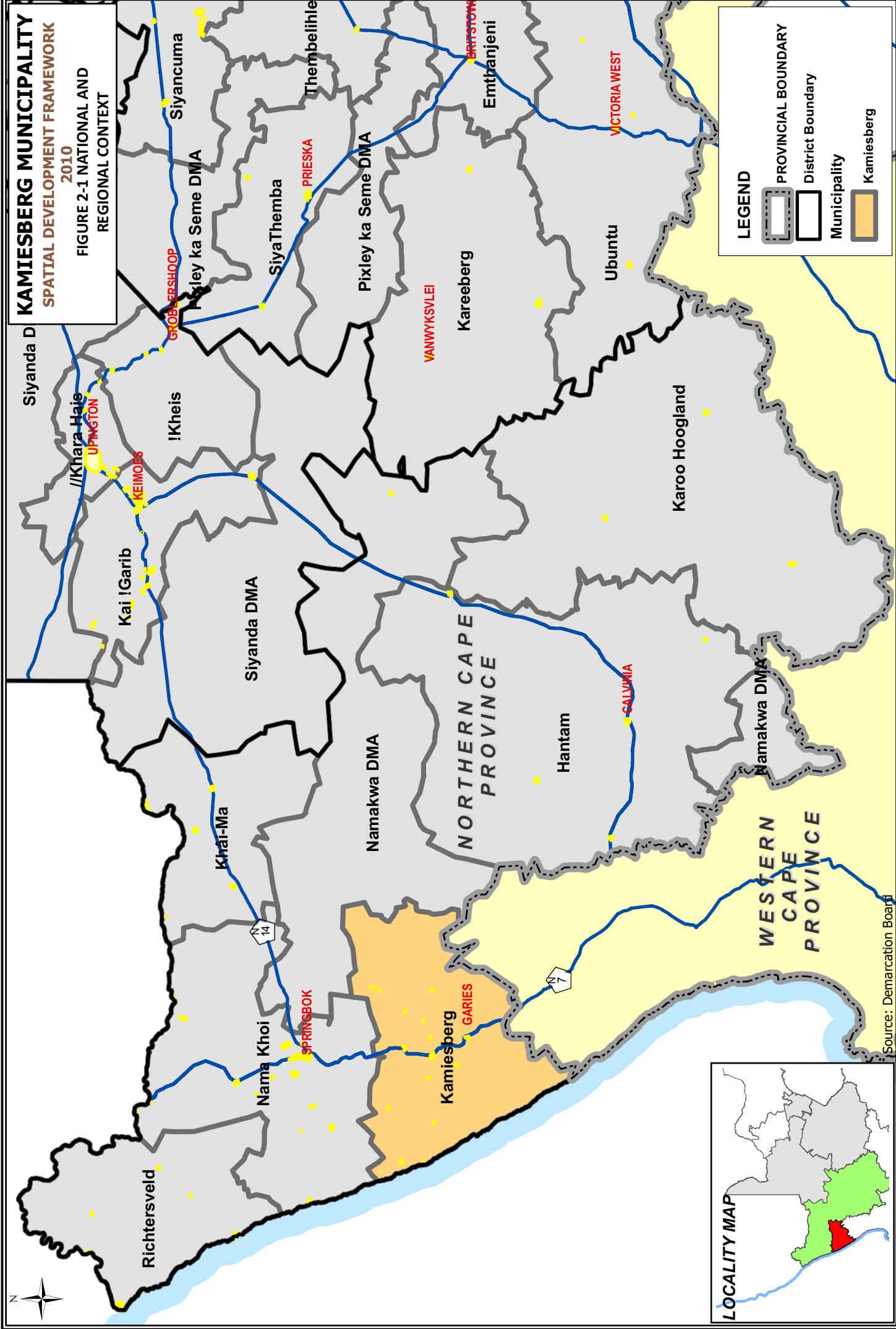
The N7 national road traverses the area in a north-south direction connecting Cape Town in the Western Cape with Windhoek in Namibia.

The distance between Springbok and Cape Town is 500km. The major towns of Steinkopf, Port Nolloth, and Alexander Bay are 49 km, 141 km and 230 km from Springbok respectively. (Kamiesberg Draft IDP 2010-2011, 2010)

**Figure 2-1: National and Regional Context**



2010



Source: Demarcation Board

### 2.3.2 Local Context

The Kamiesberg Local Municipality is a category B municipality (NC064), established in 2001 and is 11 742km<sup>2</sup> in extent. The municipality administrates and serves, apart from a vast rural area, 16 towns and settlements namely Garies, Hondeklipbaai, Kamassies, Kamieskroon, Kharkams, Kheis, Klipfontein, Leliefontein, Lepelsfontein, Nourivier, Paulshoek, Rooifontein, Soebatsfontein, Spoegrivier, and Tweerivier. The main town is Garies, and is located 450km from Cape Town and approximately 950km from Kimberley.

This area is the home of the infamous area known as “Namakwa”. The Northern Cape Tourism Authority, reports that Namakwa, as part of the Succulent Karoo, is the only arid biodiversity hotspot in the world. It contains more than 6 000 plant species, 250 species of birds, 78 species of mammals, 132 species of reptiles and amphibians and an unknown number of insects, making it the world's most diverse, arid environment. More than 40% of these species are found nowhere else on Earth<sup>4</sup>.

### 2.3.3 Topography

The topography of the Kamiesberg area is inundated with steep, rocky slopes as per the figure following.

The steep, rocky slopes are not conducive for settlement development. There are limited areas of gradients of less than 5°, which is the favoured gradient of the environmental organisations for human settlement.

### 2.3.4 Climate

The climate of Kamiesberg is hot and dry. The municipality is situated in an arid area where water is a scarce natural resource.

### 2.3.5 Geology

The Municipal area is mainly underlain by rocks belonging to the Namaqualand Metamorphic Complex. Three of the Suites present in the area are the Spektakel, Hoogoor and Little Namaqualand Suites. In addition, rocks of the Okiep Group are also present in the area.

The local context, typography and geology of the municipal area are depicted in the figures following:

Figure 2-2: Local Context

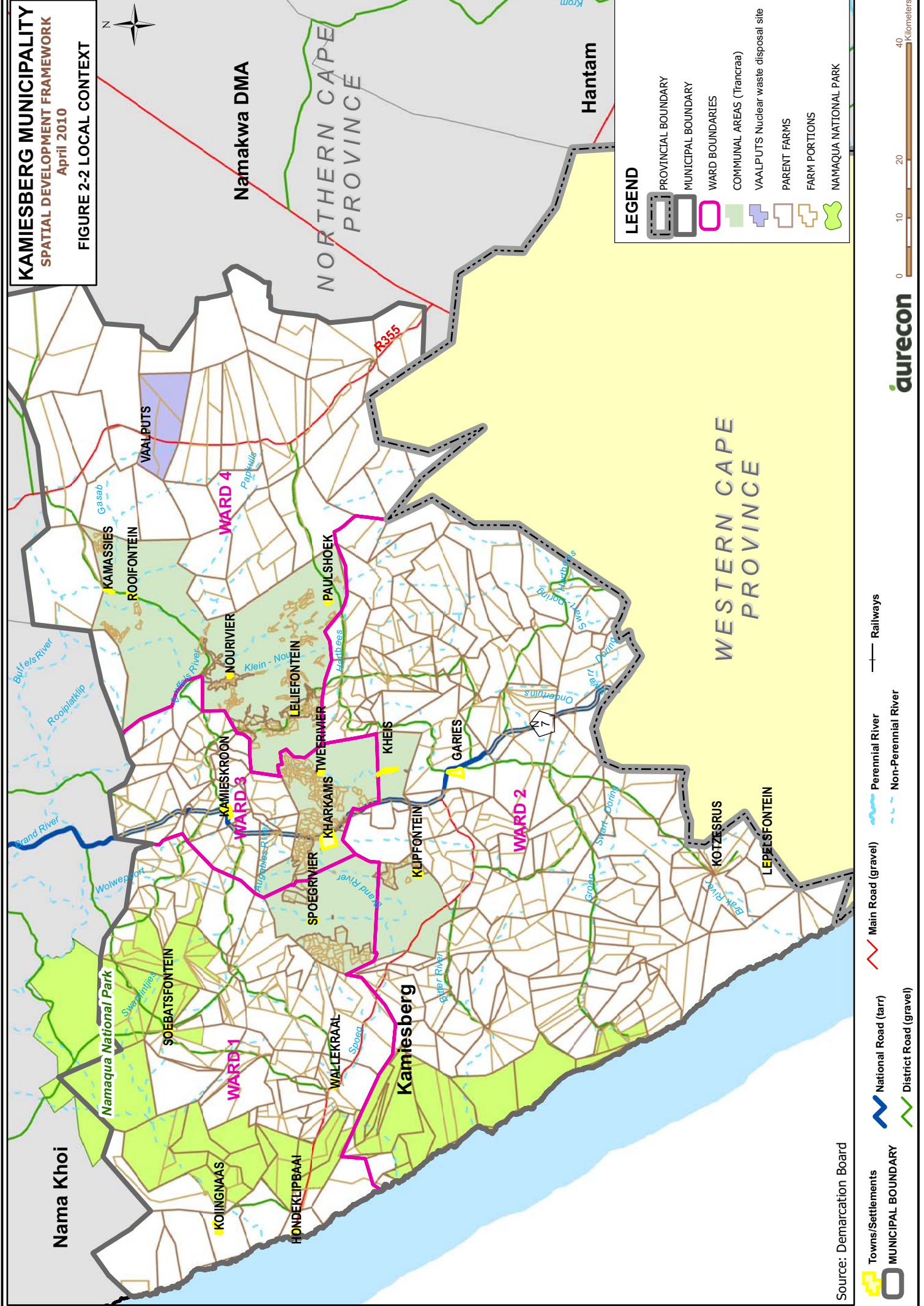
Figure 2-3: Topography

Figure 2-4: Geology

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<sup>4</sup> Northern Cape Tourism Authority, 2010

**FIGURE 2-2 LOCAL CONTEXT**



Source: Demarcation Board

Towns/Settlements  
**MUNICIPAL BOUNDARY**

National Road (tarr)  
 District Road (gravel)

Main Road (gravel)  
 Perennial River  
 Non-Perennial River

Railways

**aurecon**

0 10 20 40  
 Kilometers

**LEGEND**

- PROVINCIAL BOUNDARY
- MUNICIPAL BOUNDARY
- WARD BOUNDARIES
- COMMUNAL AREAS (Trancraa)
- VAALPUTS Nuclear waste disposal site
- PARENT FARMS
- FARM PORTIONS
- NAMAQUA NATIONAL PARK



**FIGURE 2-3 TOPOGRAPHY**

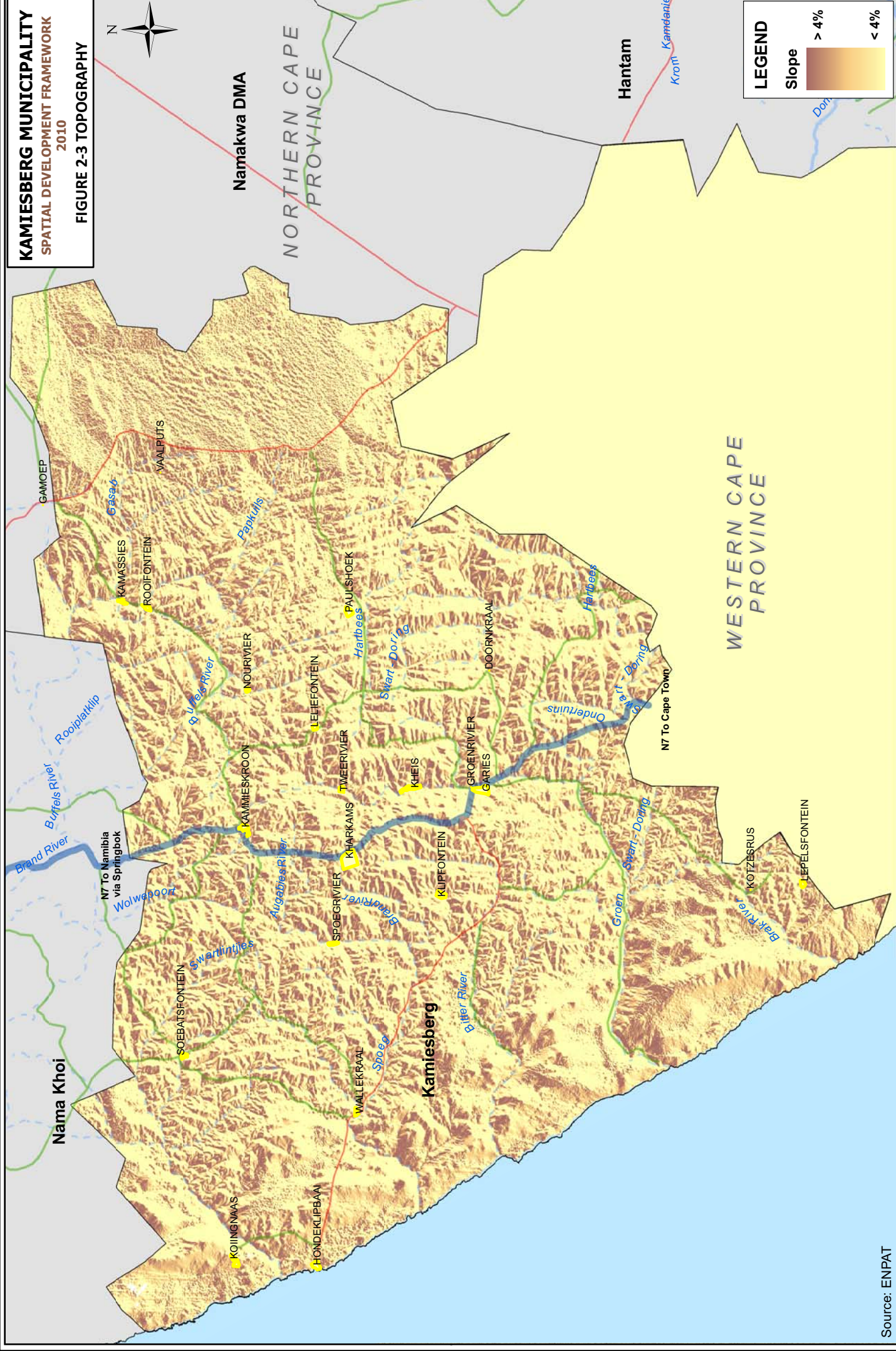
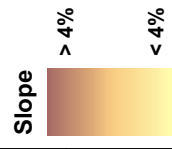


**Namakwa DMA**

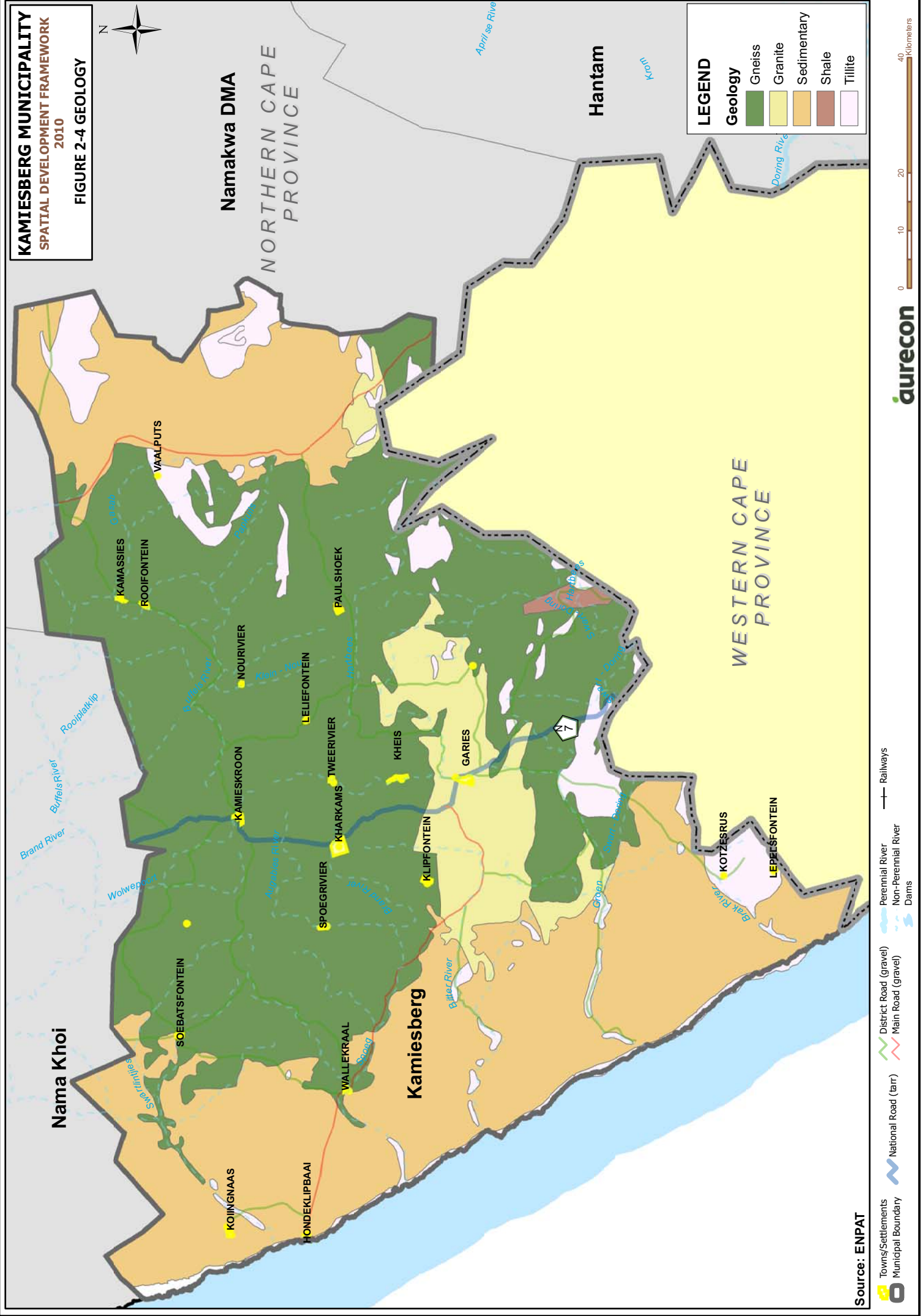
**NORTHERN CAPE PROVINCE**

**Hantam**

**LEGEND**







### **2.3.5.1 The Main Geological Types:**

The main geological types within the municipal area are:

#### **Gneiss**



Gneiss (pronounced /naɪs/ "nice") is a common and widely distributed type of rock formed by high-grade regional metamorphic processes from pre-existing formations that were originally either igneous or sedimentary rocks.

Gneiss displays compositional banding where the minerals are arranged into bands of more mafic minerals and more felsic minerals. This is developed under high temperature and pressure conditions.

#### **Granite**



Granite (pronounced /'grænit/) is a common and widely occurring type of intrusive, felsic, igneous rock. Granites usually have a medium to coarse grained texture. Occasionally some individual crystals (phenocrysts) are larger than the groundmass in which case the texture is known as porphyritic. A granitic rock with a porphyritic texture is sometimes known as porphyry. Granites can be pink to grey in colour, depending on their

chemistry and mineralogy. By definition, granite has a colour index (i.e. the percentage of the rock made up of dark minerals) of less than 25%. Outcrops of granite tend to form tors, and rounded massifs. Granites sometimes occur in circular depressions surrounded by a range of hills, formed by the metamorphic aureole or hornfels.

Granite is nearly always massive (lacking internal structures), hard and tough, and therefore it has gained widespread use as a construction stone. The average density of granite is located between 2.65[1] and 2.75 g/cm<sup>3</sup>, its compressive strength usually lies above 200 MPa and its viscosity at standard temperature and pressure is 3-6 • 10<sup>19</sup> Pa·s.[2] The word granite comes from the Latin granum, a grain, in reference to the coarse-grained structure of such a crystalline rock.

#### **Sedimentary**



Sedimentary rock is a type of rock that is formed by sedimentation of material at the Earth's surface and within bodies of water. Sedimentation is the collective name for processes that cause mineral and/or organic particles (detritus) to settle and accumulate or minerals to precipitate from a solution. Particles that form a sedimentary rock by accumulating are called sediment. Before being deposited, sediment was formed by weathering and

erosion in a source area, and then transported to the place of deposition by water, wind, mass movement or glaciers which are called agents of denudation.

The sedimentary rock cover of the continents of the Earth's crust is extensive, but the total contribution of sedimentary rocks is estimated to be only 5% of the total volume of the crust. Sedimentary rocks are only a thin veneer over a crust consisting mainly of igneous and metamorphic rocks.

Sedimentary rocks are deposited in layers as strata, forming a structure called bedding. The study of sedimentary rocks and rock strata provides information about the subsurface that is useful for civil

engineering, for example in the construction of roads, houses, tunnels, canals or other constructions. Sedimentary rocks are also important sources of natural resources like coal, fossil fuels, drinking water or ores.

The study of the sequence of sedimentary rock strata is the main source for scientific knowledge about the Earth's history, including paleogeography, paleoclimatology and the history of life.

The scientific discipline that studies the properties and origin of sedimentary rocks is called sedimentology. Sedimentology is both part of geology and physical geography and overlaps partly with other disciplines in the Earth sciences, such as pedology, geomorphology, geochemistry or structural geology.

### **Shale**



Shale is a fine-grained, clastic sedimentary rock composed of mud that is a mix of flakes of clay minerals and tiny fragments (silt-sized particles) of other minerals, especially quartz and calcite. The ratio of clay to other minerals is variable.[1] Shale is characterized by breaks along thin laminae or parallel layering or bedding less than one centimetre in thickness, called fissility.[1] Mudstones, on the other hand, are similar in composition but do not show the fissility.

### **Tillite**



Till or glacial till is unsorted glacial sediment. Glacial drift is a general term for the coarsely graded and extremely heterogeneous sediments of glacial origin. Glacial till is that part of glacial drift which was deposited directly by the glacier. It may vary from clays to mixtures of clay, sand, gravel and boulders. Clay in till may form in spherical shapes called till balls. If a till ball rolls around in a stream, it may pick up rocks from the streambed and become covered by rocks; then it is known as an armoured till ball.

Till is deposited at the terminal moraine, along the lateral and medial moraines and in the ground moraine of a glacier. As a glacier melts, especially a continental glacier, large amounts of till are washed away and deposited as outwash in sandurs by the rivers flowing from the glacier and as varves in any proglacial lakes which may form. Till may contain alluvial deposits of gems or other valuable ore minerals picked up by the glacier during its advance, for example the diamonds found in the American states of Wisconsin, Indiana, and in Canada. Prospectors use trace minerals in tills as clues to follow the glacier upstream to find kimberlite diamond deposits and other types of ore deposits.

## **2.3.6 Mining and Minerals**

The Kamiesberg Municipal area is inundated with mineral deposits and although the mining sector is currently declining it would be worthwhile to facilitate exploration to determine the possible future economic contribution of this sector to the economy of Kamiesberg. Refer to the figure following.

**Figure 2-5: Mining and Minerals**



**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-5 MINING AND MINERALS**



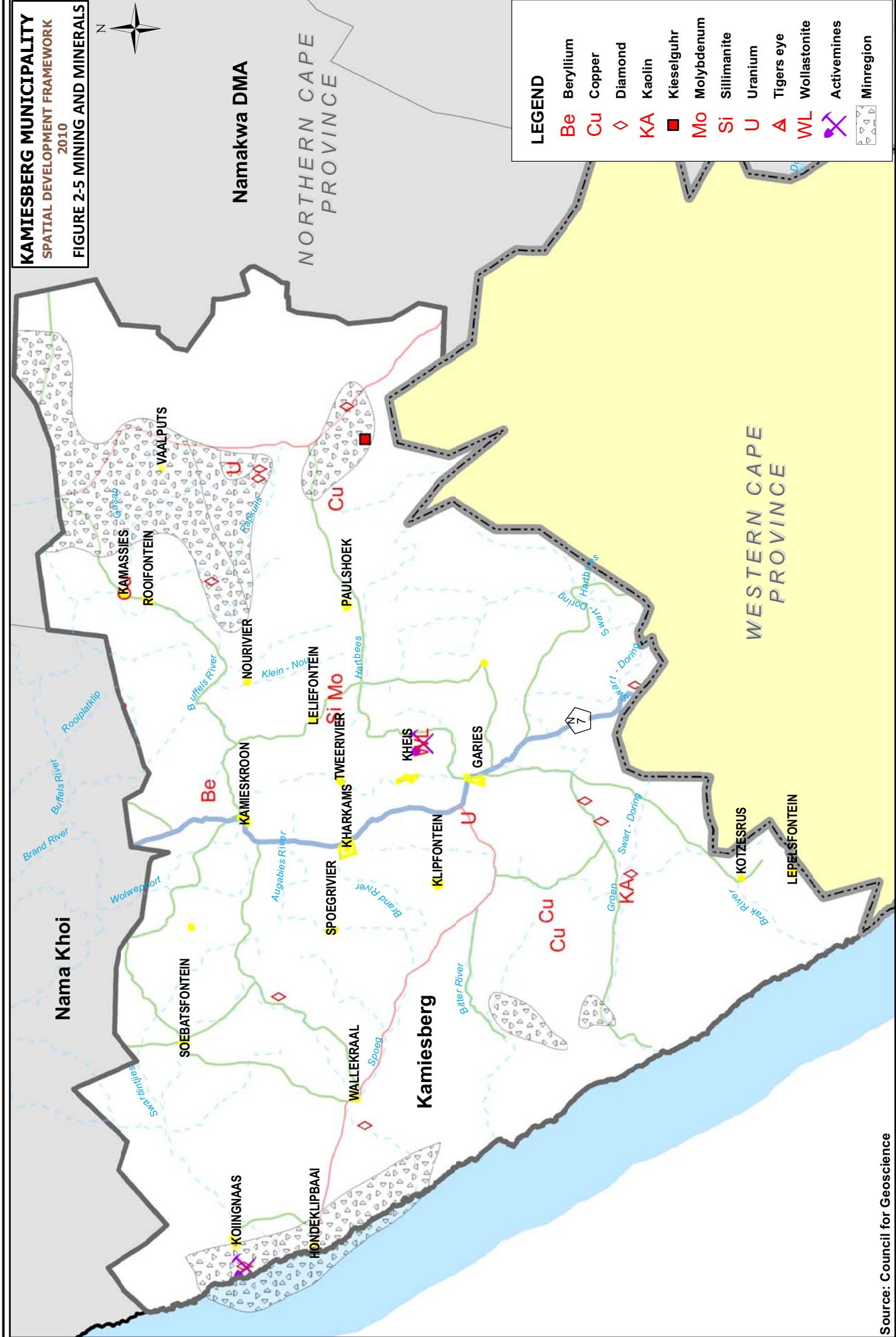
**Namakwa DMA**

**NORTHERN CAPE PROVINCE**

**WESTERN CAPE PROVINCE**

**LEGEND**

<b>Be</b>	Beryllium	<b>KA</b>	Kaolin	<b>Kieselguhr</b>	<b>Mo</b>	Molybdenum	<b>Si</b>	Sillimanite	<b>U</b>	Uranium	<b>Tigers eye</b>	<b>WL</b>	Wollastonite	<b>Activemines</b>	<b>Minregion</b>
<b>Cu</b>	Copper	<b>◇</b>	Diamond	<b>■</b>	<b>■</b>		<b>■</b>		<b>■</b>		<b>▲</b>	<b>▲</b>		<b>▲</b>	



Source: Council for Geoscience

Towns/Settlements  
 Municipal Boundary  
 District Road (gravel)  
 National Road (tarr)  
 Main Road (gravel)  
 Perennial River  
 Non-Perennial River  
 Dams  
 Railways





### 2.3.7 Soil Potential and Vegetation

The soil potential linked to potential agriculture activities is diverse in the area and can accommodate a variety of activities.

The soil potential plan indicated that this area is not suitable for agriculture and the potential is extremely low or non-existent, particularly in combination with the arid climate.

Kamiesberg Granite Fynbos is the only vegetation type restricted to the Kamiesberg Uplands, and it should thus be a key element of any conservation strategy for the area. This presentation type supports the highest number of endemic plant species in the KBC, with at least 29 endemics (or near endemics) wholly restricted to or found primarily in this vegetation type. This vegetation is seldom found below 1200m, and only in the vicinity of the Rooiberg peak are there fairly extensive Fynbos patches below 1200m. This attracts more clouds and moisture than elsewhere, and is also cooler, all factors which contribute to the lower Fynbos Boundary in this area.

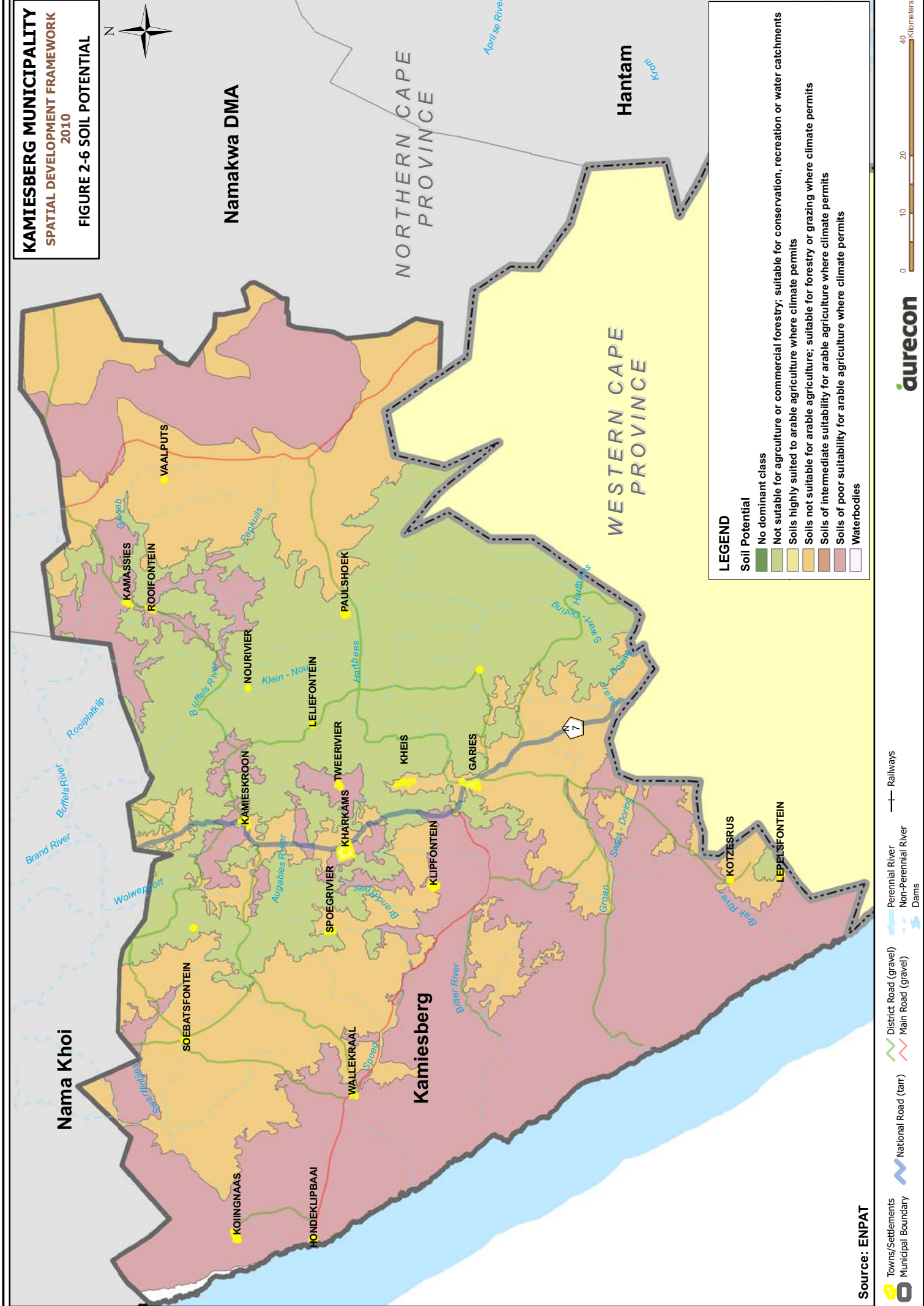
The main vegetation types include the Mountainous Renosterveld, the Succulent Karoo, the False Succulent Karoo and the Namaqualand Broken Veldt. The Namaqualand Renosterveld is most heavily impacted in the municipal area, and should therefore be greatly conserved.

Overall plant life is deteriorating and there is an increase in the presence of poisonous plants.

Refer to the figures following for soil potential and vegetation type.

**Figure 2-6: Soil Potential**

**Figure 2-7: Vegetation Type**





### 2.3.8 Swot Analysis and Spatial Implications

The Strengths, Weaknesses, Opportunities and Threats (SWOT) of this section must guide and inform the spatial development within the Kamiesberg Local Municipality as follows:

**Table 2-2: SWOT Analysis**

Component	Strengths	Weakness	Opportunity	Threat
National and Regional Context	<ul style="list-style-type: none"> <li>The N7 from Cape Town to Namibia transverses through the Municipal Area</li> <li>The Atlantic Coast forms the western border of the area</li> </ul>		<ul style="list-style-type: none"> <li>Garies, being 450km from Springbok, is the next "Oasis" en-route to Namibia from Cape Town</li> </ul>	<ul style="list-style-type: none"> <li>Arid climatic conditions hampers and limits opportunities</li> </ul>
Local Context	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>The settlement pattern is fragmented with 16 towns and settlements far apart from one another</li> </ul>		<ul style="list-style-type: none"> <li>Arid climatic conditions hampers and limits opportunities</li> </ul>
Topography	<ul style="list-style-type: none"> <li>Extremely scenic, rocky and sandy terrain</li> </ul>	<ul style="list-style-type: none"> <li>Not suitable for agriculture.</li> <li>Steep rocky slopes limiting settlement development to the valleys.</li> </ul>		
Climate		<ul style="list-style-type: none"> <li>Extremely dry and arid.</li> </ul>	<ul style="list-style-type: none"> <li>Hot and windy conditions provide opportunities for alternative energy sources.</li> </ul>	
Geology		<ul style="list-style-type: none"> <li>Rocky formations limit agricultural usage.</li> </ul>		
Mining and Minerals	<ul style="list-style-type: none"> <li>Rich in mineral deposits</li> </ul>	<ul style="list-style-type: none"> <li>Diamond and copper mining is in decline</li> </ul>	<ul style="list-style-type: none"> <li>Exploration of minerals warranted to determine the future economic strength of mining.</li> </ul>	
Soil Potential and Vegetation		<ul style="list-style-type: none"> <li>No or low agricultural potential in combination with the arid climate.</li> </ul>		

## 2/4. SOCIO-ECONOMIC PERSPECTIVE

This sector is an analysis of the current demographic and socio-economic profile within the Kamiesberg Municipality.

### 2.4.1 Demographics

The Stats SA Community Survey of 2007 indicates that the population has grown from 10 759 in 2001 to 12 117 in 2007. (Stats SA, 2007) As the data for both 2001 and 2007 is questioned the likelihood that 2001 is a more representative figure than the sample survey done by Stats SA in 2007.

For the purposes of this SDF the base line population as indicated in the Northern Cape Human Development Report compiled in 2010 by the Chief Directorate Development and Research of the Northern Cape Department of Social Development be accepted. In this report the total population within the Kamiesberg Municipal Area is given as 12 109<sup>5</sup>. The report indicates that the household size has shrunk from 3,79 in 2001 to 3,12 in 2007. Based on the above data and applying the ratios given by StatsSA as part of the 2001 census the number of households with the municipal area is 3195 of which + 608 lives on farms.

It is estimated that for the period 2010 to 2025 the population will decrease but the number of households will increase. This is based on the assumption that the out-migration of people will continue due to the lack of economic activities within the area. The younger population will break away from their current households to form their own household structures.

Table 2-3: Population and Households<sup>6</sup>

	Municipality	Persons		Households	
		2001	2007	2001	2007
NAMAKWA	Kamiesberg	10 754	12109*	2 834	3195*
	DMA Namakwa	813	897	337	359
	Hantam	19 813	21 234	5 404	5 819
	Karoo Hoogland	10 512	10 420	2 942	2 982
	Khai-Ma	11 344	12 571	2 752	3 787
	Nama Khoi	44 750	54 644	10 903	15 656
	Richtersveld	10 125	14 613	2 604	3 953
	Subtotal	108 111	126 496	27 776	36 437

In comparison the 2001 and 2007 population figures indicated that there was a growth of 11.7% reflected and a growth of 12.74% in the number of households. The latter confirms the decline in household size.

Due to the lack of economic attraction within the area it is not believed that the population will grow due to in-migration but would rather decline because of out-migration and the fact that in general the natural population growth of the Republic has virtually come to a halt.

In applying the above the population and household growth is projected utilizing the StatsSA growth as an optimistic growth and a probable growth as follows:

<sup>5</sup> Department of Social Development, 2010 (page 29)

<sup>6</sup> Department of Social Development, 2010 (adapted)



**Table 2-4: Projected Population Growth**

		Growth	2007	2013	1019	2025
Population	Optimistic	11.70%	12117	13535	15118	16887
	Probable	1.17%	12109	12251	12394	12539
Household	Optimistic	12.74%	2834	3195	3602	4061
	Probable	1.27%	3195	3236	3277	3318

The figures below reflects the age distribution of the population per gender and then in total respectively. (Stats SA, 2007) According to the Figure below the population is heavily skewed towards the male population particularly between the ages 0 – 39.

In terms of the total population distribution the curve indicates a fairly normal distribution with approximately 34% of the population being of school going age. The economic active population amounts to approximately 57% of the population, whilst senior citizens make out approximately 9% of the population.

**Figure 2-8: Age Distribution by Gender**

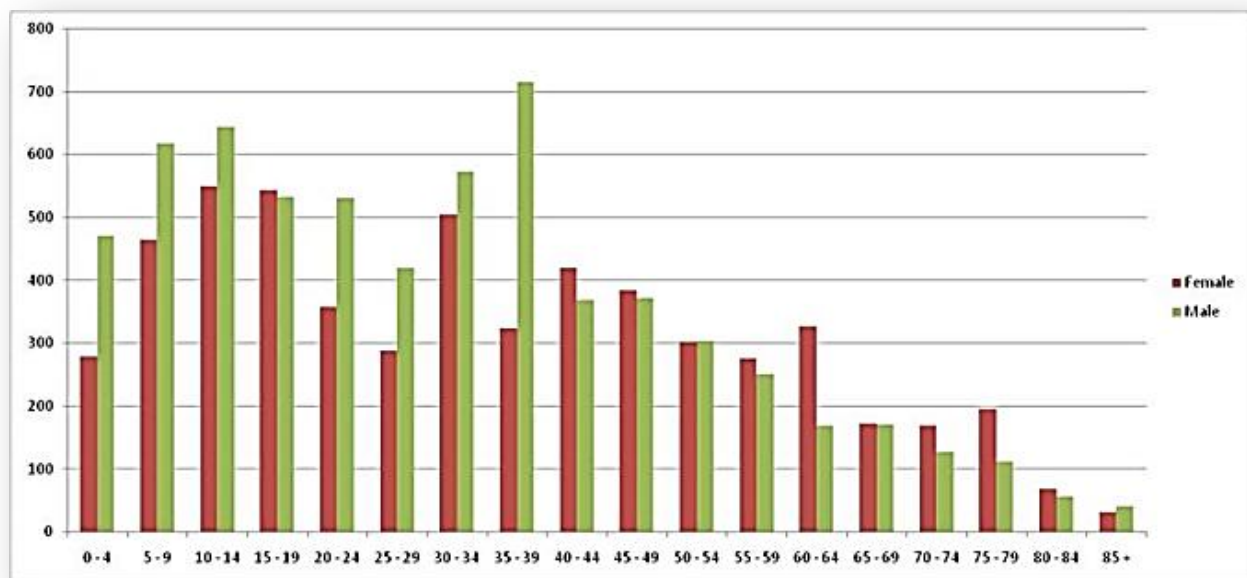
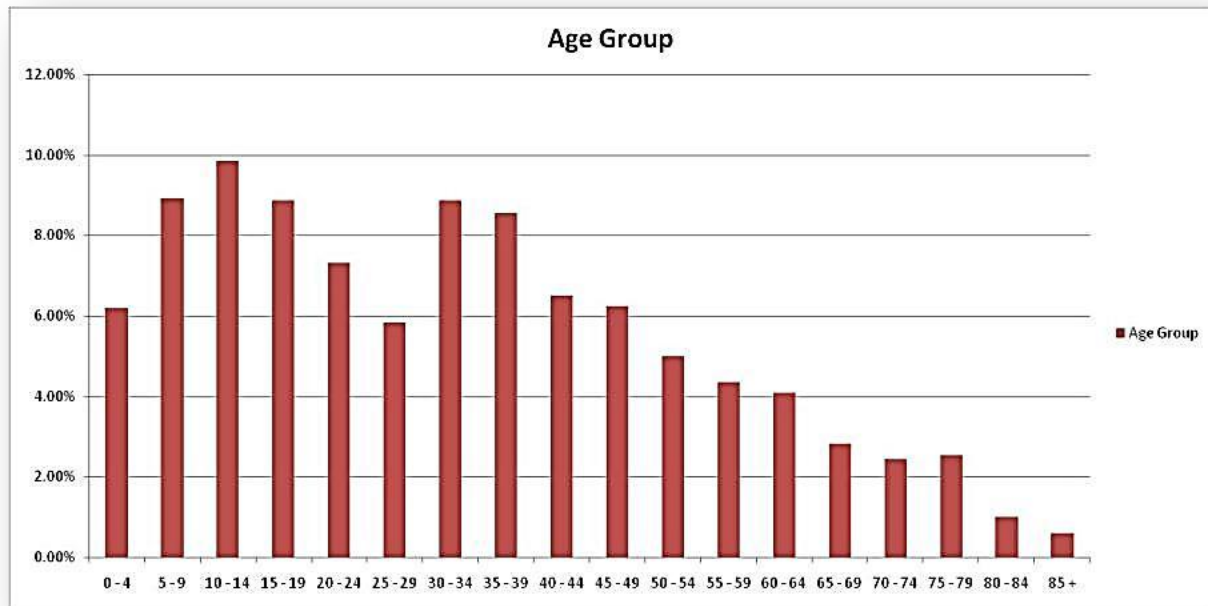


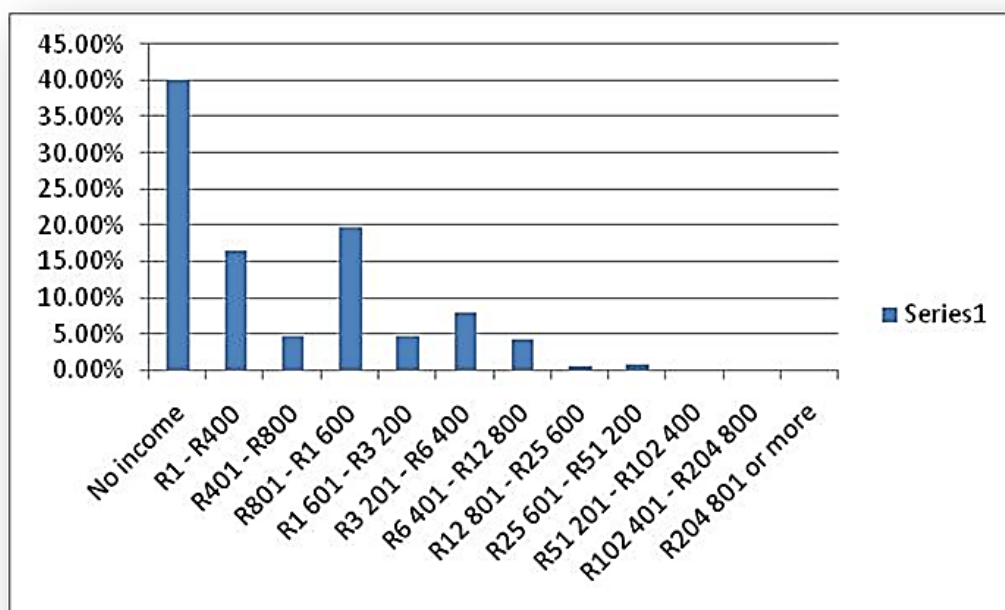
Figure 2-9: Age Distribution (Total)



## 2.4.2 Employment Status and Profile

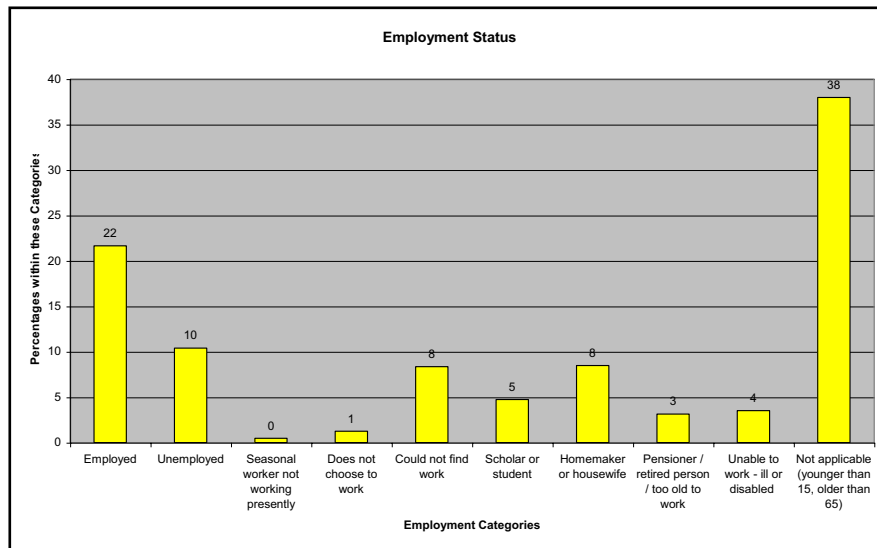
The figure below indicates the income profile of Kamiesberg as per the 2007 StatsSA Community Survey, for the population between the ages of 15 and 65. Of the population 40% has no income whilst 40% earns less than R1600pm. The mean income per person is R1600. This makes this area one of the poorest areas in South Africa. In comparison with the Census 2001 it indicated a drastic decline in earnings.

Figure 2-10: Income Profile



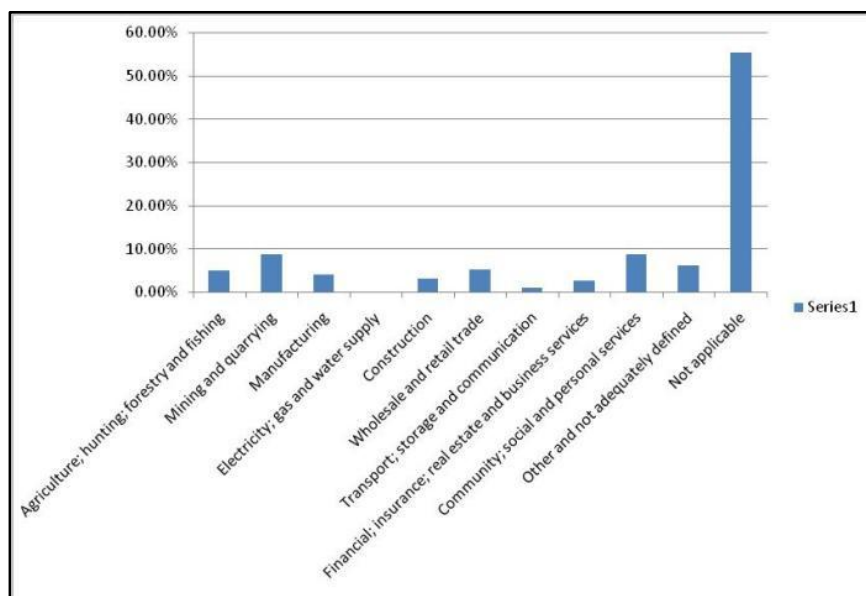
In Kamiesberg the economically active, inactive and potentially active labour force as per the 2001 Census reflects that 22% of the population living within the area is employed. Of the total population another 18% could be targeted for employment should employment opportunities within the area improve - 10% unemployed and 8% who could not find work. Together with the employed sector this could potentially account for 40% of the municipal population being economically active. The 5% scholars or students should also be targeted.<sup>7</sup>

**Figure 2-11: Employment as per Census 2001**



The 2007 StatsSA Community Survey reflects that unemployment has increased fourfold as per the following figure:

**Figure 2-12: Employment as per 2007 StatsSA**



<sup>7</sup> StatsSA 2001



The above graph relates well with the previous figures in that over 50% is not employed (in relation to 40% having no income and 9% is pensioners). The economic sector of employment is mainly Mining and Community services followed by Agriculture and Wholesale Trade.

### **2.4.3 Migration**

Although the population figures reflect a growth of the population between 2001 and 2007 it is expected that the population is in actual fact declining. It is expected that migration occurs from the north as far as Namibia towards the south for job seekers searching for work and slowly work their way towards the more economically advanced areas such as Upington in the Northern Cape and Cape Town in the Western Cape.

### **2.4.4 Poverty Levels**

Household income is one of the most important determinants of welfare in a region. The ability to meet basic needs, such as food, clothing, shelter and basic amenities is largely determined by the level of income earned by households. Poverty is often defined as the lack of resources to meet these needs. In Kamiesberg the socio-economic conditions of the municipal area are extremely poor, and the facilities available to residents are also limited.

According to Census 2001 figures, 40% of persons aged 15-65 living within the municipal area earn no income at all. On a monthly basis 15% earn between R1 and R400, 4% earn between R401 and R800, 19% earn between R801 and R1600. This implies that the majority of people in the municipal area qualify for indigent status.

The poverty level within this area makes it virtually impossible for the municipality to provide effective and efficient services.

### **2.4.5 Social and Health Services**

According to the Department of Health, Namakwa District Municipality, there is a shortage of service and capacity both on a district and local level. This has resulted in negative health and social implications. In terms of the health status of the municipal area hypertension, diabetes, HIV, TB, diarrhoea and malnourishment (especially amongst children) are most prevalent within the municipal area.<sup>8</sup>

There are 10 satellite clinics and one community health centre within the municipal area. These are as follows:

- Kheis – community hall
- Klipfontein – community hall
- Nourivier – community hall
- Paulshoek – community hall
- Rooifontein – community hall
- Spoegrivier – community hall
- Tweerivier – community hall
- Soebatsfontein – advice office
- Lepelsfontein – mobile clinic
- Garies – formal clinic and a community health centre

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<sup>8</sup> Department of Health, Namakwa District Municipality, 2007

According to the Department of Health, Namakwa District the satellite facilities are understaffed and only 3 professional nurses serve all the clinics within the area. The distances between towns also complicate the frequency with which clinic services can be provided. Apart from Garies all of the facilities are in need of upgrading, especially in Soebatsfontein. The facility in Kamassies also lacks a waiting area, forcing patients to stand.<sup>9</sup>

De Beers has been responsible for the provision of services and facilities related to health and education within Koingnaas. Discussions are currently underway with the Northern Cape Provincial Department for Health regarding the transfer of health and medical services, and the Northern Cape Provincial Department for Education regarding the transfer of educational facilities.

The table below indicates the overall service provided within the municipal area.

**Table 2-5: Social Services**

District	Municipality	Hospital	CHC & Community Hospitals	Fixed Clinics
Namakwa	Hantam	1	2	1
	Kamiesberg		1	5
	Karoo Hoogland		3	
	Khai-Ma		1	2
	Nama Khoi	1	1	7
	Richtersveld		1	3
	Subtotal	2	9	18

The Northern Cape Department of Health's Service transformation plan outlines a plan to provide equitable distribution of health facilities so that:<sup>10</sup>

- At least 85% of the population has access to a clinic within 10 minutes' drive and a maximum travel time of 40 minutes.
- Community health centre (CHC) within 30 minutes' drive.
- District hospital within one hour's drive.
- Regional hospital facility within two hour's drive from where they live. Kimberley, Upington, Kuruman and De Aar are such facilities in the Northern Cape.
- Tertiary hospital within three hours, such as Kimberley hospital.

## 2.4.6 Education

Education and training satisfy the basic human need for knowledge and skills, thereby providing a means for meeting other basic needs. The level of education in a given population influences that population's welfare through effects on health, fertility and life expectancy. Education helps to increase the value of other forms of social and physical investment.<sup>11</sup> (Meintjies)

The 2007 StatsSA Community Survey reveals that within Kamiesberg approximately 4.33% of the population has no schooling, 19.36% has education level of between Grade 0 and Grade 5, only 2% has completed primary school with a grade 7 level of education. Secondary school education reflects that 30% of the population has a level of education between Grade 8 and Grade 10 and 17% has an education

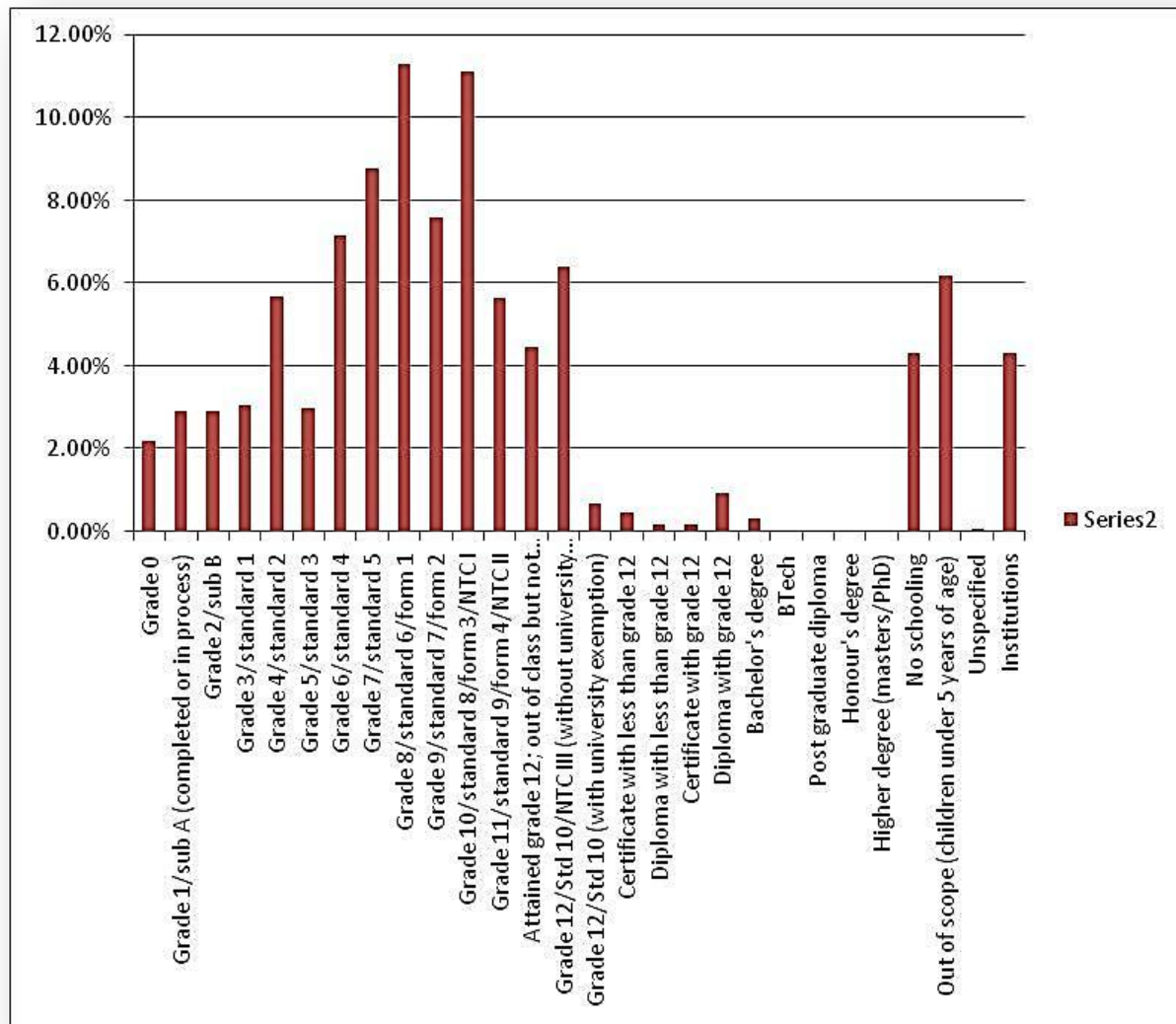
<sup>9</sup> Department of Health, Namakwa District Municipality, 2007

<sup>10</sup> Department of Social Development, 2010

<sup>11</sup> Meintjies, C

between Grade 11 and 12. Only 0.34% of the population has tertiary education in the form of a Bachelors Degree.

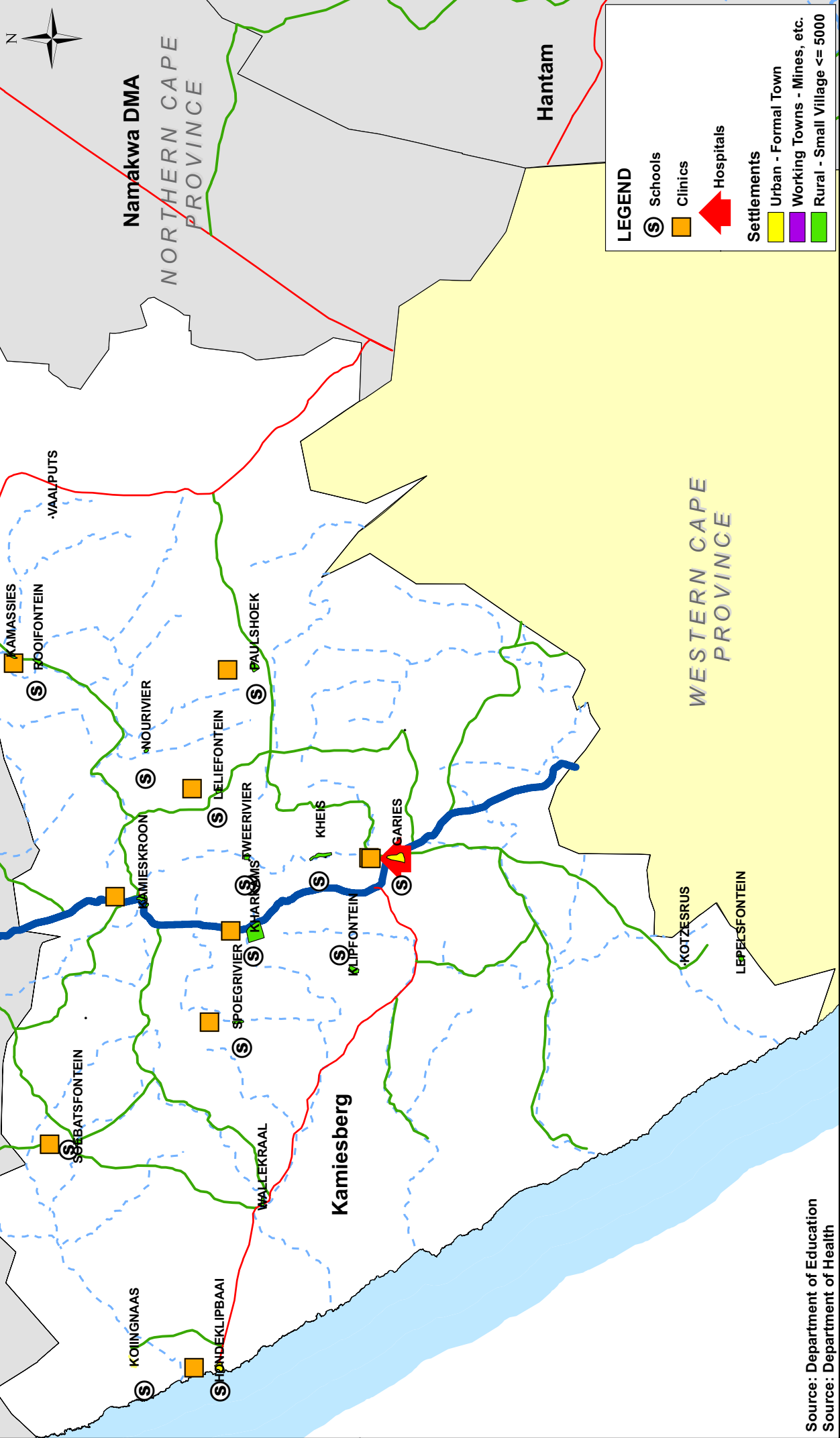
Figure 2-13: Education Levels 2007



The following figure shows the locality of the schools and health facilities in Kamiesberg.

Figure 2-14: Locality of Schools and Health Facilities

**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
 2010  
**FIGURE 2-14 LOCALITY OF SCHOOLS**  
**AND HEALTH FACILITIES**



## 2.4.7 SWOT Analysis and Spatial Implications

The Strengths, Weaknesses, Opportunities and Threats (SWOT) of this section must guide and inform the spatial development within the Kamiesberg Local Municipality as follows:

**Table 2-6: SWOT Analysis and Spatial Implications**

Component	Strengths	Weakness	Opportunity	Threat
Demographics		<ul style="list-style-type: none"> <li>Low population growth leaning towards a declining population.</li> <li>Increasing number of households with smaller household size.</li> </ul>		
Employment Status and Profile	<ul style="list-style-type: none"> <li>The major employment sectors are still Mining and Community Services.</li> <li>The second largest employer is Agriculture and Wholesale Trade.</li> </ul>		<ul style="list-style-type: none"> <li>This provided opportunities to instil semi-skilled enterprises particularly in the Agricultural Industry.</li> </ul>	
Migration		<ul style="list-style-type: none"> <li>Migration to areas of economic opportunity is high.</li> </ul>		
Income and Poverty Levels		<ul style="list-style-type: none"> <li>45% earns less than R1600pm.</li> </ul>		
Social and Health Services		<ul style="list-style-type: none"> <li>Condition and operational ability of facilities are poor.</li> </ul>		
Education	<ul style="list-style-type: none"> <li>Relative good level of education in that the majority of the population has a secondary schooling.</li> <li>Number of educational facilities adequate.</li> </ul>	<ul style="list-style-type: none"> <li>Condition and operational ability of facilities are poor.</li> </ul>	<ul style="list-style-type: none"> <li>This provided opportunities to instil semi-skilled enterprises particularly in the Agricultural Industry.</li> </ul>	

## 2/5. HOUSING

Housing provision is not the provision of housing areas, but the establishment and creation of integrated and sustainable communities. This sector will analyse the housing provision in terms of its contribution to sustainable development.

### 2.5.1 Residential Development

The municipality consists of fifteen towns which is approximately 80 km from each other and connected with gravel roads. Only Kamieskroon, Kharkams and Garies are located on the N7 national road. The scattered rural towns have limited prospects of economic growth and more than one third of households in the area survive on an income of less than R400 per month. This situation asks for drastic intervention in either locating the poor closer to economic opportunities or to facilitate economic investment closer to the poor. Due to the investment already made in housing provision, it would be impossible to consider relocation of settlements.

The maps following indicate the residential development in the various towns/settlements and residentially zoned erven available for dwellings and residences as at 2008. The table below indicates that with the exception of Lepelsfontein all the other settlements have undeveloped surveyed and zoned land available for development.

**Table 2-7: Vacant Land**

Town		Surveyed Residential Stands			
		Developed	Vacant	Total	% Vacant
1	Garies	311	92	403	23%
2	Hondeklipbaai	162	306	468	65%
3	Kamassies	73	47	120	39%
4	Kamieskroon	207	19	226	8%
5	Kharkams	325	20	345	6%
6	Kheis	131	74	205	36%
7	Klipfontein	94	84	178	47%
8	Leliefontein	218	94	312	30%
9	Lepelsfontein	79	0	79	0%
10	Nourivier	148	18	166	11%
11	Paulshoek	86	50	136	37%
12	Rooifontein	118	79	197	40%
13	Soebatsfontein	37	61	98	62%
14	Spoegrivier	147	24	171	14%
15	Tweerivier	79	23	102	23%
<b>TOTAL</b>		2215	991	3206	31%

It is evident from the figures and the table that all of the settlements possess ample land on which housing development can occur. There is thus not an obvious need for the creation of expanded settlement areas. The residential stand sizes various between 350m<sup>2</sup> to 1000m<sup>2</sup>. None of the settlements possesses a critical mass that can make the delivery of socio-economic facilities economical and sustainable. This places a heavy burden on the administrative cost of the Municipality.

The following figures provide an overview of the locality of housing and available land for infill purposes, per settlement.

**Figure 2-15: Locality of Housing Hondeklipbaai**

**Figure 2-16: Locality of Housing Soebatsfontein**

**Figure 2-17: Locality of Housing Spoegrivier**

**Figure 2-18: Locality of Housing Klipfontein**

**Figure 2-19: Locality of Housing Lepelsfontein**

**Figure 2-20: Locality of Housing Kharkams**

**Figure 2-21: Locality of Housing Kamieskroon**

**Figure 2-22: Locality of Housing Garies**

**Figure 2-23: Locality of Housing Kheis**

**Figure 2-24: Locality of Housing Tweerivier**

**Figure 2-25: Locality of Housing Leliefontein**

**Figure 2-26: Locality of Housing Nourivier**

**Figure 2-27: Locality of Housing Kamassies**

**Figure 2-28: Locality of Housing Rooifontein**

**Figure 2-29: Locality of Housing Paulshoek**



**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-15 LOCALITY OF**  
**HOUSING HONDEKLIPBAAI**



**LEGEND**

**HOUSING**

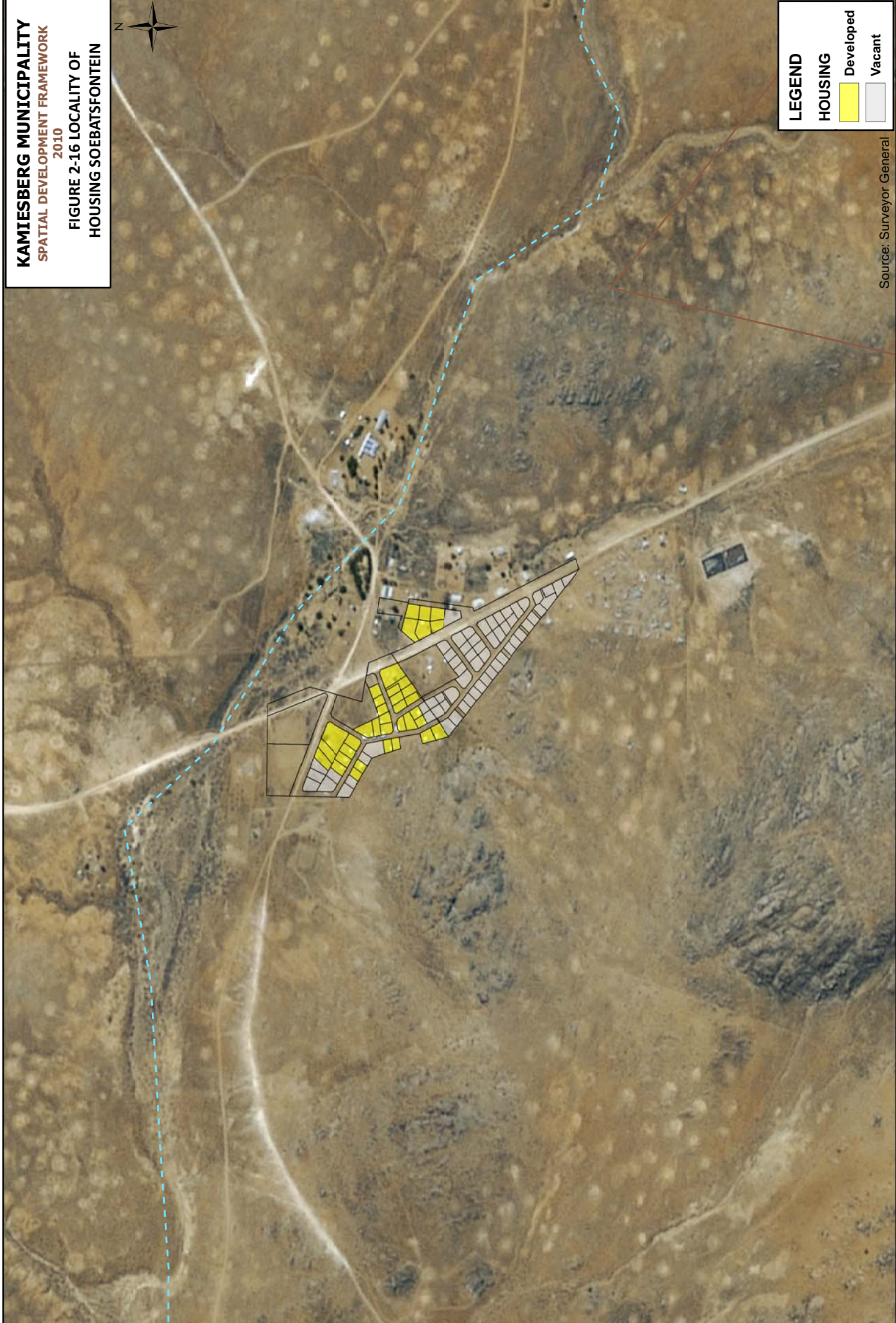
Developed

Vacant

Source: Surveyor General



**FIGURE 2-16 LOCALITY OF  
HOUSING SOEBATSFONTEIN**



**LEGEND**

**HOUSING**

Developed

Vacant

Source: Surveyor General





**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-17 LOCALITY OF**  
**HOUSING SPOEGRIVIER**



**LEGEND**

**HOUSING**

Developed

Vacant

Source: Surveyor General



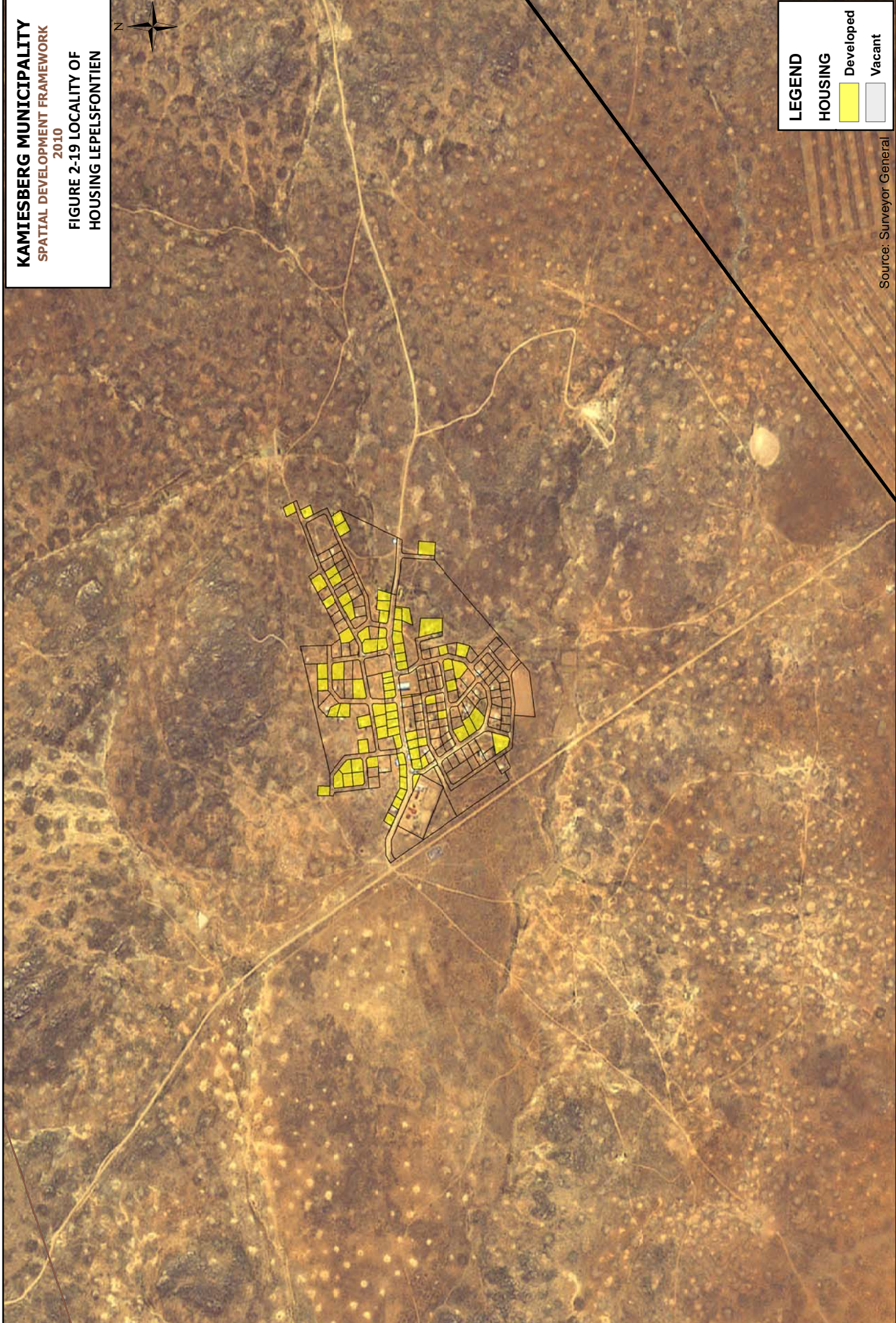


**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-18 LOCALITY OF**  
**HOUSING KLIPFONTEIN**





**FIGURE 2-19 LOCALITY OF  
HOUSING LEPELSFONTIEN**



**LEGEND**

**HOUSING**

Developed
Vacant

Source: Surveyor General





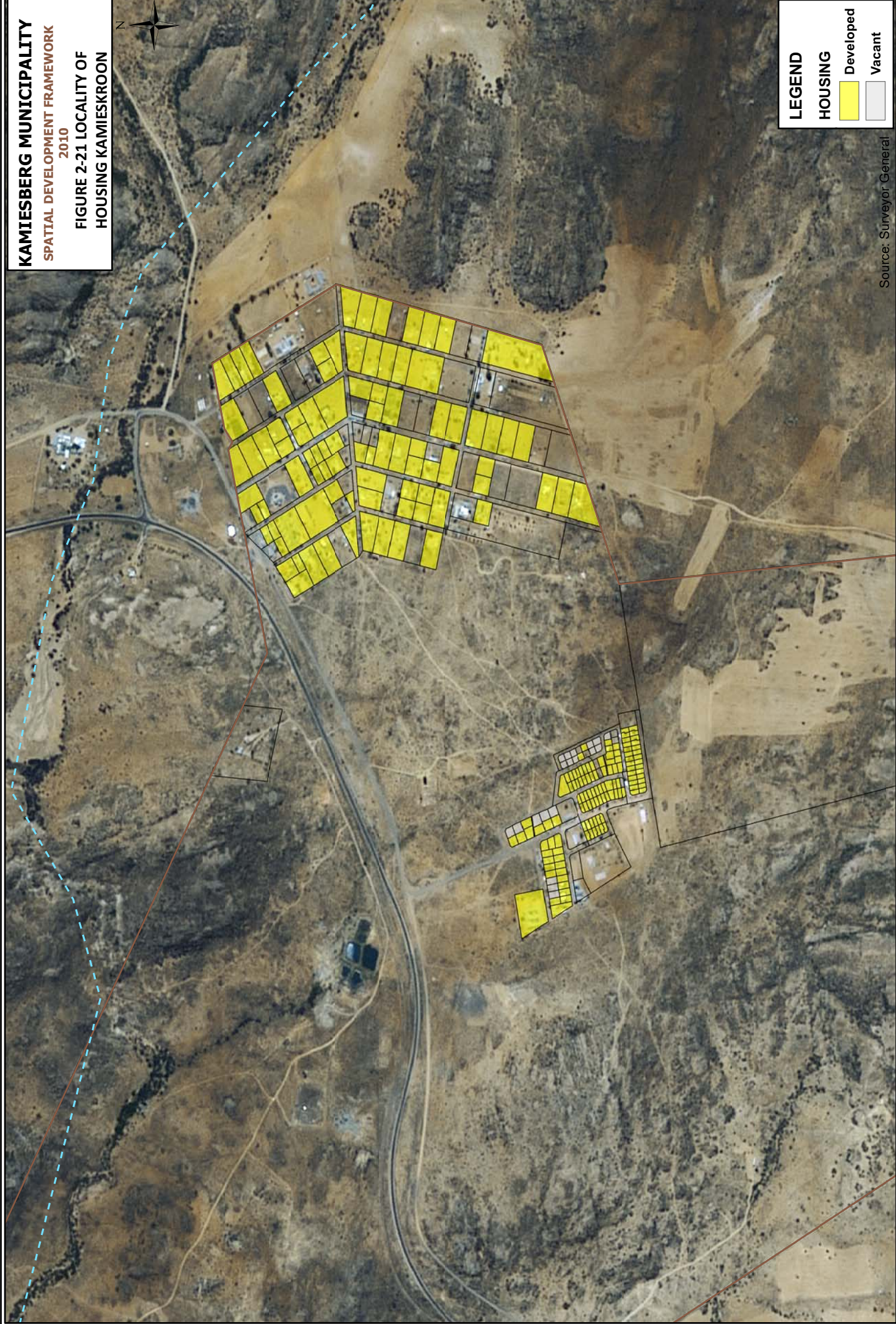
**FIGURE 2-20 LOCLITY OF  
HOUSING KHARKAMS**





**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**

**FIGURE 2-21 LOCALITY OF  
HOUSING KAMIESKROON**



**LEGEND**

**HOUSING**

Developed

Vacant

Source: Surveyor General



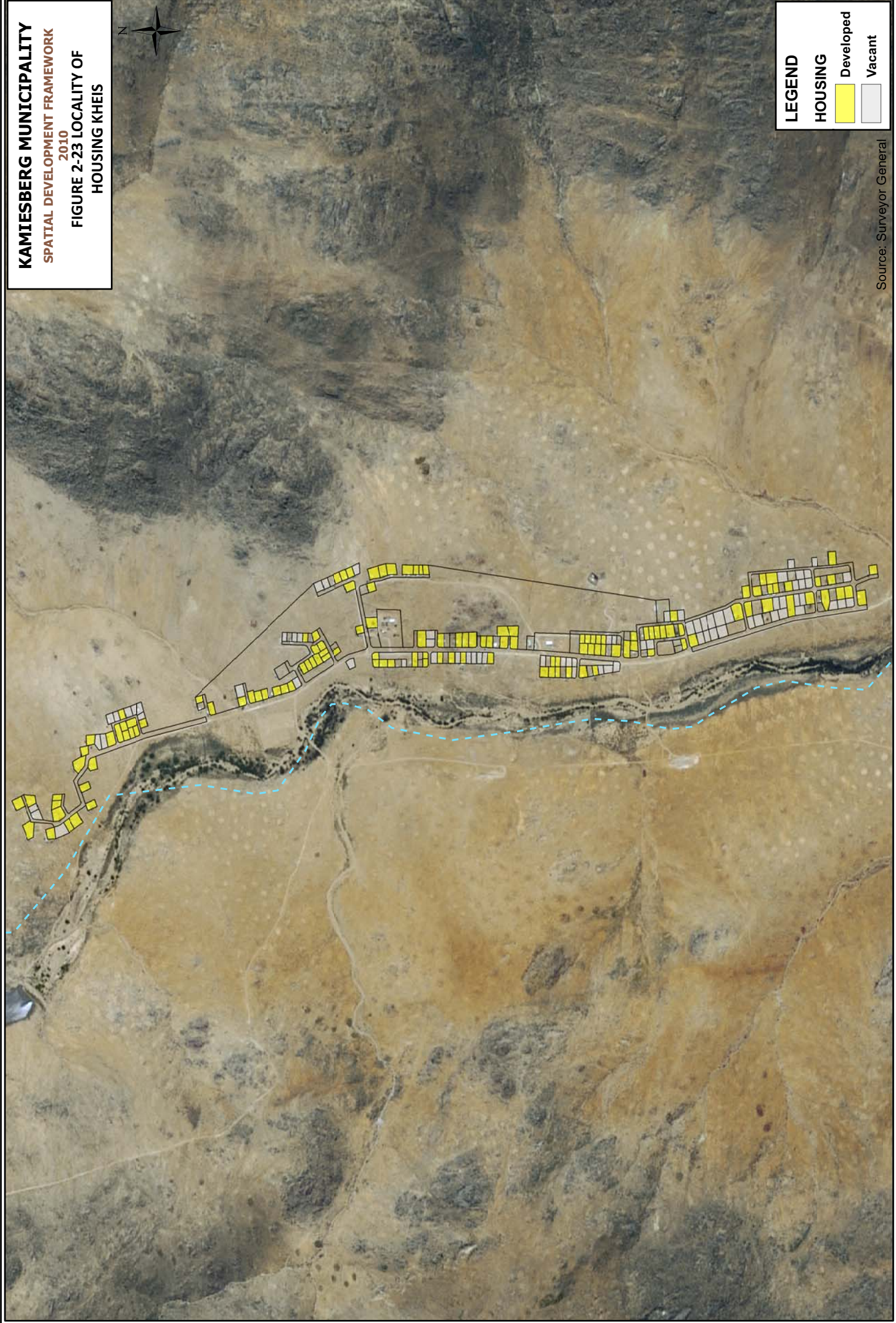


**FIGURE 2-22 LOCALITY OF  
HOUSING GARIES**





**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-23 LOCALITY OF**  
**HOUSING KHEIS**



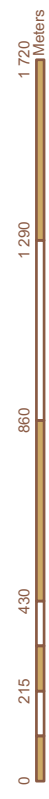
**LEGEND**

**HOUSING**

Developed

Vacant

Source: Surveyor General





**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-24 LOCALITY OF**  
**HOUSING TWEERIVIER**



**LEGEND**

**HOUSING**

Developed

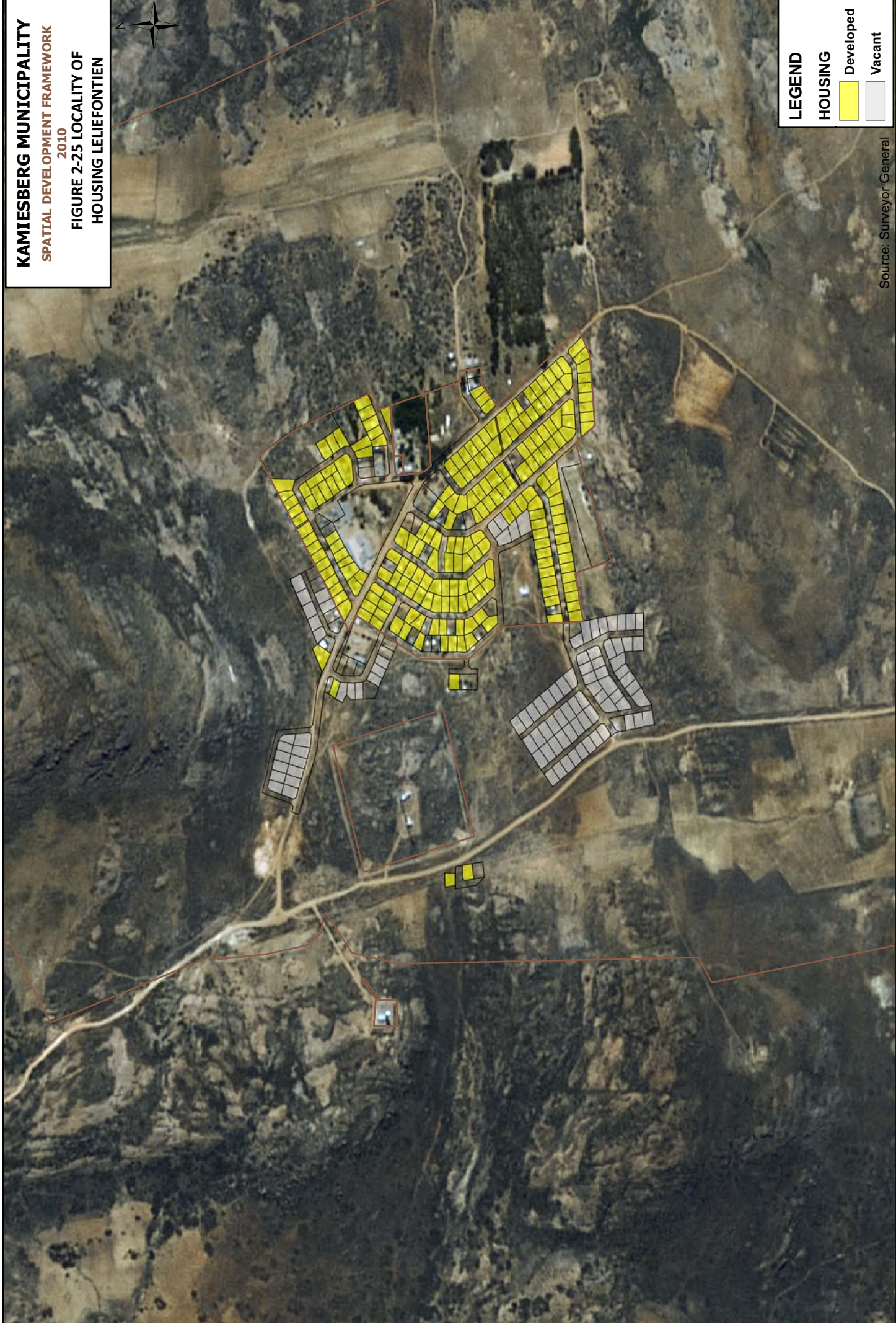
Vacant

Source: Surveyor General





**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-25 LOCALITY OF**  
**HOUSING LELIEFONTIEN**



**LEGEND**

**HOUSING**

Developed

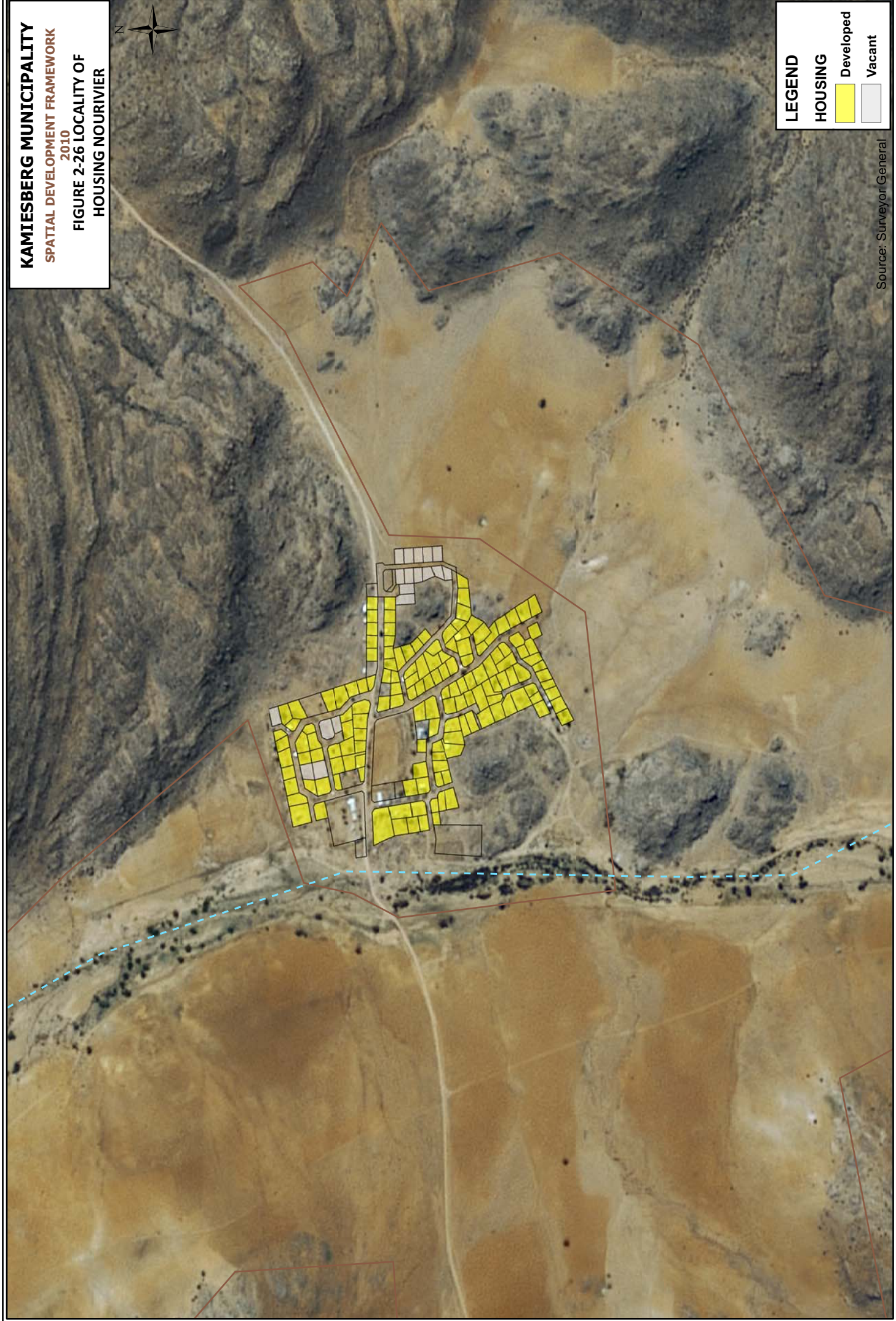
Vacant

Source: Surveyor General





**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-26 LOCALITY OF**  
**HOUSING NOURVIER**



**LEGEND**

**HOUSING**

Developed

Vacant

Source: Surveyor General





**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-27 LOCALITY OF**  
**HOUSING KAMMASIES**



**LEGEND**

**HOUSING**

Developed

Vacant

Source: Surveyor General



**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-28 LOCALITY OF**  
**HOUSING ROOIFONTEIN**



**LEGEND**

**HOUSING**

Developed

Vacant

Source: Surveyor General





**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-29 LOCALITY OF**  
**HOUSING PAULSHOEK**



**LEGEND**

**HOUSING**

Developed

Vacant

Source: Surveyor General



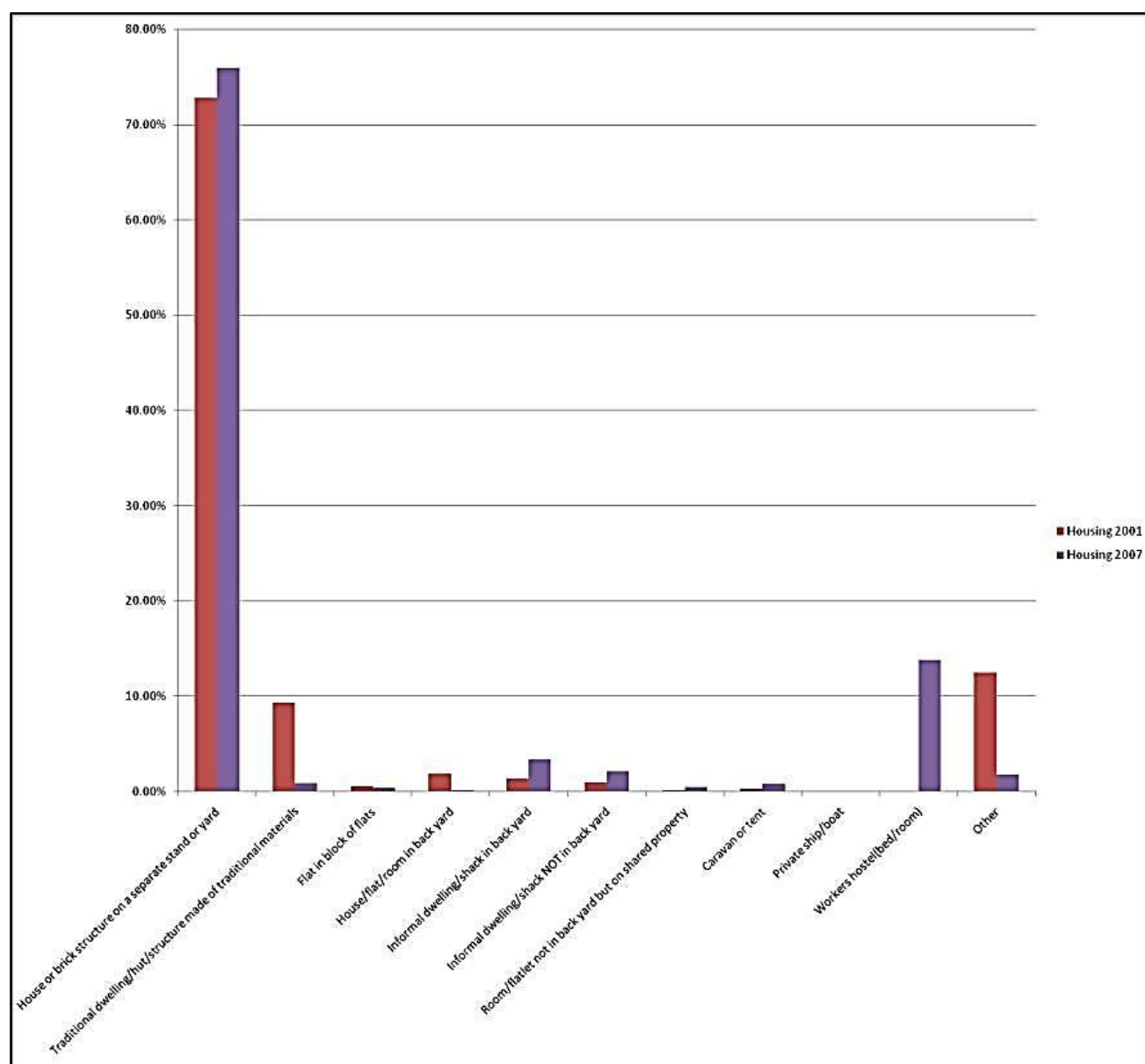
## 2.5.2 Dwelling Typology

When the Census 2001 and the 2007 StatsSA Community Survey statistics are compared with one another it reflects that there was a general improvement in the quantity of permanent or formal housing structures on single stands. This grew from 73% to 76% of all housing typologies.

It must be noted that of the total housing stock there is a substantial decline in the number of “traditional houses” from 9.32% to 0.90%. It is assumed that this decline is attributed to a traditional dwelling being converted to a formal house or that it has been listed in the 2007 Community Survey as an informal dwelling.

The concern is, however, that there seems also to be a growth in the number of informal housing typologies growing from 2.35% to 5.57% of the total housing stock. The total housing stock has also grown by 20% over the six year period from 3239 opportunities to 3880 opportunities; this relates well with the population growth depicted between the two census periods.

Figure 2-30: Dwelling Type





### 2.5.3 Housing Backlog and Projects

As the draft Municipal IDP 2010/11 advocates that the housing backlog is eradicated it seems that the only need is to address the 216 informal settlement structures as referred to in the paragraph above. It seems that these informal housing structures are located on existing surveyed stands as there are no known squatter or informal residential areas.

There are, however, concerns in terms of the ability of the housing contractors being New Way and Namdev to be able to deliver and complete their respective housing delivery mandates. It is believed that the need for 216 housing upgrades is reflected in the table below indicating the spread of the housing need.

In all cases serviced land is available to accommodate the determined need. The spread of the housing need is derived from information contained in the Developments Bank's spatial development proposal for Kamiesberg<sup>12</sup>, and is depicted as follows:

**Table 2-8: Housing Upgrade Distribution Need**

Town/Village	Formalisation Need
Garies	40
Kamassies	15
Kamieskroon	10
Kharkams	57
Kheiss	0
Klipfontein	0
Leliefontein	1
Lepelsfontein	0
Nourivier	34
Paulshoek	30
Rooifontein	0
Soebatsfontein	8
Spoegrivier	43
Tweerivier	0
Total	238

### 2.5.4 Home Ownership

The figure below indicates that the majority of households own their own residences, while 24% occupy houses rent free.

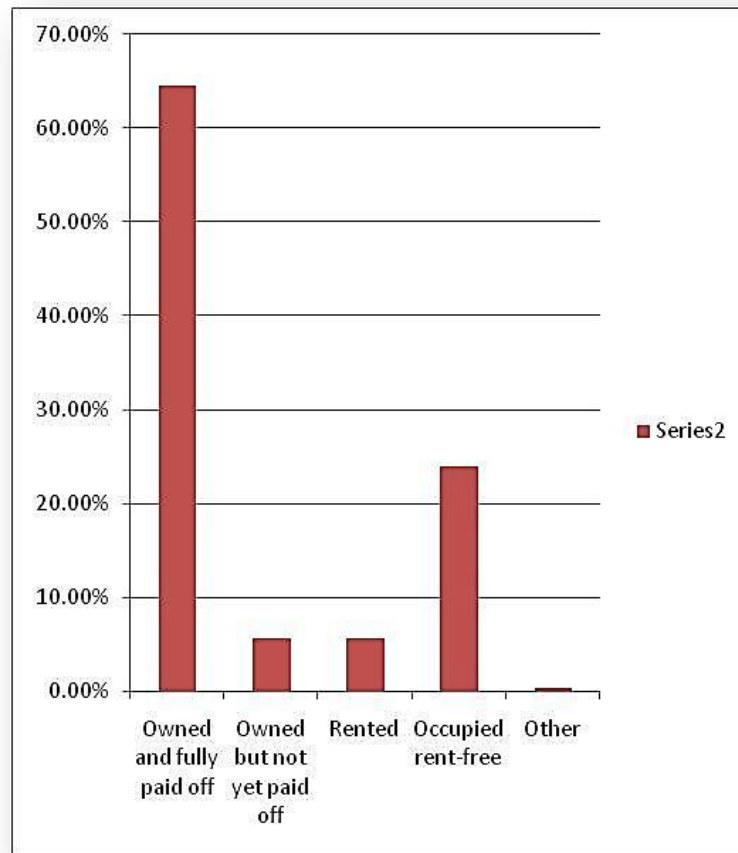
In relation to the income profile of the community the graph below does not provide an indication that whether the occupants can contribute to the fiscus of the municipality. Most of the ownership was probably obtained from government RDP programmes.

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<sup>12</sup> Development Bank of South Africa, 2008



Figure 2-31: Home Ownership



### 2.5.5 Housing in the Rural Areas

There is no information available that illustrates the state of housing on the farms and what the need is to supply housing on the farms.

Table 2-9: Settlement Category

Formal Town		Rural Settlement	Surveyed Residential Stands	
			Total	% Vacant
1	Garies		403	23%
2	Hondeklipbaai		468	65%
3		Kamassies	120	39%
4	Kamieskroon		226	8%
5		Kharkams		6%
6		Kheis		36%
7		Klipfontein		47%
8		Leliefontein		30%
9		Lepelsfontein		0%
10		Nourivier		11%

Formal Town		Rural Settlement	Surveyed Residential Stands	
			Total	% Vacant
11		Paulshoek		37%
12		Rooifontein		40%
13		Soebatsfontein		62%
14		Spoegrivier		14%
15		Tweerivier		23%
TOTAL			3206	31%

## 2.5.6 Swot Analysis and Spatial Implications

The Strengths, Weaknesses, Opportunities and Threats (SWOT) of this section must guide and inform the spatial development within the Kamiesberg Local Municipality as follows:

**Table 2-10: SWOT Analysis and Spatial Implications**

Component	Strengths	Weakness	Opportunity	Threat
Residential development	The settlements have unused capacity to absorb future residential growth	The residential settlements are scattered far apart (80km) loading the cost of community services and infrastructure	Hondeklipbaai being situated on the Atlantic Coast have a distinct locational advantage for tourism and mariculture development	Inability to provide social cohesion
Dwelling typology	Most of the housing stock is in the form of formal housing	Only approximately 206 informal shelters remains		
Housing backlog	There is no real housing backlog in the area. Only approximately 286 houses are still to be completed	The housing contractors seems to fail in their ability to fulfil their contractual obligations		
Home ownership	The majority of homes are privately owned	The income levels are extremely low thus making it virtually impossible to maintain structures. Low income profile severely restricts the community to contribute to or afford the cost of community services.		
Housing in rural areas	Most housing in the rural areas occurs in the rural settlements			

## 2/6. ENVIRONMENT, CONSERVATION & HERITAGE

The analysis of this sector is the spatial assessment of the environment sensitivity, cultural, heritage and archaeological characteristics within the Kamiesberg municipality.

The Kamiesberg area is located within the Succulent Karoo, one of only two semi-arid biodiversity hotspots in the world, exhibiting by far the highest plant diversity of any arid ecosystem. This unique biodiversity in the area has attracted institutions such as Conservation International SA. A biodiversity sector plan was developed for the area in 2008 to help guide land-use planning, environmental assessments and authorizations, and natural resource management in order to promote development which occurs in a sustainable manner<sup>13</sup>.

The entire Northern Cape Province is unusually biologically diverse and many reserves have been created to protect this diversity. The province contains five (5) national parks and seven (7) nature reserves most notable of all the Kalahari Gemsbok National Park that, together with the Gemsbok National Park in Botswana forms the Kgalagadi Transfrontier Park, being Africa's first Transfrontier game park. It is one of the largest nature conservation areas in Southern Africa and one of the largest remaining natural ecosystems in the world. This trans-boundary park provides unfenced access to a variety of game between South Africa and Botswana, and has a surface area of more than two million hectares. Another transfrontier park, the Ai-Ais Richtersveld Transfrontier Conservation Park, has recently been established between the Northern Cape and Namibia.

### 2.6.1 Areas of Ecological Importance

#### 2.6.1.1 The Succulent Karoo Biodiversity Hotspot

The Kamiesberg contains two of nine South African National Biodiversity Institute (SANBI), identified conservation priority areas, namely the Central Namaqualand Coast and Kamiesberg Uplands.<sup>14</sup>

The primary threat to biodiversity currently is transformation by mining. Potential future threats include:

- Small scale mining;
- Overgrazing;
- Inappropriate management of water resources;
- The overharvesting of natural resources;
- Transformation of the coastal zone for tourism/holiday home development;
- Global climate change.

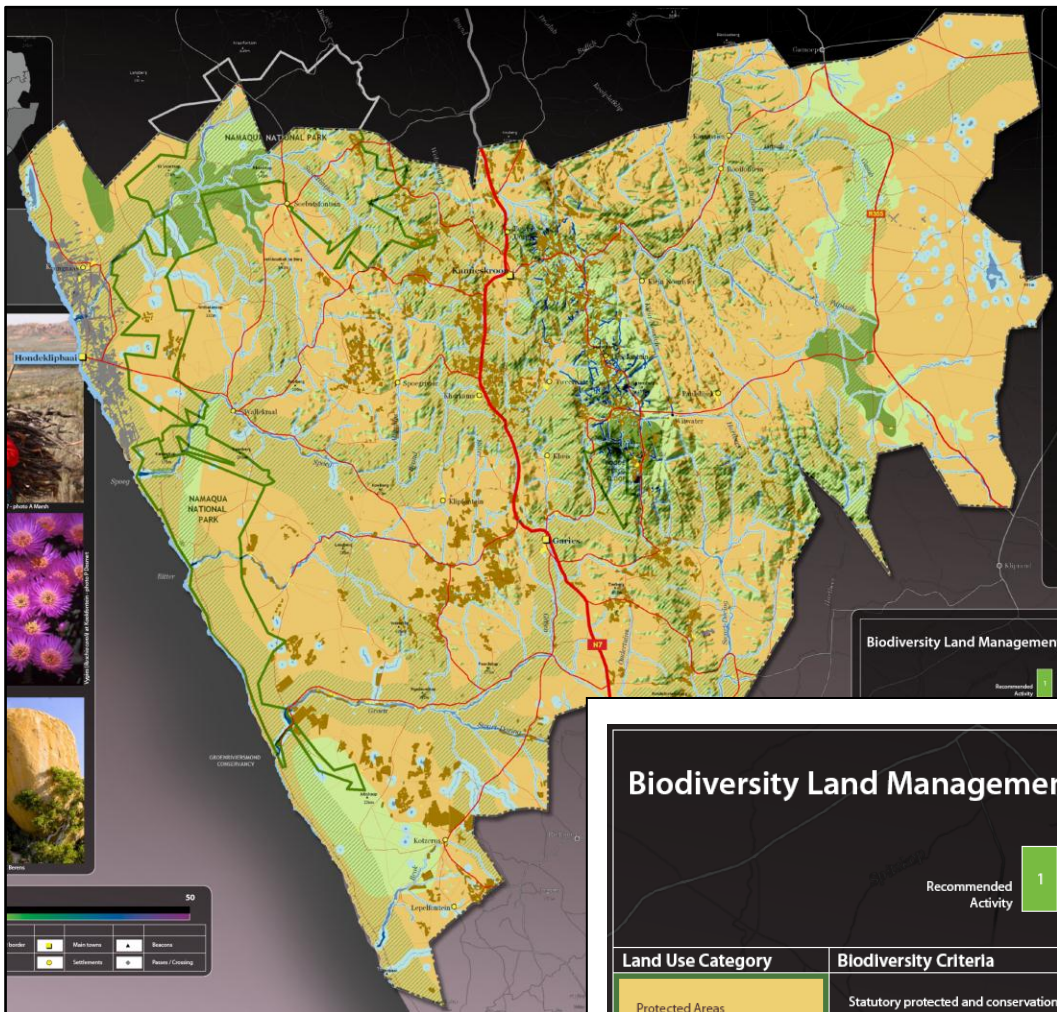
In addition to conserve the Succulent Karoo biome, there are also specific ecologically sensitive areas such as the Strandveld dunes, with moving sand that is important for beach regeneration and the Swartlintjies River corridor that acts as an important ecological corridor between the inland mountainous areas and the coast.

The following figure illustrates the critical biodiversity areas within Kamiesberg Municipality.

**Figure 2-32: Critical Biodiversity Areas<sup>15</sup>**

<sup>13</sup> Namakwa District Municipality, 2008

<sup>14</sup> Kamiesberg Biodiversity Sector Plan, 2008



## Biodiversity Land Management Classification Key

Recommended Activity 1

Restricted Activity 2

Unsuitable Activity 3

Land Use Category	Biodiversity Criteria	Land Management Objectives
Protected Areas	Statutory protected and conservation areas	Maintain in a natural state with limited or no biodiversity loss
CBA 1: Irreplaceable Sites	The most important areas for biodiversity conservation	Maintain in a natural state with no further biodiversity loss
CBA 2: Important Areas	Other areas known to be of high biodiversity value	Maintain near-natural landscapes with no or limited loss of biodiversity pattern and limited loss of ecosystem processes
Ecological Support Areas	Areas that support key biodiversity resources (e.g. water) or ecological processes (e.g. movement corridors) in the landscape	Maintain near-natural landscapes with some loss of biodiversity pattern and limited loss of ecosystem processes
Other Natural Areas	Areas of natural vegetation where the land has not been ploughed, mined or built on	Functional landscapes: manage land to maintain basic ecosystem processes
Agricultural transformation	Croplands with limited or no natural remaining	Sustainable management
Infrastructural transformation	Urban areas and roads with no natural remaining	Sustainable management
Mining and Quarrying	Limited or no natural remaining	Sustainable management

<sup>15</sup> South African National Biodiversity Institute. <http://bgis.sanbi.org/namakwa/kamiesberg.pdf> Accessed 25/01/2011

### **2.6.1.2 Succulent Karoo Ecosystem Programme**

The Succulent Karoo Ecosystem Programme (SKEP) is a long term, multi-stakeholder bioregional conservation and development partnership programme involving government and civil society partners in working toward this vision: that the people of the Succulent Karoo take ownership of and enjoy their unique living landscape in a way that maintains biodiversity and improves livelihoods now and in perpetuity.

The Succulent Karoo stretches from the Klein Karoo up the West Coast through Namaqualand and into Namibia. The biome has a wealth of unique biodiversity but has been severely damaged by human activities such as mining, overgrazing and ostrich farming.

Planning for SKEP started in 2001 and from 2003, funding from the Critical Ecosystem Partnership Fund focused on catalysing and programme start-up. From 2009, with the coordination unit housed by the South African National Biodiversity Institute, SKEP is focused on programme consolidation – integrating SKEP objectives into national and regional government and other programmes and ensuring sustainability. Conservation International is a key implementation partner of SKEP.<sup>16</sup>

### **2.6.1.3 The Living Edge of Africa Project**

The area known as the Living Edge of Africa Project (LEAP) consists of:<sup>17</sup>

- The De Beers holdings, in two separate sections, the bulk of which is held in mining concessions:
  - approximately 9000 ha with 16.7 km of coastline, and
  - approximately 18596 ha with 27 km of coastline.
- The land situated between the two De Beers landholdings belongs to the Department of Public Works, but the mining concessions are held by the Trans Hex Group Limited, a diamond mining company. This area comprises approximately 3577 ha with 10.23 km of coastline.
- The town of Hondeklipbaai, situated on the coast, adjacent the Trans Hex concession area,

The following figures indicate land ownership within the LEAP area, and land users within the LEAP area.

**Figure 2-33: Land Ownership within LEAP Area**

**Figure 2-34: The LEAP Area (Living Edge of Africa Land Use Development Plan, 4 March 2010)**

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<sup>16</sup> [www.skep.org.za](http://www.skep.org.za)

<sup>17</sup> Living Edge of Africa Land Use Development Plan, 4 March 2010



**Figure 2-33: Land Ownership within LEAP Area**

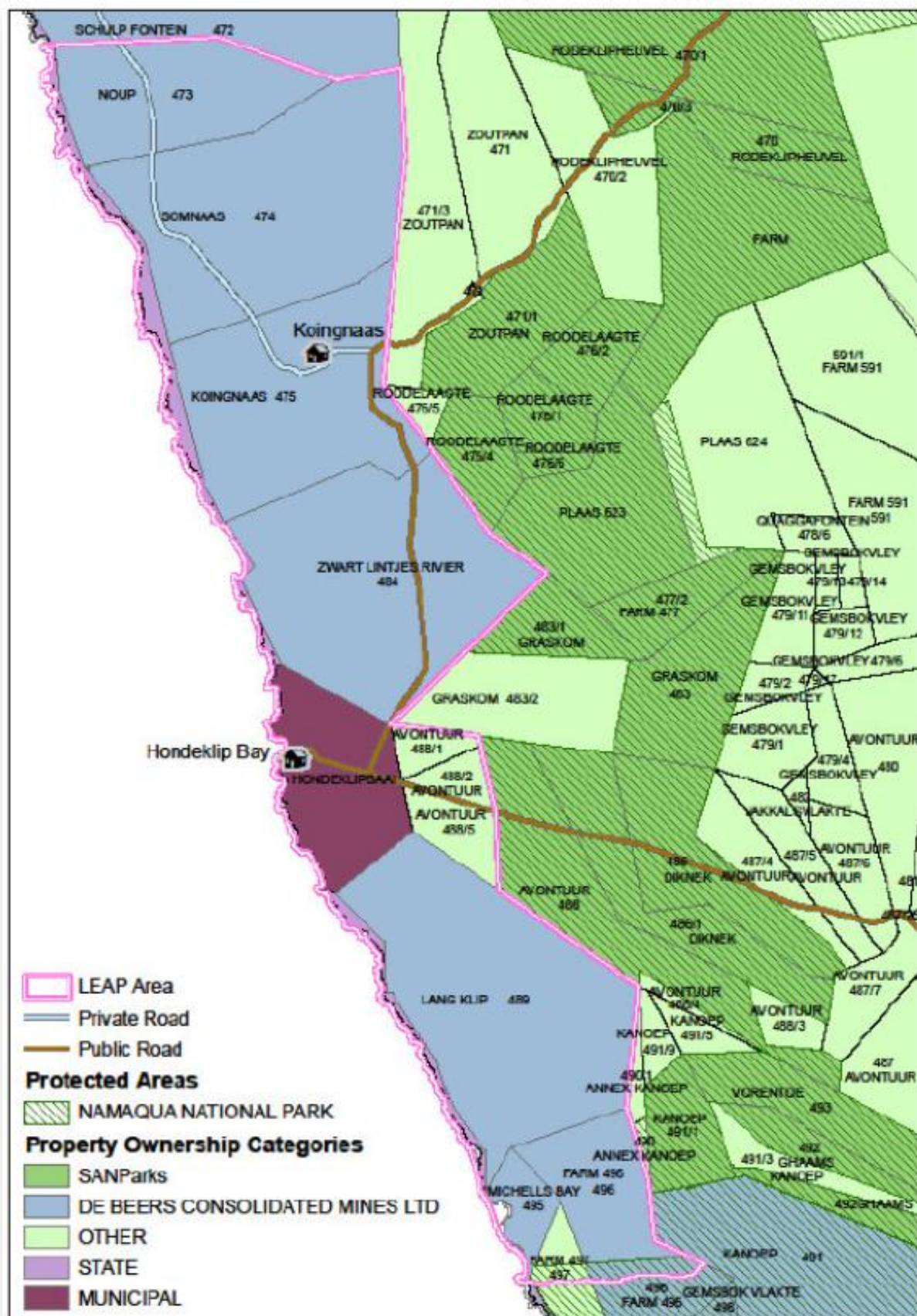
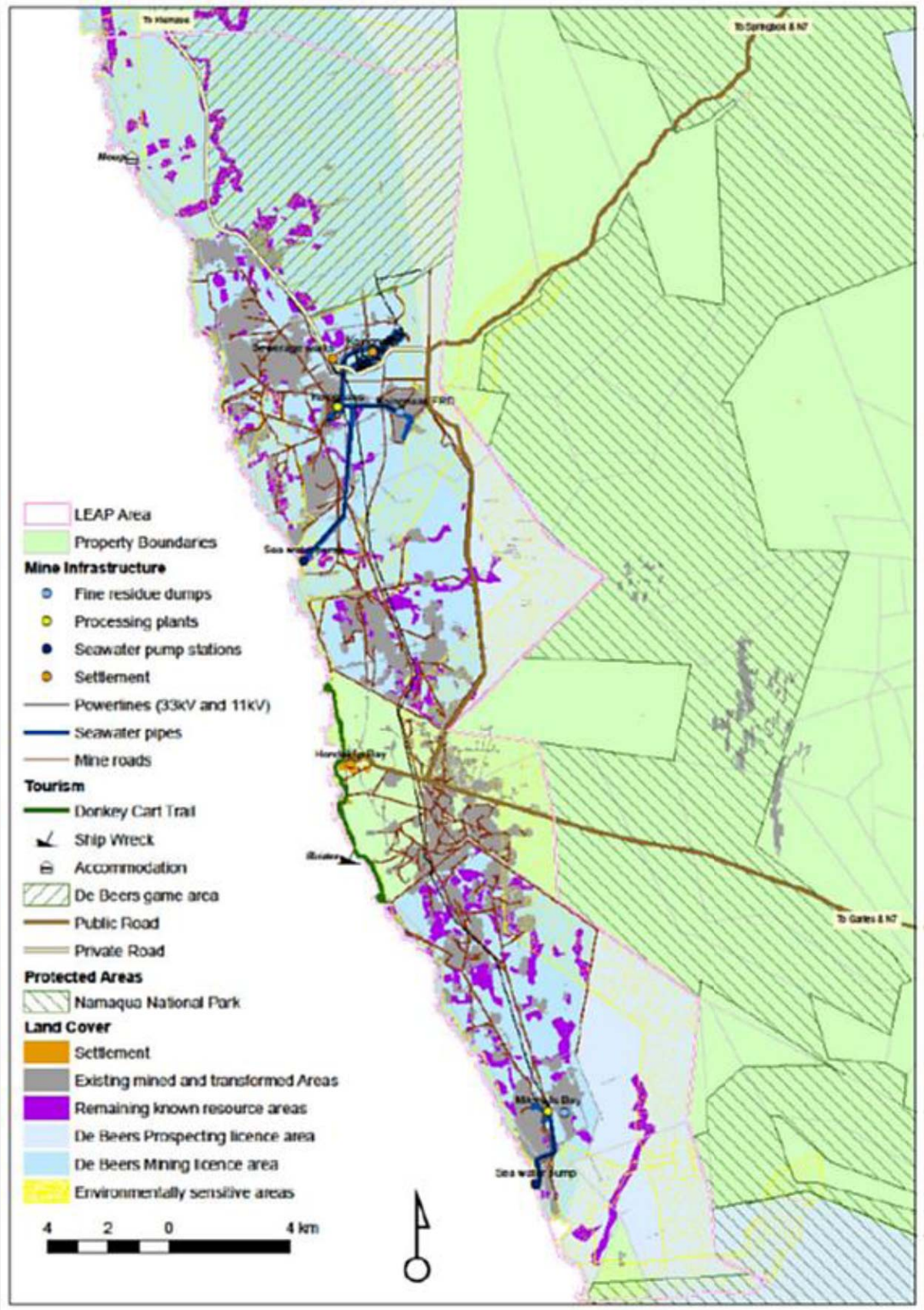




Figure 2-34: The LEAP Area (Living Edge of Africa Land Use Development Plan, 4 March 2010)



The LEAP area represents the coastal area north and south of Hondeklipbaai which has been severely environmentally degraded due to mining activities and needs to be reinstated due to the decline and closure of the majority of mining activities within this area.

The following figure indicates the current land uses with the LEAP area demonstrating the extent of the mining activities superimposed on areas which have been demarcated as being environmentally sensitive.

LEAP's vision is aligned with all the relevant policy plans at provincial, district and municipal level. LEAP supports numerous policies including the need to stimulate economic development and create employment, the focus on mariculture, tourism and alternative energy generation as economic development opportunities. The need to protect valuable biodiversity resources, the important role of the mining sector and the issue of water scarcity.

#### **2.6.1.4 The Namaqua National Park**

The Namaqua National Park (NNP) is situated 22 km west of the town Kamieskroon, which is 495 km north of Cape Town. The NNP is situated within the Succulent Karoo Biome, in one of only 2 arid biodiversity hotspots, with the number of plant species being particularly high (6 356), many of which (40%) are endemic. Seventeen percent of the plant species in this biome are Red Data listed (characterised as being rare or under threat). It is home to the world's smallest tortoise, the Namaqua Speckled Padloper.<sup>18</sup>

Since its establishment in 1998, the park has since been expanded to its current size of 140,035 ha. This includes the recently acquired coastal land between Groen and Spoeg River, and link the park from the high laying Skilpad section adjoining the west coast shoreline. It is world renowned for its spectacular spring lower displays.<sup>19</sup>

The municipalities surrounding NNP are Kamiesberg, Nama Khoi and the Namakwa District Municipality. The park's social responsibility projects include Working for Water, Working for Wetlands and Working for the Coast as well as the creation of the Groen Spoeg Coastal Section.

The NNP is included in the SDF and Environmental Management Framework of the Namakwa District.

**Figure 2-35: NNP Regional Context<sup>20</sup>**

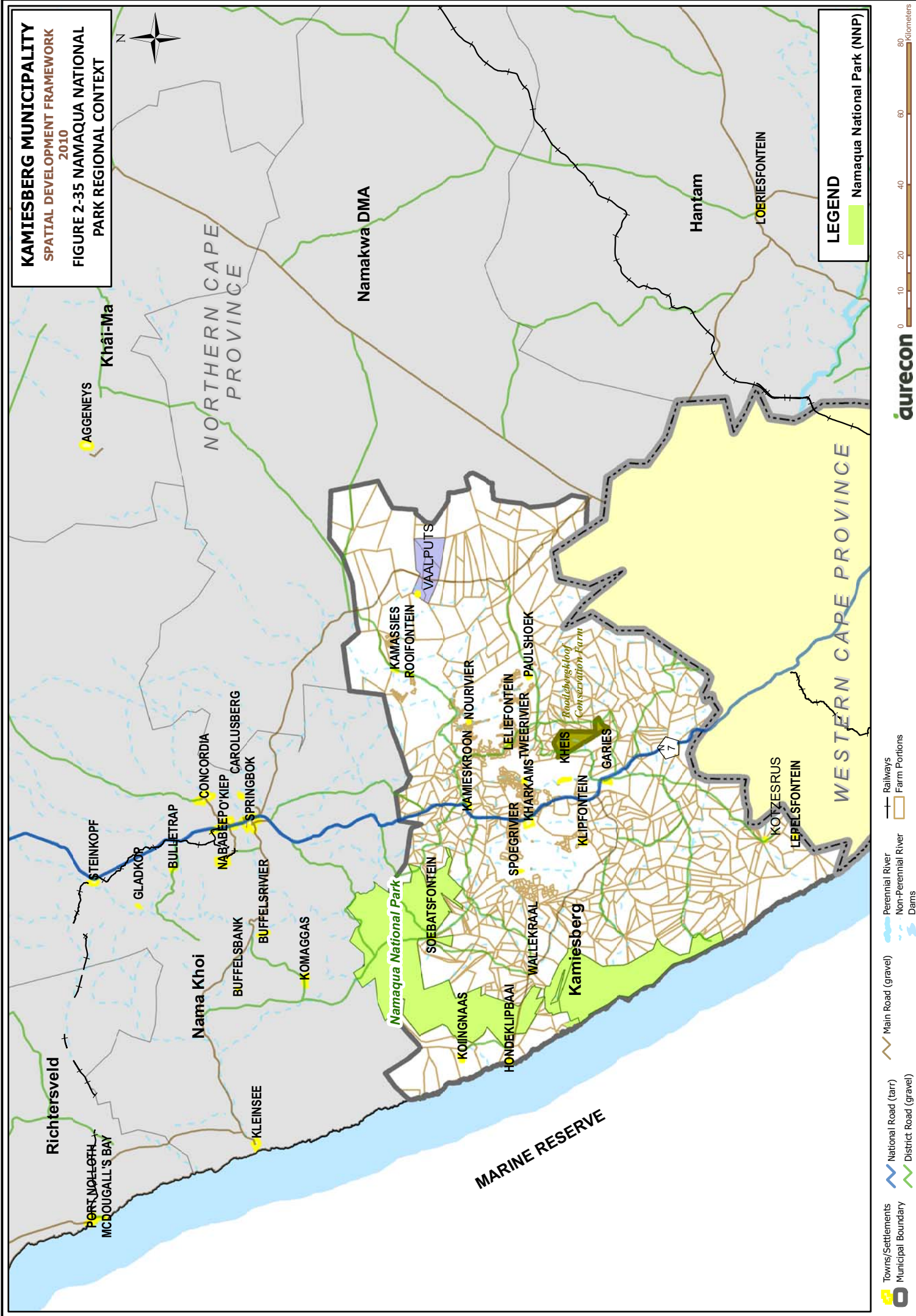
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<sup>18</sup> Namaqua National Park Management Plan (Draft), February 2010

<sup>19</sup> <http://www.sanparks.org>

<sup>20</sup> Namaqua National Park Management Plan (Draft), February 2010





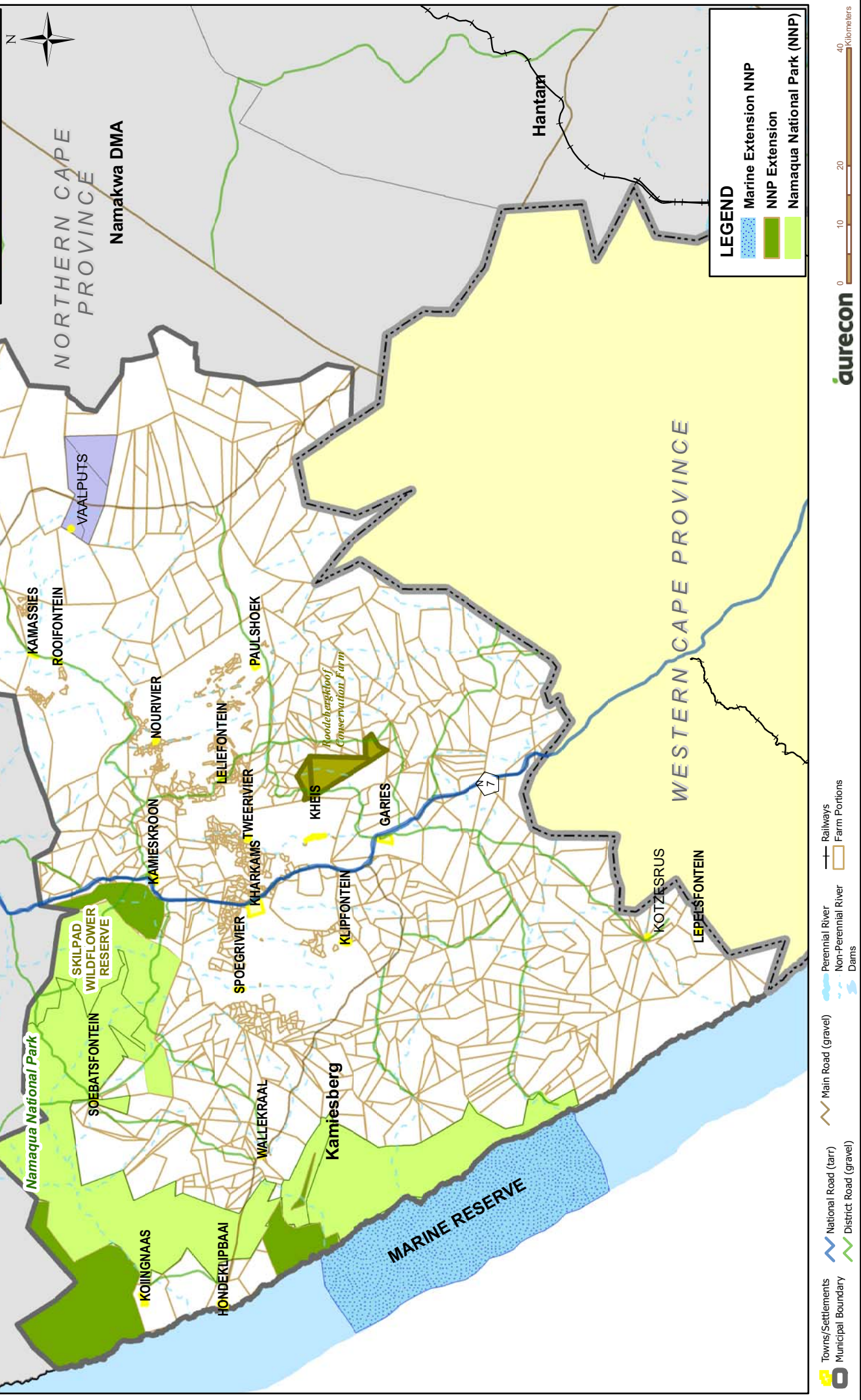
The previous figure indicates the possible further expansion of the NNP as per the Namaqua National Parks management Plan, 2010 (draft) which encompasses the following:

- **Eastern section** which focuses on the linkage between the current park and national highway near Kamieskroon, with an extension into the botanically important Kamiesberg Mountain area. The latter 21,000 ha area would ideally be incorporated via contractual means. The acquisition component for this section involves about 21,000 ha. A further 8,500 ha could be included via contract or acquired, depending upon the funds and land-owner willingness.
- **South section** that attempts to consolidate the isolated sections of the wilderness corridor between the main section of the park near Soebatsfontein and the de Beers Groen – Spoeg contractual section. This involves isolated portions of land surrounded by park owned land or properties that would facilitate fence-straightening, thus enhancing park management efficiency. This involves about 3,200 ha, with about 1000 ha that could be included contractually.
- **Western section** that would attempt to take the park to the coast in the north-west area via a combination of 54,000 ha of contractual inclusion (largely with de Beers Consolidated Mines) and a further acquisition of 14,000 ha.

Figure 2-36: Proposed NNP Land Tenure and Park Expansion



**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-36 NAMAQUA NATIONAL**  
**PARK EXTENSION**



### 2.6.1.5 Vaalputs

Vaalputs, situated in the western portion of the Kamiesberg Municipal area, as indicated on the figure below, is the national radioactive waste disposal facility managed by the South African Nuclear Energy Corporation (Necsa) on behalf of the South African Government and has been receiving low and medium level nuclear waste from Eskom's Koeberg nuclear power plant near Cape Town since 1986. (Vaalputs, 2009). Vaalputs covers an area of about 10 000 ha, measuring 16,5 km from east to west and 6,5 km from north to south at its narrowest point. Approximately 500 - 1 000 ha will be occupied by the sites being developed for low- and intermediate-level waste, an interim spent fuel storage facility, housing, roads, power lines and the airstrip.<sup>21</sup>.

The guiding principle with low or intermediate level waste is to contain the emitting material in an appropriate container, which should be placed in a geological formation to trap any material that escapes through leakage. The hazards to health associated with a well-managed depository are actually very low. High level waste (essentially spent nuclear fuel) emits a great deal of heat and requires special treatment; but this at present is not within Vaalputs's brief. Koeberg's high level waste is currently stored on site.

The site was chosen by the Atomic Energy Board, taking into account the rainfall, rate of flow of underground water from the site, earthquake risk, mining potential, agricultural potential, population density in the vicinity, permeability of the underlying strata and their susceptibility to corrosion. The Board acquired Vaalputs, some 10 000ha, large enough to receive all possible low and intermediate level nuclear waste from as many as five nuclear power plants the size of Koeberg over their possible lifetimes. It is located in one of the driest and least densely populated parts of the country.

The site is underlain generally by clay (a layer of 15-25m), a suitably impermeable geological formation. This is important as back-up in nuclear waste disposal. Low level waste is packed in steel drums, but the site planning allows for the inevitable deterioration of the drums through rust. However, at a correctly chosen site, all radio activity will be safely contained even in the event of leakage of containers for intermediate level waste.

The safety system is further reinforced by a variety of monitoring procedures. A watch is kept on such aspects as ground water. Nuclear Liabilities Management maintains boreholes in and around the area. The presence of radioactive isotopes would be a warning sign of the movement of radioactive material. The air above the site is also monitored, as is the rock under the storage trenches and even the vegetation growing on the site. The same is done for the general neighbourhood. In fifteen years, there has never been a problem. Remote handling of material is unnecessary with low and intermediate level waste. Operators must, however, wear protective clothing and have their health monitored at suitable intervals. It is additionally inherent in the phenomenon of radioactivity that it declines over time. Considering the mix of materials being stored at Vaalputs, it is safe to say that after 300 years the level of radiation at the site will have fallen off to insignificant levels.

The procedure at Vaalputs is to excavate large trenches of seven metres in depth, each trench being gradually filled up with one type of storage container – steel drums for the low level waste. The preparation of intermediate level waste for storage is more complex. This is vitrified within concrete containers, in turn placed inside a metal casing, surrounded by a further concrete casing. Low level waste typically consists of gloves, clothes, paper and cleaning material and medium level waste of resins, filters and smaller components.

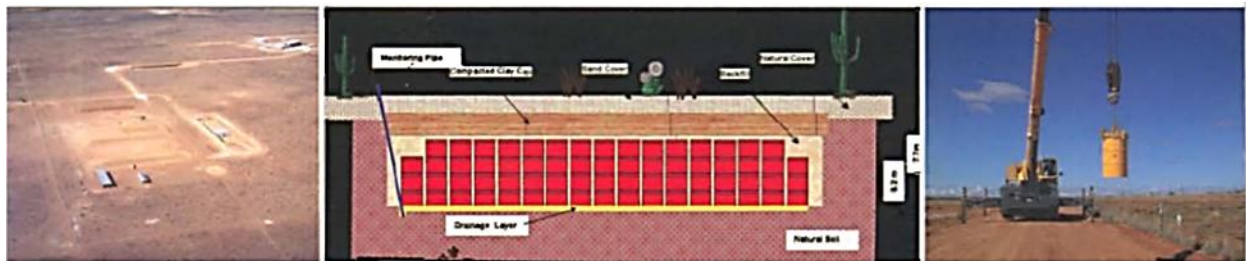
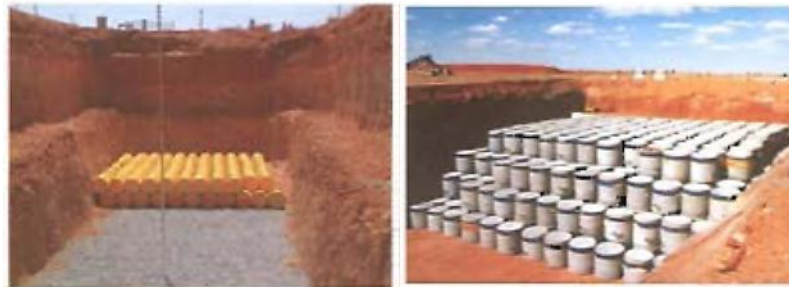
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<sup>21</sup> [www.radwaste.co.za](http://www.radwaste.co.za)



When a trench has been filled, it is capped with the original top layers of earth preserved from the time of excavation. Thereafter the original vegetation reconstitutes itself. Vaalputs is located well within the boundaries of the African tectonic plate, where the risk of substantial earthquakes is at a minimum. The site can be regarded as geologically stable.<sup>22</sup>

**Figure 2-37: Operations at Vaalputs Nuclear Waste Disposal Site<sup>23</sup>**



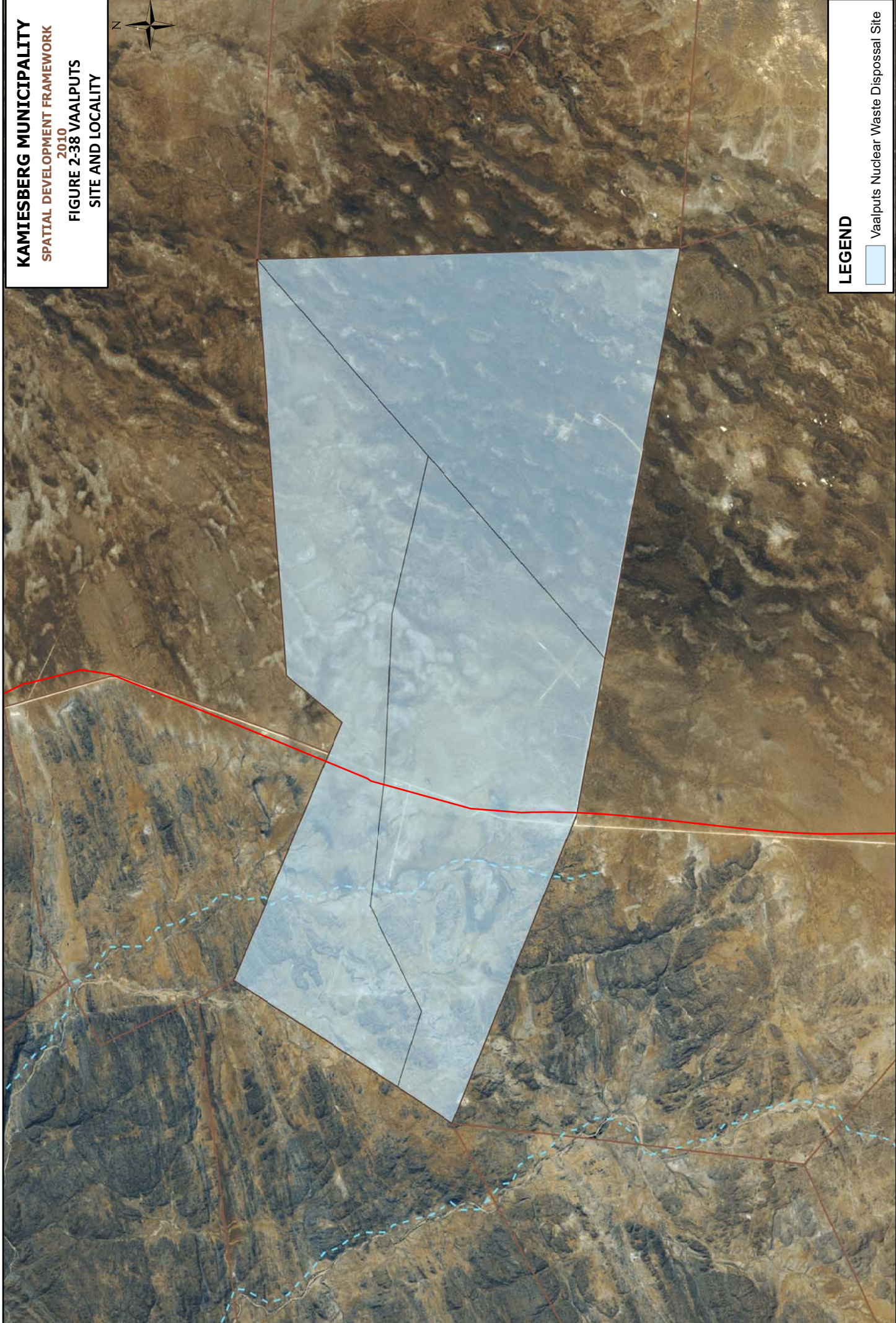
**Figure 2-38: Vaalputs Site and Locality**

<sup>22</sup> Vaalputs, 2009


<sup>23</sup> NECSA. [www.necsa.co.za](http://www.necsa.co.za). Accessed 04 August 2010



**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-38 VAALPUTS**  
**SITE AND LOCALITY**



**LEGEND**

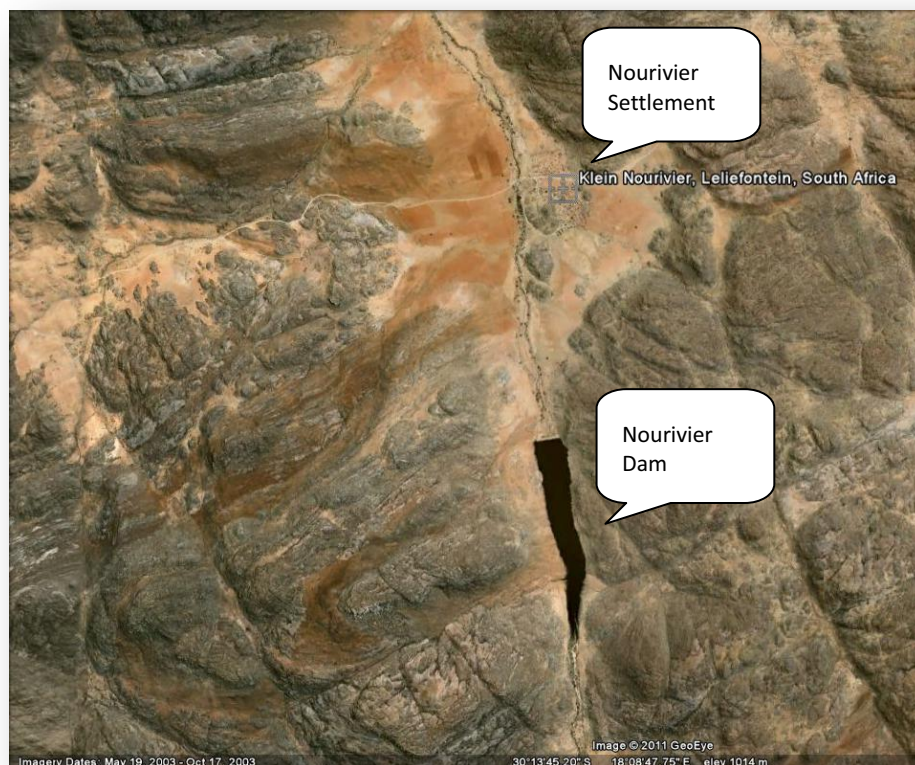
 Vaalputs Nuclear Waste Disposal Site



### 2.6.2 Nourivier Dam

The Nourivier Dam is situated along the Klein Nourivier, south of the Nourivier settlement as per the figure following:

Figure 2-39: Nourivier Dam



Although the dam does not have any environmental significance, it is considered as an important probable contributor to the local economy of Nourivier in the form of eco-tourism and aquaculture (fisheries). Currently, a portion of the dam overflow was washed away in the 2009 floods and the dam wall is in a weakened state. The restoration of the dam wall and the redevelopment around the dam is a project in terms of the Namakwa District Municipality IDP.

### 2.6.3 Heritage and Archaeological Characteristics

The NNP has a rich cultural heritage which complements the parks biodiversity and therefore offers a great conservation opportunity. The cultural landscapes of the NNP consist of the following:<sup>24</sup>

- The San peoples (hunter-gatherers);
- The Khoekhoeh (original herder peoples);
- Communal stock farmers (mostly of Namaqua and mixed descendant brown Afrikaners);
- Commercial stock farmers (mostly white Afrikaners who are descended from various European groups);
- and

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<sup>24</sup> Namaqua National Park Management Plan (Draft), February 2010

- Town's people and community/village people, from various cultures.

Heritage resources, historic buildings, sites, burial grounds and archaeological and paleontological sites can all be found within the Kamiesberg area. Dr David Morris (McGregor Museum) and Dr L Webley (Albany Museum) conducted a ten-day survey in December 2003 during which 92 cultural and/or heritage sites were recorded inside the borders of the NNP. All these sites must be regarded as highly sensitive.

The following table provides a list of declared (by the South African Heritage Resources Agency) Council) heritage sites and monuments in the area. The figure below indicates the locality of these sites:

**Table 2-11: Provincial Heritage Sites and Monuments**

	Provincial Heritage Sites	Town	Street & Suburb, Farm or Other Location	Year Declared
1	Methodist Church and Parsonage	Leliefontein	Westley St	1978
2	Old Messelpad Pass, Divisional Road 2952			1991
3	Rock Formation known as "Letterklip"	Garies		1980
	MONUMENTS			
1	AIDS Memorial, Sandrift			
2	AIDS Memorial, Eksteenfontein			
3	Virgin Mary Shrine, Catholic Mission, Kamieskroon			
4	Kamieskroon, Adriaan van Niekerk Memorial, DR Church, Kamieskroon			
5	Anglo-Boer War Memorial, DR Church, Kamieskroon			
6	Blesbokpoort Anglo-Boer War Memorial, DR Church, Kamieskroon			
7	Boswa Plaque – Boslys Migration 60th Anniversary, Gymnasium, Main St, Eksteenfontein			2009
8	Clement George Memorial Gate & James Alexander Memorial Bell, Methodist Mission Church, Westley St, Leliefontein			1939
9	Garies, Hondeklipbaai Bay, Koingnaas, Lekkersing, Sendelingsdrift, not surveyed			

**Figure 2-40: Heritage and Monuments**

**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-40 HERITAGE**  
**AND MONUMENTS**



**Namakwa DMA**

**NORTHERN CAPE PROVINCE**

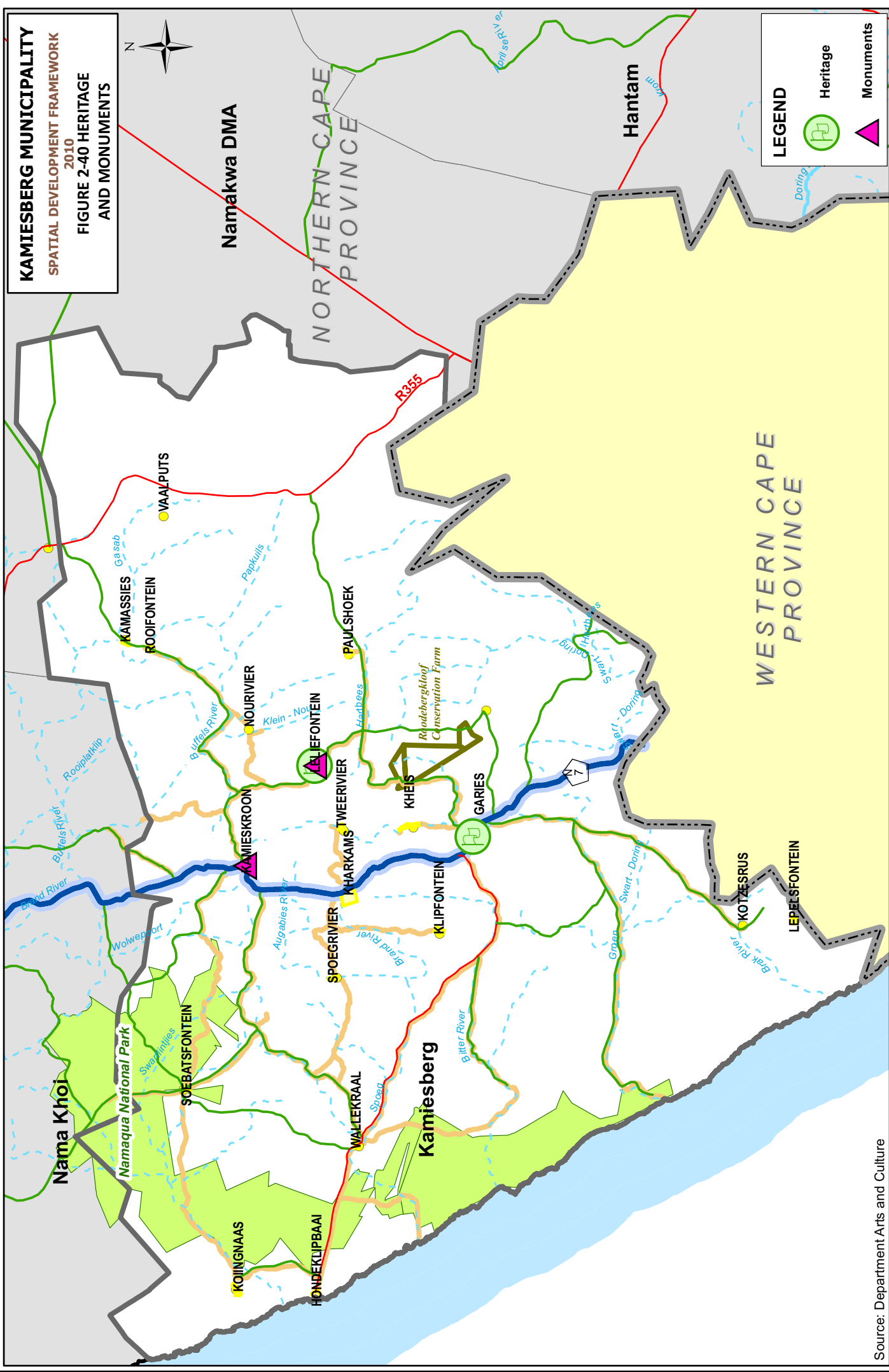
**Hantam**

**WESTERN CAPE PROVINCE**

**LEGEND**

Heritage

Monuments



## 2.6.4 Swot Analysis and Spatial Implications

The Strengths, Weaknesses, Opportunities and Threats (SWOT) of this section must guide and inform the spatial development within the Kamiesberg Local Municipality as follows:

**Table 2-12: SWOT Analysis and Spatial Implications**

Component	Strengths	Weakness	Opportunity	Threat
Succulent Karoo Biodiversity hotspot	Contains two of nine SANBI identified conservation priority areas, namely the Central Namaqualand Coast and Kamiesberg Uplands.		To integrate these biomes into the NNP and the development of tourism focused economies around the biomes	The primary threat to biodiversity currently is transformation by mining. Potential future threats include: <ul style="list-style-type: none"> <li>• small scale mining;</li> <li>• overgrazing;</li> <li>• inappropriate management of water resources;</li> <li>• the overharvesting of natural resources;</li> <li>• transformation of the coastal zone for tourism/holiday home development</li> <li>• Global climate change.</li> </ul>
The Living Edge of Africa Project	<ul style="list-style-type: none"> <li>• The past mining Mecca of the Namaqua land district.</li> <li>• Wedged between the NNP and the Atlantic Coast.</li> </ul>	The rehabilitation and integration as well as redevelopment of the area is costly and over a too long time frame.	The implementation of the Living Edge of Africa Project in that provides definite and concrete opportunities in respect of : <ul style="list-style-type: none"> <li>• Tourism</li> <li>• Mariculture</li> <li>• Agriculture</li> </ul>	Absence of financial backing to the rehabilitation and redevelopment initiatives
The Namaqua National Park	Flowers and biodiversity within an arid biome for Africa.	The tourism attraction season currently very short – only flower season.	The purposeful implementation of the Namaqua National Park Management Plan (Draft), February 2010)	Lack of funding
Vaalputs		Area being sterilised due to the presence of the national		



Component	Strengths	Weakness	Opportunity	Threat
		radioactive waste disposal facility.		
Nourivier Dam	Existing infrastructure that can assist with the well-being of the Nourivier community.	Dam wall collapsed.	The reinstatement of the Dam and redevelopment of the agricultural and tourism initiatives around the dam.	Lack of funding
Heritage and Archaeological Characteristics.	Kamiesberg is rich in Heritage and Monuments.	Poor maintenance and upkeep of sites and monuments.	The incorporation of the monuments and sites into the tourism economy.	

## 2/7. ECONOMIC SECTOR

### 2.7.1 General Overview

In this region, there is a focus on primary production in the mining and agriculture sectors, as well as some business in tourism and manufacturing. Livestock farming is the primary agricultural activity in the region, generating income and providing employment to the local communities. Between August and October the region's economy gets a significant boost with the arrival of the spring flowers as tourists flock to see the colour display.

Hondeklipbaai, a coastal town, was formerly a favoured holiday destination for farmers, fishermen and divers. It is separated from Springbok by 104km of gravel road, the Messelpad Pass and Soebatsfontein. Hondeklipbaai harbour now serves fishing and diamond-mining boats.

### 2.7.2 Provincial Growth and Targets

The information in this section has been obtained from the draft Northern Cape Human Development Report, 2010, Chief Directorate Development and Research, Northern Cape Department of Social Development, 28 May 2010, Chapter 28. The Human Development Report in turn utilised information supplied in the Northern Cape Treasury, District Socio-Economic Review, 25 November 2009, Stats SA and the Development Bank of South Africa.

It can be assumed that the Kamiesberg Local Municipality adopts the Northern Cape Provincial Growth and Development Strategy Targets (PGDS), as follows:<sup>25</sup>

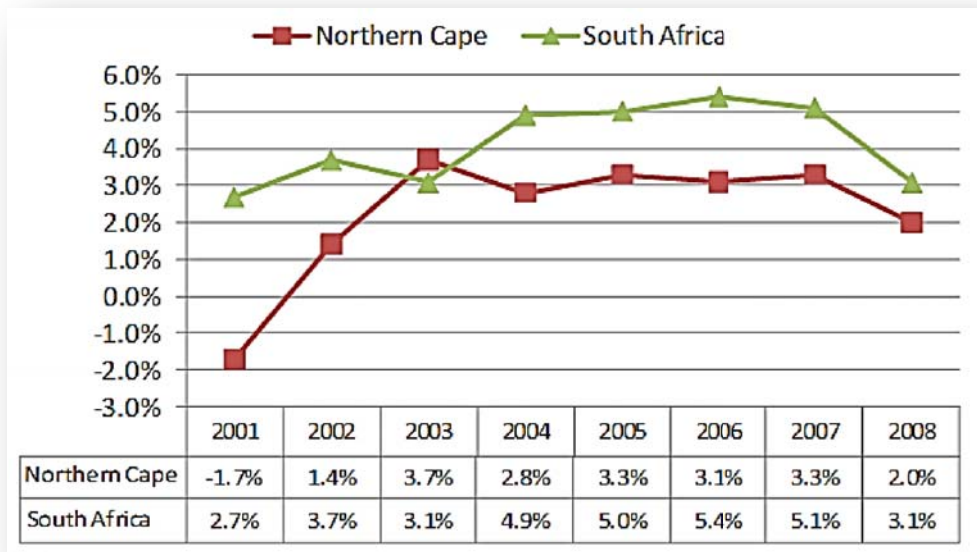
- PGDS - To maintain an average economic growth rate of between 4% and 6%
- PGDS - To provide adequate infrastructure for economic development and growth by 2014

It is, however, noted that the Northern Cape already falls short of this target, as it seems that it could only maintain a growth rate of 2.2% between 2003 and 2007, dropping to a growth rate of 2% in 2008, with a negative growth rate expected for 2009 due to the low demand and price of commodities and the world recession.

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<sup>25</sup> Department of Social Development 2010

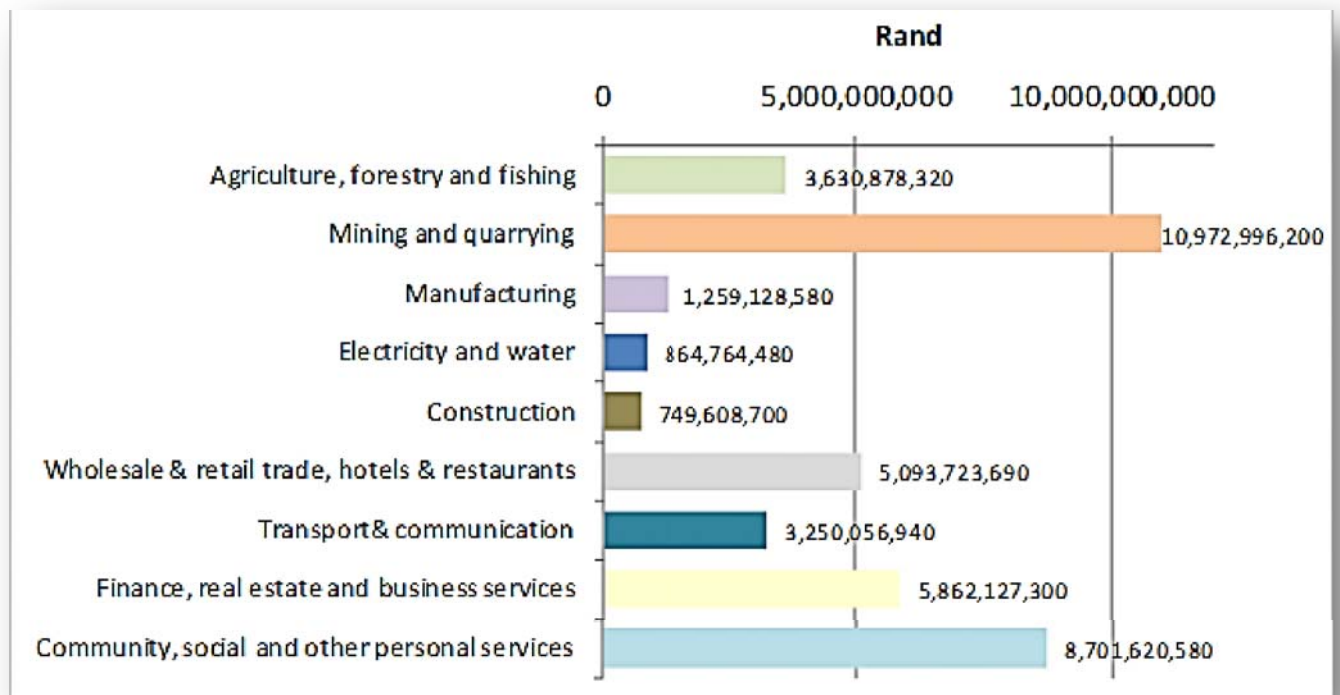
Figure 2-41: Economic Growth Rates



## 2/8. DISTRICT ECONOMIC PROFILE

Mining and quarrying, as per the following figure, is the highest overall contributor to the Northern Cape Growth Domestic Product, and is the highest contributor to the economy in the Namakwa District.

Figure 2-42: Provincial GDP 2007



As per the table below “Community, social and other personal services” is the highest contributor that the Namakwa District makes to the Northern Cape GDP, this is followed closely by Mining.

**Table 2-13: Sectoral Contribution by District 2007<sup>26</sup>**

	Frances Baard	JTG	Namakwa	Pixley ka Seme	Siyanda	TOTAL
Primary industries	11%	65%	34%	25%	57%	36%
Agriculture, forestry and fishing	4%	5%	14%	24%	10%	9%
Mining and quarrying	7%	60%	20%	0%	47%	27%
Secondary industries	10%	4%	3%	9%	6%	7%
Manufacturing	4%	2%	1%	2%	3%	3%
Electricity and water	3%	1%	0%	6%	2%	2%
Construction	3%	2%	1%	1%	1%	2%
Tertiary industries	79%	30%	63%	66%	37%	57%
Wholesale & retail trade, hotels & restaurants	15%	8%	19%	11%	10%	13%
Transport& communication	12%	2%	9%	12%	5%	8%
Finance, real estate and business services	23%	5%	11%	13%	10%	15%
Community, social and other personal services	28%	15%	23%	31%	12%	22%
All industries at basic prices	100%	100%	100%	100%	100%	100%

It is noted that agriculture has the highest growth in its contribution to the GDP in the District as indicated in the table below. It is assumed that this trend will continue for the foreseeable future.

**Table 2-14: GDP Growth 2001-2007<sup>27</sup>**

	Frances Baard	JTG	Namakwa	Pixley ka Seme	Siyanda
<b>Primary industries</b>	<b>2.72%</b>	<b>10.25%</b>	<b>4.78%</b>	<b>15.94%</b>	<b>13.00%</b>
Agriculture, forestry and fishing	16.09%	16.08%	16.15%	16.13%	16.13%
Mining and quarrying	-1.51%	9.86%	-0.16%	-2.00%	12.41%
<b>Secondary industries</b>	<b>8.61%</b>	<b>9.43%</b>	<b>6.43%</b>	<b>8.57%</b>	<b>9.86%</b>
Manufacturing	8.32%	9.58%	5.15%	6.03%	8.89%
Electricity and water	6.11%	5.86%	3.63%	9.60%	10.64%
Construction	12.37%	11.33%	8.66%	8.82%	11.10%
<b>Tertiary industries</b>	<b>11.59%</b>	<b>11.01%</b>	<b>9.49%</b>	<b>10.51%</b>	<b>10.76%</b>
Wholesale & retail trade, hotels & restaurants	15.15%	14.66%	11.03%	11.87%	14.27%
Transport& communication	8.96%	1.63%	5.16%	7.96%	7.43%
Finance, real estate and business services	12.95%	15.33%	11.16%	14.48%	13.93%
Community, social and other personal services	10.06%	9.68%	9.46%	9.68%	7.69%
<b>All industries at basic prices</b>	<b>9.98%</b>	<b>10.44%</b>	<b>7.61%</b>	<b>11.49%</b>	<b>11.94%</b>
Taxes less subsidies on products	15.29%	15.84%	15.07%	15.63%	15.80%
<b>TOTAL GROSS DOMESTIC PRODUCT</b>	<b>10.61%</b>	<b>10.84%</b>	<b>8.35%</b>	<b>12.07%</b>	<b>12.26%</b>

<sup>26</sup> Department of Social Development, 2010

<sup>27</sup> Department of Social Development, 2010



In terms of Rand values, value adding to the economy seems to have grown as per the table below. However, taking into consideration an average inflation rate of 4% from 1996 to 2005, value adding in the respective municipalities in the district has actually severely declined, should 1996 be utilised as the base year.

**Table 2-15: Value Adding<sup>28</sup>**

	Municipality	Value Adding in Rand			Value Adding (Inflationary Adjusted)*		
		1996	2001	2005	1996	2001	2005
<b>Namakwa</b>	DMA Namakwa	R 28,180	R 39,525	R 46,104	R 28,180	R 32,228	R 31,929
	Hantam	R 284,925	R 430,930	R 539,930	R 284,925	R 351,369	R 373,920
	Kamiesberg	R 110,275	R 177,662	R 232,868	R 110,275	R 144,861	R 161,269
	Karoo Hoogland	R 192,563	R 295,527	R 372,938	R 192,563	R 240,965	R 258,272
	Khai-Ma	R 97,675	R 154,863	R 199,416	R 97,675	R 126,271	R 138,102
	Nama Khoi	R 603,316	R 1,003,130	R 1,315,824	R 603,316	R 817,925	R 911,253
	Richtersveld	R 176,965	R 288,790	R 373,738	R 176,965	R 235,471	R 258,826
	Subtotal	R 1,493,899	R 2,390,399	R 3,080,817	R 1,493,899	R 1,949,089	R 2,133,571

## 2/9. MUNICIPAL ECONOMY

### 2.9.1 Overview

The economy of the Kamiesberg Municipal area can be evaluated with respect to the Namaqualand region as represented by the area under the jurisdiction of the Namakwa District Municipality. The Namaqualand economy must also be seen in the perspective of the Northern Cape. Graphical representations of these relationships are shown below as they existed in 2005 and expressed in Constant of 2000 Rands.<sup>29</sup>

A significant economic factor for the Namakwa District, and Kamiesberg, is “flower” tourism that is based on Namaqualand’s fantastic annual wildflower displays that cover regions in a kaleidoscope of colour each spring. The regional ecotourism industry has grown over the last few years (e.g. 4x4 and ecotourism), and not only over the flowering season, but with tourists arriving throughout the year.

The table below indicates that the sectoral distribution of the Kamiesberg relates well with that of the District, however the total economy of Kamiesberg only makes up 7% of the Namakwa District economy:

**Table 2-16: Kamiesberg Economic Distribution**

	Namakwa	Kamiesberg
<b>Primary industries</b>	<b>34%</b>	<b>34%</b>
Agriculture, forestry and fishing	14%	9%
Mining and quarrying	20%	25%
<b>Secondary industries</b>	<b>3%</b>	<b>3%</b>
Manufacturing	1%	1%

<sup>28</sup> Department of Social Development, 2010: *Own interpretation*

<sup>29</sup> Economic Data - Provided by DBSA, 14 March 2008

	Namakwa	Kamiesberg
Electricity and water	0%	0%
Construction	1%	2%
<b>Tertiary industries</b>	<b>63%</b>	<b>63%</b>
Wholesale & retail trade, hotels & restaurants	19%	13%
Transport& communication	9%	10%
Finance, real estate and business services	11%	7%
Community, social and other personal services	<b>23%</b>	<b>33%</b>
<b>All industries at basic prices</b>	<b>100%</b>	<b>100%</b>

It can be seen that while patterns of economic activity are similar in the municipal and district areas it is, however, apparent that Wholesale and Retail Trade makes a relatively larger contribution to the district than it does to Kamiesberg. It is also apparent that Kamiesberg is much more dependent on the “Community, Social and Personal Services” sector than the District.

The growth of the economy, and the various sectors within the economy, can also provide an insight into economic trends. The growths of the various economic sectors between 1996 and 2005 are displayed in the figure overleaf.

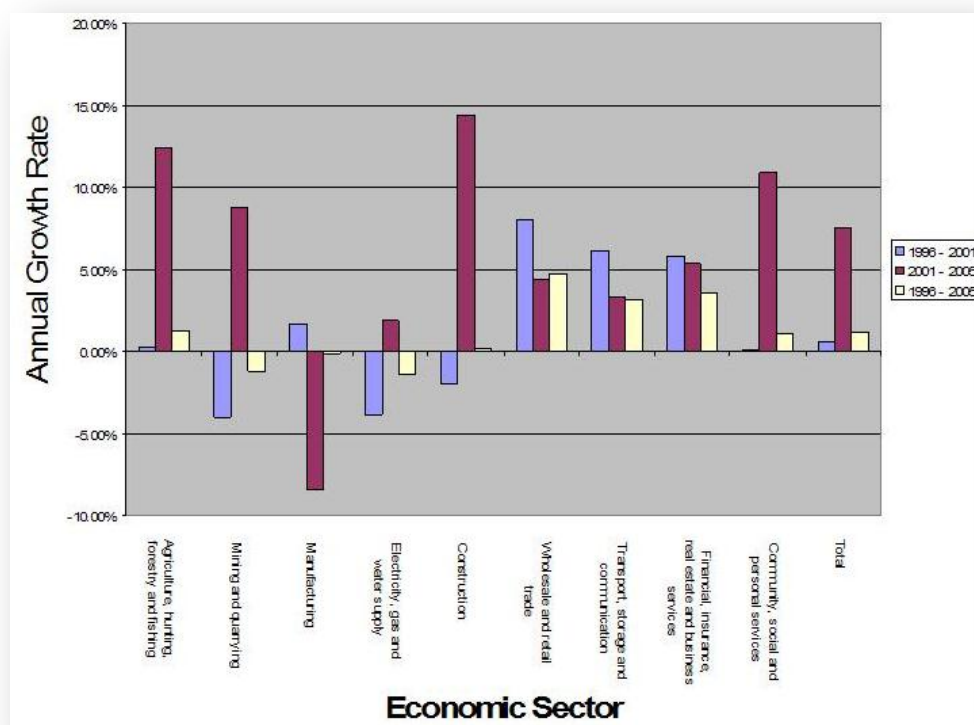
It is evident from the figure that although Construction only contributes 2% to the overall economy it had the largest growth in this period. This attributed to the construction of government funded housing projects and is thus not seen as a prolonged investment. Agriculture contributes 9% to the overall economy and this sector had the second largest growth factor. This attributed to the decline in mining forcing the population back to their root economy, being livestock farming.

Earlier in the document it has been pointed out that value adding has severely declined, this is confirmed by the graph in the figure, which illustrates that manufacturing had a negative growth.

The pillars of the Kamiesberg economy, which are further elaborated on below, are:

- Community Social and Personal Services (33%)
- Mining and quarrying (25%)
- Wholesale and Trade (13%)
- Agriculture, hunting, forestry and fishing (9%)

Figure 2-43: Growth Rates for Kamiesberg between 1996 and 2005



## 2.9.2 Community Social and Personal Services

This sector refers to employment with the Government and Municipality and parastatals such as Eskom and South African National Parks. Kamiesberg has become highly dependent on this sector for employment. It is however believed that this sector is saturated and will not grow significantly in the future.

## 2.9.3 Mining and Quarrying

Although diamond mining is on the decline the area is rich in minerals, which have an exploration value. It is foreseen that mining will play a lesser role in the economy in the future but still have the potential to be an important contributor. It must there be supported and exploited to its fullest.

It seems that minerals are exported in their raw form through the Port Nolloth harbour (being close to pegmatite deposits). The export of minerals in its raw form should be avoided by adding value to the minerals.

Some settlements such as Koingnaas have been completely dependent on mining and it is due to the decline of mining that these towns have no economic footing that can sustain them. There are, however, initiatives now afoot to diversify the economy mainly towards tourism. De Beers Consolidated Mines (DBCM) has also recently been shedding non-core functions, which has resulted in the out-sourcing of mainly services and retail functions within the town.

Wollastonite deposits occur in the Garies region. Wollastonite, a calcium metasilicate, is used in ceramics and as filler in plastics and paint. It also has construction uses in structural clays, glass abrasives, paper, adhesives, and as a replacement for asbestos. The Garies deposits are the only deposits exploited in South



Africa to date. Mining operations started in 1963, but difficulties related to quality problems resulted in the closure of the operations.

#### **2.9.4 Wholesale and Trade**

With a small population of only 12 000 it is believed that the performance of wholesale and trade is elevated by the spur of tourism in the flower season. The activities associated with tourism, such as the sale of accommodation, prepared food and curios, forms part of this sector.

#### **2.9.5 Tourism**

The municipal area is recognized as a flora “hot spot”. The Namaqua Region has high attractive adventure, natural and cultural tourism experiences. It offers a variety of niche tourism experiences of which the most famous is the annual and usually spectacular flower season. Other tourism experiences include the Richtersveld mountain desert, which was recently declared as a World Heritage Site. The Richtersveld highlights a transfrontier conservation area, sharing land with the Namibian side of the Richtersveld. The Richtersveld offers beautiful scenery but also attractive cultural experiences, such as Nama cultural experiences, as well as many enthralling 4x4 trails to choose from.

This pull effect on the entire regions experiences needs to be supported by ensuring easy access, availability of sound amenities and awareness<sup>30</sup>.

In terms of Tourism, the region has not yet reached its full potential due to:

- It being perceived as not worth a visit outside the annual flower season;
- All roads, except the N7, being gravel and being in a bad condition;
- The Namaqua National Park is not being experienced as an strong enough “tourism anchor”;
- The coast, with it abundance of marine life, currently being “a no-go area” due to the coastal mining operations;
- The area being remote and access is limited to vehicles. Air and rail transport is limited and absence respectively.

Despite the concerns raise above, tourism and conservation seems to be the only sectors that have a potential to contribute significantly to the economic wellbeing of the region. These services must be maintained to the highest order as there are limited other prospects for Kamiesberg.

#### **2.9.6 Agriculture, Hunting, Forestry and Fishing**

Although, the municipal area does not extensively focus on this sector, it experienced the highest growth rate and will thus have a growing importance in the Kamiesberg economy.

##### **2.9.6.1 Agriculture**

Due to the arid conditions farming is focussed on life stock farming, being goats and sheep. With a ratio of 9ha per sheep/goat it demonstrates that extremely large parcels of land are required to maintain a viable sheep or goat farm. The extent of land brings about its own management problems as it is not possible to oversee the welfare of the animals with subsequent losses to predators such as jackals and eagles as well as theft. Agricultural initiatives by way of projects are underway on the development and transformation of

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<sup>30</sup> Namakwa DM Growth and Development Strategy, 2008

the agricultural sector such as the Commercial Goat farming, Land Care, CASP and Vederlandspan Agricultural Development projects.

#### **2.9.6.2 Fishing and Mariculture**

The Kamiesberg Municipal area has access to the Atlantic coast with a shoreline of more than a 100km. This shoreline and ocean has never been fully exploited, mainly due to the mining operations. Of all the agricultural components it is believed that fishing and mariculture have the greatest potential to provide (apart from tourism) a new solid footing for the declining economy of Kamiesberg.

Mariculture is generally defined as a specialised branch of aquaculture involving the cultivation of marine organisms for food and other products in the open ocean, an enclosed section of the ocean, or in tanks, ponds or raceways which are filled with seawater. An example of the latter is the farming of marine fish, including finfish and shellfish e.g. prawns, or oysters and seaweed in saltwater ponds. Non-food products produced by mariculture include: fish meal, nutrient agar, jewellery (e.g. cultured pearls), and cosmetics<sup>31</sup>.

Based on research already completed, the Northern Cape Provincial Government has attached a high priority to promoting investment in the fishing and mariculture sectors as a means to mitigating the future negative socio-economic impact associated with diamond mining downscaling. Indications are that the optimal development of fishing and mariculture can create at least 2500 jobs over 10 years, absorbing much of the unemployment created by the downscaling of mining.

In his article, titled “Mariculture site-selection along the South African coastline: A GIS approach”, posted on the website of Food And Agriculture Organization of the United Nations, I Klotz-Shiran advocated that<sup>32</sup>:

“Presently underdeveloped, South Africa’s entire mariculture industry produces a total average of 5,000 tonnes of shellfish (abalone and oyster) and prawns per year. By comparison, France alone produces over 200,000 tonnes of shellfish each year. The constraints to the development of this industry include physical, technological and socio-economic factors. The major obstacle is South Africa’s frequent winter storms, which make offshore mariculture operations difficult to maintain. In addition, the few remaining protected bays that are favourable for sea farming are heavily utilised for various activities. **But perhaps one of the most crippling constraints on the industry’s growth is the lack of a cohesive national policy for the development of mariculture.** An adopted policy would provide a greatly needed infrastructure to capitalise on the opportunities the South African coastline offers, including excellent water quality, good infrastructure such as road networks and electricity, and relatively cheap land in certain areas – an attraction for investors. However, the tide may be changing, thanks to geospatial technology and a joint French-South African project designed to help indicate potential and suitable sites for mariculture development and production. **Although national legislation is still lacking, government agencies such as the Department of Environmental Affairs and Tourism, which is responsible for coastal development, have publicly identified mariculture as a potential commercial resource for local communities struggling to make a living.** Industry decision-makers, such as the South Africa Network for Coastal and Ocean Research (SANCOR), have therefore begun to move ahead to gather the needed information to locate suitable sites for sea farming. Specifically, environmental data and a mariculture management database are needed to allow users to analyse regions, to identify suitable areas and to map them. A GIS has been deemed the solution. The Department of Ichthyology and Fisheries Science at Rhodes University in South Africa, and IFREMER, a French government marine research institution, formed a joint project in 1998 to develop this GIS, and to help identify suitable mariculture environments. ”

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<sup>31</sup> www.wikipedia.org, 2010

<sup>32</sup> Shiran, I. Mariculture Site Selection along the South African Coastline: A GIS Approach. Food And Agriculture Organization of the United Nations www.fao.org, 2000

From the above it is evident that in this area mariculture should be pursued as the economic alternative to ordinary farming practices.

## 2.9.7 SWOT Analysis and Spatial Implications

The Strengths, Weaknesses, Opportunities and Threats (SWOT) of this section must guide and inform the spatial development within the Kamiesberg Local Municipality as follows:

**Table 2-17: SWOT Analysis**

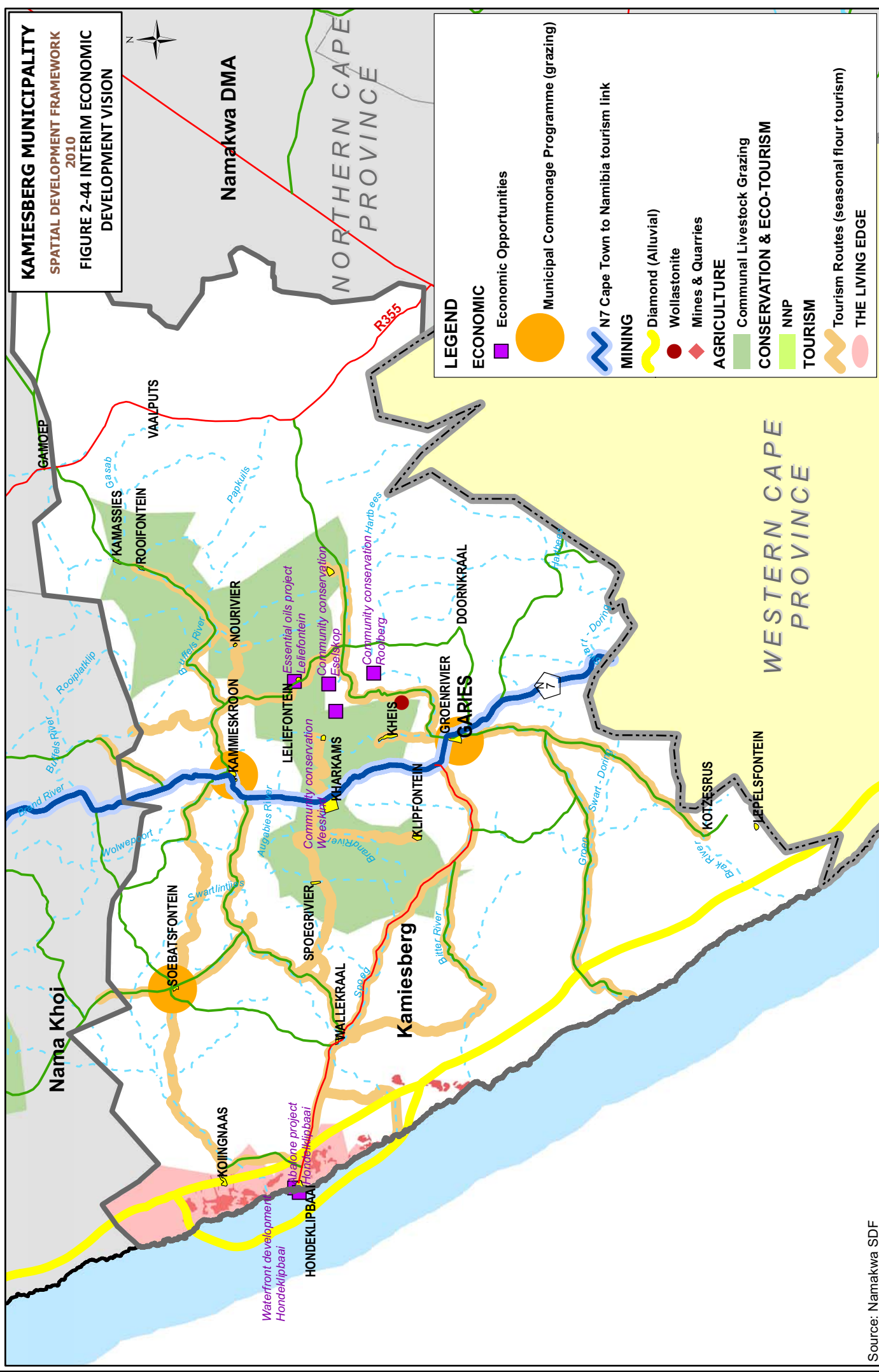
Component	Strengths	Weakness	Opportunity	Threat
General Overview	Mining and agriculture forms back bone of economy. Natural environment (flowers and rugged terrain).			Arid climatic conditions and depletion of mineral resource base.
District Economy	Mining and agriculture forms back bone of economy. Natural environment (flowers and rugged terrain).			Arid climatic conditions and depletion of mineral resource base.
Municipal Economy	Natural environment (flowers and rugged terrain).	Vast area with inadequate supportive infrastructure. Area perceived to be inaccessible due to gravel roads being in a poor condition. No alternative means of transport by means of rail and commercial air. Dependency on the Community and personal services sector for employment.	Development of agriculture (mariculture) and the strengthening and expansion of the tourism sector.	Decline in mining and in ability to create an alternative economic base.

The above SWOT presents an interim spatial vision for economic development within Kamiesberg which will be further unpacked in Phase Three (Development Concept) of the SDF:

**Figure 2-44: Interim Economic Development Vision**



**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-44 INTERIM ECONOMIC**  
**DEVELOPMENT VISION**



Source: Namakwa SDF

It is evident that at present there is a large dependency on the successful implementation of the following initiatives:

### **2.9.7.1 The Living Edge of Africa Project (LEAP)**

LEAP is regarded as an important economic development and employment creation opportunity for the area<sup>33</sup>. LEAPs vision is aligned with all the relevant polity plans at the provincial, district and municipal level. It supports numerous policies including the need to stimulate economic development and create employment, with a strong focus on mariculture, tourism, and alternative energy generation, the need to protect valuable biodiversity resources, the important role of the mining sector, and the issue of water scarcity.

### **2.9.7.2 Namakwa National Park (NNP)**

NNP aims to play a significant, targeted and effective role in contributing to local economic development, economic empowerment and social development in communities and neighbouring areas adjacent to the park by partnering with Local Government to form part of the IDPs, participating in Government Programmes to contribute to local skills development by supporting learnerships, implementing needs related training programmes and by creating business opportunities<sup>34</sup>.

The Expanded Public Works Program (EPWP) will remain a significant focus area of the organization to effectively contribute to the creation of temporary jobs in the short terms, sustainability by investigating exit opportunities and entrepreneurial opportunities for local communities.

### **2.9.7.3 Municipal IDP Initiatives**

**Table 2-18: Municipal IDP Projects**

Sector	Strategy
Economic	<ul style="list-style-type: none"> <li>Community conservation at Rooiberg, Weeskind and Eselskop</li> <li>Tourism as meaning of job creation</li> <li>Hondeklipbaai - potential to resurrect the fishing industry, notably in mariculture, does exist.</li> <li>Establish Boerbok companies</li> <li>Process essential oils</li> <li>Municipal commonage programme (grazing)</li> <li>Develop abalone project in Hondeklipbaai</li> <li>N7 Cape Town to Namibia tourism &amp; economic link</li> </ul>
Mining	<ul style="list-style-type: none"> <li>Wollastonite plant in Garies</li> <li>Supply alternative energy</li> <li>Plant for manufacturing of solar heating equipment</li> <li>Wind energy</li> </ul>
Tourism	<ul style="list-style-type: none"> <li>Upgrade tourism routes</li> <li>Hiking trails on Roodebergkloof conservation farm</li> <li>Waterfront development in Hondeklipbaai</li> <li>Hondeklipbaai cater for increasing numbers of holidaymakers, both campers and those who have bought plots for holiday homes.</li> </ul>
Conservation	<ul style="list-style-type: none"> <li>Living Edge project</li> <li>Hiking trails in Roodebergkloof conservation farm</li> </ul>

<sup>33</sup> Living Edge of Africa Land Use Development Plan, 4 March 2010

<sup>34</sup> Namaqua National Park Management Plan (Draft), February 2010

Sector	Strategy
	<ul style="list-style-type: none"> <li>• Develop camping sites in along the coast</li> <li>• Manage grazing</li> </ul>

## 2/10.ROADS & TRANSPORTATION

### 2.10.1 Transportation Infrastructure

#### 2.10.1.1 National and Regional Transportation Network

The main transport infrastructure serving this section of the Namakwa District is the N7 National Road, which runs in a north/south direction connecting Cape Town to Namibia, and the N14, which runs from Springbok in an easterly direction to Upington. The remainder of the roads in this section of Namaqualand are generally gravel roads in varying conditions. From the Free State the Namakwa is access via the N8 from Bloemfontein and from Gauteng via the N14 through the North West Province or the N12 via Kimberley.

The distance between Springbok and Cape Town is 500km. The major towns of Steinkopf, Port Nolloth, and Alexander Bay are 49 km, 141 km and 230 km from Springbok respectively. The Namakwa is also connected to Cape Town by airline routes from Springbok (an air service also connects Springbok to Alexander Bay and Kleinsee). These air fields are not used for commercial flights and are mostly used by the Red Cross and private charter planes.

This section of Namaqualand is not served by railways or commercial airlines with the nearest railway station and commercial airport being in Upington approximately 350 km away. The Cape Town-Bitterfontein railway line was developed during the early 19th century to serve the Namakwa copper mines. This was recently closed following the ceasing of copper mining activities in the Namakwa region.

Port Nolloth and Hondeklipbaai both have fishing harbours. Both experienced degradation of their basic infrastructure in recent years due to the decline of the fishing industry in the Namakwa. At present the Hondeklipbaai facility is non-utilised. The Port Nolloth harbour is currently utilised by a number of shallow-water diamond concession vessels.

#### 2.10.1.2 Local Road Network

Roads are a major concern; all roads in the area are gravel and in a serious state of disrepair. They are often in a bad condition due to lack of maintenance. Kamiesberg municipality is the only municipality which has gravel on all of its roads.

There are no railways, commercial harbours and airports and the economy of the municipality is dependent on these bad roads to ensure services delivery to the communities. Health services, polices services, municipal services are all dependent on these roads for service delivery and consequently their condition hampers and cripples service delivery.

In terms of access to Koingnaas, the town is served only by road access although DBCM does have regular flights for their employees to the airfield at Kleinsee. The main access is via a surfaced road between Kleinsee and Koingnaas while there is also a gravel road linking Koingnaas to the main gravel route between Garies and Hondeklipbaai.

Figure 2-45: Road Network and Condition





### **2.10.1.3 Rail Networks**

There are no railway lines within the Kamiesberg Municipal area.

### **2.10.1.4 Aerodromes and Air Fields**

Namakwa is connected to Cape Town by private charter air routes from Springbok, Alexander Bay and Kleinsee. These air fields are not used for commercial flights and are mostly used by the Red Cross and private charter planes.

## **2.10.2 Transport Modes**

### **2.10.2.1 Public Transport**

Only 2% of the Kamiesberg population is employed in the transport sector. This can be seen in the lack of any forms of public transport services in the area. The bad road conditions are also hampering these services.

The only busses entering the area are mainly tourist busses passing through on the N7 or visiting the Namaqua National Park.

### **2.10.2.2 Private Transport**

Approximately 86% of the population does not have access to advanced forms of transport and rely on foot or in many cases the donkey cart.

### **2.10.2.3 Tourism Routes**

There are several tourist routes in the area. These routes are linked to the areas where the spring flowers can be viewed during August to October. The Kamiesberg area is also known for its 4x4 trails.

## **2.10.3 SWOT Analysis and Spatial Implications**

The Strengths, Weaknesses, Opportunities and Threats (SWOT) of this section must guide and inform the spatial development within the Kamiesberg Local Municipality as follows:

**Table 2-19: SWOT Analysis**

<b>Component</b>	<b>Strengths</b>	<b>Weakness</b>	<b>Opportunity</b>	<b>Threat</b>
National and Regional Transportation Network	National roads N7 and N14 traversing region.	<ul style="list-style-type: none"><li>• No commercial airport.</li><li>• Inconvenient road network off the N7.</li><li>• Limited rail transport.</li></ul>	<ul style="list-style-type: none"><li>• Upgrade of regional routes particularly lining Hondeklipbaai and the Namakwa National Park to the N7.</li></ul>	
Local Road Network		<ul style="list-style-type: none"><li>• All roads apart from N7, gravel and in poor condition.</li></ul>	<ul style="list-style-type: none"><li>• Upgrade of roads, particularly those linking Hondeklipbaai and the Namakwa National Park to the N7.</li><li>• Economic development</li></ul>	

Component	Strengths	Weakness	Opportunity	Threat
			opportunities should be channelled into corridors and roads that are adjacent to or link with the main economic growth centres.	
Rail network		No rail network		
Aerodromes and airfields		No commercial airports		
Public Transport		Limited public transport available.		
Private Transport		Time consuming and unproductive as it is mainly pedestrian and donkey cart orientated.		

## 2/11.ELECTRICITY

### 2.11.1 Electrical Reticulation Network

The following figure shows the medium and high voltage electrical infrastructure in the Kamiesberg area.

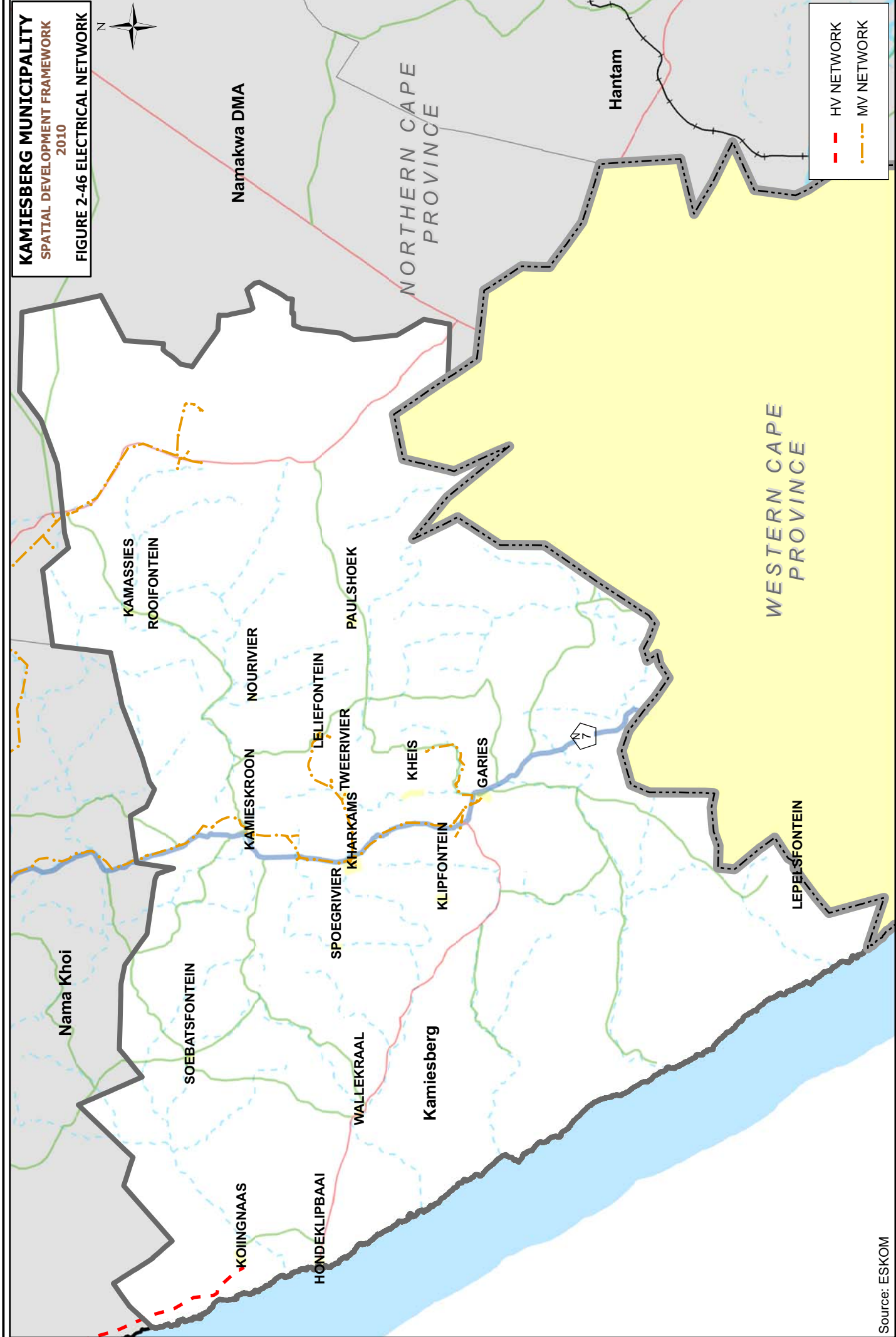
No information is currently available on the capacity of the networks.

**Figure 2-46: Electrical Network**



**KAMIESBERG MUNICIPALITY**  
SPATIAL DEVELOPMENT FRAMEWORK  
2010

FIGURE 2-46 ELECTRICAL NETWORK



Source: ESKOM

### 2.11.2 Supply and Level of Service

Electricity reticulation means bulk supply of electricity, which includes for the purposes of such supply, the transmission, distribution and, where applicable, the generation of electricity, and also the regulation, control and maintenance of the electricity reticulation network, tariff policies, monitoring of the operation of the facilities for adherence to standards and registration requirements, and any other matter pertaining to the provision of electricity in the municipal areas. The Kamiesberg Municipality adopted a free basic service policy by which 50 kilowatts of electricity is given free to all indigents.

Due to the declining mining industry, the mining operators (DBMC) have approached the Municipality to take over the infrastructure in such mining towns as Koinaas. These towns, without having an economic footing once the mining operations cease to exist, will not be able to afford pay for services and as such will place a higher burden on the municipality to supply adequate services under the indigent programme.

### 2.11.3 Existing Electricity Infrastructure

Kamiesberg Municipality, as the distributor, supplies consumers within the licensed area of supply. The distribution of electricity within the municipal area is governed further by distribution licences with NERSA, which regulate the areas to which the municipality may distribute electricity. According to the licence the distribution area includes: Diamantstreek, Garies, Hondeklipbaai, Kamieskroon, Leliefontein/Kamiesberg, Namakwa and Rietpoort<sup>35</sup>.

According to the Kamiesberg Municipality IDP 2010, 97.2 % of Kamiesberg Municipality has access to electricity and it was expected that the remaining 2.8% would have access by December 2008. This has not been confirmed. The Municipality is of the opinion that they are well ahead of the National targets on providing Electricity to all households.

### 2.11.4 Alternative Fuel and Energy Sources

The Municipality has adopted a policy of a 10% saving on the use of electricity and has in terms of their IDP expressed their intent to explore alternative energy generation such as wind mill and solar power. The area is well suited for both of these alternative generation processes.

### 2.11.5 SWOT Analysis and Spatial Implications

The Strengths, Weaknesses, Opportunities and Threats (SWOT) of this section must guide and inform the spatial development within the Kamiesberg Local Municipality as follows:

Table 2-20: SWOT Analyses

Component	Strengths	Weakness	Opportunity	Threat
Electricity	All households provided with electricity.	Additional load on scarce ability and municipal resources to absorb the transfer of mining town transfers	Alternative power generation as a means of economic growth.	

<sup>35</sup> National Electricity Regulator Temporary Distribution License issued to Kamiesberg Municipality. NER/D/NC064

## **2/12.MUNICIPAL ENGINEERING SERVICES**

### **2.12.1 Solid Waste and Refuse**

According to the Municipality (telephonic discussion on 5 Aug 2010) all the settlements have waste disposal sites of which three is as yet not licensed namely the Garies, Hondeklipbaai and Lepelsfontein sites.

Waste removal occurs weekly by means of a tractor and trailer or by truck.

### **2.12.2 Water**

#### ***2.12.2.1 Overview***

All the towns within the Kamiesberg area have either a house of erf connection. Leliefontein and Spoegrivier are provided with communal standpipes.

Status of Free Basic Water Services:

- Free basic services are delivered to indigents households with a monthly income of R1880 or less.
- 963 households are registered indigents of which all receive free basic water and free basic sanitation.
- Due to the scarcity of water only 2 kilolitres of water per month is free to all registered indigent households (national standard is 6kl). There are currently 963 registered indigent households (households earning less than R1880 per month).

**Figure 2-47: Level of Services – Water**

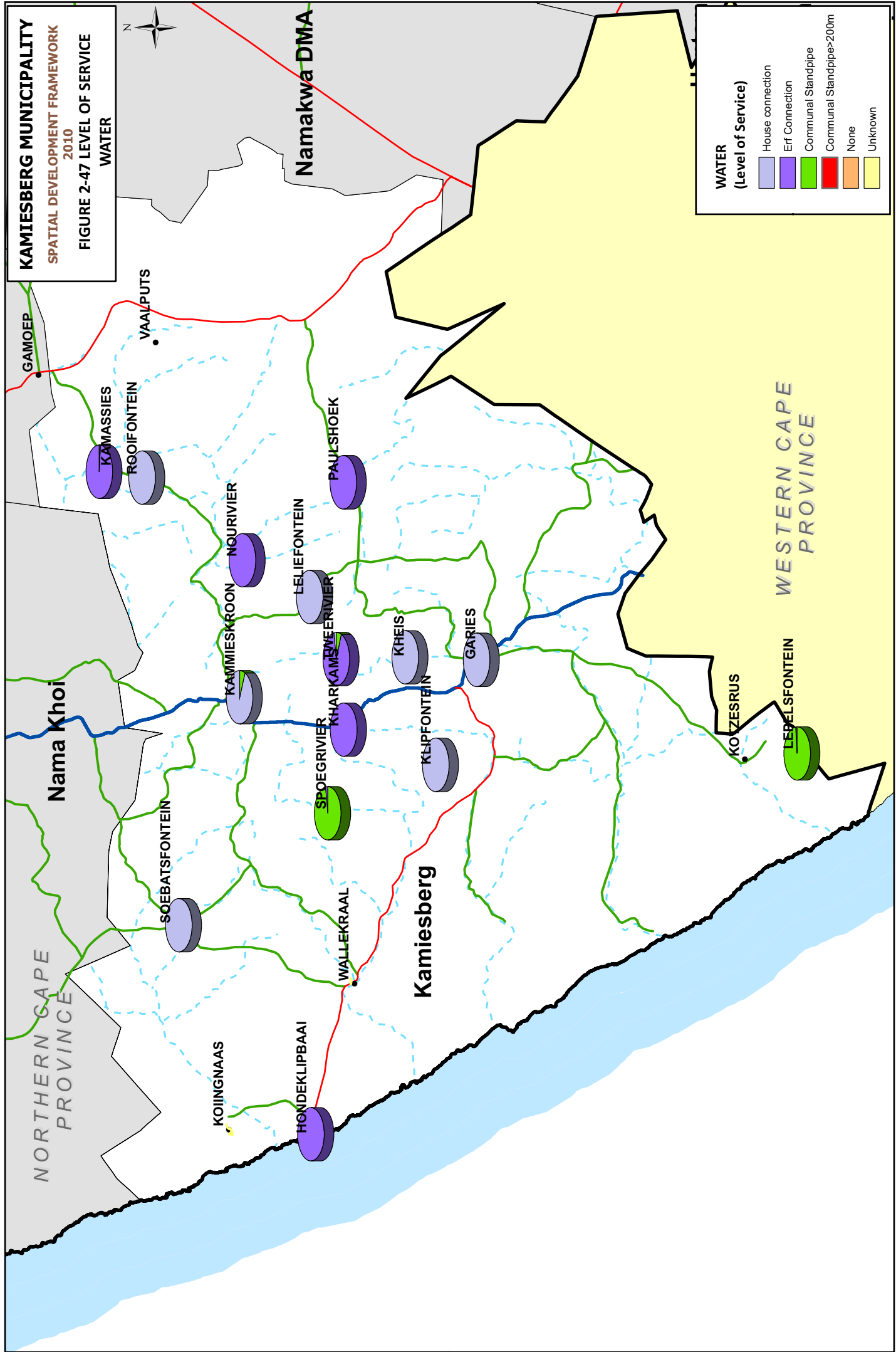
**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-47 LEVEL OF SERVICE**  
**WATER**



**Namakwa DMA**

**WATER**  
**(Level of Service)**

- House connection
- Erf Connection
- Communal Standpipe
- Communal Standpipe >200m
- None
- Unknown





### 2.12.2.2 Water Source

Kamiesberg municipality has 16 small villages all relying on groundwater. The challenges experienced are listed below:

- The Koingnaas Mine supplies water to Hondeklipbaai which periodically experiences extreme water shortages. The bulk water storage should be upgraded.
- At Kharkams a borehole has been set up for artificial recharge by receiving run off water from a seasonal stream. This borehole should be equipped with electrical connections and a telemetric system. The old asbestos pipeline from the borehole to the town should be replaced. [28km]
- The scarcity of water has resulted in generally low water consumption and only the first 2 kl is free to all households.
- Water is generally hard and use is made of desalination processes to reduce the dissolved salts which are expensive.
- With the construction of the hospital in Garies, pressure has been placed on the water resources and storage. A new reservoir complex for the total Garies area should be constructed to replace the current stagnated, limited system.
- Lepelsfontein provides drinking water twice a week only due to desalination plants capacity. The desalination plant should be upgraded.
- Spoegrivier, Klipfontein and Soebatsfontein – capacity problems with boreholes/desalination plant and storage, as well as a permanent water network distribution system for all these towns. The current plastic reservoirs should also be upgraded with permanent concrete reservoirs.
- Paulshoek need a water network with house connections and the upgrading of the reservoirs. The new production boreholes should also be equipped with an electricity line and pump equipment.
- The operations at all these bore holes, should be automated by means of a telemetric system as to allow optimal use and abstraction.
- All 16 towns should be equipped with automatic chlorination plants making use of liquid chlorine.
- Kheis needs a proper water storage reservoir and distribution network as well as the upgrading of the desalination plant.

The annual MIG allocation to fund and address all these challenges is too small. *Options investigated include:*

- Construction of a suitable pipeline from the Namakwa Water system in Springbok to Garies. Draw off points will be provided along the route to Kamieskroon, Kharkams, Tweerivier, Spoegrivier, Klipfontein and Kheis. This pipeline will be routed along old existing roads for ease of construction and maintenance. The capacity of the existing pipeline (Henkries pipeline) from the Gariep River to Springbok will be investigated to determine whether the pipeline has sufficient capacity to deliver the additional water to Kamiesberg. This pipeline currently has a number of draw off points and stretches as far as Kleinsee. The capacity of the existing main supply pipeline from Gariep River to Springbok will be investigated to determine whether the system has the capacity to deliver the additional water to Kamiesberg.
- Desalination of sea water and Hondeklipbaai. The feasibility of the development of a desalination plant will have to be further investigated before it can be considered as an option.

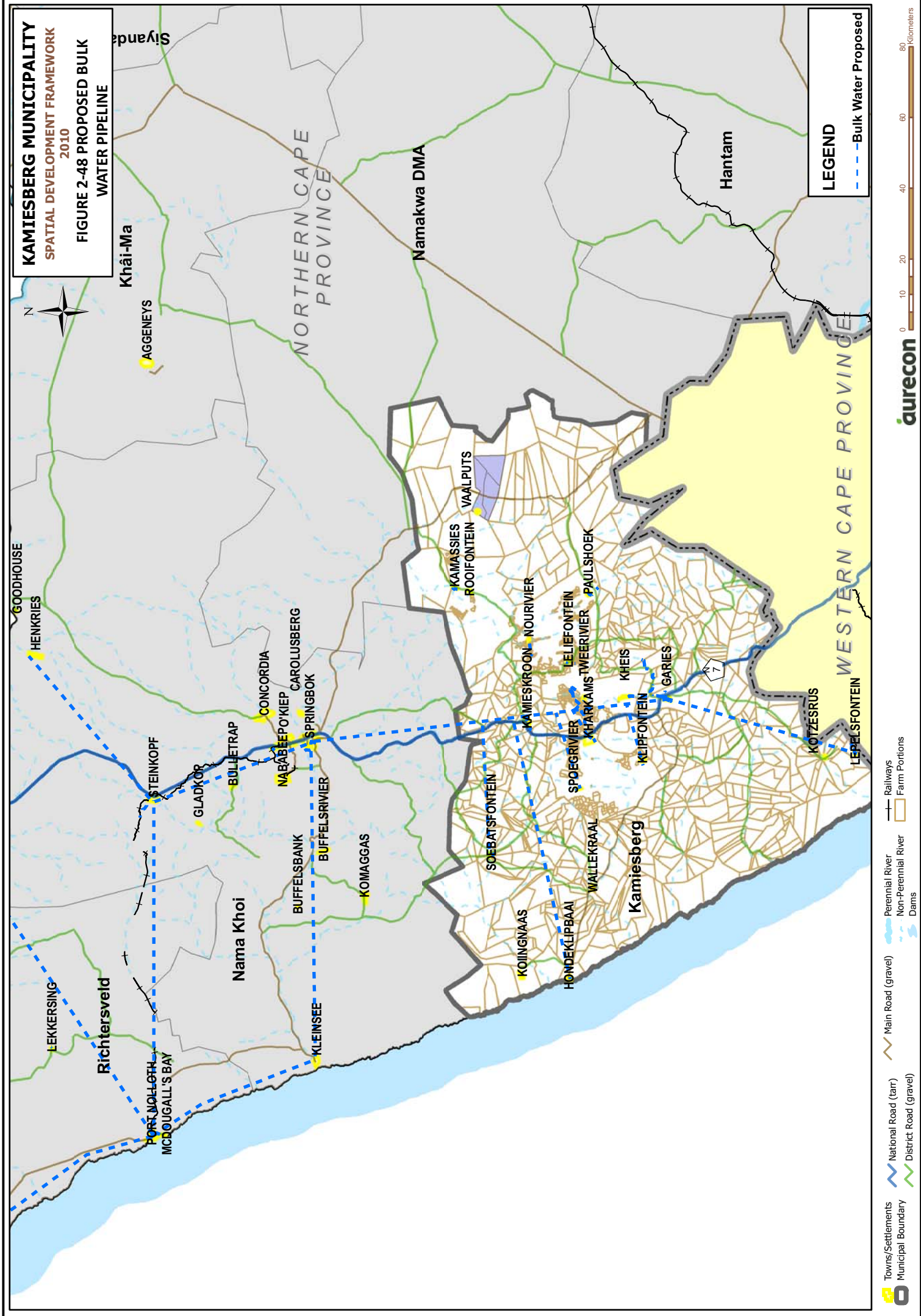
*The Preferred option includes:* Construction of a pipeline from the Namakwa Water Board to Garies with draw-off points along the road to Kamieskroon, Kharkams, Tweerivier, Spoegrivier, Klipfontein and Kheis.

The following map shows the proposed bulk water pipeline.

**Figure 2-48: Proposed Bulk Water Pipeline**

**KAMIESBERG MUNICIPALITY**  
SPATIAL DEVELOPMENT FRAMEWORK  
2010

**FIGURE 2-48 PROPOSED BULK  
WATER PIPELINE**



- Towns/Settlements
- Municipal Boundary
- National Road (tarr)
- Main Road (gravel)
- Perennial River
- Non-Perennial River
- Dams
- Railways
- Farm Portions

**LEGEND**

--- Bulk Water Proposed

## 2.12.3 Sanitation

### 2.12.3.1 Sanitation Overview

Only Garies, Koingnaas and Kamieskroon have full water-borne sewage connected to a treatment works. Due to the scarcity of water in the region, the rest of the towns are all serviced with either a VIP or UDS system. Hondeklipbaai, Kharkams, Leliefontein and Nourivier have a combination of septic tanks and UDS systems.

Figure 2-49: Level of Service - Sanitation

### 2.12.3.2 Waste Water Treatment

Only Garies, Koingnaas and Kamieskroon are equipped with oxidation ponds. The rest of the towns have no treatment systems. Most of the towns have dry sanitation systems; hence the lack of treatment works. At Hondeklipbaai, Kharkams and Soebatsfontein the septic tank content gets disposed of in trenches next to dumping site.

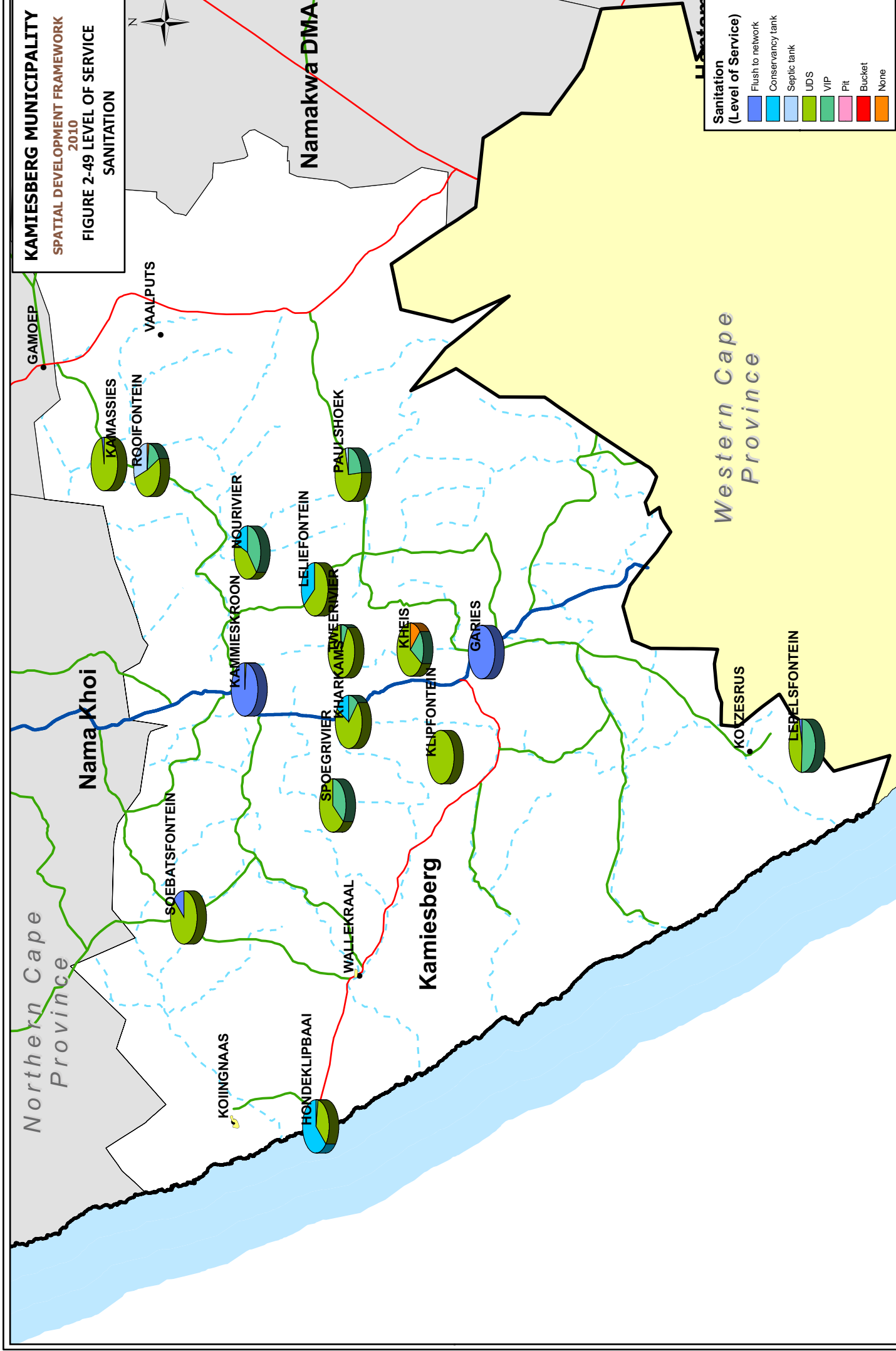
## 2.12.4 SWOT Analysis and Spatial Implications

The Strengths, Weaknesses, Opportunities and Threats (SWOT) of this section must guide and inform the spatial development within the Kamiesberg Local Municipality as follows:

Table 2-21: SWOT Analyses

Component	Strengths	Weakness	Opportunity	Threat
Solid Waste	All settlements have solid waste sites	Three of the sites are not as yet licensed thereby posing an uncertainty on the environmental management and operational management of the site.		
Water		Current water capacity inadequate to fulfil the needs of the area. Area only supplied by boreholes.	Supply of bulk water from the Orange River Supply of bulk water through desalination plant at Hondeklipbaai.	Drying up of boreholes
Sewerage	All household are either served.	Except for Garies, Koingnaas and Kamieskroon all other settlements and farms are served by VIP or UDS systems. If not managed properly by user it can lead to sickness and ill health.		Water scarcity makes it impossible to reticulate with full waterborne systems

**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-49 LEVEL OF SERVICE**  
**SANITATION**





## **2/13. LAND USE AND LAND MANAGEMENT**

### **2.13.1 General Settlement (Development) Pattern**

The municipal area of Kamiesberg covers an area of 11 742km<sup>2</sup> and as per the figure below, displays the following broad uses in the spatial pattern:

- 16 small urban settlements, each not big enough to generate its own economic drivers;
- A declining coastal mining area that requires intervention;
- The Namaqua National Park;
- The communal rural area;
- General or commercial rural area.

**Figure 2-50: Current General Spatial Development**

### **2.13.2 Land Use Management**

The standard land use management scheme contained in the Cape of Good Hope Ordinance 15 of 1985 is applicable to the Kamiesberg Local Municipality. The mapping of land use rights is not a prerequisite in terms of this scheme; the municipality must keep a list of all the applicable land use rights for each property.

Amendments to the land use rights are however administrated in terms of the Northern Cape Planning and Development Act, 1998 (Act 7 of 1998), however the annotations of the Ordinance are still utilised.

It appears that the cadastral boundaries and land uses do not match, which indicates that the Municipality do not regularly update their cadastral base with the result that there may be a loss of income due to properties not being rated. Furthermore, as the mining houses did not always adhere to any land use management regulations, land uses emerged and subdivisions were done without being registered at the deed office. It appears that there is a need for a land audit within the area.

The Kamiesberg Municipality has prepared a draft land use management scheme. This scheme, at the time of writing this document, has not been formally approved and promulgated and therefore does not have any legal standing.

**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
 2010  
**FIGURE 2-50 CURRENT GENERAL**  
**SPATIAL DEVELOPMENT**



Namakwa DMA

NORTHERN CAPE PROVINCE

WESTERN CAPE PROVINCE

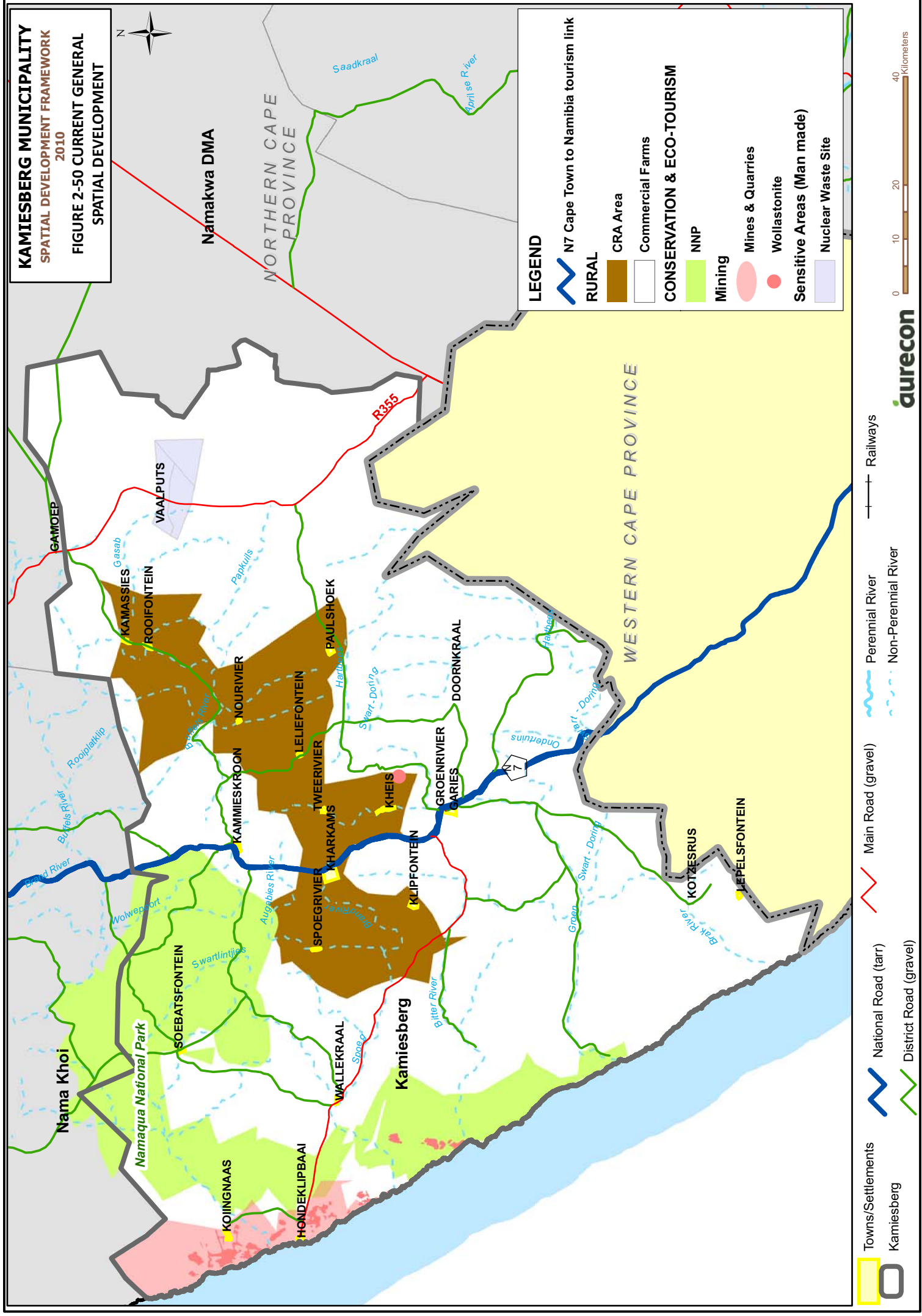
**LEGEND**

- N7 Cape Town to Namibia tourism link
- RURAL**
- CRA Area
- Commercial Farms
- CONSERVATION & ECO-TOURISM**
- NNP
- Mining
- Mines & Quarries
- Wollastonite
- Sensitive Areas (Man made)**
- Nuclear Waste Site

- Towns/Settlements
- Kamiesberg
- National Road (tarr)
- District Road (gravel)
- Main Road (gravel)
- Perennial River
- Non-Perennial River
- Railways



**aurecon**



### 2.13.3 Land Reform and Restitution

There are a number of land restitution and redistribution cases in the Northern Cape. In the Namakwa Region these include six Coloured Rural Areas (CRA). The CRA's are also referred to as Coloured Rural Reserves, or Act 9 Areas, with reference to the Apartheid-era legislation that governed these areas.

One of the six CRA's is situated in the Kamiesberg area and is known as Leliefontein (see Figure above). The CRA's began as mission stations in the early 19<sup>th</sup> century, as part of the expansion of the colonial frontier and settler farming. Within the CRAs, land was nominally owned by the Minister of Land Affairs, but was locally perceived to belong to the occupiers who managed it communally. Land rights, particularly on arable plots, rested mostly with male "heads of households", and male stockowners have, historically, dominated the communal grazing lands.

In many of these cases the economic potential of land is inadequate as a source for economic livelihoods and this will have to be addressed in any future consideration of infrastructure investment and development. The development priorities should be the maximization of LED opportunities, promoting integration and linkages with the surrounding economy and the provision of appropriate levels of service<sup>36</sup>.

Table 2-22: Leliefontein CRA

Area	Act 9 Land (ha)	Newly purchased land (ha)	State land (ha)	Total land (ha)	Number of residents
Leliefontein	159,182	32,627	0	191,809	4825

#### 2.13.3.1 Municipal Commonage Programme

The municipal commonage land was purchased for the CRA's under the Municipal Commonage Programme. This programme allows municipalities to acquire and manage land (commonage) for the benefit of disadvantaged members of their communities, using funds supplied by the National Department of Rural Development and Land Reform. The Municipal Commonage Programme was applied to Leliefontein and later extended to include land around Kamieskroon and Garies.

The current commonage model poses serious financial problems to the cash-strapped rural municipality. To allow poor people access to commonage implies that the municipality must subsidise those users by either leasing the land at low rates or sacrifice their maintenance responsibilities. The lack of administrative and financial capacity within the municipality makes it difficult for them to manage the commonage land effectively, both in terms of regulating access and maintaining physical infrastructure such as fences and water points<sup>37</sup>.

The SANParks supports the land restitution process. Currently land claims in protected areas are being resolved in accordance with the Cabinet Memo of 2002 and the Memorandum of Agreement between the Department of Rural Development and Land Reform and Department of Environmental Affairs on the resolution of land claims within Protected Areas.

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<sup>36</sup> [www.northerncape.org.za](http://www.northerncape.org.za), 2010

<sup>37</sup> Lahiff, Land reform in Namaqualand, 1994–2005: A review, 25 Aug 2006

A land claim was lodged on behalf of the Hondeklipbaai community. The claim is currently in its initial phase and SANParks is working with the Land Claims Commission on acquiring all the relevant data<sup>38</sup>.

#### **2.13.4 Settlement Land Use and Zoning**

The municipality provides services to the towns and settlements of Garies, Hondeklipbaai, Kamassies, Kamieskroon, Kharkams, Kheis, Klipfontein, Leliefontein, Lepelsfontein, Nourivier, Paulshoek, Rooifontein, Soebatsfontein, Spoegrivier, and Tweerivier. The main urban settlement within the Kamiesberg Municipality is Garies.

The settlement patterns are mainly determined by the topography and locality of suitable grazing land within the area, hence the scattering of the settlements over this vast area. Access roads to the different villages are all badly maintained gravel roads. Travel between villages is time consuming and residents have difficulty in getting to key facilities such as hospitals and business centres.

Within a village, an erf usually accommodates single dwelling units on erven that vary in size from 350m<sup>2</sup> to 1000m<sup>2</sup>. Besides residential sites, agriculture is a dominant land use, mainly in the form of livestock farming. Non-residential uses are clustered in all of the villages. All the villages have spaza shops, a clinic, crèches, churches and primary schools.

The settlement pattern and land use configuration per settlement is illustrated in the figures following in terms of a survey done by Aurecon in 2008 and a Google Earth image (imagery date March 2003) to illustrate the context of the settlement:

**Figure 2-51: Garies Land Use**

**Figure 2-52: Hondeklipbaai Land Use**

**Figure 2-53: Kamassies Land Use**

**Figure 2-54: Kamieskroon Land Use**

**Figure 2-55: Kharkams Land Use**

**Figure 2-56: Kheis Land Use**

**Figure 2-57: Klipfontein Land Use**

**Figure 2-58: Leliefontein Land Use**

**Figure 2-59: Lepelsfontein Land Use**

**Figure 2-60: Nourivier Land Use**

**Figure 2-61: Paulshoek Land Use**

**Figure 2-62: Soebatsfontein Land Use**

**Figure 2-63: Spoegrivier Land Use**

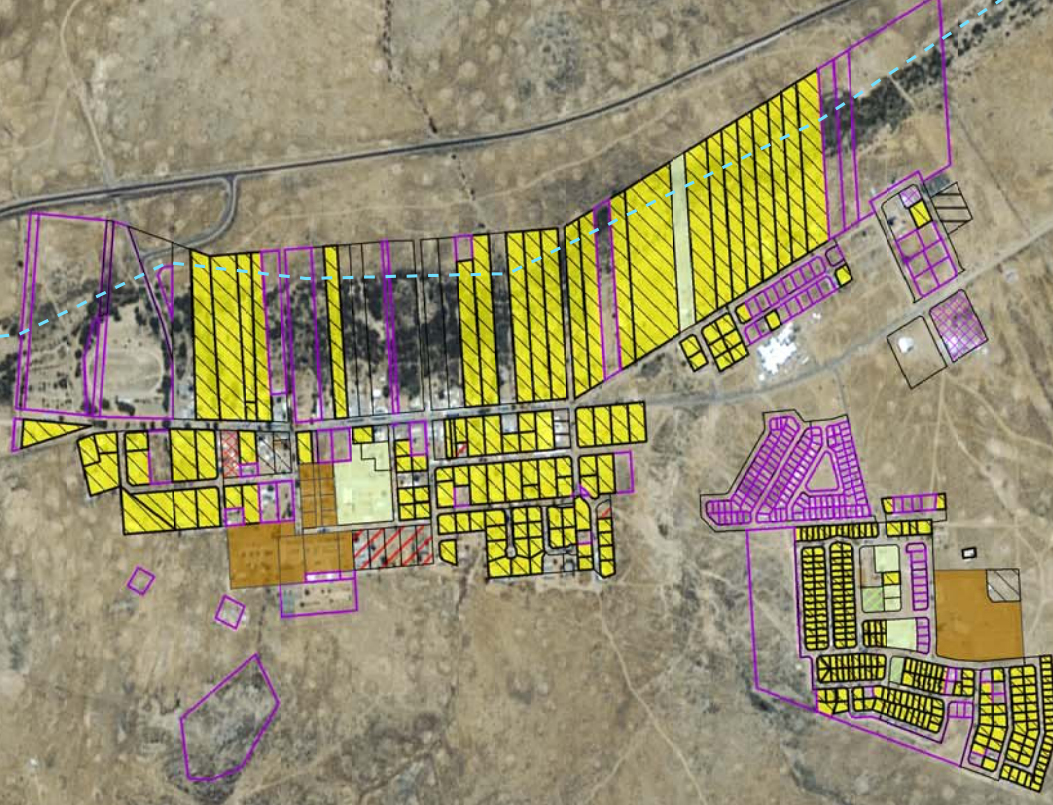
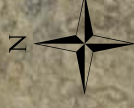
**Figure 2-64: Tweerivier Land Use**

**Figure 2-65: Koiingnaas Land Use**

<sup>38</sup> Namaqua National Park Management Plan (Draft), February 2010



**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 2-51 GARIES LAND USE**

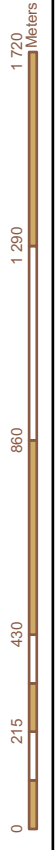


**LANDUSE**

**Stands**

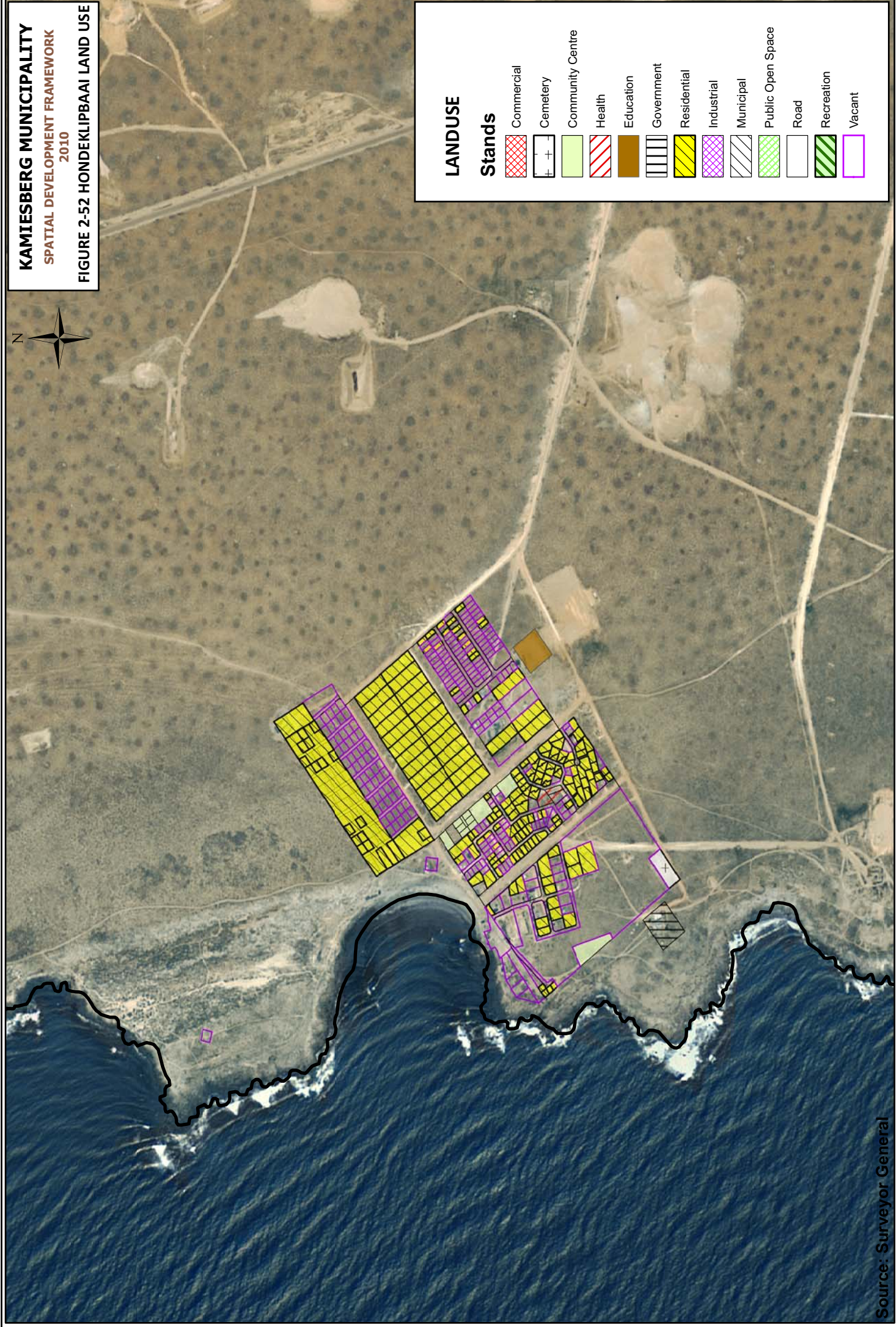
	Commercial
	Cemetery
	Community Centre
	Health
	Education
	Government
	Residential
	Industrial
	Municipal
	Public Open Space
	Road
	Recreation
	Vacant

Source: Surveyor General

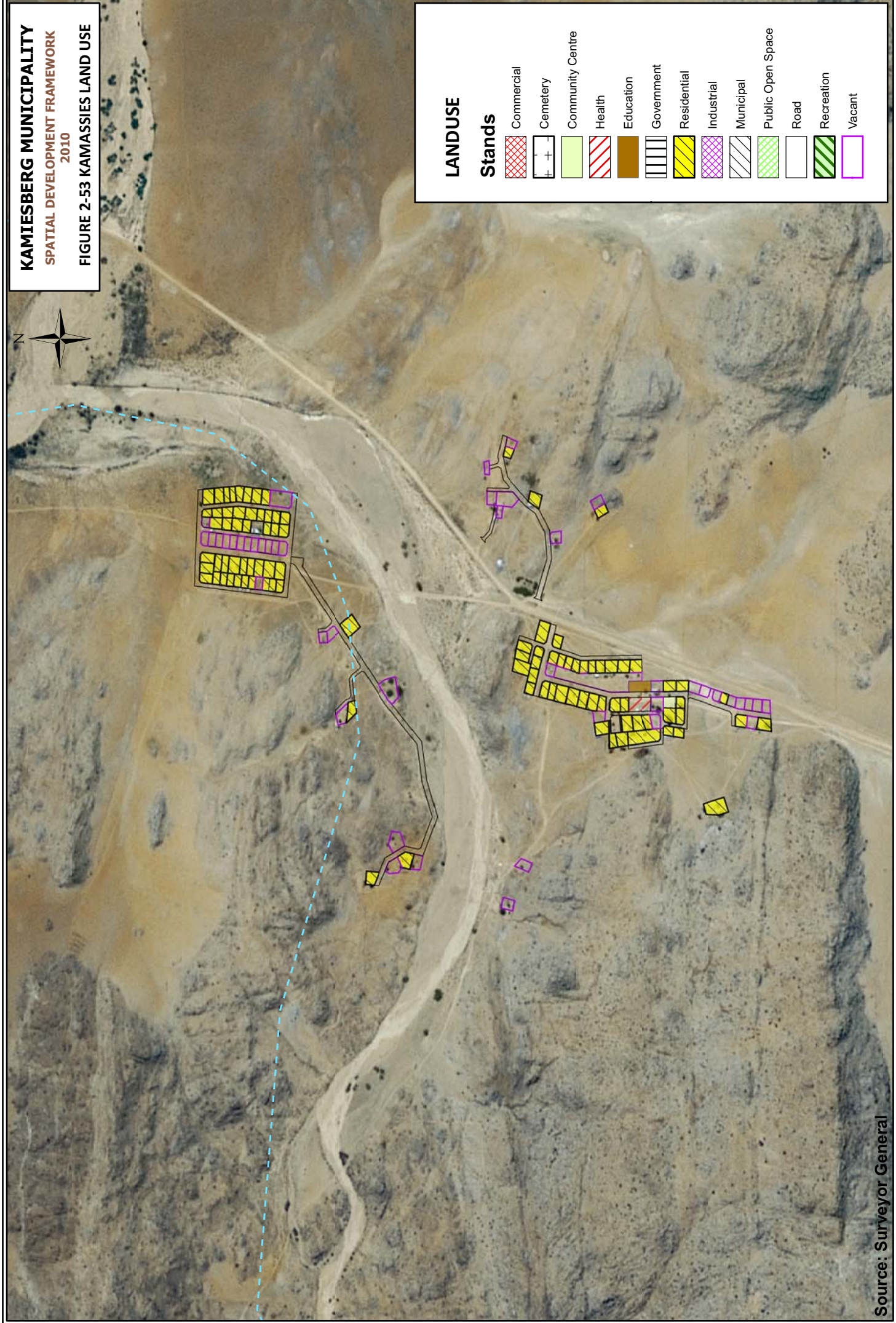




**FIGURE 2-52 HONDEKLIPBAAI LAND USE**







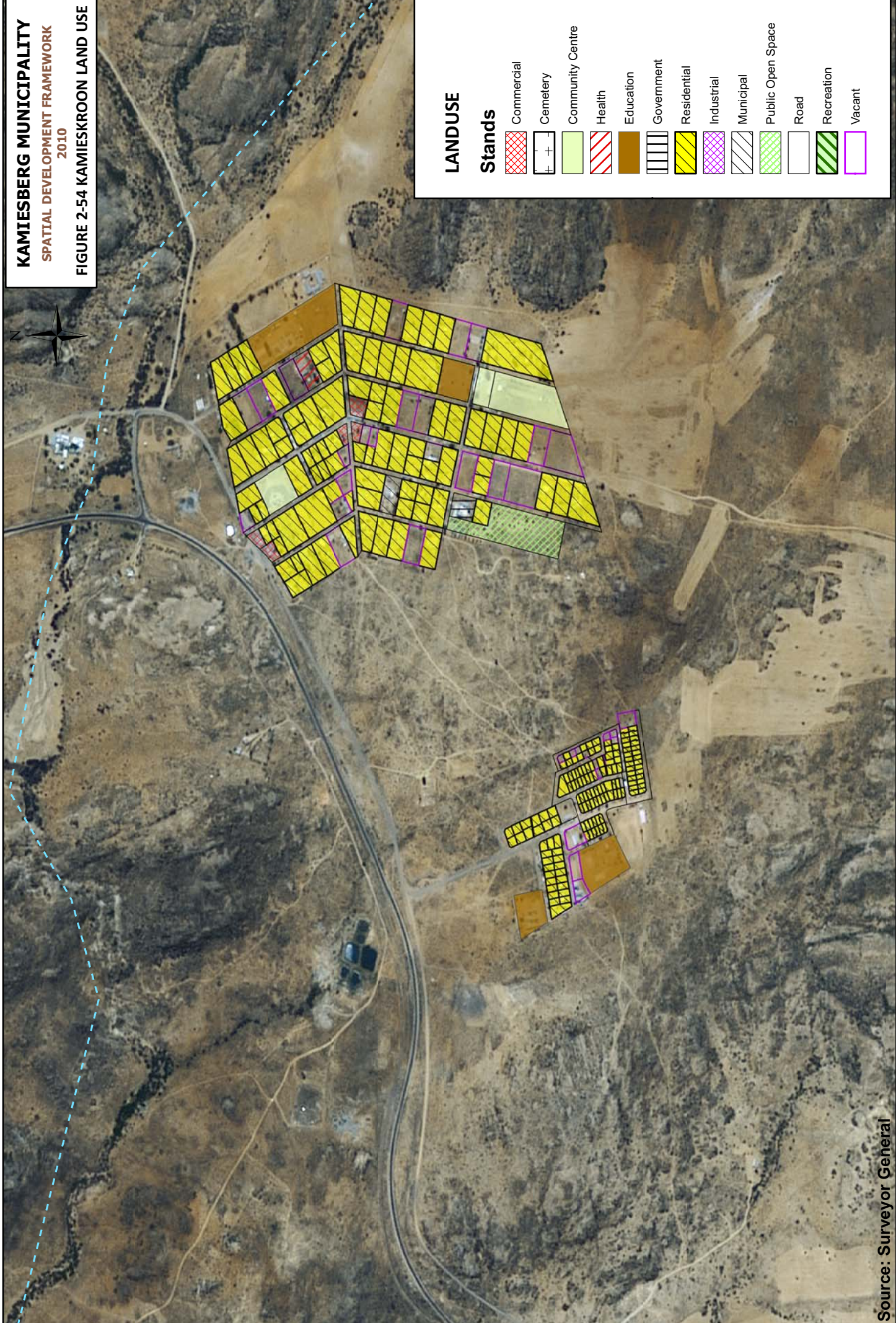
## LANDUSE

### Stands

	Commercial
	Cemetery
	Community Centre
	Health
	Education
	Government
	Residential
	Industrial
	Municipal
	Public Open Space
	Road
	Recreation
	Vacant



**FIGURE 2-54 KAMIESKROON LAND USE**

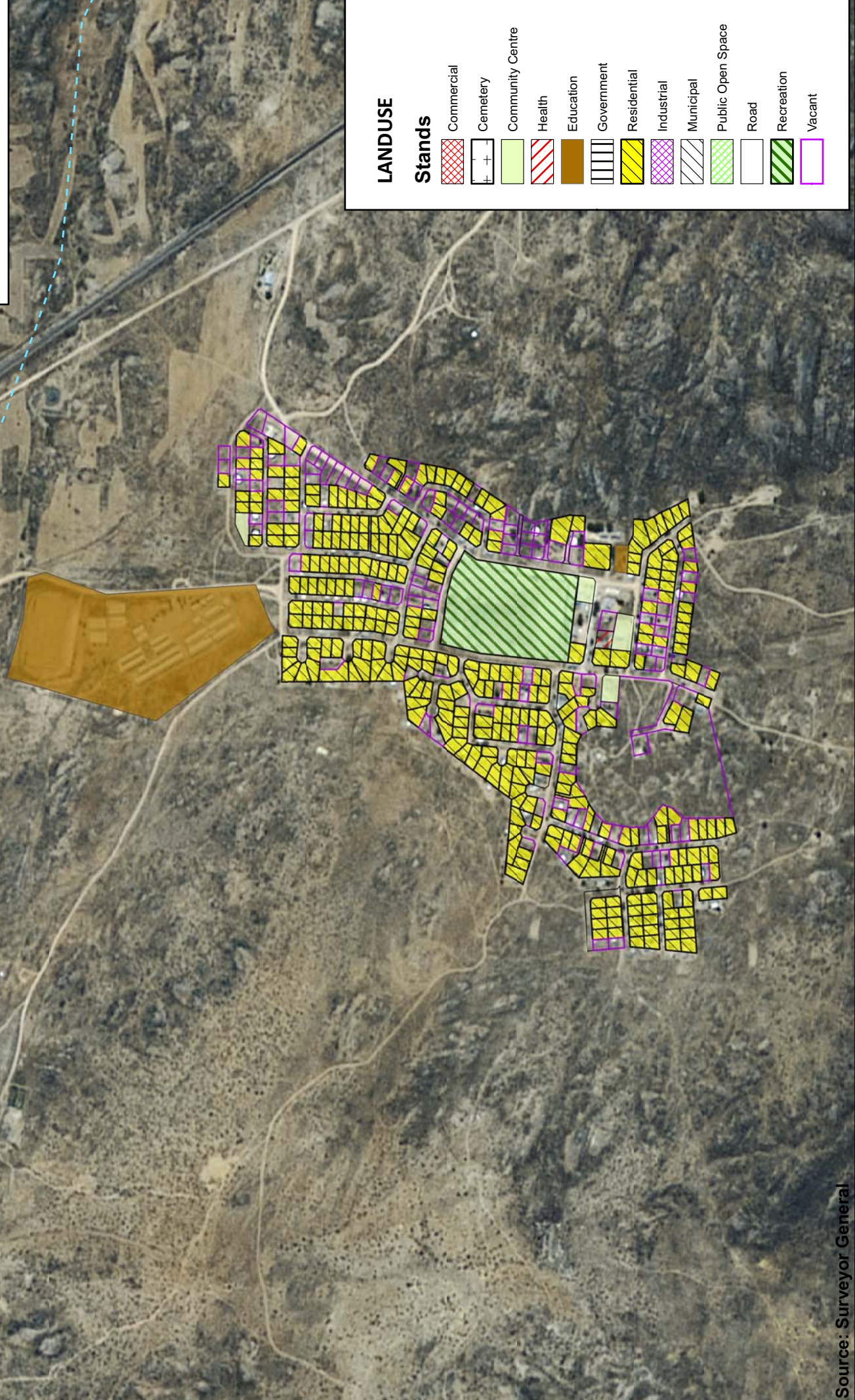


**LANDUSE**

**Stands**

	Commercial
	Cemetery
	Community Centre
	Health
	Education
	Government
	Residential
	Industrial
	Municipal
	Public Open Space
	Road
	Recreation
	Vacant

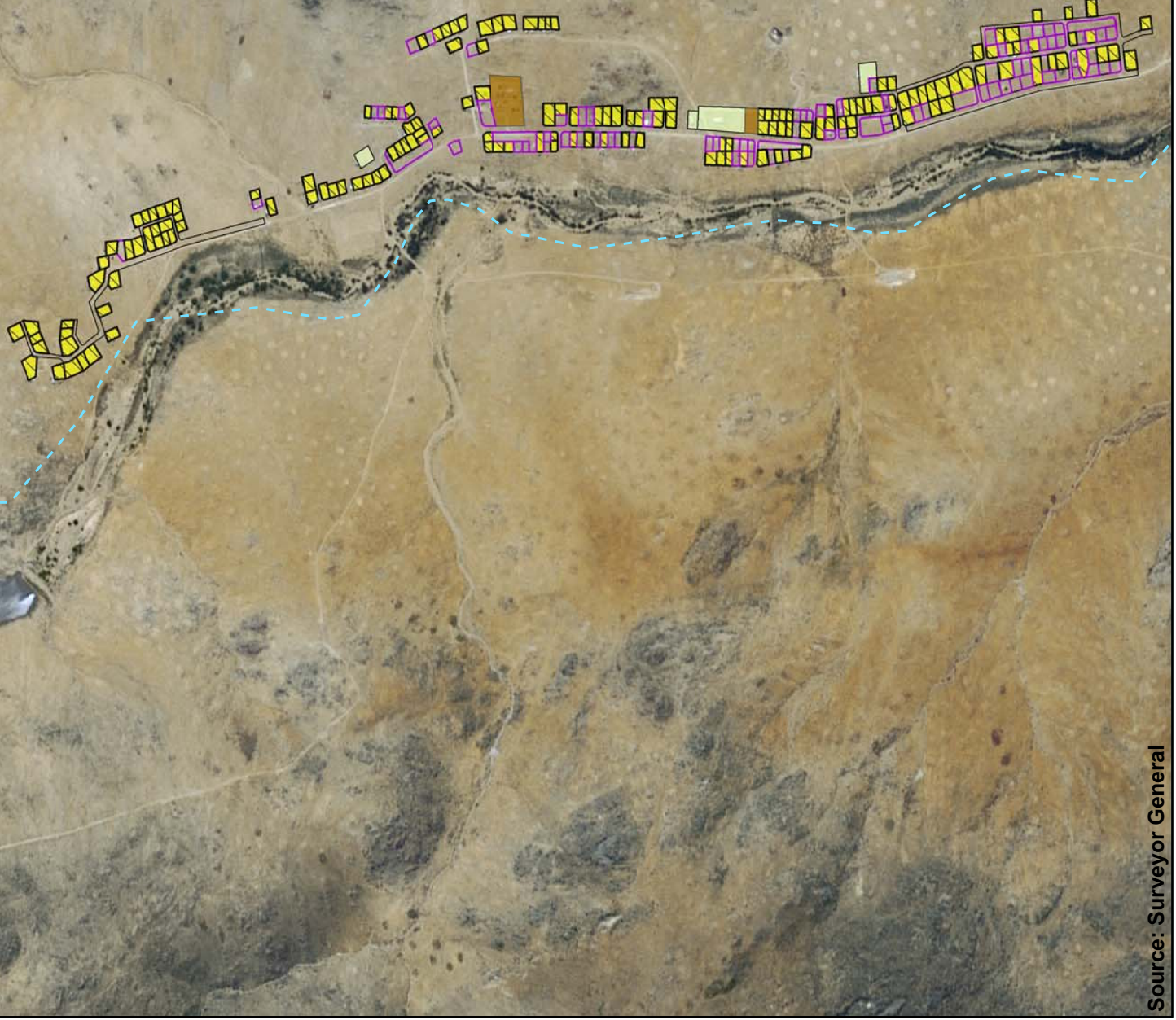




LANDUSE	
Stands	
Commercial	
Cemetery	
Community Centre	
Health	
Education	
Government	
Residential	
Industrial	
Municipal	
Public Open Space	
Road	
Recreation	
Vacant	







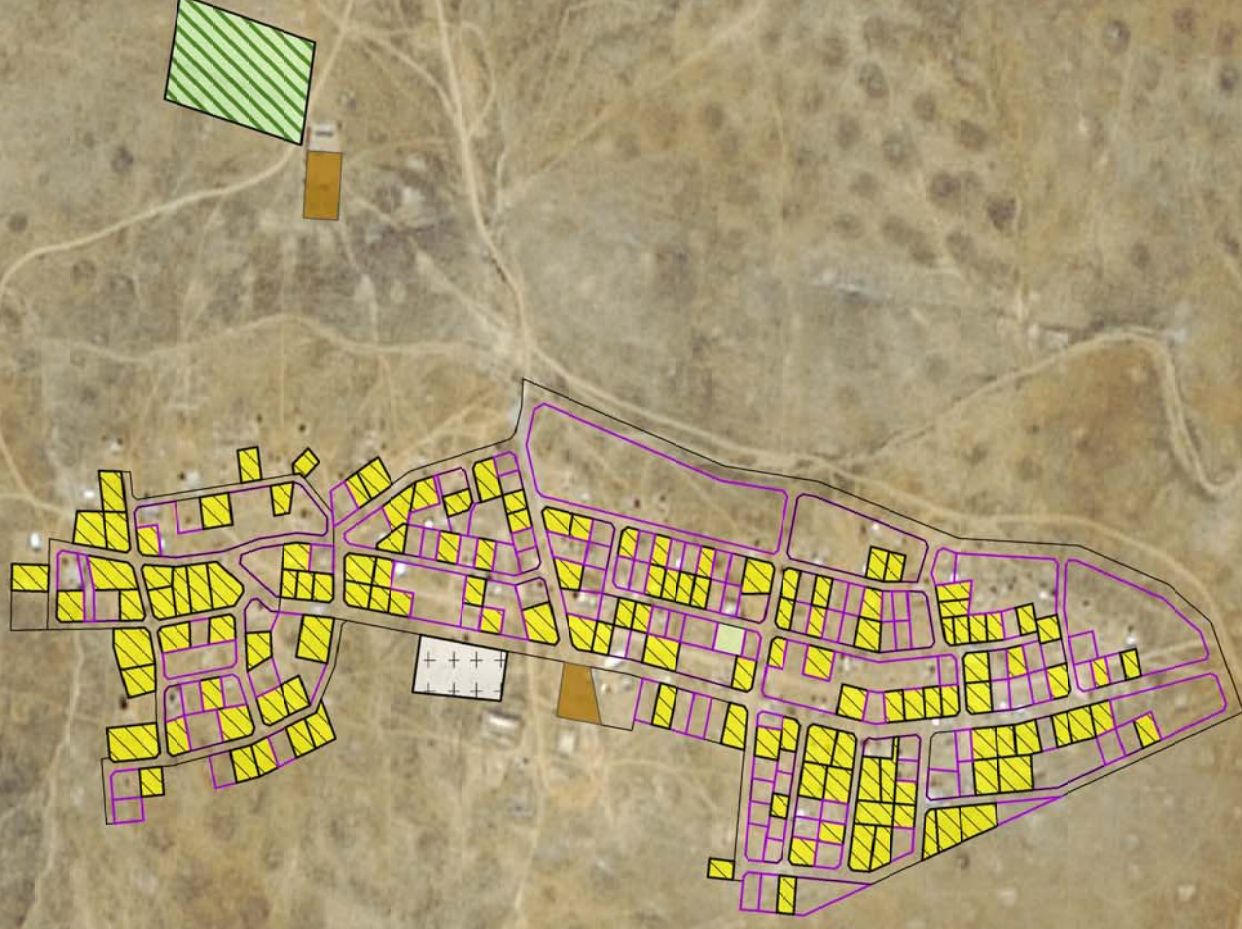
## LANDUSE

### Stands

	Commercial
	Cemetery
	Community Centre
	Health
	Education
	Government
	Residential
	Industrial
	Municipal
	Public Open Space
	Road
	Recreation
	Vacant



**FIGURE 2-57 KLIPFONTEIN LAND USE**



## LANDUSE

### Stands

	Commercial
	Cemetery
	Community Centre
	Health
	Education
	Government
	Residential
	Industrial
	Municipal
	Public Open Space
	Road
	Recreation
	Vacant





# LANDUSE

## Stands

	Commercial
	Cemetery
	Community Centre
	Health
	Education
	Government
	Residential
	Industrial
	Municipal
	Public Open Space
	Road
	Recreation
	Vacant





## LANDUSE

### Stands

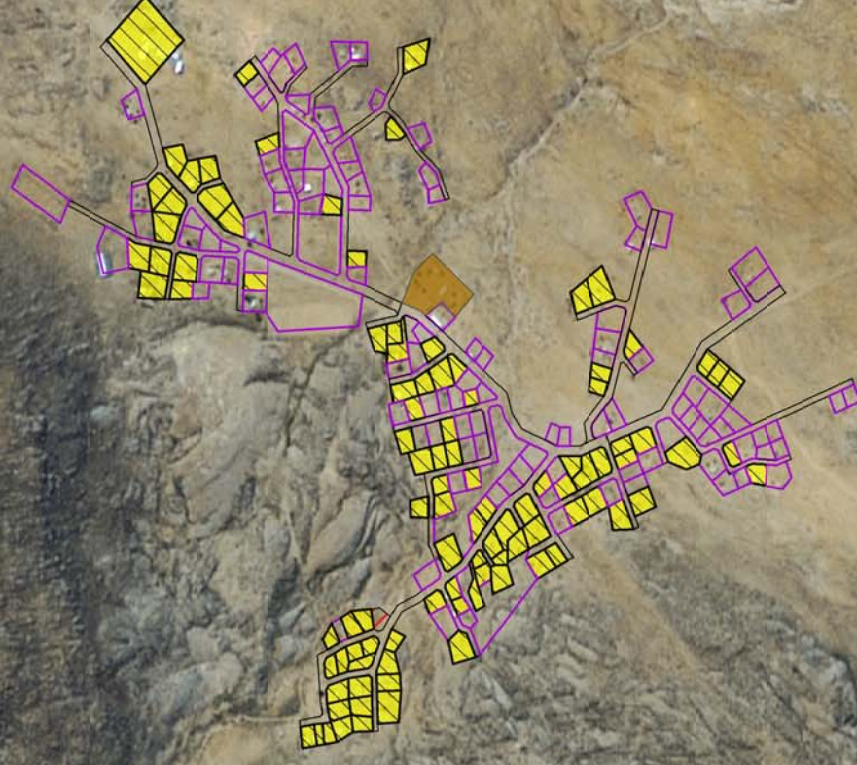
	Commercial
	Cemetery
	Community Centre
	Health
	Education
	Government
	Residential
	Industrial
	Municipal
	Public Open Space
	Road
	Recreation
	Vacant





LANDUSE	
Stands	
Commercial	
Cemetery	
Community Centre	
Health	
Education	
Government	
Residential	
Industrial	
Municipal	
Public Open Space	
Road	
Recreation	
Vacant	



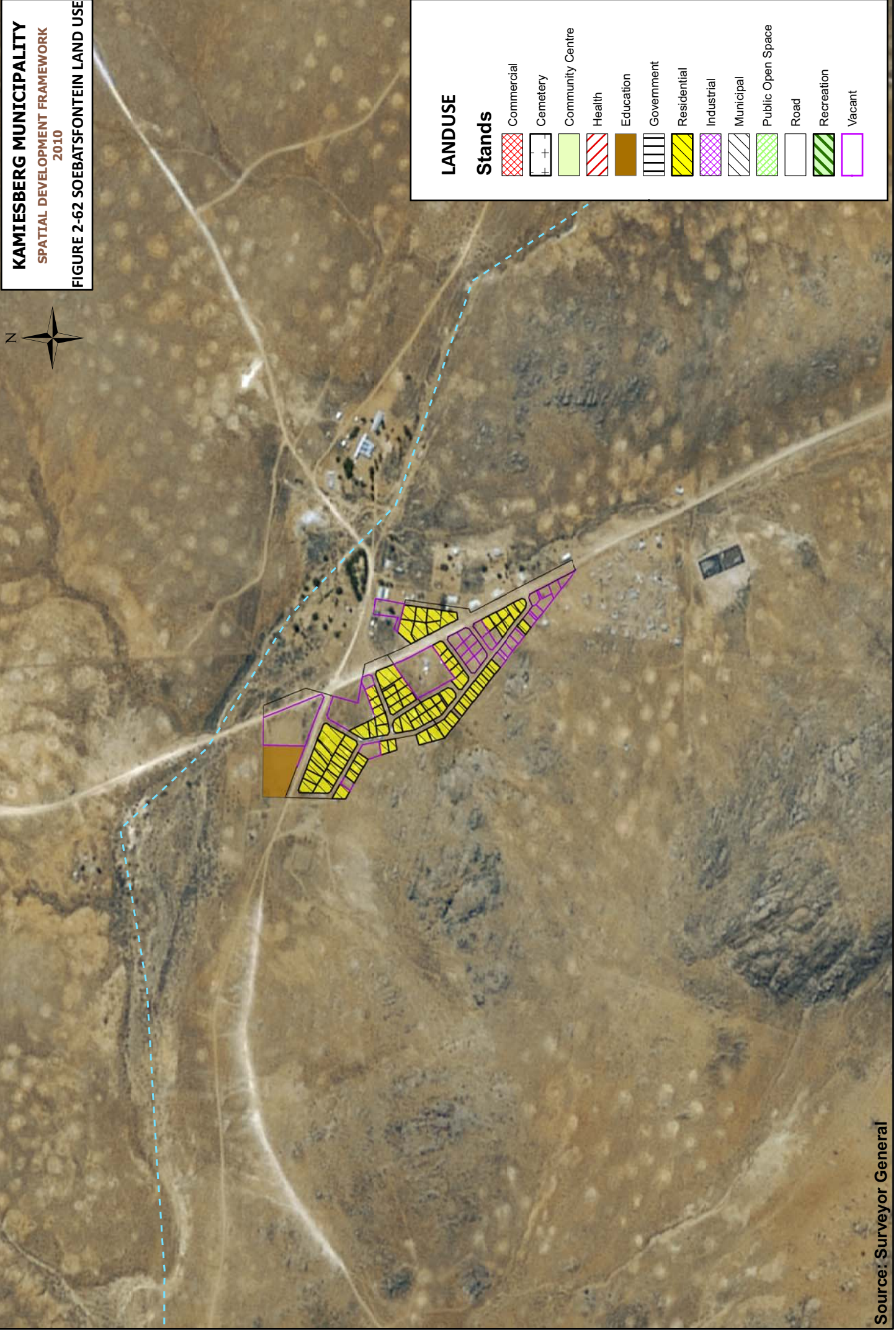


## LANDUSE

### Stands

	Commercial
	Cemetery
	Community Centre
	Health
	Education
	Government
	Residential
	Industrial
	Municipal
	Public Open Space
	Road
	Recreation
	Vacant





**LANDUSE**

**Stands**

	Commercial
	Cemetery
	Community Centre
	Health
	Education
	Government
	Residential
	Industrial
	Municipal
	Public Open Space
	Road
	Recreation
	Vacant



**FIGURE 2-63 SPOEGRIVIER LAND USE**

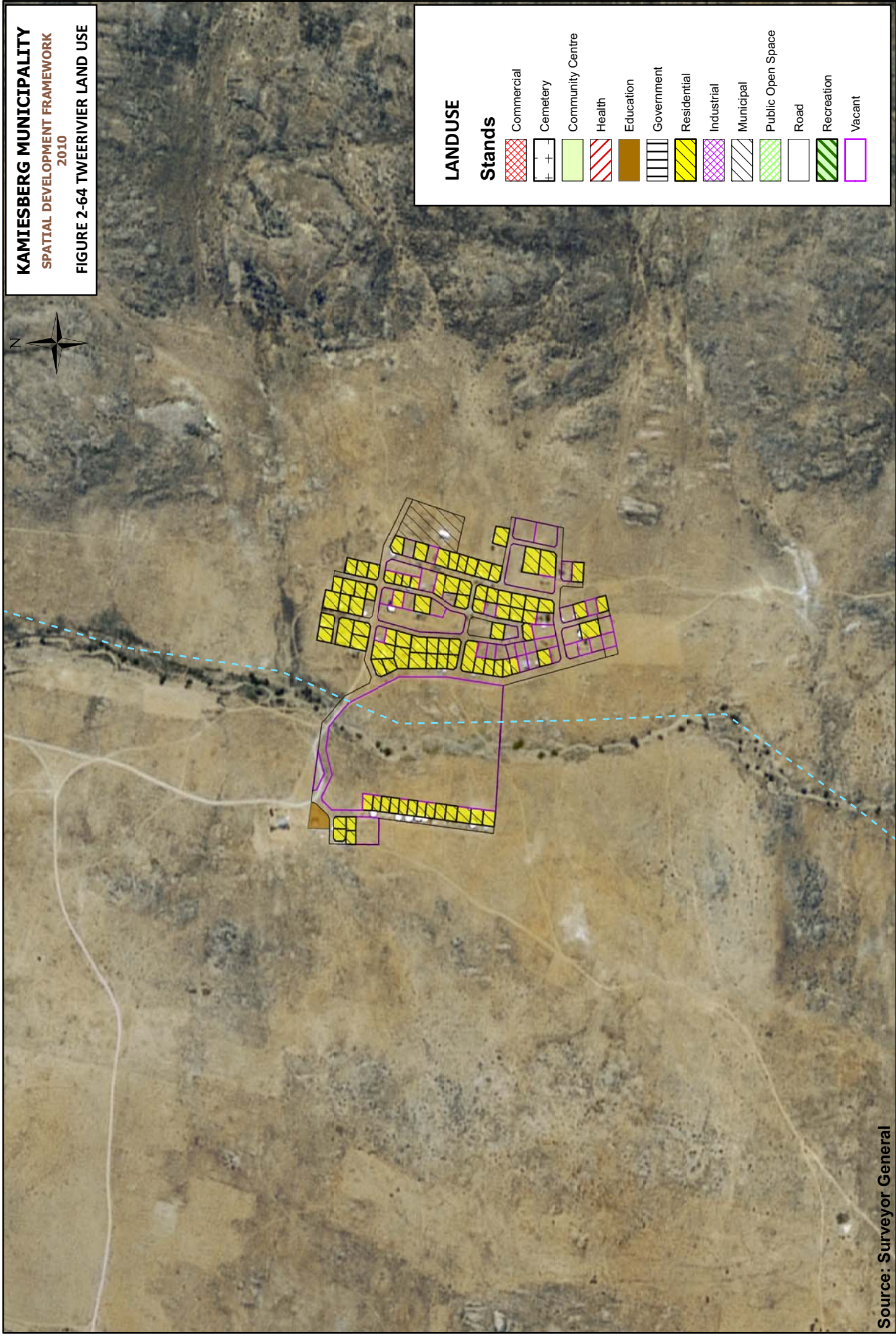


## LANDUSE

### Stands

	Commercial
	Cemetery
	Community Centre
	Health
	Education
	Government
	Residential
	Industrial
	Municipal
	Public Open Space
	Road
	Recreation
	Vacant





LANDUSE	
Stands	
	Commercial
	Cemetery
	Community Centre
	Health
	Education
	Government
	Residential
	Industrial
	Municipal
	Public Open Space
	Road
	Recreation
	Vacant





PRIVATE LAND - NO LAYOUT AVAILABLE  
AND NO LAND USE DATA

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2010

FIGURE 2-65 KOIINGNAAS LAND USE

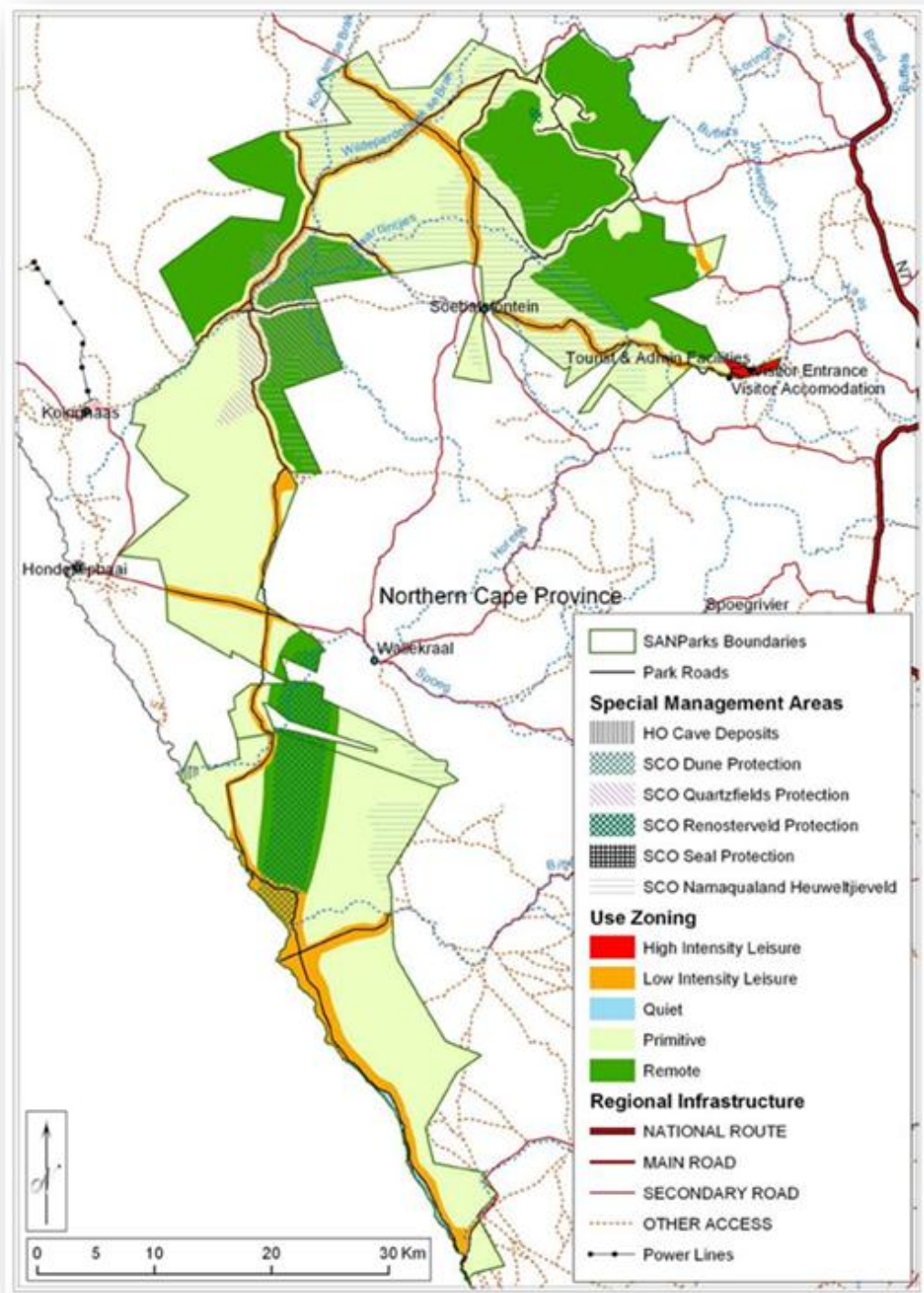




#### 2.13.4.1 Namaqualand National Park

The South African National Parks developed a zonation plan for the Namaqua National Park. This zonation plan indicates the development intent of the institution to enhance the tourism value of the park and to make it a year round visitors' haven. The zonation is reflected in the Namaqua National Park Management Plan (Draft) dated February 2010 and should be utilised as a development framework springboard:

Figure 2-66: Namakwa National Park





### 2.13.5 Comprehensive Rural Development Programme

It seems that the Municipality does not yet have a policy or programme regarding comprehensive rural development formulated. The SDF should incorporate the initiatives of the programme.

### 2.13.6 Swot Analysis and Spatial Implications

The Strengths, Weaknesses, Opportunities and Threats (SWOT) of this section must guide and inform the spatial development within the Kamiesberg Local Municipality as follows:

**Table 2-23: SWOT Analyses**

Component	Strengths	Weakness	Opportunity	Threat
General Settlement / spatial Pattern	Natural area with two of the bio-diverse environmental hotspots.	The spatial pattern is fragmented with scattered unsustainable settlements situated on average 100km apart. Past and present mining operations cause extensive environmental damage with no sure financial backing to reinstate the environment.	To strengthen the tourism opportunities and potential of the area by the vehement implementation of : <ul style="list-style-type: none"> <li>• SANParks Namaqua Management;</li> <li>• LEAP Project Plan.</li> </ul> Identification and selection of core settlements for promotion and development e.g. Garies as the administrative head and Hondeklipbaai as a mix use area focusing on mariculture, fishing, desalination of sea water and coastal recreation.	Inability to raise appropriate funding to enable restructuring and redevelopment of the environment.
Land Use management	Legislative framework to administrate land uses being the Northern Cape Planning and Development Act and the Cape Ordinance 15 of 1985.	Land Use Management is not administrated to fulfil or enhance a development vision leading to the adhoc approval of land uses with the consequential result of further fragmentation of the spatial pattern.	To review the Kamiesberg Land Use Management Scheme to be aligned with the spatial planning visions and implement it in terms of the prescriptions of the Northern Cape Planning and Development Act.	
Land Reform and Distribution	Provisionally the CRA's are considered the contribution to land reform within this Municipal area.	The Leliefontein CRA houses ± 4800 people with no sure economic framework to make the	The compilation of an economic plan demonstrating the integration and alignment of this	The establishment of more "clan" settlements which will further diminish the ability of the

Component	Strengths	Weakness	Opportunity	Threat
		communal land economically viable and sustainable.	communal area into the tourism realm of the area.	municipality to serve the area effectively and efficiently.
Settlement Land Use and Zoning		Settlements are too small to generate any economic multiplier and internal sustainability.	Limit the growth of the settlements to a selected few where economic activities and injections can be effectively and efficiently be directed to.	Continuation of fragmented settlement pattern will negatively influence the Municipality and the community.
NNP	The NNP can be considered as one of the “natural wonders” of the world.	Accessibility to the park is hampered by low standard roads. NNP is seasonally orientated and must be more year round friendly.	Vehement implementation of the NNP management and development plan.	The inability of SANParks to raise the funds for the implementation of the management and development plan.
LEAP	An ambitious revitalisation plan for the coastal mining areas, north and south of Hondeklipbaai with promising economic spin offs.	The implementation time frame and prioritisation, and who the financial backers will be seems to be absent and not clearly identified.	To review the LEAP proposal and identify catalyst projects which can act as drivers for the full implementation of the vision.	No participation of the respective role players, i.e. The mining houses and authorities to timeously commit and budget for the provision of infrastructure and creation of an enabling environment.

## 2/14.LEGISLATION AND POLICIES INFLUENCING SPATIAL DEVELOPMENT

The legislative and policy framework giving direction to spatial development within the Kamiesberg Municipal Area is summarised as follows:

### 2.14.1 National Spatial Development Perspective (NSDP) (Revision 2006)

The NSDP was prepared in response to recognition of the importance of the spatial economy in addressing the legacy of Apartheid and poverty. In particular, it assists government in confronting three fundamental planning questions in its drive to grow the economy, create jobs, address poverty and establish social cohesion, namely:

- Where should government direct its investment and development initiatives to ensure sustainable and maximum impact?
- What kinds of spatial forms and arrangements are more conducive to the achievement of our objectives of democratic nation building and social and economic inclusion?
- How can government as a whole capitalise on complementarities and facilitate consistent decision making; and move beyond focusing on integration and coordination procedures to establishing processes and mechanisms that would bring about strategic coordination, interaction and alignment?

The answers to the above three questions must be found in the implementation of the following NSDP principles, which also then gives spatial direction to the Kamiesberg Municipal area:

**Table 2-24: NSDP Principles**

Development Principle	Spatial Implication
<b>Principle 1:</b> Rapid economic growth that is sustained and inclusive is a pre-requisite for the achievement of other policy objectives, amongst which poverty alleviation is key.	Development should be focused and catalyst orientated which can instigate the necessary multiplier effect accelerating sustainable development.
<b>Principle 2:</b> Government has a constitutional obligation to provide basic services to all citizens (e.g. water, energy, health and educational facilities) wherever they reside.	The on-going implementation of the basic housing and water services program in a sustainable manner requiring thus that the fragmentation of settlements be avoided in support of integrated and compact development.
<b>Principle 3:</b> Beyond the constitutional obligation identified in Principle 2 above, government spending on fixed investment should be focused on localities of economic growth and/or economic potential in order to gear up private sector investment, stimulate sustainable economic activities and create long-term employment opportunities.	Reiterates the sentiment in Principle 1 from a spatial perspective adding to that, that growth and development should be long term orientated.
<b>Principle 4:</b> Efforts to address past and current social inequalities should focus on people, not places. In localities where there are both high levels of poverty and demonstrated economic potential, this could include fixed capital investment beyond basic services to exploit the potential of those localities. In localities with low demonstrated economic potential, Government should, beyond the provision of basic services, concentrate primarily on human capital development by providing social transfers such as grants, education and training and poverty relief programmes and reducing migration costs by providing labour market intelligence so as to give people better information, opportunities and capabilities to enable people to gravitate, if they chose to, to localities that are more likely to provide sustainable employment and economic opportunities.	Requires the correction of the spatial landscape to ensure an integrated development for the benefit of all and not for segments of the population only.
<b>Principle 5:</b> In order to overcome the spatial distortions of Apartheid, future settlement and economic development opportunities should be channelled into activity corridors and nodes that are adjacent to or link the main growth centres. Infrastructure investment should primarily support localities that will become major growth nodes in South Africa and the SADC region to create regional gateways to the global economy.	Accentuates Principle 4.



### 2.14.2 Northern Cape Province Growth and Development Strategy (NCPGDS)

The NCPGDS is a 10-year strategy based on a vision of “building a prosperous, sustainable, growing provincial economy to reduce poverty and improve social development”. The NCPDGS is based on a thorough analysis of the NCP’s economy and social conditions.

Based on this socio-economic reality, the NCP has identified the reduction of poverty as its most significant challenge, to be achieved through long-term sustainable growth and development.

The NCPGDS primary objectives, its targets and its spatial implications to the Kamiesberg Municipality are as follows:

**Table 2-25: NCPGDS Objectives and Targets**

NCPGDS Objective and Target	Spatial Implication
Promote growth, diversification and transformation of the NCP economy	Development should be focused and catalyst orientated which can instigate the necessary multiplier effect accelerating sustainable development.
Reduce poverty through social development	The on-going implementation of the basic housing and water services program in a sustainable manner requiring thus that the fragmentation of settlements be avoided in support of integrated and compact development.
Develop requisite levels of human and social capital.	Create and implement an environment for the provision of facilities for training.
Improve the efficiency and effectiveness of governance and other development institutions.	Implementation of good governance principles. The provision of services and opportunities in an equitable and fair manner.
Enhance infrastructure for economic growth and social development.	Focus on infrastructure spending that can support and accelerate the multiplier effect as allured to above.
Halving the unemployment rate by 2014.	Development should be focused and catalyst orientated which can instigate the necessary multiplier effect accelerating sustainable development.
Reducing the number of households living in poverty by 5% per annum.	Development should be focused and catalyst orientated which can instigate the necessary multiplier effect accelerating sustainable development.
Conserving 6,5% of valuable biodiversity resources by 2014.	Kamiesberg Municipal area already complies.

### 2.14.3 The Northern Cape Province Coastal Management Plan (NCP CMP)

The NCP CMP’s vision is “to promote sustainable coastal development and the realisation of livelihoods that reflect the true range of ecological and socio-economic opportunities in the Namaqualand coastal zone. This will be achieved by creating co-operative governance institutions and capacity to promote integrated coastal management, and by defining goals and strategies that attract investment, both financial and social, to promote environmental conservation and sectoral growth.”

For the purposes of this policy, the coastal zone is defined as the most westerly row of farms adjoining the seashore along the Northern Cape Coast. Currently mining dominates the coast; mariculture, fishing, aquaculture, tourism and conservation (including game farming) are identified as new economic opportunities as mining is phased out. The threat to valuable vegetation posed by overgrazing and the challenge to create an effective institutional vehicle to manage the coastal zone are also discussed. Based on this analysis the CMP identifies the following priority issues to be addressed:

**Table 2-26: NCP CMP Priority Issues and Spatial Implication**

NCP CMP Priority issues	Spatial Implication
<p><i>Governance, in particular institutional capacity, co-ordination and co-operative governance.</i></p> <p>The Provincial Coastal Committee (PCC) and Coastal Management Unit (CMU) will play the lead roles in this regard. The PCC provides an avenue for stakeholders, including conservation agencies and mining companies, to participate in coastal management provide guidance in the implementation of the NCP CMP. The CMU is the arm of DEA&amp;NC, responsible for implementing coastal management. The NCP CMP recognises the mining companies' pivotal role in continued management of the coastal zone, as they control so much of it, but they are not expected to lead post-mining regional development processes. The CMP suggests that appropriate public sector partnerships, with supporting institutional arrangements be formed with the mines to address issues of access to land and the development of alternative industries.</p>	<p>No spatial implication.</p>
<p><i>Access to the coast</i></p> <p>Allow more physical access to the coast and ensure that valuable coastal resources (cultural and natural) are protected. Develop strategies for the use of public land.</p>	<p>Development should be focused and catalyst orientated which can instigate the necessary multiplier effect accelerating sustainable development.</p>
<p><i>Plan and develop for economic opportunities, access and conservation in an integrated manner, with emphasis on local community benefits.</i></p>	<p>Development should be focused and catalyst orientated which can instigate the necessary multiplier effect accelerating sustainable development. Exploit economic opportunities such as mariculture and tourism as an alternative to the exploitation of the coastal resource.</p>
<p><i>Management of the natural resource base, including a local area management approach to living marine resources to optimise the potential of the region and for the rehabilitation of pre-1991 mined areas.</i></p>	<p>Include in land use management schemes mechanisms which can ensure the optimal and sustainable development of the coastal resource.</p>
<p><i>Pollution control and waste management</i></p>	<p>The location of waste management facilities should be situated clear of any environmental impact within the coastal zone.</p>

#### **2.14.4 Namakwa District Municipality Integrated Development Plan (2006-2011) (NDM IDP) (2010 Revision)**

The NDM IDP marks a shift in emphasis from a focus on infrastructure provision to economic development. The issues relevant to Kamiesberg include addressing the scarcity of water. The potential solutions cited to address the water shortage include a desalination plant at Hondeklipbaai or a pipeline to bring Orange River water from Springbok to Garies with extensions to Hondeklipbaai and Koingnaas.

Additional projects of relevance to Kamiesberg Municipality are:

- Develop alternative energy resources in the NDM – investigate the potential for exploiting renewable energy sources;
- Develop and transform the mining sector – including social and labour plans developed in partnership with mines;
- Develop the SMME sector through support centres and skills development, with the emphasis on youth, women and rural businesses;
- Develop a mariculture park at Hondeklipbaai possibly in partnership with the Fishing and Mariculture Development Company (FAMDA);
- Develop job-creation projects (at the local municipal level);
- Develop tourism infrastructure and resources and provide marketing; and
- Branding the N7.

The above reiterates the spatial development principal of creating catalytic environments and the avoidance of fragmented development.

#### **2.14.5 West Coast Local Municipality SDF**

The following figure is the composite spatial development framework for the West Coast Local Municipality:

**Figure 2-67: West Coast Municipality SDF**

In essence this plan advocates the development of a development corridor between Malmesbury and Cape Town as a primary axis and a secondary axis to Garies and Windhoek, approximating the alignment of the N7. The land directly adjacent to Kamiesberg Municipality is maintaining the rural character and agricultural environment, whilst advocating mining exploration along the west coast.

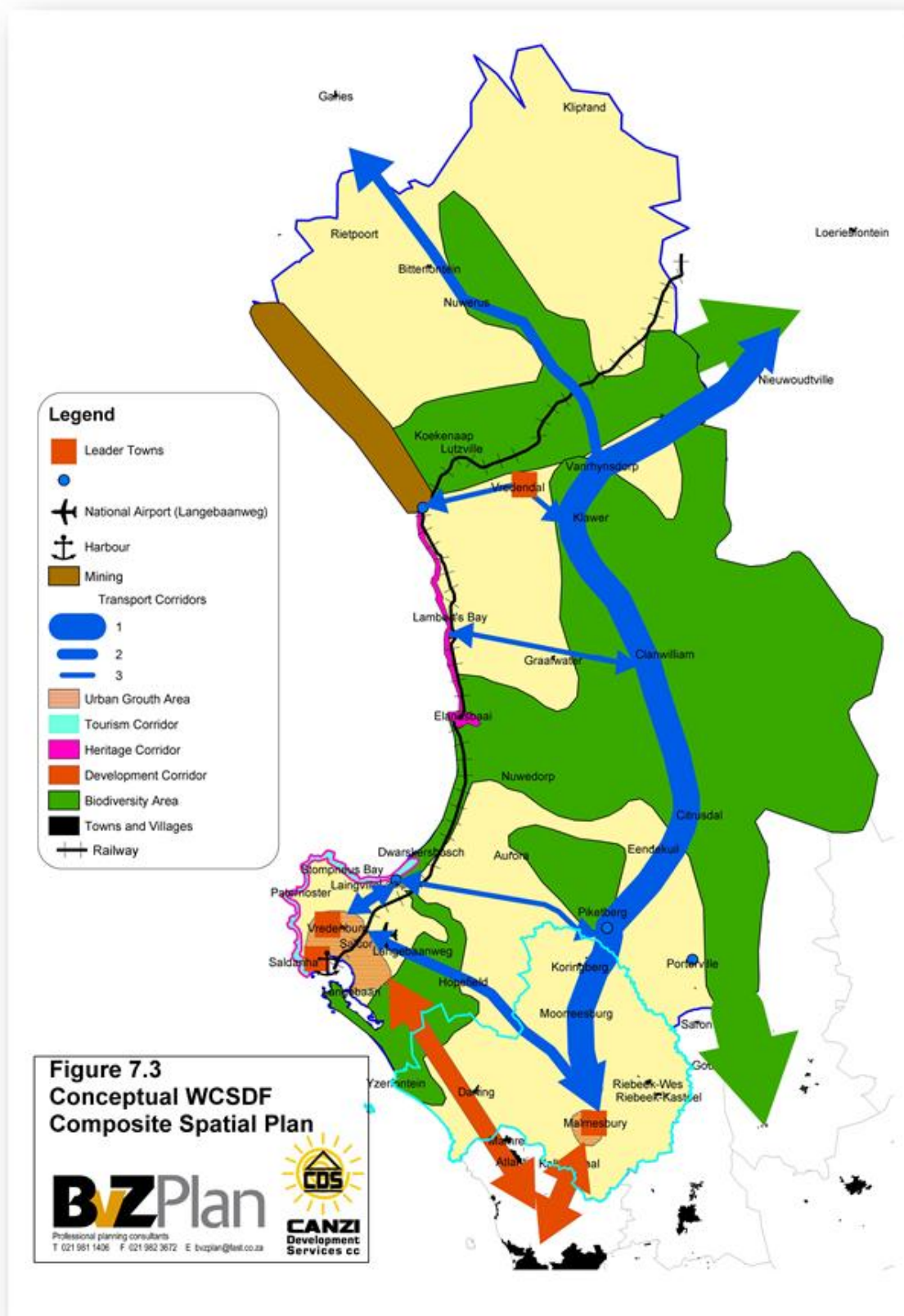
#### **2.14.6 Nama Khoi Local Municipality**

At the time of the compilation of this report, no spatial development framework was available for the Nama Khoi Municipality, which is situated adjacent north of the Kamiesberg Municipality.

As the NNP traverses the boundary between the Municipalities, it is expected that this Municipality will embrace the NNP Management and Development Plan and also focus on the strengthening of the N7 and N14 as transportation corridors within the Namaqua area.



Figure 2-67: West Coast Municipality SDF



**KAMIESBERG LOCAL MUNICIPALITY  
SPATIAL DEVELOPMENT FRAMEWORK  
LAND DEVELOPMENT PLAN  
2010 - 2015**



**VOLUME 3  
SPACIAL DEVELOPMENT  
FRAMEWORK**

## VOLUME 3. SPATIAL DEVELOPMENT FRAMEWORK

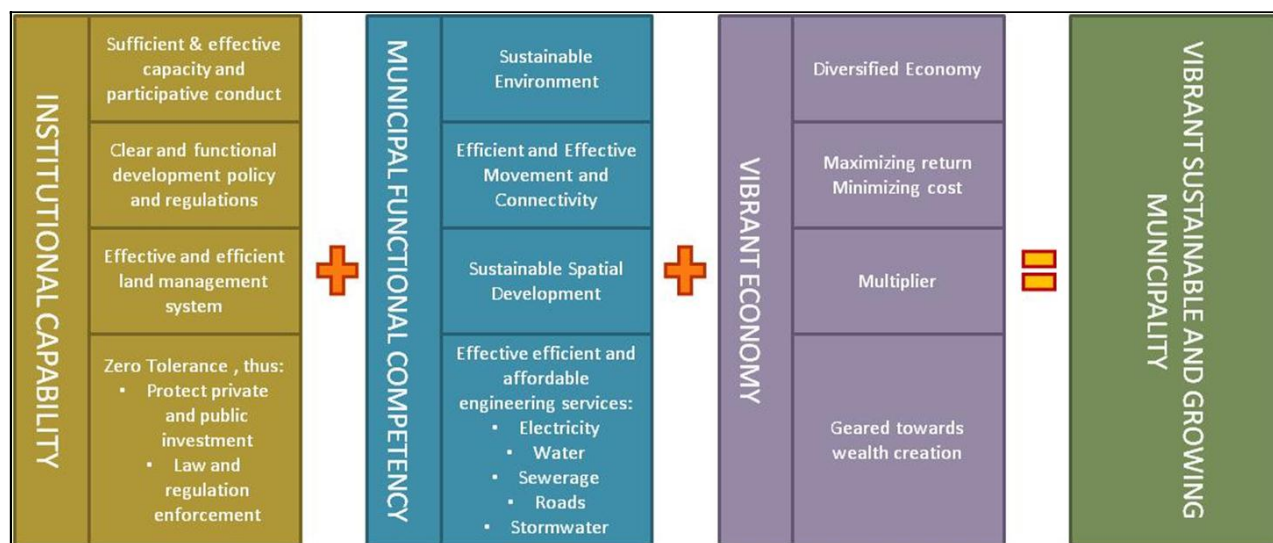
### 3/1.THE SPATIAL DEVELOPMENT FUNDAMENTALS TO ENABLE A SUSTAINABLE MUNICIPALITY

A Municipality is viewed as a business entity with the purpose of enhancing the socio economic investment within its area of jurisdiction. The ratepayers and property owners within the municipality are the shareholders of the business entity and the Councillors are viewed as the elected Board of Directors. The Board of Directors is supported by the administrative staff that is employed by the Board to oversee the day to day administration of the business entity. For the Municipality to ensure a positive growth in the investment value of its shareholders it must be able to manage and administrate the basic pillars of an enabling development.

A spatial development fundamental is for the purposes of the Spatial Development Framework defined as a principle with associated policy that must be in place to enable the conduct of the municipality. A fundamental is described as a basic and necessary component of something, especially an underlying rule or principle that has to be in place and must be maintained to ensure

These pillars with, their associated spatial development fundamental, are schematically presented in the figure below and described in the paragraphs below:

**Figure 3-1: The Pillars of a Sustainable Municipality**



With reference to the figure above the founding pillars of a municipality are described as follows:

#### 3.1.1 Pillar 1- Having Institutional Capability

Foremost, having institutional capability, means that the Municipality as a business entity must employ suitable qualified workers to fulfil the various administrative functions. If there are no suitability qualified persons within the municipality it means that the municipality could import the required expertise through outsourcing mechanisms.



The operations of the municipal staff should not be conducted in a vacuum but be guided by clear and specific guidelines and policy and regulations and every aspect of municipal conduct. From a spatial perspective having a policy and regulations in respect of land development and land management is a dire necessity staff employed by the municipality. Land development is normally guided by the Spatial Development Framework read in conjunction with the municipal growth and development strategy and Integrated Development Plan (IDP), while land management is done in terms of a legal framework generally referred to as a Land Use Management System or Zoning Scheme.

The application of policy and regulations must always be transparent and honest focussing on the protection and enhancement of existing investment. Existing investment is the cornerstone of the municipal rates income. If the value of existing investment within the municipality deteriorates, then the municipal income will decline accordingly. Investment declines when a municipality grant development rights without clearly understand the impact a development will have on the existing investment within and area. Similarly if the municipality does not enforce rule and regulation, illegal use of land causes existing investment to deteriorate and will cause investors to avoid the area because of such municipal conduct.

Having institutional capacity gives birth to the following spatial development fundamental:

#### **Spatial Development Fundamental 1:**

**Clean, transparent, effective and efficient administration**

### **3.1.2 Pillar 2-Having Functional Competency**

Having functional competency means that the municipality is equipped with tools to enable it to do their work in such a manner that it realise the goals and objectives of the municipality. Functional competency encompasses having the ability (thus having the tools of the trade in hard and soft format) to ensure sustainable development. Sustainable development is a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but also for generations to come ([http://en.wikipedia.org/wiki/Sustainable\\_development](http://en.wikipedia.org/wiki/Sustainable_development)). Human operations require the ability to travel and interact. The municipality must therefore possess the ability to create effective and efficient movement and connectivity within the various parts of the municipal environment. It must ensure and provide passable roads and linkages throughout the municipal area as the functionality of the municipality would be highly compromised if movement and access ability is not ensured. The tools of trade that will enable a municipality to ensure sustainable spatial development is embedded in its policies guiding land development and its rules and regulations that administrates land development. Of highest importance in land development is the ability to ensure that the municipal area functions as a cohesive whole. This cohesiveness cannot be attained if land use and land development within the municipal area is dysfunctional and fragmented. Fragmentation is to lose a sense of unity or cohesion, with the result that something splits into isolated and often conflicting elements, or cause something to do this.

Underpinning a municipal area is the ability to serve its inhabitants with its daily survival needs being the need for water and the need for energy. Thus the municipality must be competent in supplying its subjects with levels of service that will enable them to survive, grow and develop. The municipal subjects must be able to grow and develop as this is the cornerstone of the municipality namely to enhance its socio-economic capital goals.

A number of spatial development fundamentals emanate from having functional competency:

Spatial Development Fundamental	2	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology
Spatial Development Fundamental	3	Creating linkages and access
Spatial Development Fundamental	4	Actively and forcefully address spatial fragmentation
Spatial Development Fundamental	5	Provision of bulk infrastructure and appropriate services levels

### 3.1.3 Pillar 3- Having a Vibrant Economy

Swedfund the Swedish government's international investment firm for economic upliftment has as its opening statement - A vibrant economy is the key to sustainable development in poor countries (for our purposes countries are substituted by municipalities)(see [http://www.swedfund.se/media/12299/new\\_thinking\\_sifferdel\\_070502.pdf](http://www.swedfund.se/media/12299/new_thinking_sifferdel_070502.pdf)).

Keynesian economics theory states that government intervention is necessary to ensure an active and vibrant economy. According to this theory, government should stimulate demand for goods and services in order to encourage economic growth. It thus recommends tax cuts and increased government spending during recessions to reinvigorate growth; likewise, it recommends tax increases and spending cuts during economic expansion in order to combat inflation.

Taking the lead from the Tewkesbury Borough Council (<http://minutes.tewkesbury.gov.uk/mgConvert2PDF.aspx?ID=2017&J=1>), since it applies directly to Kamiesberg, it is uncontested that a vibrant economy is vital to the well-being of residents of the municipality. It affects the range and quality of employment opportunities and the range of services provided. A vibrant economy means that people have more money to spend on their family needs, which will include leisure, retail and cultural activities. A vibrant economy also means the sustaining of our rural landscape through traditional agriculture and farm diversification, helping our market towns to survive, and helping to retain our historic fabric through ensuring the viable use of buildings. Provision of a varied employment base together with training and re-skilling opportunities for those people needing to change career or get back into the job market is key to sustaining a buoyant economy.

As part of the notion to create wealth, the municipality must have a mission of fostering and maintaining a buoyant and vibrant economy, which maximises the range of opportunities and choice within the municipality, whilst, also helping to enable a skilled and adaptable workforce and sustaining a high quality environment for those working and living in, and visiting, the municipality. Such an economy aims to:

To work in partnership to maximise opportunities and deliver improvements in employment, training and social inclusion;

- To increase awareness and to attract higher levels of external funding into the municipality;
- To enhance and sustain the vitality of the embedded heritage;
- To support and encourage a broad and vibrant rural economy;
- To increase the volume & value of tourism to the municipality;
- To support key employment sectors.

As the economy of Kamiesberg is focussed on mining and to some extent on agriculture, having a vibrant economy gives birth to the following spatial development fundamental:

Spatial Development Fundamental 6:	Economic Diversification
------------------------------------	--------------------------

### 3/2. DEVELOPMENT FUNDAMENTALS UNDERWRITTEN BY THE IDP

The Spatial Interpretation of the IDP, Phase 1 of this SDF, reflected that the municipal vision, being: “To better the guiding of life for all inhabitants”, is founded by four objectives around which the spatial development of Kamiesberg is directed. These objectives have a spatial implication and underwrite the spatial fundamental principles which much be applied to enable the desired spatial development pattern, as follows:

**Table 3-1: Developmental Fundamentals Underwritten by the IDP**

IDP Objective	Spatial Implication	Spatial Fundamental Principle					
		Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Meeting Basic Needs	A diverse level of services to suit affordability by users.	✓		✓		✓	
	Planning and development to facilitate social integration.	✓	✓			✓	
	Recognising and catering for a diverse range of social and economic affordability.	✓	✓	✓		✓	
	Environmentally friendly developments.			✓	✓		
	Dispersed settlements to be linked to economic wellbeing.		✓			✓	✓
Stimulating the Economy	The economy is directly related and dependant on the movement of goods and people, thus requiring a: high level of accessibility; high convenience level.		✓				
	Low income settlements must be linked to		✓				✓



IDP Objective	Spatial Implication	Spatial Fundamental Principle					
		Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
	economic wellbeing.						
	Concentrating social and economic opportunities.					✓	
	Promote the tourism industry as a means of job creation.				✓		✓
	Promote the proposed regional economic programme called The Living Edge of Africa (LEAP), to promote job creation.		✓		✓	✓	✓
	Promote SMME development.	✓					
	Promote agricultural livestock farming for upcoming farmers to become commercial farmers.	✓					✓
	Identify role-players and stakeholders related to identified key tourism experiences.	✓					
Improving Service Delivery	Achieve social integration.	✓	✓			✓	
	Create equal opportunities (but still recognise a diverse range of social and economic affordability).	✓		✓		✓	✓
	Formulate and apply policy and regulations that	✓		✓		✓	✓

IDP Objective	Spatial Implication	Spatial Fundamental Principle					
		Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
	will protect and enhance the quality of life and investment.						
	Adherence to the fixed development priorities in accordance with approved budgets.	✓					
Capacitating Local Government & Good Governance	Being consistent in the application of policy, particularly the IDP and SDF.	✓					
	High levels of service delivery.	✓					
	The pursuit of efficient and cooperative governance.	✓					
	Countering the fragmentation in planning and investment.	✓				✓	
	The deepening of participatory democracy which entails inter-governmental partnerships and citizenships.	✓					
	Achievable and appropriate development policies.	✓					

### 3/3. SPATIAL FUNDAMENTALS EMANATING FROM THE WEAKNESSES AND THREATS

The weakness and threats referred to in this section are extracted from the Phase 2 Status Quo report.

#### 3.3.1 Kamiesberg Local Municipality Context

The fundamental principles emanating from the weaknesses and threats related to the municipal context are as follows:

**Table 3-2: Spatial Fundamentals**

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
National and Regional Context		Arid, climatic conditions hampers and limits opportunities					✓	
Local Context	The settlement pattern is fragmented with 16 towns and settlements are far apart from one another.	Arid, climatic conditions hampers and limits opportunities					✓	✓
Topography, Climate & Geology Soil Potential and Vegetation	Not highly suitable for intensive crop farming. Steep rocky slopes limiting settlement development to the valleys. Extremely dry and arid. Rocky formations limit agricultural usage. No or low agricultural potential in combination with the arid climate.		✓					✓
Mining and Minerals	Diamond and copper mining is in decline.							✓



### 3.3.2 Socio-Economic Perspective

The fundamental principles emanating from the weaknesses and threats related to the socio-economic perspective are as follows:

**Table 3-3: Socio Economic Perspective**

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Demographics	Low population growth leaning towards a declining population. Increasing number of households with a smaller household size.		✓				✓	
Employment Status and Profile and Migration Income and Poverty Levels	40% of population is unemployed. Migration to areas of economic opportunity is high. 45% of population earns less than R1600pm.		✓					✓
Social and Health Services, Education Facilities	Condition and operational ability of facilities are poor.		✓				✓	

### 3.3.3 Housing Sector

The fundamental principles emanating from the weaknesses and threats related to the housing sector are as follows:

**Table 3-4: Housing Sector**

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Residential development	The residential settlements are scattered far apart (80km) loading the cost of community services and infrastructure	Inability to provide social cohesion.					✓	
Dwelling typology	Only approximately 206 informal shelters remain.		✓					
Housing backlog	The housing contractors seem to fail in their ability to fulfil their contractual obligations in that the quality of the housing is sub-standard.		✓				✓	
Home ownership	The income levels are extremely low thus making it virtually impossible to maintain structures. Low income profile severely restricts the community to contribute to or afford the cost of community services.							✓

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
	The market value of existing houses is far below the replacement value of the house.							

### 3.3.4 Environment Conservation and Heritage

The fundamental principles emanating from the weaknesses and threats related to the environment, conservation and heritage aspects are as follows:

**Table 3-5: Conservation and Heritage**

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Succulent Karoo Biodiversity Growth Point		The primary threat to biodiversity currently is transformation by mining. Potential future threats include: small scale mining; overgrazing; inappropriate management of water resources; the over harvesting of natural	✓	✓	✓	✓	✓	



Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
		resources; transformation of the coastal zone for tourism/holiday home development; global climate change.						
The Living Edge of Africa Project	The rehabilitation and integration as well as redevelopment of the area is costly and over a too long time frame.	Absence of financial backing to the rehabilitation and redevelopment initiatives.	✓	✓	✓	✓	✓	✓
The Namaqua National Park	The tourism attraction season currently very short – only flower season.	Lack of funding.	✓			✓		✓
	Conflict between the Park and neighbouring communities over land usage.		✓			✓	✓	✓
Vaalputs	Area being sterilised due to the presence of the national radioactive waste disposal facility.			✓		✓		
Heritage and Archaeological	Poor maintenance and		✓			✓		

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Characteristics.	upkeep of sites and monuments							
	Poor documentation of heritage.		✓					

### 3.3.5 Economic Sector

The fundamental principles emanating from the weaknesses and threats related to the economic sector are as follows:

**Table 3-6: Economic Sector**

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
General Overview		Arid, climatic conditions and depletion of mineral resource base.						✓
District Economy		Arid, climatic conditions and depletion of mineral resource base.						✓
Municipal Economy	Vast area with inadequate supportive infrastructure. Area inaccessible due to	Decline in mining and inability to create an alternative economic base.	✓	✓	✓	✓	✓	✓

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
	gravel roads being in a poor condition. No alternative means of transport such as rail or commercial air. Dependency on the community and personal services sector for employment.							

### 3.3.6 Roads and Transportation

The fundamental principles emanating from the weaknesses and threats related to roads and transportation are as follows:

**Table 3-7: Roads and Transportation**

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
National and Regional Transportation Network	No commercial airport. Inconvenient road network		✓	✓			✓	



Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
	off the N7.							
Local Road Network	All roads, apart from N7, are gravel and in poor condition.			✓	✓		✓	
Rail network	No rail network, line ends at Bitterfontein.			✓				
Aerodromes and airfields	No commercial airports.			✓				
Public Transport	Limited public transport available.			✓	✓		✓	
Private Transport	Time consuming and unproductive and it is mainly pedestrian and hitch hiking opportunities			✓	✓		✓	

### 3.3.7 Electricity

The fundamental principles emanating from the weaknesses and threats related to electricity are as follows:

**Table 3-8: Electricity**

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Electricity	Additional		✓	✓	✓			

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
	load on scarce municipal resources to absorb the transfer of mining town. Limited skilled personal available – skilled personal leave for more financially lucrative opportunities.							

### 3.3.8 Municipal Engineering Services

The fundamental principles emanating from the weaknesses and threats related to municipal engineering services are as follows:

**Table 3-9: Municipal Engineering Services**

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Solid Waste	Three of the sites are not as yet licensed thereby posing an uncertainty on the environmental management and operational management of the site.		✓		✓			

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Water	Current water capacity inadequate to fulfil the needs of the area. Area only supplied by boreholes.	Drying up of bore-holes			✓		✓	
Sewerage	Except for Garies. Koiingnaas and Kamieskroon, all other settlements and farms are served by VIP or UDS systems. If not managed properly by users it can lead to sickness and ill health.	Water scarcity makes it impossible to reticulate with full water-borne systems. Some areas unsuitable for pit latrines due to geology and high water table.	✓		✓		✓	

### 3.3.9 Land Use and Land Management

The fundamental principles emanating from the weaknesses and threats related to land use and land management are as follows:

Table 3-10: Land Use and Land Use Management

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
General Settlement and Spatial	The spatial pattern is fragmented	Inability to raise appropriate		✓	✓		✓	✓



Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Pattern	with scattered unsustainable settlements situated on average 80km apart. Past and present mining operations do extensive environmental damage with no sure financial backing to reinstate the environment.	funding to enable restructuring and redevelopment of the environment.						
Land Use Management	Land Use Management is not administrated to fulfil or enhance a development vision leading to the adhoc approval of land uses with the consequential result of further fragmentation of the spatial pattern.		✓				✓	
Land Reform and Distribution	The LCA houses ± 4800 people with no sure economic framework to make the communal land economically viable and	The establishment of more "clan" settlements which will further diminish the ability of the municipality to serve the					✓	✓

Component	Weakness	Threat	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
	sustainable.	area effectively and efficiently.						
Settlement Land Use and Zoning	Settlements are too small to generate any economic multiplier and internal sustainability.	Continuation of fragmented settlement pattern will negatively influence the Municipality and the community.	✓				✓	
Namaqua National Park (NNP)	Accessibility to the park is hampered by low standard roads. NNP is seasonally orientated and must implement all year tourist attractions.	Insufficient funds within SANParks for the implementation of the management and development plan.		✓				✓
Living Edge of Africa Project (LEAP)	The implementation time frame and prioritisation, as well as who the financial backers seems to be absent and not clearly identified.	No participation of the respective role players, i.e. the mining houses and authorities to timeously commit and budget for the provision of infrastructure and creation of an enabling environment.	✓	✓	✓		✓	✓

### 3/4.SPATIAL FUNDAMENTALS EMANATING FROM STRENGTHS AND OPPORTUNITIES

The strengths and opportunities referred to in this section are extracted from the Phase 2 Status Quo report.

#### 3.4.1 Kamiesberg Local Municipality Context

The fundamental principles emanating from the strengths and opportunities related to the municipal context are as follows:

**Table 3-11: Kamiesberg Local Municipality Context**

Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
National, Regional and Local Context	The N7 from Cape Town to Namibia transverses through the Municipal Area. The Atlantic Coast forms the western border of the area.	Garies, being 450km from Cape town, can be an "Oasis" en-route to Namibia from Cape Town. Create a West Coast Coastal Route.		✓				
Topography , Climate, Geology, Soil Potential and Vegetation	Extremely scenic, rocky and sandy terrain.	Hot and windy conditions provide opportunities for alternative energy sources.				✓		✓
Mining and Minerals	Rich in mineral deposits	Exploration of minerals warranted to determine the future economic strength of mining, i.e. granite, Wollastonite and kaolinite.						✓

#### 3.4.2 Socio-Economic Perspective

The fundamental principles emanating from the strengths and opportunities related to the socio-economic perspective are as follows:



**Table 3-12: Socio-Economic Perspective**

Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Employment Status and Profile Income and Poverty Levels	The major employment sectors are still Mining and Community Services. The second largest employer is Agriculture and Wholesale Trade.	Provide opportunities to instil semi-skilled enterprises particularly in the Agricultural Industry.		✓	✓		✓	✓
Social and Health Services and Education	13% of population has an education level of Grade 12 and above, whilst 25% have an education level of between Grades 8-11. Adequate number of schools.	Provide opportunities to instil semi-skilled enterprises particularly in the Agricultural Industry.			✓		✓	

### 3.4.3 Housing Sector

The fundamental principles emanating from the strengths and opportunities related to the housing sector are as follows:

**Table 3-13: Housing Sector**

Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Residential development	The settlements have unused capacity to absorb future residential growth.	Hondeklipbaai being situated on the Atlantic Coast has a distinct locational advantage for tourism and mariculture development.			✓		✓	✓
Dwelling typology	Most of the housing stock is in the form of formal housing.							
Housing backlog	There is no real housing backlog in the area. Only approximately 238 houses are still to be completed.			✓	✓		✓	
Home ownership	The majority of homes are privately owned.							✓
Housing in rural areas	Most housing in the rural areas occurs in the rural settlements.						✓	

### 3.4.4 Environment, Conservation and Heritage

The fundamental principles emanating from the strengths and opportunities related to the housing sector are as follows:

**Table 3-14: Environment, Conservation and Heritage**

Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Succulent Karoo Biodiversity Growth Point	Contains two of the nine SANBI identified conservation priority areas, namely the Central Namaqualand Coast and Kamiesberg Uplands.	To integrate these biomes into the NNP and the development of tourism focused economies around the biomes. Implement Working for Wetlands (SANBI)	✓	✓	✓	✓	✓	✓
The Living Edge of Africa Project (LEAP)	Comprised of the past mining mecca of the area. Wedged between the NNP and the Atlantic Coast.	The implementation of LEAP in that it provides definite and concrete opportunities in respect of: Tourism; Mariculture; and Agriculture.	✓	✓	✓	✓	✓	✓
The Namaqua National Park (NNP)	Flowers and biodiversity within an arid biome.	The purposeful implementation of the Namaqua National Park Management Plan (Draft), February 2010). Expand the NNP Management Plan to be more proactive and sensitive towards community integration and participation.	✓	✓	✓	✓	✓	✓
Vaalputs					✓			
Existing local dams i.e. in Nourivier, Kheis and Tweerivier	Existing infrastructure that can assist with the well-being of the communities.	The reinstatement of the dam walls and redevelopment of the agricultural and tourism initiatives around			✓		✓	✓



Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
		the dams.						
Heritage and Archaeological Characteristics.	Kamiesberg is rich in Heritage and Monuments	The documenting of history and incorporation of the monuments and sites into the tourism economy.				✓		

### 3.4.5 Economic Sector

The fundamental principles emanating from the strengths and opportunities related to the economic sector are as follows:

Table 3-15: Economic Sector

Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
General Overview	Mining and agriculture forms back bone of economy. Natural environment (flowers and rugged terrain)	Explore other mining opportunities.				✓		✓
District Economy	Mining and agriculture forms back bone of economy. Natural environment (flowers and					✓		✓

Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
	rugged terrain)							
Municipal Economy	Natural environment (flowers and rugged terrain).	Development of agriculture (mariculture) and the strengthening and expansion of the tourism sector.	✓	✓	✓	✓	✓	✓

### 3.4.6 Roads and Transportation

The fundamental principles emanating from the strengths and opportunities related to roads and transportation are as follows:

**Table 3-16: Roads and Transportation**

Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
National and Regional Transportation Network	National roads N7 and N14 traversing region.	Upgrade of regional routes particularly linking Hondeklipbaai and the Namaqua National Park to the N7. To implement a West Coast Coastal Route.		✓				✓
Local Road Network		Upgrade of roads, particularly those linking Hondeklipbaai and the Namakwa National Park to the N7.		✓				✓

Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
		Economic development opportunities should be channelled into corridors and roads that are adjacent to or link with the main economic growth centres.						
Rail network		Expand rail network from Bitterfontein northwards.		✓				✓
Aerodromes and airfields		Consider the implementation of a chartered airfield to assist with tourism sector.		✓				✓
Public Transport		Strengthening of the transportation linkages between Springbok, Garies and Cape Town.		✓				

### 3.4.7 Electricity

The fundamental principles emanating from the strengths and opportunities threats related to electricity are as follows:

**Table 3-17: Electricity**

Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification



Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Electricity	All households provided with electricity.	Alternative power generation as a means of economic growth.					✓	✓

### 3.4.8 Municipal Engineering Services

The fundamental principles emanating from the strengths and opportunities related to municipal engineering services are as follows:

**Table 3-18: Municipal Engineering Services**

Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
Solid Waste	All settlements have solid waste sites.				✓			
Water		Supply of bulk water from the Orange River. Supply of bulk water through desalination plant at Hondeklipbaai. More effective usage of existing water resources i.e. Rain water harvesting.			✓			✓
Sewerage		To provide a diverse range of services linked to the economic hierarchy			✓			

Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
		allocated to the settlement.						

### 3.4.9 Land Use and Land Management

The fundamental principles emanating from the strengths and opportunities related to land use and land management are as follows:

**Table 3-19: Land Use and Land Management**

Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
General Settlement and Spatial Pattern	Natural area with two of the most bio-diverse environmental growth points.	To strengthen the tourism opportunities and potential of the area by the vehement implementation of: SANParks NNP Management Plan; LEAP Project Plan. Identification and selection of core settlements for promotion and development e.g. Garies as the administrative head and Hondeklipbaai as a mix use area focusing on mariculture,				✓	✓	✓

Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
		fishing, desalination of sea water and coastal recreation						
Land Use management	Legislative framework to administrate land uses being the Northern Cape Planning and Development Act (Act 7 of 1998) and the Cape Planning Ordinance (Ordinance 15 of 1985).	To review the Kamiesberg Land Use Management Scheme to be aligned with the spatial planning visions and implemented in terms of the prescriptions of the Northern Cape Planning and Development Act (Act 7 of 1998).	✓					
Land Reform and Distribution	Provisionally the CRA's are considered the contribution to land reform within this Municipal area.	The compilation of an economic plan demonstrating the integration and alignment of this communal area into the tourism realm of the area.	✓			✓		✓
Settlement Land Use and Zoning		Limit the growth of the settlements to a selected few where economic activities and injections can be effectively and efficiently be directed to.	✓				✓	
NNP	The NNP can be considered as one of	Vehement implementation of the NNP management and		✓		✓		✓



Component	Strengths	Opportunities	Spatial Fundamental Principle					
			Clean, transparent, effective and efficient administration	Creating linkages and access	Provision of bulk infrastructure and appropriate services levels	The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Actively and forcefully addressing spatial fragmentation	Economic Diversification
	the “natural wonders” of the world.	development plan. Apply for WHS status						
LEAP	An ambitious revitalisation plan for the coastal mining areas, north and south of Hondeklipbaai with promising economic spin offs.	To review the LEAP proposal and identify catalyst projects which can act as drivers for the full implementation of the vision.	✓	✓	✓	✓	✓	✓

### 3/5. KAMIESBERG DEVELOPMENT RATIONALE

#### 3.5.1 The Points of Departure

Growth and development within Kamiesberg is to be based on the following departure points, growth projections and assumptions:

- Whilst the Northern Cape Provincial Growth and Development Strategy advocates a 4% and 6% economic growth, it is estimated that a 3% growth within the Kamiesberg area would be a more achievable growth rate for the medium term, by:
  - Pursuing incremental growth in selected focus areas;
  - Creating economies of scale which fosters permanent employment;
  - Embracing a movement economy due to the geographical magnitude of the municipal area;
  - Application of effective and efficient governance.
- Population growth will be nominal to 1% per annum:
  - This population growth is attributed to people returning home due to the general decline of the economy, particularly of the mining economy, in this region.
- Kamiesberg is the home of one of the only two semi-arid biodiversity hotspots in the world, exhibiting by far the highest plant diversity of any arid system, which makes it an ideal candidate for World Heritage Site status and as such should maximise the opportunities that this phenomenon creates, particularly when the marine life rich Atlantic Ocean is added to the equation. The benefits emanating from being a potential World Heritage Site, will not manifest if:

- A high level of convenience is absent;
- Governance and business ethics and service levels are not of impeccable level and high standard;
- A high level of environmental and social quality is absent;
- Economies of scale attracting investment are ineffective; and
- The visitation is not by preference but rather by necessity.
- The introduction of an Urban Edge around settlements to promote infill and avoid horizontal expansion in an uncontrolled and unstructured manner.

### 3.5.2 The Development Framework Rationale

Flowing out of the principles which form the foundation for the development vision are the following directives and policy frameworks, which are aligned with the sentiment expressed in the Provincial and District Growth and Development Strategies, the District and Municipal IDP (the founding principles are listed in the order of importance):

**Table 3-20: Development Policy**

Fundamental	Directive/Policy Framework	Action Programme
Clean, transparent, effective and efficient administration	The Municipality is to embrace the Bathe Pele principals and is to be free of corruption embracing the following: <ul style="list-style-type: none"> <li>● Provide quality service delivery and customer care; and</li> <li>● Focus on the social and economic upliftment of the community.</li> </ul>	<ul style="list-style-type: none"> <li>● Land audit</li> <li>● Compile Land Use Management Scheme</li> <li>● Formalise settlements</li> <li>● Review Water Services Master Plan</li> <li>● Review LED Strategy</li> <li>● Capacitate Municipality</li> </ul>
Creating linkages and access.	In order to embrace a movement economy, the movement infrastructure must be enhanced as follows: <ul style="list-style-type: none"> <li>● <b>ROADS:</b> Implementation of a hierarchy of roads: <ul style="list-style-type: none"> <li>○ National Road (N7) to be well maintained and of high quality. The function of this road is to facilitate through movement encouraging the road user to economically support the nodes.</li> <li>○ Arterial roads enable linkage and connectivity and must be surfaced and of a high standard in order to facilitate through movement and economic interaction.</li> <li>○ Local roads give access to individual properties and should be surfaced roads in the higher order nodes and economic spots but can be well maintained gravel roads in the rural settlement areas.</li> </ul> </li> </ul>	Upgrade the arterial roads from gravel roads to surfaced roads; Upgrade the local roads to surfaced roads in the economic growth points.
	<ul style="list-style-type: none"> <li>● <b>RAIL:</b> <ul style="list-style-type: none"> <li>○ Reinstatement of the movement of passenger and freight by rail to Bitterfontein and the extension of the rail facility into the Kamiesberg area (Garies).</li> </ul> </li> </ul>	Actively pursue with the District Municipality, the Provincial Administration and Government the revitalisation of the rail industry and the extension of the line.
	<ul style="list-style-type: none"> <li>● <b>AIR:</b> <ul style="list-style-type: none"> <li>○ The closest commercial airports to Kamiesberg are in Cape Town and Upington, which are too far to contribute to the economy. In order to improve connectivity and linkages, it is desirable to facilitate a chartered airfield in the Kamiesberg area.</li> </ul> </li> </ul>	Investigate the viability of establishing a chartered airfield by focusing on absorbing existing infrastructure, such as the airfield at Koiingnaas.
Provision of bulk infrastructure and appropriate services levels.	The provision infrastructure will be provided in accordance with the Municipal Infrastructure: An Industry Guide to Infrastructure Service Delivery Levels and Unit Costs, January 2010 as issued by the National Department of Cooperative Governance and Traditional Affairs, for all infrastructure services.	
	<ul style="list-style-type: none"> <li>● <b>ELECTRICITY BULK SUPPLY:</b></li> </ul>	

Fundamental	Directive/Policy Framework	Action Programme																																	
	Supplement electrical supply by means of the provision of alternative energy through wind and solar energy generation. <ul style="list-style-type: none"><li>○ <b>ELECTRICAL SERVICE LEVELS:</b></li><li>○ <b>BASIC SERVICE LEVEL:</b> Prepaid metres.</li><li>○ <b>FULL SERVICE LEVEL:</b> Full metered house connection.</li><li>○ <b>GREEN ENERGY:</b> Harvesting of natural energy, e.g. wind and solar.</li></ul>	Conduct a feasibility study to establish large scale alternative energy generation plants to supplement the Eskom supply and for economic gain.																																	
	In order to enable sustainable development, the level of services and bulk infrastructure must be provided as follows: <ul style="list-style-type: none"><li>• <b>BULK WATER:</b><ul style="list-style-type: none"><li>○ The provision of adequate bulk water infrastructure to enable the provision of at least 2kl of free water per indigent household per month and ensuring suitable capacity to facilitate economic development, particularly in tourism and urban development (Hondeklipbaai).</li><li>○ Provision of water - Priorities:</li><li>○ Desalination plant at Hondeklipbaai as it will create employment opportunities and contribute towards a new economic footing for the town.</li><li>○ Pipeline from the Orange River (Springbok/Garies Bulk Water).</li></ul></li></ul>	Prepare a water resource management plan which takes into consideration: A feasibility study on a large scale desalination plant at Hondeklipbaai; Best practice in rainwater and mist harvesting; Best practice in utilisation of aquifers; Provision of potable water from the Orange River.																																	
	<ul style="list-style-type: none"><li>• <b>SERVICES LEVELS – WATER AND SANITATION:</b><ul style="list-style-type: none"><li>○ Provision is made for the following levels of service (LOS):</li><li>○ GREEN WATER – Rainwater and mist harvesting.</li></ul></li></ul>	All household to apply a green water LOS in conjunction with the normal commercial LOS																																	
	<table><tr><th>LOS OPTION</th><th colspan="2">WATER</th><th colspan="2">SANITATION</th></tr><tr><td>Level 1 Basic</td><td>Standpipe &amp; communal taps</td><td><ul style="list-style-type: none"><li>• Average 25 households per tap</li><li>• standpipe can have more than one tap</li></ul></td><td><ul style="list-style-type: none"><li>• Single &amp; double pit fixed &amp; movable top structure VIP</li><li>• UDS</li><li>• Other dry sanitation systems</li></ul></td><td><ul style="list-style-type: none"><li>• 1 per household</li><li>• Free of monthly consumer charge</li></ul></td></tr><tr><td>Level 2 Intermediate</td><td>Yard taps</td><td><ul style="list-style-type: none"><li>• Metered</li><li>• not connected to any private plumbing fixtures</li></ul></td><td><ul style="list-style-type: none"><li>• Pour-flush toilet</li><li>• LOFLOS</li></ul></td><td><ul style="list-style-type: none"><li>• Manually operated cistern</li><li>• Lined pit or closed digester &amp; soakaway</li></ul></td></tr><tr><td rowspan="3">Level 3 Full</td><td>Yard tank</td><td><ul style="list-style-type: none"><li>• filled by trickle flow or other controlled flow daily,</li><li>• max 200 l/day</li></ul></td><td><ul style="list-style-type: none"><li>• Ecological sanitation</li><li>• Pour flush toilet</li><li>• LOFLOS</li></ul></td><td><ul style="list-style-type: none"><li>• Manually operated cistern</li><li>• Lined pit or closed digester &amp; 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The protection of environmentally sensitive areas, nature reserves, heritage and archaeological sites.	<ul style="list-style-type: none"><li>• <b>ENVIRONMENTAL:</b><ul style="list-style-type: none"><li>○ The semi-arid biodiversity growth point, being the area with the highest diversity in succulent plants in the world, as represented by the Namaqua National Park and the proposed extensions thereof, must be protected and conserved. The Critical Biodiversity areas (CBA's) are terrestrial and aquatic features in the landscape that are critical for retaining biodiversity and supporting continued ecosystem functioning and services (SANBI, 2007). These form the key output of a systematic conservation assessment and are the biodiversity sectors inputs into multi-sectoral planning and decision making tools.</li><li>○ Apply the Kamiesberg Local Municipality Biodiversity Sector Plan, 2008 as prepared by Conservation International, the Botanical Society of South Africa and the Northern Cape Province, which covers the Namakwa District Municipal area.</li><li>○ Adopt a zero tolerance approach against environmental degradation practices.</li></ul></li></ul>	To have the Namaqua National Park and hinterland declared as a World Heritage Site.  The compilation of a farm management and usage plan to establish best practice in creating a balance between preservation and economic return and the preservation of the bio-diverse landscape. Documentation of the heritage and archaeological history of the area and the compilation of a business plan to convert the historical value into economic																																	



Fundamental	Directive/Policy Framework	Action Programme
	<ul style="list-style-type: none"> <li><b>HERITAGE:</b> <ul style="list-style-type: none"> <li>To ascribe to the provisions of the National Resources Heritage Act, 1999 (Act 25 of 1999) to protect and incorporate the vast heritage and archaeological history in the economic realm of the municipality.</li> </ul> </li> </ul>	opportunities.
Actively and forcefully addressing spatial fragmentation.	Spatial fragmentation relates directly to the use of land and the settlement pattern advocated in the municipal area. To this extend it relates equally to the rural and urban environment:	
	<ul style="list-style-type: none"> <li><b>RURAL ENVIRONMENT:</b> <ul style="list-style-type: none"> <li>Farm parcel sizes must be in accordance with an economic sustainability report prepared by an agricultural economist</li> <li>Commonages will only be supported and implemented with a comprehensive sustainability report prepared by an expert in the field.</li> <li>Over utilisation of rural land to be discouraged and managed.</li> </ul> </li> </ul>	The compilation of a farm management and usage plan to establish best practice in creating a balance between preservation and economic return and the preservation of the bio-diverse landscape.
	<ul style="list-style-type: none"> <li><b>URBAN ENVIRONMENT:</b> No horizontal expansion to the urban nodes to be permitted as they have ample of capacity for infill and densification inside the urban edge indicated on the respective urban framework plan. The urban settlements to be categorised and branded into the following settlement categories: <ul style="list-style-type: none"> <li>Administrative node Administrative and financial centre for the Municipal area.</li> <li>Tourism portal node Settlement areas with distinct role and function of supporting the tourism industry.</li> <li>Economic Growth Point node The settlement area earmarked for a mix of activities stimulating and promoting economic diversification and growth.</li> <li>Rural settlement Small settlement areas where growth and expansion is curtailed and supplied with the minimum basic service levels. The main function of these areas is to provide educational facilities and appoint for rendering mobile social services e.g. Mobile clinic and mobile library.</li> </ul> </li> </ul>	
	<ul style="list-style-type: none"> <li><b>GENERAL LAND USE MANAGEMENT:</b> <ul style="list-style-type: none"> <li>Adopt zero tolerance approach to the illegal usage of land.</li> <li>Support development, subdivision and densification only in the identified nodes.</li> </ul> </li> </ul>	Land use audit. Compilation of a land use management scheme.
Economic Diversification	With the mining sector declining and community and social services having reached its peak, the economic base must be diversified by:	
	<ul style="list-style-type: none"> <li><b>PRIMARY INDUSTRY:</b> <ul style="list-style-type: none"> <li>As the area is inundated with mineral resources, an assessment of the future mining and quarrying potential with specific reference to uranium, wollastonite and granite;</li> <li>Apply agricultural best practices and promote industrious agricultural activities, being the production of produce within a contained environment i.e. hot houses, tunnels, chicken runs, fish farms and mariculture for personal nutrition and economic gain.</li> </ul> </li> </ul>	The compilation of a farm management and usage plan to establish the best practice in creating a balance between preservation and economic return and the preservation of the bio-diverse landscape, encapsulating industrious agricultural activities for personal nutrition and economic gain.
	<ul style="list-style-type: none"> <li><b>SECONDARY INDUSTRIES:</b> <ul style="list-style-type: none"> <li>Focussing on strengthening and expanding the secondary industries related to the provision of bulk infrastructure services, particularly electricity and water, which at this point do not contribute at all to the economy;</li> <li>Encourage and promote the establishment of value adding enterprises in the identified nodes.</li> </ul> </li> </ul>	Conduct a feasibility study to establish large scale alternative energy generation plants to supplement the Eskom supply and for economic gain.
	<ul style="list-style-type: none"> <li><b>TERTIARY INDUSTRY:</b></li> </ul>	Documentation of the

Fundamental	Directive/Policy Framework	Action Programme
	<ul style="list-style-type: none"> <li>○ Focussing on strengthening and expanding of tourism and related activities.</li> </ul>	<p>heritage and archaeological history of the area and the compilation of a business plan to convert the historical value into economic opportunities.</p> <p>Actively develop programs for the development and promotion of tourism with role players such as SANParks.</p>

## 3/6. SPATIAL DEVELOPMENT FRAMEWORK

### 3.6.1 Economic Diversification

The intended economic diversification is spatially represented on the figure below advocate focussed investment in core elements which if successful will generate a complete and vigorous economic platform for the Municipal Area:

#### 3.6.1.1 Tourism

Within the critical biodiversity areas, as represented in the SDF and originating from the Namakwa District Municipality Biodiversity Sector Plan, land use and development within this area should be guided in accordance with the recommendations contained in the biodiversity sector plan. The SDF proposes that the Namaqua National Park be extended eastwards to encompass the Skilpad Wildlife Flower Reserve and extend further east to the N7 boundary. Expansion to the west is proposed to the north of Koiingnaas to encompass a section of the alluvial mining area and to include the area between the proposed economic growth point and the Spoegrivier. These expansion proposals coincide with the Namaqua National Parks, Park Management Plan, February 2010 (draft) as prepared by the South African National Parks. This area must play a more aggressive role in the economic environment. To assist with this notion the Kamieskroon and Soebatsfontein have been rebranded as being the tourism portal nodes. Soebatsfontein is seen to be the main entrance to the NNP and Kamieskroon should feature once the park extensions have been attained. It is important that the NNP and the surrounding environment be declared as a World Heritage Site as this will ensure the necessary funding for the development, maintenance and expansion of the park as an international destination. It will also assist in the provision of funding for critically required infrastructure such as the provision of roads and water.

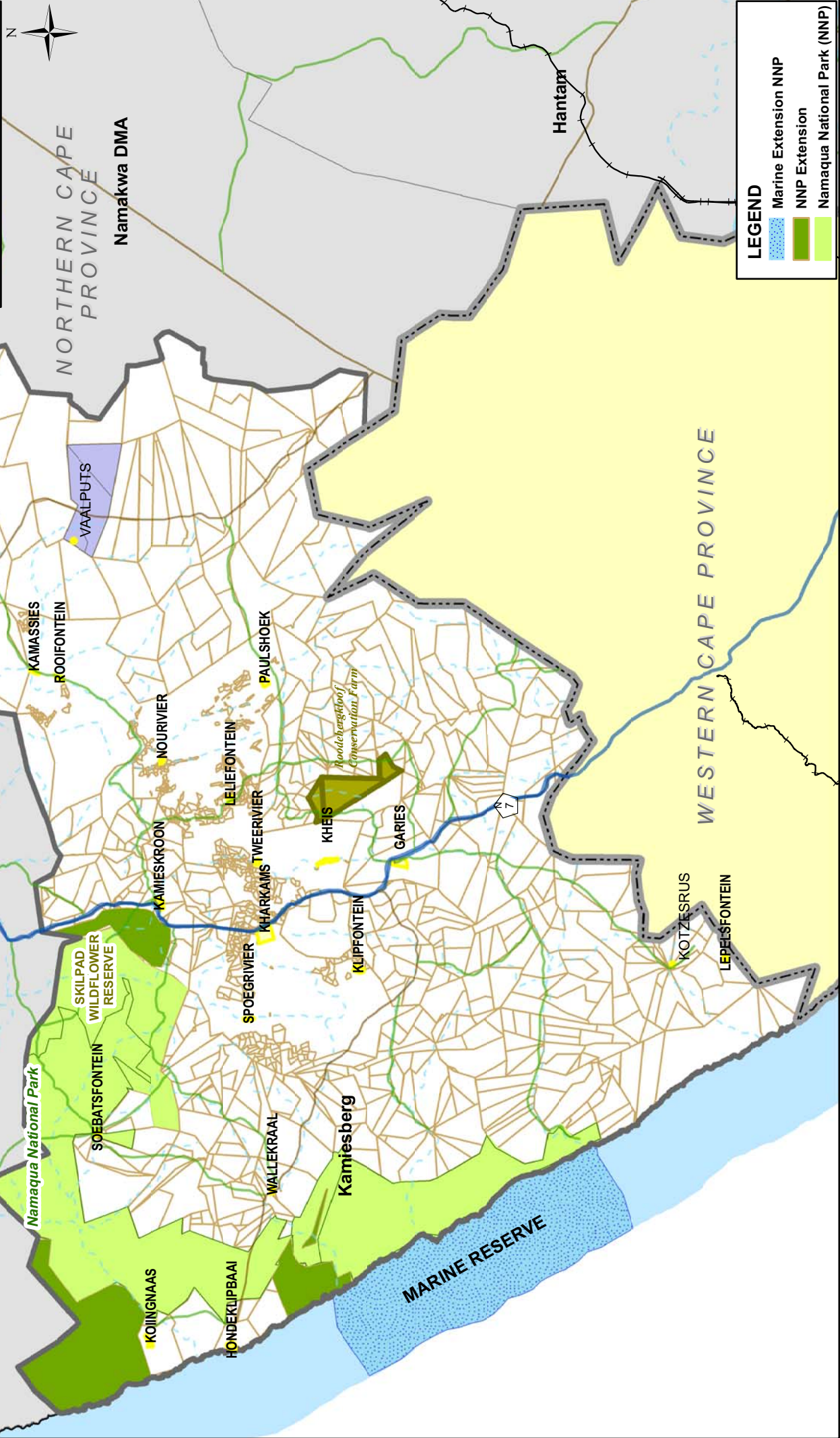
The Northern Cape Province is generally renowned for game hunting and the hunting industry should be encouraged to play a far more prominent role within the rural area of the Kamiesberg Local Municipality.

It is envisaged that within the proposed economic growth point, tourism resorts and apartments should be promoted and encouraged as this nodal point provides back to back tourism benefits in conjunction with the marine rich Atlantic Ocean and the Namaqua National Park.

In addition the Roodeberg Conservation Farm should be promoted as a tourism development opportunity within the ambit of economic empowerment of the Leliefontein Communal Area.

**Figure 3-2: Namaqua National Park and Extension**

**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 3-2 NAMAQUA NATIONAL PARK**  
**EXTENTION**



**LEGEND**

- Marine Extension NNP
- NNP Extension
- Namaqua National Park (NNP)

**Towns/Settlements**  
**Municipal Boundary**  
**National Road (tarr)**  
**District Road (gravel)**  
**Main Road (gravel)**  
**Perennial River**  
**Non-Perennial River**  
**Dams**  
**Railways**  
**Farm Portions**

**aurecon**

0 10 20 40 Kilometers



### **3.6.1.2     *The Economic Growth Point***

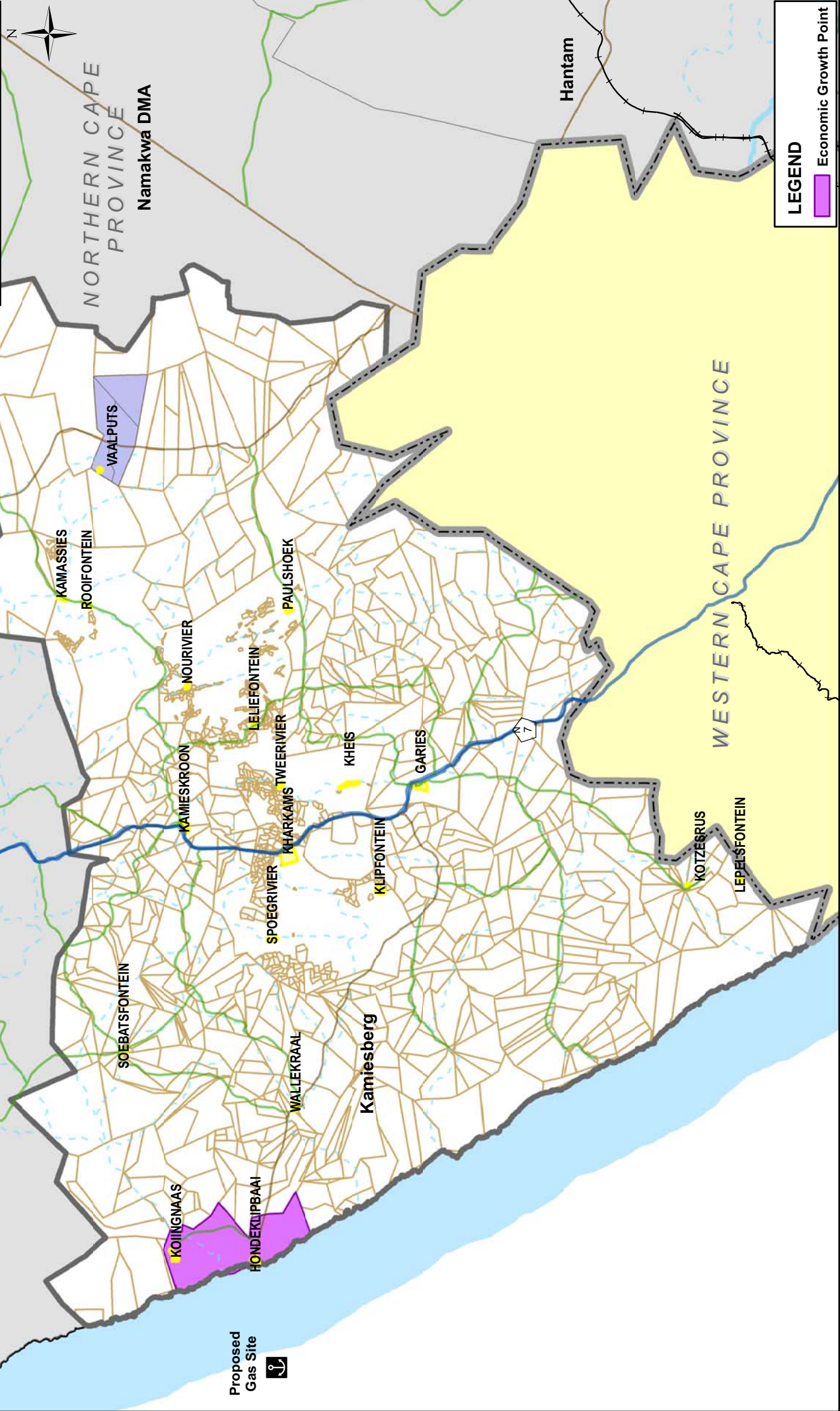
This area incorporates a portion of the LEAP Project area (Living Edge of Africa Project) as depicted in the figure following:

The LEAP project, although highly ambitious, has promising features of which the following should be prioritised and pursued:

**Figure 3-3: Economic Growth Point**

**KAMIESBERG MUNICIPALITY**  
SPATIAL DEVELOPMENT FRAMEWORK  
2010

**FIGURE 3-3 ECONOMIC GROWTH POINT**



### 3.6.1.2.1 The Desalination Plant at Hondeklipbaai

The availability of water is a key ingredient in the economic sustainability of the Kamiesberg municipal area. The provision of potable water should go hand in hand with employment and income generation and this can be achieved through a desalination plant. The capacity of this plant should be to address the water need of the Namakwa District Municipality similar to the Tampa Bay Water Plant as per the article below<sup>39</sup>.

	<b>Contact Information</b> Michelle Rapp Tampa Bay Water 727.796.2355 Maureen Duffy American Water 609.707.0373
<b>Nation's First, Large Scale Desalination Plant Delivers Drought-Proof Water Supply</b>	
<p>Clearwater, FL•February 12, 2008/PRNewswire/—The nation's first, large-scale seawater desalination plant is delivering drinking water to more than 2.5 million residents of the Tampa Bay area. It's a timely solution as continued drought is forecast across the south-eastern United States.</p>	
<p>While parts of Alabama, Georgia and North Carolina are facing exceptional drought conditions, officials in west-central Florida say their residents are benefiting from the nation's first drought-proof drinking water supply, a project pioneered by the area's regional utility, Tampa Bay Water.</p>	
<p>"Nearly a decade ago the Tampa Bay region suffered from an extreme drought, just as we are currently, and at that time we explored how we might drought-proof our system so that this didn't have catastrophic consequences," said Jerry Maxwell, General Manager of Tampa Bay Water, "As we did so seawater was a natural place for us to look. We live in Florida, we are on a peninsula, surrounded by seawaters, and even though it hadn't been undertaken on a large-scale, it seemed the natural thing to do."</p>	
<p>Cost was the reason the utility had not considered seawater desalination in the past, Maxwell said. But when technology advances brought the cost of desalinated water down significantly, the utility felt the time was right.</p>	
<p>The Tampa Bay Seawater Desalination Plant can produce up to 25 million gallons per day of drinking water. The process works like this:</p>	
<p>About 44 million gallons of water from a nearby power plant cooling system is diverted to the plant. There, it goes through pre-treatment steps to remove algae and other particles. Using reverse osmosis filters, 25 million gallons per day of freshwater is separated from the seawater.</p>	
<p>This leaves behind a twice-as salty by-product that is blended with a large amount of cooling water from the power plant. That dilution is why environmental studies show no measurable salinity change in Tampa Bay related to plant production.</p>	

<sup>39</sup> Source <http://multivu.prnewswire.com/mnr/tampabaywater/31679/>



"In the rest of the world they don't always have as high or as strict of standards as it relates to the environment as we do here in the US, so working in a real natural, sensitive ecosystem meant that we had a very high bar to clear in terms of environmental stewardship," said Maxwell.

The plant faced its share of early problems. Officials say the original developer failed to deliver a plant that met specifications. So Tampa Bay Water engaged two companies with worldwide desalination experience to bring the plant up to specifications. They were American Water, and Acciona Agua of Spain.

"I don't think any public utility has the kind of expertise in house that it takes to undertake a project of this magnitude. In our instance we partnered with American Water and with Acciona because they had both North American and worldwide experience in the construction of water treatment plants," said Maxwell.



While the plant is designed to produce up to 25 million gallons per day, it can be expanded to produce up to 35 million gallons per day in the future. That, Tampa Bay Water officials say, gives them comfort that public water supply will not be an issue during the next drought.

American Water's Don Correll sees more such projects on the horizon. "Beyond providing a reliable supply of drinking water to the residents of this region and leading the way for other, similar projects across the United States, this plant is an excellent example of what a successful public-private partnership can accomplish," he said.

"We've already had folks from other coastal areas around the United States, in from in fact around the world, come visit us, to visit this site, see what we have been able to accomplish, understand how it works, and we know it is just a matter of time before others are able replicate what we have done and in fact, improve on it and advance the science of seawater desalination," Maxwell said.

Acciona Agua's Luis Castilla sees the plant as a demonstration to the world that desalination is a practical solution. "I think personally that this plant is one of the most important plants in the world. The success of this plant is going to have far great impact not only in America but also in the rest of the desalination markets in the world," he said.

"As growth and drought continue to strain the public water supply, it's really good to know that we have a safe and sustainable way to harvest water from the sea," said Maxwell.

### **3.6.1.2.2 The Reinstatement of the Hondeklipbaai Fishing Industry and Mariculture**

The Atlantic Coast is renowned for its abundant marine life. Although Port Nolloth is the hub of the fishing industry on this stretch of the west coast, Hondeklipbaai can provide a viable alternative. Because most of the fish caught in the Northern Cape waters have until recently been landed and processed outside the province, development of the fishing industry has been slow. This is all set to change, with the increased quotas that will be awarded to land and process fish in the Northern Cape. Stricter enforcement of quota rules, as from 1998, means that at least 65% of the catch, which totals 7 085 tons (mainly hake), are landed in the Northern Cape. This opens up the possibility for more fish processing in support of the fishing industry.

Mariculture industry with, among others, abalone being farmed for export to the Far East, should also be pursued as there is internationally a high demand for abalone.

The abalone is a marine gastropod (snail), distinguished from other gastropods by its flat shell. There are many species of abalone, but all feed on algae and have the distinctive shell shape. Their meat is supposed to be quite tasty and can be very expensive. Overfishing, pollution, and climate factors have decreased the population of wild abalone, which in North America are caught mainly off the coast of California. Many aquaculture businesses exist to meet the high demand for abalone meat, and farm-raised abalone is much less expensive than the wild variety. Abalone shells are often used to make jewellery and other decorative items. Abalone pearls are much rarer than oyster pearls and are dark in colour, resembling opals.<sup>40</sup>

#### **3.6.1.2.3 The Establishment of Resorts and Accommodation**

As the growth point is flanked in the west by the Atlantic Ocean and to its east by the NNP it is desirable that the within the growth point resorts and holiday accommodation be established. Good quality accommodation with a four star rating is currently relatively scarce in the Kamiesberg area.

#### **3.6.1.2.4 The Provision of Secondary Industries Related to Infrastructure Provision such as Wind and Solar Energy Generation**

In addition to the desalination plant opportunity the micro climate within this section of the Kamiesberg Municipal Area is suitable for, in particular, wind energy generation. The availability of electricity as with water is the second main component to have in order to sustain high levels of industrial investment. The

#### **3.6.1.2.5 Liquid Fuel**

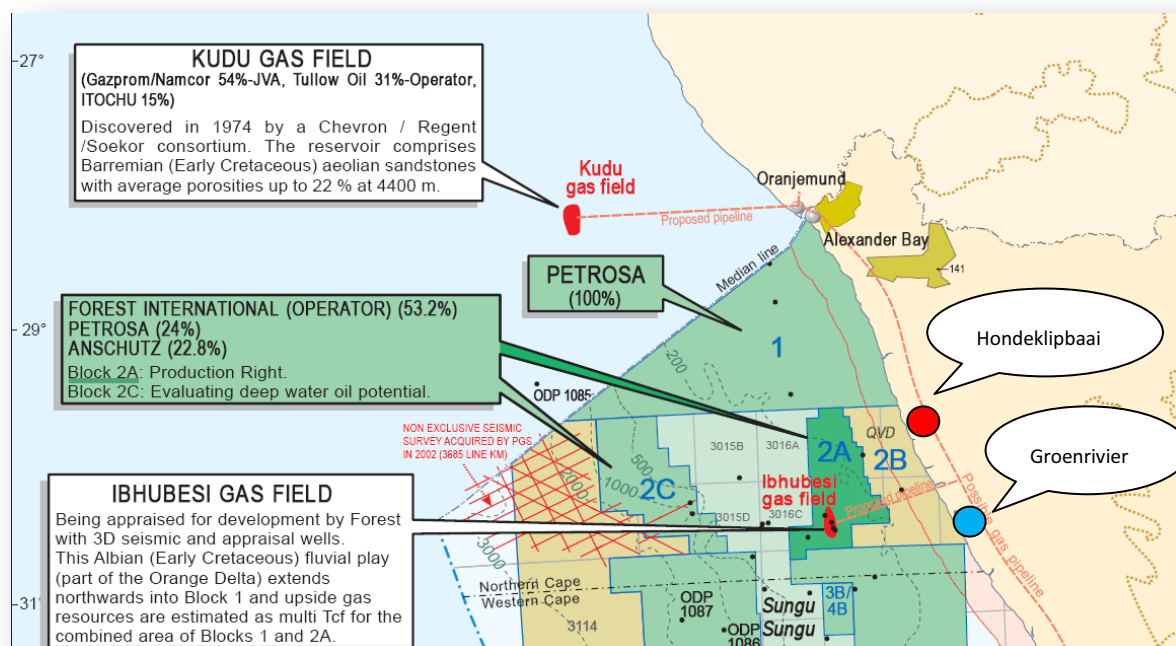
The provision of a refinery, producing high-quality liquid fuels and associated products from natural gas and condensate found at the gas field, which is located  $\pm 70\text{km}$  to  $105\text{km}$  offshore from Hondeklipbaai

The search for natural petroleum products i.e. oil and gas is an on-going investment within the coastal waters of South Africa. To the end the following figure illustrates the current state of oil and gas exploration along the Kamiesberg coast:

---

<sup>40</sup> <http://everything2.com/title/Abalone>

Figure 3-4: Oil and Gas Exploration Northern Cape<sup>41</sup>



From the figure above it is envisaged to land the Ibhubesi gas line at Groenrivier. It is imperative, in order to remain with the vision of concentrated effort to ensure that all further gas and or oil be brought to shore at Hondeklipbaai. If at all possible it is recommended that discussions be entered into Forest Oil the owner of the Ibhubesi Gas Field to redirect the envisaged landing at Groenrivier to Hondeklipbaai.

### 3.6.1.3 The Land Reform / Commonage Area

The commonage area, also known as the Leliefontein Communal Area (LCA), is an area of  $\pm 191\,809$  ha, which represents approximately 16% of the area of the Kamiesberg Local Municipality. The area contains 10 of the 16 settlements in the Kamiesberg area. Stock farming (sheep and goats) is the main agricultural use within the LCA but  $\pm 23\,000$  ha has been divided into 564 crop fields for the cultivation of mainly oats, as additional summer feed for stock, as well as corn for personal consumption and sale within the community.<sup>42</sup>

The LCA has, in combination with the stock farming, the potential to provide opportunities for renewable energy generation in the form of wind and solar power. There are a number of settlements within the area which do not have an economic base and development in these settlements should be restricted, with the exception of Kharkams. Kharkams is situated on the N7 national road and thus is presented with the opportunity to be the window for the products produced within this area. All the development within this area should be centred on Kharkams. This area is an ideal area for the implementation of the Comprehensive Rural Development Programme (CRDP) initiative, as well as the establishment of agri-villages and agri-industry ventures.

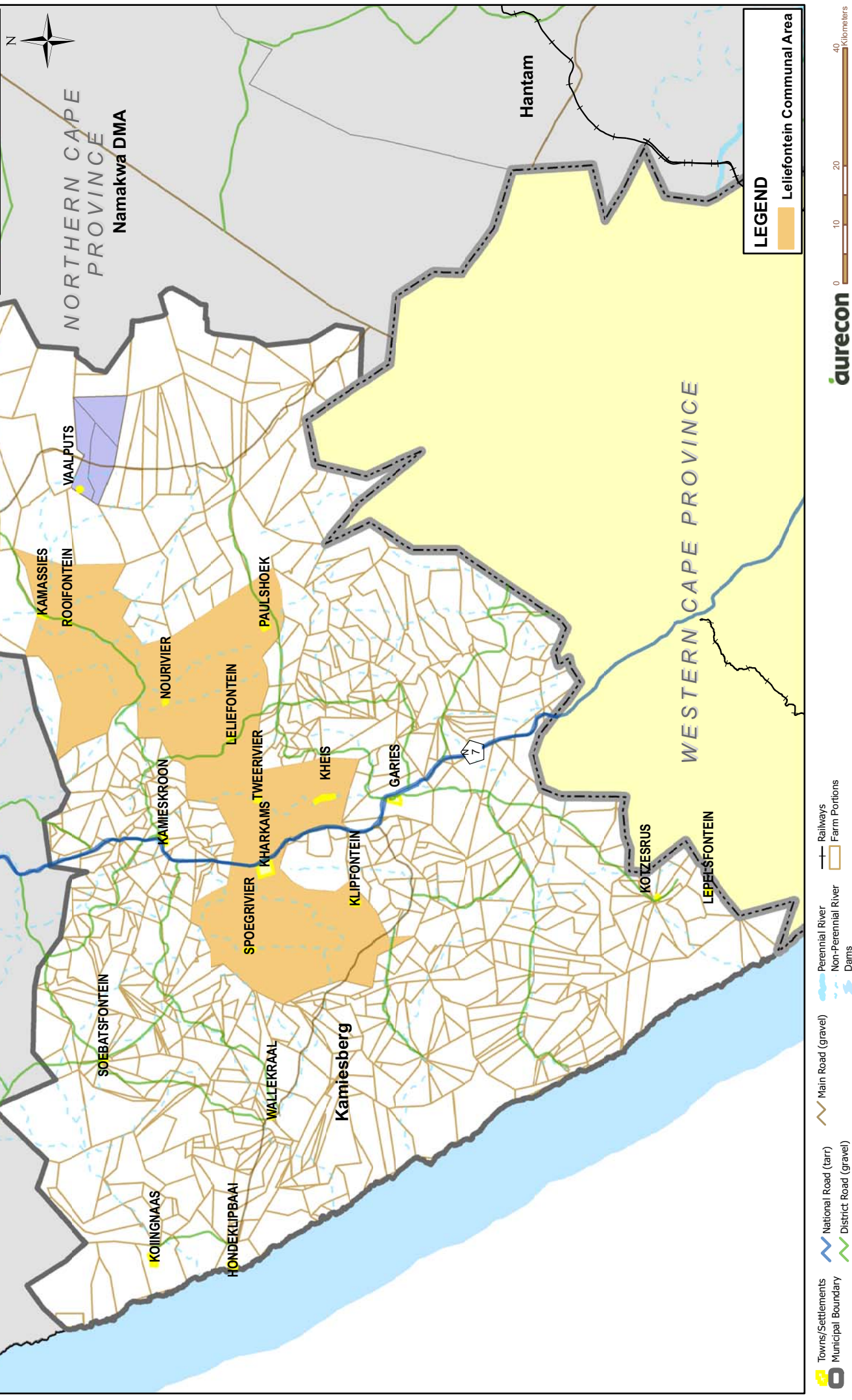
Figure 3-5: Land Reform and Commonage Area

<sup>41</sup> Source : <http://www.petroleumagency.co.za/home.aspx>

<sup>42</sup> Source: Draft Leliefontein Rural Area Management Concept 2 -18 April 2010 as prepared by the Agricultural Research Council



**KAMIESBERG MUNICIPALITY**  
SPATIAL DEVELOPMENT FRAMEWORK  
2010  
**FIGURE 3-5 LAND REFORM AND  
COMMUNAGE AREA**



Towns/Settlements  
Municipal Boundary  
National Road (tarr)  
District Road (gravel)  
Main Road (gravel)  
Perennial River  
Non-Perennial River  
Dams  
Railways  
Farm Portions

**aurecon**

**LEGEND**  
Leliefontein Communal Area

### 3.6.2 Spatial Fragmentation

Spatial fragmentation refers to the fact that there are sixteen small, dysfunctional settlements spread out through the municipal area. Each of these settlements, with the exception of Kamiesberg and Garies, are too small to be economically viable and do not possess any economic substance to generate economic multipliers for growth and development. This fragmented spatial settlement pattern is extremely costly to maintain as all of these settlements demand and is entitled to minimum basic service levels. As most of the inhabitants within these settlements are unemployed and live on very low income, it is not possible for the households to contribute to the income of the municipality. It is therefore essential that a hierarchy of settlements be established being:

**Table 3-21: Spatial Fragmentation**

Node and Settlement Classification	Settlement	Function
Class A Node	Hondeklipbaai and economic growth point	The settlement area earmarked for a mix of activities stimulating and promoting economic diversification and growth.
Class B Node	Garies	Administrative node Administrative and financial centre for the Municipal area.
Class C Node	Kamieskroon and Soebatsfontein	Tourism portal node Settlement areas with distinct role and function of supporting the tourism industry.
Class D Settlement	Koiingnaas	Green Village Settlement in support of economic growth point with “green” bulk infrastructure.
Class E Settlement	Kharkams	Cultural Village Settlement area with the main function of being a portal to the commonage area (LCA).
Class F Settlements	Rural settlement	Small settlement areas where growth and expansion is curtailed and supplied with the minimum basic service levels. The main function of these areas is to provide educational facilities and a point for rendering mobile social services e.g. Mobile clinic and mobile library

Growth and development must be stimulated and permitted firstly within the Class A node namely the economic growth point and secondly with the Class B and C nodes. The Class D settlement (Koiingnaas) should be developed as a “green” village implying that all infrastructures must adhere to “green” norms and be naturally attained. In addition to being “green”, Koiingnaas is seen as the port of entry into the economic growth point through the airfield that must be ungraded into a viable commercial chartered airfield. Class E settlement (Kharkams) is the largest settlement with the Leliefontein Communal Area and is situated on the N7. It should thus be developed as the cultural portal to the commonage area. The remaining settlements are classified as Class F settlements and expansions of these settlements must be curtailed.

Class A to C nodes is suitable for the establishment of multi-purpose community centres (also known as Thusong Service Centre). All other settlements can be serviced by a mobile service.

**Figure 3-6: Settlement Hierarchy**



**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**

**FIGURE 3-6 SETTLEMENT HIERARCHY**



NORTHERN CAPE  
 PROVINCE

Namakwa DMA

Hantam

**LEGEND**

- A** Economic Growth Point
- B** Administrative Capital
- C** Tourism Portal
- D** Green Village
- E** Cultural Village

Towns/Settlements

Municipal Boundary

National Road (tarr)

District Road (gravel)

Main Road (gravel)

Perennial River

Non-Perennial River

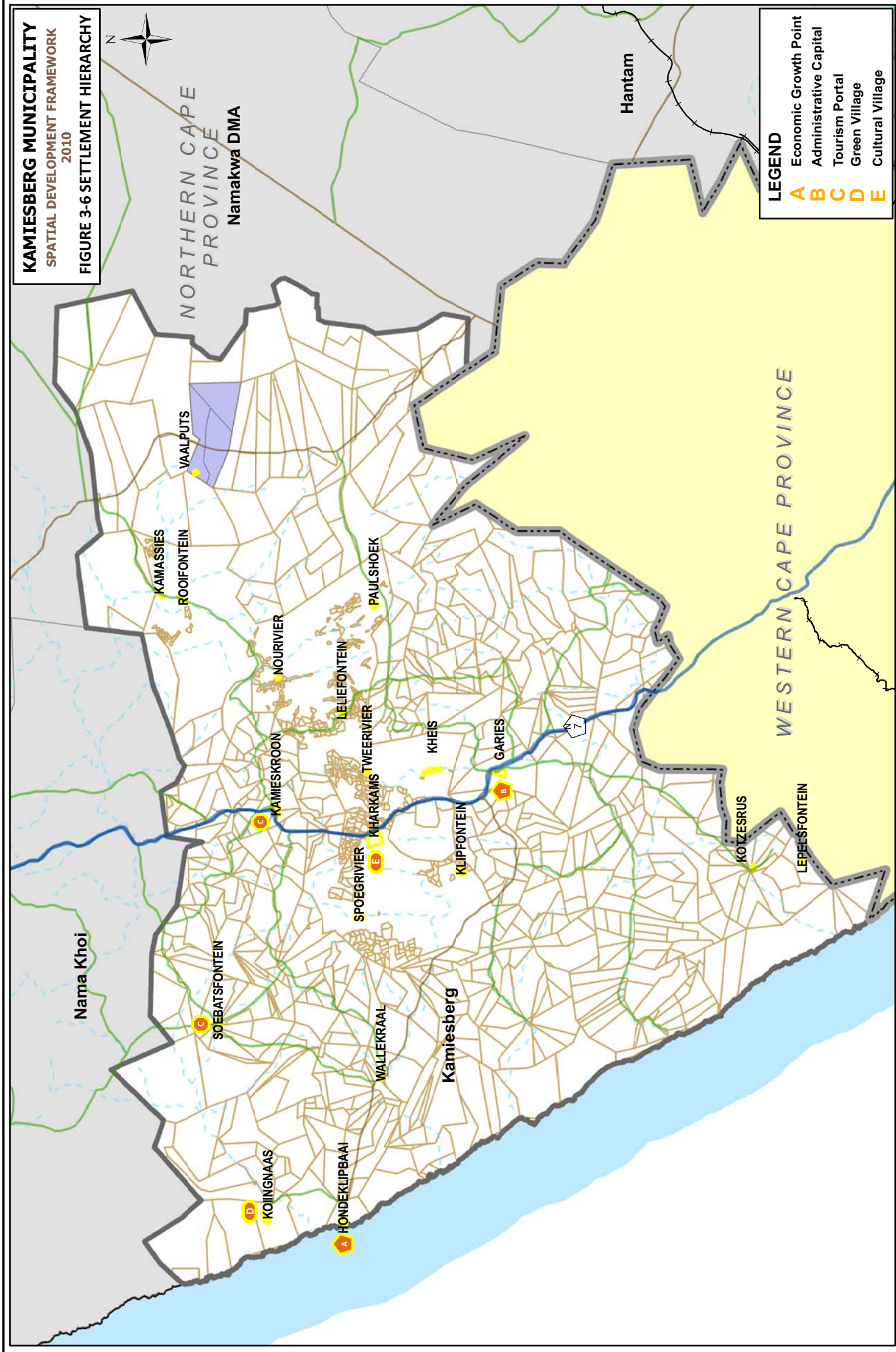
Dams

Railways

Farm Portions

aurecon

0 10 20 40 Kilometers



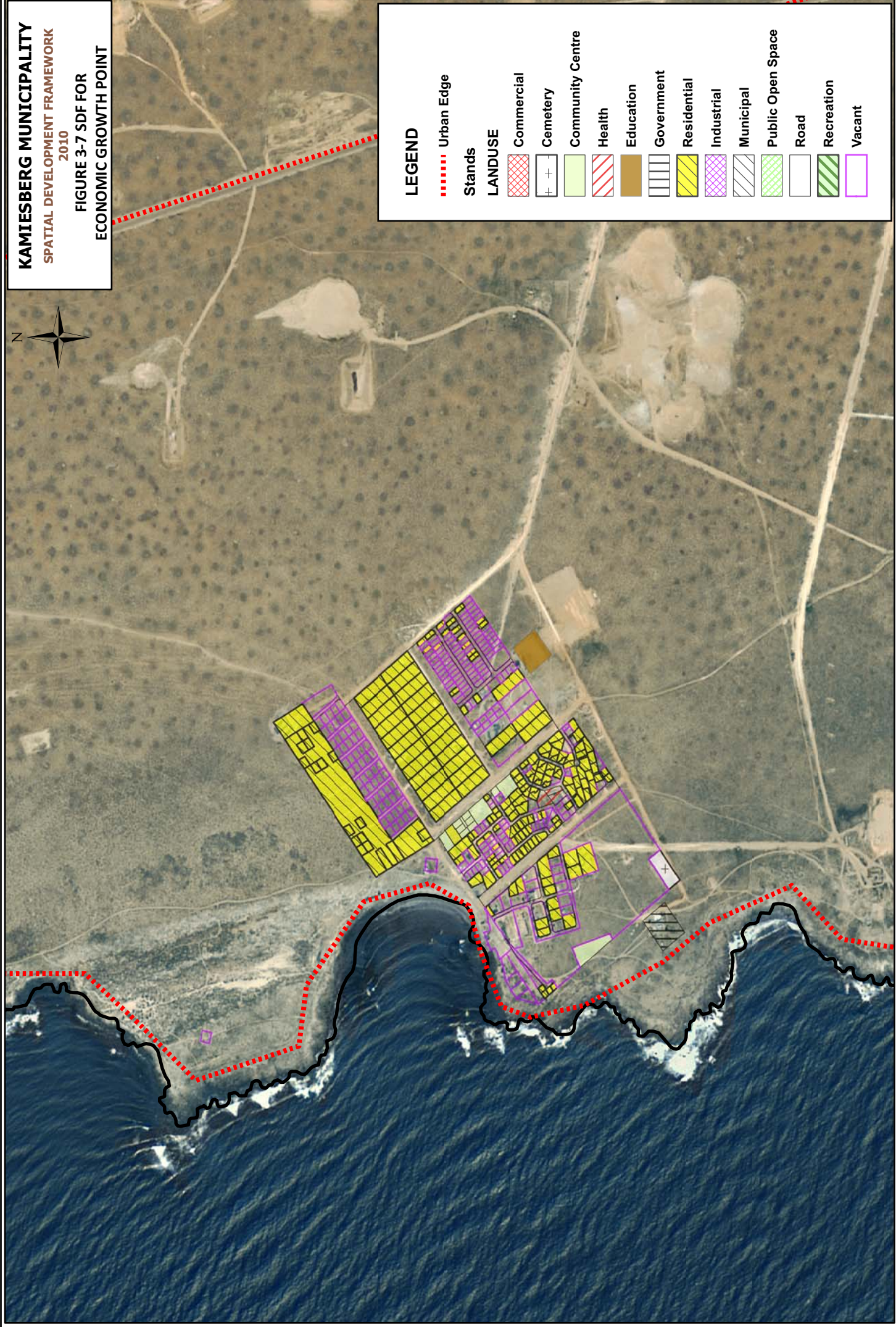


### 3.6.2.1 *Economic Growth Point*

**Table 3-22: Economic Growth Point**

Settlement	Function	Land Use Management
Hondeklipbaai	The pivot point for commercial growth and development around infrastructure industry, fishing industry, tourism and settlement.	<ul style="list-style-type: none"> <li>• Promote in accordance to a detailed development framework: <ul style="list-style-type: none"> <li>○ Tourism establishments and associated activities</li> <li>○ Infrastructure Industry i.e. desalination plant, wind and solar energy generation</li> <li>○ Fishing and mariculture</li> <li>○ Supporting commercial enterprises</li> <li>○ Densification and settlement</li> </ul> </li> <li>• High level of services</li> <li>• Local roads to be surfaced</li> </ul>

**Figure 3-7: Spatial Development Framework for Economic Growth Point**



### 3.6.2.2 *Administrative Capital*

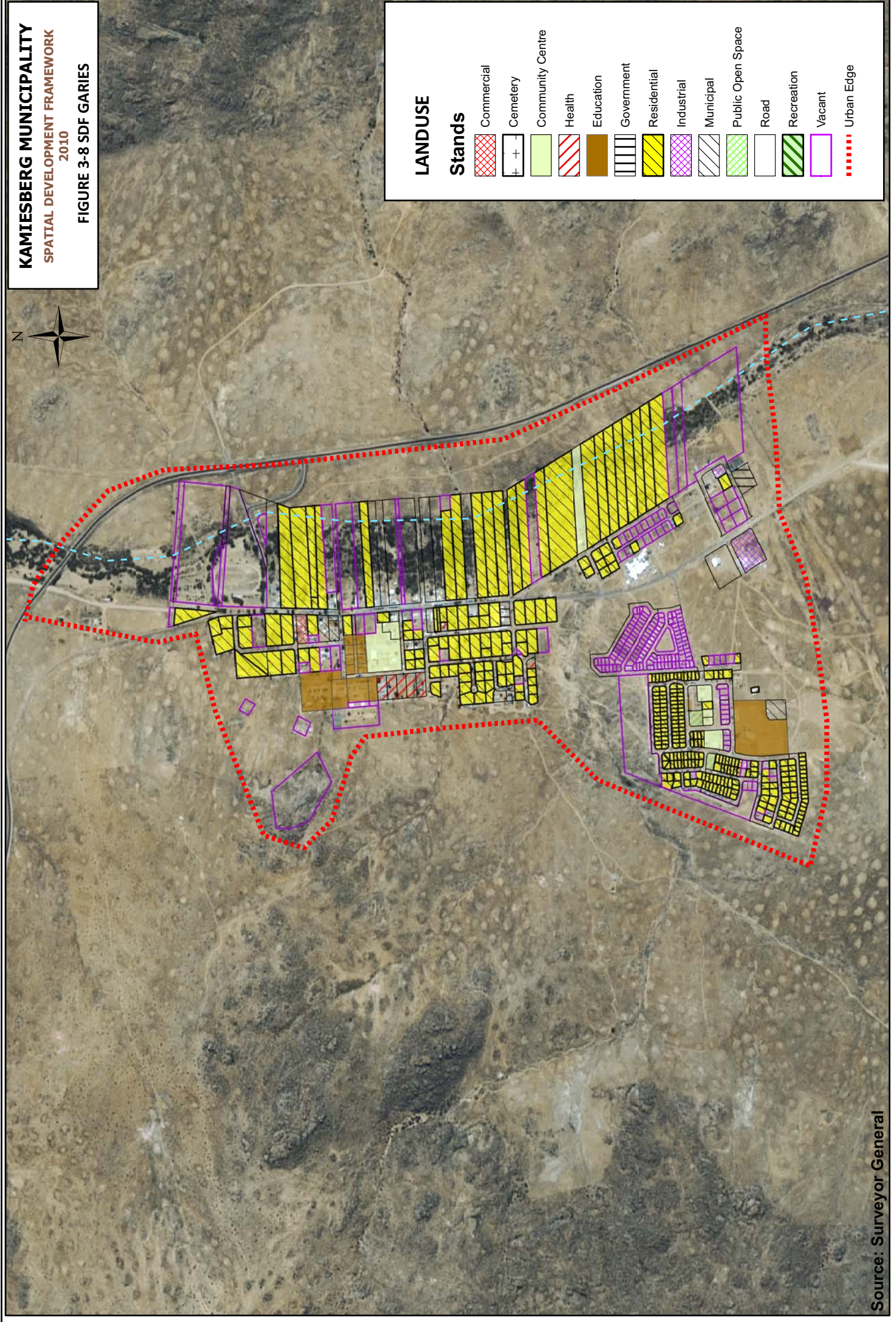
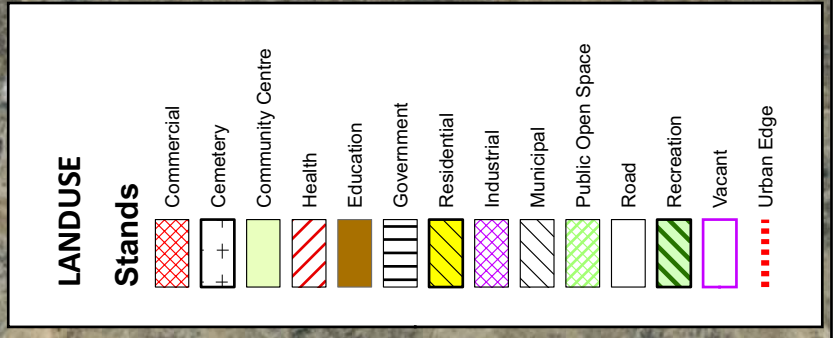
**Table 3-23: Administrative Capital**

Settlement	Function	Land Use Management
Garies	Centre for all administrative and government support.	<ul style="list-style-type: none"> <li>• Promote in accordance to a detailed development framework: <ul style="list-style-type: none"> <li>○ Tourism establishments and associated activities.</li> <li>○ Secondary industries in support of agricultural environment.</li> <li>○ Supporting commercial enterprises.</li> </ul> </li> <li>• Densification and settlement within urban edge.</li> <li>• High level of services</li> <li>• Local roads to be surfaced</li> </ul>

**Figure 3-8: Spatial Development Framework for Garies**



**FIGURE 3-8 SDF GARIES**



Source: Surveyor General



### 3.6.2.3 Tourism Portal Nodes

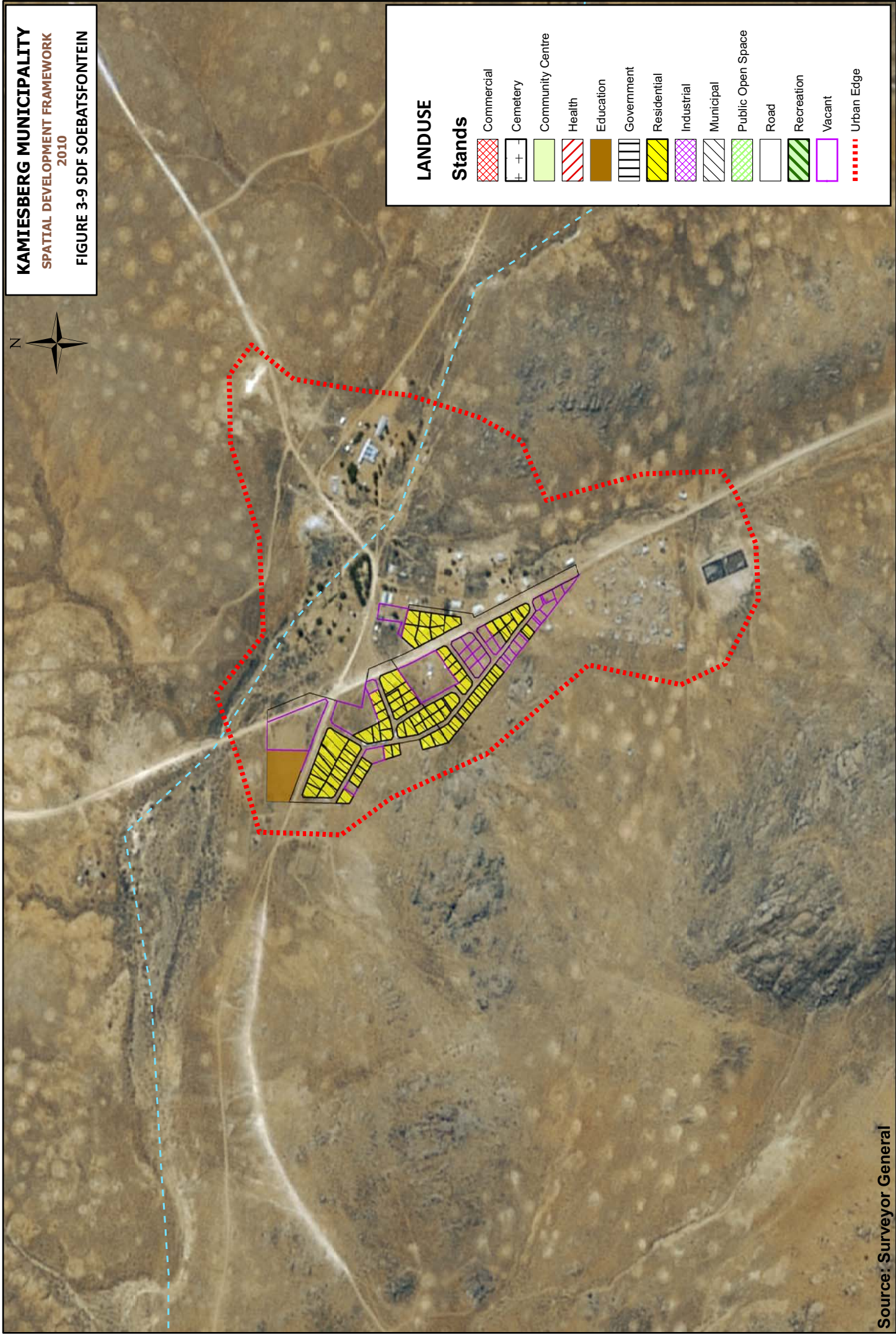
Table 3-24: Tourism Portal Nodes

Settlement	Function	Land Use Management
Soebatsfontein	Main point of entrance into NNP and support centre for NNP.	<ul style="list-style-type: none"> <li>Promote in accordance to a detailed development framework: <ul style="list-style-type: none"> <li>Tourism establishments and associated activities.</li> <li>Secondary industries in support of tourism environment.</li> <li>Supporting commercial enterprises.</li> <li>Densification and settlement within urban edge.</li> <li>NNP housing and accommodation.</li> </ul> </li> <li>High level of services</li> <li>Local roads to be surfaced</li> </ul>
Kamieskroon	Secondary support centre for NNP.	<ul style="list-style-type: none"> <li>Promote in accordance to a detailed development framework: <ul style="list-style-type: none"> <li>Tourism establishments and associated activities</li> <li>Secondary industries in support of tourism environment</li> <li>Supporting commercial enterprises</li> <li>Densification and settlement within urban edge</li> </ul> </li> <li>High level of services</li> <li>Local roads to be surfaced</li> </ul>

Figure 3-9: Spatial Development Framework for Soebatsfontein

Figure 3-10: Spatial Development Framework for Kamieskroon





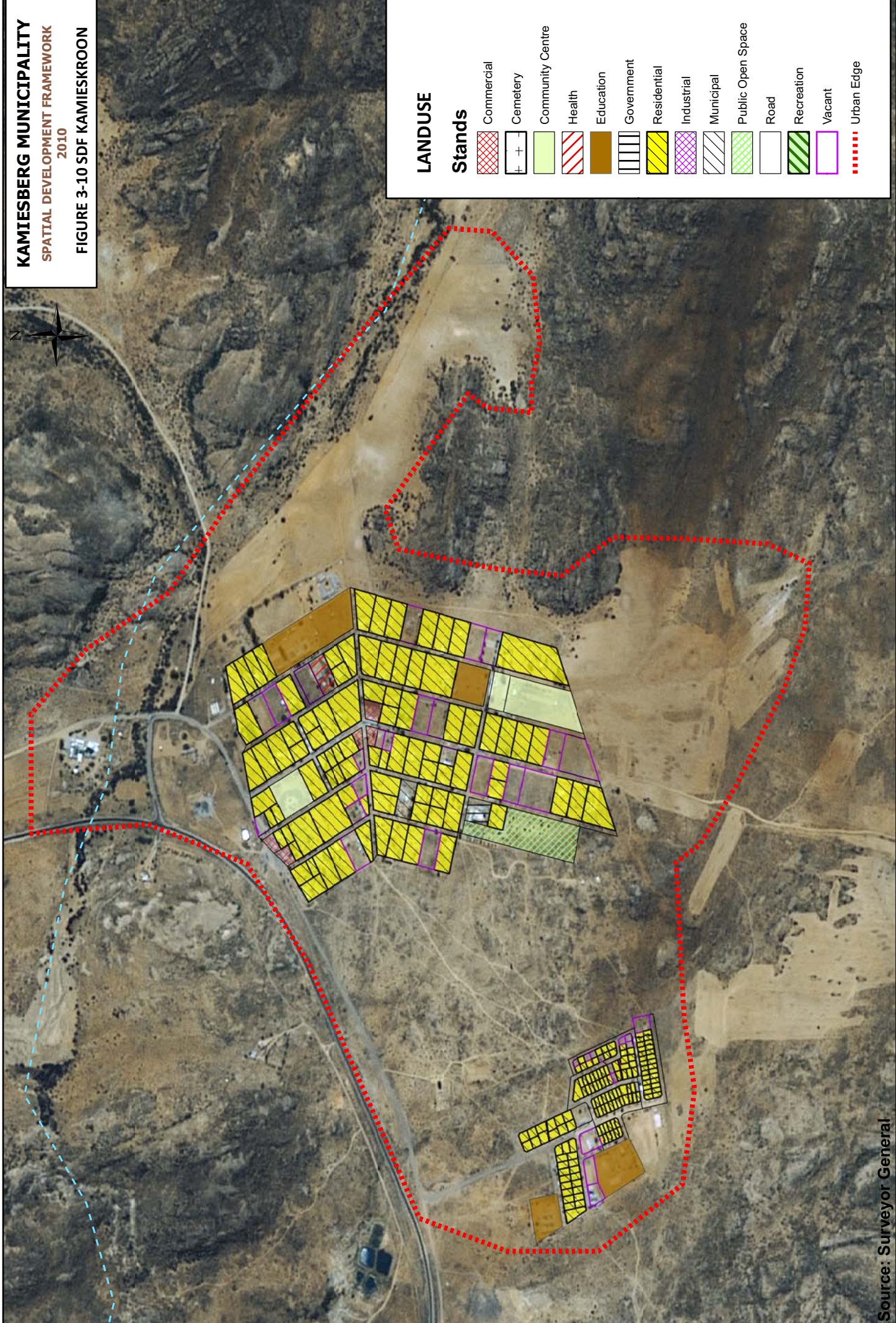
## LANDUSE

### Stands

	Commercial		Cemetery		Community Centre		Health		Education		Government		Residential		Industrial		Municipal		Public Open Space		Road		Recreation		Vacant		Urban Edge
--	------------	--	----------	--	------------------	--	--------	--	-----------	--	------------	--	-------------	--	------------	--	-----------	--	-------------------	--	------	--	------------	--	--------	--	------------



**KAMIESBERG MUNICIPALITY**  
**SPATIAL DEVELOPMENT FRAMEWORK**  
**2010**  
**FIGURE 3-10 SDF KAMIESKROON**



LANDUSE	
Stands	
	Commercial
	Cemetery
	Community Centre
	Health
	Education
	Government
	Residential
	Industrial
	Municipal
	Public Open Space
	Road
	Recreation
	Vacant
	Urban Edge



Source: Surveyor General

#### 3.6.2.4 *Green Village*

Table 3-25: Green Village

Settlement	Function	Land Use Management
Koiingnaas	Village in support of the Economic Growth Point and airfield for chartered flights.	<ul style="list-style-type: none"><li>• Promote in accordance to a detailed development framework:<ul style="list-style-type: none"><li>○ Tourism establishments and associated activities</li><li>○ Secondary industries in support of economic growth point</li><li>○ Supporting commercial enterprises</li><li>○ Densification and settlement within urban edge</li></ul></li><li>• All services to be “green” services</li><li>• Local roads to be surfaced</li></ul>

Figure 3-11: Spatial Development Framework for Koiingnaas



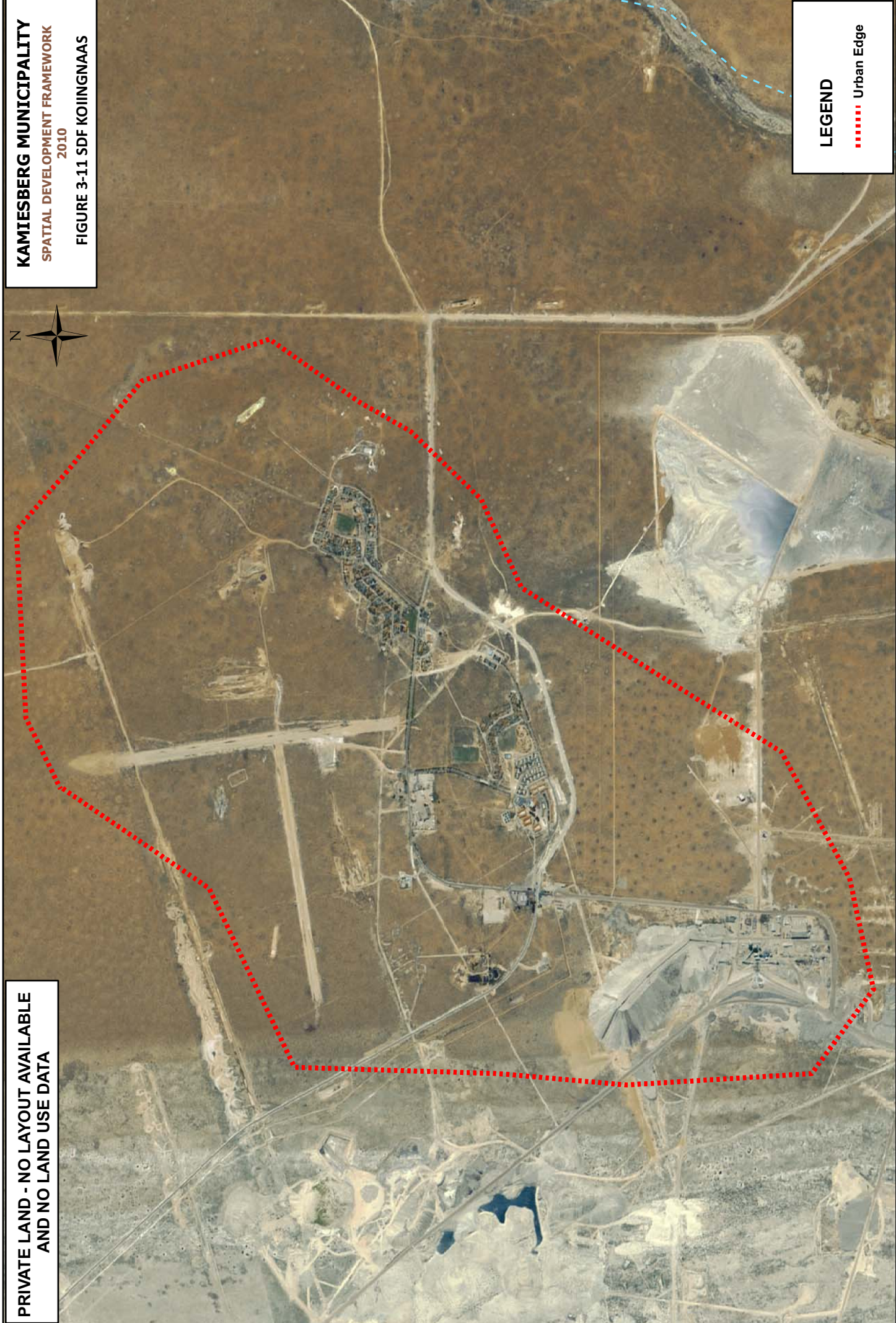
PRIVATE LAND - NO LAYOUT AVAILABLE  
AND NO LAND USE DATA

KAMIESBERG MUNICIPALITY  
SPATIAL DEVELOPMENT FRAMEWORK  
2010  
FIGURE 3-11 SDF KOINGNAAS



**LEGEND**

..... Urban Edge



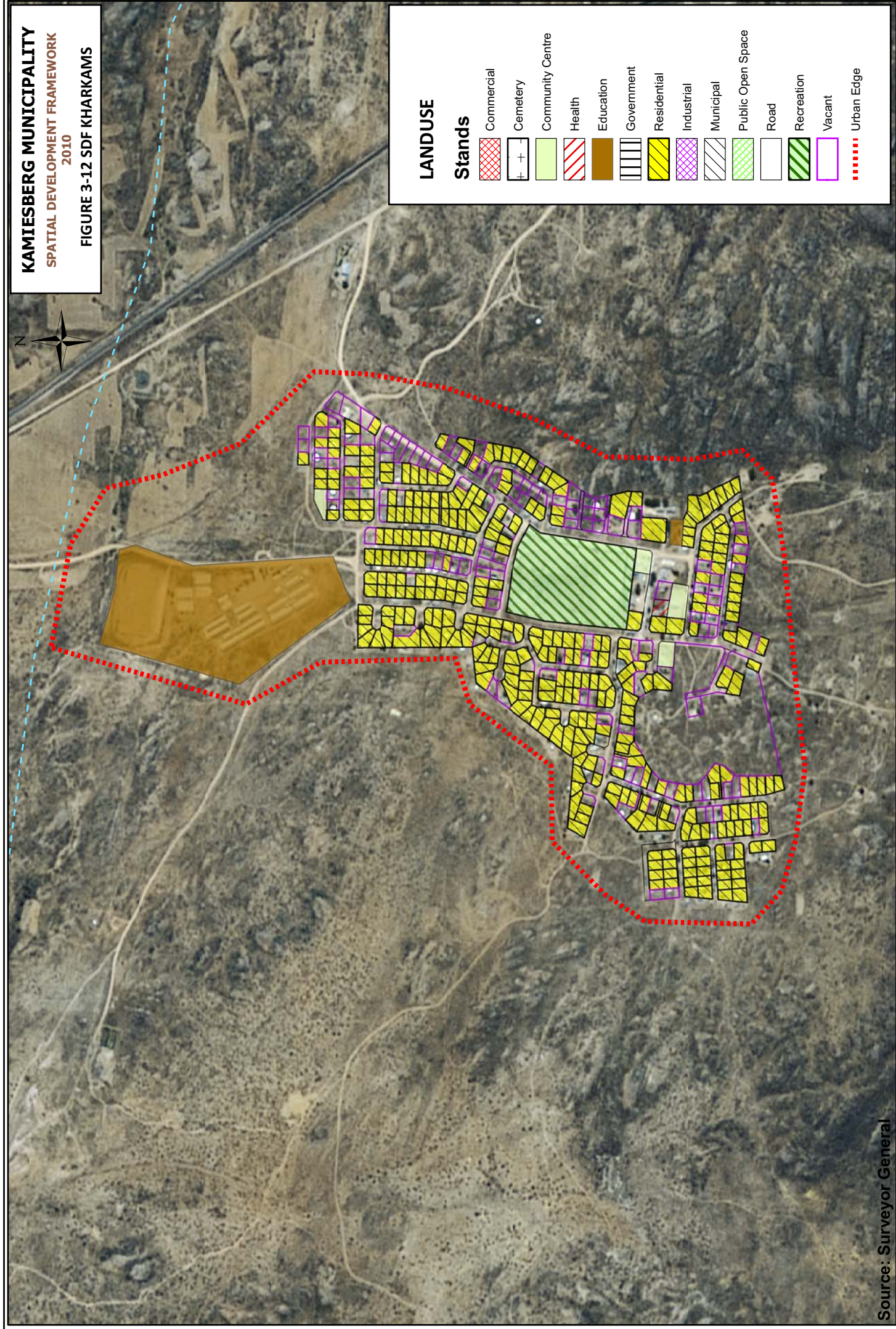


### 3.6.2.5 Cultural Village

Table 3-26: Cultural Village















Settlement	Function	Land Use Management
Kharkams	Cultural Village in support of the Leliefontein Communal Area (LCA).	<ul style="list-style-type: none"> <li>• Promote in accordance to a comprehensive LCA development framework: <ul style="list-style-type: none"> <li>○ Tourism and cultural establishments and associated activities</li> <li>○ Secondary industries in support of tourism and cultural activities</li> <li>○ Supporting commercial enterprises</li> <li>○ Densification and settlement within urban edge</li> </ul> </li> </ul>

Figure 3-12: Spatial Development Framework for Kharkams



**LANDUSE**

**Stands**

-  Commercial
-  Cemetery
-  Community Centre
-  Health
-  Education
-  Government
-  Residential
-  Industrial
-  Municipal
-  Public Open Space
-  Road
-  Recreation
-  Vacant
-  Urban Edge



### 3.6.3 Creating Linkages and Access

The SDF provides for the following hierarchy of roads:

**Table 3-27: Hierarchy of Roads**

Class	Map Reference	Road	Function	Standard
Class 1 – Mobility corridor	Blue	The national road (N7)	To facilitate through movement encouraging the road user to economically support the nodes.	To be well maintained and of high quality.
Class 2 – Arterial Road	Red	Road linking Hondeklipbaai, Koiingnaas and Kamieskroon as well as road linking Garies, Wallekraal and Hondeklipbaai.	These roads are considered the priority arterials as it enables linkage and access to the national park and the envisaged economic growth point.	Must be surfaced and of a high standard.
Class 3 – Local Connector	Purple	Road linking Kamieskroon with Leliefontein, Tweerivier, Roodeberg Kloof Conservation Farm and Garies.	This arterial enables connectivity and access to most of the settlements within the commonage area.	Must be layered gravel roads.
	Purple	Road linking Vaalputs with Kamieskroon and Garies.	This arterial will ease access to the Vaalputs nuclear waste site	Must be layered gravel roads.
Class 4 – Access Roads	Not highlighted	All roads, other than those described above.	These roads give access to the rural areas and non-prioritised settlement areas.	Well maintained gravel roads in non-focus areas, Surfaced in focus areas

The roads to be built in terms of the standards set out in the Guidelines for Human Settlement Planning and Design as compiled under the patronage of the Department of Housing by the CSIR Building and Construction Technology, ISBN 0-7988-5498-7 (Generally known as the Red Book).

The SDF also provides for:

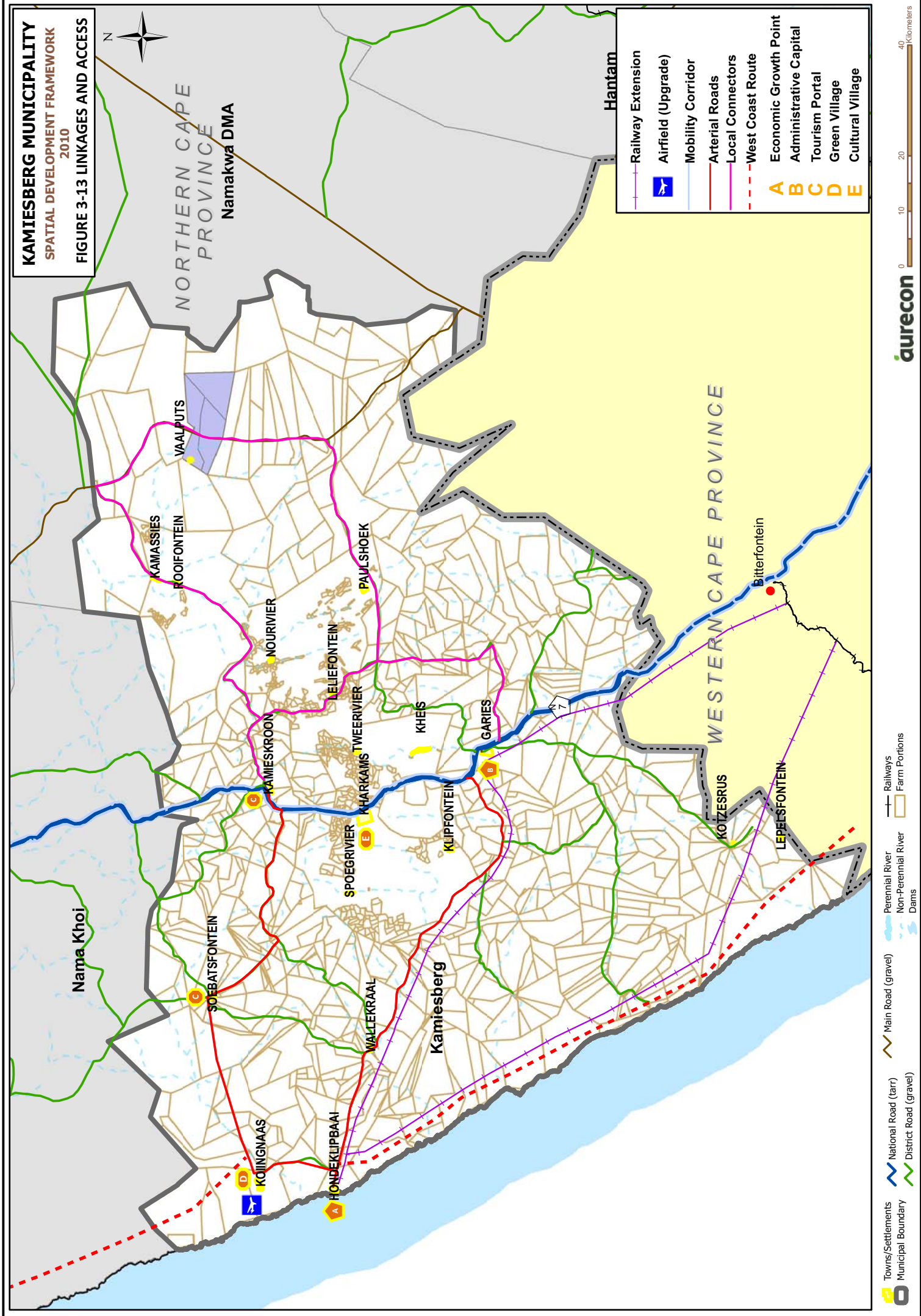
- The expansion of the rail network from Bitterfontein northwards.
- The upgrade of the airfield at Koiingnaas for chartered flights to assist with tourism sector.

**Figure 3-13: Linkages and Access**



**KAMIESBERG MUNICIPALITY**  
SPATIAL DEVELOPMENT FRAMEWORK  
2010

**FIGURE 3-13 LINKAGES AND ACCESS**



### **3.6.3.1     *Vaalputs***

Vaalputs was acquired by the Atomic Energy Board for the storage of low and intermediate level nuclear waste. There are no buffer zones imposed, but it can be accepted that settlement in the immediate vicinity of Vaalputs must be avoided.

### **3.6.3.2     *Supply of Bulk Infrastructure***

#### **3.6.3.2.1     *Water Network***

It is imperative that the water resource capacity within the municipality be upgraded by the implementation of either one of the two proposals reflected on the SDF:

- |          |                                                                                                                                                                                                                                                                                                                                                                              |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Option 1 | Extension of the current Namakwa Water Board Network from the Orange River to Kamieskroon, Garies and Lepelsfontein as well as to Spoegrivier and Klipfontein.                                                                                                                                                                                                               |
| Option 2 | This is the preferred option and consists of a ring feeder system following the red arterial road emanating from a desolation plan stationed at Hondeklipbaai. This option will set the scene for an expanded economic base within Hondeklipbaai as the plant will create job opportunities related to the water purification as well as the trade and distribution of salt. |

### **3.6.3.3     *Alternative Energy Sources***

The climatic conditions within the municipal area are highly conducive for the generation of alternative energy by means of wind and solar power. This should be considered on the higher lying areas within the LCA as it will provide alternative economic opportunities for the commonage population.

**Figure 3-14: Supply of Bulk Infrastructure**

## **3.6.4     *Composite Spatial Development Framework***

The following figure illustrates the composite spatial development framework for the Kamiesberg Local Municipality:

**Figure 3-15: Composite Spatial Development Framework**



**KAMIESBERG MUNICIPALITY**  
SPATIAL DEVELOPMENT FRAMEWORK  
2010

**FIGURE 3-14 SUPPLY OF  
BULK INFRASTRUCTURE**

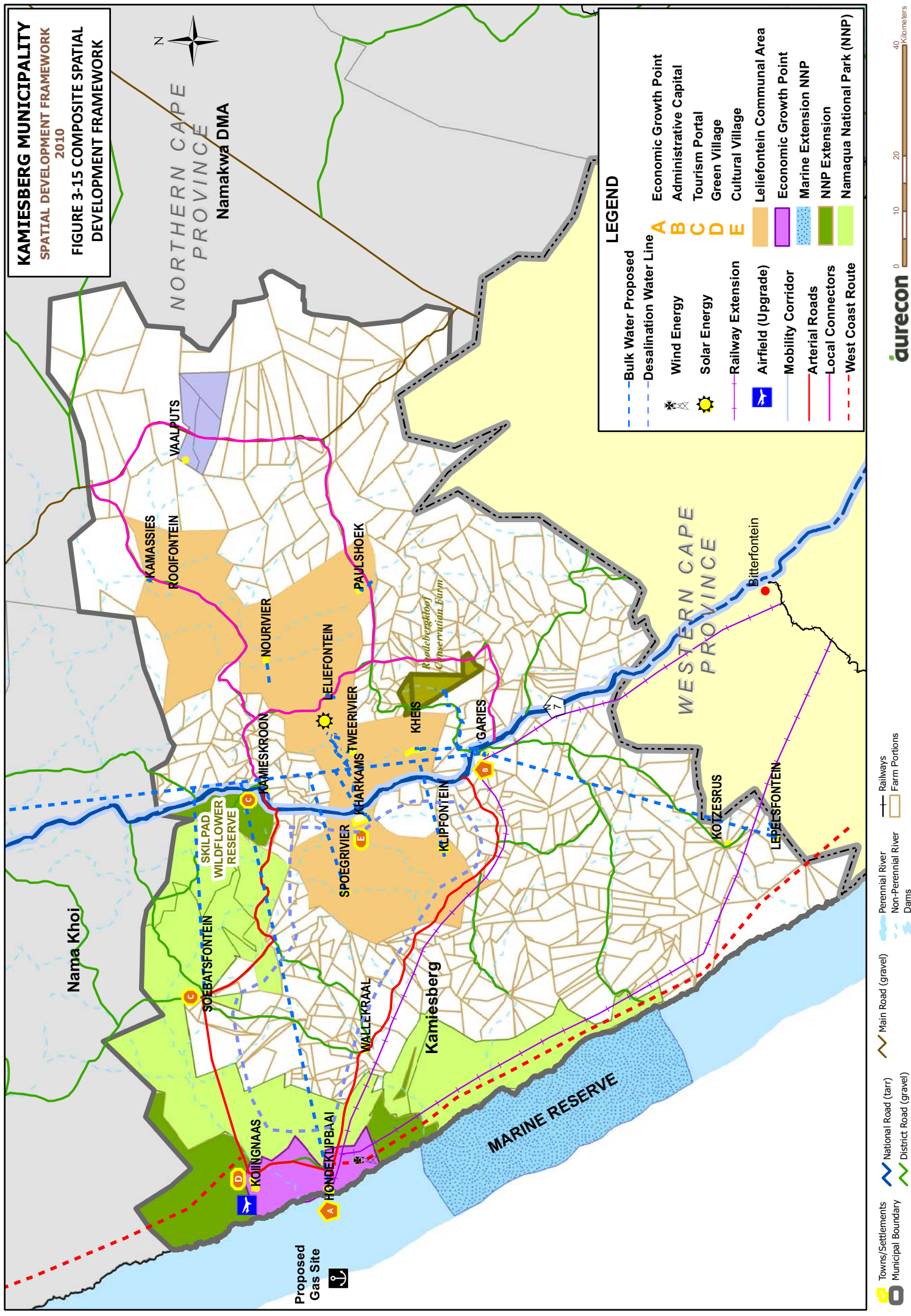




**KAMIESBERG MUNICIPALITY**  
SPATIAL DEVELOPMENT FRAMEWORK  
2010

**FIGURE 3-15 COMPOSITE SPATIAL  
DEVELOPMENT FRAMEWORK**

NORTH  
NORTHERN CAPE  
PROVINCE  
Namakwa DMA



**LEGEND**

	Bulk Water Proposed		Economic Growth Point A
	Desalination Water Line		Administrative Capital B
	Wind Energy		Tourism Portal C
	Solar Energy		Green Village D
	Railway Extension		Cultural Village E
	Airfield (Upgrade)		Leliefontein Communal Area
	Mobility Corridor		Economic Growth Point
	Arterial Roads		Marine Extension NNP
	Local Connectors		NNP Extension
	West Coast Route		Namaqua National Park (NNP)

Towns/Settlements  
Municipal Boundary

Perennial River  
Non-Perennial River  
Dams

Main Road (gravel)  
National Road (tarr)  
District Road (gravel)

Railways  
Farm Portions

**aurecon**

0 10 20 40  
Kilometers

**KAMIESBERG LOCAL MUNICIPALITY  
SPATIAL DEVELOPMENT FRAMEWORK  
LAND DEVELOPMENT PLAN  
2010 - 2015**



**VOLUME 4  
IMPLEMENTATION**

# VOLUME 4. IMPLEMENTATION

## 4/1. INTRODUCTION

This volume contains the implementation framework of the SDF and encompasses the following aspects:

- Capital Expenditure Framework for the municipality's development programmes and budget process;
- Prioritized list of development 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.

The volume will address the above by following the following general outline:

Firstly, a prioritisation mechanism will be put in place which will be known as the "Goal Achievement Matrix" generally referred as "GAM". Each identified project will be weighted and ranked in accordance with the goal achievement matrix. The projects will be presented in accordance with the spatial development fundamentals and then summarised to provide the overarching 10 priority projects. The projects identified in the IDP would also be adjudicated in terms of the GAM and integrated with the projects and programmes identified by the SDF.

The projects will be summarised in an excel spreadsheet (refer Annexure A) with the following outline:

- Development Fundamental;
- Project ranked in terms of the GAM;
- Project name;
- Project outcome;
- Implementing agent and role;
- Expected commencement date;
- Budget; and
- Possible sources of finance.

The table below indicates the abbreviations used to refer to Northern Cape Provincial Departments as well as National Government Departments:

**Table 4-1: Provincial Government Abbreviations**

Northern Cape & National Government Departments	Abbreviation
NC Department of Agriculture, Land Reform & Rural Development	ALRRD
NC Department of Economic Development and Tourism	EDT
NC Department of Education	E
NC Department of Finance & Treasury	FT
NC Department of Health	H



Northern Cape & National Government Departments	Abbreviation
NC Department of Co-Operative Governance, Human Settlement and Traditional Affairs	COGHSTA
NC Department Transport, Safety and Liaison	TSL
NC Department of Social Services & Population Development	SSPD
NC Department of Sport, Arts and Culture	SAC
NC Department of Environmental Affairs Nature & Conservation	EANC
NC Department of Transport, Roads and Public Works	TRPW
NC Department of Government Communication & Information System	GCIS
National Department of Minerals	DM
National Department of Energy	DE
National Department of Water Affairs	DWA

This volume will be concluded with recommendations on institutional capacity and how to use the SDF as a decision making tool by the Municipality, sector departments, investors and the general public.

## 4/2. THE GOAL ACHIEVEMENT MATRIX

Following the assessment of the current situation and the spatial vision presented by the SDF the following decision making tool is proposed and is applied to rank the projects and programmes delineated by the SDF as well as to integrate, align and reprioritise the existing IDP projects:

**Table 4-2: Goal Achievement Matrix**

Spatial Fundamental	Score/Weight		
	1	3	5
Clean, transparent, effective and efficient administration	Maintaining Status Quo	Ensure a limited improvement	Enable the Municipality to fulfil its mandate.
Economic Diversification	Maintaining Status Quo	Provide some economic opportunity	Will contribute to achieving the 3% growth target.
Provision of bulk infrastructure and appropriate services levels	Maintaining Status Quo	Provide a limited improvement in services levels or availability of bulk services	Will to a huge extent relieve the need for bulk services and improve the quality of services levels.
Creating linkages and access	Maintaining Status Quo	Provide a limited improvement in linkages and accessibility	Will contribute greatly to the improvement of access, linkage and movement within the municipality and its external environment.
The protection of environmentally sensitive areas, nature reserves, heritage and archaeology	Maintaining Status Quo	Provide limited improvement in the protection, development and enhancement of the environment	Will contribute extensively to the protection and enhancement of the environment, heritage and archaeology.
Actively and forcefully address spatial fragmentation	Maintaining Status Quo	Will to some extent curtail spatial fragmentation	Will greatly contribute to the elimination of spatial fragmentation and the creation of a compact and sustainable settlement area.

Each project is adjudicated in terms of how well they contribute to the set spatial development fundamentals. The sum total of its contribution is viewed as its conformation weight and is referred to as the “GAM Score”. Projects should be implemented from the highest score to the lowest score in the financial year allocated as the implementation period for the project. Projects with a score of 20 or more are considered to be crucial and should receive the highest level of effort to ensure their implementation.

### 4/3. PROJECTS EMANATING FROM THE SDF

With reference to Phase 3, Annexure A contains a full list of projects, programmes and actions that must be implemented to ensure the materialisation of the SDF and with that an upliftment and enhancement of the socio-economic conditions within the Kamiesberg Local Municipality area. The list depicts the project name, the required project outcome, the recommended implementation period, the expected cost of the project, the implementing agent and the institutions where funding can be sourced. The following table reflects the projects in order of priority for each Spatial Development Fundamental (SF) identified:

#### 4.3.1 Projects Emanating from SF1- Clean, Transparent, Effective and Efficient Governance

**Table 4-3: Embracing Good Governance**

Project Reference Number		DF Cross Reference	GAM Score Card						GAM Score	Project Name	Project Outcome
SDF	IDP		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6			
SF 1 - 4			5	5	5	3	3	3	24	Municipal Capacitating Strategy	Ensuring sufficient capacity, suitable quality and high service levels.
SF 1 - 1			5	1	5	1	5	5	22	Kamiesberg Land Audit	Full data and updated cadastral plan overlaid on aerial photograph with data set indicating: Land Parcel Description, Size, and Ownership, Land use, Zoning.
SF 1 - 2			5	5	1	1	5	5	22	Kamiesberg Land Use Management Scheme	The development of a Legal Framework for Land Use Management, including all legislative requirements pertaining to Spatial Development, Land Use Management and the Environment.
SF 1 - 3			5	5	3	3	3	3	22	Kamiesberg Local Economic Development Strategy	To compile local economic strategy in support of the SDF and to enable Kamiesberg to create a diverse economic base.
SF 1 - 5			5	3	5	3	3	3	22	Kamiesberg Operational and Management Plans	The compilation of full operational and management plans for the provision and maintenance of engineering services, health facilities & electricity.
SF 1 - 6			5	3	5	3	3	3	22	Kamiesberg Water Services Master Plan	The review of the existing water services master plan to ensure the implementation of the selected SDF water services levels, water resource development and management.

### 4.3.2 Projects Emanating from SF 2 -Economic Diversification

Table 4-4: Fostering Economic Diversification

Project Reference Number		DF Cross Reference	GAM Score Card						GAM Score	Project Name	Project Outcome
SDF	IDP		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6			
SF 2 - 2			5	5	5	5	5	5	30	NNP World Heritage Site	The application to have the NNP and surrounds declared a world heritage site
SF 2 - 4	3-32		5	5	5	5	5	5	30	Economic Growth Point Development Strategy	Compilation of a detail development framework for the promotion of tourism, industrial development, residential and resorts, intensive agriculture and mariculture, whilst protecting and enhancing the sensitive biosphere and optimal use of water resource.
SF 2 - 5	3.32		5	5	5	3	5	3	26	Hondeklipbaai fishing industry and Mariculture	A feasibility study on the viability and implementability of commercial fishing and mariculture in Hondeklipbaai
SF 2 - 6			5	5	5	3	5	3	26	Hondeklipbaai Oil and Gas Refinery	Development agreement between the oils and gas industrialists along the west coast to use Hondeklipbaai as port of entry and processing for any Gas and Oil brought to shore
SF 2 - 8			3	5	3	5	5	5	26	West Coast Development Framework	Compilation of a detailed development framework to convert the mining area between Hondeklipbaai and Kleinsee into a mix use area focusing on tourism, settlement, industry and environmental reinstatement
SF 2 - 7			3	5	3	3	5	5	24	Leliefontein Communal Area	Compilation of a detailed development framework that will enhance the cultural heritage of the area, implement a comprehensive rural development program which host agri-villages supported by agri-industry and industrious farming practices, solar energy generation , and be a cultural hinterland with Kharkams as base
SF 2 - 3			3	5	3	1	3	1	16	Roodeberg Kloof Conservation Farm	Compilation of a detail development framework for the promotion of tourism, intensive agriculture, whilst protecting and enhancing the sensitive biosphere and optimal use of water resources.
SF 2 - 1			1	5	1	1	3	1	12	Kamiesberg Mining Exploration	Assessment of the viability of the mining and quarrying potential with specific reference to uranium, wollastonite and granite



### 4.3.3 Projects Emanating from SF 3 - Provision of Bulk Infrastructure and Appropriate Services Levels

Table 4-5: Providing Bulk Infrastructure and Appropriate Services

Project Reference Number		DF Cross Reference	GAM Score Card						GAM Score	Project Name	Project Outcome
SDF	IDP		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6			
SF 3 - 3	3-17		5	5	5	1	5	3	24	Hondeklipbaai Desalination Plant	Execution of a feasibility study to determine the viability of salt water desalination to provide bulk water serving the needs of not only Kamiesberg but the Namakwa District
SF 3 - 5			3	3	5	3	5	3	22	Kamiesberg Water Services Plan	Revision of Water Services Plan to incorporate new services levels, water management and bulk infrastructure provision and natural water resource management taking cognizance of the SDF growth departures and development rationale.
SF 3 - 1			1	5	5	1	5	3	20	Kamiesberg Green Energy (Wind)	Execution of a feasibility study to determine the viability of the generation of energy through wind and the use thereof for own consumption and resale of surplus to the national energy supplier and job creation.
SF 3 - 2			1	5	5	1	5	3	20	Kamiesberg Green Energy (Solar)	Execution of a feasibility study to determine the viability of the generation of solar power and the use thereof for own consumption and resale of surplus to the national energy supplier and job creation.
SF 3 - 4			1	5	5	1	1	1	14	Kamiesberg-Orange River Bulk Water Supply	Review the viability of the Orange River Garies Supply Line in relation to a desalination plant

### 4.3.4 Projects Emanating from SF 4 - Creating Linkages and Access

Table 4-6: Creating Access and Linkages

Project Reference Number		DF Cross Reference	GAM Score Card						GAM Score	Project Name	Project Outcome
SDF	IDP		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6			
SF 4 - 4			5	5	3	5	3	3	24	Garies Hondeklipbaai Link Road	The upgrade of road to a class 4 surfaced road
SF 4 - 5			5	5	3	5	3	3	24	Hondeklipbaai Koiingnaas Soebatsfontein Link Road	The upgrade of road to a class 4 surfaced road
SF 4 - 6			5	5	3	5	3	3	24	Soebatsfontein Kamieskroon Link Road	The upgrade of road to a class 4 surfaced road

Project Reference Number		DF Cross Reference	GAM Score Card						GAM Score	Project Name	Project Outcome
SDF	IDP		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6			
SF 4 - 2			3	5	3	5	1	3	20	Garies, Hondeklipbaai Bitterfontein Rail Link	The compilation and execution of a feasibility study to extend the rail infrastructure from Bitterfontein to Garies and Hondeklipbaai
SF 4 - 3			3	5	3	5	1	3	20	Koingnaas Chartered Airfield	Compilation and execution of a feasibility study to upgrade the De Beers airfield as Koingnaas for chartered flight purposes
SF 4 - 7			5	3	3	5	1	3	20	Kamieskroon Leliefontein Garies Link Road	The upgrade of road to a class 4 gravel road
SF 4 - 8			5	3	3	5	1	3	20	Nourivier Gamoep Vaalputs Paulshoek Link Road	The upgrade of road to a class 4 gravel road
SF 4 - 1			3	3	1	5	1	1	14	Kamiesberg Transportation Plan	The compilation and implementation of public transport services within the settlements and between the settlements

#### 4.3.5 Projects Emanating from SF 5 - The Protection of Environmentally Sensitive Areas, Nature Reserves, Heritage and Archaeology

Table 4-7: Environmental Protection

Project Reference Number		DF Cross Reference	GAM Score Card						GAM Score	Project name	Project outcome
SDF	IDP		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6			
SF 5 - 2	3-22		5	5	5	5	5	5	30	NNP World Heritage Site	The application to have the NNP and surrounds declared a world heritage site including marine care
SF 5 - 5			5	3	3	1	5	5	22	Kamiesberg Integrated Environmental Management Framework	Update and expansion of the IEMP to reflect the sentiments and guidelines imposed by the SDF
SF 5 - 6			5	5	1	1	5	3	20	Kamiesberg Heritage Management Strategy	Documentation and compilation of a revival strategy of the heritage and archaeology within the area
SF 5 - 1	3-19		3	5	3	1	3	3	18	Roodebergkloof Conservation Farm	Compilation of a detail development framework for the promotion of tourism, intensive agriculture, whilst protecting and enhancing the sensitive biosphere and optimal use of water resource.
SF 5 - 3			5	5	1	1	3	3	18	Kamiesberg Farm Management Plan	The compilation of a farm management and usage plan to establish the best practice in creating a balance between preservation and economic return and the preservation of the bio-diverse

Project Reference Number		DF Cross Reference	GAM Score Card						GAM Score	Project name	Project outcome
SDF	IDP		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6			
											landscape, encapsulating industrious agricultural activities for personal nutrition and economic gain and optimal use of scarce water resources

#### 4.3.6 Projects Emanating from SF 6 - Actively and Forcefully Address Spatial Fragmentation

Table 4-8: Curtailing Spatial Fragmentation

Project Reference Number		DF Cross Reference	GAM Score Card						GAM Score	Project name	Project outcome
SDF	IDP		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6			
SF 6 - 1			3	5	5	5	5	5	28	Hondeklipbaai Economic Growth Point	Detail design and development framework for Hondeklipbaai promoting residential development, tourism establishments and associated activities , Infrastructure industry i.e. desalination plant, wind and solar energy generation, fishing and mariculture, supporting commercial enterprises
SF 6 - 2			3	5	5	3	5	5	26	Koiingnaas Green Village	A detailed development strategy encompassing the formalisation of the settlement, enabling tourism establishments and associated activities, secondary industries in support of economic growth point, supporting commercial enterprises, densification and settlement within urban edge and all services to be "green" services
SF 6 - 3			3	5	5	3	5	5	26	Soebatsfontein Tourism Portal	A detailed development strategy encompassing the formalisation of the settlement, enabling tourism establishments and associated activities, secondary industries in support of economic growth point, supporting commercial enterprises, densification and settlement within urban edge and all services to be "green" services
SF 6 - 4			3	5	5	3	5	5	26	Kamieskroon Tourism Portal	A detailed development framework focussing on tourism establishments and associated activities, secondary industries in support of tourism the environment, supporting commercial enterprises, residential and tourism accommodation (in partnership with NNP), densification and settlement within urban edge
SF 6 - 8			3	5	3	3	5	5	24	Leliefontein Communal Area	Compilation of a detailed development framework that will enhance the cultural heritage of the area, implement a comprehensive rural development



Project Reference Number		DF Cross Reference	GAM Score Card						GAM Score	Project name	Project outcome
SDF	IDP		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6			
											programme which host agri-villages supported by agri-industry and industrious farming practices, solar Energy generation with Kharkams as the cultural base
SF 6 - 5			5	5	1	1	5	5	22	Kamiesberg Land Use Management Scheme	The development of a Legal Framework for Land Use Management, including all legislative requirements pertaining to Spatial Development, Land Use Management and the Environment.
SF 6 - 6			5	5	3	1	3	3	20	Kharkams Cultural Village	Detail design and development framework for the creation of a cultural village that revives and commercialize the heritage of the village in collaboration with the LCA economic development framework

#### 4.3.7 Summary of Highest Ranking Projects

The projects, in order of priority, with a score of 18 or more is summarised as follows:

**Table 4-9: Priority SDF Projects**

Project Reference Number		DF Cross Reference	GAM Score Card						GAM Score	Project name	Project outcome
SDF	IDP		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6			
SF 2 - 2			5	5	5	5	5	5	30	NNP World Heritage Site	The application to have the NNP and surrounds declared a world heritage site
SF 2 - 4	3-32		5	5	5	5	5	5	30	Economic Growth Point Development Strategy	Compilation of a detail development framework for the promotion of tourism, industrial development, residential and resorts, intensive agriculture and mariculture, whilst protecting and enhancing the sensitive biosphere and optimal use of water resource.
SF 5 - 2	3-22		5	5	5	5	5	5	30	NNP World Heritage Site	The application to have the NNP and surrounds declared a world heritage site including marine care
SF 6 - 1			3	5	5	5	5	5	28	Hondeklipbaai Economic Growth Point	Detail design and development framework for Hondeklipbaai promoting residential development, tourism establishments and associated activities , Infrastructure industry i.e. desalination plant, wind and solar energy generation, fishing and mariculture, supporting commercial enterprises
SF 2 - 5	3.32		5	5	5	3	5	3	26	Hondeklipbaai fishing industry and Mariculture	A feasibility study on the viability and implementability of commercial fishing and

Project Reference Number		DF Cross Reference	GAM Score Card						GAM Score	Project name	Project outcome
SDF	IDP		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6			
											mariculture in Hondeklipbaai
SF 2 - 6			5	5	5	3	5	3	26	Hondeklipbaai Oil and Gas Refinery	Development agreement between the oils and gas industrialists along the west coast to use Hondeklipbaai as port of entry and processing for any Gas and Oil brought to shore
SF 2 - 8			3	5	3	5	5	5	26	West Coast Development Framework	Compilation of a detailed development framework to convert the mining area between Hondeklipbaai and Kleinsee into a mix use area focussing on tourism, settlement, industry and environmental reinstatement
SF 6 - 2			3	5	5	3	5	5	26	Koiingnaas Green Village	A detailed development strategy encompassing the formalisation of the settlement, enabling tourism establishments and associated activities, secondary industries in support of economic growth point, supporting commercial enterprises, densification and settlement within urban edge and all services to be "green" services
SF 6 - 3			3	5	5	3	5	5	26	Soebatsfontein Tourism Portal	A detailed development strategy encompassing the formalisation of the settlement, enabling tourism establishments and associated activities, secondary industries in support of economic growth point, supporting commercial enterprises, densification and settlement within urban edge and all services to be "green" services
SF 6 - 4			3	5	5	3	5	5	26	Kamieskroon Tourism Portal	A detailed development framework focussing on tourism establishments and associated activities, secondary industries in support of tourism the environment, supporting commercial enterprises, residential and tourism accommodation (in partnership with NNP), densification and settlement within urban edge
SF 1 - 4			5	5	5	3	3	3	24	Municipal Capacitation Strategy	Ensuring sufficient capacity, suitable quality and high service levels.
SF 2 - 7	SF 6 - 8		3	5	3	3	5	5	24	Leliefontein Communal Area	Compilation of a detailed development framework that will enhance the cultural heritage of the area, implement a comprehensive rural development programme which host agri-

Project Reference Number		DF Cross Reference	GAM Score Card						GAM Score	Project name	Project outcome
SDF	IDP		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6			
											villages supported by agri-industry and industrious farming practices, solar Energy generation with Kharkams as the cultural base
SF 3 - 3		3-17	5	5	5	1	5	3	24	Hondeklipbaai Desalination Plant	Execution of a feasibility study to determine the viability of salt water desalination to provide bulk water serving the needs of not only Kamiesberg but the Namakwa District
SF 4 - 4			5	5	3	5	3	3	24	Garies Hondeklipbaai Link Road	The upgrade of road to a class 4 surfaced road
SF 4 - 5			5	5	3	5	3	3	24	Hondeklipbaai Koiingnaas Soebatsfontein Link Road	The upgrade of road to a class 4 surfaced road
SF 4 - 6			5	5	3	5	3	3	24	Soebatsfontein Kamieskroon Link Road	The upgrade of road to a class 4 surfaced road
SF 6 - 8			3	5	3	3	5	5	24	Leliefontein Communal Area	Compilation of a detailed development framework that will enhance the cultural heritage of the area, implement a comprehensive rural development programme which host agri-villages supported by agri-industry and industrious farming practices, solar Energy generation with Kharkams as the cultural base
SF 1 - 1			5	1	5	1	5	5	22	Kamiesberg Land Audit	Full data and updated cadastral plan overlaid on aerial photograph with data set indicating: Land Parcel Description, Size, Ownership, Land use, and Zoning.
SF 1 - 2	SF 6 - 5		5	5	1	1	5	5	22	Kamiesberg Land Use Management Scheme	The development of a Legal Framework for Land Use Management, including all legislative requirements pertaining to Spatial Development, Land Use Management and the Environment.
SF 1 - 3			5	5	3	3	3	3	22	Kamiesberg Local Economic Development Strategy	To compile local economic strategy in support of the SDF and to enable Kamiesberg to create a diverse economic base.
SF 1 - 5			5	3	5	3	3	3	22	Kamiesberg Operational and Management Plans	The compilation of full operational and management plans for the provision and maintenance of engineering services, health facilities & electricity.
SF 1 - 6			5	3	5	3	3	3	22	Kamiesberg Water Services Master Plan	The review of the existing water services master plan to ensure the implementation of the selected



Project Reference Number		DF Cross Reference	GAM Score Card						GAM Score	Project name	Project outcome
SDF	IDP		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6			
											SDF water services levels, water resource development and management
SF 3 - 5			3	3	5	3	5	3	22	Kamiesberg Water Services Plan	Revision of Water Services Plan to incorporate new services levels, water management and bulk infrastructure provision and natural water resource management taking cognisance of the SDF growth departures and development rationale.
SF 5 - 5			5	3	3	1	5	5	22	Kamiesberg Integrated Environmental Management Framework	Update and expansion of the IEMP to reflect the sentiments and guidelines imposed by the SDF
SF 3 - 1			1	5	5	1	5	3	20	Kamiesberg Green Energy Wind	Execution of a feasibility study to determine the viability of the generation of energy through wind and the use thereof for own consumption and resale of surplus to the national energy supplier and job creation.
SF 3 - 2			1	5	5	1	5	3	20	Kamiesberg Green Energy Solar	Execution of a feasibility study to determine the viability of the generation of solar power and the use thereof for own consumption and resale of surplus to the national energy supplier and job creation.
SF 4 - 2			3	5	3	5	1	3	20	Garies, Hondeklipbaai Bitterfontein Rail Link	The compilation and execution of a feasibility study to extend the rail infrastructure from Bitterfontein to Garies and Hondeklipbaai
SF 4 - 3			3	5	3	5	1	3	20	Koiingnaas Chartered Airfield	Compilation and execution of a feasibility study to upgrade the De Beers airfield as Koiingnaas for chartered flight purposes
SF 4 - 7			5	3	3	5	1	3	20	Kamieskroon Leliefontein Garies Link Road	The upgrade of road to a class 4 gravel road
SF 4 - 8			5	3	3	5	1	3	20	Nourivier Gamoep Vaalputs Paulshoek Link Road	The upgrade of road to a class 4 gravel road

#### 4/4. INTEGRATION OF EXISTING IDP PROJECTS

Utilising the GAM the current IDP projects (differentiating between those which have received funding and those which are listed as unfunded projects) are ranked to ascertain their contribution and value to the implementation of the SDF. Annexure B contains the full project list indication the preferred implementation period, the expected cost of the project, the implementing agent and the institutions where funding can be sourced. The outcome of the GAM ranking is as follows:

Table 4-10: GAM Score IDP Projects

Project Number	Reference	GAM Score Card						GAM Score	Project name
SDF	IDP	SF 1	SF 2	SF 3	SF 4	SF 5	SF 6		
1 - Integrated National Electrification Program Projects (INEP)									
	3-4	5	5	5	5	1	5	26	Upgrading of Garies bulk supply
	3-3	5	5	5	5	1	1	22	Refurbish electricity network HKB
	3-1	3	1	5	1	3	1	14	Electrification of Lepelsfontein bulk
	3-2	3	1	5	1	3	1	14	Lepelsfontein household electricity connections
	3-5	3	1	5	1	3	1	14	Connect electricity to 195 houses
	3-6	3	1	5	1	3	1	14	Spoegrivier household connection
2 - Municipal Infrastructure Grant Projects (MIG)									
SF3-3	3-17	5	5	5	5	5	5	30	Construction of desalination plant in Hondeklipbaai
	3-16	3	3	3	1	1	3	14	Construction of new reservoir in Garies and Kheis and installation of telemetry system
	3-18	3	1	1	1	1	3	10	Kharkams upgrade of sporting facilities
	3-7	1	1	3	1	1	1	8	Upgrade water network Spoegrivier
	3-8	1	1	3	1	1	1	8	Upgrade desalination plant Kheis
	3-9	1	1	3	1	1	1	8	Upgrade desalination plant Klipfontein
	3-10	1	1	3	1	1	1	8	Upgrade desalination plant Spoegrivier
	3-11	1	1	3	1	1	1	8	Upgrade desalination plant Lepelsfontein
	3-12	1	1	3	1	1	1	8	Upgrade desalination plant Soebatsfontein
	3-13	1	1	3	1	1	1	8	Bulk supply of water to Lepelsfontein
	3-14	1	1	3	1	1	1	8	Install prepaid meters in Tweerivier, Leliefontein en Kharkams
	3-15	1	1	3	1	1	1	8	Bulk supply of water to Lepelsfontein
3 - Other Funding Projects									
	3-38	5	5	5	5	5	5	30	Tourism Experience Development – Kamiesberg Route
SF - 2	3-22	5	5	3	5	5	3	26	Coast Care
SF 2-4	3-32	5	5	3	5	5	3	26	Abalone farming (Hondeklipbaai)
SF 5 - 1	3-19	3	5	3	3	5	3	22	Roodebergkloof guest farm
	3-43	5	5	3	1	3	3	20	Hondeklipbaai Empowerment and Livelihood project
	3-20	3	3	3	3	3	3	18	Upgrade roads

Project Number	Reference	GAM Score Card						GAM Score	Project name
		SF 1	SF 2	SF 3	SF 4	SF 5	SF 6		
	3-21	3	3	3	3	3	3	18	Tar Garies circle road
	3-23	3	3	3	3	3	3	18	MPRC
	3-24	3	3	3	3	3	3	18	Caravan park Hondeklipbaai
	3-47	3	5	1	1	1	5	16	Kamieskroon Clothing and textile
	3-27	5	1	1	1	1	1	10	Develop Website
	3-29	5	1	1	1	1	1	10	Upgrade telephone system
	3-31	5	1	1	1	1	1	10	Fire fighting
	3-36	3	1	3	1	1	1	10	40 Erf sewerage connections Garies
	3-37	3	1	3	1	1	1	10	100 Erf electricity connections
	3-42	3	1	3	1	1	1	10	Installation of electricity equipment
	3-30	5	1	1	1	1	1	10	Upgrade archive system
	3-34	1	3	1	1	1	1	8	Tweerivier Vegetable garden
	3-25	1	1	1	1	1	1	6	Paulshoek guesthouse
	3-26	1	1	1	1	1	1	6	Hiking trail on Weeskind
	3-28	1	1	1	1	1	1	6	Clock-in system
	3-35	1	1	1	1	1	1	6	Housing – land survey
	3-41	1	1	1	1	1	1	6	Storm water and Kerbs
	3-44	1	1	1	1	1	1	6	Roofontein, Kamassies soup kitchen
	3-45	1	1	1	1	1	1	6	Leliefontein soup kitchen
	3-46	1	1	1	1	1	1	6	Garies Youth service centre
	3-33							0	Drop Inn Centre
	3-39							0	NDM Infrastructure Project
	3-40							0	Lepelsfontein MPRC
<b>4 - Housing Projects</b>									
	3-48	1	1	1	1	1	1	6	Build 60 houses in Klipfontein
	3-49	1	1	1	1	1	1	6	Build 30 houses in Lepelsfontein
<b>5 -Social Labour Plans</b>									
	3-55	5	5	3	5	5	5	28	Build access road : Kamieskroon
	3-56	5	5	3	5	5	5	28	Build access road: Kharkams
	3-52	5	5	5	1	3	5	24	Transhex – Hondeklipbaai Electricity Refurbishment
	3-51	5	3	1	1	5	5	20	Finstone- Kamiesberg Cultural Centre
	3-54	5	3	1	5	3	1	18	Build access road: Paulshoek
	3-57	5	3	1	5	3	1	18	Build access road: Klipfontein
	3-58	5	3	1	5	3	1	18	Build access road: Kheis
	3-59	1	1	1	1	1	1	6	Build 30 subsidy houses in Lepelsfontein
	3-60	1	1	1	1	1	1	6	Build 60 subsidy houses in Klipfontein
	3-53							0	De Beers



From the above table it is clear whilst a number of current IDP projects do not actively support the SDF, there are many projects which contribute to the achievement of the SDF goals but are currently without funding. The projects with a score of 18 and higher are highlighted in the table below and funding should be secured for these projects in the forthcoming financial cycle with particular emphasis on those projects with score of 20 or higher as well as those that are also reflected as SDF projects:

**Table 4-11: IDP Projects Requiring Funding**

Project Number	Reference	GAM Score Card						GAM Score	Project name
SDF	IDP	SF 1	SF 2	SF 3	SF 4	SF 5	SF 6		
SF3-3	3-17	5	5	5	5	5	5	30	Build desalination plant in Hondeklipbaai
	3-38	5	5	5	5	5	5	30	Tourism Experience Development – Kamiesberg Route
	3-55	5	5	3	5	5	5	28	Build access road : Kamieskroon
	3-56	5	5	3	5	5	5	28	Build access road: Kharkams
	3-4	5	5	5	5	1	5	26	Upgrading of Garies bulk supply
SF - 2	3-22	5	5	3	5	5	3	26	Coast Care
SF 2-4	3-32	5	5	3	5	5	3	26	Abalone farming (Hondeklipbaai)
	3-52	5	5	5	1	3	5	24	Transhex – Hondeklipbaai Electricity Refurbishment
	3-3	5	5	5	5	1	1	22	Refurbish electricity network HKB
SF 5 - 1	3-19	3	5	3	3	5	3	22	Roodebergkloof guest farm
	3-43	5	5	3	1	3	3	20	Hondeklipbaai Empowerment and Livelihood project
	3-20	3	3	3	3	3	3	18	Upgrade roads
	3-21	3	3	3	3	3	3	18	Tar Garies circle road
	3-23	3	3	3	3	3	3	18	MPRC
	3-24	3	3	3	3	3	3	18	Caravan park Hondeklipbaai
	3-54	5	3	1	5	3	1	18	Build access road: Paulshoek
	3-57	5	3	1	5	3	1	18	Build access road: Klipfontein

Project Number	Reference	GAM Score Card						GAM Score	Project name
SDF	IDP	SF 1	SF 2	SF 3	SF 4	SF 5	SF 6		
	3-58	5	3	1	5	3	1	18	Build access road: Kheis

## 4/5. SPATIAL REPRESENTATION OF THE PROJECTS

Annexure B attached contains a summary of the SDF, highlighting the spatial location of the projects with a ranking of 18 and higher for both IDP and SDF projects.

## 4/6. APPLICATION OF SDF

The Municipal Systems Act, 2000 (Act 32 of 2000) makes a statutory provision for the drafting of an Integrated Development Plan (IDP) for holistic forward planning of development in defined areas of jurisdiction. The Act also requires municipalities to prepare a Spatial Development Framework (SDF) to supplement, or to form the basis of the IDP. A SDF does not grant any rights pertaining to land use, nor take any rights away. However, being an integral part (foundation) of the IDP, the SDF will be formally approved by the municipality and will thus be binding on the municipality and the general populous.

The basic purpose of the SDF is to lay down strategies, proposals and guidelines for the future spatial development of the area to which it relates. This includes, without being limited to, development objectives, proposals for land reform, urban renewal, reconstruction, integration, environmental planning, transport planning, infrastructure planning, and urban design so that the general well-being of the particular community and order in the area are promoted in the most effective manner.

According to Section 16(1) of the Land Use Management Bill (National) the spatial development framework must be included in a municipality's IDP and must be consistent with and give effect to the following:

- The Directive Principles.
- Any national land use framework applicable in the area of the municipality.
- Any national and provincial plans and planning legislation.

Section 26(e) of the Municipal Systems Act, 2000 (Act 32 of 2000) requires that an SDF must include basic guidelines for a land use management system.

The SDF furthermore has the following broad functions and characteristics:

- It spatially reflects the vision of how the municipal area should develop in the broad sense.
- It reflects the needs identified in the first stages of the IDP process.
- Spatially integrates the strategies of the various sectors (such as the Water Plan,
- Transport Plan, Department of Agriculture's Area - Wide Conservation Planning, etc.).
- Provides a legally binding spatial framework, which promotes sustainable.
- Environmental, economic and social development in a municipality.
- Sets out the objectives that reflect the desired spatial form of the area.
- Serve as an information source and guide to inform and direct land use management.
- It expresses government policy and the views and aspirations of all I&APs.
- Government departments, and other authorities and institutions involved in future development and land use planning in the municipal area, will be bound by the SDF proposals.

- It provides certainty to the affected communities regarding future socio-economic and spatial development in the area.
- It provides a basis for co-ordinated decision-making and policy formulation related to future land use.
- It creates opportunities for preparing development and action plans to which financial budgets can be linked.

The SDF is to be used as a tool to adjudicate and guide social and economic investment within the Kamiesberg Local Municipality. It has “legal” status in that it is compulsory for a municipality to align all their actions to enable the fruition of the SDF.

Any institution wishing to invest in the Municipal Area must use the SDF as a guide to see in which areas the Municipality will support and encourage the investment and what kind of investment will be accepted.

As the implementation of the SDF requires the input of specialised personnel, it is recommended that the municipality obtain the developmental expertise by either employing the necessary skills or import the knowledge by means of outsourcing. Should outsourcing be considered as a means of capacity creation then such arrangements should be in place for at least 36 months.

The GAM tool can be expanded by including other criteria to further define and prioritise projects. The GAM should be utilised on an on-going bases as a means to adjudicate any development application and/or initiative brought before the Municipality.

## 4/7. MUNICIPAL CAPACITY

The implementation of this SDF is not dependant on the municipality alone, but on a partnership between the municipality and the following institutions:

**Table 4-12: Development Partners**

National Government Departments	Northern Cape Provincial Departments	Other Partners
National Department of Minerals	NC Department of Agriculture, Land Reform & Rural Development	Neighbouring Municipalities
National Department of Energy	NC Department of Economic Development and Tourism	Namakwa District Municipality
National Department of Water Affairs	NC Department of Finance & Treasury	Conservation International
National Department of Human Settlement	NC Department of Co-Operative Governance, Human Settlement and Traditional Affairs	Eskom
National Department of Cooperative Government and Traditional Affairs	NC Department Transport, Safety and Liaison	De Beers / Transhex
National Department of Economic Development	NC Department of Environmental Affairs Nature & Conservation	SANParks / Namaqua National Park
SANRAL	NC Department of Transport, Roads and Public Works	Development Bank of South Africa

The municipality itself do not possess the necessary capacity nor do they possess the necessary competency to implement the SDF. In this regard it is proposed that the municipality obtain the necessary capacity and competency by executing one or a combination of the following options:



- The employment of the necessary skills required
- The outsourcing of the skills required
- Rely on the District Municipality to the required technical support

The most effective and efficient means to capacitate the municipality is for the municipality to obtain skills by means of outsourcing.

# ANNEXURE A: INTEGRATED IDP AND SDF PROJECT LIST

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Project Reference Number			DF Cross Reference	GAM Score	Project name	Project outcome	Implementation period (Financial year)					Project Budget		Funding Source					
SDF	IDP	2011/12					2012/13	2013/14	2014/15	2015/16	In thousands	Implementing Agent	LM	Neighbouring Municipality	DM	NCP	NG	NGO/ OTHER	
SF 2 - 2				30	NNP World Heritage Site	The application to have the NNP and surrounds declared a world heritage site	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			R 5 500	NNP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EANC		Conservation International
SF 2 - 4	3-32			30	Economic Growth Point Development Strategy	Compilation of a detail development framework for the promotion of tourism, industrial development, residential and resorts, intensive agriculture and mariculture, whilst protecting and enhancing the sensitive biosphere and optimal use of water resource.	<input checked="" type="checkbox"/>					R 2 500	LM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EANC, EDT		Conservation International, De Beers
SF 5 - 2	3-22			30	NNP World Heritage Site	The application to have the NNP and surrounds declared a world heritage site including marine care	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			R 5 500	NNP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EANC		Conservation International
SF3-3	3-17			30	Build desalination plant in Hondeklipbaai	Build desalination plant in Hondeklipbaai	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			R 8 000	LM	<input checked="" type="checkbox"/>					
SF3-3	3-17			30	Build desalination plant in Hondeklipbaai	Build desalination plant in Hondeklipbaai	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			R 8 000	LM	<input checked="" type="checkbox"/>					
	3-38			30	Tourism Experience Development – Kamiesberg Route	Tourism Experience Development – Kamiesberg Route	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				R 160	LM	<input checked="" type="checkbox"/>					
SF 6 - 1				28	Hondeklipbaai Economic Growth Point	Detail design and development framework for Hondeklipbaai promoting residential development, tourism establishments and associated activities, Infrastructure industry i.e. desalination plant, wind and solar energy generation, fishing and mariculture, supporting commercial enterprises	<input checked="" type="checkbox"/>					R 1 550	LM		<input checked="" type="checkbox"/>		COGHSTA	DE	De Beers
SF 2 - 5	3.32			26	Hondeklipbaai fishing industry and Mariculture	A feasibility study on the viability and implementability of commercial fishing and mariculture in Hondeklipbaai	<input checked="" type="checkbox"/>					R 350	LM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		EANC, EDT	
SF 2 - 6				26	Hondeklipbaai Oil and Gas Refinery	Development agreement between the oils and gas industrialists along the west coast to use Hondeklipbaai as port of entry and processing for any Gas and Oil brought to shore	<input checked="" type="checkbox"/>					R 150	LM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	EANC, EDT		Forest Oil, Petroleum SA, AH Bilton
SF 2 - 8				26	West Coast Development Framework	Compilation of a detailed development framework to convert the mining area between Hondeklipbaai and Kleinsee into a mix use area focussing on tourism, settlement, industry and environmental reinstatement	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			R 3 000	DM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EANC, EDT, COGHSTA	DME	Conservation International, SANPARKS, De Beers
SF 6 - 2				26	Koingnaas Green Village	A detailed development strategy encompassing the formalisation of the settlement, enabling tourism establishments and associated activities, secondary industries in support of economic growth point, supporting commercial enterprises, densification and settlement within urban edge and all services to be "green" services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				R 750	LM		<input checked="" type="checkbox"/>		COGHSTA	DE	De Beers
SF 6 - 3				26	Soebatsfontein Tourism Portal	A detailed development strategy encompassing the formalisation of the settlement, enabling tourism establishments and associated activities, secondary industries in support of economic growth point, supporting commercial enterprises, densification and settlement within urban edge and all services to be "green" services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				R 450	LM		<input checked="" type="checkbox"/>		COGHSTA, EDT		De Beers
SF 6 - 4				26	Kamieskroon Tourism Portal	A detailed development framework focussing on tourism establishments and associated activities, secondary industries in support of tourism the environment, supporting commercial enterprises, residential and tourism accommodation (in partnership with NNP), densification and settlement within urban edge	<input checked="" type="checkbox"/>					R 450	LM		<input checked="" type="checkbox"/>		COGHSTA		SANPARKS
	3-4			26	Upgrading of Garies bulk supply	Upgrading of Garies bulk supply	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				R 700	LM	<input checked="" type="checkbox"/>					
SF - 2	3-22			26	Coast Care	Coast Care	<input checked="" type="checkbox"/>					R 2 000	LM	<input checked="" type="checkbox"/>					
SF 2-4	3-32			26	Abalone farming (Hondeklipbaai)	Abalone farming	<input checked="" type="checkbox"/>					R 102	LM	<input checked="" type="checkbox"/>					
SF 1 - 4				24	Municipal Capacitation Strategy	Ensuring sufficient capacity, suitable quality and high service levels.	<input checked="" type="checkbox"/>					R 150	LM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
SF 2 - 7				24	Leliefontein Communal Area	Compilation of a detailed development framework that will enhance the cultural heritage of the area, implement a comprehensive rural development programme which host agri-villages supported by agri-industry and industrious farming practices, solar Energy generation with Kharkams as the cultural base	<input checked="" type="checkbox"/>					R 750	LM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	EANC, EDT, COGHSTA		



Project Reference Number		DF Cross Reference	GAM Score	Project name	Project outcome	Implementation period (Financial year)					Project Budget in thousands	Funding Source						
						2011/12	2012/13	2013/14	2014/15	2015/16		Implementing Agent	LM	Neigh- bouring Municipali- ty	DM	NCP	NG	NGO/ OTHER
SF 3 - 3		3-17	24	Hondeklipbaai Desalination Plant	Execution of a feasibility study to determine the viability of salt water desalination to provide bulk water serving the needs of not only Kamiesberg but the Namakwa District	<input checked="" type="checkbox"/>					R 350	LM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		DWA	
SF 4 - 4			24	Garies Hondeklipbaai Link Road	The upgrade of road to a class 4 surfaced road	<input checked="" type="checkbox"/>					R 90 000	DM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	TRPW		
SF 4 - 5			24	Hondeklipbaai Koingnaas Soebatsfontein Link Road	The upgrade of road to a class 4 surfaced road		<input checked="" type="checkbox"/>				R 55 000	DM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	TRPW		
SF 4 - 6			24	Soebatsfontein Kamieskroon Link Road	The upgrade of road to a class 4 surfaced road		<input checked="" type="checkbox"/>				R 55 000	DM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	TRPW		
SF 6 - 8			24	Leliefontein Communal Area	Compilation and implementation of a detailed development framework that will enhance the cultural heritage of the area, a comprehensive rural development programme which host agri-villages supported by agri-industry and industrious farming practices, solar energy generation, with Kharkams as settlement and distribution base.	<input checked="" type="checkbox"/>					R 750	LM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	EANC EDT, COGHSTA		
	3-52		24	Transhex – Hondeklipbaai Electricity Refurbishment	Transhex – Hondeklipbaai Electricity Refurbishment	<input checked="" type="checkbox"/>					R 200	LM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	COGHSTA	DE	Eskom
SF 1 - 1			22	Kamiesberg Land Audit	Full data and updated cadastral plan overlaid on aerial photograph with data set indicating: Land Parcel Description, Size, Ownership, Land use, Zoning.	<input checked="" type="checkbox"/>					R 1 100	LM			<input checked="" type="checkbox"/>			
SF 1 - 2			22	Kamiesberg Land Use Management Scheme	The development of a Legal Framework for Land Use Management, including all legislative requirements pertaining to Spatial Development, Land Use Management and the Environment.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				R 1 000	LM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	COGHSTA		
SF 1 - 3			22	Kamiesberg Local Economic Development Strategy	To compile local economic strategy in support of the SDF and to enable Kamiesberg to create a diverse economic base.	<input checked="" type="checkbox"/>					R 500	LM	<input checked="" type="checkbox"/>					
SF 1 - 5			22	Kamiesberg Operational and Management Plans	The compilation of full operational and management plans for the provision and maintenance of engineering services, health facilities & electricity.	<input checked="" type="checkbox"/>					R 150	LM	<input checked="" type="checkbox"/>					
SF 1 - 6			22	Kamiesberg Water Services Master Plan	The review of the existing water services master plan to ensure the implementation of the selected SDF water services levels, water resource development and management	<input checked="" type="checkbox"/>					R 150	LM	<input checked="" type="checkbox"/>					
SF 3 - 5			22	Kamiesberg Water Services Plan	Revision of Water Services Plan to incorporate new services levels, water management and bulk infrastructure provision and natural water resource management taking cognisance of the SDF growth departures and development rationale.	<input checked="" type="checkbox"/>					R 50	LM			<input checked="" type="checkbox"/>		DWA	
SF 5 - 5			22	Kamiesberg Integrated Environmental Management Framework	Update and expansion of the IEMP to reflect the sentiments and guidelines imposed by the SDF	<input checked="" type="checkbox"/>					R 120	LM			<input checked="" type="checkbox"/>	EANC		
SF 6 - 5			22	Kamiesberg Land Use Management Scheme	The development of a Legal Framework for Land Use Management, including all legislative requirements pertaining to Spatial Development, Land Use Management and the Environment.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				R 1 000	LM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	COGHSTA		
	3-3		22	Refurbish electricity network HK8	Refurbish electricity network HK8			<input checked="" type="checkbox"/>			R 1 500	LM	<input checked="" type="checkbox"/>					
SF 5 - 1	3-19		22	Roodebergkloof guest farm	Roodebergkloof guest farm	<input checked="" type="checkbox"/>					R 890	LM	<input checked="" type="checkbox"/>					
SF 3 - 1			20	Kamiesberg Green Energy Wind	Execution of a feasibility study to determine the viability of the generation of energy through wind and the use thereof for own consumption and resale of surplus to the national energy supplier and job creation.		<input checked="" type="checkbox"/>				R 250	DM			<input checked="" type="checkbox"/>		DE	
SF 3 - 2			20	Kamiesberg Green Energy Solar	Execution of a feasibility study to determine the viability of the generation of solar power and the use thereof for own consumption and resale of surplus to the national energy supplier and job creation.		<input checked="" type="checkbox"/>				R 250	DM			<input checked="" type="checkbox"/>		DE	
SF 4 - 2			20	Garies, Hondeklipbaai Bitterfontein Rail Link	The compilation and execution of a feasibility study to extend the rail infrastructure from Bitterfontein to Garies and Hondeklipbaai		<input checked="" type="checkbox"/>				R 450	LM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	TRPW		Transnet
SF 4 - 3			20	Koingnaas Chartered Airfield	Compilation and execution of a feasibility study to upgrade the De Beers airfield as Koingnaas for chartered flight purposes		<input checked="" type="checkbox"/>				R 150	LM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	TRPW		De Beers

Project Reference Number			DF Cross Reference	GAM Score	Project name	Project outcome	Implementation period (Financial year)					Project Budget	Funding Source						
							2011/12	2012/13	2013/14	2014/15	2015/16		Implementing Agent	LM	Neigh- bouring Municipal- ity	DM	NCP	NG	NGO/ OTHER
SF 4 - 7				20	Kamieskroon Lellefontein Garies Link Road	The upgrade of road to a class 4 gravel road			✓			R 66 000	DM	✓			TRPW		
SF 4 - 8				20	Nourivier Gamooep Vaalputs Paulshoek Link Road	The upgrade of road to a class 4 gravel road			✓			R 100 000	DM	✓			TRPW		
SF 5 - 6				20	Kamiesberg Heritage Management Strategy	Documentation and compilation of a revival strategy of the heritage and archaeology within the area		✓				R 200	LM		✓				SAHRA
SF 6 - 6	#REF!			20	Kharkams Cultural Village	Detail design and development framework for the creation of a cultural village that revives and commercialise the heritage of the village in collaboration with the LCA economic development framework			✓			R 450	LM		✓		EDT, COGHSTA		
	3-43			20	Hondeklipbaai Empowerment and Livelihood project	Hondeklipbaai Empowerment and Livelihood project	✓					R 250	LM		✓				
	3-51			20	Finstone- Kamiesberg Cultural Centre	Finstone- kamiesberg Cultural Centre	✓					R 170	LM		✓		COGHSTA	DE	Eskom
SF 5 - 1	3-19			18	Rodebergkloof Conservation Farm	Compilation of a detail development framework for the promotion of tourism, intensive agriculture, whilst protecting and enhancing the sensitive biosphere and optimal use of water resource.	✓					R 250	LM		✓		EANC		
SF 5 - 3	SF 6 - 7			18	Kamiesberg Farm Management Plan	The compilation of a farm management and usage plan to establish the best practice in creating a balance between preservation and economic return and the preservation of the bio-diverse landscape, encapsulating industrious agricultural activities for personal nutrition and economic gain and optimal use of scarce water resources		✓				R 350	LM		✓		AURD		
	3-20			18	Upgrade roads	Upgrade roads	✓					R 4 000	LM		✓				
	3-21			18	Tar Garies circle road	Tar Garies circle road		✓				R 650	LM		✓				
	3-23			18	MPRC	MPRC	✓	✓				R 1 300	LM		✓				
	3-24			18	Caravan park Hondeklipbaai	Caravan park Hondeklipbaai							LM		✓				
	3-54			18	Build access road: Paulshoek	Build access road: Paulshoek		✓							✓				
	3-55			18	Build access road : Kamieskroon	Build access road : Kamieskroon		✓							✓				
	3-56			18	Build access road: Kharkams	Build access road: Kharkams		✓					LM		✓		COGHSTA		
	3-57			18	Build access road: Klipfontein	Build access road: Klipfontein		✓					LM		✓		COGHSTA		
	3-58			18	Build access road: Kheis	Build access road: Kheis		✓					LM		✓		COGHSTA		
SF 2 - 3				16	Rodebergkloof Conservation Farm	Compilation of a detail development framework for the promotion of tourism, intensive agriculture, whilst protecting and enhancing the sensitive biosphere and optimal use of water resource.	✓					R 250	LM		✓		EANC		
	3-47			16	Kamieskroon Clothing and textile	Kamieskroon Clothing and textile							LM		✓				
SF 3 - 4				14	Kamiesberg- Orange River Bulk Water Supply	Review the viability of the Orange River garish Supply Line in relation to a desalination plant	✓					R 150	LM		✓			DWA	
SF 4 - 1				14	Kamiesberg Transportation Plan	The compilation and implementation of public transport services within the settlements and between the settlements		✓				R 250	LM		✓		TRPW		
	3-1			14	Electrification of Lepelsfontein bulk	Electrification of Lepelsfontein bulk	✓					R 2 000	LM		✓				
	3-2			14	Lepelsfontein household electricity connections	Lepelsfontein household electricity connections		✓	✓			R 1 700	LM		✓				

Project Reference Number		DF Cross Reference	GAM Score	Project name	Project outcome	Implementation period (Financial year)					Project Budget in thousands	Implementing Agent		Funding Source				
SDF	IDP					2011/12	2012/13	2013/14	2014/15	2015/16		Implementing Agent	LM	Neigh- bouring Municipali- ty	DM	NCP	NG	NGO/ OTHER
	3-5		14	Connect electricity to 195 houses	Connect electricity to 195 houses	<input checked="" type="checkbox"/>					R 200	LM	<input checked="" type="checkbox"/>					
	3-6		14	Spoegrivier household connection	Spoegrivier household connection		<input checked="" type="checkbox"/>				R 300	LM	<input checked="" type="checkbox"/>					
	3-16		14	Build new reservoir in Garies and Kheis and installation of telemetry system	Build new reservoir in Garies and Kheis and installation of telemetry system		<input checked="" type="checkbox"/>				R 3 800	LM	<input checked="" type="checkbox"/>					
SF 2 - 1			12	Kamiesberg Mining Exploration	Assessment of the viability of the mining and quarrying potential with specific reference to uranium, wollastonite and granite		<input checked="" type="checkbox"/>				R 180	DM		<input checked="" type="checkbox"/>			DE	
	3-18		10	Kharkams upgrading of sport facilities	Kharkams upgrading of sport facilities			<input checked="" type="checkbox"/>			R 5 000	LM	<input checked="" type="checkbox"/>					
	3-27		10	Develop Website	Develop Website							LM	<input checked="" type="checkbox"/>					
	3-29		10	Upgrade telephone system	Upgrade telephone system	<input checked="" type="checkbox"/>					R 20	LM	<input checked="" type="checkbox"/>					
	3-31		10	Fire fighting	Fire fighting	<input checked="" type="checkbox"/>					R 200	LM	<input checked="" type="checkbox"/>					
	3-36		10	40 Erf sewerage connections Garies	40 Erf sewerage connections Garies							LM	<input checked="" type="checkbox"/>					
	3-37		10	100 Erf electricity connections	100 Erf electricity connections	<input checked="" type="checkbox"/>					R 467	LM	<input checked="" type="checkbox"/>					
	3-42		10	Installation of electricity equipment	Installation of electricity equipment	<input checked="" type="checkbox"/>					R 250	LM	<input checked="" type="checkbox"/>					
	3-30		10	Upgrade archive system	Upgrade archive system	<input checked="" type="checkbox"/>					R 300							
	3-7		8	Upgrade water network Spoegrivier	Upgrade water network Spoegrivier	<input checked="" type="checkbox"/>					R 1 100	LM	<input checked="" type="checkbox"/>					
	3-8		8	Upgrade desalination plant Kheis	Upgrade desalination plant Kheis	<input checked="" type="checkbox"/>					R 950	LM	<input checked="" type="checkbox"/>					
	3-9		8	Upgrade desalination plant Klipfontein	Upgrade desalination plant Klipfontein	<input checked="" type="checkbox"/>					R 950	LM	<input checked="" type="checkbox"/>					
	3-10		8	Upgrade desalination plant Spoegrivier	Upgrade desalination plant Spoegrivier	<input checked="" type="checkbox"/>					R 950	LM	<input checked="" type="checkbox"/>					
	3-11		8	Upgrade desalination plant Lepelsfontein	Upgrade desalination plant Lepelsfontein	<input checked="" type="checkbox"/>					R 950	LM	<input checked="" type="checkbox"/>					
	3-12		8	Upgrade desalination plant Soebatsfontein	Upgrade desalination plant Soebatsfontein	<input checked="" type="checkbox"/>					R 950	LM	<input checked="" type="checkbox"/>					
	3-13		8	Bulk supply of water to Lepelsfontein	Bulk supply of water to Lepelsfontein	<input checked="" type="checkbox"/>					R 1 600	LM	<input checked="" type="checkbox"/>					
	3-14		8	Install prepaid meters in Tweerivier, Leliefontein en Kharkams	Install prepaid meters in Tweerivier, Leliefontein en Kharkams		<input checked="" type="checkbox"/>				R 3 100	LM	<input checked="" type="checkbox"/>					
	3-15		8	Bulk supply of water to Lepelsfontein	Bulk supply of water to Lepelsfontein	<input checked="" type="checkbox"/>					R 3 000	LM	<input checked="" type="checkbox"/>					
	3-34		8	Tweerivier Vegetable garden	Tweerivier Vegetable garden		<input checked="" type="checkbox"/>				R 300	LM	<input checked="" type="checkbox"/>					
	3-25		6	Paulshoek guesthouse	Paulshoek guesthouse	<input checked="" type="checkbox"/>					R 400	LM	<input checked="" type="checkbox"/>					
	3-26		6	Hiking trail on Weeskind	Hiking trail on Weeskind							LM	<input checked="" type="checkbox"/>					
	3-28		6	Click-in system	Click-in system	<input checked="" type="checkbox"/>					R 50	LM	<input checked="" type="checkbox"/>					
	3-35		6	Housing – land survey	Housing – land survey							LM	<input checked="" type="checkbox"/>					
	3-41		6	Storm water and Kerbs	Storm water and Kerbs	<input checked="" type="checkbox"/>					R 450	LM	<input checked="" type="checkbox"/>					
	3-44		6	Rooffontein, Kamassies soup kitchen	Rooffontein, Kamassies soup kitchen							LM	<input checked="" type="checkbox"/>					



Project Reference Number		DF Cross Reference	GAM Score	Project name	Project outcome	Implementation period (Financial year)					Project Budget		Implementing Agent	Funding Source				
						2011/12	2012/13	2013/14	2014/15	2015/16	in thousands	LM		Neighbouring Municipality	DM	NCP	NG	NGO/ OTHER
	3-45		6	Leliefontein soup kitchen	Leliefontein soup kitchen							LM	<input checked="" type="checkbox"/>					
	3-46		6	Garies Youth service centre	Garies Youth service centre							LM	<input checked="" type="checkbox"/>					
	3-48		6	Build 60 houses in Klipfontein	Build 60 houses in Klipfontein													Eskom
	3-49		6	Build 30 houses in Lepelsfontein	Build 30 houses in Lepelsfontein													
	3-59		6	Build 30 subsidy houses in Lepelsfontein	Build 30 subsidy houses in Lepelsfontein		<input checked="" type="checkbox"/>				R 1 840	LM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
	3-60		6	Build 60 subsidy houses in Klipfontein	Build 60 subsidy houses in Klipfontein		<input checked="" type="checkbox"/>				R 3 660	LM	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
	3-33		0	Drop Inn Centre	Drop Inn Centre	<input checked="" type="checkbox"/>					R 17 000	LM	<input checked="" type="checkbox"/>					
	3-39		0	NDM Infrastructure Project	NDM Infrastructure Project	<input checked="" type="checkbox"/>					R 100	LM	<input checked="" type="checkbox"/>					
	3-40		0	Lepelsfontein MPRC	Lepelsfontein MPRC	<input checked="" type="checkbox"/>					R 500	LM	<input checked="" type="checkbox"/>					
	3-53		0	De Beers	De Beers	<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			



# ANNEXURE B: COMPOSITE SDF/LDP

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# ANNEXURE C: SDF ASSESSMENT FORM

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# NORTHERN CAPE PLANNING AND DEVELOPMENT ACT, 1998, ACT 7 OF 1998

## Land Development Plan: Control List

In terms of Section 29 of the Act a Land Development Plan shall consist of the following components:

1. A contextual framework (**See Annexure 1 for contextual Map**), the scope and contents of which shall include the following:

- a) the identification, spatial location and evaluation of elements and areas of

		Reference:		
		Vol.	Chap.	Pg.
1.1	<u>the natural environment</u> , including environmental resources of			
	ecological,	2	2.3.2	7
		2	2.3.4	7
		2	2.3.7	14
	biological,	2	2.3.2	7
		2	2.6.1.4	53
	topographical,	2	2.3.1	5
		2	2.3.2	7
		2	2.3.3	7
	geological,	2	2.3.5	7
		2	2.3.5.1	11
	agricultural and	2	2.3.7	14
		2	2.9.6.1	70
	scenic significance;	2	2.6.1.4	53
1.2	<u>marine systems</u> , including marine sanctuaries, dunes, reefs and estuaries;	2	2.9.6.2	71
		2	6.1.1	48
1.3	<u>catchment areas</u> , including			
	mountains and valleys,	2	2.9.5	70
	river corridors, wetlands, “vleis”,	2	2.6.1.1	48
		2	2.6.2	60
		2	2.6.1.4	53
	flood plains to the 50 year flood line and areas with a high water table;	n/a		
1.4	mineral deposits;	n/a		
		2	2.3.6	12
1.5	damaged land, and unstable soils;	2	2.9.3	69
		2	2.6.1.2	50
		2	2.6.1.3	53
1.6	scenic drives and panoramic views;	2	2.6.1.5	57
		2	2.9.5	70
1.7	<u>areas of indigenous vegetation</u> , including			
	indigenous forests, habitats and nature reserves;	2	2.9.5	70
		2	2.3.2	7
		2	2.3.7	14
		2	2/6	48



b) the identification and assessment of

1.8	the current and predicted role and need for a <u>public open space system</u>	2	2/6	48
		3	3.3.4	10
		3	3.3.9	16
		3	3.4.4	21
		3	3.4.9	27
1.9	and the provision of;			
	recreational,	2	2/6	48
		2	2.10.2.3	77
	sporting and	n/a		
	other public facilities, including			
	libraries,	n/a		
	museums and	n/a		
	community halls;	2	2.4.5	22

c) the identification and assessment of

1.10	<u>the current and future economic trends by sector, including;</u>	2	2.7.1	64
	Primary (mining, agriculture and fishing)	2	2.3.6	12
		2	2/8	65
		2	2.9.1	67
		2	2.9.3	69
		2	2.9.6.1	70
		2	2.9.6.2	71
		3	3.3.1	7
		3	3.3.5	12
		3	3.4.1	19
		3	3.4.2	20
		3	3.4.4	22
		3	3.4.5	23
		3	3.5.2	32
		3	3.6.1.2.2	38
		3	3.6.1.2.5	39
		3	3.6.2.1	44
	Secondary (manufacturing and processing)	2	2/8	65
		2	2.9.1	67
		3	3.4.4	22
		3	3.5.2	32
		3	3.6.1.2.1	37
		3	3.6.1.2.4	39
	Tertiary (Wholesale and trade, tourism and service)	2	2/8	65
		2	2.9.1	67
		2	2.9.2	69
		2	2.9.4	70
		2	2.9.5	70
		3	3.4.2	20
		3	3.4.9	27
		3	3.5.2	32
		3	3.6.1.1	33
		3	3.6.2.2	46
		3	3.6.2.3	48

	together with their <u>spatial distribution</u> relative to their resource base, infrastructure needs, markets and labour;	See Map, Annexure 1
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d) the identification and assessment of

1.11	the <u>existing and future social trends</u> , including a demographic and spatial analysis in - terms of population composition, its distribution and access to;	2	2.4.1	18
	health,	2	2.4.5	22
		3	3.3.2	8
	education and training,	2	2.4.6	23
		3	3.3.2	8
		3	3.4.2	20
	employment,	2	2.4.2	20
		2	2.4.4	22
		3	3.3.2	8
	housing,	2	2.5.1	27
		2	2.5.2	44
		2	2.5.3	45
		2	2.5.4	45
		2	2.5.5	46
		3	3.3.2	8
		3	3.3.3	8
		3	3.4.3	21
	potable water,	2	2.12.2.1	81
		2	2.12.2.2	83
	electricity,	2	2.11.2	80
		2	2.11.4	80
		3	3.3.7	14
		3	3.4.7	25
	public transport and	2	2.10.2.1	77
		3	3.3.6	13
		3	3.4.6	24
	any other indicators of social benefit;	2	2.12.1	32
		3	3.3.8	15
		3	3.4.8	26

e) the identification and assessment of

1.12	the current and future capacity and spatial distribution of <u>bulk infrastructure</u> , including;	See Map, Annexure 1		
	sewerage,	2	2.12.3.1	85
		2	2.12.3.2	85
		3	3.3.8	16
		3	3.4.8	26
	water and	2	2.12.2.2	83
		3	3.3.8	16
		3	3.4.8	26
	electricity reticulation,	2	2.11.2	80
		2	2.22.3	80
		3	3.3.7	14
		3	3.4.7	25
	roads and	2	2.10.1.1	75

		2	2.10.1.2	75
		3	3.3.6	13
		3	3.4.6	24
	public transport provision;	2	2.10.2.1	77
		3	3.3.6	13
		3	3.4.6	24

f) an evaluation of

1.13	the historical and cultural built and natural environment.	2	2.6.3	60
		2	2.6	48
		2	2.6.1.1	48
		2	2.6.1.2	50
		2	2.6.1.3	50
		2	2.6.1.4	53
		2	2.6.1.5	57
		3	3.3.4	11
		3	3.4.4	48

2. A development framework shall consist of a set of co-ordinated and integrated policies, objectives and strategies:

a) elaborating on and aimed at implementing

2.1	the <u>Principles</u> referred to in Chapter I	4	4.6	15
	as well as any other policies, objectives, strategies or programmes prescribed in,			
2.2	the Provincial Plan and			
	the District Council Plan or	2	2.14.4	111
	any other initiatives impacting on land development, either at a provincial or national level;	2	2.9.7.1	74
		2	2.14.1	108
		2	2.14.2	110
		2	2.14.3	110

b) informed by the projected future demographic growth and change

2.3	both <u>within the area of jurisdiction</u> of the local or representative council or	2	2.4.1	18
		3	3.3.2	8
		3	3.5.1	29
	<u>as a result of immigration;</u>	2	2.4.1	18
		2	2.4.3	22
		3	3.3.2	8

c) informed by the projected future economic growth, by sector,

2.4	<u>within the area of jurisdiction</u> of the local or representative council,	2	2.7.2	64
		2	2/8	65
		2	2.9.1	67
		3	3.3.2	8
		3	3.3.4	10
		3	3.4.7	26
		3	3.5.2	32
		3	3.5.1	29



		3	3.6.1.2	35
		4	4.3.2	4
	as well as			
	any economic activities operating <u>beyond its area of jurisdiction</u> which may have a secondary impact on the local or representative council,	2	2/8	65
	together with the infrastructural requirements needed to service that growth;	3	3.5.2	30
		3	3.6.3	55
		4	4.3.4	5

d) informed by a set of identified and projected social needs, and where appropriate,

2.5	quantifiable standards in relation to people's access to			
	health,	2	2.4.5	22
		3	3.3.2	8
	education and training,	3	3.3.2	8
		3	3.4.2	20
	public transport,	4	4.3.4	5
	employment,	2	2.4.1	18
		2	2.4.4	22
		2	2.9.7.1	74
	recreational facilities (both active and passive),	3	3.4.9	22
		3	3.6.1.2.3	39
	housing,	2	2.5.1	27
		2	2.5.2	44
		2	2.5.3	45
		2	2.5.4	45
		2	2.5.5	46
		3	3.3.3	8
		3	3.4.3	21
	potable water,	2	2.12.2.1	81
	electricity and	2	2.11.3	80
		3	3.3.7	14
		3	3.4.7	25
	any other indicators of social benefit;			

e) informed by the projected future infrastructural needs and costs required to service growth and development, as identified in paragraphs (c) and (d), within the area of jurisdiction of the local or representative council;

2.6		2	2.12.2.2	83
		3	3.5.2	30
		3	3.6.3	54
		3	3.6.3.2.1	57
		3	3.6.3.3	57
		4	4.3.3	5

f) informed by a land availability assessment, identifying

2.7	local government,	2	2.13.3	89
	provincial and			
	national owned land,			
	including any commonage, together with an analysis of its	2	2.13.3.1	89
	development potential relative to the meeting of the development	3	3.5.2	32

	needs of the local or representative council as identified in subsections (c) and (d);	3	3.6.1.3	40
		3	3.6.2	42

g) informed by the environmental context as provided for in subsection 1. a)

2.8		3	3.5.2	31
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3. An implementation framework, consisting of prioritised programmes and projects aimed at implementing the policies, objectives and strategies referred to in subsection (2) through:

a) defining targets based on projected needs, which shall, where appropriate, be informed by the measurable and quantifiable social, economic, health and service related indicators and standards referred to in subsection (2) (d);

3.1		See Volume 4 Annexure B		
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b) prioritised three-to-five-year capital expenditure programmes informing the annual capital and operational budget allocation of the local or representative council;

3.2		See Volume 4 Annexure B		
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c) motivating, leveraging and securing funding from district council, provincial and national sources;

3.3		See Volume 4 Annexure B		
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d) motivating, leveraging and securing funding from any other funding related agencies;

3.4		See Volume 4 Annexure B		
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e) partnership arrangements with the private sector; and

3.5		See Volume 4 Annexure B		
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f) any other implementational mechanisms including

3.6	zoning schemes and	See Volume 4 Annexure B		
	land development procedures and regulations,			
	urban renewal programmes and			
	strategic site development.			



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