

## SECTION A: INTRODUCTION

### SECTION SYNOPSIS

This section comprises of the following:

- a) Background information for the planning process.
- b) Definition of the Spatial Development Framework, its legal status, purposes and key elements.
- c) Summary of planning principles and core values that form the basis of the District Management Area SDF.

## 1 INTRODUCTION

### 1.1 BACKGROUND

The Eden District Municipality appointed Dennis Moss Partnership Inc. during December 2002 to assist with the preparation of the **Eden District Management Area Spatial Development Framework (DMA SDF)** as an integral part of the Eden District Municipality SDF and District Management Area IDP.

The project is to be undertaken in collaboration with the Eden District Municipality. Full use will be made of the existing Integrated Development Plan (IDP) forums as a basis for Interested and Affected Party (I&AP) consultation and participation.

The primary aspects of the planning process will be the following:

- a) Formulate detailed development and management strategies that will promote sustainable development in the District Management Area (DMA).
- b) Explore options for the implementation of UNESCO's MaB (Man and the Biosphere) Programme as a mechanism for promoting sustainable development.

These planning processes are undertaken in accordance with, *inter alia*, the Municipal Systems Act, 2000 (Act 32 of 2000) and the Western Cape Planning and Development Act (WCPDA), 1999 (Act 7 of 1999).

### 1.2 PROJECT BRIEF

In terms of the project brief, the DMA SDF has to include or achieve the following:

- (a) Indicate the spatial implications of the DMA IDP.
- (b) Develop a detailed land use analysis for the DMA.
- (c) Formulate proposals for the re-development and future development of the DMA.
- (d) Identify land for future land uses, such as housing.
- (e) Optimise the historical value of the towns in the DMA.
- (f) Develop detail environmental and urban design guidelines for the DMA.

## 1.3 STRUCTURE OF THE DOCUMENT

In addition to this introductory section (Section A), this document comprises 7 further sections, the functions of which are summarised in Diagram 1 below.

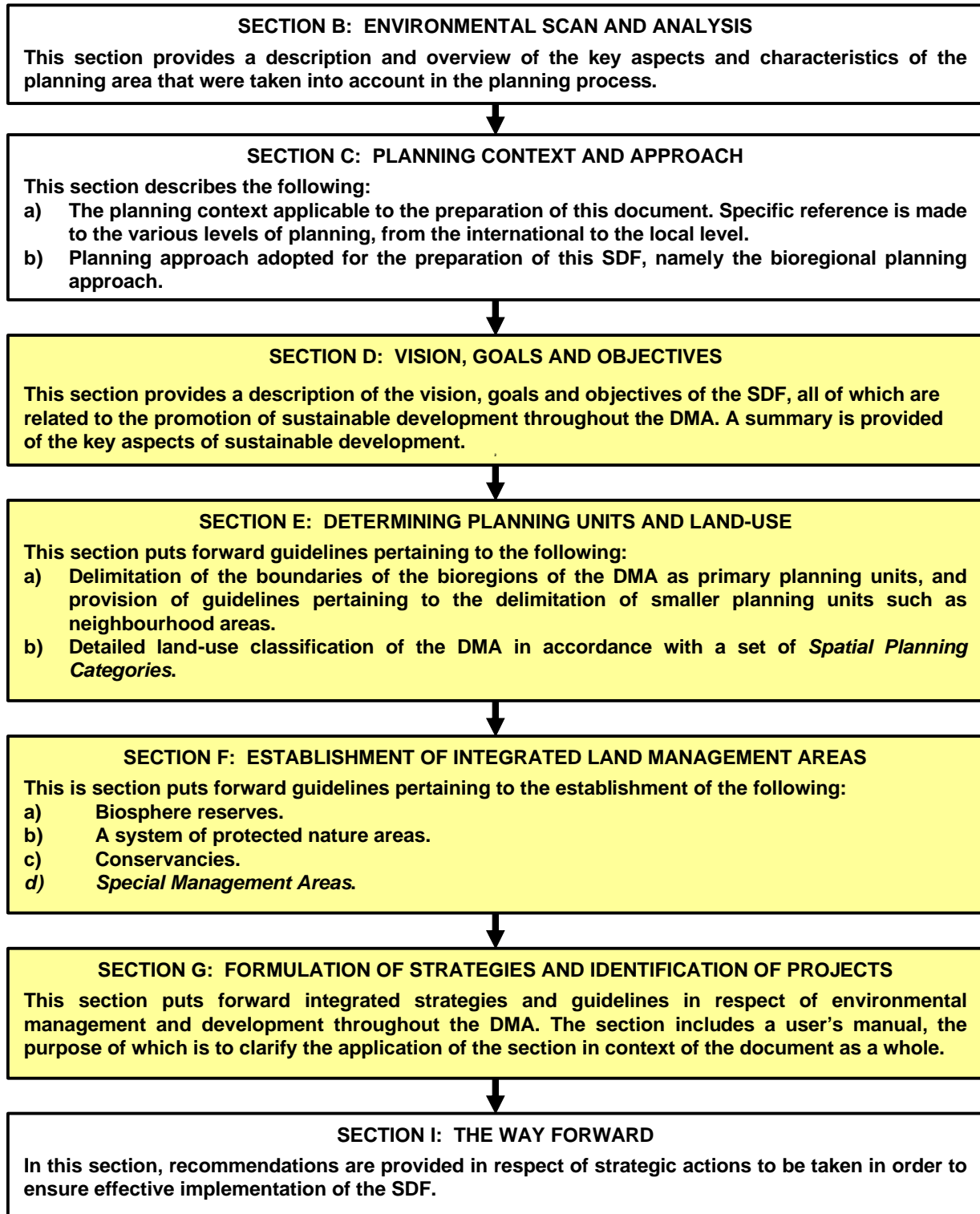


Diagram 1: Document Structure

## 2 READER'S GUIDE TO TERMS USED IN THE DOCUMENT

The following terms, abbreviations and acronyms have been used, or are referred to in this document.

<b>Alien organisms</b>	Plants, animals, and micro-organisms, which do not naturally occur in an area, and which have been deliberately or accidentally introduced by humans to ecosystems outside of their natural range.
<b>Biogeographic</b>	Concerning both geographical (e.g. climate, ocean currents), and biological (e.g. animals, plants) components and the inter-relationship of these components with humans.
<b>Biological diversity or biodiversity</b>	Biodiversity is an abbreviation of biological diversity. The Convention on Biological Diversity defines it as 'the variability among living organisms from all sources including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within, between species and of ecosystems'.
<b>Biome</b>	A group of ecosystems, which may differ considerably in the species they contain, but function in ecologically similar ways. In practise, although biomes contain both plants and animals, for purposes of identifying biomes and mapping them, the vegetation type is used to define the biome boundaries.
<b>Bioregion</b>	A land and water territory, the limits of which are not defined by political but by the geographical boundaries of human communities and ecological systems. Also a geographical space that contains one whole, or several nested ecosystems characterised by landforms, vegetative cover, human culture and history as identified by local communities, governments and scientists.
<b>Bioregional planning</b>	An organised process that enables people to work together, think carefully about potential problems of their region, set goals and objectives, define activities, implement projects, take actions agreed upon by the communities, evaluate progress and refine their approach.
<b>Biosphere reserve</b>	Areas of terrestrial and coastal/marine ecosystems, or a combination thereof, which are internationally recognised within the framework of UNESCO's MaB Programme.
<b>Bo-Langkloof</b>	A region situated between the Kammanassie and Oteniqua Mountains, stretching approximately 80 km along the N9 from Herold in west to Avontuur in the east.
<b>CAPE</b>	Cape Action for People and the Environment
<b>Catchment or catchment area</b>	The entire land area from which water flows into a river. Catchments can be divided into smaller 'quarterary' or 'sub-catchments'.
<b>Category A Municipality</b>	In terms of the Local Government Municipal Structures Act, 1998 (Act 117 of 1998) this is a Metropolitan Municipality that has exclusive municipal executive and legislative authority in its area.
<b>Category B Municipality</b>	In terms of the Local Government Municipal Structures Act, 1998 (Act 117 of 1998) this is a Local Municipality that shares municipal executive and legislative authority in its area with a district municipality within whose area it falls.
<b>Category C Municipality</b>	In terms of the Local Government Municipal Structures Act, 1998 (Act 117 of 1998) this is a District Municipality that has municipal executive and legislative authority in its area and that includes more than one local municipality.
<b>CBO</b>	Community-Based Organisation.

<b>CNC</b>	Cape Nature Conservation.
<b>Conservancy</b>	A group of farms, or natural areas, on which the landowners have pooled some of their resources for the purpose of conserving natural resources on the combined properties.
<b>Conservation</b>	The management of human use of the biosphere to yield the greatest benefit to present generations while maintaining the potential to meet the needs and aspirations of future generations. Conservation thus includes sustainable use, protection, maintenance, rehabilitation, restoration, and enhancement of the natural environment.
<b>CZP</b>	Coastal Zone Policy.
<b>DEADP</b>	Department of Environmental Affairs and Development Planning.
<b>District Town</b>	Seat of the Category C Municipality.
<b>DMA</b>	District Management Area.
<b>ECO</b>	Environmental Control Officer.
<b>Ecosystem</b>	A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.
<b>EDMA</b>	Eden District Management Area
<b>EMS</b>	Environmental Management System
<b>Endemic</b>	Any plant or animal species confined to, or exclusive to a particular, specified area.
<b>Existential dimension</b>	The 'existential dimension' refers to the philosophical explanation of the part of the world that gives meaning and identity to our way of 'existing'.
<b>Fynbos</b>	Fynbos is the main vegetation type of the Southwestern Cape and of the Cape Floristic Region.
<b>Garden Route</b>	A 227 km coastal necklace from Mossel Bay to the Storms River. A region of bays, beaches, cliffs, rocky capes, immense flora and fauna diversity and excellent holiday resorts.
<b>GIS</b>	Geographical Information System or 'a system of people, resources, and procedures that collects, transforms, and distributes (spatial) information to relevant organisation members'.
<b>GRKK</b>	Garden Route Klein Karoo
<b>Habitat</b>	The place or type of site where an organism or population naturally occurs.
<b>HOA</b>	Home Owners' Association.
<b>I&amp;AP</b>	Interested and Affected Party.
<b>IDP</b>	Integrated Development Plan.
<b>IISD</b>	International Institute for Sustainable Development.
<b>Indigenous</b>	Native to a particular area.
<b>ISO</b>	International Standards Organisation.

<b>IUCN</b>	International Union for Conservation of Nature.
<b>Langkloof</b>	A region situated between the Baviaans and Kouga Mountains, stretching along the N9/R62 from Herold in the west to Patensie in the east.
<b>LDO</b>	Land Development Objective.
<b>Local Town</b>	Town that previously had municipal status, now forms part of a Category B Municipality and has a municipal office.
<b>LUPO</b>	Land Use Planning Ordinance.
<b>MaB</b>	Man and the Biosphere.
<b>MaB Programme</b>	A global programme of international scientific co-operation, dealing with people-environment interactions over the entire realm of bio-climatic and geographic situations of the biosphere.
<b>Macro biogeographical region</b>	A region defined by its unique biological characteristics (flora and fauna) and biophysical characteristics (climate, geology, soils), giving rise to a variety of major landscapes, and variations in human settlement patterns and economic activity.
<b>Main Local Town</b>	Seat of the Category B Municipality.
<b>NGO</b>	Non-Governmental Organisation.
<b>ORV</b>	Off-Road Vehicle.
<b>PEAE</b>	Port Elizabeth Apple Express
<b>PGWC</b>	Provincial Government of the Western Cape.
<b>Permaculture</b>	A design system for creating sustainable human environments that are ecologically sound and economically viable, providing for their own needs, do not exploit or pollute and are therefore sustainable in the long term.
<b>PNE</b>	Protected Natural Environment.
<b>Policy</b>	A set of principles that guide law-making and government administration. Note that the aspect of 'policy' captures only the intentions. The difficult part concerns the realisation of those intentions through new rules and effective enforcement mechanisms.
<b>Population</b>	A group of individuals with common ancestry that are much more likely to mate with one another than with individuals from another such group.
<b>Protected area</b>	A geographically defined area designated and managed to achieve specific conservation objectives. Protected areas are dedicated primarily to the protection and enjoyment of natural or cultural heritage, and to the maintenance of life support systems.
<b>Quarternary catchment</b>	Usually the area which feeds a tributary or a part of the main river.
<b>Quid pro quo</b>	Something for something.
<b>RDP</b>	Reconstruction and Development Programme
<b>Rehabilitation</b>	To return a degraded ecosystem or population to its original condition.
<b>ROS</b>	Recreational Opportunity Spectrum

<b>SAFCOL</b>	South African Forestry Company Limited.
<b>SAHRA</b>	South African Heritage Resources Agency.
<b>SA Red Data Book</b>	A document presenting information on endangered, rare or threatened species in such a manner as to assist conservationists to assess their actions in respect of these species.
<b>SKEP</b>	Succulent Karoo Ecosystem Plan
<b>SMA</b>	Special Management Area.
<b>SPC</b>	Spatial Planning Category.
<b>Species</b>	Plants, animals, micro-organisms or other living organisms that are morphologically similar; that share inheritance from common ancestry; or whose genes are so similar that they can breed together and produce fertile offspring.
<b>STEP</b>	Subtropical Thicket Ecosystem Planning
<b>Sustainable development</b>	Sustainable development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.
<b>Traditional knowledge</b>	Traditional knowledge refers to a body of knowledge built up by a group of people through generations of living in close contact with nature. Traditional knowledge is both cumulative and dynamic; building upon the experience of earlier generations and adapting to the new technological and socio-economic changes of the present.
<b>UNEP</b>	United Nations Environmental Programme.
<b>UNESCO</b>	United Nations Economic, Scientific and Cultural Organisation.
<b>Water cycle</b>	The water (hydrological) cycle describes the natural process of moving water out of the oceans, into the atmosphere, and back to the land and oceans.
<b>WCPDA</b>	Western Cape Planning and Development Act, 1999 (Act 7 of 1999).
<b>WCNCB</b>	Western Cape Nature Conservation Board.
<b>Wildlife</b>	Any non-domestic animals and plants, which occur in the wild.
<b>WRI</b>	World Resource Institute.
<b>WWF</b>	World Wide Fund for Nature.

## 3 THE SPATIAL DEVELOPMENT FRAMEWORK

### 3.1 DEFINITION AND STATUS

The Municipal Systems Act, 2000 (Act 32 of 2000) makes 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. (In the past, various plans such as guide plans, structure plans, spatial plans, etc. were prepared. Presently one definition and a mutually accepted format are proposed namely a Spatial Development Framework).

An SDF does not grant any rights pertaining to land use, nor take any rights away. However, being an integral part of the IDP, the SDF will be formally approved by the municipality. Such approval in accordance with the applicable legislation grants significant status to the document.

### 3.2 PURPOSE OF THE SDF

The basic purpose of the SDF is to indicate the spatial implications of an IDP, and 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 wellbeing 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:*

- a) *The Directive Principles.*
- b) *Any national land use framework applicable in the area of the municipality.*
- c) *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 includes basic guidelines for a land use management system.

The SDF furthermore has the following broad functions and characteristics:

- (a) It expresses government policy and the views and aspirations of all interested and affected parties (I&APs).
- (b) 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.
- (c) It provides certainty to the affected communities regarding future socio-economic and spatial development in the area.
- (d) It provides a basis for co-ordinated decision-making and policy formulation related to future land use.
- (e) It creates opportunities for preparing development and action plans to which financial budgets can be linked.

### 3.3 SPECIFIC AIMS OF THE DISTRICT MANAGEMENT SDF

The DMA SDF provides goals and objectives, strategies, programmes and projects for the spatial and administrative planning and management of the key issues, which have been identified by the IDP and applicable lower sphere planning frameworks. In this regard, the SDF includes comprehensive plans and strategies, which collectively indicate **which** type of development should be allowed in the DMA, **where** it should take place, and **how** such development should be undertaken.

The SDF reflects the aspirations and needs of the people of the DMA as identified during the IDP process. This implies that the SDF will ultimately be drafted '*by the people for the people*', and will express their wishes in respect of **what kind of places** they want to live in and **what kind of future** they are aspiring for.

The Western Cape Planning and Development Act, 1999 (Act 7 of 1999) stipulates that, '*when preparing, amending, withdrawing, or reviewing a development framework, regard shall be had to the natural and developed environment and ecologically sustainable development in general, and all prescribed steps taken in this connection shall be specified and all prescribed studies shall be carried out*'.

In order to comply with the latter requirement, the SDF was based on a holistic planning approach that addresses the full spectrum of environmental and related key issues. The WRI<sup>1</sup> states in its Global Biodiversity Strategy that UNESCO's MaB (Man and the Biosphere) Programme is a useful tool for translating the bioregional planning approach to 'grass roots level'. The MaB Programme deals with people-environment interactions over the entire realm of bio-climatic and geographic situations of the biosphere (the latter concepts and programmes are described in Chapter 19 below).

### 3.4 FUNDAMENTAL PRINCIPLES OF THE DMA SDF

The SDF is based on fundamental principles derived from applicable government policy statements such as the White Paper on Environmental Management Policy for South Africa, 1096 of 1997. These principles will also guide the implementation of the SDF and future decision-making related to development and land-use.

- a) **Alienation of resources:** Renewable and non-renewable resources are public assets and belong to all the people of South Africa. The SDF must help to ensure that any alienation of these resources will be done with circumspection, in the best interests of the people's rights and to ensure the wise use of such resources.
- b) **Capacity building and education:** All people of the municipal area must have the opportunity to develop the understanding, skills and capacity for effective participation in achieving sustainable development.
- c) **Conflict of interests:** Actual or potential conflicts of interest between responsibilities for resource exploitation, and any responsibilities, or powers affecting environmental quality, or impact management, must be resolved. Solutions to such conflicts of interest must ensure effective implementation of environmental policy and provide for the lead agent in monitoring and ensuring the maintenance of norms and standards set in the SDF.
- d) **Consider all alternatives:** Considering all possibilities results in the best decisions. Development and environmental planning, problem solving and

---

<sup>1</sup> World Resource Institute

- decision-making are often complex. Possible consequences of conflicting interest, as well as the consequences of not acting need careful consideration.
- e) **Co-ordination:** Various concerns and issues cut across the key sectors and functions in the municipal area. Therefore, sustainability, integrated planning and management depend on co-ordination and integration of all sectors of society.
  - f) **Demand management:** In managing resources and environmental impacts, demand management must be considered, along with other integrated control measures.
  - g) **Due process:** Due process must be applied in all integrated management activities. This includes adherence to the provisions in the statutes dealing with just administration and public participation in regional and local governance.
  - h) **Duty of care:** Every person, or organisation has a duty to act with due care to avoid damage to others, or to the environment. Also called the Environmental Responsibility Principle.
  - i) **Equity:** There should be equitable access to natural resources, benefits and services to meet basic needs and ensure human well-being. Each generation has a duty to avoid impairing the ability of future generations to ensure their well-being.
  - j) **Environmental justice:** To comply with the requirements of environmental justice, the SDF must integrate environmental considerations with social, political, and economic justice in addressing the needs and rights of all communities, sectors and individuals.
  - k) **Full cost accounting:** Decisions must be based on an assessment of the full social and environmental costs.
  - l) **Good governance:** Good governance depends on mutual trust and reciprocal relations between the various groups and sectors of the municipal area. This must be based on the fulfilment of constitutional, legislative and executive obligations, and the maintenance of transparency and accountability.
  - m) **Inclusivity:** Integrated management processes must consider the interests, needs and values of all I&APs in decision-making to ensure sustainable development.
  - n) **Using traditional knowledge:** This includes recognising all forms of knowledge, including traditional and ordinary knowledge.
  - o) **Precaution:** The SDF will apply a risk averse and cautious approach that recognises the limits of current knowledge regarding the consequences of decisions or actions.
  - p) **Prevention:** The SDF must anticipate problems and prevent negative impacts on the environment and on people's rights.
  - q) **Polluter Pays:** Those responsible for environmental damage must pay the repair costs both to the environment and human health, and the costs of preventative measures to reduce or prevent further pollution or degradation.
  - r) **Waste management:** Waste management must minimise and avoid the creation of waste at the source. The SDF must encourage waste recycling, separation at source and safe disposal of unavoidable waste.

### 3.5 ELEMENTS OF AN SDF

According to Section 16(2) of the Land Use Management Bill (National), an SDF should serve as a land use policy to guide:

- a) Desired patterns of land use in the municipal area.
- b) The spatial reconstruction of the municipal area, including:
  - (i) correction of past spatial imbalances and integration of formerly disadvantaged areas;
  - (ii) directions of growth;

- (iii) major movement routes;
  - (iv) conservation of natural and built environment;
  - (v) identification of areas in which particular types of land use should be encouraged or discouraged; and,
  - (vi) the identification of areas in which the intensity of land development should be increased or reduced.
- c) Decision-making relating to the location and nature of development in the municipal area.

## SECTION B: PLANNING AREA PROFILE

### SECTION SYNOPSIS

This section provides a description and overview of the key aspects and characteristics of the DMA that need to be addressed in the SDF:

- a) The existing local government structures of the municipal area determined in terms of the Local Government Municipal Demarcation Act, 1998 (Act 27 of 1998).
- b) The historical, ecological, biophysical and socio-economic characteristics, which collectively shape the cultural and natural landscapes of the DMA and represent the area's *intrinsic, systemic and instrumental* values.
- c) The unique environmental manifestations that are of global conservation significance and programmes and initiatives that have been instituted to ensure their long-term protection.

## 4 CONTEXT

The Eden District Management Area is located along the south-eastern boundary of the Western Cape Province and covers an area of approximately 4 170.35 km<sup>2</sup>.

The DMA stretches roughly for 100 km from the R 62 between Oudtshoorn and George in the west to the Eastern Province Border in the east and the eastern Swartberg Mountains in the north. The Outeniqua Mountain range forms the southern boundary of the DMA and in so doing forms a natural barrier between the DMA and the coastal plains. The landscape of this vast area varies from gently rolling plains to deep valleys to rocky mountainous outcrops.

The world-famous Langkloof and Little Karoo regions comprise most of the land surface of the DMA. The former region comprise of the Kammanassie River Valley, the Bo- and Lower Langkloof as well as a portion of the Keurbooms Valley.

The region is endowed by natural resources. The features of its natural resource base are made up of the semi-arid Little Karoo landscape and varying topography. The DMA offers a variety of experiences (e.g. 4x4 trails, San Rock Art tours, mountain hikes, etc.) to tourists and residents alike.

The DMA is bordered by the Central Karoo District Municipality to the north, Oudtshoorn, George, Knysna and Plettenberg Bay Local Municipalities, as well as the Eastern Cape Province to the east.

The main access routes to the DMA are the R62 (main road 1/2) via Herold & R62 (main road 44/1) via Haarlem/Louterwater, N9 (main road 1/3) via Willowmore, R341 (main road 88/1) via De Rust, divisional road 1840 via the Baviaanskloof and R339 (main road 59/1) via the Prince Alfred Pass.

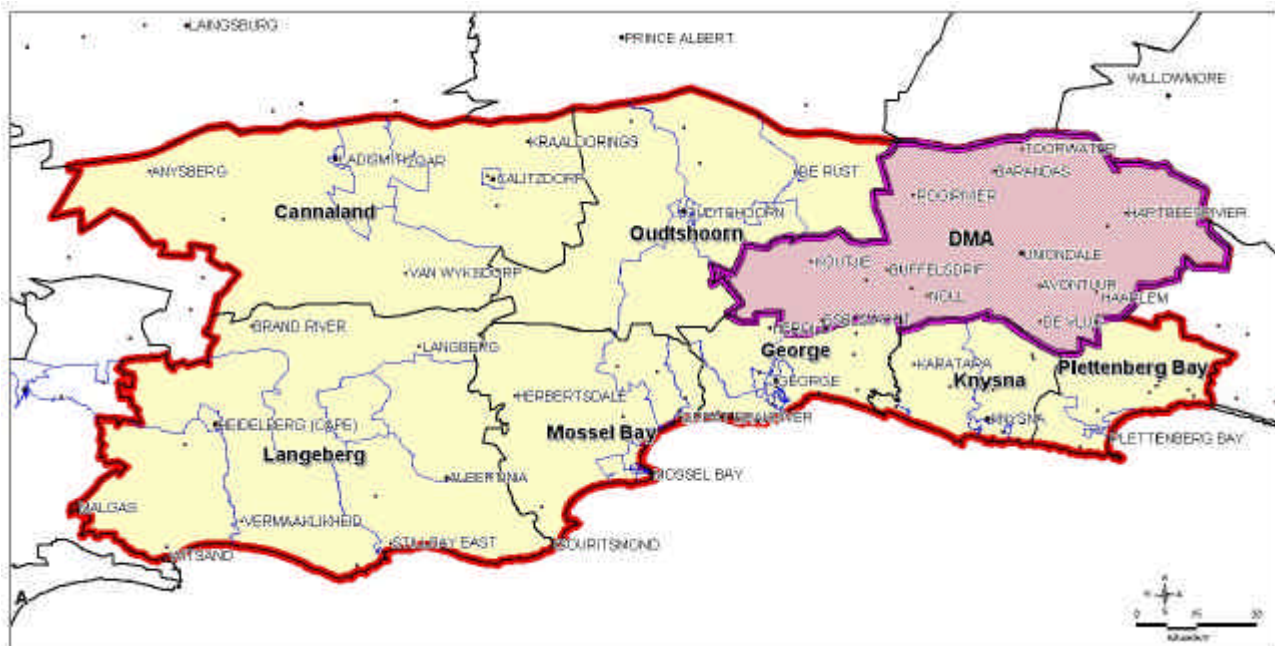
## 5 MUNICIPAL STRUCTURES

As illustrated by Figure 1 below, the DMA falls within the area governed by the Eden District Municipality, and shares municipal executive and legislative authority with the latter. The Eden District Municipality comprises the following municipalities as declared on 22 September 2000 in terms of Provincial Gazette 5991:

**Category C:** Eden District Municipality (DC4)  
**District Management Area – Uniondale (WCDMA04)**

**Category B:** Kannaland Municipality (WC041)  
 Langeberg Municipality (WC042)  
 Mossel Bay Municipality (WC043)  
 George Municipality (WC044)  
 Oudtshoorn Municipality (WC045)  
 Plettenberg Bay Municipality (WC047)  
 Knysna Municipality (WC048)

The Eden DMA constitutes the towns of Uniondale, Haarlem, Avontuur, Noll, Zaaimansdal, De Vlug (refer to Chapter 9) and the rural areas/farms including Koutjie, Daskop, Analt, Welgelegen, Speelmanskraal, Dwarsfontein, De Hoek, Greylock, Hartbeesrivier, Highview, Rooirivier, Siesta and Toorwater.



**Figure 1: Municipal Authority Boundaries (A larger scale map is appended to this document).**

This new local government structure resulted in the sharing of jurisdiction over most of the Eden District between Category C (District Municipality) and Category B (former TLCs) Municipalities. The division of powers and functions are determined in Section 84 of the Municipal Structures Act, 1998 (Act 117 of 1998), which provides for the establishment of various categories and types of municipalities, and determines the powers and functions of the various categories of municipalities.

## 6 ARCHAEOLOGY AND HISTORY

Of all the people of South Africa, only the San are truly indigenous – and they have been displaced and victimised by each successive wave of immigrants. Today there are but a few remnants (mostly rock art) of this once proud people in South Africa.

The San have left a lasting record of their life through thousands of paintings or rock art. Though more closely related to their cultural and spiritual life, many of the paintings give a San perspective on those who came into their land and displaced them. In particular, only those paintings found along the west coast of South Africa show sheep, as tended by the pastoralist Khoehoe, whilst over on the east side of South Africa, at various locations along the base of the Drakensberg mountain range, are a painting of a Renaissance era sailing ship, horse-drawn wagons, and images of San being hunted by rifle-toting horse-riders (potentially either Xhosa or European).

The Rock Art of the San people of Southern Africa has been described as one of humankind's greatest treasures from the past. Also it is one of the longest and richest rock art traditions on earth. Evidence from painted stones in a cave deposit in Namibia shows that an artistic tradition, with ritual and symbolism that is associated with it, extends back at least 25 000 years. The earliest evidence so far for engraving is 11 000 years old, but new finds could extend this back as well. The most recent paintings and engravings may be only 200 years old. Rock art is studied by archaeologists, anthropologists and art historians from archaeological and ethnographic and artistic perspectives. This allows researchers access to a range of information on which they can base their interpretations of meaning ([www.museums.org.za](http://www.museums.org.za)).

Rock art is found over a large area of Southern Africa and more than 15 000 sites occur in South Africa alone. This priceless heritage, as depicted in the collection of the Centre for Indigenous Knowledge of the University of Pretoria, is a valuable aid to understanding the spiritual search of the San people ([www.greensponsors.com](http://www.greensponsors.com)).

Along the valleys and ridges of the DMA several rock art sites occur. These San rock art sites range from as recent as approximately 200 years ago, to as old as 6 000 years. These sites have much in common with those found further westwards, towards Oudtshoorn. There are, however, differences and some remarkable examples such as painted burial stones. At Boomplaas cave and elsewhere in the region, excavated stones have been dated to between 2 000 and 6 500 years old, confirming the great antiquity of the Late Stone Age painting tradition (Townley Johnson, 1979).



**Photo 1: San Rock Art on the Mountain Pastures Game Reserve (DMP).**

Two world-famous rock art sites are found in the DMA with at least another 100 other sites that have been noted. The Narouga rock art sites at Mountain Pastures Game Reserve are probably some of the most spiritual in Southern Africa. These sites include a site where the San lived, an ancient 'observatory', an overhang of instruction, a trance dance site and only one of eight known 'force point' sites in the world. The other world-famous site in the DMA is the Esseljachtspoort 'mermaid' site.

Colourful paintings are depicted at the DMA rock art sites, although not as profound or colourful as in the Drakensberg Mountains. However, the meaning(s) of the rock art is highly complex and spiritual, emphasising the deep ancient wisdom of the Bushman.

## 6.1 EARLY PIONEERS AND TRAVELERS

During the Anglo-Boer War, the DMA experience its fair share incursions and clashes between the Boers and the British. Commandant Gideon Schepers led his troops through the Langkloof and Baviaanskloof. The British, especially the 10<sup>th</sup> Hussars were on hot pursuit and it resulted in some deadly encounters.

During 1901, Uniondale experienced two invasions. The first invasion occurred on the 20<sup>th</sup> January 1901, which was led by the 23-year old Commandant Scheepers who entered the town with 40 Boers. Then on the 26<sup>th</sup> January the Boers under Kritzinger entered Avontuur from the George side. They numbered over 100 men and looted shops and destroyed the Post Office's telegraphs.

Some Avontuur farmers were not happy at the fact that Boers commandeered large quantities of forage for their horses (Zondagh, 2003<sup>2</sup>). To prevent future incursions, the British built a series of forts around the town. Six forts were established, one of the forts was built on a hilltop overlooking Uniondale and is today a national monument (refer to Photo 2).

On the 11<sup>th</sup> August 1901 the 10<sup>th</sup> Hussars and the Boers clashed at Wanhoop on Uniondale's border. The Boers got the upper hand and a Hussar was killed and four wounded. The scattered hamlets of Misgund, Haarlem and Avontuur with their irrigated lands on which grew tobacco, wheat, barley, oats and fruit trees were unprotected and soft targets. Only Uniondale was defended by a garrison, blockhouses and Town Guards. On the 20<sup>th</sup> of August the Boers under Scheepers had gone ahead to the Kammanassie region.



**Photo 2: A restored fort above Uniondale (DMP).**

<sup>2</sup> Information received from Mr. Jimmy Zondagh (farms at Avontuur), August 2003 who is currently compiling an extensive historical background (buildings, history, people, architecture) on Uniondale and its surroundings.

## 6.2 MISSION STATIONS

Missionary activity in South Africa during the 19th century was vigorous. By the early 20th century Southern Africa, had become one of the most intensively worked mission fields in the world.

Distinct settlement types arose in the various geographic regions as result of different environmental, climatic, social, political and economic conditions and the mission society involved. Also, cultural customs and relations between mission societies and local chiefs also had a major formative influence (<http://whc.unesco.org>).

In an unpublished document prepared by UNESCO, two basic types of missions are identified.

- a) Mission settlements, of which there were many variations. These settlements have a civic nucleus consisting of a church and various social facilities surrounded by a settlement.
- b) Mission stations. These were institutions which were not intended to be centres of settlement, but offered various social services to the surrounding areas. Mission stations consisted of only the nucleus without a surrounding or adjacent formal settlement.

Many of the historic mission settlements and stations have survived and still serve a valuable educational, social, political and religious function. A couple of these settlements are still present in the DMA. These mission stations, such as the ones at Haarlem and Molen River, created for the spiritual well-being of the indigenous people. The seemingly timeless lifestyles and unique architecture of the mission stations are still evident today.

### a) Haarlem



Photo 3: Haarlem Church (DMP).

The rural village of Haarlem is another example of a village that had its roots as a mission station. The area was originally laid out as a White township in 1856 by JC Taute. The first missionary was Friederich Prietsch, who came from Anhalt in Germany and was supported by the Schmidt fund, hence the original name of the mission station: Anhalt-Schmidt. The Berlin Missionary Society took transfer of the village in 1860, but it had already been named Haarlem, after the city near Amsterdam in Holland ([www.saexplorer.co.za](http://www.saexplorer.co.za)).

This town, with a population of approximately 1 800 people, has a number of historic buildings including an old church and minister's house. The economic base of this village is still small scale horticulture. Low input agricultural practices are used, ploughs are horse-drawn and other work is still done by hand.



Temperatures are fairly moderate within the Langkloof and frost seldom occurs. The Little Karoo is hotter and shows greater variation in temperature. Mean annual temperature ranges from 15 - 17°C and berg wind conditions in summer can result in a few very hot days. (South Cape District Council, 1999).

The predominant wind direction in the region is Southeast and Southwest, but due to the mountain ranges in the southern and eastern parts of the planning area (Outeniqua, Langkloof and Kouga Mountains), which blocks most of these winds, the DMA is less windy than the coastal regions.

### 7.3 GEOLOGY

The major feature of the geology is the Cape Fold Mountains which forms a sequence of alternating quartzite mountain ranges and shale valleys (Uniondale IDP, 2002).

The entire Cape Supergroup comprising the Table Mountain, Bokkeveld and Witteberg Groups is present in the area. The Table Mountain Group consists of up to 3 500 m of supermature quartz sandstone and minor shale layers, the Bokkeveld Group of up to 1700m of shale and subordinate sandstone, and the Witteberg Group of up to 1 500 m of quartz sandstone and shale. Marine invertebrates are common in the shales of the lower half of Bokkeveld Group (Toerien, 1979)<sup>3</sup>.

The Karoo Sequence is represented in the area by the Dwyka Formation (600 m tillite), the Ecca Group (over 2 000 m shale and sandstone) and part of the Beaufort Group (over 2000 m mudstone and sandstone).

Conglomerates and subordinate clay and sandstone of the Cretaceous System in this area attain a maximum thickness of 300 m. All the pre-Cretaceous strata were subjected to severe north-south orientated compressive stresses producing the so-called Cape Fold Belt with the more resistant strata forming prominent mountain ranges running east-west. Overfolding is common, and reverse faults are present in places. Also present are normal faults, largely post-Cretaceous in age, and down-thrown to the south by up to a few thousand metres (Toerien, 1979).

Table mountain sandstone is responsible for the impressive Outeniqua folded mountains. This impervious rock results in nutrient poor soils and consists of quartzite sandstones with a shale band, which separate the Lower Peninsula Sandstone Formation from the upper Nardouw Sandstone Formation. The Little Karoo fault line enters the DMA via Dysseisdorp in the valley between the Swartberg and Kammanassie Mountains and runs perpendicular to the above-mentioned mountains to the Baviaanskloof. The Table Mountain sandstone, furthermore, results in the acidic runoff that characterise the rivers of the area.

In the DMA, advancing glaciers from the north-west and north terminated the deposition of the thick Peninsula sandstone. This is evidenced by sporadic soft-sediment deformation in the top of the Peninsula as seen in the Swartberg and Kammanassie Mountains, as well as by thin conglomerate sandstone and siltstone at the base of the Cedarberg Formation.

---

<sup>3</sup> Toerien DK 1979: *The Geology of the Oudtshoorn Area*. Geological Survey: Department of Mines: Republic of South Africa

For the rest of Cedarberg comprises black shale which is arenaceous at the base and usually also at the top. It is generally 35 to 55 m thick, though very thin or even absent in the area north and south of Uniondale, in the Outeniqua Mountains north and south of George (Toerien, 1979).

The Baviaanskloof Formation is approximately 200 m thick and consists of two dark-grey impure sandstones separated by a pale feldspathic zone. Brachiopods and gastropods appear at the top where the formation is terminated by a few thin alternating sandstone and shale layers (Toerien, 1979).

Alluvial fans and scree comprising boulders and smaller fragments, sand and drift cover the bedrock in large conspicuous patches, especially north of the Swartberg and Baviaanskloof Mountains. Low-level river-terrace gravels occur here and there along the river courses in the hinterland.

The most dominant geological formations include the following:

- a) **Arenites:** This formation dominates the mountainous regions of the DMA as well as a very narrow section along the N12 and part of the R341 between the Langkloof and the Kammanassie River Valley.
- b) **Shales:** The shales are limited to the valleys of the Olifants and Kammanassie Rivers. This formation also dominates a large area to the north of Uniondale and Herold and also consists of a narrow strip along the southern side of the N9, which extends from Herold to the Keurbooms Valley.
- c) **Conglomerates:** Conglomerates are found only in the northern part of the DMA, at the foot of the Swartberg Mountains, concentrated to the west of Barandas and east of Toorwater.

The pattern of soils closely correlates with geology, topography and climate. The main soils in the sub-region consists of Lithosols, which consists of rocks with limited soils (arenaceous and agrillaceous sediments); Alluvium (soils with a marked clay accumulation); and Calcareous sands and loams overlying calcrete (Uniondale IDP, 2002).

Reverse and normal faults, of which some are of pre-Cape age, have caused displacements of a few thousand metres in the Kango Group. Numerous post-Cape strike faults, downthrown to the south, are present. Of these the well-known Kango-Baviaanskloof Fault south of the Swartberg cutting through the entire area, is the largest. The throw which is to the south, amounts to a few thousand metres. Movement was presumably largely post-Cretaceous, though local post-Tertiary rejuvenation has been observed.

Gypsum occurs as small deposits on the Karoo rocks and especially the Whitehill Formation where it is presumably produced by the action of air and rainwater on limestone, pyrite and carbon.

Iron and Manganese, small iron and manganese deposits are widespread in this area. They generally occur as ferricrete associated with silcrete on high-level terraces, as in the Baviaanskloof, or near faults. Manganese concentrations as high as 30 percent have been found. These elements are most probably derived from the Tchando Formation.

## 7.4 HYDROLOGY

The main rivers in the study area are listed below:

- a) **Olifants River:** Runs into the Stompdrift Dam at De Rust.
- b) **Kammanassie River:** Runs into the Kammanassie Dam at Oudtshoorn.
- c) **Kouga River:** Runs into the Kouga Dam at Hankey.
- d) **Keurbooms River:** Runs into the lagoon mouth at Plettenberg Bay.

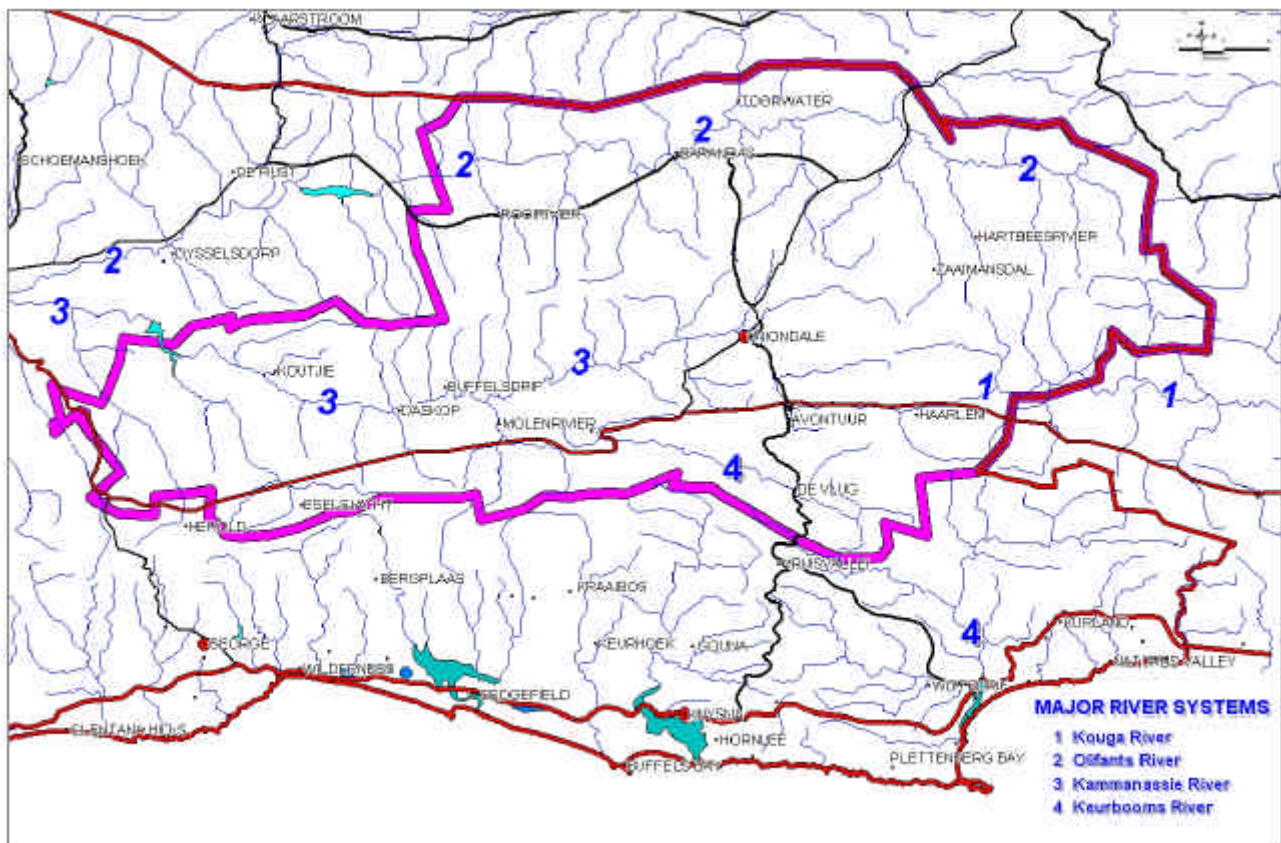


Figure 3: Hydrology of the DMA (A larger scale map is appended to this document).

### 7.4.1 KEURBOOMS RIVER

The tributaries draining into the Keurbooms River include the Hartbees-, Duiwelsgat-, Palmiet-, Klein-, Diep-, Witels-, Kwaai-, Peters-, Bos- and Kykoerie Rivers. The Palmiet River has a number of smaller tributaries draining parts of the Langkloof and Tsitsikamma mountains and joins the Keurbooms River approximately 15 km from the estuary mouth.

Upstream the drainage basin is composed successively of feldspathic sandstone of the Baviaanskloof Formation, whitish-weathering quartz sandstone and profusely cross-bedded subordinate shale of the Kouga Formation as well as brownish-weathering sandstone and shale of the Tchando Formation (Heydorn & Grindley, 1984<sup>4</sup>).

<sup>4</sup> Heydorn AEF & Grindley JR 1984: *Estuaries of the Cape, Report No.31: Keurbooms/Bitou System (CMS 19) Piesang (CMS 18)*. Stellenbosch: CSIR Research.

The major part of the river catchment is made up of privately owned farms. The mountain catchment areas along the upper reaches of the river mostly consist of natural vegetation utilised for cattle and goat farming.

The river received its name from the sweetly scented flowering trees that grow on its banks, joining the Bietou River to form a lagoon at the Keurbooms River estuary.

The headwaters of the Keurbooms River come from the Langkloof, north of the main Tsitsikamma mountain range. This river was already flowing when sea level was 300m above its present level. The placid waters of its estuary hide the tortuous journey of the mother stream through the inland mountain valleys. Its gorge is spectacular and well worth a voyage upstream to enjoy the unspoilt, unpolluted beauty.

#### **7.4.2 GOURITS WATER MANAGEMENT AREA**

The Gourits Water Management Area borders on the Breede, Olifants/Doring, Lower Orange and Fish-to-Tsitsikamma Water Management Areas. A large portion of the water management area is drained by the Gourits River and its main tributaries the Groot, Gamka and Olifants River. Secondary tributaries include the Touws, Buffels, Dwyka and Kammanassie Rivers. Several smaller rivers drain the coastal belt such as the Duiwenhoks, Brak, Goukamma and Keurbooms Rivers (Gourits Water Management Area, 2003)<sup>5</sup>.

The geology of the DMA water management area mainly consists of Karoo sediments and dolerite intrusions, with more complex formations in the central parts where porous unconsolidated strata and other good water bearing formations can be found.

Consequently, five sub-areas were identified to facilitate the presentation and management of key issues in the water management area. These are as follows:

- a) The Gamka sub-area comprising the catchment of the Gamka River upstream of the confluence with the Olifants River, downstream of which the river is known as the Gourits River.
- b) The Groot sub-area, corresponding to the catchment of the Groot River down to its confluence with the Gourits River.
- c) The Olifants River sub-area which corresponds to the catchment of the Olifants River. Water in the Olifants River catchment is regulated by the Stompdrift and Kammanassie Dams, and the smaller Koos Raubenheimer Dam.

Water demand management is the primary option to improve the assurance of water supply to Uniondale (more so to Oudtshoorn) and to provide for future growth in water requirements. Following on the successful implementation of water demand management, the re-use of effluent and re-allocation of irrigation water should be investigated. The increased use of groundwater and removal of alien vegetation may also hold potential.

A detailed study is required of groundwater use and aquifer characteristics in the Olifants River catchment, with particular attention to be given to the inter-dependencies between groundwater and surface water (Gourits Water Management Area, 2003).

---

<sup>5</sup> Gourits Water Management Area 2003: *Overview of water resources and availability and utilization*. Report No. P WMA 16/000/00/0203: Department of Water Affairs and Forestry.

- d) The Gourits sub-area, which includes the catchment of the Gourits River downstream of the above catchments together with the catchments of the coastal rivers between the Gourits River and the Breede water management area.
- e) The Gourits Coastal sub-area, which includes all the coastal catchments between the Gourits River and the Fish-to-Tsitsikamma water management area.

At current levels of development, deficits occur in all the sub-areas, with the exception of the Gourits sub-area, where the requirements for and availability of water are approximately in balance. The deficits in the Gamka, Groot and Olifants sub-areas are mainly as a result of irrigation requirements which are in excess of the water available, but where farming practices have been adapted accordingly.

Much of the irrigation in particularly the Groot and Olifants sub-areas, is highly opportunistic of nature with a very low assurance associated with water for irrigation in these areas.

### **7.4.3 KAMMANASSIE RIVER**

The Kammanassie Mountain is situated in the Cape Fold Belt which borders the Southern Cape and is made up by formations of the Cape Super Group. Structurally the range forms a long, oval shaped dome. This has developed as a result of the compression and folding of sedimentary rock.

The geomorphology is largely determined by the underlying rock structure. Streams and rivers flow in deep narrow kloofs. The main rivers mainly follow a north/south orientation. Those on the northern side flow into the Olifants River and those on the southern side into the Kammanassie River

The major rivers of the Little Karoo, the Olifants- and Kammanassie Rivers, drain west of the Gourits River. In the Langkloof the Kouga River drains to the Gamtoos. To the south the Keurbooms River drains directly to the sea, at Keurboomstrand (Uniondale IDP, 2002).

### **7.4.4 GROUNDWATER**

Groundwater is of major importance as a source of water supply in the DMA, particularly in the drier region where more than half of the water used in some water management sub-areas is abstracted from groundwater. Groundwater is the primary source of water for rural domestic supplies and stock watering. A sizeable portion in the Olifants sub-area is used for irrigation.

According to the *Integrated Water Services Development Plan: 'Starter Requirements' (2000)*, general water provision to houses is of a fairly good standard, even if it is only available near houses. The document, furthermore, states that there is constant and sufficient water delivery from the Haarlem Dam.

It is, however, recognised that water for development, mass use and dissipation should be developed and that care should be taken to prevent over use due to development and urban settlements.

## 8 BIOLOGICAL CHARACTERISTICS

### 8.1 FLORA

The DMA falls within the Cape Floral Kingdom, which is internationally recognised as one of the six Floral Kingdoms of the world and includes a number of biomes, namely the Fynbos, Forest, Nama Karoo, Succulent Karoo and Thicket Biomes (refer to Figure 4).

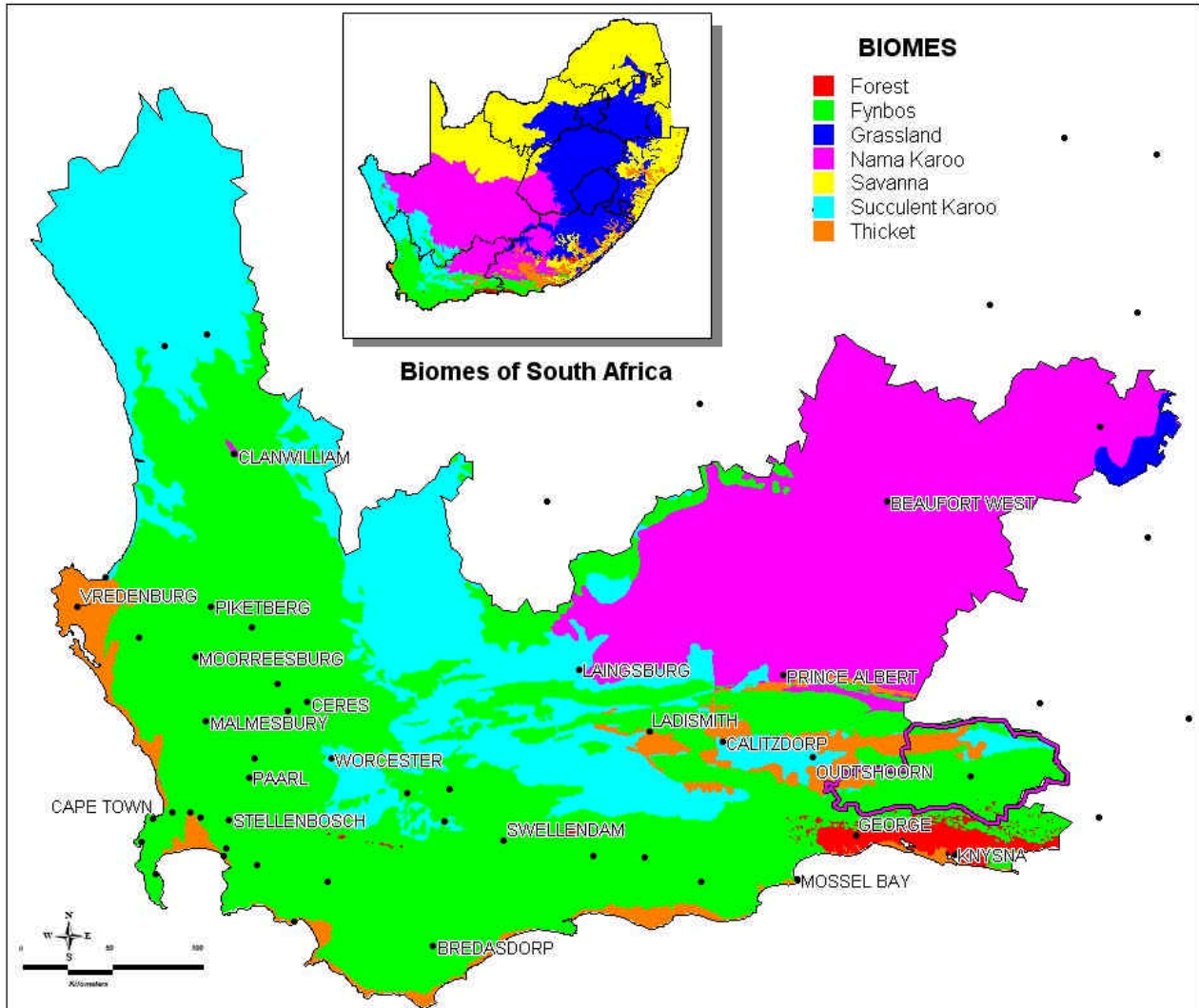


Figure 4: Biomes of the Western Cape

The Cape Floral Kingdom is the smallest of the Floral Kingdoms of the world, covering a mere 0,06% of the earth's surface, and is the only Floral Kingdom contained in its entirety within a single country (refer to Figure 5). The Cape Floral Kingdom is characterised by its exceptional richness in plant species. More than 8 700 species are known to occur, with more than 68% of these being endemic. The Cape Floral Kingdom, thus, compares with some of the richest floras world-wide, even surpassing many tropical forest regions in floral diversity.

About 75% of all plants in the South African Red Data Book are found in the Cape Floral Kingdom. Of these species, about 1 700 are threatened with extinction. Many Fynbos

species are extremely localised in their distribution, with sets of such localised species organised into 'centers of endemism' (Low and Robelo, 1996).

Low and Robelo (1996) state that, although the Cape Floral Kingdom comprises various biomes, namely Fynbos, Forest, Nama Karoo, Succulent Karoo, and Thicket, the contribution of Fynbos in terms of species richness, endemism, and fame of the region, is so overwhelming, that the Cape Floral Kingdom is considered to be 'essentially Fynbos'.

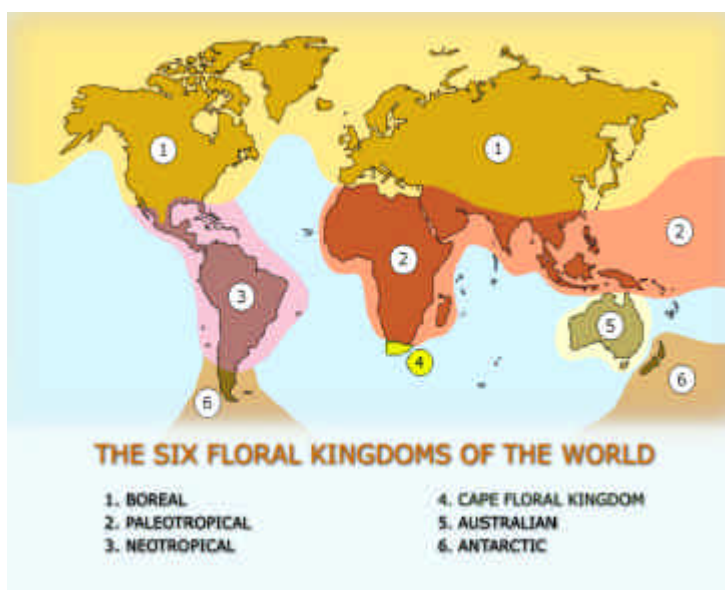
Fynbos has unique intrinsic capabilities as a natural water conservation agent and, subsequently, plays a critical role in the maintenance of the natural *water cycle*<sup>6</sup>. Maintenance of water

yield entails ensuring the capacity of a catchment area to yield water at historical flow rates. This can only be achieved through the maintenance of a vigorous cover of indigenous vegetation, such as Fynbos. Fynbos occurs on well leached infertile soils.

Vegetation in the DMA consists mainly of Fynbos and Karoo shrub although patches of Afromontane forest occur to the south of the planning area (refer to Figure 6). The latter vegetation type coincides with Knysna forest which surrounds the Prince Alfred Pass. There is a vegetation sequence in keeping with the topographical, soil and climatological sequences.

As mentioned above, Fynbos and Karoo shrub is the dominant vegetation type over most of the area. Fynbos can be divided broadly into mountain and lowland fynbos, but within this definition there is a high diversity of fynbos communities that vary extensively in their conservation importance. Some communities have been almost entirely destroyed due to agricultural expansion, such as the renosterveld (South Cape District Council IDP, 1999).

The flora of the region encompasses a great range of genetic diversity, which includes the genetically distinct and ancient cycads. Two surviving species of these ancient plants are found in the Baviaanskloof area. Within the Kammanassie nature reserve unique vegetation types occur of which the Kammanassie conebrush (*Leucadendron singulare*) is endemic to the Kammanassie.



**Figure 5: The Cape Floral Kingdom in International Context**

<sup>6</sup> The *water (hydrological) cycle* describes the natural process of moving water out of the oceans, into the atmosphere, and back to the land and oceans.

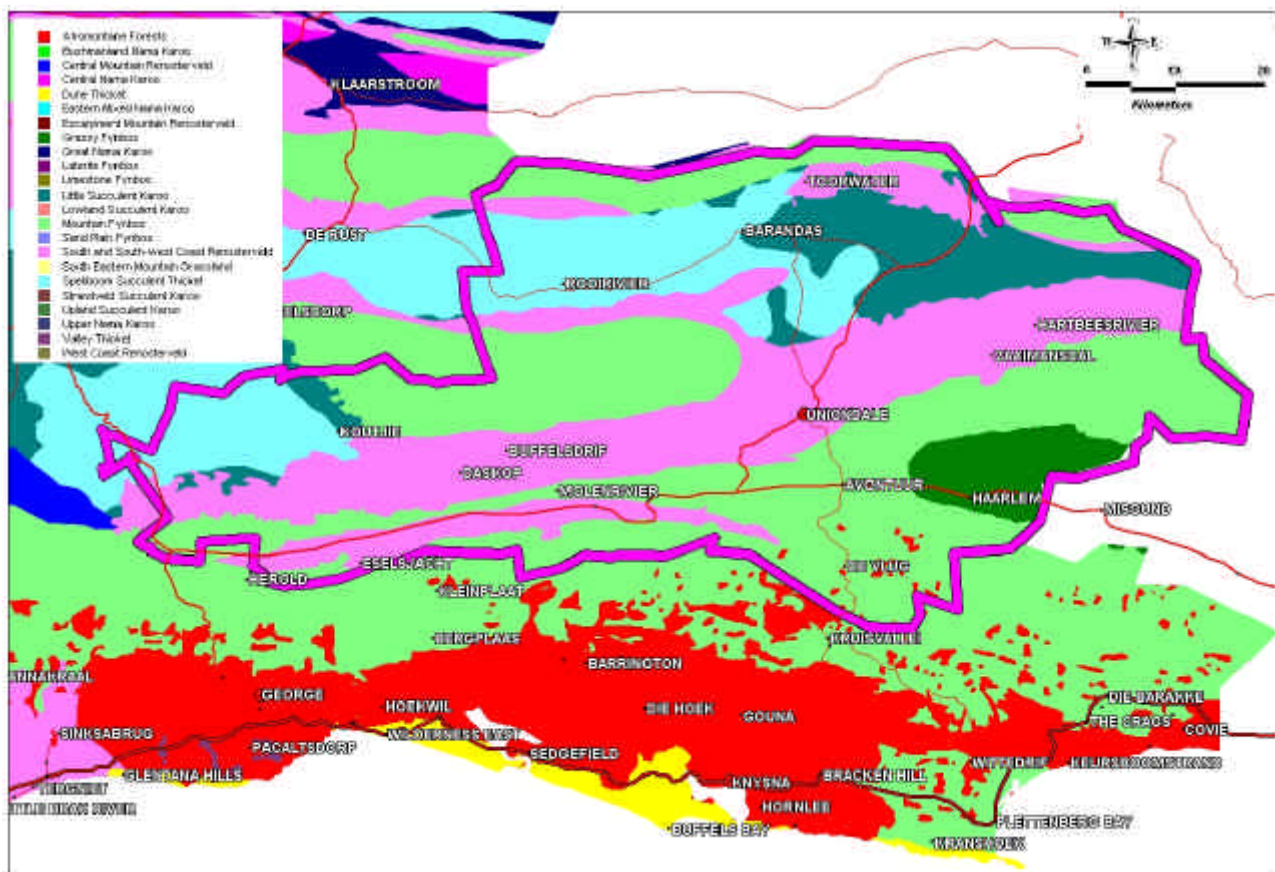


Figure 6: Vegetation of the Eden DMA (A larger scale map is appended to this document).

A number of vegetation types of immense scientific importance occur within the DMA, namely:

### 8.1.1 MOUNTAIN FYNBOS

Mountain fynbos occurs on acid, leached sandy soils mostly on Table Mountain sandstone of origin. The fynbos is exceptionally rich in species and only occurs in climates with relatively humid winters that are cool but almost entirely free of frosts. It occurs in rainfall areas that vary from 200 mm to over 2000 mm annually.

### 8.1.2 RENOSTERVELD

There are two forms of Renosterveld – west and south coast, although only *South Coast Renosterveld* is found within the DMA. *South Coast Renosterveld* ranges from the Caledon district to Humansdorp. This vegetation consists of subdominants and diagnostic shrub species such as *Relhania genistaefolia*, *R. cuenata*, *Helichrysum anomalum*, *Indigofera denudata* and *Hermannia flam* (Outeniqua SDF, 2000).

### 8.1.3 THICKET BIOME

Low and Rebelo (1998) explain that there is no formal “Thicket Biome” recognised in the literature. Thicket replaces forest where fire protection is still evident, but rainfall is not as high as in the forest biome. The plants in this biome do not grow as tall as forest species and the strata are not as distinct as that displayed within the forest biome.

The Thicket Biome vegetation shares floristic components with almost all other phytochoria and as a result of this few endemics are recorded in the Thicket biome. The four thicket types are explained below:

**a) Succulent transitional thicket**

Elements of both Tongaland – Pondoland and Karoo-Namib origin are equally well represented. The vegetation can be stratified into tree/shrub and herb layers. There is a high proportion of spinescent trees, shrubs and woody creepers in the upper layers and grasses and succulents in the lower stratum. Aloes, Asclepiadaceous and *Euphorbiaceous* genera are present and *Eriocephalus africanus* is an important pioneer shrub in disturbed areas together with *Acacia karoo* in the upper stratum.

**b) Xeric transitional thicket**

The Xeric transitional thicket is dominated by species primarily of Tongaland – Pondoland affinity but includes a relatively high component of Succulent Karoo - Namib species, such as Euphorbias and Aloes. The distribution of Xeric Transitional thicket is limited to a few drier river valleys, where incision into the coastal plain has exposed Bokkeveld shales.

**c) Forest and Thicket on Ancient Dunes**

In comparison to Xeric transitional thicket this community does, not however, include as many species of Afromontane or Karoo – Namib affinities. The number of succulents and endemics is high, although species richness is low compared to other thicket types. Characteristic woody species are Karoo Cross-berry (*Grewia robusta*), Small Bitterleaf (*Brachylaena ilicifolia*), *Maytenus capitata* and *Lycium campanulatum*. The limited distribution of this vegetation type within the region places a high importance value on its future preservation.

#### **8.1.4 AFROMONTANE FORESTS**

Afromontane forests represent a very small land surface in the DMA, it probably remains one of the most striking vegetation features of the region. It is characterised by a temperate forest of evergreen trees averaging between 15 – 30 m in height. These forests were originally confined to areas which were protected from both fire and wind. It is not only in the Garden Route where Afromontane forests occur, several isolated patches of indigenous forests occur along the Prince Alfred Pass and on the southern slopes of the Tsitsikamma Mountains.

Partly because of their rarity, their grandeur and their setting, forests are an important tourist attraction in South Africa. They have been exploited in the past for valuable timber, including Black Stinkwood (*Ocotea bullata*) and Outeniqua Yellowwood (*Podocarpus falcatus*). Some forests were removed for the establishment of exotic plantations.

The lovely George-lilly (*Cyrtanthus purpureus*) is found in the Langkloof, and normally grows in the wet, humid indigenous forests.

#### **8.1.5 INVASIVE ALIEN VEGETATION**

Several regions within the DMA have been invaded by exotic plant species, particularly Australian Acacias including black wattle (*A. meansii*), Port Jackson (*A. saligna*),

Rooikrans (*A. cyclops*) and blackwood (*A. melanoxylon*), as well as Hakea sericea and pine (*Pinus patula*). These plants pose a number of ecological threats to indigenous plant and animal communities and to water systems. Some of these species do, however, have economic value in terms of fir food and furniture timber (South Cape District Council IDP, 1999).

Alien vegetation is particularly problematic in the Langkloof, where cluster pines and hakea are invading natural vegetation. Succulent transitional thicket is, furthermore, commonly invaded by *Opuntia ficus – indica* (prickly pear), while a major plant invader of forests is Blackwood (*Acacia melanoxylon*).

## 8.2 FAUNA

The rich and diverse animal life of the DMA can be attributed to the diversity and complexity of its environmental component. Within the protected areas of the DMA several animals of immense conservation importance are found, of which the Cape Mountain Zebra (*Equus zebra zebra*) represents one such species.

Few of the region's reptiles and amphibians are endangered, and most have been recorded within nature reserves. However, the drastic clearing of valley bushveld vegetation is destroying the habitat of many species.

Butterflies are abundant throughout the region with 50 species recorded to date. The Kammanassie blue (*Orachrysops brinkmani*) has recently been discovered in the Kammanassie Provincial Nature Reserve and belongs to the same genus as the endangered Brenton blue and Karkloof blue (Cape Nature Conservation, 2003).

Some invertebrates which are likely to be seen include small populations of klipspringer, grey rhebuck, common duiker, dassie and chacma baboon. Several of the larger animals are predominantly found within reserves and include a population of 38 individuals of cape mountain zebra within the Kammanassie Nature Reserve, kudu, Cape buffalo, red hartebeest, eland, leopard and caracal.

Approximately 400 bird species have been recorded within the region. The Baviaanskloof region is, however, recognised as a globally-important bird area on account of the high diversity of birds. Amongst the raptors finding refuge in the DMA are the booted eagle, crowned eagle, fish eagle, martial eagle, black eagle as well as the jackal buzzard. Sugarbirds are attracted by the flowers of protea and other fynbos species.

Of the terrestrial avifauna, the magnificent Black Eagle is the most striking and occurs throughout the Little Karoo. This bird is threatened throughout the sub-continent but is less endangered in this region. Distinctive for its white tail feathers and white 'V' over its shoulders, this raptor can be spotted mostly around cliff faces where it likes to nest.



**Photo 4: Cape Mountain Zebra (*Equus zebra zebra*)**  
Source: Nell, 2003

## 9 HUMAN SETTLEMENT PATTERN

### 9.1 DESCRIPTION OF SETTLEMENTS

The chapters below provide a brief description (in alphabetical order) of the main towns and villages in the DMA (refer to Figure 7).

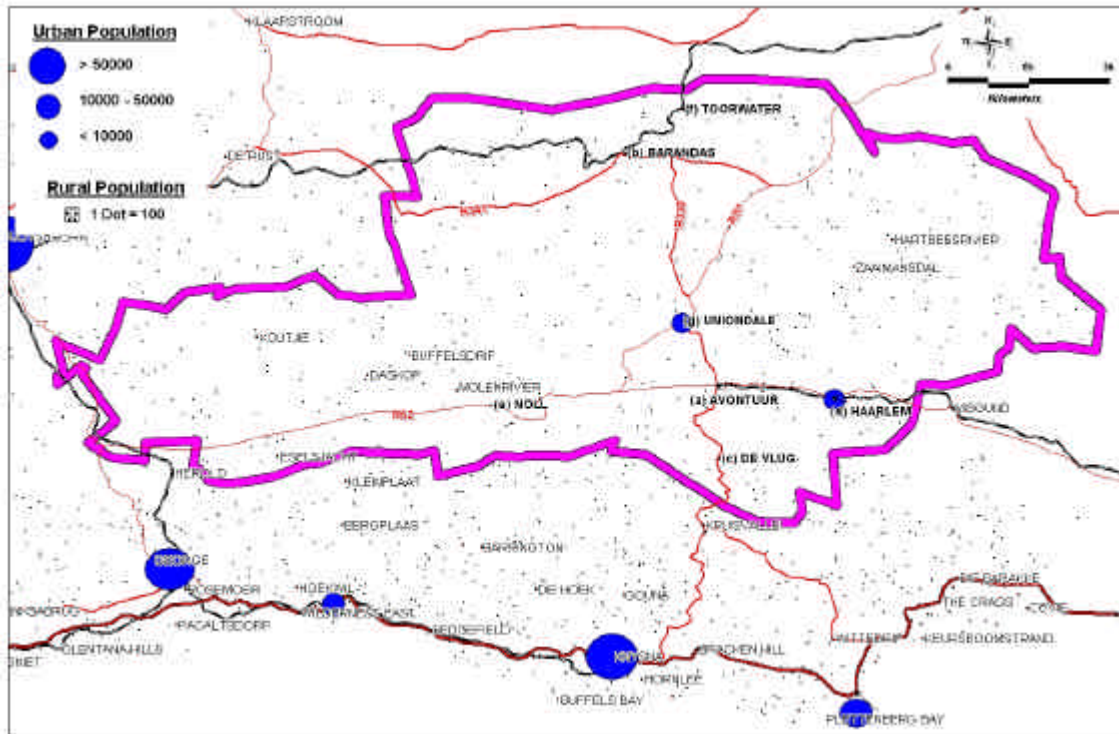


Figure 7: Major settlements of the DMA (A larger scale map is appended to this document).

#### a) Avontuur

On 29 April 1795, Mathys II Zondagh made a formal application to hire the farms De Riete Valley *gelegen aan de Camminazie* and D'Avontuur to run his cattle. De Riete Valley is the present-day Uniondale. Matthys left De Riete Valley after only one year and moved to the farming settlement D'Avontuur. Today this farming settlement still belongs to the Zondagh family. In winter it gets very cold here – ideal for apple-growing. Agricultural activities include mainly fruit, dairy, sheep and cattle, as well as game, cereal crops, vegetable seed, potatoes, ostriches, honey-bush tea and wild flowers.



Photo 5: The farming village of Avontuur (DMP).

## b) Barandas

The village of Barandas is situated in the northern parts of the DMA, in the Little Karoo, and is located adjacent to main road 88/1, approximately 27 km north of Uniondale. The Oudtshoorn – Johannesburg railway line extend through the Swartberg Mountains and Toorwater to the derelict railway station at Barandas. The village offer some service related activities such as a post office, but the main economic base is small-scale agriculture.

The revised Municipal IDP (2003) identifies Barandas as a possible settlement that could provide locations for low order services requested throughout the DMA, for example, as a base for dispensing periodic services. These could take the form of mobile vans containing the following:

- (i) Library;
- (ii) Health services, Home Affairs and traffic services;
- (iii) Pension payouts ;
- (iv) Bank services;
- (v) Entertainment; and
- (vi) Trading opportunities.



Photo 6: Barandas Station (DMP).

## c) De Vlug

In a valley deep in the mountains of the Prince Alfred Pass the quaint village of De Vlug is sited. In 1771 the government had granted the farm De Vlug to Elsje Botha. Thomas Bain stayed here with his family from 1863 to 1867 while building the section of the pass from De Vlug to Avontuur. His young daughter died in this settlement, and it was here that he learned of the death of his father and road-building mentor Andrew Geddes Bain in Cape Town (Meyer, 1999).

Thomas bought a plot at De Vlug and sold it to the Berlin Missionary Society in 1869. It grew into a small village, affording access to both the coast and the interior. It was known as Edminton for a while. The alluvial soil and climate were ideal for growing sweet-potatoes. Wheat, maize and potatoes also flourished here. Floods in 1875, 1916, 1931 and 1934 washed away the fertile top soil, making it uneconomical to farm. People started moving away in the early 1960s.

Today De Vlug is still a small settlement but can offer visitors hiking trails and gorge-scramblings, eel-catching and trout-fishing, mountain biking, Bushman paintings, and the Burchell's<sup>7</sup> Route (Meyer, 1999).

<sup>7</sup> William John Burchell (1781-1863) was a botanist who left Cape Town in 1811. While travelling in Southern Africa Burchell collected over 63 000 specimens and objects. In addition, he made about 500 drawings that included landscapes, portraits, zoological and botanical sketches. In April 1815 he left for England and spent a lifetime identifying his collection. He collected many species of plants near the pass, including one that has never been found again – *Oxylaena acicularis*. The Burchell's Gazelle is one of the animals named after him. Today, the Burchell's Oxwagen 4x4 Trail operates near the Prince Alfred Pass.

#### d) Haarlem

The rural village of Haarlem is situated approximately 60 kilometres from Uniondale, on the road to the Langkloof. The area was originally laid out as a White township in 1856 by JC Taute. The first missionary was Friederich Prietsch, who came from Anhalt in Germany and supported by the Schmidt fund, hence the original name of the mission station: Anhalt-Schmidt. The Berlin Missionary Society took transfer in 1860, but the village had already been named Haarlem, after the city 19 km west of Amsterdam in Holland ([www.westerncape.gov.za](http://www.westerncape.gov.za)).



Photo 7: Haarlem (DMP).

The town hosts a number of historic buildings that have ‘survived’ the years as well as the church and minister’s house. The village, although the second largest in the DMA was neglected during the apartheid era and is bypassed by the R62 (main road 44/1). In recent years a high school and community hall were built although rather inaccessibly located at the rear of the settlement (Uniondale IDP, 2002).

The economic base of the village is still small-scale horticulture. Plenty water supply is available from the Haarlem dam and the soil is extremely fertile. Low input agricultural practices are used, ploughs are horse-drawn and other work is done by hand (Revised Municipal IDP, 2003).

As a consequence of its former neglect the inherent cultural and historic tourist potential in Haarlem has been ignored. A number of projects are required to nurture this potential including tarring the eastern access road, implementing building design and carefully directing the location and form of new public buildings, as well as a tourism marketing strategy.

#### e) Noll

Noll was named after the Jewish shopkeeper Harry Noll. The hamlet is situated on the R62 (main road 1/2) 38 km west of Avontuur. Noll produces agricultural products such as fruit, dairy, ostriches, honeybush tea, proteas, luserne, sheep and cattle.

#### f) Toorwater

Toorwater is situated off the N9 about 55km from De Rust travelling towards Willowmore. Toorwater is located adjacent to a declared nature reserve of 1 300 hectares and is nestled in at the foot of the towering Swartberg Mountain range. The region has immense potential to establish itself as a future node and offer features such as Karoo vistas of indigenous aloe forests as well as unspoiled nature. The Oudtshoorn – Johannesburg railway line penetrates the Swartberg Mountains by means of the Toorwater (‘bewitched

water') gorge. Hot water bubbles out of the gorge in a steady stream as long as recorded history can recall. It is regarded as one of the last untapped and undeveloped hot water springs in South Africa, and definitely the most pristine and dramatically located of all known hot springs in the country (Chittenden Nicks De Villiers, 2003).

The name, Toorwater, comes from a peculiar local phenomenon. At different times and places, marsh gas escapes from the hot spring. The gas sometimes ignites and ghostly-looking flames then flicker like will-o'-the-wisp<sup>8</sup>. The springs are about 45 degree Celsius and are reputed to have medicinal qualities

A resort development is being proposed for Toorwater to create an excellent tourist destination and thus promote a more extensive tourism industry potential in the region.

The proposed development includes, inter alia, the following:

- a) An *extensive spa-type health and recuperation resort* linked directly to the hot spring offering a luxury nature experience aimed at international tourists and executive level travellers.
- b) A *luxury 'Bush Camp'* set at the foot of the Rooikoppe. The bush camp will be a unique African experience in the form of luxury tented huts.
- c) *Luxurious freehold cottages* each privately located in the natural bush.

#### **g) Uniondale**

Uniondale, a small town in the eastern part of the Little Karoo, came about by the joining of two towns, namely, Hopedale and Lyon, in 1856. Initially known as a major ostrich-farming and wagon-building centre, the town is currently predominantly a sheep, goat, seed and apple farming community. Uniondale has a rich architectural heritage that includes the Otto Haager-designed Dutch Reformed Church. The town lies next to the Langkloof, along the N9 road en route to George, Knysna and Plettenberg Bay.

Uniondale is the major service center in the sub-region. However, the western sections of the DMA, namely the western Bo-Langkloof and the Klein Karoo are more functionally linked to George and Oudtshoorn. Both these settlements provide higher order retail, financial and trade services to the detriment of the Uniondale local economy, which is increasingly less able to support municipal services.



**Photo 8: Uniondale (DMP).**

The main economic activities in the town are agricultural service support, tourism and small-scale manufacturing, e.g. furniture manufacture, and food processing. The town is also increasingly housing farm workers who commute to surrounding farms. These are largely seasonal labourers who work from October to March, and thus face major cash flow problems in the winter months. Migrants

<sup>8</sup> Phosphorescent light seen on marshy ground.

from outside the region, the Eastern Cape and Baviaanskloof are also settling in the town (Revised Municipal IDP, 2003).

Uniondale offers a variety of sporting activities like squash, tennis, golf and horse riding. There are a number of short walks, hikes and mountain bike trails. For the 4x4 enthusiasts the Baviaanskloof and Mannetjiesberg in the Kammanassie Nature Reserve offer trails. Near De Hoop, just outside Uniondale, there are a number of sites where San rock art can be viewed.

The Uniondale watermill, with the largest wheel (second largest in the Southern Hemisphere) in South Africa, is situated on the town's edge and was built in 1854 ([www.thegreatkaroo.com](http://www.thegreatkaroo.com)). This watermill has been restored to its original form and now houses an art gallery and a restaurant.

Synonymous with Uniondale is its elusive ghost. During Easter weekend of 1968 a young woman died in a car accident some 20 km from the town. The first recorded sighting occurred during the Easter weekend of 1976. Since then many sightings have been recorded.

## 9.2 DEMOGRAPHY

The population of the DMA is dispersed throughout the region with large concentrations of people living in the two main towns namely, Uniondale and Haarlem. The municipal IDP identifies these two towns as having 2 800 and 1 800 people respectively.

**Table 1: Population Composition of the Eden District Management Area.**

ETHNIC GROUP				TOTAL POPULATION
Black	Coloured	White	Indian / Asian	
756	12 379	1 450	6	14 591

(Source: Census, 2001)

The estimated population of the DMA is 14 591 with the major ethnic group being the coloured population, representing some 84.84% to the total population of the DMA (refer to Table 1 above).

The sex structure is almost equal, with 49.17% of the total population being male. The female population constitutes the remaining 50.83%.

**Table 2: Current Population Structure of Eden District Management Area.**

No of House-holds	Sex		Ethnic				Total
	Male	Female	Black	Coloured	Asian	White	
3 528	7 174	7 417	756	12 379	6	1 450	14 591
100%	49.17%	50.83%	5.18%	84.84%	0.04%	9.94%	100%

The Provincial Government of the Western Cape's Migration Study (2002) assent to the fact that the coloured population forms the majority of the people living in the DMA. As is the case with most of the white population in the DMA, almost the entire coloured

population group was born in the DMA. In contrast with these figures, 94% of all black farm worker communities in the Eden District Municipality were born in the Eastern Cape Province. This also counts for the black farm worker communities in the DMA.

The primary reasons for the migration of the black farm worker communities could be attributed to the seeking of job opportunities. The mentioned document furthermore indicates that the majority of people living in the Eden District Municipality, including the DMA, are reluctant to migrate to other towns. It should, however, be mentioned that a certain amount of out-migration does take place from the towns surrounding George, this includes towns such as Uniondale.

The age composition of the DMA is normal with a slightly larger percentage of the population under the age of 30 years. Although 60% of the population is under the age of 30 years, the overall amount of adults (20 – 80+) exceed that of the children. From the table below, there is an indication that the overall population of the DMA is increasing by a reasonable percentage. In the period between 1996 and 2001, the overall growth rate was 17.405%, with the black population group showing the largest growth rate.

**Table 3: Growth tendencies in the DMA.**

ETHNIC GROUP	1996	2001	GROWTH ON DMA LEVEL
Black	414	756	+ 82.61%
Coloured	10 504	12 379	+ 17.85%
White	1 414	1 450	+ 2.55%
Indian / Asian / Other	96	6	- 93.75%
<b>TOTAL</b>	<b>12 428</b>	<b>14 591</b>	<b>+ 17.405%</b>

From the table above, it is evident that the black population has shown the most significant growth pattern in the DMA, while the white population only grew with only 2.55% since 1996. The overall population grew with 17.405% between 2001 and 1996.

The increase in the population can be directly related to the following three sources:

- Natural growth, i.e. the surplus of births over deaths in the existing population.
- Regional rural-urban migration – people living in the immediate hinterland move to local towns.
- Inter-regional migration. The large growth rates in the coastal towns appear to considerably exceed regional rural-urban migration rates. Officials suggest that the source of this growth is the Eastern Cape for the coloured and black population and Gauteng for whites (GRKK IDP, 2002).

### 9.2.1 DEMOGRAPHIC ASPECTS WHICH CAN HAVE AN IMPACT ON FUTURE DEVELOPMENT

The different estimations of the population of the DMA can complicate the allocation of funds canalised from national and provincial government to the Eden District Municipality, and subsequently the DMA.

Table 4 on the following page indicates the different population estimations for the DMA as well as the percentage of the total population of the Western Cape.

**Table 4: Population estimations of the DMA.**

SOURCE	WESTERN CAPE	EDEN	% REPRESENTED	DMA	% REPRESENTED
GRKK & Uniondale IDP (2003)	3 956 875	373 429	9.44	13 000	3.48
2001 Census Figures	4 524 335	454 924	10.06	14 591	3.21

These different estimations in the total population could influence the amount of government funds allocated to the DMA, which, in turn, could impact negatively on the development and service capabilities of the DMA.

The following aspects can have a direct impact on future development and include the following:

**a) Census Shortages**

Possibly the factor that may have the biggest influence on the future development of the region is census shortages. A general lack of information regarding the DMA hampers future development. The demarcation Board, for example, only lists the statistics for the Local Municipalities. Furthermore, according to the Municipal IDP the DMA has a population of 13 000, while census figures indicate a total of 14 591. Although this might seem as a small number of people, it may influence this sparsely population region.

**b) The impact of the population structure on the interpretation of development indicators.**

It is clear that the Black population is growing at the highest rate, while it is this particular group that has the lowest HDI.

The Coloured and Black population grows at a higher rate than the White group, while it is under this group where the largest backlogs in respect of literacy are occurring.

It is important that the imbalances between the various population groups be addressed, otherwise it can be expected that the average HDI will start declining and that illiteracy levels will increase.

**c) A tendency towards urbanisation.**

According to the 1996 Census Statistics, 44.4% of the population of the Uniondale Region lived in rural areas and 55.6% in the town. In 1991, 46.3% of the population were urbanised and 53.7% were living in the rural areas. Although the figure remains almost the same, the tendency towards urbanisation continues since 1996 and will, in future, impact heavily on the provision of infrastructure and services in towns.

**d) Composition of the population.**

The migrating tendency of the Black population to certain regions in EDM holds particular implications for future development planning as the immigrating Black population mainly consists of economically active young men and woman looking for

job opportunities, while the Whites are mainly farming, managing or owning small enterprises in the tourism and manufacturing sectors.

**e) Disproportionate population density.**

Diversity in the field of agriculture is influencing accompanying economic activities and plays a decisive role in settlement patterns. Larger population concentrations are therefore to be found in the fruit producing regions than in the livestock and wheat producing areas.

## 9.3 SERVICES AND INFRASTRUCTURE

### 9.3.1 GENERAL INFRASTRUCTURAL INFORMATION

According to the 2001 census figures, there are 3 528 households present in the DMA. Of these households, only 1.41% (54) live in informal dwellings (informal / squatter settlement).

Since 1996, the overall infrastructural development within the DMA has improved by some extent. Almost all sectors have shown significant improvements in service delivery. The only sector that was worse off than in 1996 was sewerage removal. The percentage of households with no sewerage removal worsened to 17.04%, compared to 16.9% in 1996. Sectors such as water provision (+4%), electricity supply (+20%) and access to telephone services (+5%) all improved since the 1996 census was undertaken.

**Table 5: General Infrastructure Information.**

GENERAL INFORMATION			
Total Household	Total Formal Dwellings	Total Informal Dwellings	Total Traditional Dwelling
3 528	3 698	54	73
100%	96.68%	1.41%	1.91%

(Source: Census, 2001)

### 9.3.2 SERVICE STANDARDS: SEWAGE REMOVAL

More than 601 households in the DMA do not have any access to water borne sanitation. This figure represents 17.04% of the total number of households in the DMA.

According to Census statistics, the service standards are as follows:

- a) A total of 57.74% (2 037) of all households have access to 'n flush toilet system, while 25.11% (886) of people make use of either a pit latrine, bucket system or chemical toilet.
- b) More than 82 % of all households are equipped with some system of sewerage removal, which include either soakaway, suction, or pit systems. The remaining 17.04% does not have access to any sanitation.

The percentage of households in the entire EDM without access to sanitation (6.5%) is far lower than the percentage of households in the DMA that do not have access to any such activities (17.04%).

The Uniondale IDP (2002) states that sanitation is generally adequate in the towns of Uniondale and Haarlem although there are problems in with pipe blockages in the latter. There also appears to be inadequate sanitation for many farm workers. This may be partly due to the costs of installing waterborne sanitation and its treatment either by septic tanks or package treatment plants. These costs are even more questionable in a situation where less and less permanent housing may be required on farms.

The above-mentioned document, furthermore states that more than 900 toilets are needed on farms to address the current shortages.

**Table 6: Standards of Sewage Removal.**

<b>SEWAGE REMOVAL</b>					
Sanitation availability per Household					
Total Household	Flush	Pit Latrine	Bucket Latrine	Chemical	None
3 528	2 037	558	318	10	601
100%	57.74%	15.82%	9.01%	0.28%	17.04%

(Source: Census, 2001)

### 9.3.3 SERVICE STANDARDS: WATER RETICULATION

According to the Municipal IDP (2002), approximately 800 rain water tanks are required for farm worker housing, although, particularly in the Little Karoo and Kammanassie River Valley, farmers require a more reliable water supply.

According to Census data, 40.36% of households have access to running water from within their dwelling, while 45.55% have access to water points situated on their erven.

Approximately 501 households rely on public taps, boreholes, natural streams (springs, rain-water, dams, and rivers), vendors and other sources of water (refer to Table 7 below).

Problems associated with stormwater flooding have been raised in Haarlem and Lyonville (Uniondale). The Uniondale IDP (2002) stated that these problems should require short-term solutions as well as a review of the approach to stormwater and catchment management. Furthermore, the 1:50 year flood lines have not been determined for rivers in Haarlem and Uniondale.

**Table 7: Standards of Water Reticulation.**

<b>WATER RETICULATION</b>							
Number of Households with Access to Running Water							
Water Dwelling (tap)	On Site (tap)	Public tap < 200m	Public tap > 200m	Borehole	Natural	Vendor	Other
1 424	1 607	207	95	12	161	13	13
40.36%	45.55%	5.87%	2.69%	0.34%	4.56%	0.37%	0.37%

(Source: Census, 2001)

### **9.3.4 SERVICE STANDARDS: CONDITION OF ROADS AND STREETS**

The road network within the DMA is generally good and there is a comprehensive network of primary (tarred) and secondary (gravel) roads. More frequent maintenance is required on the gravel roads, particularly in the fruit harvesting season to avoid damage to the fruit. Gravel roads in the north of the DMA have been identified for upgrading by the District Municipality's Department of Roads (Municipal IDP, 2002).

Both Uniondale and Haarlem are bypassed by the regional routes. This considerably lessens opportunities for business and tourism. Residents in both towns requested that the possibility of re-aligning the external intersections to give priority to the through route rather than the bypass be investigated (Municipal IDP, 2002) (Refer to Plans 2.3, 7 & 7.1 for re-alignment).

A concern that has been raised is the proposed toll system on the N2 between George and Port Elizabeth. Should such a toll system be imposed on the N2, the R62 (main road 44/1) through the Langkloof would have to be substantially upgraded to handle the additional traffic that might get displaced from the N2 (GRKK IDP, 2002). Currently, this road has no shoulder and together with added large trucks bypassing congestion on the N2, this may create significant traffic hazards, especially in the harvesting season.

### **9.3.5 SERVICE STANDARDS: RAILWAY LINES**

The Apple Express is one of only two narrow gauge steam trains still operational in South Africa and currently boasts one of the longest working narrow gauge tracks. The Apple Express steam train, which operated between Port Elizabeth and Avontuur was inaugurated in 1903 while servicing the local farming communities and running passenger trips during the weekends.

Passenger services were discontinued in 1946 and the train was redesigned to function as a transport medium for apples grown in the Langkloof. As demand grew for outings on the Apple Express, the train was reintroduced on a trail basis in 1993.

Due to the importance of the Apple Express as a tourist attraction, members of several sectors of society have decided to revamp, revive and remarket this operation. For this purpose a non-profit organisation was formed, namely the Port Elizabeth Apple Express (PEAE).

Currently, there are two rail lines running through the DMA representing considerable investment. To the north, the Johannesburg – Mossel Bay line cuts into the Little Karoo at Toorwater. In the south, the narrow gauge line from Port Elizabeth terminates at Avontuur. This line is hardly used due to the shift from rail to road freight. Their greatest potential probably lies within unscheduled tourist trains (Municipal IDP, 2002).

### **9.3.6 SERVICE STANDARDS: REFUSE REMOVAL**

Solid waste management does not seem to pose a problem in the majority of towns in the DMA. Only Haarlem identified solid waste management as being a problem that need to be addressed. There is, however, a problem with the disposal of car wrecks on some of the farms.

Almost all households in the DMA have access to refuse removal, either by the local authority or by their own arrangements. Almost 38% of households are serviced by the local municipality, either once a week or less often. Approximately 2 000 (56.26%) households make use of their own refuse dump for refuse removal, while 119 (3.37%) households has no access to such facilities.

**Table 8: Status of Refuse Disposal Services.**

<b>REFUSE DISPOSAL</b>				
Number of Households with Access to Refuse Disposal Services				
<b>Local Authority (once a week)</b>	<b>Local Authority (Less often)</b>	<b>Communal refuse dump</b>	<b>Own refuse dump</b>	<b>No refuse disposal</b>
1 133	209	80	1 985	119
32.11%	5.92%	2.27%	56.26%	3.37%

(Source: Census, 2001)

### 9.3.7 SERVICE STANDARDS: ELECTRICITY

The 2001 census data estimated that a total of 3 023 households are provided with electricity. This constituted some 85.69% of all households. The remaining 14.31% do not have access to local electricity and have to rely on candles and paraffin for their energy requirements as well as wood for fuel.

According to the Municipal IDP (2002), 200 farm workers houses do not have electricity. This document further states that alternative sources of electricity, such as solar panels, should be investigated.

**Table 9: Provision of Electricity.**

<b>ELECTRICITY</b>					
Availability of electricity per household					
<b>Local Electricity</b>	<b>Gas</b>	<b>Paraffin</b>	<b>Candles</b>	<b>Solar</b>	<b>Other</b>
3 004	8	14	486	11	7
85.15%	0.23%	0.40%	22.28%	0.31%	0.20%

(Source: Census, 2001)

### 9.3.8 SERVICE STANDARDS: TELEPHONE SERVICES

The 2001 Census data estimated that 96.32% of households in the DMA have access to a telephone. Of these 3 394 households, only 14.63% has a telephone inside their dwelling, while 81.65% has to seek such services outside of their own home. A small percentage of households have a cell-phone in their dwelling (5.27%), while more than double the amount of households have both a cell-phone and telephone in their dwelling (10.83%).

A total of 61.67% has a telephone nearby their dwellings, while only 3.88% of households are not located near a telephone. A total of 130 households (3.68%) do not have any

access to a telephone. This figure has decreased by more than 4.6% since 1996, when 239 households was without such a facility.

According to the IDP, access to telephones was a problem for labourers, particularly in emergencies. Cell phone reception, however, is a problem in some areas. Proposals were also made for public telephones to be installed at Welgelegen, Dwarsfontein and Highview.

**Table 10: Provision of Telephone Services.**

TELEPHONE							
Availability of telephone services per household							
Dwelling only	Cell-phone	Dwelling & Cell-phone	Neighbour	Public Phone	Other Nearby	Not Nearby	No Access
516	186	382	420	1 605	151	137	130
14.63%	5.27%	10.83%	11.90%	45.49%	4.28%	3.88%	3.68%

(Source: Census, 2001)

### 9.3.9 SERVICE STANDARDS: HEALTH SERVICES

Alcoholism, tuberculosis and respiratory infections appear to be the main health problems in the DMA, while HIV/Aids do not seem too much of a problem at this stage. General services such as pre-natal care, ante-natal care, child health care, immunisation, treatment of hypertension (high blood pressure) and gastro-enteritis are delivered by the mobile clinics (South Cape District Council, 1997).



**Photo 9: Mobile clinic in Uniondale (DMP).**

Access to health facilities seems to be the major problem in the rural areas. Many areas are dependent on the above-mentioned mobile clinics that visit the smaller towns on a weekly or monthly basis, but due to a shortage of funds, remote areas are visited only every six weeks (GRKK IDP, 2002).

The nearest permanent doctor is in Uniondale where there is a hospital, while medical specialists are only available in George (Municipal IDP, 2002).

### 9.3.10 SERVICE STANDARDS: CRIME AND SECURITY

In the GRKK IDP (2002) it is stated that, in general, it seems as if the area experiences a generally low crime rate. The SAPS must, however, become more accessible, particularly in the Bo-Langkloof, while there are only police stations in the towns of Uniondale and Herold. It is suggested that a satellite station be opened in Haarlem to cope with the increasing crime figures, especially amongst the youth. The SAPS, furthermore suggested that streetlights be erected in the latter town.

It is, however, evident that violent crimes (normal assault and assault with the intention to do bodily harm) are on the increase. One of the main reasons for this tendency is the circulation of money and availability of alcohol. Economic crimes follow a reasonably seasonal trend. The reason for this is the seasonal workers that stop working at the end of May and subsequently have to steal to make a living (Pers. comm. SAPS, 2003).

A very effective and well organised Farm Guard exists in the DMA. This Farm Guard is divided into 13 wards throughout the region and covers the entire DMA.

### 9.3.11 SERVICE STANDARDS: SPORTS AND RECREATION

Access to sport, recreation and cultural facilities, e.g. museums, theatres and cinemas are important aspects of a community's well-being. Unfortunately, due to historical imbalances, most of these facilities are located in the larger towns. Furthermore, there is an imbalance in the provision of sport and recreational facilities between rural and urban areas.

According to the Municipal IDP (2002), community institutions are extremely weak. This is largely due to the dispersed population. Uniondale and Haarlem, the two main centers, however, have active civic buildings and political parties.

As is the case with community facilities/institutions, sport and recreation facilities are mainly distributed in Uniondale with a few sporting facilities in Avontuur and Haarlem. Some sports facilities in Uniondale are poorly maintained, for example, tennis courts in Lyonville. There is, however, a severe shortage of sports facilities in the Bo-Langkloof.

### 9.3.12 SERVICE STANDARDS: HOUSING



**Photo 10: Low-cost housing development in Lyonville (DMP).**

Unlike many other urban and rural areas, very few informal houses can be observed in the study area. Two RDP housing schemes of 222 and 198 houses respectively have been built in Uniondale and Haarlem. Although there were sufficient numbers of units to cater for the housing backlog, there are, however, still 300 households requiring housing in Uniondale. It is thought that these households are migrants from outside the region (Uniondale IDP, 2002).

Above and beyond the 300 households requiring housing, a further 742 farm workers in the Bo-Langkloof require housing. The shortage of affordable housing has led to proposals for agri-villages in certain areas.

## 10 ECONOMIC ENVIRONMENT

### 10.1 SOCIO-ECONOMIC STATUS

Overall, the Western Cape has the highest Human Development Index (HDI) compared to South Africa's other provinces. The high HDI of 0.93 (HSRC, 1995) for the white population reflects the higher levels of education, income and life expectancy. The HDI for coloureds is 0.50, with an even lower HDI for Blacks (0.47). Although a higher life expectancy is indicated by the fact that the older age groups are increasing, the income and education discrepancies (especially in the more rural areas) between the different race groups need to be addressed before a rise in the HDI could be expected (South Cape District Council, 1999).

Table 11 below illustrates the socio-economic distribution per age group in the DMA. The table also indicates the percentage of the various age groups in relation to the DMA. In this table it is evident that the DMA represents a evenly distributed population with almost 60% of the population over the age of 20 years. The largest percentage of the population, however, falls in the age group 30 – 49 years.

**Table 11: Age Structure of District Management Area.**

INDIVIDUALS PER AGE GROUPING						
0 – 9	10 – 19	20 – 29	30 – 49	50 – 64	65 – 79	Over 80
3 061	3 037	2 356	4 024	1 414	587	111
20.98%	20.81%	16.15%	27.58%	9.69%	4.02%	0.76%

(Source: Census, 2001)

According to the 2001 census figures, the DMA has an illiteracy level of 6.89%. The illiteracy rate is, however, directly related to low income levels and will push the HDI further down if this problem is not attended to. It is imperative that not only the illiteracy level but functional illiteracy level be addressed as soon as possible. Functional illiteracy is indicative of an inability to understand abstract information and usually occurs when a person has completed less than seven years of formal education and at least passed grade seven. From the table on the next page it is evident that more than 43% of the population in the DMA only completed some or the entire primary school.

A lack of even functional illiteracy was evident amongst attendees at the public meetings that were held during the IDP process. There are only 150 people in management and professional positions in the DMA according to 1996 Census, suggesting that there is a severe shortage of entrepreneurs if the 10% norm is applied (Municipal IDP, 2002).

**Table 12: Education Level within the DMA.**

EDUCATION LEVEL					
Some Primary	Complete Primary	Some Secondary	Grade 12	Higher	No Schooling
2 762	891	2 399	986	446	1 006
32.53%	10.49%	28.26%	11.61%	5.25%	11.85%

(Source: Census, 2001)

From the table below, the census figures would suggest that the majority of the population is currently in elementary occupation (67.62%). Almost 360 people are situated in either senior managerial, professional, technical or associated professional occupations in the DMA.

**Table 13: Occupation per profession in the DMA.**

OCCUPATION PER PROFESSION										
Manager	Profes-sional	Techni-cal	Clerks	Service Related	Skilled	Craft & Trade	Plant Machine	Elemen-tary	Undeter-mined	Total
147	77	133	167	177	352	148	159	3 358	248	4 966
2.96%	1.55%	2.68%	3.36%	3.56%	7.09%	2.98%	3.20%	67.62%	4.99%	100%

(Source: Census, 2001)

According to Table 14 below, it is evident that the DMA represents some very poor people. A total of 106 (2.13%) people do not have any form of income, while 73.43% of the economically active population earn less than R400 a month – only 11.40% of the people in the entire EDM earn less than the said amount. More than 16% of the population of the DMA earn between R401 and R1 600 a month.

**Table 14: Monthly Income Level.**

MONTHLY INCOME 'R'									
1-400	401-1600	1601-6400	6401-12800	12801-25600	25601-51200	51201-102400	102401-204800	>204801	No Income
3 651	832	267	81	19	3	10	3	0	106
73.43	16.73	5.37	1.63	0.38	0.06	0.20	0.06	0	2.13

(Source: Census, 2001)

## 10.2 UNEMPLOYMENT LEVELS

The GRKK IDP (2002) identifies two distinct patterns of unemployment, urban- and rural unemployment, of which the former is of greater importance to the study area.

### 10.2.1 RURAL UNEMPLOYMENT

This pattern of unemployment is found in the remote rural areas particularly between Calitzdorp and Ladismith and Riversdale, southeast of Heidelberg, the De Rust-Oudshoorn corridor, and the DMA. Unemployment in these areas is much more of an issue as there are extremely limited alternative options.

According to the Uniondale IDP (2002), approximately 5 300 people are potentially economically active. From the above-mentioned number, 4 200 people are employed. This would suggest an unemployment rate of 20.8% although the demarcation board suggests that only 450 people are unemployed, i.e. unemployment rate of 8.5%. The IDP furthermore states that the difference may be due to the definition used for unemployment, such as, economically active people who chose not to work for remuneration for various reasons, for example, housewives, disabled.

Census figures for unemployment in the DMA differ somewhat from those mentioned in the IDP. According to the census figures, employment is currently at 35.57% (4 968), while unemployment is at 7.49% (1 046). In discussions held with the SANP, it is suggested that the unemployment figure for the DMA could even be as high as 60 – 70% (Pers. comm. SANP, 2003).

**Table 15: Unemployment levels.**

EMPLOYMENT SITUATION				
Region	Employed	Unemployed	Not Economically Active	Under 15 years
DMA	4 968 (35.57%)	1 046 (7.49%)	3 311 (23.71%)	4 641 (33.23%)
EDM	30.05%	10.81%	24.84%	28.50%

(Source: Census, 2001)

## 10.3 UNIONDALE INTEGRATED EMPOWERMENT PROJECTS

Uniondale Integrated Empowerment Projects (UnIEP) is a Section 21 Company based in Uniondale that is aimed at eradicating poverty and developing the region as a whole. UnIEP was registered as a Section 21 Company on 19 March 2003.

The main business of UnIEP is as follows:

- Development of projects into profitable businesses.
- Empowerment of the community through training (e.g. Belhar College & CETA) / limited study grants for students.
- Improving tourism through, *inter alia*, the UnIEP Building as well as thorough marketing of projects and products.

- d) Providing a support base for all projects through administrative skills, infrastructure, mentorship, etc.
- e) Determining the community's social needs and initiating new projects and supporting existing projects that would serve their needs (e.g. Homecare and Community Kitchen).
- f) Developing new projects for profitable gains e.g. pig farmers.

All projects initiated by UnIEP are performed through the communities. No consultants are used as the capacity to perform certain projects is built within the existing communities in conjunction with the EDM while using existing infrastructure (**Refer to Annexure 5**).

The vision of UnIEP is to eradicate poverty in the communities Uniondale while creating a well-being for these communities, while their mission is four-fold:

- a) To create a micro-economy in Uniondale through its integrated projects.
- b) Upgrade the UnIEP Building as the flagship of the skills of the community.
- c) Empowerment through training of the youth.
- d) To create a climate of entrepreneurialship.

Through the experience gained by implementing projects, UnIEP has proven that job creation is not the sole solution to the crime wave in the country, but rather a changing of a mindset, a broadening of horizons, and the creation of a climate in which people take charge of their own lives, destinies and challenges, thereby declaring itself a process and not a project to combat poverty (UnIEP, 2003).

In total, almost 60 people are permanently employed through projects initiated by UnIEP, while 45 people are employed on a temporary basis. Of the 58 people who are permanently employed, as many as 53 people are women, while 30 of 45 temporary workers are also women. There are also 144 apprenticeships at the Belhar Community College, which is under the management of UnIEP.

There are also several social projects such as *Project rural schools* where shoes and jerseys are provided to the poorest schools, *Community Care-givers* provides home care for bedridden patients, such as the elderly and HIV/Aids and TB patients, and the *Community Kitchen*, which feed 150 – 300 people a day.

As soon as funding and partners can be acquired, several other economic projects will be given effect to. These include, *inter alia*, Toorwater Luxury Hot Water Spring Resort, which will involve more than 250 people from the community and have direct benefits to more than 750 community members (refer to # 9.1) as well as a community-run wilderness area in the Kammanassie Nature Reserve. This project will have direct benefits to approximately 105 community members.

## 10.4 CURRENT ECONOMIC ACTIVITIES

Almost all the settlements in the DMA appear to be farming service centres and, although different, display a very distinct character.

According to census statistics, the sector which provides the most employment opportunities in the district is the farming industry, which employs approximately 3 238 people. The second largest sector is the trade sector, which employs more than 450 people, followed by the social services sector (refer to table 16 on the following page).

**Table 16: Employment per economic industry.**

EMPLOYMENT PER INDUSTRY										
Farming	Manufacturing	Utilities	Construction	Trade	Transport	Business	Social Services	Private Household	Undetermined	Total
3 238	146	13	105	456	37	47	389	290	248	4 956
65.33%	2.95%	0.26%	2.12%	9.20%	0.75%	0.95%	7.85%	5.85%	5.00%	100%

(Source: Census, 2001)

The various employment generating sectors in the region are described below:

#### 10.4.1 AGRICULTURE

Agriculture provides the largest percentage of employment in the region with two thirds (65.33%) of the economically-active population of the DMA involved in this sector.

The fruit industry in the Langkloof is the major generator of work. The Langkloof and the Little Karoo export a large percentage of their products and are exposed to globalisation pressures. A concern, however, in this regard is that it is suggested that agriculture, although the major contributor to the gross geographic product (GGP) in the region, may be shedding about 10% of jobs per annum due to pressure to increase efficiencies (Pers. Comm, Langkloof Farmers).

Another source of concern that requires investigation is that the long-term livestock carrying capacity in the extensive farming areas of the Little Karoo is declining (Uniondale IDP, 2002).

In general the agricultural potential is being well exploited. Rainfall, soil, slope and the availability of irrigation being the main driving factors. Changes in local and global markets can have profound impacts on the profitability of individual farming activities and this has had profound impacts on industries such as the ostrich industry (South Cape District Council IDP, 1999).

There are currently four agricultural associations in the DMA. These include, inter alia, the following:

- a) **Avontuur Farmers:** Their activities are mainly focused on fruit farming, dairy, sheep and cattle, as well as game, cereal crops, vegetable seed, potatoes, ostriches, honey-bush tea and wild flowers.
- b) **Uniondale Mohair and Wool Cultivators Association:** Mainly sheep and Angora goat, as well as Boer-goats, luserne, ostriches, dairy, 'Boer perd' breeders, aloë ferox, vegetable seed and to a lesser extent fruit.
- c) **Noll Farmers:** Mainly fruit, dairy, ostriches, honeybush tea, proteas, luserne and sheep and cattle.
- d) **Kammanassie Farmers:** Sheep, cattle, vegetable seed production, fruit, luserne and ostriches.

- e) **Langkloof Boere Kooperasie:** This is not an agricultural association but a local co-operative. Their headquarters is situated in Avontuur and they have branches in Uniondale, Noll, Misgund, Joubertina and Aberdeen.

#### 10.4.1.1 FRUIT CULTIVATION

The Bo-Langkloof and Langkloof are important apple-producing regions but they also export pears, plums, apricots and nectarines. Some of the Langkloof estates welcome tourists and will arrange tractor-and – trailer tours of orchards and packsheds. Two visually spectacular times to visit the Bo-Langkloof and the Langkloof is from late March to early June when the leaves of fruit trees change to dazzling autumn colours. Throughout the region the different fruits are harvested from the beginning of November to the end of July.<sup>9</sup>

#### 10.4.1.2 ALOE CULTIVATION

Aloes are cultivated and harvested on a private farm in the Uniondale district. The latter farm is only one of two farms in South Africa where aloes are cultivated. The reason for the few farms is that there are enough aloes growing in the wild to sustain the current demand for aloe products and that aloes are not a viable crop for farmers not involved in the aloe factories.

There are currently only two aloe raw material factories in the country, namely African Aloe in Uniondale and the Mossel Bay Albertinia Aloe Producers. These two factories supply the raw materials to cosmetic factories, pharmaceutical companies and other uses of aloe products. African Aloe is the manufacturer of health and natural products from the Aloe Ferox plant.

African Aloe sets out to determine the feasibility of growing aloe in South Africa with the view to enhancing the development of the agricultural sector in an economically and an environmentally sound way. Aloes have the added ability to help control soil erosion, create jobs, earn revenue and enhance communities living in the poor rural areas of Southern African ([www.africanaloe.com](http://www.africanaloe.com)).

The company produces high quality Aloe Ferox raw materials, Aloe crystal, Aloe Gel and Aloe Health Drinks. African Aloe is also the main distributor of raw materials to processing factories such as the aloe factory at Albertinia. Currently, 90% of the Aloe products are being exported to, amongst others, Germany, Switzerland, Korea and Japan. The company has an annual turnover of approximately R3 million and provides an income to 150 ‘tappers’ (harvesters).

*The information pertaining to aloe farming and products was obtained from the website of African Aloe ([www.africanaloe.com](http://www.africanaloe.com)).*

---

<sup>9</sup> Information received from Langkloof Tourism Bureau – Art Café Mitz

**a) Aloe Bitters Crystal / Gum**

Aloe processing begins with the harvesting of the leaf from the plant in the field. The Aloe leaves are stacked in a ring around a depression that is made in the ground and lined with plastic. The Aloe sap, which is a very dark, treacle-like liquid, is allowed to seep from the leaves into the depression.

The sap, which may take several hours to drain from the leaves, is then collected in a drum and boiled – this process can take up to 4 hours. When it cools it solidifies into a crystalline lump. Great care has to be taken that the sap is not overcooked or burnt as this can reduce the value of the crystalline. Crystalline is generally sold in this form.

The most frequent use of this product is for its laxative qualities. It is used in numerous medicinal products.

**b) Aloe Ferox Gel**

Aloe Ferox Gel is a thick concentrated extract made from the whole aloe leaf and is used as a base or an additive in the cosmetic industry. The Aloe Ferox Gel transports moisture, nourishment, soothing and healing properties to dehydrated or damaged skin cells, rendering a first-aid beauty treatment in one.

**c) Aloe Juice**

Aloe Juice is made from pure extract of the whole Aloe Ferox leaf. In the same way as aloe gel applied topically relieves many skin irritations, soothes burns and moisturises the skin, taken internally the properties are very similar relieving various stomach disorders.

**d) Aloe Ferox Leaf Powder**

For the production of Aloe Ferox Leaf Powder, leaves already cut by the tappers and from which the bitter sap has drained are collected from the fields, washed in the factory and then sliced very thin. Slices are then dried in the sun and milled into a fine powder.

The production process is sufficiently mild to retain the minerals as well as a range of amino acids.

**10.4.1.3 HONEYBUSH TEA FARMING**

The harvesting of honeybush tea has traditionally been an important activity in Haarlem despite the diminishing natural population of *Cyclopia spp.*, which directly affected the income of the harvesters. In addition, there was a need to develop business skills in the area and in 1999 the Haarlem community approached ASNAPP (Agribusiness in Sustainable Natural African Plant Products) for assistance.

ASNAPP in partnership with the Universities of Stellenbosch and Rutgers (New Jersey) provided the technology transfer and support that enabled each Haarlem farmer to purchase and cultivate Honeybush seedlings.

In 2000, the Haarlem Tea Farmers' Trust joined forces with ASNAPP to establish their first commercial Honeybush plantation. Their first objective was to establish a nursery to

ensure a consistent supply of high quality planting material to farmers in the area. In October 2001 the Trust harvested its first crops.

Presently, many of the seedlings are sold to a Griqua community in Plettenberg Bay who has started with their own commercial plantation. The exchange between the two communities forms part of ASNAPP's believe that rural farmers could empower each other by exchanging information and by sharing experiences.

#### **10.4.2 FORESTRY**

Due to the slightly drier climate in the central and northern parts of the DMA, timber is imported from the Knysna region by the Uniondale furniture manufacturers as it can be cured faster due to the area's dry climate (Uniondale IDP, 2002).

Uniondale have been identified as having important raw material for secondary timber and furniture manufacturing industries, while the major sawmills are located at George and Knysna. Ease of distribution is made possible through the well developed transport infrastructure of the region.

#### **10.4.3 CONSTRUCTION**

Approximately 150 people working out of Uniondale are involved in construction, mainly as small builders in the towns and on surrounding farms. This sector is extremely sensitive to demand in the residential, commercial and agricultural sectors (Uniondale IDP, 2002).

The 2001 census figures would suggest that only 105 people in the DMA is currently involved in the construction sector. Construction is only the seventh largest employment generator (2.12%) in the region and is fairly labour intensive. The construction sector is cyclical by nature – with periods of high growth alternating with periods of low and even negative growth.

This industry is also closely linked with several other economic industries, for example, the forestry industry, which provides raw materials for the construction industry. Many of the markets for forestry products are located in the Cape Metropolitan Area due to the growing demand for construction products.

#### **10.4.4 MANUFACTURING**

The manufacturing sector is the sixth largest employment provider in the region and provides almost 2.95% (146) of job opportunities in the DMA. This sector is largely based on agro-processing, particularly fruit on the Langkloof farms as well as wood and aloe products in Uniondale.

The small size of this sector indicates the general lack of vertical integration and value adding in agriculture. In some cases farmers have constructed large packaging plants which have considerably increased employment. However, the entry costs to this level of production are prohibitive of most farmers (Uniondale IDP, 2002).

Factors that are conducive to the growth of the manufacturing sector include, *inter alia*, the following:

- a) A modern infrastructure including a well-developed road and rail system.
- b) Sufficient areas of land zoned for industrial use, in most towns.

- c) The proximity to local primary sources.
- d) Proximity to primary markets in Port Elizabeth and Cape Town.
- e) The economic benefits accruing from links with other industries in the area, including a strong service sector (George Municipality Development Profile, 2000).

#### 10.4.4.1 TIMBER AND FURNITURE INDUSTRY

The greatest significance of the furniture and timber processing sector is its diversity, ranging from rare wood furniture, functional furniture, treated poles, building materials, pre-fabricated houses, wooden frames and general joinery.

*Klein Karoo Meubels* is situated in Uniondale and specialises in hand-made furniture of excellent quality. The location of the company's factory and showroom is specifically chosen due to the warm climate and proximity to the Tsitsikamma forests.

*Klein Karoo Meubels* concentrate on pure African wood products, for example, Caprivi Kiaat (i.e. teak), Africa Rose Wood as well as well-known wood products from the Knysna region. Besides the factory and showroom in Uniondale, two other showrooms are situated in both Brooklyn Pretoria and Klerksdorp, respectively.

The products of the factory range from unique occasion table designs to utility objects in the house to professional office furniture.

Other craft industries that go hand-in-hand with the furniture crafting are beads, curios, clothes, metal works, clay products, glass works etc. There is a great demand (locally and internationally) for these diverse curios because they are hand-made, highly creative, colourful, and made from indigenous wood and clay (refer to Chapter 26).

#### 10.4.4.2 MOHAIR PRODUCTION

The political situation in South Africa continues to impact on the mohair industry via labour prices, taxes and security considerations. The formation of national parks in the Karoo has also reduced the farm area available for mohair production.

Mohair derives from the *Angora goat*, which in turn originated in the Tibetan highlands. The outstanding quality properties of the mohair fleece have long been recognised. The fibres softness, receptiveness to dyes and exceptional versatility continue to be rediscovered since ancient times. The Western Cape Province is home to the oldest Angora goat in the country and producers have consistently produced most of world's high quality clip, obtaining the highest prices for the past 30 years<sup>10</sup>.

Angora goats thrive in the arid Karoo and Eastern Cape areas. World demand for mohair has always depended on fashion - changing supply and demand created huge fluctuations in prices, seriously affecting producers.

Compared to many other fibres, Cape mohair is much sought after in the world terms. Its lustre, moisture absorption, overall resilience and appeal, silky texture and durability, have its origin from the breeder.<sup>11</sup>

<sup>10</sup> Proudly SA set to boost dwindling Mohair Industry: <http://www.proudlysa.co.za/about/pr2003/pr0127.html>

<sup>11</sup> Mohair South Africa: Growers: <http://www.mohair.co.za/home/start.asp?cat=growers&id=0>

Mohair farms are situated in the Kammanassie, Baviaanskloof and Uniondale areas,. In Uniondale the total mohair production in 2003 was 50 400 kg which had a total turnover of R 2 822 400 (Loots, 2003).<sup>12</sup>

#### 10.4.5 TRADE AND CRAFT

The trade and craft sector is the second largest employment industry in the DMA, providing employment to more than 450 people. It is mainly focused in Uniondale and suffers from income leakage to the surrounding towns such as George and Oudtshoorn. Wealthier residents are able to travel to these towns and make large monthly bulk purchases (Uniondale IDP, 2002).

Surprisingly, there is little evidence of informal sector activity notwithstanding high levels of unemployment.

WESGRO identifies a number of different categories within which craft activity can be classified. These include the following:

- a) **Traditional:** Culturally specific products of which the meaning and significance is generated and shared by members of a specific community.
- b) **Designer goods:** A deliberate adaptation of traditional design motifs and production processes to create a more commercially viable item.
- c) **Craft art:** Products which are created entirely by hand by very skilled producers. Items are of high aesthetic value and design is an important component.
- d) **Functional wares:** Mass-produced handmade goods, often of superior design and production quality, created in small batch production processes in craft workshops or (small) factories.
- e) **Souvenirs:** Generally inexpensive trinkets of simplified crafts, which sell as memories of a particular location or experience.

The major products in the sub-sectors of the DMA include, *inter alia*, textiles, beadwork and woodwork.

A recent audit of craft industry assets in the Western Cape has highlighted the fact that the sector's real strength in the province lies in retail. There are more than 300 retail outlets in the province and a significant number of informal and formal craft markets, many of them attached to tourist destinations and festivals. In addition, there are regular agricultural shows and other special events in the rural areas, which usually include some form of craft market as a core activity, e.g. Uniondale Agricultural Show (Wesgro, 2000).

---

<sup>12</sup> Loots F 2003: Mohair South Africa Ltd

### 10.4.6 TOURISM

Tourism has been identified as one of the sectors with the largest potential for growth and development in the Western Cape. This is particularly valid in the DMA, where the unique diversity of landscapes, cultures and natural resources imply huge potential for sustainable tourism.

The region has a wealth of diverse resources. The primary intrinsic attributes being the exceptional aesthetic quality and beauty of its landscapes, numerous recreational facilities and options, a range of cultural heritage sites, interesting diversity of communities, and note-worthy agricultural enterprises.

The EDM must take proper time in developing this industry and ensure that it is the people as a whole that benefit, not just a select few and it must ensure that the trump cards it holds at the moment are used to their best advantage, to extract the best deals from an economic, social and ecological point of view.

Currently the tourism sector is contributing 8.7% to the GRP and 8.6% of employment opportunities.

The Municipal IDP (2002) recognises the considerable growth in the tourism sector. The document, furthermore, indicates the numbers of seasonal visitors in the region for both domestic and foreign tourists. During the period September 1998 to June 1999 a total of 450 domestic tourists visited the Uniondale region, while 84 foreign tourists visited the region during the same period. Table 17 below illustrates the various types of accommodation found throughout the DMA. In addition, it should be noted that the proposed resort development at Toorwater could offer another dimension to tourist facilities in the DMA, and subsequently attract many national and international tourists.

**Table 17: Tourist facilities in the DMA.**

TYPE OF ACCOMMODATION	UNIONDALE TOWN	UNIONDALE RURAL	BO – LANGKLOOF
Farms (Hunting and Guest Farms)	-	19	-
Guesthouses	17	115	66
Hotels	1	-	-
B&B	13	-	-
Caravan Parks	1	-	-

(Source: Municipal IDP, 2002)

The area comprises a variety of recreation areas, offering a broad spectrum of tourist opportunities. Tourism is also becoming a major alternative for agriculture in the DMA and includes, amongst others, the following:

- Scenic beauty of pristine areas and panoramic views of five mountain ranges (Swartberge, Kammanassie, Outeniqua, Kouga and Tsitsikamma Mountains).
- Hiking trails in the Kammanassie Nature Reserve and Baviaanskloof Wilderness Area.
- 4X4 routes such as Burchells Road, Dwarsfontein, Williamsburgh, Kammanassie, Gamkaberg and Duiwelsberg.
- Horseback riding on nature trails.

- e) Rich historic cultural sites, including the various San Rock Art sites at Mountain Pastures Game Reserve at De Hoop, missionary churches in, amongst others, Haarlem and Molenrivier as well as Uniondale's historic buildings.
- f) Unique range of bird species, which can be viewed at, amongst others, the Baviaanskloof Wilderness Area and Kammanassie Nature Reserve.
- g) Unique population of rare Cape Mountain Zebra at the Kammanassie Nature Reserve.
- h) Festivals such as the annual Agricultural Show and International Horse Competitions in Uniondale, the Karoo to Coast Mountain Biking Challenge between Uniondale and Knysna on the Prince Alfred Pass and the Gail Strever Artist Week.
- i) Proposed development of a luxury lodge and spa at Toorwater.

#### **10.4.6.1 PRINCE ALFRED'S PASS**

The Prince Alfred Pass is one of South Africa's many picturesque mountain passes. The pass, which runs over the Outeniqua Mountains and through the Keurbooms River Valley, offer the primary tourist route to enter the DMA via Knysna or Plettenberg Bay.

The road from Knysna to Avontuur in the Langkloof finds a spectacular way over the Outeniqua Mountains by means of the pass named after Prince Alfred, second son of Queen Victoria. The pass leads through dense forests, pine and gum plantations, the forestry station of Diepwalle, through the "dal of varings" (dale of ferns), climbs steeply to a 1 045 meter summit and descends into the fruit-producing valley of the Langkloof (Bulpin, 1990).

The pass was built by Thomas Bain, the son of the esteemed road-builder Andrew Geddes Bain. The proposed route was a bridle path used for centuries by early inhabitants and forest elephants. At the time, it was stated that the work would be "more costly than anything attempted in the whole Colony". The estimated cost of the pass was £15 000.

Work on the pass began in 1860. The road would cut through dense virgin forest from Knysna to De Vlugt and then Avontuur. Every mile of work was done with convict labourers who had to cut and level, often building stone retaining walls to hold the road where there should be none. At one stage more than 250 labourers were engaged. In May 1867, after considerable widening, the pass was completed.

The pass has changed little since its completion, though heavy rains, especially in 1875, necessitated repairs. In the 1930 the stinkwood beams of the bridges in the 'Poort' were replaced with concrete and a low-water bridge was built at De Vlugt when motor cars became into use. In November 1996 heavy rains caused a section of the dry-stone retaining wall to collapse near De Vlugt. The Roads Department went to much trouble to rebuild it in the original way – so much so that the slightly different colour of the stone-work is today the only clue.

Places of interest along the pass include the Dieprivier picnic spot where the memorial of Thomas Bain is situated; the hamlet of De Vlugt where Thomas Bain lived with his wife Johanna and their children while building the pass; the world's shortest telephone pole (measuring a mere 1.2 m); Tiekelifierug (Ticket-of-leave Ridge), the ridge where the convicts were given their ticket of Leave after the pass had been completed, just to mention a few. The pass stands as a great memorial to Thomas Bain – South Africa's most famous and prolific pass builder.

## 11 ENVIRONMENTAL CONSERVATION

The DMA comprise a host of unique natural features and ecosystems, including the following:

### 11.1 WILDERNESS AREAS

The **Baviaanskloof Wilderness Area** is the only Wilderness Area in the DMA and is partially situated within the DMA and the Eastern Cape Province.

*It is important to note that the information regarding the Baviaanskloof Wilderness Area have been obtained from their official website: ([www.baviaanskloof.net](http://www.baviaanskloof.net)).*

#### 11.1.1 BAVIAANSKLOOF WILDERNESS AREA

##### a) Location and Importance

The Baviaanskloof ('Valley of Baboons') is situated approximately 120 km west of Port Elizabeth in the Eastern Cape and extend into the eastern side of the DMA in the Western Cape Province. The Wilderness Area is furthermore situated on the eastern border of the Cape Floral Kingdom and comprises some 200 km<sup>2</sup> of unspoiled rugged, mountainous terrain.

Little is known about this vast, brooding mountain refuge, which has been managed by Cape Nature Conservation since 1987. This complex represents the largest consolidated conservation area in the region (175 000 ha).

The area is one of notable biological diversity and historical importance and has over thousands of years sheltered the San people, and today provides ecological services to major industrial areas of the Eastern Cape.

##### b) Characteristics

The area is characterised by its diverse landscape due to the region's high geological, topographical and climatic diversity. The various rock formations, which form the mountains and cliffs are characteristics of the predominant hard sandstone which is part of the Table Mountain Group of sediments.

The highly visible geology with huge sandstone cliffs displays bedding planes and massive folding. This diversity supports a large variety of flora, including over 1 100 species in 12 vegetation types.

#### 11.1.2 BAVIAANSKLOOF MEGA RESERVE

The Baviaanskloof region is centred on the Baviaanskloof Conservation Area in the western section of the Eastern Cape Province, and a portion of the Western Cape Province. The Baviaanskloof Mega Reserve Project is a partnership between the Eastern Cape Government and the Wilderness Foundation, which seeks to expand and consolidate the existing protected area and create a mega reserve which effectively conserve all elements of biodiversity (as proposed by the CAPE project) (Skowno, 2003).



**Table 18: Summary of Provincial Nature Reserves in the DMA.**

<b>Conservation Areas</b>			
<b>Town / Vicinity</b>	<b>Conservation Areas</b>	<b>Size (ha)</b>	<b>Managed by</b>
Uniondale	Kammanassie Nature Reserve	49 430	WCNCB and Private
Toorwater	Swartberg Nature Reserve	121 000	WCNCB
Zaaimansdal	Baviaanskloof Wilderness Area	15 321	WCNCB and CNC District Eastern Cape

### **11.2.1 KAMMANASSIE NATURE RESERVE**

The Kammanassie Nature Reserve is situated between Uniondale in the east and De Rust and Dysselsdorp in the northwest and west. The Kammanassie Mountain is an Inselberg in the Little Karoo between the Swartberg and Outeniqua mountains.

The total area of the range which is managed as conservation area covers 49 430 ha of which 21 532 ha is privately owned declared Mountain Catchment Area. The remaining 27 898 ha is state land (CNC, 11\2001).

### **11.2.2 SWARTBERG NATURE RESERVE**

Swartberg Nature Reserve lies in the Oudshoorn District between the Great and Little Karoo and is bordered by the Gamka River in the west and the Uniondale-Willowmore road in the east. Gamkapoort Nature Reserve is immediately north of the reserve and 8000 ha is managed as part of the Swartberg Nature Reserve (CNC, 2/1998).

## **11.3 LOCAL AUTHORITY NATURE RESERVES**

Local authority nature reserves may be established by local authorities on land which they control or manage. These reserves are proclaimed by the Premier by way of a notice in the Provincial Gazette in accordance with Article 7 of the Nature and Environmental Conservation Ordinance, 1974 (Ordinance 19 of 1974). The aim of local nature reserves is to encourage local authorities to protect significant species, ecosystems of physical features of the local environment (WCNCB, 2002).

There is only one local authority nature reserve situated in the DMA. 'Die Fort' local authority nature reserve is situated just outside the town of Uniondale and comprise some 114 ha. The municipal IDP states that this reserve needs to be protected or it may lose its status.

## **11.4 MOUNTAIN CATCHMENT AREAS**

Probably the most important property of South African mountains is their function as natural drainage areas. Their capacity for rainfall and mist interception and eventual release of water into rivers is one of the greatest importances to a relatively arid country like South Africa. Runoff from mountain catchments is the main source of most of the Western Cape's rivers. To yield the maximum quantity of water of the highest possible quality on the most dependable basis, without reducing plant cover and the variety of species, optimal management of mountain catchment areas is necessary. The Mountain Catchment Areas Act, 1970 (Act 63 of 1970) was promulgated to provide for the

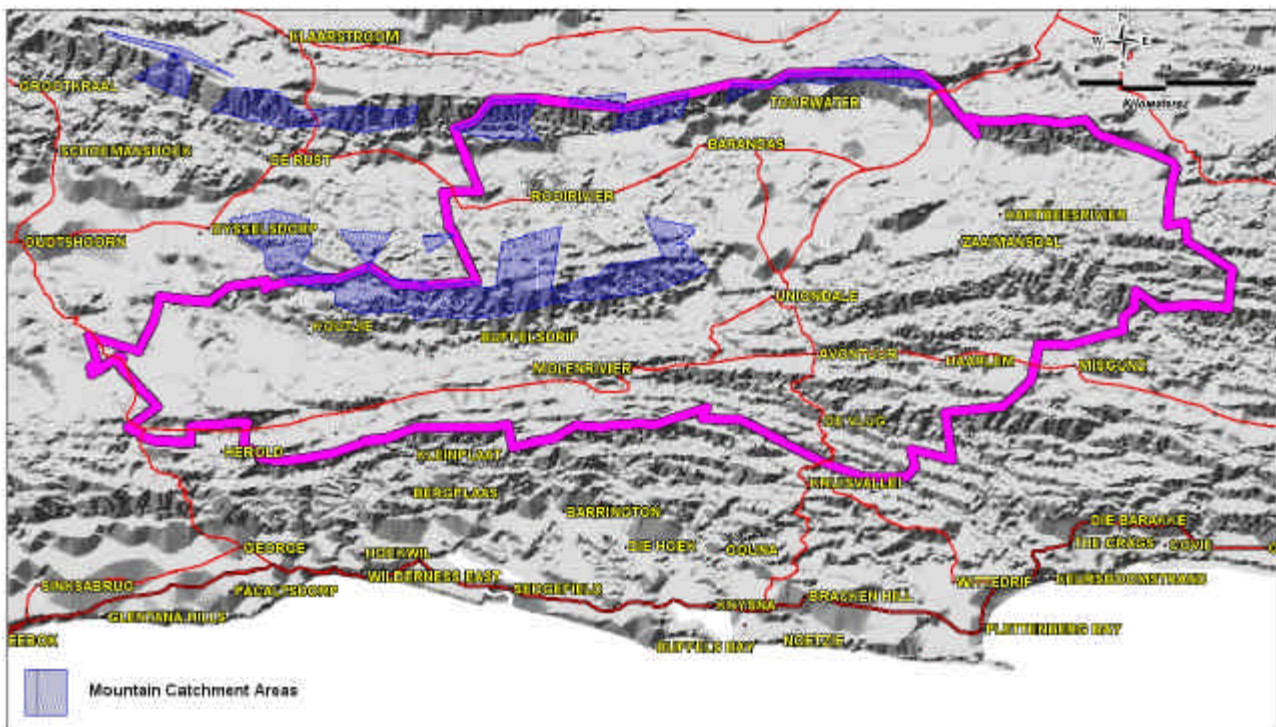
conservation, use, management and control of land situated in declared mountain catchment areas (Fuggle and Rabie, 1992).

In terms of the Act any (private) area of which the water yield is of great importance may be declared to be a mountain catchment area. Mountain catchment areas are managed by means of management guidelines relating to conservation, use and control of land, and vegetation within the area (Fuggle and Rabie, 1992). Two mountain catchment areas have been declared, either entirely or partly, in the DMA (refer to Table 19 and Figure 9).

**Table 19: Summary of Mountain Catchment Areas in the DMA.**

Conservation Areas		
Town / Vicinity	Conservation Areas	Size (ha)
Uniondale	Kammanassie Mountain Catchment Area	28 991
De Rust	Swartberg Mountain Catchment Area	9 306

Different measures are provided in the Act for biodiversity protection within mountain catchment areas. One of these measures is the establishment of fire protection committees and the preparation of fire protection plans, to ensure that a proper management regime regulates the activity of preparing and maintaining firebreaks within mountain catchment areas (WCNCB, 2002).



**Figure 9: Mountain Catchment Areas in the DMA.**

## 11.5 PRIVATE CONSERVATION AREAS

Private landowners may apply to establish a private nature reserve on their land or on parts of their land in accordance with Article 12 of the Nature and Environmental Conservation Ordinance, 1974 (Ord. 19 of 1974). In order to qualify the land needs to be of viable size and should already be management for conservation purposes. The main

